

Waterproofing Northern Adelaide



WATERPROOFING NORTHERN ADELAIDE FINAL REPORT

30th September 2010

“Waterproofing Northern Adelaide (WNA) is a collaborative project to improve urban water management in Adelaide’s northern region. WNA is being undertaken by the Cities of Tea Tree Gully, Salisbury and Playford with the assistance of a \$41.8 million grant from the Australian Government’s Water Smart Australia programme as well as State and private partners.”

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Waterproofing Northern Adelaide Regional Subsidiary

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Companion Material

DVD	Waterproofing Northern Adelaide 2010
Powerpoint Presentation	Waterproofing Northern Adelaide 2010
Pdf	Integrated Water Cycle Management Plan

1 EXECUTIVE SUMMARY

This report sets out the way in which the three Councils of Playford, Salisbury and Tea Tree Gully have, with the assistance of the Commonwealth and State Governments as well as the investment by private parties, developed their urban stormwater systems to convert the water from a disposal problem into a sustainable resource.

Northern Adelaide, which is the urban areas of the three councils, covers approximately 46,000ha on the urban fringe. It has a population of about 220,000 now and will grow to over 300,000 during the next 30 years as well as having the largest industrial areas in Adelaide. The area falls from east to west and has 5 significant waterways; Smith Creek, Helps Road Drain, Little Para River, Dry Creek and Torrens River. These are fed by 440 to 560mm of rainfall, predominantly in winter. The area has 1200mm of evaporation, predominantly in summer.

The Councils had developed a drainage system with four riverine linear parks, Torrens River, Dry Creek, Little Para River and Smith Creek, a large number of flood management detention basins of which 8 were being harvested and the water stored underground for urban reuse. The vision was to accelerate the development of this drainage system into a sustainable supply of 9GL/an. of urban non potable water. This would ensure the community irrigation needs were met and to provide water for other uses (private recreation, schools, industry and third pipe in new residential areas). The Waterproofing Northern Adelaide project was defined to achieve this vision by a total investment of over \$100m.

Waterproofing Northern Adelaide is to integrate the urban stormwater, groundwater, wastewater and drinking water systems to provide a sustainable water supply for the region. In doing this it was to achieve the following Objectives:

- Provide and manage a 8.2GL/year (a GL is 1 billion litres) sustainable non-potable urban water supply
- Recharge the groundwater with 5.7GL/year
- Sustain 70km of riverine environments
- Provide a sustainable harvest of 16GL/year of recycled stormwater
- Implement National Water Initiative pricing principles
- Enhance 2,300ha of the urban environment
- Demonstrate best practice and innovation in urban water management
- Reduce ocean outfall by 21.6GL/year
- Substitute for 8GL/year of potable (drinking) water use
- Substitute for 1.2GL/year of groundwater use
- Increase efficiency of water use
- Enhance flood protection

This reports sets out the way in which the Councils have achieved these ambitious Objectives.

The Councils formed a small, efficient and focused Regional Subsidiary, under the Local Government Act, which has a Board made up of Council officers. The Subsidiary acts as the linkage between the Councils and the funding agencies while providing coordination and oversight to the project. The Subsidiary has formed three specific groups to attend to; Finance and Reporting, Technical matters and Communications. The Subsidiary has arranged with its Councils to draw on their resources for staff, accommodation, record keeping and accounting. The Councils have each formed a team to deliver the Capital Works and Other Activities. This has proven an effective low cost (<1%) way of implementing the project.

Waterproofing Northern Adelaide consists of individual harvesting and reuse Capital Works and a distribution system in each Council area. These Capital Works were grouped into 13 Sub-Projects based on the 5 catchments and Other Activities. During the project the latest knowledge and techniques were used to increase the efficiency of the scheme by reducing the number of harvesting sites and increasing the extent of the distribution system. The project has delivered a system capable of capturing in wetlands, cleansing and harvesting 15.5GL/year. which provides 10.1GL/year supply of recycled stormwater by way of:

- 18 harvesting wetlands storing cleansed water in 20 Aquifer Storage and Recovery borefields
- a mechanical filtration plant to supply treated stormwater harvested from a storage dam
- 31 Community Bores extracting and supplying groundwater
- an augmented natural bed recharge zone in the Little Para River
- over 120km of distribution mains
- some direct supply from the wetlands for low risk uses.

In addition the project has delivered regional modelling of surface and sub-surface water resources and research into; control of detentions within the system to enhance harvest, control of detention time in the aquifer to provide disinfection; parameters for desalination of brackish groundwater which is sustained by stormwater injection, use of the recycled water mains as an energy resource.

Waterproofing Northern Adelaide has been completed substantially on time, within Budget and has achieved both its direct water management Objectives and its indirect role as demonstrating the practicality of urban stormwater reuse. The project has led the State in the utilization of urban stormwater as a practical diversification of supply for Adelaide, as espoused in the "Water for Good Plan".

The Councils are now expanding the system to keep up with urban growth and to link it to the wider region. Additionally the research ethos fostered during the project continues with; a study of carp control, the value of green space and the development of an operational model for decision support in the management of this complex system.

The Waterproofing Northern Adelaide Regional Subsidiary has prepared this Final Report to demonstrate the way in which they have managed the funding provided to more than achieve the Goal and Objectives set and to create a water management system which is the base for ongoing expansion and a model for others to follow.

2 AN INTRODUCTION TO WATERPROOFING NORTHERN ADELAIDE

Waterproofing Northern Adelaide set out to develop the pre-existing urban stormwater drainage systems into an integrated system of urban water management for the urban portion of the Council areas of Playford, Salisbury and Tea Tree Gully. This system will:

- Protect developed properties and infrastructure from flooding
- Clean the water and sustain environmental flows in the main waterways (Torrens River, Dry Creek, Little Para River, Helps Road Drain and Smiths Creek)
- Reduce the flow of contaminated urban stormwater into Barker Inlet
- Produce a sustained harvest of stormwater which will provide the community with much of the water it needs for community, industrial and residential users at a price which covers all operating costs and much of the catchment management costs while providing savings for users.
- Provide the distribution pipes which will supply the reserves, ovals, schools, factories and houses with recycled stormwater alone or blended with ground water or recycled wastewater.
- Provide significant replenishment of the over allocated groundwater and build up a reserve in the aquifers to drought proof the region.
- Substitute fit for purpose water for drinking water and groundwater
- Enhance the urban landscape with riverine linear parks which act as bio diversity corridors as well as lakes, wetlands, water features and irrigated public areas, these are now called Greenways.
- Encourage increased water efficiency by all users.
- Undertake research into; modeling of surface and sub-surface waters, catchment control, aquifer management and multiple uses of water mains which will lead to the next generation of improvements in urban water management.

This integrated water management system of which Waterproofing Northern Adelaide is the first major stage is to manage the 38GL of urban stormwater which runs off the urban areas in such a way to make it into a sustainable resource providing at least:

- 5GL of environmental flows in the creeks
- 5GL of replenishment for the groundwater
- 4GL of water for community use
- 5.2GL of water for other uses which replaces drinking water or groundwater use
- 8GL of drinking water substitution.

The three councils and their partners (CSIRO, United Water, University of South Australia and Richard Clark & Assoc.), with the assistance of Federal and State Governments, have built the first stage which sets the scene for a complete system which will eventually supply over 16GL/year for reuse. At the completion of WNA it is (as shown in Figure 2):

- 18 integrated stormwater ASR wetlands which provide detention (for flood protection), wetlands (for cleansing, biodiversity and recreation), storage in the aquifer and distribution to users.
- A mechanical treatment plant to cleanse water from a storage dam and supply it to the distribution system
- 14 new community bores (31 total) to supply water to parks and sports grounds, schools and other community facilities
- Fit for purpose distribution systems (>110km) which provide water from stormwater, groundwater and recycled waste water to users.
- An Aquifer Storage Transfer and Recovery facility to research the effectiveness of the aquifer in cleaning recycled stormwater to reduce pathogens (ASTR), now forming part of the storage and recovery system
- An improved and regionally integrated monitoring system for surface water
- A system for control of detentions (flood control dams and tanks) to improve stormwater harvest yields without reducing flood protection.
- Integrated regional models of; stormwater run off and harvest yields
- A regional model of aquifer performance under sustained ASR operation.

The successful completion of Waterproofing Northern Adelaide has set the base for a system of ASR Wetlands east of Port Wakefield Road which is being developed. Additional funding under the Water for the Future program will complete the eastern system, in Salisbury & Playford, and develop facilities west of Port Wakefield Road; these are Whites Road and Summer Road. These can increase the sustainable harvest by 6.3GL. which may be used in combination with Bolivar recycled waste water at some time in the future. The system accommodates the development of a CWMS treatment plant in Tea Tree Gully with an output of 0.6GL

The total Project has an estimated, GST exclusive, cost of \$107m; Commonwealth \$38m, Councils \$22m, State \$33m, Private \$14m.

The Councils have coordinated their efforts and made their experience available to other Councils in Australia through a Regional Coordinating Group in the form of a Subsidiary under the Local Government Act.

The Regional Subsidiary has had a minimum suite of powers, sufficient to allow it to receive the grant from the Commonwealth, to assist in securing other funds from sources external to the Councils and to coordinate, oversee and report on the Project. It also acted as the Steering Committee under the Funding Agreement.

The Board of the Subsidiary consisted of a member from each Council, with Commonwealth and Adelaide and Mount Lofty Ranges Natural Resources Management Board (AMLR NRM) as observers. All members and observers were officers of their organizations.

The Board has formed three specialist groups to coordinate the Financial & Reporting, Technical and Communications functions. These have been predominantly Council officers supplemented by State personnel as appropriate.

The Councils each formed a team to design and deliver their portion of the project. These teams used the Council's own processes and procedures for approvals and financial control.

The organizational structure is shown in Figure 1.

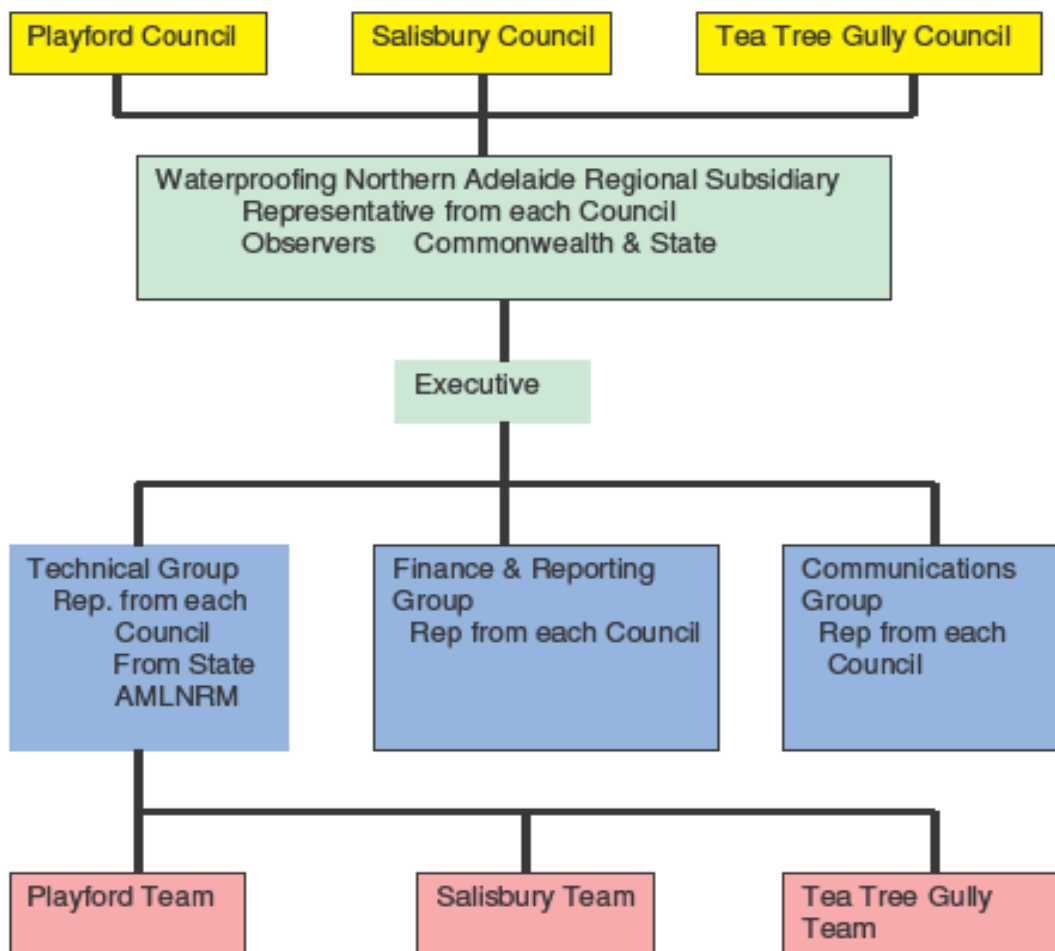


Figure 1 WNARS Organization Structure

W.N.A Final Scheme

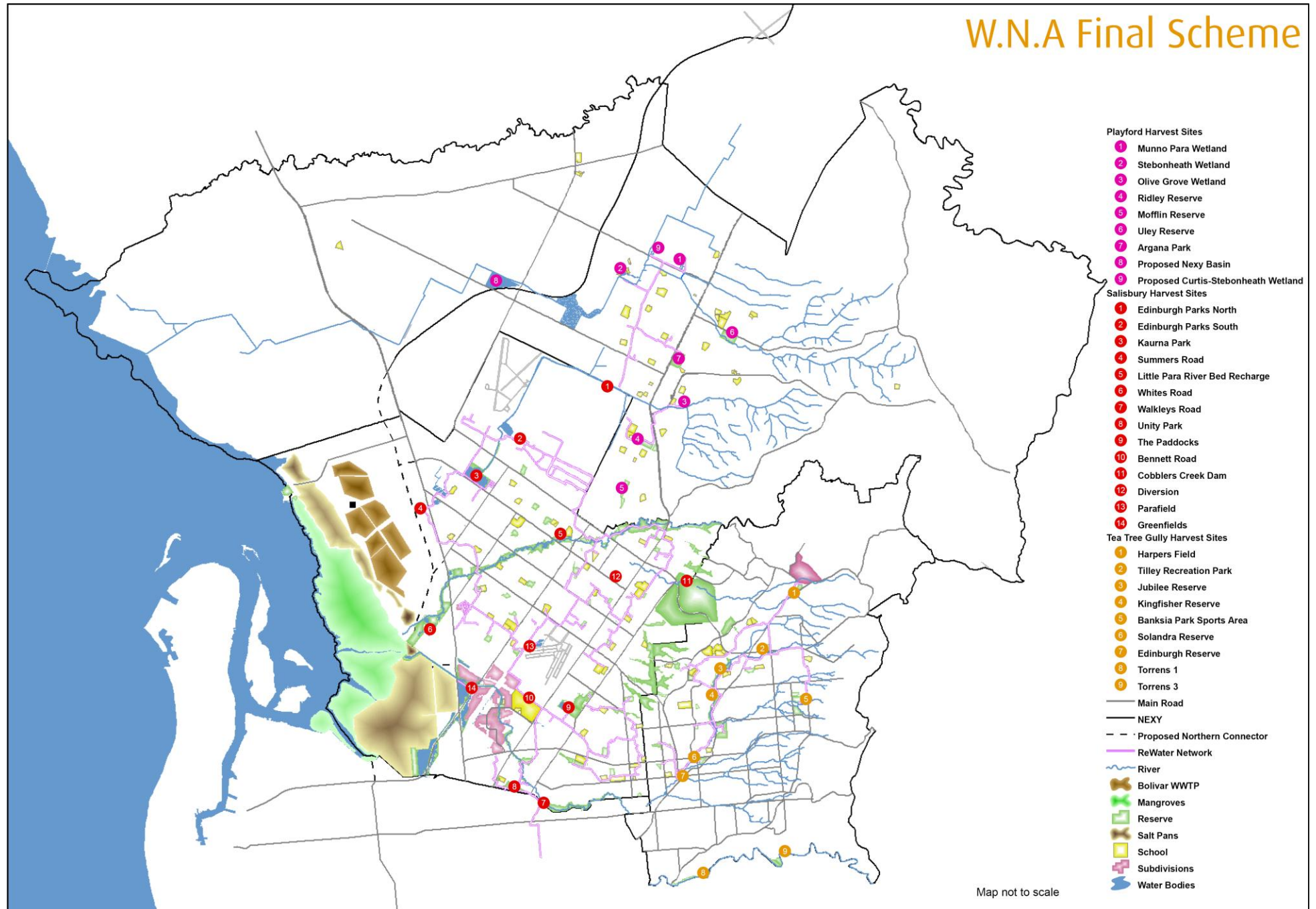


Figure 2 WNA Final Scheme

3 PROJECT MANAGEMENT & IMPLEMENTATION

3.1 Regional Subsidiary

3.1.1 Charter, Date of Formation

On 6th December 2006 the Minister for Local Government approved the Charter for the Waterproofing Northern Adelaide Regional Subsidiary which had been proposed by the three Constituent Councils (Cities of Playford, Salisbury and Tea Tree Gully). This is a Regional Subsidiary formed in accordance with Section 43 of the Local Government Act (1999).

The Subsidiary was formed to secure funding for the project (Waterproofing Northern Adelaide), to act as the Steering Committee in accordance with the Funding Deed as well as to provide oversight and coordination of the working groups and Council Teams who were to deliver the project.

The Charter is included as Appendix A.

The Minister's approval required a review of the Subsidiary after 3 years of operation. This was undertaken by the Board and Executive staff late in 2009 and into 2010.

At the conclusion of development of the project Salisbury Council had commenced an independent review of the organisational requirements for their water business. The other Constituent Councils were waiting on the outcome of this Business Review to determine their organisational preferences. Thus the review of the Subsidiary proposed extending it to allow for completion of the project, finalisation of the reporting and for subsequent review depending on the individual Council's assessment of their separate or joint long term needs. This review was endorsed by the three Councils and approved by the Minister.

The Review Report is attached as Appendix B.

3.1.2 Board

Role

To provide leadership and direction to the Subsidiary in undertaking the project and to fulfil the functions of the "Steering Committee" in the Funding Agreement.

Membership

The members were officers nominated by their individual Councils either by full Council or by delegation to CEO.

Salisbury nominees:

Peter Fairlie-Jones	December 2006 to September 2010 (Chair)
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Playford nominees

Mark Temme	December 2006 to June 2010
Shaun Kennedy	June 2010 to September 2010

Tea Tree Gully nominees

Ken May	December 2006 to September 2008
Brenton Curtis	September 2008 to September 2010

While each Council nominated proxies these were very rarely used. The continuity of the small group of senior Council officers led to a cohesive and effective Board operation.

Observers

The Commonwealth had a nominated officer to act as an Observer for Board Meetings. They were provided papers, in electronic form at least 3 and usually 4 working days prior to the meetings and were provided with draft Minutes in electronic form within 2 working days of the meeting.

The Commonwealth Observers attended on average 3 meetings per year. The Commonwealth observers were

Laura Phipps	December 2006 to April 2007
Michael Peat	April 2006 to December 2009
Nicole Elliot	December 2009 to September 2010

The State had a nominated officer from the Adelaide and Mount Lofty Ranges Natural Resource Management Board to act as an Observer for Board meetings. They were provided papers and Minutes as described for the Commonwealth and were used as the prime point of contact for dealings with the State government. The State observers were

Keith Smith	December 06 to February 09
Sam Phillips	February 09 to September 2010.

This method of representation proved effective and successful for the project, it provided a focus for dealings with Commonwealth and State as well as making reporting to both economical and effective. Guidance and input from both levels of government through the observers allowed the project to proceed smoothly. The continuity of representation through the bulk of the project was of considerable benefit and the Board is grateful for the effort of the officers involved.

Meetings

The Board met approximately monthly, with a small number of special meetings to undertake site inspections and to review the project mid-way through.

The Board meetings were held in a formal manner with full papers prepared and distributed in advance and formal motions passed. Given the membership of 3 all recommendations were passed unanimously. The Board was able to work throughout in a collaborative manner.

The Board invited other staff and government representatives to attend as required. The meetings were not advertised as being open to the public; no requests for such attendance were received.

An annual program of meetings was prepared and in general adhered to, they were held in the morning of the last Tuesday of the month.

39 meetings were held up to June 2010.

Minutes of the meetings have been posted on the WNA website (www.wna.gov.au).

3.1.3 Groups

Three Groups were formed in order to coordinate particular aspects of the project across the three Councils. These were Finance & Reporting, Technical and Communications. These groups also represented the structure of the relevant Councils with Accounting, Engineering & Communications being in separate divisions within each Council, thus it was a way to secure coordination of all the key staff involved in the project.

The Groups met formally with papers prepared and Minutes kept. An annual program of meetings was set and in general adhered to. The Communications Group wound up during 2009 as the overall project communications role was substantially complete.

Finance & Reporting

Role: To coordinate the accounting, recording and reporting aspects and advise the Board on financial management of WNA.

Membership: Because Peter Fairlie-Jones is Director of Finance at Salisbury as well as Chairman of the Subsidiary he also has chaired this Group. The combination has contributed significantly to the successful integration of the Group considerations into the Board's decision making.

The other members have been the accountant responsible for the financial record keeping for each Council's implementation of WNARS.

The core members throughout have been:

- Matthew Coldwell (Salisbury)
- Trevor Horskins (Playford)
- Jeffery Jones (Tea Tree Gully)

Meetings: The Group has met monthly since its formation in June 2007. A total of 32 meetings were held up to June 2010.

The meetings are formal, with papers prepared and circulated in advance and Minutes circulated close to the day of the meeting.

In general the Finance and Reporting Group meetings were held a week before the Board meeting.

The Minutes of the Meeting are included in the Board Papers.

Financial Record Keeping:

The Subsidiary made a decision at commencement that it would not engage staff but would divide the support functions between the Constituent Councils.

Playford provided financial record keeping from commencement to October 2009 and then transferred this to Tea Tree Gully.

Technical

Role: To coordinate the planning, design, construction control, licensing, monitoring, risk management and procurement aspects of the project and advise the Board on all technical matters and the management of the scope of WNA.

Membership including State Observers:

Membership has been more fluid than other Groups. The core of members have been the Council Team Leaders:

Tea Tree Gully	Brenton Curtis (to September 08)
	David Baldwin
Playford	Adrian Swiatnik
Salisbury	Bruce Naumann

Other Council staff have attended meetings as required, particularly when the Group was considering monitoring requirements.

Mark Purdie from Salisbury was the lead officer in the development of the Systems Control and Data Acquisition (SCADA) and represented the Council's on the reference group assisting the State in the development of the Managed Aquifer Recharge (MAR) Code of Practice.

The State has had officers from the Adelaide & Mount Lofty Ranges Natural Resource Management Board (Keith Smith and then Sam Phillips) and the Department of Water Land and Bio Diversity Conservation (Donna-Lee Edwards) nominated as observers to the Group.

They receive papers in advance and attend if possible and of interest to them. This somewhat informal arrangement has provided good linkage to the key State regulatory agencies.

Meetings: The Group meets in a formal manner and is scheduled for monthly meeting although these became less frequent late in the project as each Council moved to complete the works in accordance with the mid-project review. A total of 22 meetings were held to June 2010.

Communications

Role: To coordinate the implementation of the Communication Strategy, Demonstration Strategy and advise the Board on communications required by or related to the management of WNA.

The group was quite active during the initial years of the project but once each Council was working within the agreed parameters the group became almost redundant and efforts focussed on individual events or productions and the coordination role was subsumed into the Executive staff.

Membership A senior officer from the communications section of each Council was nominated to this Group. There have been more changes in the membership of this group, reflecting changes in the communications staff within the Councils.

The key members were:

Playford	Belinda McLeod
Salisbury	Mez Lee
Tea Tree Gully	Wendy Pfitzenmeier

Meetings: As stated above the group was most active in the establishment period and undertook a thorough review of the Communications Strategy early in 2008 and then concentrated on implementing their own Councils efforts with the Executive undertaking day to day coordination. A total of 18 formal meetings have been held to June 2010.

3.1.4 Staff

Positions and role

The Board has kept its staff levels to a minimum throughout the project and has required the Constituent Councils to manage the Capital Works through their own Teams. There have been three staff involved with only the Executive Officer engaged throughout.

It was originally proposed that the project would require a part time Executive Officer and a part time Project Officer, with both officers working about 0.6 of their time for the Subsidiary. The Board decided to defer staffing for as long as possible.

Executive Officer: The Board has had an officer to manage the affairs and programs of the Subsidiary through the implementation of a Business Plan. This officer attended all Board meetings, kept and ensured minutes were kept, attended Finance & Reporting Group meetings and kept their minutes, Chaired and kept the minutes for the other two Group meetings and other administrative functions.

The Executive Officer also managed three regional studies:

- Hydrologic Modelling
- Geohydrologic Modelling
- Integrated Water Cycle Management Plan (IWCMP)

The key role throughout has been fund raising and reporting to the funding agencies.

This position has been held throughout by Chris Kaufmann and the role has been 0.6 of his time.

Administrative Assistant:

The Board secured the part time (0.3) services of an assistant to work predominately on communications. This involved developing and maintaining the website, the style guide and a range of communications material.

This support started in September 2007 and finished in mid 2009 by which time the Communications had been merged into the Councils normal communications functions.

This position was held by Christine Harvey.

Project Officer:

The Board secured a Project Officer at 0.4 time to provide additional assistance in the progress and financial recording and reporting in September 2008 and this continues to the final report.

With the removal of the administrative support this officer has provided support with such communications work as has been required.

This position is held by Roseanne Irvine.

Manner of employment

All staff have been engaged by the City of Salisbury which has provided their services to the Subsidiary by way of a service agreement.

The Executive Officer has been responsible for the management of the staff and has reported to the Chairman of the Board for ongoing management.

Thus throughout the Subsidiary has had no employees and hence no staff liabilities. The City of Salisbury has provided office space, IT and other systems support and hence there has been no need for the acquisition of any assets.

3.1.5 Business Plan

The Business Plan was assembled from individual documents prepared early in the project. This composite document forms the basis for management of the whole project and was split into four parts. The full Business Plan is included as Appendix C.

Outline

- Four main parts:
- A Raising Additional Funds
 - B Capital Works from Funding Deed
 - C Other Project Activities from Funding Deed
 - D Funding Deed Requirements
 - Communications & Consultation Strategy
 - Demonstration Strategy
 - Monitoring & Evaluation
 - Risk Management Plan
 - Regional Geohydrology

Report on Implementation of the Business Plan

A Raising Additional Funds

This will be presented in the Financial Reporting under the discussion of Matching Funding. The Board set targets for raising Matching Funds of at least the \$38m required by the Funding Deed.

The Board has sought, and the Commonwealth approved, two variations which made alterations to the scope of the project and some changes to the split of Matching Contributions, from State and Councils.

The Councils made their initial commitment of \$21.6m in signing the Deed. By the completion of the project this was approved to be reduced to \$21.4m in Project Variation 2 (PV2).

Councils have made a total contribution of \$22.6m in cash and kind.

The State contribution required in the Funding Deed was \$16.4m. In the Business Plan the Board endorsed a strategy to secure up to \$28m in matching contributions from the State. By the time of seeking the second project variation (PV2) this was formalized at \$33.2m. This contribution is made up of a small amount of cash and substantial donations of land and infrastructure. There have been some delays in securing the completion of the land asset transfers, however by the time of this report (September 2010) \$28.942m had been received and brought to account (refer Section 5.4.1) and the State has made commitments that the remainder will be transferred by the completion of the Evaluation Period. (30 June 2014). The annual Evaluation Reports will track these contributions.

The strategy set out in the Business Plan for raising matching funds has been successfully implemented.

B Capital Works Program

A program of 32 Capital Works was set out in the Funding Deed and they were assigned to Milestones. The Board made the program the fundamental focus of the Business Plan.

Several factors caused the Board to review the program mid way through the project, these were:

- (a) a change in the relative cost of installing distribution systems, arising from directional drilling, which allowed for greater distribution and reduced number of harvesting sites.
- (b) a better knowledge of the Geohydrology leading to changes in the location of ASR bores in Tea Tree Gully and the development of a mixed system of ASR and extraction with a distribution main in Playford
- (c) cost escalation at considerably above CPI which was higher than allowed for. The Funding Deed did not allow for an Escalation Claim and the Board's request was unsuccessful.

A revised scope was submitted and approved as Project Variation 2. This reduced the number of Capital Works to 26 without any significant reduction in Outcomes. A revised program for completion was also approved.

At completion, the 26 Capital Works have been completed. A more detailed description of the system at the completion of the project follows in Chapter 5 "Sub-Projects and Capital Works".

The Strategy for Capital Works, modified as approved, was successfully implemented.

C Other Project Activities

There were five other activities which were essentially research or regional analysis. These were:

- Aquifer Storage Transfer & Recovery (ASTR)
- Controllable Detentions
- Heat Transfer from mains
- Hydrologic Modelling
- Geohydrologic Modelling

All of these Activities have been completed and reports have been posted on the website.

In summary:

ASTR: Research into the time effect of detention in the aquifer on water quality, particularly pathogens.

The decline of bacteria and protozoa was rapid and viruses very slow. Detention can provide a worthwhile supplement to the treatment train but will not eliminate the need to disinfect the water for some uses (eg. use within dwellings).

Controllable Detention:

The use of large flood control detentions can provide considerable improvement in harvest efficiency.

Heat Transfer from Mains:

A request for partners did not secure an investor, a desktop analysis did not support this as a viable technology at this time.

Hydrologic Modelling:

This has had several outcomes. Regional modelling confirmed the water resource available for harvesting. The research elements have developed the WaterCress model to a stage where NWC is prepared to release it for use in Australia and Icewarm has renewed their interest in it.

Geohydrologic Modelling:

rem undertook this modelling for WNARS, using and extending the model of the tertiary aquifers owned by the Adelaide & Mt Lofty Ranges NRM Board. This has confirmed the acceptable injection and extraction criteria for the tertiary aquifers and confirmed the long term sustainability of the ASR aspects of the scheme.

Conclusion

The research activities included in the project were successfully undertaken and while not all the aspirations of the research were achieved the overall benefit to urban stormwater knowledge has been considerable.

The "Other Activities" program set out in the Business Plan has been successfully implemented.

D Funding Deed Requirements

The Funding Deed imposed an array of administrative and reporting obligations on the Subsidiary to ensure the project was properly managed. These have been focussed on the systems needed to provide comprehensive Milestone Reports, an Annual Report and Audited Financial Statements and are substantially covered in the Financial Reporting section of this report.

Additional specific requirements cover:

Risk Management (Section 3.1.6)

Project Progress Reporting (Section 3.1.7)

Communications Strategy (Chapter 9)

Demonstration Strategy (Chapter 10)

Integrated Water Cycle Management Planning (Section 3.1.9)

Regional Geohydrology (Section 3.1.10)

These are reported in detail later in this report

The Subsidiary has competently discharged its obligations under the Funding Deed Requirements.

3.1.6 Risk Management Plan

Process of preparation

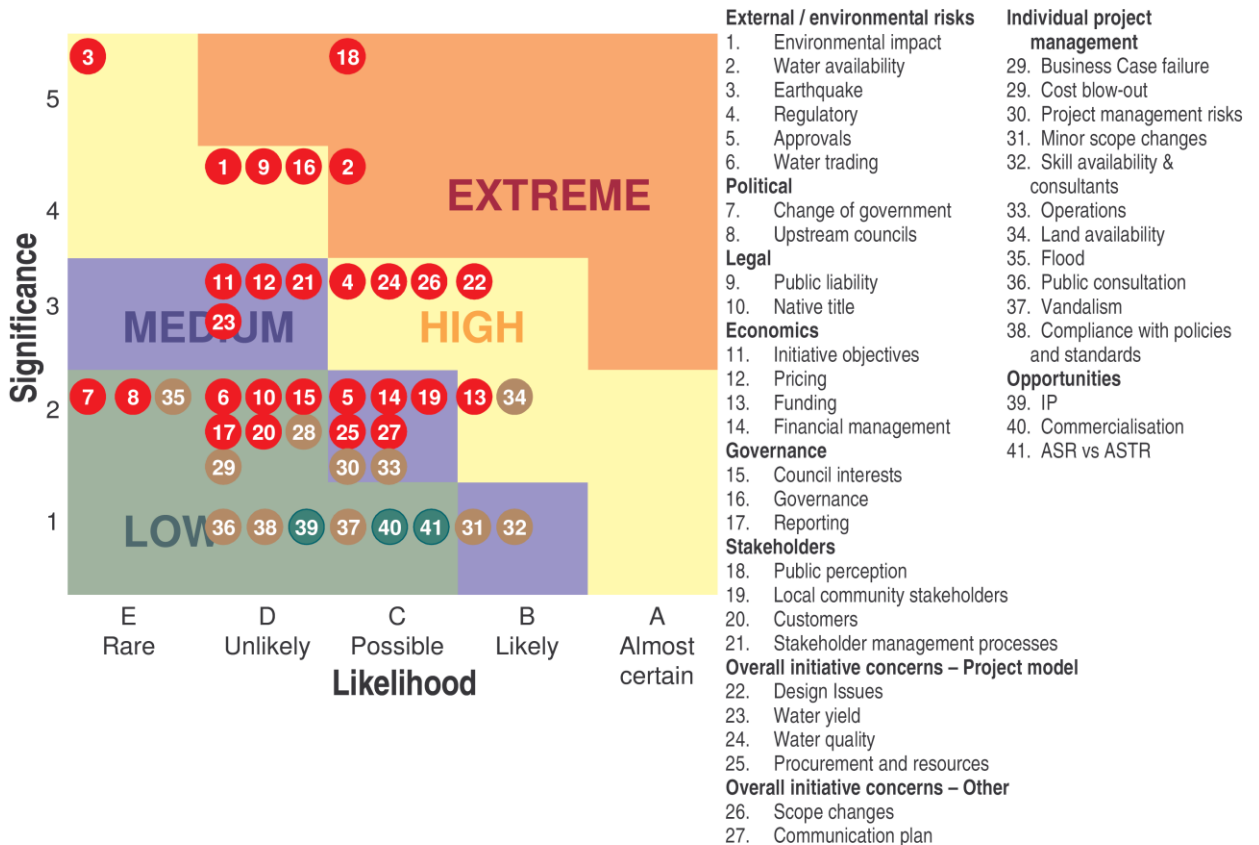
This followed the approach established in AS/NZS4360 – 2004. A professionally led workshop of internal and external Stakeholders was held. The outcomes were edited, circulated, comments received and the results compiled into a document setting out the risks and their severity. A second meeting was held to review the findings, add any risks and consider both the impact and likelihood as well as management actions to mitigate against risk and hence the residual risk.

The risk management had two aspects; risks to the successful completion of the project and risks to the successful performance of the project when built. The former were the focus of risk planning for the Subsidiary, the latter were the focus of the Council's design teams.

The key risks (Residual Risk Extreme) to the successful completion of the project were identified as:

- (a) loss of public support for the project, this arises from the level of commitment required by the Councils relative to their total Capital Works budgets
- (b) Insufficient water availability for harvest, the project was based on a preliminary hydrologic model and if this proved incorrect the project would need to be rescoped.

The full Residual Risk evaluation matrix is presented below. This shows the two Extreme residual risks and the 10 High residual risks which focussed the Board's attention in the management of the delivery of the project.



Review of Risk Management Plan (RMP)

An annual review of the RMP was undertaken by the Technical Group. The initial reviews were based on a group working session in which consideration was given to new risks eg. delay in securing regulatory approval to inject in to ASR bores. This was added to consideration of the residual risk of Extreme and High risks.

The final review in 2009 was undertaken by the Executive Officer and circulated to Technical Group members with subsequent endorsement at a formal group meeting. Rather unsurprisingly this review indicated that most of the residual risks identified had diminished as the project drew to completion.

The Risk Management Plan is included within the Business Plan (refer Item D5 of Appendix C).

3.1.7 Project Progress Monitoring & Reporting, Project Implementation Plan

The Board, Council Teams and funders have been keen to monitor the progress of this complex project and there has been considerable experimentation with different ways to present the information. The difficulty in striking a balance between a short simple presentation and the innate complexity of the project with its 7 Sub-Projects and 22 Capital Works and 3 research activities has finally been overcome. This was achieved by producing;

- a graph of expenditure against Budget,
- a text report,
- a spreadsheet relating to the Milestones
- a project management report using the Covalent system.

These have been supplemented by specific reports on capital works which have been experiencing difficulties and a report on progress with Matching Contributions.

The Executive staff has worked directly with the Council teams to monitor progress and assist with coordination. The Technical Group has been the focus of the monitoring of progress prior to reporting to the Board. The explicit nature of the Milestone schedule in the Funding Agreement has made monitoring progress quite simple.

A typical Covalent summary report is attached as Appendix D.

3.1.8 Milestone Reports

These reports have used the same format for progress as described above.

The other information required has been presented in the order set out in the Funding Agreement and has proven simple and an effective communication of the status of the project.

When approved by the Commonwealth the Milestone Reports have been entered on the website.

3.1.9 Integrated Water Cycle Management Plans

At the commencement of the project there were three plans. While these were presented as Integrated Water Cycle Management Plans (IWCMP), they were substantially catchment management plans which focussed on the management of surface water and added stormwater reuse to the flood and environmental protection focus of the catchment plans. These plans had been prepared for the Councils by SKM with assistance from the Adelaide & Mt Lofty Ranges NRM Board

During the course of the project it became apparent that the three plans no longer represented the evolving scheme accurately. It was decided by the Board to undertake the review of the three plans and integrate them into a single document.

This was undertaken by SKM, using funds from the Adelaide & Mt Lofty Ranges NRM Board. This plan now endeavours to guide the management of catchments, surface water, groundwater, recycled waste water and imported potable water.

A key feature of the plan is the emphasis on multiple uses being made of the water infrastructure, in particular waterways and wetlands.

The full plan will be presented as an accompanying document to this report. The executive summary follows:

The Cities of Salisbury, Playford and Tea Tree Gully have been working together to manage their water resources for over two decades. This collaboration was formalised with the establishment of the *Waterproofing Northern Adelaide Regional Subsidiary* (WNARS). While each Council has unique water management issues to address, there are also many management issues common to all three given the shared surface water catchments and groundwater resources. This Integrated Water Cycle Management Plan (IWCMP) represents the effort of all three councils to coordinate water management. The Plan provides a framework for on-going investment into water management across the region and is a 'living' document requiring periodic updates.

The Councils' aim is to achieve long term water security for the residents and businesses of the region by identifying and developing appropriate 'fit for purpose' alternative sources to mains water, including rain water, stormwater, groundwater and recycled water.

The challenges for the Councils in managing water in their region are:

- Urban consolidation and development, including a projected population increase of over 100,000 people in the next 30 years;
- Climate change which may result in reduced rainfall, increased flood risk and increased demand for water;
- Providing water security for the growing community;
- Sustaining flows and maintaining and improving water quality in watercourses and receiving environments; and,
- Coping with changes in water price and regulation.

These challenges were considered throughout the development of the IWCMP Plan, which includes key information on:

- Background planning information;
- Water Balance including investigation of 'fit for purpose' water supplies;
- Integrating land and water management issues;
- Environmental health;
- Public health;
- Groundwater resources;
- Flooding impacts and issues; and
- Monitoring, evaluation and reporting.

The three Councils will continue to invest in the development of an integrated water management system which will generate a sustainable harvest of 18 GI of urban stormwater and reclaim 0.6GI of wastewater. The water will be used alone or in combination with groundwater and wastewater reclaimed by SA Water to supply as much of the urban non-potable water requirements of the region as practical. The integrated system will provide flood mitigation and the main waterways will be developed into Greenways providing environmental and urban amenity benefits to the community.

The total capital investment from all sources, required for the next 30 years is:

Water Security	\$300m
Flood Protection	\$190m
Greenways	\$35m
Water System Improvement	\$1m
<hr/>	
Total	\$526m
<hr/>	

If the community decides to provide recycled water to all existing dwellings, this would add approximately \$400m to the investment.

Two-thirds of the Water Security investment is based on 26 harvesting sites supplemented by reclaimed wastewater from two plants and linked to a distribution system over 100km long and third pipe system in all major new developments.

Flood protection is required to upgrade deficiencies in current systems, accommodate the increased flood intensity predicted by climate change models and urban consolidation, and to meet urban expansion requirements. Over 50 major projects have been identified. The total investment of at least \$190m would be shared between the developers, the Councils, and the State through the Stormwater Management Authority.

Developing the major waterways as Greenways is a feature of both the State's 30 Year Plan and the Councils' strategic directions. At least 9 Greenways are proposed, linking the Region. The investment is to be shared between the State and the Councils.

The current system of water management also needs improvement to comply with recent changes in regulatory, management requirements and policy.

3.1.10 Regional Geohydrology

The Adelaide & Mt Lofty Ranges NRM Board has funded the development of a numerical model of the performance of the tertiary aquifers which underlie most of Adelaide. This model is to provide the basis for development and monitoring of water allocation from these aquifers.

In close consultation with the Adelaide & Mt Lofty Ranges NRM Board, WNARS engaged SKM to further develop the model for the region impacted by WNA's aquifer storage system. This required inclusion of more detailed data emerging from the drilling program and from initial pump testing of bore performance as well as inclusion of results from the development of ASTR.

The model was then run to predict the impact of winter injection at multiple sites and summer extraction from the ASR sites and the Community Bores.

The conclusions are that the safe limits of the confining layers of Hindmarsh clay are 50m of head and 200m bore spacing. If these are not exceeded the scheme will have no detrimental effect on the regional performance of the aquifer, despite producing an extended zone (5km radius from borefields) of artesian effect during winter. Summer draw down is much less extensive in its impact.

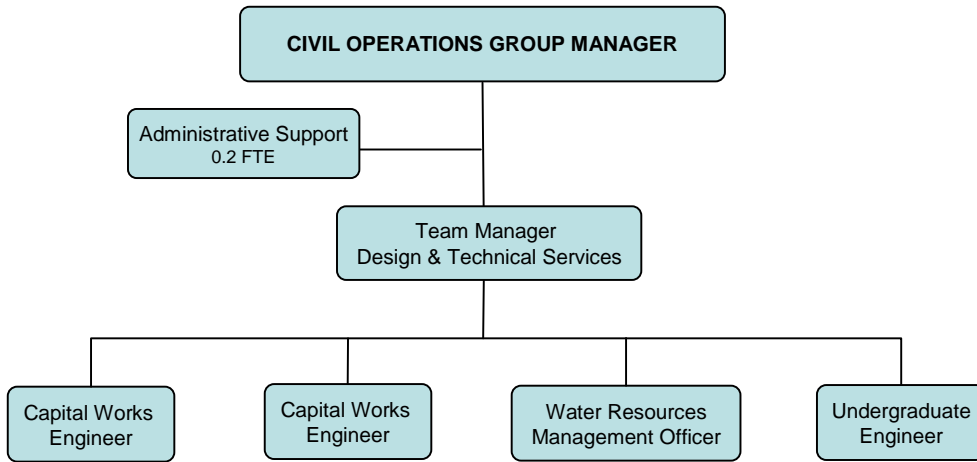
The predicted effect of the injection program and the leaving of 20% of injected water in the aquifer was to aid the recovery of the cones of depression under the northern Adelaide plains. This seems to be occurring but to a lesser extent than modelled.

3.2 Council Teams

Each Council implemented their Capital Works and Other Activities under the coordination and oversight of the Regional Subsidiary using their own staff, following their own project control, administrative and procurement policies. The Councils have provided a Compliance Statement that they have implemented the project in accordance with the Funding Deed. These are included as Appendix E.

3.2.1 Playford

Personnel & Structure

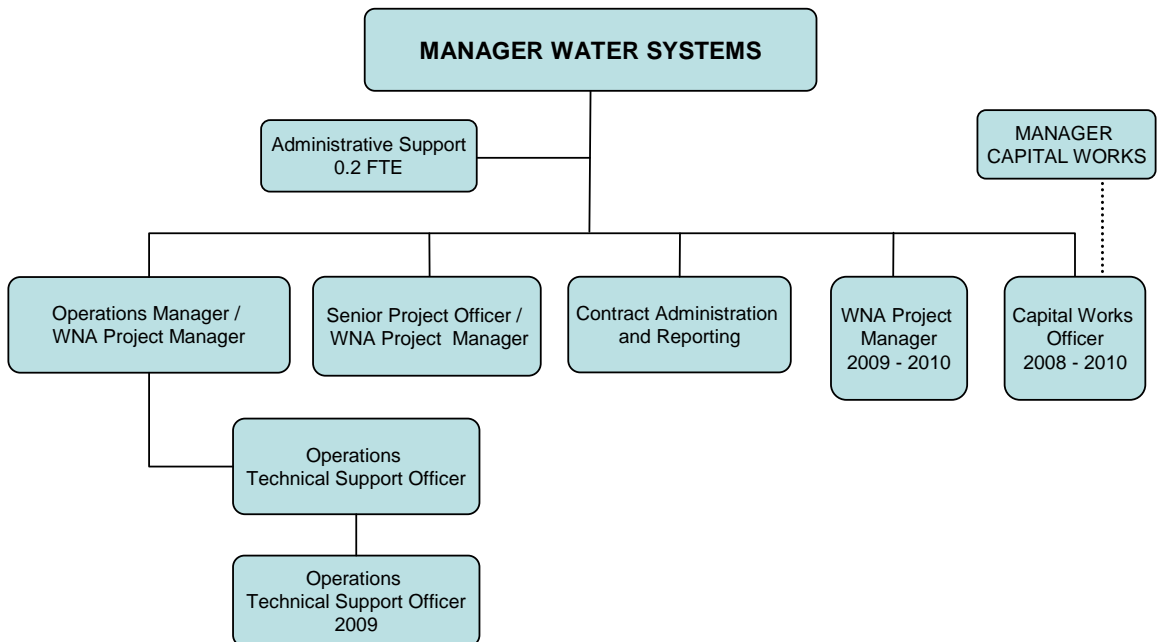


Ongoing structure

Playford has initiated a review of the optimal organisation for the management and operation of the water business which the project has developed. This will be reported in the Evaluation Reports.

3.2.2 Salisbury

Personnel & Structure

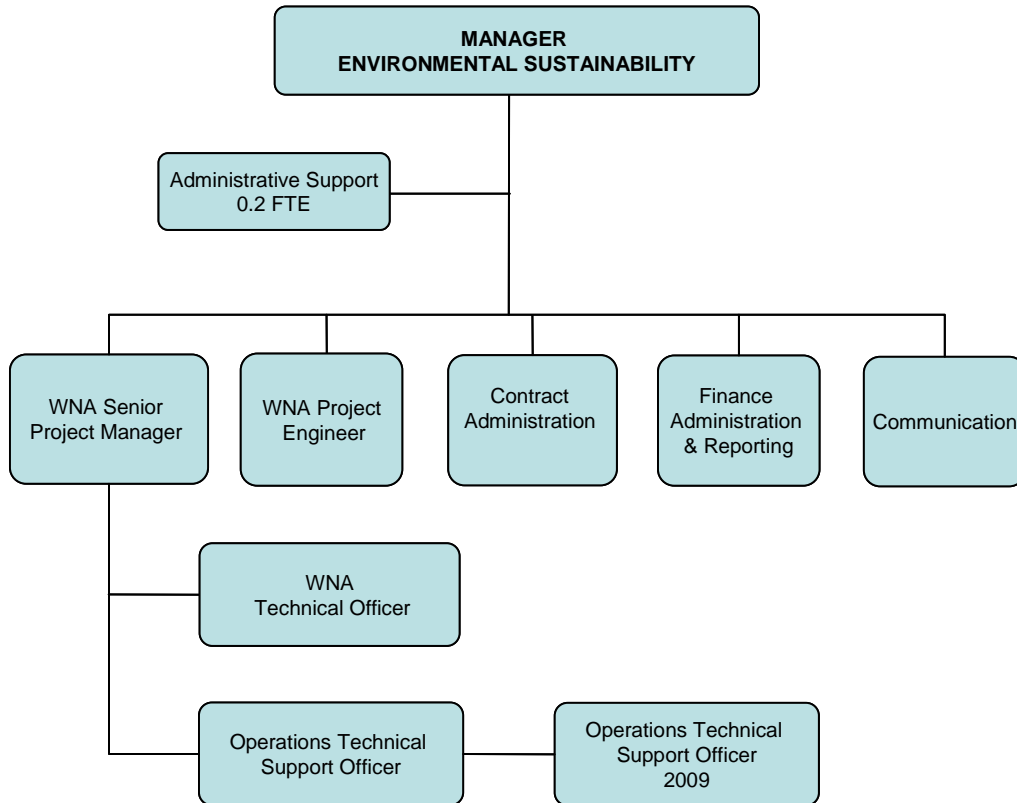


Ongoing Structure

Salisbury established its Team as a Business Unit within the Council to develop and operate the system.

With the completion of the project the form of the Business Unit has been reviewed and some changes have been put in train to improve the effectiveness of the operation.

3.2.3 Tea Tree Gully Personnel & Structure



Ongoing structure

Tea Tree Gully will initiate a review of the optimal organisation for the management and operation of the water business which the project has developed and the operation of the CWMS plant developed in parallel to this project. This will be reported in the Evaluation Reports.

3.3 Technical Innovation

The Councils undertook to pursue innovation and best practice in implementing the project. The following sections set out some of the highlights of the project which have advanced the standards of planning, design and construction of urban stormwater management systems.

3.3.1 Distribution systems

The project has advanced several aspects of fit for purpose infrastructure to deliver recycled water. These include Directional Boring to lay distribution mains in built up urban areas. The project has underpinned the importation of new equipment and the development of skilled operators to the ongoing benefit of the water industry. These changes allowed the integration of the whole distribution system which has increased the robustness of the supply.

3.3.2 SCADA

The use of computer and communications technology to collect data on the system and control it from a central location with the system being able to analyse the data into reporting formats for the regulatory authorities has been advanced considerably. This is allowing the operation of the schemes to be refined and the operating costs to be contained.

This has formed the platform for the development of automated data transfer to Bureau of Meteorology and Regional Natural Resource Management Board for public information via their respective web sites.

3.3.3 Mechanical Treatment

The use of a mechanical treatment plant, based on flocculation and filtration, to provide the final removal of colloidal and organic components from stormwater drawn from a large storage dam. Then disinfected using UV and prepared for injection into a medium risk fractured rock aquifer is a new application of existing technologies.

This is a replacement of open water wetlands, it uses less space and is lower in capital investment.

3.3.4 ASR controlled detention

The findings of the ASTR research have been applied to more closely define the effectiveness of aquifer storage in achieving log reductions in pathogens within the recycled water treatment train.

This has led to refinements in design and operation of ASR borefields to improve risk reduction without significant cost increases, thus enhancing the utility of the recycled water.

3.3.5 MAR in Fractured Rock

During the project the regulatory requirements for the use of Fractured Rock aquifers were subjected to rigorous debate and evaluation. This has resulted in considerable improvements in; the preparation of Catchment and Aquifer Risk Assessment, the consideration of Environmental Values in Licensing and the monitoring needs to ensure that the system is operating within approved parameters.

These have been of benefit for other applicants subsequent to the project.

3.4 Approvals

The project has been carried out in urban catchments which are subject to several regulatory requirements. These are:

- (a) environmental qualities of the receiving waters are protected under an Environmental Protection Act which empowers an Environmental Protection Policy regulation for Water Quality
- (b) water resources for some of the resources in the area have been prescribed and will be controlled by Water Allocation Plans. These are:
 - Central Adelaide Plains Prescribed Wells Area, groundwater, will be included in an amended plan with the Northern Adelaide Plains.
 - Little Para Prescribed Watercourse, watercourses, will be included in the Western Mount Lofty Ranges Plan
 - Northern Adelaide Plains Prescribed Wells Area, groundwater, current Plan being reviewed and will include Central Adelaide Plains
 - Western Mount Lofty Ranges (includes Torrens River), groundwater, Watercourses and Surface Water, will have a Plan prepared.
- (c) public health risks resulting from the use of recycled water are regulated under the Health Act. This requires approval for use of water containing reclaimed waste water, this is by way of an Irrigation Management Plan. By agreement schemes using only recycled stormwater or groundwater are submitted for endorsement, rather than approval.

In general the approach taken by the various authorities has been coordinated and they are working towards a Managed Aquifer Recharge Code of Practice which will empower the application of National Recycled Water Guidelines in South Australia.

Each scheme is assessed by preparing a risk assessment of the contributing catchment and assessing the barriers to contamination and treatment offered by the barriers put in place. This is used in conjunction with the Water Pollution Protection regulation and the Environmental Values determination to secure a License to Discharge from EPA. Then a model of the injection plume and assessment of the zone of Influence together with the predicted risks to existing groundwater users will set the conditions in an ASR licence from Department for Water. Depending on the water source an approval under the Health Act or an endorsement for the scheme is required. If approval is needed, because reclaimed waste water is used, a risk based Irrigation Management Plan is required for approval.

Each of these approvals requires a monitoring and reporting regime to be implemented. These supplement and are coordinated with the regulatory reporting of water information to the Bureau of Meteorology and the NRM Board's regional system. Both these systems provide on line data which obviates the need to provide it specifically for the WNA schemes.

The development of the schemes is subject to regulation in the following ways:

- Native Title is protected under its own legislation, this applies particularly to watercourses
- Heritage, Indigenous and European, each subject to specific legislation and particularly applicable to areas close to water prior to or during initial settlement
- Water Affecting Activities, to protect the environmental values of watercourses under the Natural Resources Management Act. This applies particularly to weirs and bank works.

- Certain built elements are large enough to require approval under the Development Act which empowers a Development Plan. This covers tanks and pump sheds but the wetlands and drainage structures are exempt

Each Council has been responsible for obtaining all approvals for their Capital Works and has done so.

WNARS has provided overall briefings to the regulatory agencies, has had the key regulators as observers at Technical Group meetings and has facilitated a coordinated approach to securing approvals for the various Capital Works. This has been of assistance to the individual Councils in setting the regional context, as has the preparation of regional models for surface and subsurface water resources across the region.

3.5 Policy Development

3.5.1 Water Pricing

WNARS has devoted some effort to understanding the NWI policy on pricing of urban water and has made submissions to ESCOSA in its review of the processes and principles of water pricing by SA Water.

The Councils have made considerable efforts to establish the portion of their water assets which are producing recycled water and those which are fulfilling statutory obligations of flood mitigation and environmental enhancement. This has allowed them to assess their likely Upper Bound Costs, allowing for whole of life and depreciation of assets.

During the course of the project WNARS has arranged for legal advice on the mechanisms for charging for water and has held working sessions to help the constituent Councils develop and coordinate their policies. This work has been recorded in the Board papers.

WNARS has made a recommendation to the Constituent Councils on a preferred water pricing policy which covers both sale to external customers, the price to be applied for internal customers and an inter-Council trading price. These cover both sale of delivered water and sale of groundwater credits.

Following the recommendations of the Board and the lead of Salisbury, all three Councils have implemented the policy. They are using the recommended price and approach to secure a price for their water which in accordance with NWI principles recovers at least the full Upper Bound Price, which is calculated at being no more than \$2100/ML, including a cash provision for asset sustainment. This is reported in Section 6, Achievement of Objectives refer Item E.

The latest policy is included as Appendix F.

3.5.2 Greenways

The development of a linked system of urban landscape, walking and cycle routes which are called Greenways has been fostered in the region by WNARS.

The main waterways form the East-West elements of a network of routes which link to the major metropolitan system located down the Torrens, radially from the City and along the Coast. These are shown on the plan included as Appendix G.

This system has been developed in consultation with the State and is now endorsed in the 30 Year Plan for Greater Adelaide.

The development of the main components of the plan has been costed and a long term assistance program with the State discussed to develop the Greenways of Northern Adelaide over the coming 10-15 years.

3.6 Policy Input

While undertaking policy development for its constituent Councils the Subsidiary has had significant and influential input to the development of policy at a State level. This has included:

Waterwise Adelaide

WNARS prepared a vision for an integrated urban stormwater reuse scheme for the whole of Adelaide as a submission to the Water Security Commissioner in her work on preparing a Water Security Plan for South Australia. The Commissioner asked WNARS to present its submission to the Water Security Council.

The submission was substantially accepted and has been incorporated into the plan, called Water for Good.

A copy of the submission is included as Appendix H.

ESCOSA Price Setting Reviews

Each year the Emergency Services Commission of South Australia (ESCOSA) has undertaken a review of the process by which the State sets its water prices. These reviews have considered some of the key elements included in the water price and the relationship between the State treatment of these and the National Water Initiative principles.

WNARS has made submissions to these drawing attention to the manner in which treatment of some elements understate the Upper Bound price and hence allow the State to set too low a price for mains water.

It is not possible to state what effect these submissions have had, however the price of water has risen considerably and appears set to rise further.

National & State Recycled Water Guidelines

WNARS has made submissions based on the combined experience of the Councils in operating urban stormwater reuse and Managed Aquifer Recharge schemes as part of the process of formulating these guidelines.

It is difficult to determine what effect the submissions, generally seeking simple low cost controls and monitoring requirements, may have had.

MAR Code of Practice.

The state has had a working group preparing a Code of Practice for Managed Aquifer Recharge for some years.

The intent is for the Minister for Environment to authorise the Code and the EPA can then withdraw from issuing Licences to Discharge, the Department of Water licences for MAR will include compliance with the Code of Practice.

WNARS has provided a group member to represent MAR operators. This has made the draft document much more practical.

The draft is nearing release for public consultation.

Groundwater, Environmental Values,

The EPA has been undertaking state wide evaluation of ambient groundwater quality with the intent of setting specific environmental values for each significant aquifer.

WNARS has made its data and staff available as input to the process. It is hoped that this will result in setting values to be implemented through the Code of Practice which will be more practical and will assist the operation of MAR schemes.

Development of Adelaide & Mt Lofty Ranges NRM Board regional monitoring

WNARS has worked closely with both Adelaide & Mt Lofty Ranges NRM Board and Bureau of Meteorology (BoM) to ensure that the catchments are appropriately monitored and that the mass of stream data (flow and quality) which is collected on the operating sites is made available to better understand urban catchments and their management as well as reporting on the outcome of the system.

WNARS has worked closely with BoM to ensure that the local systems are integrated with the flood warning stream data and the Water Act reporting requirements. This includes the development of a database management system to facilitate input direct to BoM database.

3.7 Conclusion

The conclusion is that WNARS and the Councils have provided useful input from a practical operator's viewpoint to the development of policy and processes for the management of urban catchments and aquifers.

4 SUB-PROJECTS & CAPITAL WORKS

This chapter presents the background to the project, the target water balance and then the description of each Capital Work and Other Activity grouped by the Catchments which are the Sub Projects in the Funding Agreement.

4.1 Plan at Commencement

The project was conceived as development of 28 wetlands in the 5 catchments with Tea Tree Gully linking their 10 small ASR's in Fractured Rock together with an Integrated Distribution main, Playford linking their 3 ASR sites with a distribution main and Salisbury supplying radially or by credit transfer from their 15 sites.

4.2 Changes to Plan

As the project was implemented issues emerged to modify the fundamental approach.

Linked systems were developed, driven by the need to support small schemes that were not capable of supporting their local customer base, eg. the Paddocks and variations in rainfall patterns over the catchments resulting in large variations in harvest, again meaning customer supply could be compromised. The linked system approach was assisted by reduced cost of distribution mains, largely due to improvements in Directional Boring technology and equipment.

Life cycle costings for operating small ASR systems was shown to be more expensive per unit of water supplied. This encouraged concentration on the more efficient larger linked schemes.

The cost of construction rose much faster than CPI and the scheme had to be delivered within the Budget, which reinforced the elimination of the smaller schemes. Additionally the schemes were staged to develop the capacity to capture and treat the water while harvest, storage and distribution infrastructure were held to the minimum needed to meet the supply targets.

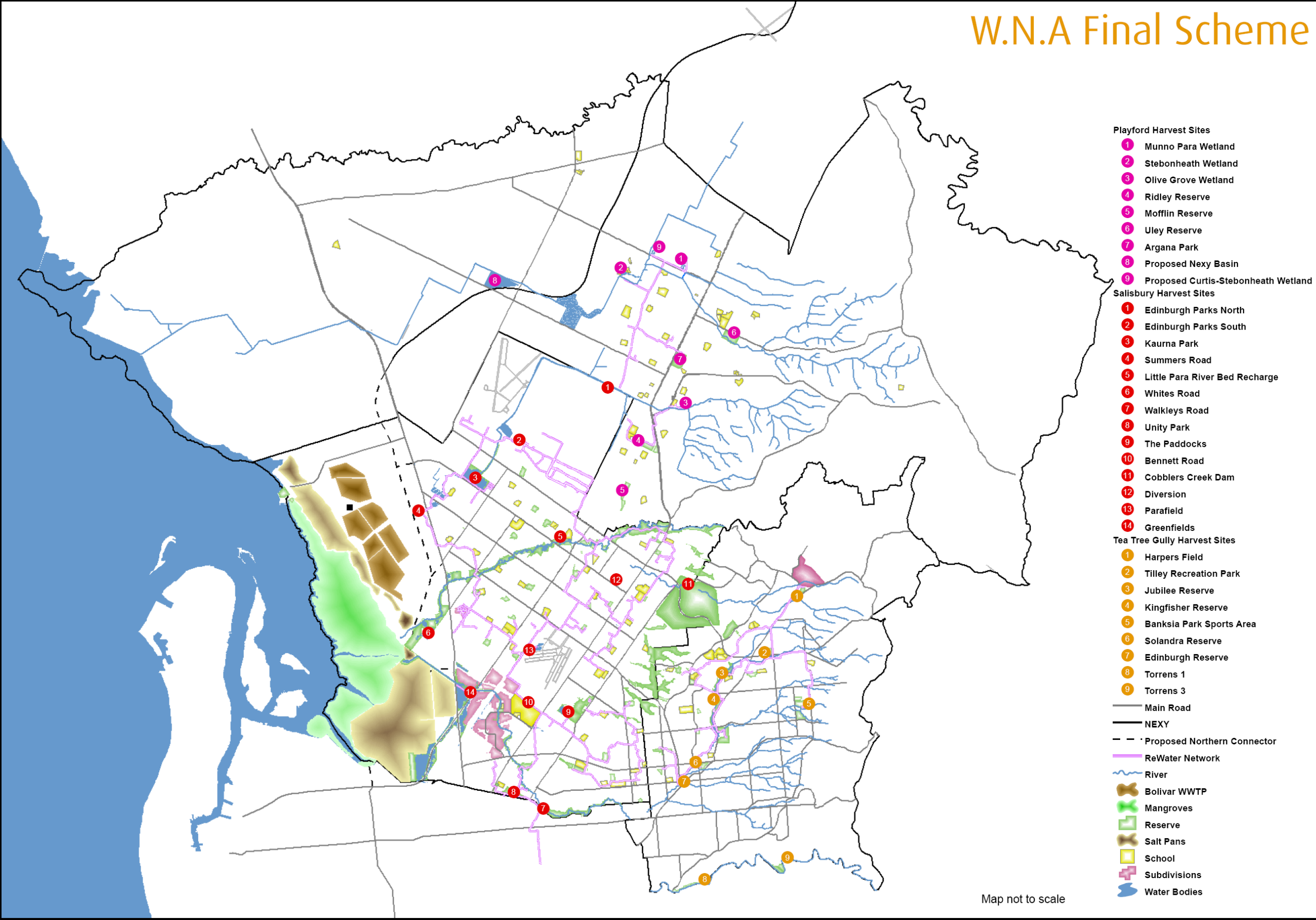
The Councils have secured additional funding from later programs to develop the latent capacity to match increased demands. This staged development approach will continue as WNA forms the base for expansion.

4.3 Plan at Completion

The scheme as it stands at June 2010 is shown in Figure 3 as follows.

The scheme is complex comprising flood and flow controls and cleansing wetlands in the catchments all feeding water to harvesting wetlands for direct supply or injection into the aquifer. The water is either extracted from the aquifer at the point of injection or at a location to which 'injection' credits have been transferred. The extracted water is distributed to users via a dedicated 'purple pipe' system. In some cases the extracted water is blended with reclaimed waste water for reuse.

W.N.A Final Scheme



Map not to scale

Figure 3 WNA Plan at Project Completion

4.4 Water Balance

The predicted water balance for the region at the completion of WNA is shown in Figure 4. Surface and groundwater resources which form WNA are presented on the left. The waste water resources which do not form part of the WNA project are shown on the right. All water volumes are in gigalitres or billions of litres per year.

The City of Tea Tree Gully CWMS project has been developed in parallel with the WNA project. This compliments WNA but does not form part of the WNA project.

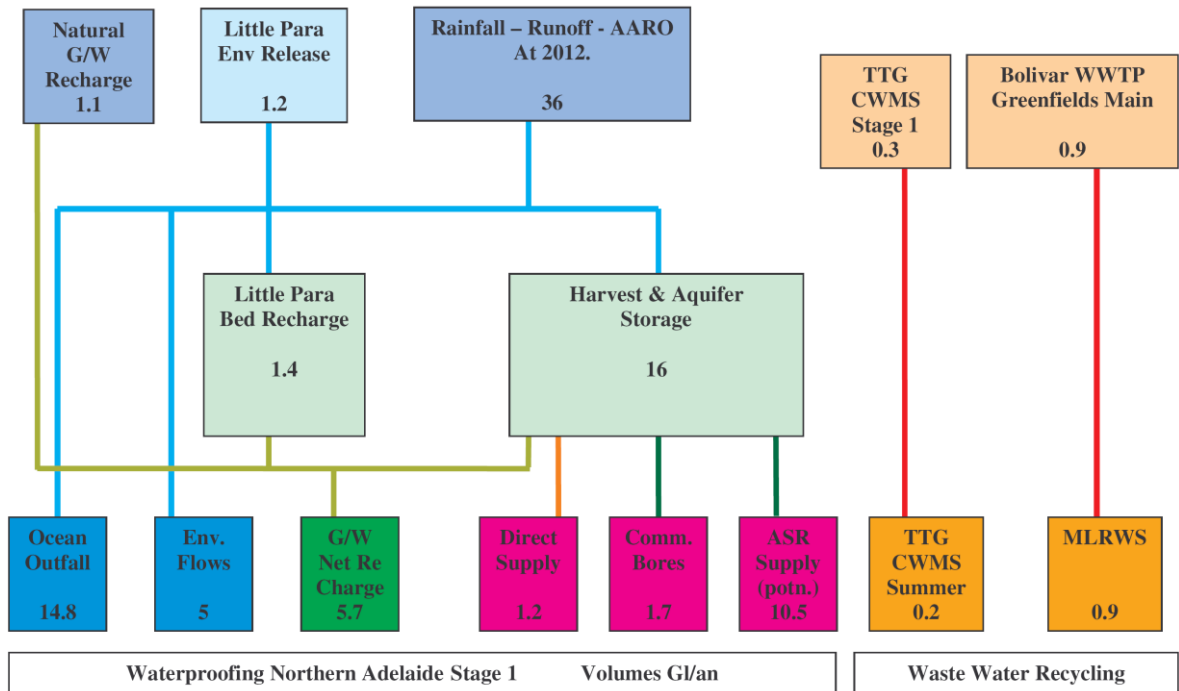


Figure 4 WNA Stage 1 Predicted Water Balance

4.5 WNA Water Balance – Overall Scheme Philosophy

The Waterproofing Northern Adelaide Water Balance Overall Scheme Philosophy is as follows:

Sequential development of each catchment;

- commencing with flow control structures which detain peak flows for flood mitigation and can store water for optimal harvesting
- other cleansing wetlands and detention structure within the catchment contributing stormwater to the main waterways
- flow directing structures within the drainage system to divert low flows to the main waterways for effective harvesting
- a series of wetlands linked by a main waterway developed as a Greenway
- allow for environmental flow to sustain Greenway and allow for bed recharge if known
- each wetland will cleanse the stormwater and may harvest and store in the aquifer
- leave an environmental contribution of 20% in the aquifer to assist groundwater sustainability
- recovery from bores to surface balance tanks
- distribution via pumped mains to users or by credit transfer to community bores for extraction and distribution to users.
- supply in bulk to SA Water for blending with reclaimed waste water and supply

Individual schemes will have distinctive features but the general approach set out above is shown schematically in Figure 5 below.

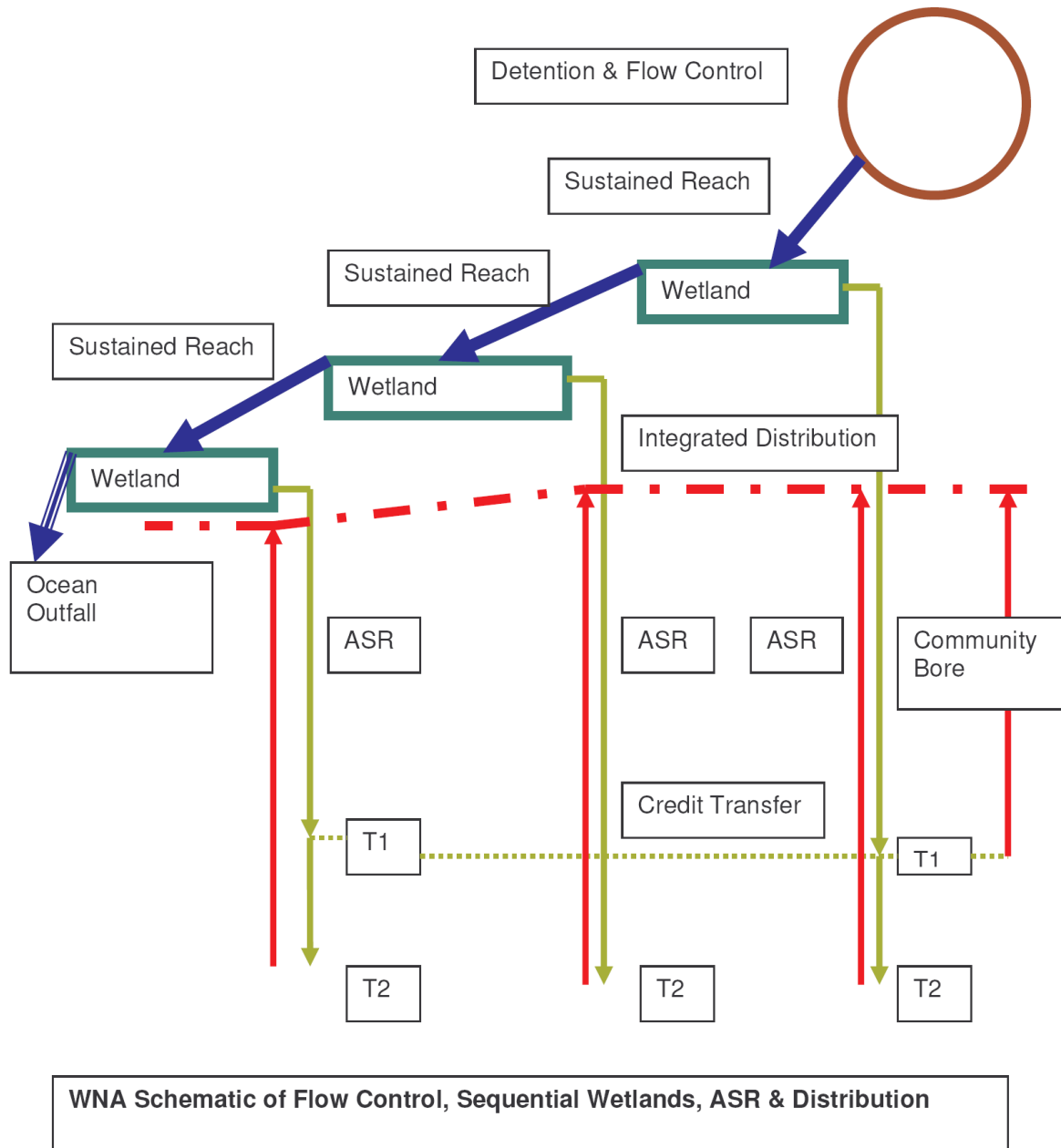


Figure 5 WNA Schematic

4.6 Capital Works Detail

Table 1 provides an overview of the catchments, harvesting wetlands, the ASR borefields and their performance.

Sub-Project / Capital Work Waterway	Wetland Name	Catchment Area ha (urban/rural)	Type In/Off line	Wetland Volume ML	Area Ha	ASR Yes/No	Bores No	Aquifer Name	Inject Cap ML/a	Inj Rate / Bore l/sec
TORRENS										
Torrens 1	Mahogany	40	O	3	1	Y	1	FR	80	7.5
Torrens 2	-	-	-	-	-	N	1	FR	0	0
Torrens 3	Aqueduct Way	River Torrens	O	3	1	Y	1	FR	140	9
DRY CREEK										
Upper Dry Creek										
Wynn Vale	Wynn Vale	650/450	I	60	3	Y	1	FR	20	2.5
+ Tilley (ASR)	-	-	-	-	-	Y	1	FR	110	8
+ Banksia (ASR)	-	-	-	-	-	Y	1	FR	200	12
Kingfisher	Kingfisher	82	O	5	1	Y	1	FR	30	3.5
Solandra	Solandra	80	O	2	1	Y	1	FR	20	1.5
Edinburgh	Edinburgh	2185/675	O	3	1	N	-	-	-	-
Lower Dry Creek										
Unity Park	Unity Park	4200/1300	O	6	3	Y	1	T2	165	12
+ Walkleys	-	-	-	-	-	N	-	-	-	-
+ Montague (ASR)	-	-	-	-	-	Y	3	T2	1040	25
The Paddocks	The Paddocks	60	I	40	1	Y	1	T2	210	15
Bennett Road	Bennett Road	2020	I	14	1	Y	1	T2	345	25
Parafield	Parafield	2620	O	122	12	Y	2	T2	690	25
Greenfields	Greenfields - Stage 1	1010	O	512	42	Y	4	T1	1020	18.5
ASTR	(Parafield)	-	-	-	-	Y	4	T2	550	10
LITTLE PARA RIVER										
Upper Little Para										
Harpers Field	Harpers Field	10/150	O	10	1	Y	1	FR	120	15
Lower Little Para River										
Salisbury Community Bores	Adams Oval	-	-	-	-	N	1	T1	-	-
	Lake Windemere	-	-	-	-	N	1	T1	-	-
HELPS ROAD DRAIN										
Edinburgh Parks North	Flow Control Pk	1834	I	391	8	Y	2	T1/T2	555	15/25
Edinburgh Parks South	Southern Basin	3032	O	370	15	Y	3	T2	1245	30
	Railway Wetland	209	I	10	2	N				-
Kaurna Park	Kaurna Park	298	I	188	40	Y	2	T2	830	30
Playford Community Bores	Mofflin	-	-	-	-	N	1	T1	0	-
	Uley	-	-	-	-	N	1	T1	0	-
	Ridley	-	-	-	-	Y	2	T1	100	6
Olive Grove (Adams Creek)	Olive Grove	1124	O	12	1	N	-	-	-	-
SMITH CREEK										
Munno Para West	Curtis-Coventry	790/1790	O	95	5	Y	3	T2	667	28
	Curtis-Stebonheath	400/0	O	48	3	N	1	T2	340	28
Andrews Farm	Stebonheath Park	1615/2920	O	65	4	Y	2	T2	571	28
Andrews Farm South	Andrews Farm South	-	-	0	0	N	1	T2	0	0

Table 1 Capital Works Summary

4.7 Tea Tree Gully Schemes

Schemes are presented in their Sub-Projects which are catchment based. Tea Tree Gully's works are predominantly in Torrens and Upper Dry Creek, with one project in the Upper Little Para catchment. These are shown in Figure 6 below.

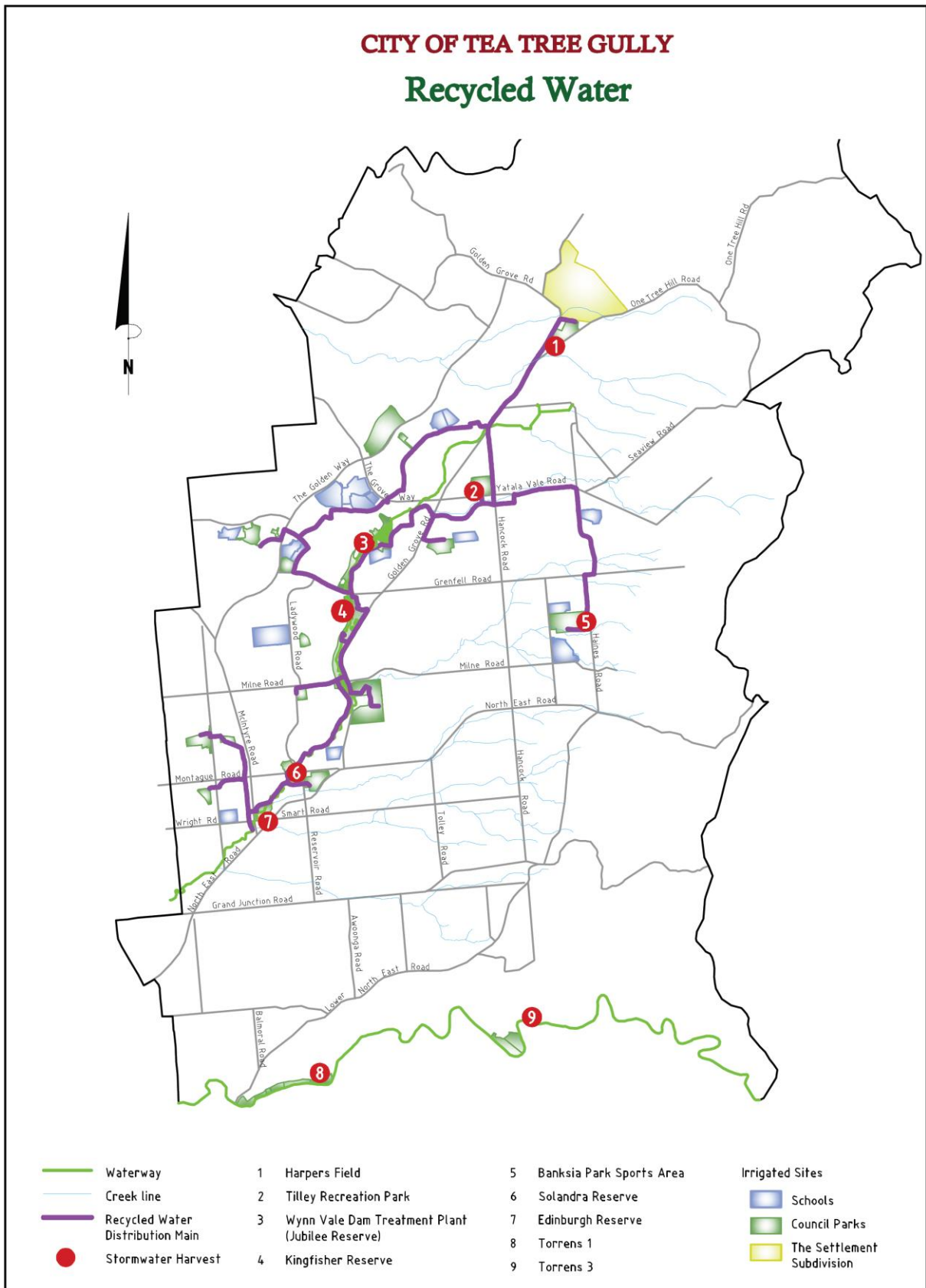


Figure 6 City of Tea Tree Gully Scheme

Torrens

Torrens 1 (Map Legend 8)

Description of Capital Work

- An off line, open water wetland which provides a recreational feature within the Torrens River Linear Park.
- The wetland is fed from the urban drainage system. Additional water can be sourced from the River Torrens.
- Water is treated initially through the wetland and then disinfected by UV prior to injection.
- The wetland incorporates numerous native aquatic and dryland plants
- Catchment area development, 40ha of developed residential area.
- Wetland area 1ha
- Wetland volume 3ML
- Site area Torrens Linear Park
- Flow rate 7.5l/s
- Harvest 80ML/year
- Storage 1 bore, 80ML/year in fractured rock
- Supply to Integrated Distribution Main

Design Detail

- City of Tea Tree Gully

Construction Detail

- | | |
|----------------------|--|
| • Wellfield | Kangarilla Drilling |
| • Civil | Beltrame Engineering |
| • Mech/Elec/Pipe | Lomman Industries |
| • Directional Boring | South Australian Directional Boring (SADB) |
| • | |
| • Communications | McKinnon Electronics |
| • Tank | Concrete Tanks |
| • Landscaping | Landscape Construction Services |



Torrens 3 (Map Legend 9)

Description of Capital Work

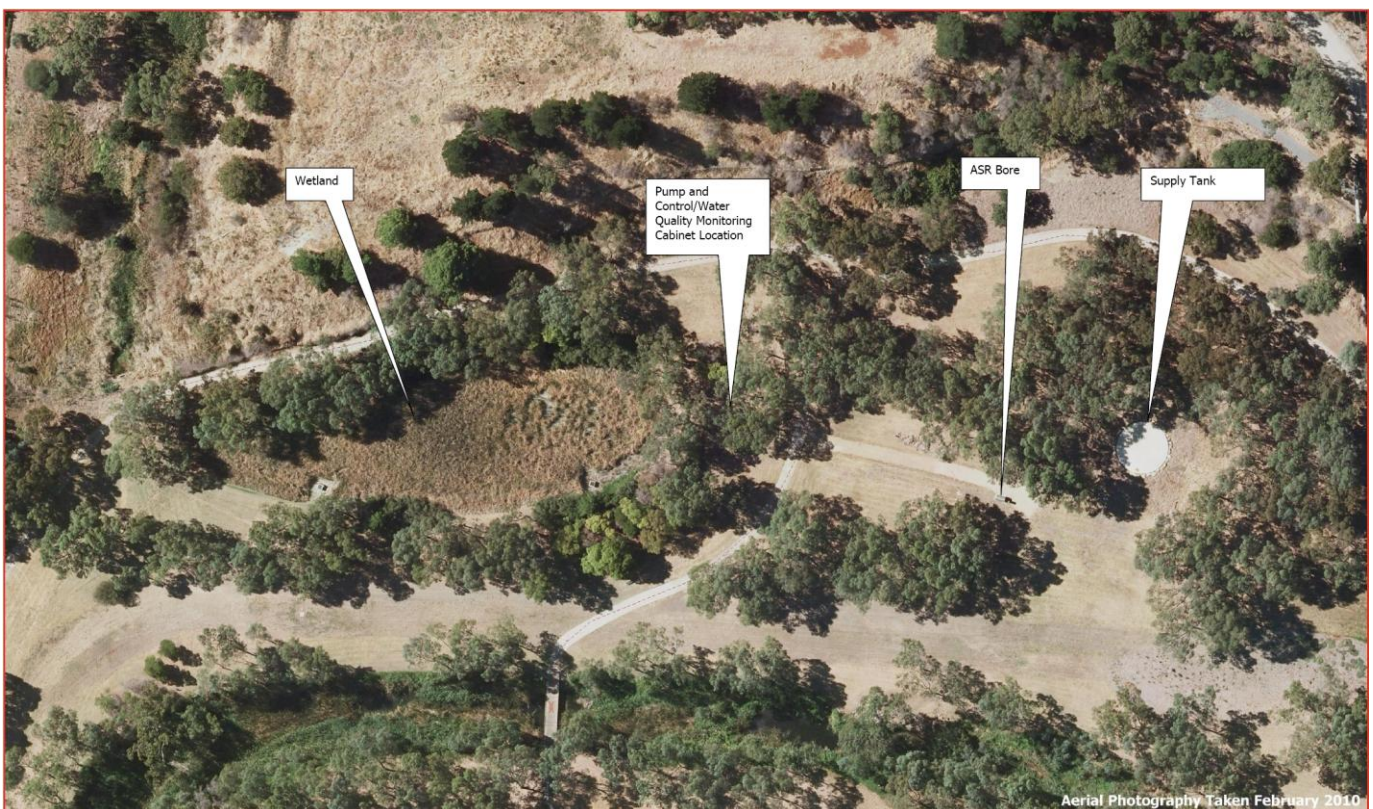
- An off line, open water wetland which utilised an existing water feature within the Torrens River Linear Park.
- Water is pumped from the main channel of Torrens River. Water is also sourced from a small residential catchment.
- Water is treated initially through the wetland and then disinfected by UV prior to injection.
- Water is drawn from the bores to a balance tank and then distributed for use for irrigation within Torrens Linear Park.
- Catchment area development, Torrens River.
- Wetland area 1ha
- Wetland volume 3ML
- Site area Torrens Linear Park
- Flow rate 9 l/s
- Harvest 140 ML/year
- Storage 1 bore, 140 ML/year in fractured rock
- Supply to Integrated Distribution Main

Design Detail

- City of Tea Tree Gully

Construction Detail

- | | |
|------------------|----------------------|
| • Wellfield | Kangarilla Drilling |
| • Civil | Beltrame Engineering |
| • Mech/Elec/Pipe | Lomman Industries |
| • Communications | McKinnon Electronics |
| • Tank | Concrete Tanks |



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Torrens Linear Park 3 – Wetland, ASR Bore and Tank

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Upper Dry Creek

Tilley and Banksia Park ASR (Map Legend 2 & 5)

Description of Capital Work

- These are two bores which are providing storage for water treated at Wynn Vale Dam.
- The supply is from the Integrated Distribution Main.
- The water is subject to UV disinfection before being supplied into the mains and hence prior to injection.
- Water is drawn from the bores to a balance tank and then distributed for use.
- The bores have injection rates of 8 and 12l/s into Fractured Rock.
- The sites provide 110ML and 200ML of storage.

Design Detail

- City of Tea Tree Gully

Construction Detail

- | | |
|--------------------|---------------------------|
| • Wellfield | Kangarilla Drilling |
| • Mech / Elec/Pipe | Lomman Industries |
| • Civil | Beltrame Engineering |
| • Tanks | Concrete Tanks |
| • Communications | McKinnon Electronics/SAGE |



Tilley ASR



Banksia ASR

Wynn Vale (Map Legend 3)

Description of Capital Work

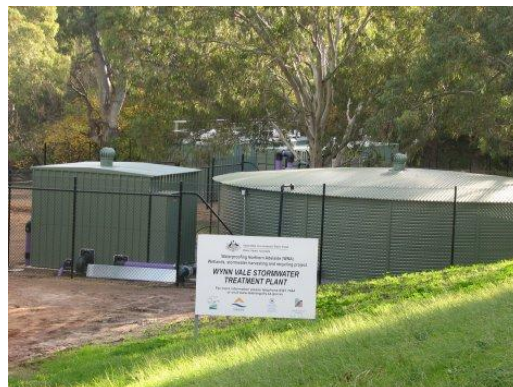
- The redevelopment of an existing dam built in the 1960's to provide irrigation to vineyards. The dam provides a very important recreational resource (no primary contact) within the Dry Creek Linear Park. A boardwalk, new creek crossing and improved path network were developed to reinforce this use.
- The dam was desilted to increase sediment capture capacity, and an aerator fountain installed to improve water quality.
- The water enters the dam from the main channel of Dry Creek and by several piped urban drains.
- A new mechanical treatment train was added. This consists of coagulation, filtration and UV disinfection to produce injection quality water.
- Catchment Area development, 650ha of almost fully developed residential area and 450ha of rural area which contains some significant extractive industries which present a threat to inflow water quality.
- Wetland area 3ha
- Wetland volume 60ML
- Site area 8ha
- Flow rate 25l/s
- Harvest 330ML/year
- Storage 1 bore on site, Fractured Rock, 2.5l/s
- Supply to Integrated Distribution main for injection at Tilley Reserve and Banksia Park

Design Detail

- City of Tea Tree Gully
- Mechanical Treatment Plant D&C Amiad Water Systems

Construction Detail

- Mechanical Treatment Plant D&C Amiad Water Systems and Lomman Industries
- Wellfield Kangarilla Drilling
- Civil Belframe Engineering
- Tanks Pioneer Water Tanks
- Boardwalk SEM
- Landscaping Colin Share Landscaping





Contact Details
 PO Box 571
 Modbury SA 5092
 571 Montague Road, Modbury
 Tel (08) 8397 7444
 Fax (08) 8397 7400
 TTY (08) 8397 7340
www.teatreegully.sa.gov.au
 Email cttg@cttg.sa.gov.au

Wynn Vale Dam and Stormwater Treatment Plant

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Kingfisher (Map Legend 4)

Description of Capital Work

- An off line open water wetland which provides a recreational attraction within the Dry Creek Linear Park.
- Water is harvested from the Mallett catchment via an offtake weir at the end of an urban drainage system.
- Catchment Area development, 82ha of developed residential area.
- Wetland area 1ha
- Wetland volume 5ML
- Site area 4ha
- Flow rate 3.5l/s
- Harvest 30ML/year
- Storage 30ML/year in fractured rock
- Supply to Integrated Distribution Main

Design Detail

- City of Tea Tree Gully

Construction Detail

- | | |
|-------------------|---------------------------------|
| • Wellfield | Kangarilla Drilling |
| • Mech/Elect/Pipe | Lomman Industries |
| • Civil | Beltrame Engineering |
| • Communications | McKinnon Electronics |
| • Tanks | Concrete Tanks |
| • Landscaping | Landscape Construction Services |



Solandra (Map Legend 6)

Description of Capital Work

- An off line open water wetland which provides a recreational feature within the Dry Creek Linear Park. Water is disinfected by UV prior to injection.
- The wetland incorporates a viewing platform and is adjacent to a developed recreation area.
- Water is drawn from a lined urban drain which overflows into Dry Creek main channel.
- Catchment Area development, 80ha of developed residential area.
- Wetland area 1ha
- Wetland volume 2ML
- Site area 3ha
- Flow rate 1.5l/s
- Harvest 20ML/year
- Storage 20ML in fractured rock, bore on site or higher performance bores supplied through Integrated Distribution Main
- Supply to Integrated Distribution Main

Design Detail

- City of Tea Tree Gully

Construction Detail

- | | |
|--------------------|------------------------------|
| • Wellfield | Kangarilla Drilling |
| • Civil | Beltrame Engineering |
| • Mech / Elec/Pipe | Lomman Industries |
| • Landscaping | Council, Grounds and Gardens |



Edinburgh (Map Legend 7)

Description of Capital Work

- An offline open water wetland with limited public access located in the Dry Creek Linear Park. It acts to cleanse water which is then delivered by the Distribution Main for final treatment through the mechanical filtration and UV disinfection plant at Wynn Vale Dam or through the wetland at Kingfisher Wetland
- Water is drawn from the main channel of Dry Creek which is fed by several constructed urban drains and some more natural creeks which are fed by urban drains.
- Water is also sourced from the urban creek at Dawson Reserve for delivery to the Edinburgh Wetlands.
- Catchment Area development, 2185ha of substantially developed residential and 675ha of rural catchment
- Wetland area 1ha
- Wetland volume 3ML
- Site area 3ha
- Flow rate 5-10l/s
- Harvest forms top up to Wynn Vale Dam or Kingfisher Wetland

Design Detail

- City of Tea Tree Gully

Construction Detail

- | | |
|----------------------|----------------------|
| • Civil | Beltrame Engineering |
| • Mech/Elec/Pipe | Lomman Industries |
| • Directional Boring | SADB |
| • Weir | Vonmac |



Integrated Distribution

An approximately 30km main which links the harvesting wetland sites and the higher performing ASR sites when then supplies the bulk of water need for community purposes.

The integrated distribution main is as shown in Section 4.7, Figure 6 of the report.

The initial supply is to 18 major reserves

In the future the system will supply to:

- 17 schools
- other community facilities
- 3rd pipe to Harpers Field residential and retirement development

Also in the future, the main is planned to be supplemented by a Recycled Water Treatment Plant, which does not form part of WNA.

Design Detail

- City of Tea Tree Gully
- KBR

Construction Detail

- | | |
|----------------------|--------------------------------|
| • Directional Boring | SADB |
| • Mech/Elec/Pipe | Lomman Industries |
| • Tanks | Concrete Tanks / Pioneer Tanks |



Upper Little Para

Harpers Field (Map Legend 1)

Description of Capital Work

- An online, open water wetland which provides a feature for the surrounding new residential development.
- Water is sourced from a natural creek which acts as the drainage channel for the development and the upstream rural area.
- Catchment Area development – 10 ha of developed urban area with 150ha of rural area.
- Wetland area 1ha
- Wetland volume 10ML
- Site area 4ha
- Flow rate 15l/s
- Harvest 120ML/year
- Storage Fractured Rock
- Supply to Integrated Distribution Main

Design Detail

- Wetland – Tonkins
- ASR – City of Tea Tree Gully

Construction Detail

- | | |
|----------------------|----------------------|
| • Wellfield | Kangarilla Drilling |
| • Mech/Elect/Pipe | Lomman Industries |
| • Directional Boring | SADB |
| • Tanks | Concrete Tanks pl |
| • Communications | McKinnon Electronics |





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Harpers Field ASR Scheme

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4.8 Salisbury Schemes

The Salisbury part of the project is shown in Figure 7 on the following plan and is located in the Dry Creek, Little Para River and Helps Road catchments. Sites 4 & 6 will form part of a later extension known as Salisbury Stormwater Harvesting and are not part of the WNA project. Site 8 is being further expanded under the Water for the Future project, known as 'Unity Park Bio-filtration and Re-use'.

City of Salisbury Recycled Storm Water

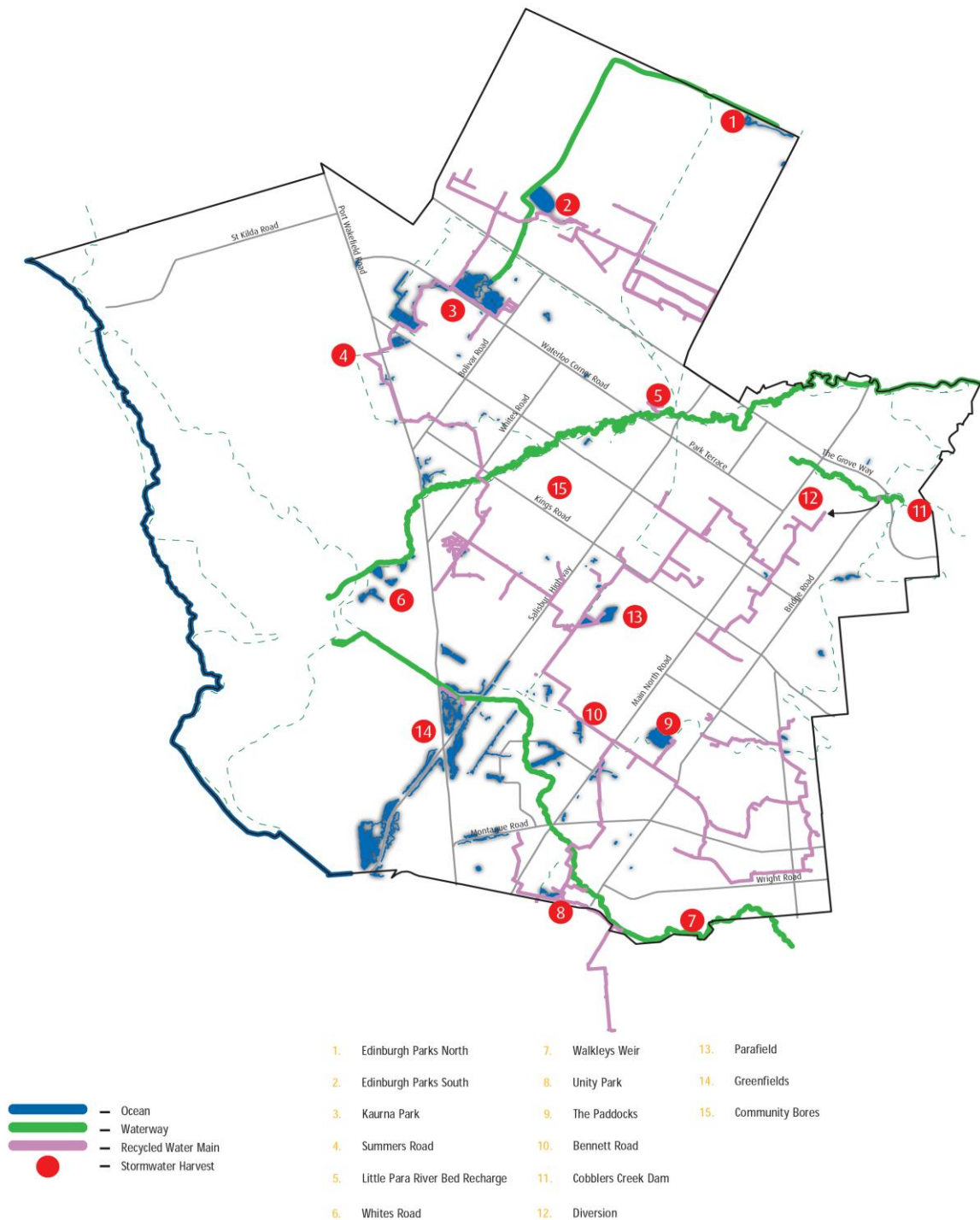


Figure 7 City of Salisbury Scheme

Lower Dry Creek

Walkleys Heights Flow Control Weir (Map Legend 7)

Description of Capital Work

- A flow control weir to detain high flows in the Dry Creek main channel and supply treatment wetlands at Unity Park, Pooraka.
- The supply is by a combination of controlled release down the main channel to a diversion pumping station at Royal Avenue supplemented by direct supply from the weir pool during higher flows.
- Height: 7m
- Volume: 50 ML
- Construction material: Clay core, Rock gabion protection

Design Detail

- Walbridge & Gilbert

Construction Detail

- SEM



Unity Park (Pooraka) / Lindblom Park / Montague Rd (Map Legend 7 & 8)

Description of Capital Work

- An upgraded Gross Pollutant Trap, new harvest intake and a larger pump were installed to pump from the main channel and supply the harvest treatment train. Twin off-line open water multiple basin wetlands have been completely reconstructed with new clay liners. (Under the WFF expansion of this project, the treatment wetlands will be supplemented by bio-filtration beds)
- The cleansed water is stored in a 3 bore well field adjacent to Montague Road and distributed through the integrated mains system. (The well field is currently being upgraded with a further 6 bores under WFF)
- Water is drawn from the main waterway of Dry Creek 5km downstream from Edinburgh wetlands (TTG), which is in natural condition.
- The substantial Dry Creek Catchment upstream of Edinburgh is supplemented by 4200Ha of partly developed residential area and 1300ha of rural catchment
- Wetland area 3ha
- Wetland volume 6ML
- Site area 18ha – Unity Park
4ha – Montague Road
- Flow rate Royal Avenue diversion 100l/s
Walkleys Weir transfer pipeline 200l/s
Treatment Rate (wetland) 100l/s
Bores 1 x 12l/s & 3 x 25l/s 87l/s
- Harvest 1200ML/year first stage, limited by wetland treatment rate and Bores.
Planned for easy expansion, as an extension to WNA.
- Storage 4 x T2
- Supply to Industry
3rd pipe to new 'Lightsview' residential development
Reserves
New Super School
- This scheme is being expanded further under the Water for the Future – Unity Park Bio-filtration and Reuse project.

Design Detail

- Walbridge & Gilbert
- DJ Electrix
- DesignFlow

Construction Detail

- Civil SEM
- Wellfield Olympic Drilling
- Wellfield infrastructure TRON Civil
- Reticulation SADB Directional Drilling





Stage 1: WNA funded

Stage 2: WFF funded



Process Schematic - Unity Park (Pooraka) / Lindblom Park / Montague Rd

The Paddocks (Map Legend 9)

Description of Capital Work

- An in line, open water, public access wetland constructed into a detention basin within a heavily landscaped reserve, adjacent to playing fields.
- Upgraded as part of WNA to increase its harvest capacity, upgraded distribution pump station, new control system (SCADA) and linked into overall Salisbury distribution network.
- Aquifer storage and supply to distribution network
- Water is drawn from underground drains from developed residential area
- Catchment comprises, developed residential 80ha
- Wetland area 2ha
- Site area 41ha
- Flow rate 1 bore x 15l/s
- Harvest 210ML/year
- Storage T2
- Supply to Distribution system
Reserves
Schools
Industry

Design Detail

- In House - Council

Construction Detail

- Mechanical Kutcha Electrical
- Electrical DJ Electrix
- Reticulation SADB



Bennett Road (Map Legend 10)

Description of Capital Work

- A pair of in-line wetlands (Main North Road and Warrendi) combining to a single harvest and ASR location, linked to the overall integrated distribution system.
- Water is drawn from three earth lined drains; from Warrendi wetland, from Main North Road (includes overflows from the Paddocks) and the Airport East drain. These combine into the Bennett Road drain.
- A weir in Bennett Road drain creates a pumping pool to supply a single ASR bore which is linked to the overall distribution system.
- Fed from a 2020ha substantially developed residential catchment which is currently undergoing scattered urban consolidation, with a minor proportion of developed light industrial area, plus a component of public facilities with significant open space; University, Technology Park, Airfield.
- Wetland area: 1ha
- Wetland volume 4ML
- Site area 2ha
- Flow rate treatment 25l/s
bore 1 x 25l/s
- Harvest: 345ML/year
- Storage T2
- Supply to Integrated distribution – reserves, schools, industry

Design Detail

- In house
- DJ Electrixs

Construction Detail

- Wells Olympic Boring
- Civil Tron Civil Pty Ltd
- Mechanical / Electrical PJ Savage / JB Civil



Parafield (Map Legend 13)

Description of Capital Work

- Upgrading an existing off-line, high performance wetland fed by two detention basins of 50ML each.
- This facility has escorted access only..
- The upgrade has included the diversion of flow from the Cobblers Creek Dam, which would otherwise flow through the constructed drainage system into the Little Para River. (Note, the natural flow of Cobblers Creek was via the Parafield plains to Dry Creek, but the drainage network constructed in the 1960's had diverted all flow to the Little Para)
- The distribution pumping system has been upgraded and balance tanks installed. This is now the primary pumping station for over 80km of integrated distribution mains .
- Water is drawn from the concrete lined Airport West drain.
- Catchment description, 2620 ha total catchment comprising
 - Open space, including Conservation Park
 - Extractive Industries area about 600ha
 - Residential, substantially developed, starting to undergo scattered urban consolidation
 - Industrial, partially developed
- Wetland area 12ha (includes two detention basins)
- Wetland volume 100ML detention, 4ML treatment
- Site area 15ha
- Flow rate 2 x 25l/s plus ASTR 4 x T2 bores at 10l/s
- Harvest 1240ML/year
- Storage T2
- Supply to Integrated distribution main

Design Detail

- Mechanical & Electrical D&C Leightons Contractors Pty Ltd
- Mechanical & Electrical DJ Electrix

Construction Detail

- Mechanical & Electrical D&C Leightons Contractors Pty Ltd
- Mechanical & Electrical Mayfield Engineering P/L
- Civil Tron Civil Contracting
- Tanks Concrete Tanks (Aust) Pty Ltd



Greenfields (Map Legend 14)

Description of Capital Work

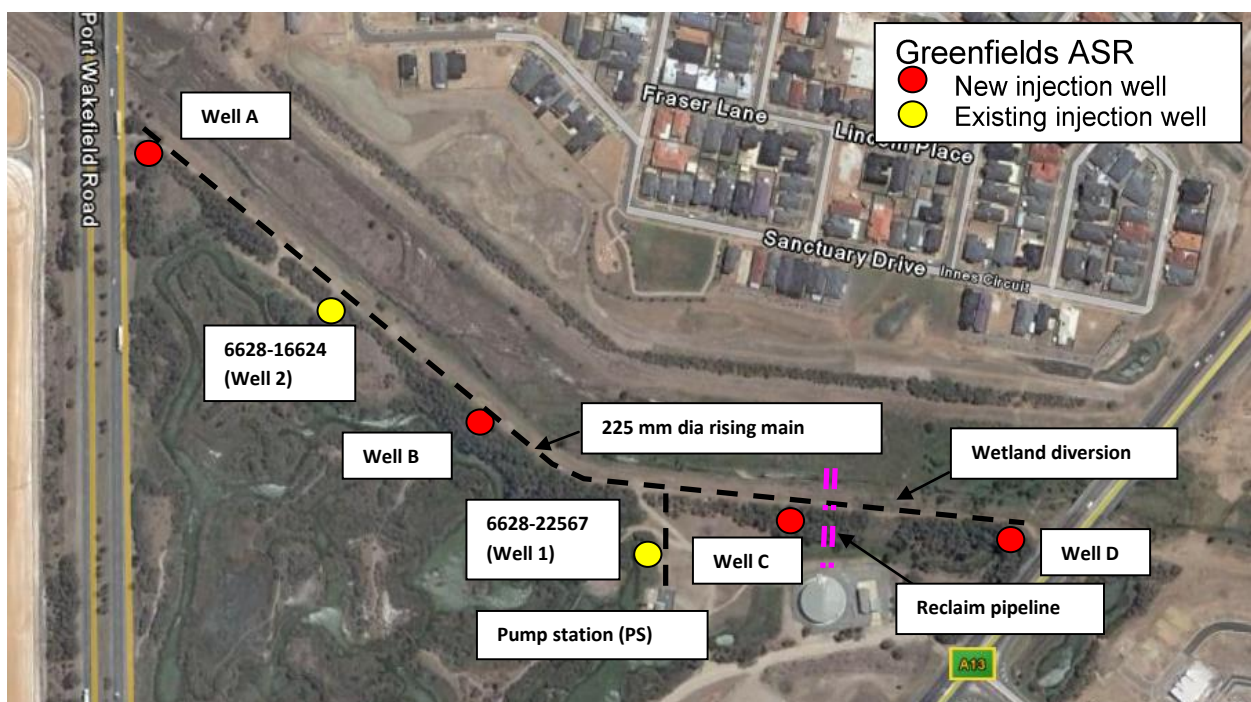
- Upgrading of an existing off-line sequence of wetlands which have been developed in an integrated overland flow route. Existing infrastructure included a pumped harvest station for injection and a direct supply extraction pool to supply a salt works.
- The upgrade has consisted of adding flows from new wetlands created as part of new subdivisions to the main harvesting wetland .
- Developing a flood release weir to allow increased volumes to be held in the main harvesting wetland for increased harvest capacity.
- Increase the number of injection bores from 2 to 5.
- Flow from the main waterway of Dry Creek and from wetlands associated with adjacent subdivisions feeds this complex of wetlands.
- Dry Creek catchment, almost fully developed,
 - Predominantly residential
 - Mawson Lakes significant development (4,500 dwellings), contains pre-treatment wetlands
- Wetland area Stage 1 - 19.5ha
- Wetland Volume Stage 1 - 512ML
- Site area 54ha
- Flow rate bores 4 x 18.5l/s
- Harvest 1020ML/year
- Storage T1
- Supply to Credit transfer for 18 community bores and Parafield Gardens reWater project – 4 extraction bores, 800 dwellings

Design Detail

- Walbridge & Gilbert
- In house

Construction Detail

- Civil & Mechanical Camco (SA) Pty Ltd
- Electrical Active Electrical Controls Pty Ltd
- Bores Olympic Boring



Lower Little Para

Salisbury Community Bores (Map Legend 15)

Description of Capital Work

- Drilling and equipping the final 2 extraction bores of a set of 22 T1 bores
- Irrigation of reserves and schools
- The bores have a licenced allocation of 224ML/annum. The licences have been acquired over many years, primarily from market gardeners, when their land is sold for housing developments. Additional capacity is provided, when required, by the licenced trading of injection credits. .

Design Detail

- In house design

Construction Detail

- Leightons Contractors Pty Ltd
- Olympic Boring
- Various minor contractors and Council staff



Little Para - Environmental Flow Management (Map Legend 5)

Description of Capital Work

- The upgrading and equipping of a V-notch weir gauging station just downstream of the Little Para Reservoir, to monitor the environmental releases of 1,200ML/year which SA Water are compelled to provide, in order to sustain natural recharge rates and the riparian environment of the Little Para River.
- The natural bed recharge is estimated to provide about 1400ML/year to the T1 aquifer. This sustains the high quality plume of T1 along the Little Para, from which the Community bores draw.

Design & Construction Detail

- Australian Water Data Services to NRM Board requirements, D&C

Helps Road Drain

Edinburgh Parks North (Map Legend 1)

Description of Capital Work

- Major detention basin which contains in line wetland as well as acting as a flow control to optimise downstream harvest
- This is to be supplemented by additional upstream detention with controlled release, works commencing this summer.
- Stormwater is received from Adams Creek and other lined urban drains from Elizabeth South and Elizabeth West.
- The catchment is 1834ha of predominantly developed residential with a small component of developed industrial area.
- Wetland Area 8.3ha (main basin & wetland)
- Wetland volume 391ML
- Site Area 10ha (no public access, but the area will be opened with future development)
- Flow rate 40l/s
- Harvest volume 600ML/year
- Storage 1 x T1, 15L/sec & 1 x T2, 25 L/sec
- Supply to: distribution system, Edinburgh Parks Industrial, Defence Edinburgh

Design Detail

- Aecom
- DJ Electrix

Construction Detail

- Reticulation SADB Directional Drilling Pty Ltd
- Mechanical / Electrical Kutcha Electrica



Edinburgh Parks South (Map Legend 2)

Description of Capital Work

A set of 3 wetlands,

- RAAF drain, 5km of highly vegetated open earth lined drain designed to act as flood transmission and an in-line cleansing wetland, with no open water as a deterrent to water birds adjacent to the RAAF airfield
- Edinburgh South wetland, an off-line treatment wetland with feed from the main RAAF drain, the Southern drain through the Edinburgh Parks industrial area and the Railway Triangle wetland.
- Railway Triangle wetlands, an in line wetland receiving water from an industrial catchment extending along the southern edge of Edinburgh Parks and including the GM Holden plant in Elizabeth South.
- Three drains all earth lined and substantially vegetated
- Major harvest and pumping station infrastructure
- Catchment Area development:
 - Penfield, currently undeveloped, planned for residential
 - Airfield and its buffer areas, includes aircraft fuelling, maintenance and wash down
 - Industrial, partly developed, includes newly constructed Hardened Networked Army (HNA) Base at Edinburgh, for a total area of 3032ha
 - The Railway Triangle wetland is fed by a 209ha partially developed industrial catchment
- Wetland area

RAAF drain	6ha
Edinburgh Parks South	15ha
Railway Triangle	2.1ha
- Wetland Volume

RAAF Drain	36ML
Edinburgh Parks South	390ML
Railway Triangle	10ML
- Site area: 25ha, public access to non-defence area's
- Flow rate bore 3 x 30l/s
- Harvest 1244ML/year
- Storage T2
- Supply to: Distribution system and then to industry and defence

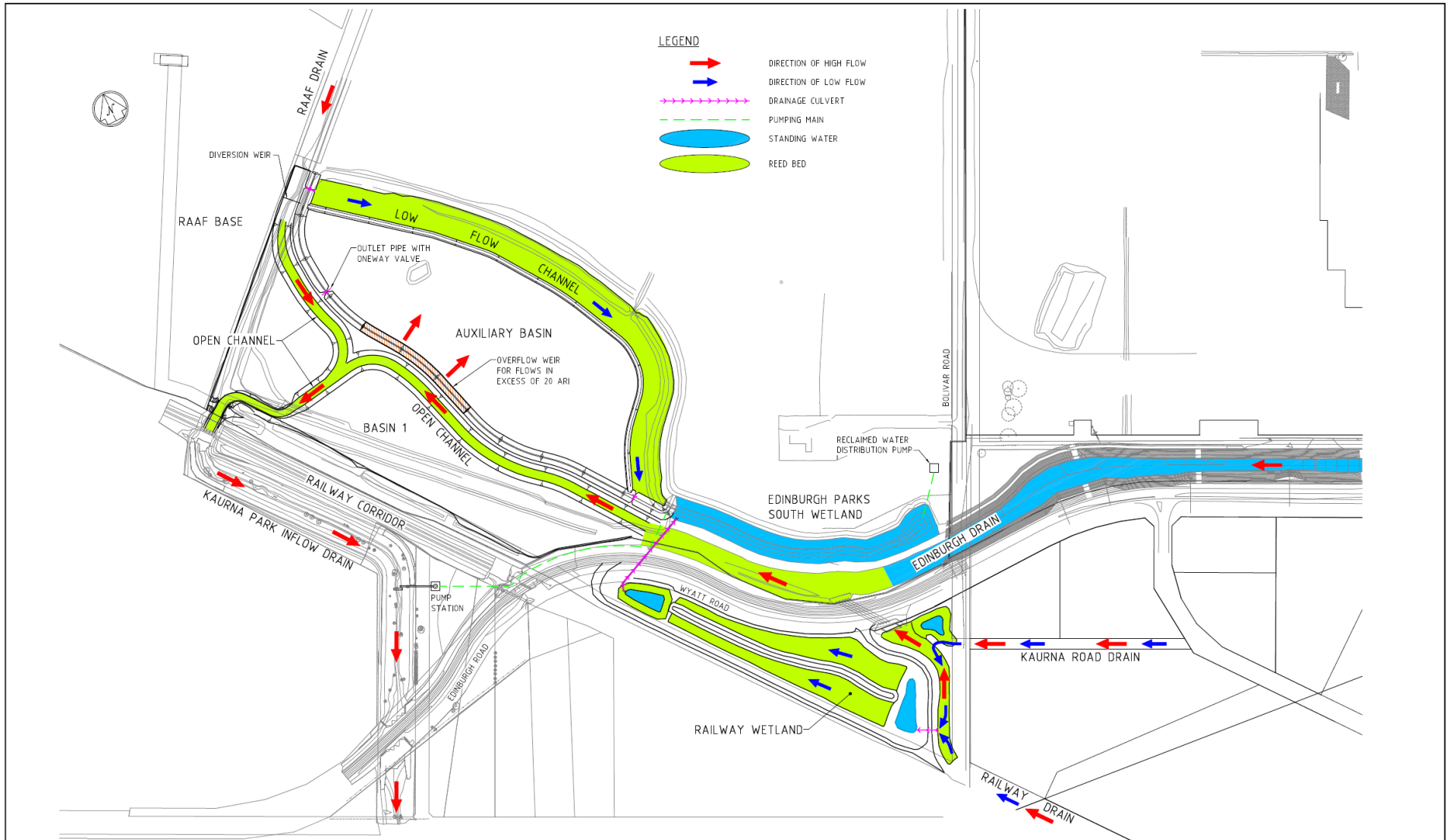
Design Detail

- Initial design KBR
- Upgrading Leightons / Aecom / DJ Electrix

Construction Detail

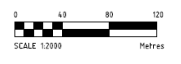
- Civil LR&M
- Civil – Wetlands/Drainage TRON Civil, JB Civil
- Landscaping Landscape Construction Services
- Mechanical/Electrical Leighton Contractors Pty Ltd
- Well fit out Olympic





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				DP/PP No.	PP 07-055-05



APPROVED _____
NAME _____
DATE _____



DESIGN TITLE	DESIGN VERIFICATION		
	NAME	SIGNATURE	DATE
SURVEYOR			
PROJECT OFFICER / CIVIL DESIGNER			
TRAFFIC MANAGEMENT MANAGER			
LANDSCAPE & SECURITY MANAGER			
WATER SYSTEMS MANAGER			
CIVIL DESIGN MANAGER			
CAPITAL WORKS MANAGER			

EDINBURGH PARKS SOUTH DETENTION BASIN
PRELIMINARY SITE PLAN

PLAN No. C-5555-01 SHEET No. 01 PC REV.

Kurna Park (Map Legend 3)

Description of Capital Work

- Upgrading of an existing in-line wetland contained within a flood detention basin. The wetland was planted with local indigenous species and has a walking trail which provides an education site for the indigenous people of the northern Adelaide Plains (Kurna people)
- Major harvest and distribution pump station upgrade
- Reticulation Linkages to Edinburgh South and Parafield Gardens
- Inflow from Helps Road drain channel flows by-passing Edinburgh South, plus minor inflows from lateral piped drains from adjacent developed areas.
- Catchment Area development : Substantially un-developed market garden areas with ongoing industrial and residential developments, area of 298ha
- Wetland area: 40ha
- Wetland volume 188ML
- Site area: 56ha
- Flow rate: bore 2 x 30l/s
- Harvest: 829ML/year
- Storage: T2
- Supply to Distribution system, industry (particularly plant nursery), council reserves & schools, third pipe to new residential

Design Detail

- Mechanical & Electrical D&C Leightons Contractors Pty Ltd

Construction Detail

- Reticulation SADB Directional Drilling Pty Ltd
- Mechanical & Electrical D&C Leightons Contractors Pty Ltd
- Tanks Adelaide Hills Concrete Tanks
- Mech/Elect DJ Electrix / Kutcha Electrical
- Wellfield Olympic



Reticulation (Salisbury)

The plan located at the commencement of Section 4.8 , Figure 7 shows the layout of over 80Km of distribution main. This main supplies recycled water through much of the City of Salisbury. Links to the neighbouring Council areas are under construction as part of the WFF expansion. This distribution network is supplied from the ASR sites and is supplemented by the supply from the 22 community bores.

The water is supplied to:

- irrigated Council reserves and ovals, golf courses
- schools
- major industrial areas; Edinburgh Parks, Salisbury South, Dry Creek/Cavan, Para Hills West
- SA Water to blend with reclaimed waste water for supply to Mawson Lakes
- new residential developments at Burton, Parafield Gardens, Brahma Lodge and Ingle Farm.
- Commercial nurseries, market gardeners

Injection credit transfers are used to balance extraction bores irrigating reserves as well as those maintaining ornamental lakes in new developments.

Design

- System Analysis and modelling ARUP
- Detail design Walbridge & Gilbert

Construction

- Tron Civil Pty Ltd
- SADB Directional Drilling



SCADA

Description of Capital Work

Systems Control and Data Acquisition.

All Salisbury systems are controlled locally via Programmed Logic Controllers (PLC). An over-arching computer based control system (SCADA) has been implemented which allows the monitoring and remote operation of the water reuse schemes via Council's internal PC network, and after-hours operation via the Internet. The SCADA system allows full control of all electrically operated equipment including pumps and valves.

At each site, data is acquired from instruments monitoring the quality of the water (salinity, pH, turbidity), the quantity of water (levels in storages or bores, flow rates) or the status of the system (eg pumps operating, pressures, flows, valves closed or partly opened, disinfection equipment)

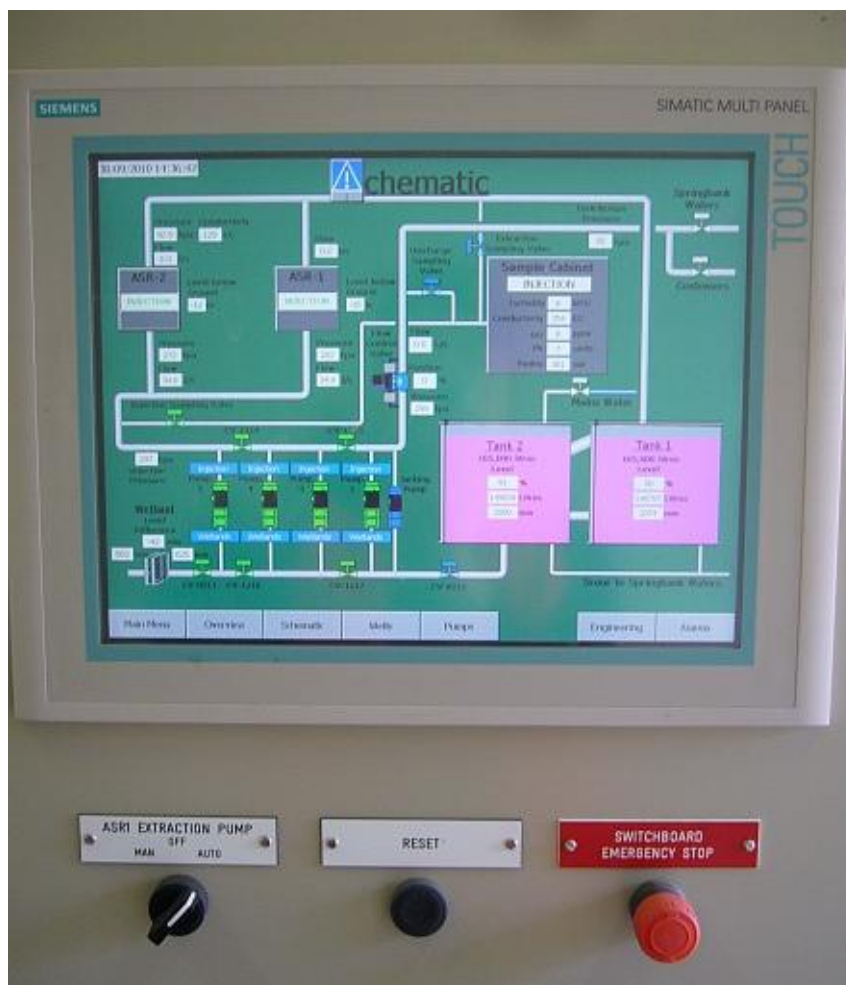
The data is collected, displayed on trend charts, and archived. Routine reports are generated which can be used for reporting to regulatory bodies. The archived data can also be readily interrogated for non-standard analyses.

Design Detail

- Scoping Study – SAGE

Construction Detail

- Siemens
- DJ Electrix



4.9 Playford Schemes

The extent of the WNA project in Playford is as shown in [Figure 8](#).

Two catchments are involved in this rapidly developing area, Helps Road Drain (also known as Adams Creek) and Smith Creek. Two wetlands, 5 community bores and a distribution system have been completed. Five community bores have been drilled and will be equipped in the future and two wetlands have been prepared for completion.

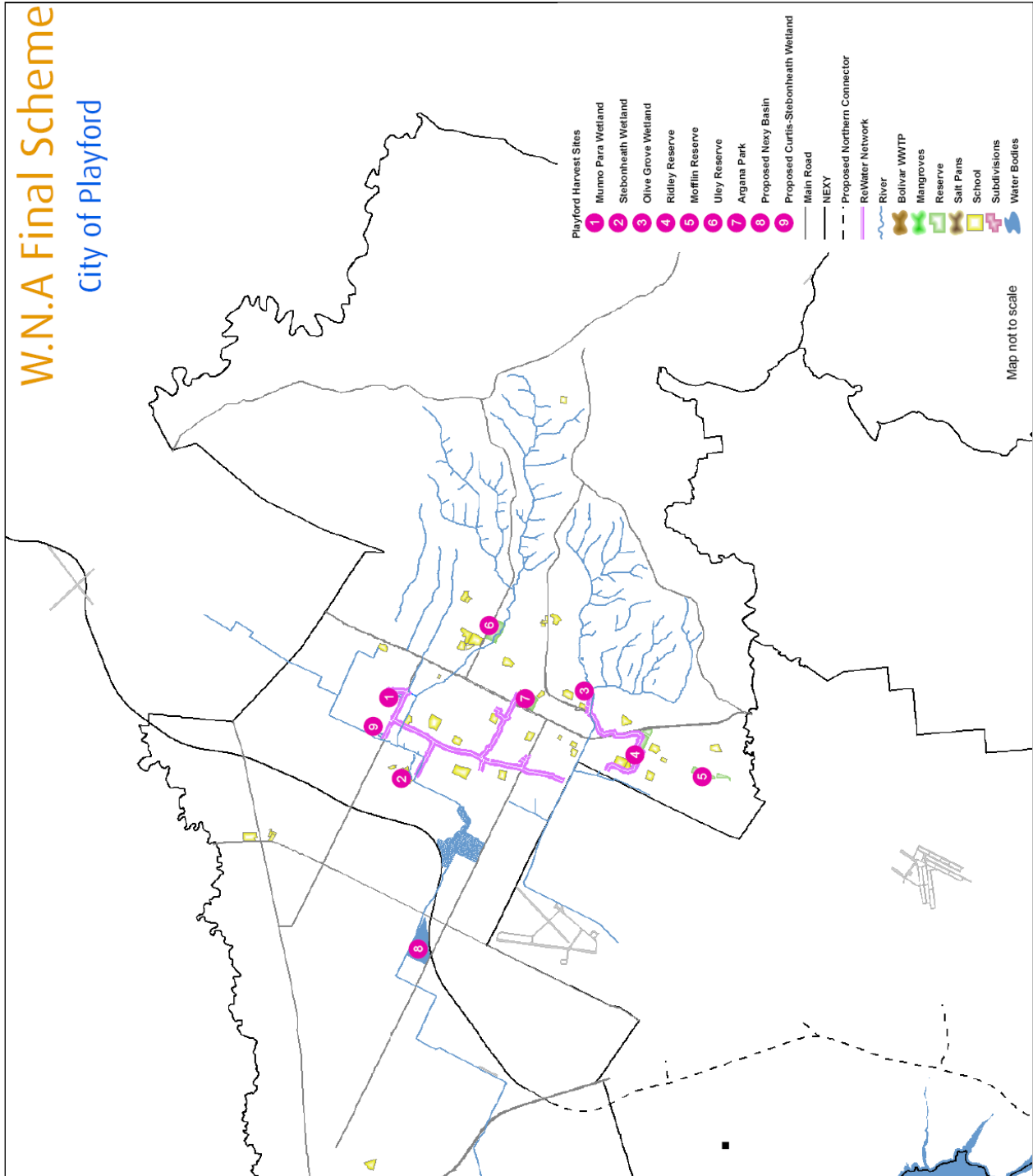


Figure 8 City of Playford Schemes

Helps Road Drain Catchment

Olive Grove (Adams Creek) Map Legend 3

Description of Capital Work

- Open water, public access wetland with off - line operation
- Stormwater is diverted from Adams Creek which is unlined.
- Runoff from rural areas and an existing developed urban catchment of 1124ha
- Wetland area 1ha
- Wetland volume 12ML
- Total site area 10ha
- Treatment train flow rate 12litres/sec for water suitable for injection
- Total annual harvest volume 100ML/year
- ASR storage in 2 x T1 bores located on Ridley Reserve
- Supply into distribution mains

Design Detail

- Initial design by KBR
- Upgrade design by Walbridge & Gilbert

Construction Detail

- Mechanical & Electrical D&C Guidera O'Connor



Smith Creek

Munno Para West (Map Legend 1)

Description of Capital Work

- Two open water public access wetlands operating off line from source waterways and forming part of new development's open space.
- Stormwater is diverted from Smith Creek and Craigmere Road Drains which are unlined but well established with vegetation.
- Stormwater runoff from an existing developed urban catchment of 1190ha and a rural catchment of 1790ha
- Wetland area is 8ha
- Wetland volume is 143ML
- Total site area is 12ha
- Treatment train flow rate is 96 litres/sec for water suitable for ASR injection
- Total harvest volume is 1007 ML/year
- ASR is 4 x T2 bores, which operate at 28L/s per well
- Supply is into distribution mains on Curtis Road

Design Detail

- Walbridge & Gilbert
- DesignFlow
- Guidera O'Connor

Construction Detail

- | | |
|---------------------------|---------------------------------|
| • Civil & Earthworks | York Civil |
| • Aquatic Planting | Landscape Construction Services |
| • Mechanical & Electrical | Guidera O'Connor |
| • Terrestrial Landscaping | Consolidated Landscape Services |
| • Footbridges | Seacon |





MUNNO PARA WETLAND
 CONCEPT MASTERPLAN NTS

Andrews Farm (Map Legend 2)

Description of Capital Work

- Open water, public access wetland with new high flow diversion drain integrated into landscape spine, on line wetland operation
- Stormwater is diverted from Smith Creek and Andrews Farm open unlined drains
- Runoff from an urban catchment of 1615ha which is about a quarter developed, with development proceeding rapidly.
- Wetland area is 4ha
- Wetland volume is 65ML
- Total site area 19ha
- Treatment train flow rate 51 litres/sec for water suitable for injection
- Total annual harvest volume 571 ML
- ASR storage in 2 x T2 bores, with an operating injection rate of 28L/s per well.
- Supply into distribution mains on Davoren Road

Design detail

- Walbridge & Gilbert
- DesignFlow

Construction detail

- | | |
|------------------------------------|---------------------------------|
| • Civil & Earthworks | York Civil |
| • Aquatic and terrestrial planting | Landscape Construction Services |
| • Mechanical & Electrical | Guidera O'Connor |





boardwalks, decks and bridges



regional playspace



path network



shelters and outdoor furniture



native revegetation



wetland redevelopment



open space

- 1 IRRIGATED OPEN GRASS AREAS
-open areas of parkland irrigated with water recycled from the wetland.
- 2 FUTURE REGIONAL PLAY SPACE
-easy to access creative play space designed using land form and natural elements; to be incorporated progressively subject to funding.
- 3 NEW CAR PARK
-new car park to improve access and use of the reserve, sealed for all weather use, located to integrate with play space, toilet and active recreation areas.
- 4 FUTURE CAR PARK
-potential to increase the size of the car park as the local population increases and the park establishes.

- 5 TOILETS
-existing toilets to be maintained and improved.
- 6 SHELTERS AND PICNIC TABLES
-various sheltered locations for picnics and social gatherings, located along the path network.
- 7 PATH NETWORK
-all weather path network that links the various features of the reserve.
- 8 BRIDGE OVER WETLANDS, BOARDWALK AND DECKING
-safe access to the waters edge for educational, recreational and environmental purposes.

- 9 AQUATIC PLANTS
-selection of local native aquatic plants that provide habitat for local wildlife and improve water quality through biological processes.
- 10 NATIVE REVEGETATION
-extensive revegetation using local shrubs and trees that will provide habitat for fauna, and shade for park users.
- 11 DRAINAGE CHANNEL
-overland flow path for excess water not captured by the wetland system.

- 12 WEIR
-stone lined weirs for wetland overflow into drainage channel.
- 13 RECYCLED WATER STORAGE TANK
-pump house and storage tank for irrigation system.
- 14 FUTURE FITNESS AREA
-proposed fitness equipment and fitness trail.
- 15 BIKE AND PEDESTRIAN PATH
-commuter path with lighting.



Drawing

CONCEPT DESIGN

Project

STEBONHEATH PARK REDEVELOPMENT. ANDREWS FARM

Date
May 2008
Scale (metres)
0 20 40

Drawn
JH
Checked
VZ



Andrews Farm South

The development of this area was intended to use a central landscaped spine containing a Golf course as the key attraction for the area. Tenders failed to elicit a suitable developer and a more conventional landscape spine for recreation will be developed. The golf course would have brought the wetland development to the commencement of the program and hence into WNA timeframe. A conventional landscape spine will be developed more slowly as land is released.

Preparatory works – the flood mitigation development of Smith Creek has been completed and this includes the excavation of the basins for a future wetland. These are to become the Council's property.

A T2 bore has been drilled in preparation for ASR but will remain unused at present.

Potential exists for a wetland to be constructed at this site when funds become available, with a potential yield of up to 270 ML/year.

Playford Community Bores

Map Legend 4 - 7

Description of Capital Work

- Drilling of 10 and fit-out of 5 wells at Council reserves so that groundwater can be used for irrigation. Sites completed include Uley Reserve and Mofflin Reserve.
- Injection credit transfers and/or groundwater allocations will be used to balance extraction bores.
- Bores drilled and not fitted out as part of this project will be fitted out as future projects or assessed as unsuitable for use due to low flow rates and high salinity.

Design Detail

- Hydrogeology Australian Groundwater Technologies
- Mechanical & Electrical D&C Guidera O'Connor

Construction Detail

- Mechanical & Electrical D&C Guidera O'Connor
- Wellfield Olympic
- Civils / tanks etc Guidera O'Connor
-



Playford Reticulation Network

18km of main has been constructed to supply recycled stormwater to Council ovals, sports fields, schools and schools within the existing urban area.

The plan located at the commencement of Section 4.10, Figure 8 shows the extent of the reticulation system owned and operated by the Council but not the much more extensive system proposed by SA Water to supply mixed recycled stormwater and reclaimed waste water to the new residential developments of Playford Alive.

Sites include -

- 17 major Council reserves, ovals & sports fields
- 14 Schools
- Council Operations Centre
- Central Districts Oval
- Aquadome
- Elizabeth South industrial area
- SA Water to supplement reclaimed waste water for third pipe supply to Playford Alive.

Design Detail

- Walbridge & Gilbert

Construction Detail

- SADB Directional Drilling Pty Ltd



4.10 Research

4.10.1 Aquifer Storage Treatment & Recovery (ASTR)

This project was a joint research initiative between CSIRO, United Water International, SA Water, Salisbury Council and WNARS.

➤ Goals

To develop cost effective well-field storage solutions

To investigate the time effectiveness of detention of cleansed urban stormwater in the aquifer for disinfection.

A subsidiary goal was to develop the infrastructure needed for the research in such a manner that it could be used as an storage (MAR) site after completion of the research.

➤ Research Outline

A comprehensive risk assessment of the catchment was undertaken to define contaminants for testing. This supplemented the history of water quality produced by the Parafield Wetlands.

Geohydrologic investigation and modelling to define the borefield layout, 4 injection wells surrounding 2 extraction wells.

Flushing injection to establish a fresh water store in the aquifer.

Timed detention prior to extraction, detailed testing and comparison of injected water & extracted water

➤ Summary of Results

Detention in the aquifer is highly effective in removing bacteria, moderately effective in removing protozoa and relatively ineffective in removing viruses. In high risk applications the extracted water would require disinfection using chlorine or equivalent.

➤ Reports by CSIRO are available on the website.

4.10.2 Controllable Detentions

This was a research project led by the Salisbury Council to investigate the effectiveness of using different types of controllable storage upstream of harvesting wetlands to increase the volumetric efficiency of harvest.

➤ Goal

To determine the effectiveness of different forms of controllable detention in improving urban stormwater harvest.

➤ Research Outline

Based on hydrologic modelling compare the effect of flood control dams and residential rainwater tanks as controllable detention.

➤ Summary of Results

Flood Control Dams

Four flood control dams were initially modified to incorporate controlled release mechanisms. After two seasons, two systems have been abandoned as the high level of undeveloped catchment feeding these dams resulted in minimal yields for a normal 1 year ARI storm event. The capital investment and operational costs, simply could not be justified for systems that only operated with greater than 1 year ARI events. The remaining systems have been upgraded to production standard and incorporated within the SCADA control system.

The Cobblers Creek System, which is fed by the highly developed Golden Grove Urban catchment, has already resulted in major improvement in yields at the Parafield Harvesting Scheme. Further work is continuing on this scheme. Major rain events result in inundation of areas of a National Park. To avoid this, an operating regime has been agreed with the Park Management, however it results in far from optimal harvest yield. A strategy, currently being costed, is to minimise holding time in the dam by transferring the captured water as quickly as possible to a secondary holding basin in Council land.

The Edinburgh North Basin has improved yields at Kaurna Park by an estimated 30%. However, the development of ASR capacity at Edinburgh North itself should see further yield improvement, as channel losses will be minimised.

Use of the dams, in conjunction with the Bureau of Meteorology Flood Warning System, allows use without compromising flood protection.



Residential Rainwater Tanks

The initial residential rainwater tank model was rejected by the Community. Residents were not prepared to co-operate with the proposed 'Big Brother' control approach, which would see water from their rainwater tanks remotely dumped.

Salisbury Council has continued on a small scale experiment, aimed at engaging the resident in the project, via a unique tank 'dump & fill' regulator. This device effectively allows the resident to "sell" their excess tank water to Council following a rain event. It also maintains a minimum set level in the tank by re-filling from Council's purple pipe network. As the tank never runs dry during summer, and they get the dual benefit of their own harvest plus sale of excess water, the cost effectiveness of investing in a rainwater tank is improved significantly for the resident. The project is a key part of Council's strategy to explore low cost options for retrofitting 'brownfield' suburbs with recycled water. A plumbed tank at each property means the back-up recycled water system can be designed for a 'levelled demand' rather than peak demand. This dramatically reduces the need for costly booster pump stations and expensive high pressure reticulation networks.

4.10.3 Heat Exchange

This was a research project led by the Playford Council to determine if it would be practical to use the thermal mass provided by the water in the distribution system as a heat sink in summer and a heat source in winter to reduce the energy needs of public buildings.

- **Goal**
To investigate the utility of using the recycled water mains to reduce energy needs of a public building.
- **Participants:**
Playford undertook a public call for a joint participant which was unsuccessful.
Parsons Brinckerhoff undertook a scoping study for the council.
- **Research Outline**
It was intended to have a scoping study to identify suitable buildings, select a pilot site, undertake preliminary costings and estimate likely benefits.
- **Summary of Results**
It was concluded that the Peachy Road main could deal with about 4,500m² of building and a suitable council recreation centre was found. The costs for the 2,600 m² building were \$45,000 against a saving of \$17,000pa. This would produce a 3 degree temperature rise in the main.
The Council could not secure the \$45,000 investment to proceed with the pilot.
- The consultant's report is available on the website.

4.10.4 Hydrologic Modelling

- **Goal**
To have in place a comprehensive model of the surface hydrology to verify the assumptions made in the concept planning for WNA , assist in the design of each Capital Work and to establish a base for the monitoring of the scheme performance and the adaptive management of the system.
- **Participants**
The constituent councils, WNARS, University of South Australia, Centre for Water Management & Reuse and Richard Clarke & Associates.
- **Research Outline**
A multi step approach which undertook:
 1. A review of the accuracy of the WaterCress models being used in Northern Adelaide.
 2. Benchmarking WaterCress capabilities and robustness against other models
 3. Regional WaterCress Models – this included more detailed work for strategic planning of harvesting on
 - (a) Lower Dry Creek
 - (b) & (c) Helps Road.
 4. Tools and Techniques for initial Assessment of Stormwater Harvesting Schemes.
 5. Contaminant risk assessment by spill event simulation

➤ **Summary of Results**

1. *Review of accuracy*

In general the model's predictions were accurate.
However in stream losses appear significant

2. *Benchmarking of WaterCress*

It was found that WaterCress had the widest range of features of the modelling packages available but has some limitations in the area of real time, small step modelling.

3. *Regional Models*

This was the key item and confirmed that the water resource derived from earlier reports is available for harvesting.

The models remain the property of the Councils for ongoing use.

The three strategic studies demonstrated the effectiveness of the approach to strategic planning in particular reaches.

The Council staff have been trained in the use of WaterCress.

4. *Tools & Techniques*

This area is a work in progress with some simple tools being available.

Discussions are continuing with NWC and IceWarm regarding further development and dissemination of the model and tools.

5. *Contaminant Risk*

EPASWMM was found to be the most appropriate modelling tool and that the most significant risk of contamination was from a major spill in a dry catchment, followed by the first flush wash off of dispersed contaminants.

This reinforced the need for Spill Management Plans.

All reports are available on the web site.

Negotiations are underway to have the model made available through the NWC system.

4.10.5 Monitoring

From the outset, WNARS and the councils have worked closely with Adelaide & Mt Lofty Ranges NRM and the Bureau of Meteorology (BoM) to ensure that the large quantity of data about the urban catchments performance is available for greatest public benefit.

The Adelaide & Mt Lofty Ranges NRM was developing a regional approach to monitoring the performance of the Adelaide catchments and their contribution of contaminant load to the Gulf St Vincent. WNARS has worked with them to determine the location of monitoring stations, the sampling regime and the parameters monitored. WNARS is working with the Board to provide consolidated and analysed information in the format which will allow the Board to compile its annual report on Natural Resource Management and achievement of the approved goals.

The BoM commenced with Flood Warning systems, including gauging stations on Dry Creek. During the course of the project their role was expanded and WNARS is developing the data transfer systems to automate the reporting required under the Commonwealth legislation.

➤ **Philosophy**

The monitoring system should be planned as a whole, to eliminate any duplication of effort and to automate the storage, routine analysis and transfer of data to the greatest practical extent.

The system comprises four elements:

1. *Active ASR site monitoring*

At each harvesting wetland the operating Council must monitor:

- Incoming water – quality, quantity
- Water after treatment – quality, quantity
- Water Injected into the aquifer – quantity
- Water conditions in the aquifer – standing head, quality at start and end of extraction season, prescribed works
- Water Extracted from the aquifer – quantity, quality
- Water delivered – quantity, quality

This data can be analysed to report for:

- EPA License to Discharge - reporting
- DfW ASR Licence – reporting

Salisbury is leading the development of a decision support model, based on a model of the operating system within the catchments which will allow adaptive management of the scheme using the available data.

2. *Outfall monitoring on main waterways*

At the outfall of the main waterways of Smith Creek, Helps Road Drain, Little Para and Dry Creek, plus intermediate stations on Little Para and Dry Creek, the Councils have built, operate and maintain stations which collect: flow information, composite samples (to meet AMLR NRM requirements), secure the data onto a web site to which AMLR NRM and BoM have access. Public access to the information is through these two well known public sites.

3. *Community monitoring of waterway health*

There are a variety of groups of people interested in the various aspects of waterway health, fish, frogs, reptiles, riverine environments, water quality.

The focus for these groups is the NRM Education group, formerly Waterwatch. This information, albeit with its quality control limitations is assembled, collated and recorded and will be a useful adjunct to knowledge of the effectiveness of urban water way management over time.

4. *Mixed recycled water use, impact monitoring*

It is a legal requirement under the Health Act that when reclaimed waste water, alone or in combination with other water, an Irrigation Management Plan be prepared, approved by Health and implemented. The outcomes in terms of public health, maintenance of critical control systems, water quality and groundwater condition (particularly shallow water tables) are all monitored.

These results which are derived in part from the active site monitoring and supplemented by specific monitoring will eventually be combined with other monitoring to give a holistic view of the catchments and water resources.

➤ **System**

All data from the ASR sites is collected via SCADA to a server in each Council. The data is collected and collated by the SCADA system and reports are prepared for consideration. These reports and those used by the Council for management are then dispatched electronically.

The Outfall Monitoring Sites and two mid-stream sites are managed by a contractor for the Councils and this data is automatically uploaded to the BoM and NRM web sites.

The Community monitoring is recorded on a spreadsheet system and examined annually for trends and as a guide to management of the waterways.

The Irrigation Management Plan requires collation of data from SCADA and stream monitoring sites with additional data collected specifically for the purpose. The report is then assembled by Council staff for electronic submission.

Some consideration of automation of the assembly of reports has been undertaken. This is of lower priority than the automation of data reporting to BoM and NRM.

➤ **Reporting**

- Adelaide & Mt Lofty Ranges NRM & BoM
 - When the consultancy being undertaken by Australian Water Data Services, with financial assistance from BoM these reports consisting of stream flow, quantity & quality, will be loaded into a web site managed by AWDS and this will be automatically reformatted into the BoM input format and the NRM input format and transmitted to their web sites.
 - Much of the data is already available on the AWDS web site.
- EPA
 - These reports cover the quality of water being injected into the aquifers, and comparison to the licence conditions. This includes exceedence reporting with analysis of cause and action.
 - The core of the report, data and analysis is prepared from the SCADA and this is then explained and amplified by the staff.
 - While much of the reporting can be automated the final explanation will remain a staff input.
- DWLBC now Department for Water
 - These are reports of Volumes; injected, Transferred, Extracted and a calculation of volumetric balance and hence Allocation carried forward. These can substantially be produced from the SCADA systems and after minimal staff consideration submitted.

5 FINANCIAL REPORT

This section of the report presents the financial aspects of the management of WNA.

5.1 Plan at Commencement

The Board created a Finance & Reporting Group to focus on the financial management of the project and the Subsidiary.

The Board also secured the services of the City of Playford accounts staff to keep the accounts of the Subsidiary. This service was later transferred to the City of Tea Tree Gully.

5.2 Accounts for the whole Project and the Subsidiary

The accounts for the Waterproofing Northern Adelaide Regional Subsidiary are focussed on the actual cash which the Subsidiary has managed. This is cash contributed by Commonwealth (AGWF), State (AMLR NRM), Councils (cash payments to the Subsidiary) and Interest on deposits. This has been applied to the payments made from the Subsidiary to Councils and for other expenditure authorised to be made by the Subsidiary.

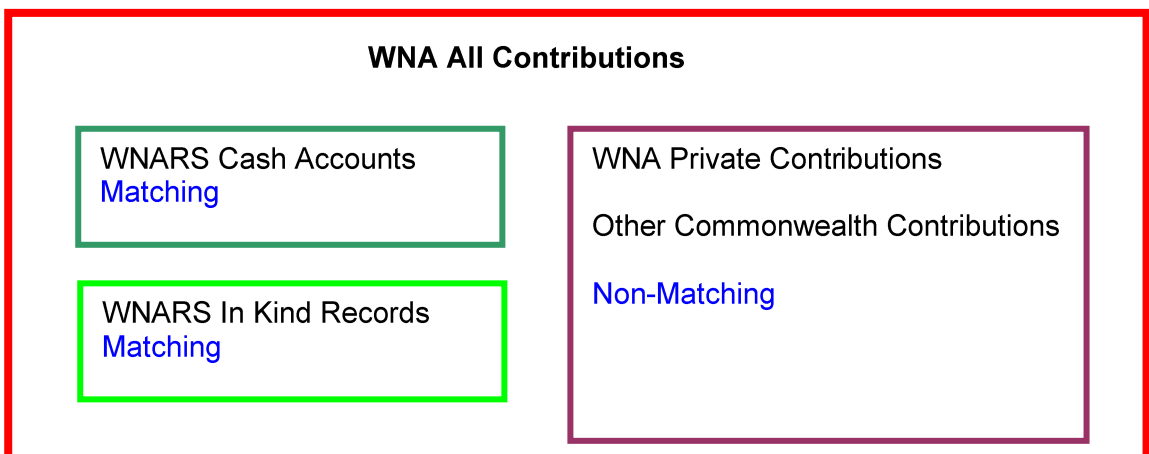
This core cash only project is expanded by matching contributions made directly to or by Councils which are reported to but not managed by the Subsidiary. These include;

- State - contributions secured by Councils from other Agencies as either Cash or Donated Assets, referred to as In Kind contributions
- Councils - contributions made In-Kind by Councils.

The key information management tool used was a standard claim form which each Council submitted to the Executive for verification and direction to the accountants for inclusion in the records. This was itemised at Sub-Project level.

The Executive maintained a record of non-Cash contributions for comparison with the Project Budget.

The Non-Matching contributions from Other Commonwealth Agencies such as Department of Defence and Private parties, predominantly for their investment on-site to use recycled water have been recorded by each Council and will continue to be so during the Evaluation Period.



5.3 Methodology

In keeping our financial records we have adopted the following practices:

- **Cash** **Commonwealth, State, Councils**
GST exclusive based on actual income and expenditure
- **Future Projects Reserve**
The subsidiary received payments from the Commonwealth and State in advance and paid to the Councils in arrears, thus generating some interest at the Council's expense. This was applied to the administrative costs of the project.
- **In Kind** **State, Councils, Private**
Staff
Based on recorded hours charged at an hourly rate calculated by the contributor.

Donated Assets
Based on the cost of creation. Supplied by the organisation contributing the asset and verified by the Council which is the long term owner of the asset.
In the case of older assets, these may be valued at written down replacement cost.
(Note: these are Capital Works and not "Assets" as defined in the Funding Agreement).

Land
Based on the value of the land being transferred to the Council at the date of transfer. This value is provided by the donor and verified by the Council receiving it.

5.4 Waterproofing Northern Adelaide Contributions

5.4.1 Summary as at 30th September 2010

This is the latest consolidation of the Contributions to the Project as at the end of September 2010. There are Commitments from State and Council to make further Contributions over the Evaluation Period. These are shown in the following Table.

WATERPROOFING NORTHERN ADELAIDE														
FINANCIAL SUMMARY														
CORE PROJECT only including Matching Contributions (\$x000, GST exclusive)														
Inception to 30th September 2010														
Sub Project	TOTAL PROJECT (ex Commitments)			MATCHING CONTRIBUTIONS									COMMITMENTS	
	Actual	Budget	Contrib Surplus / (Shortfall)	COMMONWEALTH (DEWHA)			COUNCIL (Cash / In kind)			STATE (Cash / In Kind)			COUNCIL	STATE
				Actual	Budget	Contrib Surplus / (Shortfall)	Actual	Budget	Contrib Surplus / (Shortfall)	Actual	Budget	Contrib Surplus / (Shortfall)		
Torrens	1,726	1,455	271	1,171	1,171	-	405	134	271	150	150	-	-	-
Upper Dry Creek	5,745	5,824	(79)	3,755	3,755	-	1,434	1,217	217	556	852	(296)	-	-
Integrated Distribution	5,959	5,758	201	4,300	4,300	-	1,659	1,458	201	-	-	-	-	-
Upper Little Para	712	554	158	274	274	-	438	280	158	-	-	-	-	-
Lower Dry Creek	21,984	25,164	(3,181)	10,060	10,060	-	7,222	6,550	672	4,702	8,554	(3,853)	-	645
ASTR	2,994	4,022	(1,028)	2,200	2,200	-	667	1,107	(440)	127	715	(588)	-	-
Controllable Detentions	396	850	(454)	300	300	-	96	250	(154)	-	300	(300)	-	-
Lower Little Para	709	750	(41)	300	300	-	346	300	46	63	150	(87)	-	-
Helps Road	18,801	21,815	(3,015)	4,800	4,800	-	2,824	3,100	(277)	11,177	13,915	(2,738)	152	6,700
Playford Community Bores	5,864	5,212	652	3,286	3,286	-	2,578	1,926	652	-	-	-	-	-
Smiths Creek	24,348	20,663	3,685	7,114	7,114	-	5,313	5,074	239	11,921	8,475	3,446	-	-
Hydrologic Modelling	320	420	(100)	200	200	-	-	100	(100)	120	120	-	-	-
Executive	852	660	192	240	240	-	384	300	84	126	120	6	102	-
Future Project Reserve *	484	475	9	-	-	-	484	475	9	-	-	-	-	-
TOTAL PROJECT to SEPT 10	90,893	93,623	(2,730)	38,000	38,000	-	23,850	22,272	1,578	28,942	33,351	(4,409)	254	7,345

* Future Project Reserve allocated to Executive as per Board direction (Board Meeting 28, Item 7.3)

The Total Project shown above is the core project, comprising all matched and matching contributions and shows that the Councils have met their matching obligations, with some final expenditure which has been committed but not yet brought to account.

The State has made substantial contributions and has made commitments to contribute the remainder. This late contribution is caused by the time taken to transfer property titles and some delays in construction of drainage works.

The total matching contribution will be exceeded by the completion of the Evaluation Period.

5.4.2 Summary as at 30th June 2010

The following table reflects expenditure as at the 30th June 2010 and is in accordance with the WNARS Cash Financial Statements as provided in Section 5.6.

WATERPROOFING NORTHERN ADELAIDE TOTAL PROJECT FINANCIAL SUMMARY (\$x000, GST exclusive) Inception to 30th June 2010

Sub Project	TOTAL PROJECT			MATCHING CONTRIBUTIONS								
	Actual	Budget	Contrib Surplus / (Shortfall)	COMMONWEALTH (DEWHA)			COUNCIL (Cash / In kind)			STATE (Cash / In Kind)		
				Actual	Budget	Contrib Surplus / (Shortfall)	Actual	Budget	Contrib Surplus / (Shortfall)	Actual	Budget	Contrib Surplus / (Shortfall)
Torrens	1,726	1,455	271	1,171	1,171	-	405	134	271	150	150	-
Upper Dry Creek	5,745	5,824	(79)	3,755	3,755	-	1,434	1,217	217	556	852	(296)
Integrated Distribution	5,959	5,758	201	4,300	4,300	-	1,659	1,458	201	-	-	-
Upper Little Para	712	554	158	274	274	-	438	280	158	-	-	-
Lower Dry Creek	21,690	25,164	(3,475)	10,060	10,060	-	6,928	6,550	378	4,702	8,554	(3,853)
ASTR	2,916	4,022	(1,106)	2,200	2,200	-	589	1,107	(518)	127	715	(588)
Controllable Detentions	380	850	(470)	300	300	-	80	250	(170)	-	300	(300)
Lower Little Para	709	750	(41)	300	300	-	346	300	46	63	150	(87)
Helps Road	11,498	21,815	(10,318)	4,800	4,800	-	2,589	3,100	(512)	4,109	13,915	(9,806)
Playford Community Bores	5,864	5,212	652	3,286	3,286	-	2,578	1,926	652	-	-	-
Smiths Creek	24,348	20,663	3,685	7,114	7,114	-	5,313	5,074	239	11,921	8,475	3,446
Hydrologic Modelling	200	420	(220)	200	200	-	-	100	(100)	-	120	(120)
Executive	750	660	90	240	240	-	384	300	84	126	120	6
Future Projects Reserve *	484	475	9	-	-	-	484	475	9	-	-	-
TOTAL PROJECT to JUNE 10	82,980	93,623	(10,643)	38,000	38,000	-	23,226	22,272	954	21,754	33,351	(11,597)

* Future Projects Reserve allocated to Executive as per Board direction (Board Meeting 28, Item 7.3)

Comparison with the position at the end of September 2010, as shown in the table in Section 5.4.1, shows the rapid improvement in the Matching Contributions as \$7.2m of the State's commitments are brought to account.

5.4.3 Detail of Matching Contributions at 30th June 2010

State agency matching contributions as at 30th June 2010 are as per the following table.

WATERPROOFING NORTHERN ADELAIDE										
STATE CONTRIBUTIONS										
\$x000 GST exclusive										
Inception to 30th June 2010										
Sub Project	STATE (Cash / In Kind)							Total Actual	Budget Surplus / (Shortfall)	Contrib
	NRM	LMC	SMA	DECS	UniSA	SAW	OTHER			
Torrens	-	-	-	-	-	150	-	150	150	-
Upper Dry Creek	350	-	-	-	-	-	206	556	852	(296)
Integrated Distribution	-	-	-	-	-	-	-	-	-	-
Upper Little Para	-	-	-	-	-	-	-	-	-	-
Lower Dry Creek	300	4,102	224	75	-	-	-	4,702	8,554	(3,853)
ASTR	-	-	-	-	-	127	-	127	715	(588)
Controllable Detentions	-	-	-	-	-	-	-	-	300	(300)
Lower Little Para	50	-	-	13	-	-	-	63	150	(87)
Helps Road	-	3,534	553	15	-	-	7	4,109	13,915	(9,806)
Playford Community Bores	-	-	-	-	-	-	-	-	-	-
Smiths Creek	180	10,751	-	-	-	-	990	11,921	8,475	3,446
Hydrologic Modelling	-	-	-	-	-	-	-	-	120	(120)
Executive	126	-	-	-	-	-	-	126	120	6
Future Projects Reserve *	-	-	-	-	-	-	-	-	-	-
TOTAL PROJECT to JUNE 10	1,006	18,387	777	103	-	277	1,203	21,754	33,351	(11,597)

* Future Projects Reserve allocated to Executive as per Board direction (Board Meeting 28, Item 7.3)

Through the life of WNA the State has increased its involvement and investment in the management of water to provide integration between urban development and Water Sensitive Design.

The original commitment of \$16m has been increased to \$33m of which \$22m had been brought to account by 30th June 2010. The State is fulfilling its commitments steadily and as shown in the table in Item 5.4.1, it has contributed an additional \$7m by 30th September bringing their total contribution to over \$29m.

The outstanding amounts will be contributed within the Evaluation Period.

Major contributions have been for:

- land and stormwater management assets from LMC as the developer of Mawson Lakes, Edinburgh Parks and Playford Alive
- Monitoring and catchment works from NRM
- Stormwater management works, flood mitigation component, from the Stormwater Management Authority.

The most significant areas of future State investment forming part of WNA are;

- flood mitigation drainage works in Lower Dry Creek catchment which will enhance harvesting at The Paddocks, Bennett Road and Greenfields.
- Flood mitigation drainage works in Helps Road Drain catchment at Edinburgh Parks which will form part of the development of the Transport Oriented Development which will both expand the Defence Precinct of Edinburgh Parks and support the Elizabeth regional Centre.

The State will also continue to connect schools to the system enhancing the sustainability of the region.

5.4.4 Detail of Non-Matching Contributions at 30th June 2010

Non matching contributions as at 30th June 2010 are as per the following table:

WATERPROOFING NORTHERN ADELAIDE						
Non Matching Contributions (\$x000, GST exclusive)						
Inception to 30th June 2010						
Sub Project	NON MATCHING CONTRIBUTIONS					
	PRIVATE			COMMONWEALTH (OTHER)		
	Actual	Budget	Contrib Surplus / (Shortfall)	Actual	Budget	Contrib Surplus / (Shortfall)
Torrens	-	-	-	-	-	-
Upper Dry Creek	-	-	-	-	-	-
Integrated Distribution	758	500	258	-	-	-
Upper Little Para	1,215	500	715	-	-	-
Lower Dry Creek	79	4,150	(4,071)	187	-	187
ASTR	-	980	(980)	-	-	-
Controllable Detentions	-	350	(350)	-	-	-
Lower Little Para	-	200	(200)	25	-	25
Helps Road	50	6,850	(6,800)	12	-	12
Playford Community Bores	-	-	-	-	-	-
Smiths Creek	5	-	5	-	-	-
Hydrologic Modelling	-	200	(200)	-	-	-
Executive	-	-	-	-	-	-
Future Projects Reserve*	-	-	-	-	-	-
TOTAL PROJECT to JUNE 10	2,107	13,730	(11,623)	223	-	223

* Future Projects Reserve allocated to Executive as per Board direction (Board Meeting 28, Item 7.3)

The level of private investment in the project is well below that anticipated. This reflects two aspects of the project.

- The private water users have been slow to take up the use of recycled water. The financial advantages to them are slight and the initial investment is often beyond a 2-3 year payback period. This is compounded by a reluctance to commit to use until the main is in front of their property and the actual expenditure is a year or so after commitment.
- The private investors have been tardy in providing information on the extent of their investment and the project staff has been focussed on completion of the Capital Works. Thus the information has not been collected and brought to account. This will be rectified during the Evaluation Period.

A letter of commitment has been received from the developer Land SA confirming land value in the order of \$4.7M for the Settlement Estate Wetland Reserve at Golden Grove (ULP-Harpers Field) which will be vested over to the City of Tea Tree Gully on completion of the maintenance period. This contribution will be reported during the Evaluation Period.

5.5 Audited Statements of WNARS, as at 30th June 2010.

Audited financial statements for the Regional Subsidiary as at 30th June 2010 are as follows:

DEAN NEWBERY & PARTNERS CHARTERED ACCOUNTANTS

ABN 30 164 612 890

14 September 2010

Mr Peter Fairlie-Jones
Chairperson
Waterproofing Northern Adelaide Regional Subsidiary
C/- City of Salisbury
PO Box 8
SALISBURY SA 5108

Dear Peter,

PROVISION OF 2010 AUDIT OPINION TO THE BOARD

Please be advised that in accordance with the Local Government Act 1999, we have now completed the statutory audit of the Waterproofing Northern Adelaide Regional Subsidiary for the financial year ended 30 June 2010.

We are pleased to report that the enclosed 2010 Audit Opinion has been signed without reference to any qualification.

We also advise as follows:

- There were no matters arising from the audit of the Authority for the year ended 30 June 2010 which required reporting to the Minister.
- In reaching our audit opinion, we are satisfied as to the overall standard of the Authority's accounting practices, internal controls, governance and overall financial management of the Authority.

For your reference, we enclose our 2010 Audit Opinion.

Please do not hesitate to contact me on 8267 4777 if additional information is required.

Yours sincerely



Don Venn
Partner

Enc.

Statutory Audit Opinion

**INDEPENDENT AUDITOR'S REPORT TO THE MEMBERS OF THE WATERPROOFING NORTHERN ADELAIDE REGIONAL
SUBSIDIARY**

Report on the Financial Report

We have audited the accompanying financial report of the Waterproofing Northern Adelaide Regional Subsidiary which comprises the balance sheet as at 30 June 2010, the statement of comprehensive income, statement of changes in equity and a cash flow statement for the year ended on that date, a summary of significant accounting policies, other explanatory notes and the Chief Executive Officer's statement.

Chief Executive Officer's Responsibility for the Financial Report

The Chief Executive Officer of the Waterproofing Northern Adelaide Regional Subsidiary is responsible for the preparation and fair presentation of the financial report in accordance with Australian Accounting Standards (including the Australian Accounting Interpretations) and the Local Government Act 1999 and Local Government (Financial Management) Regulations 1999. This responsibility includes designing, implementing and maintaining internal control relevant to the preparation and fair presentation of the financial report that is free from material misstatement, whether due to fraud or error; selecting and applying appropriate accounting policies; and making accounting estimates that are reasonable in the circumstances.

Auditor's responsibility

Our responsibility is to express an opinion on the financial report based on our audit. We conducted our audit in accordance with Australian Auditing Standards. These Auditing Standards require that we comply with relevant ethical requirements relating to audit engagements and plan and perform the audit to obtain reasonable assurance whether the financial report is free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the report. The procedures selected depend on the auditor's judgement, including the assessment of the risks of material misstatement of the financial report, whether due to fraud and error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial report in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by the Chief Executive Officer, as well as evaluating the overall presentation of the financial report.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for an audit opinion.

Independence

In conducting our audit, we have complied with the independence requirements of the Local Government Act 1999 and Local Government (Financial Management) Regulations 1999. We confirm that the independence declaration required by the Local Government Act 1999 and Local Government (Financial Management) Regulations 1999, provided to the Chief Executive Officer on 30 June 2010, would be in the same terms if provided to the Chief Executive Officer as at the date of this auditor's report.

Auditor's Opinion

In our opinion:

The financial report of the Waterproofing Northern Adelaide Regional Subsidiary is in accordance with the Local Government Act 1999 and Local Government (Financial Management) Regulations 1999 including:

- (a) giving a true and fair view of the Waterproofing Northern Adelaide Regional Subsidiary financial position as at 30 June 2010 and of its performance for the year ended on that date; and
- (b) complying with Australian Accounting Standards (including the Australian Accounting Interpretations); and
- (c) complying with Local Government Act 1999 and the Local Government (Financial Management) Regulations 1999; and
- (d) where applicable, in accordance with the provisions relating to subsidiaries (and regional subsidiaries) of the Local Government Act 1999 and the Local Government (Financial Management) Regulations 1999.

**DEAN NEWBERY & PARTNERS
CHARTERED ACCOUNTANTS**



**DON VENN
PARTNER**

Signed on the 14th day of September 2010,
at 214 Melbourne Street, North Adelaide, South Australia 5006.

WATERPROOFING NORTHERN ADELAIDE REGIONAL SUBSIDIARY

General Purpose Financial Reports for the year ended 30 June 2010

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WATERPROOFING NORTHERN ADELAIDE REGIONAL SUBSIDIARY

STATEMENT OF COMPREHENSIVE INCOME
for the year ended 30 June 2010

	Notes	2010 \$'000	2009 \$'000
INCOME			
Grants, subsidies and contributions	2	18,318	23,126
Investment income	2	58	118
Total Income		<u>18,376</u>	<u>23,244</u>
EXPENSES			
Materials, contracts & other expenses	3	18,796	23,126
Total Expenses		<u>18,796</u>	<u>23,126</u>
OPERATING SURPLUS / (DEFICIT)		<u>(420)</u>	118
NET SURPLUS / (DEFICIT)		<u>(420)</u>	<u>118</u>
Transferred to Equity Statement		(420)	118
Other Comprehensive Income		-	-
Total Other Comprehensive Income		<u>-</u>	<u>-</u>
TOTAL COMPREHENSIVE INCOME		<u>(420)</u>	<u>118</u>

This Statement is to be read in conjunction with the attached Notes.

WATERPROOFING NORTHERN ADELAIDE REGIONAL SUBSIDIARY

BALANCE SHEET
as at 30 June 2010

ASSETS	Notes	2010 \$'000	2009 \$'000
Current Assets			
Cash and cash equivalents	4	649	9,340
Trade & other receivables	4	<u>2,090</u>	<u>232</u>
Total Current Assets		<u>2,739</u>	<u>9,572</u>
Non-current Assets			
Total Non-current Assets		<u>-</u>	<u>-</u>
Total Assets		<u>2,739</u>	<u>9,572</u>
LIABILITIES			
Current Liabilities			
Trade & Other Payables	5	<u>2,733</u>	<u>9,146</u>
Total Current Liabilities		<u>2,733</u>	<u>9,146</u>
Non-current Liabilities			
Total Non-current Liabilities		<u>-</u>	<u>-</u>
Total Liabilities		<u>2,733</u>	<u>9,146</u>
NET ASSETS		<u>6</u>	<u>426</u>
EQUITY			
Accumulated Surplus		6	426
Other Reserves		<u>-</u>	<u>-</u>
TOTAL EQUITY		<u>6</u>	<u>426</u>

This Statement is to be read in conjunction with the attached Notes.

WATERPROOFING NORTHERN ADELAIDE REGIONAL SUBSIDIARY

STATEMENT OF CHANGES IN EQUITY for the year ended 30 June 2010

2010	Notes	Accumulated Surplus \$'000	Asset Revaluation Reserve \$'000	Available for sale Financial Assets \$'000	Other Reserves \$'000	TOTAL EQUITY \$'000
Balance at end of previous reporting period		426	-	-	-	426
Net Surplus / (Deficit) for Year		(420)	-	-	-	(420)
Other Comprehensive Income						
Transfers between reserves		-	-	-	-	-
Balance at end of period		6	-	-	-	6
2009						
Balance at end of previous reporting period		-	-	-	308	308
Net Surplus / (Deficit) for Year		118	-	-	-	118
Other Comprehensive Income						
Transfers between reserves		308	-	-	(308)	-
Balance at end of period		426	-	-	-	426

This Statement is to be read in conjunction with the attached Notes

WATERPROOFING NORTHERN ADELAIDE REGIONAL SUBSIDIARY

CASH FLOW STATEMENT
for the year ended 30 June 2010

CASH FLOWS FROM OPERATING ACTIVITIES	Notes	2010	2009
		\$'000	\$'000
<u>Receipts</u>			
Operating receipts		14,947	23,942
Investment receipts		79	132
<u>Payments</u>			
Operating payments to suppliers & employees		(23,717)	(21,327)
Finance payments		-	-
Net Cash provided by (or used in) Operating Activities		(8,691)	2,747
Net Cash provided by (or used in) Investing Activities		-	-
Net Cash provided by (or used in) Financing Activities		-	-
Net Increase (Decrease) in cash held		(8,691)	2,747
Cash & cash equivalents at beginning of period	6	9,340	6,593
Cash & cash equivalents at end of period	6	649	9,340

This Statement is to be read in conjunction with the attached Notes

WATERPROOFING NORTHERN ADELAIDE REGIONAL SUBSIDIARY

NOTES TO AND FORMING PART OF THE FINANCIAL STATEMENTS for the year ended 30 June 2010

Note 1 - SIGNIFICANT ACCOUNTING POLICIES

The principal accounting policies adopted in the preparation of the financial report are set out below. These policies have been consistently applied to all the years presented, unless otherwise stated.

1 Basis of Preparation

1.1 Compliance with Australian Accounting Standards

This general purpose financial report has been prepared in accordance with Australian Accounting Standards as they apply to not-for-profit entities, other authoritative pronouncements of the Australian Accounting Standards Board, Interpretations and relevant South Australian legislation.

The financial report was authorised for issue by certificate under clause 11 of the *Local Government (Financial Management) Regulations 1999* dated 14th September 2010.

1.2 Historical Cost Convention

Except as stated below, these financial statements have been prepared in accordance with the historical cost convention.

1.3 Critical Accounting Estimates

The preparation of financial statements in conformity with Australian Accounting Standards requires the use of certain critical accounting estimates, and requires management to exercise its judgement in applying Subsidiary's accounting policies. The areas involving a higher degree of judgement or complexity, or areas where assumptions and estimates are significant to the financial statements are specifically referred to in the relevant sections of this Note.

1.4 Rounding

All amounts in the financial statements have been rounded to the nearest thousand dollars (\$'000).

2 The Local Government Reporting Entity

Waterproofing Northern Adelaide Regional Subsidiary is a Subsidiary established pursuant to Section 43 of the Local Government Act 1999 by the Cities of Playford, Salisbury and Tea Tree Gully. These financial statements include the consolidated fund and all entities through which the Subsidiary controls resources to carry on its functions. In the process of reporting on the Subsidiary as a single unit, all transactions and balances between activity areas and controlled entities have been eliminated.

3 Income recognition

Income is measured at the fair value of the consideration received or receivable. Income is recognised when the Subsidiary obtains control over the assets comprising the income, or when the amount due constitutes an enforceable debt, whichever first occurs.

Where grants, contributions and donations recognised as incomes during the reporting period were obtained on the condition that they be expended in a particular manner or used over a particular period, and those conditions were undischarged as at the reporting date, the amounts subject to those undischarged conditions are disclosed in these notes. Also disclosed is the amount of grants, contributions and receivables recognised as incomes in a previous reporting period which were obtained in respect of the Subsidiary's operations for the current reporting period.

Waterproofing Northern Adelaide Regional Subsidiary

NOTES TO AND FORMING PART OF THE FINANCIAL STATEMENTS for the year ended 30 June 2010

Note 1 - Significant Accounting Policies (cont)

4 Cash, Cash Equivalents and other Financial Instruments

Cash Assets include all amounts readily convertible to cash on hand at Subsidiary's option with an insignificant risk of changes in value with a maturity of three months or less from the date of acquisition.

All receivables are reviewed as at the reporting date and adequate allowance made for amounts the receipt of which is considered doubtful.

All financial instruments are recognised at fair value at the date of recognition. A detailed statement of the accounting policies applied to financial instruments forms part of Note 13.

5 Payables

5.1 Goods & Services

Creditors are amounts due to external parties for the supply of goods and services and are recognised as liabilities when the goods and services are received. Creditors are normally paid 30 days after the month of invoice. No interest is payable on these amounts.

5.2 Payments Received in Advance & Deposits

Amounts received from external parties in advance of service delivery, and security deposits held against possible damage to Subsidiary assets, are recognised as liabilities until the service is delivered or damage reinstated, or the amount is refunded as the case may be.

6 GST Implications

In accordance with UIG Abstract 1031 "Accounting for the Goods & Services Tax"

- Receivables and Creditors include GST receivable and payable.
- Except in relation to input taxed activities, revenues and operating expenditures exclude GST receivable and payable.
- Non-current assets and capital expenditures include GST net of any recoupment.
- Amounts included in the Statement of Cash Flows are disclosed on a gross basis.

7 New Accounting Standards

Certain new accounting standards and UIG interpretations have been published that are not mandatory for the 30 June 2010 reporting period.

- AASB 1 *First-time Adoption of Australian Accounting Standards*
- AASB 5 *Non-current Assets Held for Sale and Discontinued Operations*
- AASB 7 *Financial Instruments: Disclosures*
- AASB 9 *Financial Instruments*
- AASB 101 *Presentation of Financial Statements*
- AASB 107 *Statement of Cash Flows*
- AASB 108 *Accounting Policies, Changes in Accounting Estimates and Errors*
- AASB 110 *Events after the Reporting Period*
- AASB 117 *Leases*
- AASB 118 *Revenue*
- AASB 119 *Employee Benefits*
- AASB 132 *Financial Instruments: Presentation*
- AASB 136 *Impairment of Assets*

Waterproofing Northern Adelaide Regional Subsidiary

NOTES TO AND FORMING PART OF THE FINANCIAL STATEMENTS

for the year ended 30 June 2010

Note 1 - Significant Accounting Policies (cont)

- AASB 137 *Provisions, Contingent Liabilities and Contingent Assets*
- AASB 139 *Financial Instruments: Recognition and Measurement*
- AASB 1031 *Financial Instruments: Recognition and Measurement*
- AASB 2009-11 *Amendments to Australian Accounting Standards arising from AASB 9 [AASB 1, 3, 4, 5, 7, 101, 102, 108, 112, 118, 121, 127, 128, 131, 132, 136, 139, 1023 & 1038 and Interpretations 10 & 12]*
- AASB 2009-12 *Amendments to Australian Accounting Standards [AASBs 5, 8, 108, 110, 112, 119, 133, 137, 139, 1023 & 1031 and Interpretations 2, 4, 16, 1039 & 1052]*
- AASB 2009-13 *Amendments to Australian Accounting Standards arising from Interpretation 19 [AASB 1]*
- AASB 2010-1 *Amendments to Australian Accounting Standards – Limited Exemption from Comparative AASB 7 Disclosures for First-time Adopters [AASB 1 & AASB 7]*
- *Interpretation 4* *Determining whether an Arrangement contains a Lease*
- *Interpretation 14* *AASB 119 – The Limit on a Defined Benefit Asset, Minimum Funding Requirements and their Interaction*
- (Standards not affecting local government have been excluded from the above list.)

Subsidiary is of the view that none of the above new standards or interpretations will affect any of the amounts recognised in the financial statements, but that they may impact certain information otherwise disclosed.

The Australian Accounting Standards Board is currently reviewing AASB 1004 *Contributions*. It is anticipated that the changes resulting from this review may have a material effect on the timing of the recognition of grants and contributions, but the financial consequences cannot be estimated until a revised accounting standard is issued.

WATERPROOFING NORTHERN ADELAIDE REGIONAL SUBSIDIARY

NOTES TO AND FORMING PART OF THE FINANCIAL STATEMENTS
for the year ended 30 June 2010

Note 2 - INCOME

	2010	2009
	Notes	
	\$'000	\$'000
INVESTMENT INCOME		
Interest on investments		
Local Government Finance Authority	53	108
Banks & other	<u>5</u>	<u>10</u>
	<u>58</u>	<u>118</u>
GRANTS, SUBSIDIES, CONTRIBUTIONS		
Other grants, subsidies and contributions	<u>18,318</u>	<u>23,126</u>
	<u>18,318</u>	<u>23,126</u>
<i>The functions to which these grants relate are shown in Note 7.</i>		
Sources of grants		
Commonwealth government	4,215	18,081
State government	530	(30)
Other	<u>13,573</u>	<u>5,075</u>
	<u>18,318</u>	<u>23,126</u>

WATERPROOFING NORTHERN ADELAIDE REGIONAL SUBSIDIARY

NOTES TO AND FORMING PART OF THE FINANCIAL STATEMENTS for the year ended 30 June 2010

Note 3 - EXPENSES

	Notes	2010 \$'000	2009 \$'000
MATERIALS, CONTRACTS & OTHER EXPENSES			
<u>Prescribed Expenses</u>			
Auditor's Remuneration			
- Auditing the financial reports		8	8
Subtotal - Prescribed Expenses		<u>8</u>	<u>8</u>
<u>Other Materials, Contracts & Expenses</u>			
Contractors		22	247
City of Playford		7,705	8,010
City of Salisbury		7,877	8,970
City of Tea Tree Gully		3,003	5,711
Sundry		181	180
Subtotal - Other Materials, Contracts & Expenses		<u>18,788</u>	<u>23,118</u>
		<u>18,796</u>	<u>23,126</u>

WATERPROOFING NORTHERN ADELAIDE REGIONAL SUBSIDIARY

**NOTES TO AND FORMING PART OF THE FINANCIAL STATEMENTS
for the year ended 30 June 2010**

Note 4 - CURRENT ASSETS

	2010	2009
	Notes	Notes
	\$'000	\$'000
CASH & EQUIVALENT ASSETS		
Cash on Hand and at Bank	13	11
Deposits at Call	<u>636</u>	<u>9,329</u>
	<u>649</u>	<u>9,340</u>
TRADE & OTHER RECEIVABLES		
Accrued Revenues	-	21
Other levels of Government	2,090	-
GST Recoupment	-	211
	<u>2,090</u>	<u>232</u>

Note 5 - LIABILITIES

	2010	2009
	Notes	Notes
	Current	Non-current
	\$'000	\$'000
TRADE & OTHER PAYABLES		
Goods & Services	2,512	7,433
Payments Received in Advance	96	934
GST Payable	125	779
	<u>2,733</u>	<u>9,146</u>

WATERPROOFING NORTHERN ADELAIDE REGIONAL SUBSIDIARY

NOTES TO AND FORMING PART OF THE FINANCIAL STATEMENTS for the year ended 30 June 2010

Note 6 - RECONCILIATION TO CASH FLOW STATEMENT

(a) Reconciliation of Cash

Cash Assets comprise highly liquid investments with short periods to maturity subject to insignificant risk of changes of value. Cash at the end of the reporting period as shown in the Cash Flow Statement is reconciled to the related items in the Balance Sheet as follows:

	Notes	2010 \$'000	2009 \$'000
Total cash & equivalent assets	5	<u>649</u>	<u>9,340</u>
Balances per Cash Flow Statement		<u>649</u>	<u>9,340</u>

(b) Reconciliation of Change in Net Assets to Cash
from Operating Activities

Net Surplus (Deficit)		<u>(420)</u>	<u>118</u>
		(420)	118
Add (Less): Changes in Net Current Assets			
Net (increase) decrease in receivables		(2,512)	474
Net increase (decrease) in trade & other payables		<u>(5,767)</u>	<u>2,155</u>
Net Cash provided by (or used in) operations		<u>(8,699)</u>	<u>2,747</u>

WATERPROOFING NORTHERN ADELAIDE REGIONAL SUBSIDIARY

NOTES TO AND FORMING PART OF THE FINANCIAL STATEMENTS for the year ended 30 June 2010

Note 7 - FUNCTIONS

INCOMES, EXPENSES AND ASSETS HAVE BEEN DIRECTLY ATTRIBUTED TO THE FOLLOWING FUNCTIONS & ACTIVITIES												
	INCOME		EXPENSES				OPERATING SURPLUS (DEFICIT)		GRANTS INCLUDED IN INCOME		TOTAL ASSETS HELD (CURRENT & NON-CURRENT)	
	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	2010	2009	2010	2009	2010	2009
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Sub-Projects	112	(372)	112	(372)	-	-	112	(372)	112	(372)	77	(151)
Torrens	983	2,544	983	2,544	-	-	983	2,544	983	2,544	281	1,030
Upper Dry Creek	1,545	3,797	1,545	3,797	-	-	1,545	3,797	1,545	3,797	199	1,537
Integrated Distribution	5,448	6,287	5,448	6,287	-	-	5,448	6,287	5,448	6,287	858	2,545
Lower Dry Creek	(139)	474	(139)	474	-	-	(139)	474	(139)	474	274	192
ASTR	234	-	234	-	-	-	234	-	234	-	153	-
Controllable Detentions	363	(244)	363	(244)	-	-	363	(244)	363	(244)	3	(99)
Upper Little Para	(44)	99	(44)	99	-	-	(44)	99	(44)	99	(381)	40
Lower Little Para	2,379	2,194	2,379	2,194	-	-	2,379	2,194	2,379	2,194	487	888
Helps Road	3,489	1,053	3,489	1,053	-	-	3,489	1,053	3,489	1,053	500	426
Playford Community Bores	4,215	6,957	4,215	6,957	-	-	4,215	6,957	4,215	6,957	52	2,816
Smith Creek	204	337	203	337	-	-	204	337	204	337	235	136
Executive	(412)	117	-	-	(412)	117	(471)	-	(471)	-	-	-
Interest Income												
TOTALS	18,377	23,243	18,788	23,126	(412)	117	18,318	23,126	18,318	23,126	2,739	9,360

WATERPROOFING NORTHERN ADELAIDE REGIONAL SUBSIDIARY

NOTES TO AND FORMING PART OF THE FINANCIAL STATEMENTS for the year ended 30 June 2010

Note 8 - FINANCIAL INSTRUMENTS

Recognised Financial Instruments

Bank, Deposits at Call, Short Term Deposits	<p>Accounting Policy: Carried at lower of cost and net realisable value; Interest is recognised when earned.</p> <p>Terms & conditions: Deposits are returning fixed interest rates between 2.75% and</p> <p>Carrying amount: approximates fair value due to the short term to maturity.</p>
Receivables - Fees & other charges	<p>Accounting Policy: Carried at nominal values less any allowance for doubtful debts. An allowance for doubtful debts is recognised (and re-assessed annually) when collection in full is no longer probable.</p> <p>Terms & conditions: Unsecured, and do not bear interest. Although Council is not materially exposed to any individual debtor, credit risk exposure is concentrated within the Council's boundaries.</p> <p>Carrying amount: approximates fair value (after deduction of any allowance).</p>
Receivables - other levels of government	<p>Accounting Policy: Carried at nominal value.</p> <p>Terms & conditions: Amounts due have been calculated in accordance with the terms and conditions of the respective programs following advice of approvals, and do not bear interest. All amounts are due by Departments and Agencies of the Governments of the Commonwealth & State.</p> <p>Carrying amount: approximates fair value.</p>
Liabilities - Creditors and Accruals	<p>Accounting Policy: Liabilities are recognised for amounts to be paid in the future for goods and services received, whether or not billed to the Council.</p> <p>Terms & conditions: Liabilities are normally settled on 30 day terms.</p> <p>Carrying amount: approximates fair value.</p>
Liabilities - Interest Bearing Borrowings	<p>Accounting Policy: Carried at the principal amounts. Interest is charged as an expense as it accrues.</p> <p>Terms & conditions: no interest bearing loans</p> <p>Carrying amount: approximates fair value.</p>
Liabilities - Finance Leases	<p>Accounting Policy: accounted for in accordance with AASB 117.</p>

WATERPROOFING NORTHERN ADELAIDE REGIONAL SUBSIDIARY

NOTES TO AND FORMING PART OF THE FINANCIAL STATEMENTS for the year ended 30 June 2010

Note 8 (cont) - FINANCIAL INSTRUMENTS

Liquidity Analysis

2010	Due < 1 year	Due > 1 year; ≤ 5 years	Due > 5 years	Total Contractual Cash Flows	Carrying Values
	\$'000	\$'000	\$'000	\$'000	\$'000
<u>Financial Liabilities</u>					
Payables	2,725	-	-	2,725	2,733
Current Borrowings	-	-	-	-	-
Non-Current Borrowings	-	-	-	-	-
Total	2,725	-	-	2,725	2,733

2009	Due < 1 year	Due > 1 year; ≤ 5 years	Due > 5 years	Total Contractual Cash Flows	Carrying Values
	\$'000	\$'000	\$'000	\$'000	\$'000
<u>Financial Liabilities</u>					
Payables	9,146	-	-	9,146	9,146
Current Borrowings	-	-	-	-	-
Non-Current Borrowings	-	-	-	-	-
Total	9,146	-	-	9,146	9,146

Net Fair Value

All carrying values approximate fair value for all recognised financial instruments. There is no recognised market for the financial assets of the Council.

Risk Exposures

Credit Risk represents the loss that would be recognised if counterparties fail to perform as contracted. The maximum credit risk on financial assets of the subsidiary is the carrying amount, net of any allowance for doubtful debts. All investments are made with the SA Local Government Finance Authority and are guaranteed by the SA Government. There is no material exposure to any individual debtor.

Market Risk is the risk that fair values of financial assets will fluctuate as a result of changes in market prices. All of Council's financial assets are denominated in Australian dollars and are not traded on any market, and hence neither market risk nor **currency risk** apply.

Liquidity Risk is the risk that Council will encounter difficulty in meeting obligations with financial liabilities. In accordance with the model Treasury Policy (LGA Information Paper 15), liabilities have a range of maturity dates based on cash inflows. Council also has available a range of bank overdraft and short-term draw down facilities that it can access.

Interest Rate Risk is the risk that future cash flows will fluctuate because of changes in market interest rates. Council has a balance of both fixed and variable interest rate borrowings and investments. Cash flow fluctuations are managed holistically in seeking to minimise interest costs over the longer term in a risk averse manner.

WATERPROOFING NORTHERN ADELAIDE REGIONAL SUBSIDIARY

**NOTES TO AND FORMING PART OF THE FINANCIAL STATEMENTS
for the year ended 30 June 2010**

Note 9 - COMMITMENTS FOR EXPENDITURE

Capital Commitments

There is no capital expenditure committed at the reporting date that is not recognised in the financial statements as liabilities.

Other Expenditure Commitments

There is no other expenditure committed at the reporting date that is not recognised in the financial statements as liabilities.

Finance Lease Commitments

There are no finance lease commitments at the reporting date.

WATERPROOFING NORTHERN ADELAIDE REGIONAL SUBSIDIARY

**NOTES TO AND FORMING PART OF THE FINANCIAL STATEMENTS
for the year ended 30 June 2010**

Note 10 - FINANCIAL INDICATORS

	2010	2009	2008
<p>These Financial Indicators have been calculated in accordance with <i>Information Paper 9 - Local Government Financial Indicators</i> prepared as part of the LGA Financial Sustainability Program for the Local Government Association of South Australia. Detailed methods of calculation are set out in the SA Model Statements.</p>			
Operating Surplus	(412)	118	271
<p><i>Being the operating surplus (deficit) before capital amounts .</i></p>			
Net Financial Liabilities	(14)	(426)	(308)
<p><i>Net Financial Liabilities are defined as total liabilities less financial assets (excluding equity accounted investments in the subsidiary).</i></p>			
Net Financial Liabilities Ratio			
<u>Net Financial Liabilities</u>	(0.1%)	(1.8%)	(2.1%)
Total Operating Revenue			
Interest Cover Ratio			
<u>Net Interest Expense</u>	(0.3%)	(0.5%)	(1.8%)
Total Operating Revenue less NRM levy less Investment Income			

WATERPROOFING NORTHERN ADELAIDE REGIONAL SUBSIDIARY

NOTES TO AND FORMING PART OF THE FINANCIAL STATEMENTS for the year ended 30 June 2010

Note 11 - UNIFORM PRESENTATION OF FINANCES

The following is a high level summary of both operating and capital investment activities of the Subsidiary prepared on a simplified Uniform Presentation Framework basis.

All Councils in South Australia have agreed to summarise annual budgets and long-term financial plans on the same basis.

The arrangements ensure that all Councils provide a common 'core' of financial information, which enables meaningful comparisons of each Council's finances

	2010 \$'000	2009 \$'000
Income	18,376	23,244
less Expenses	18,796 (420)	23,126 118
Net Lending / (Borrowing) for Financial Year	(420)	118

Note 12 - CONTINGENCIES & ASSETS & LIABILITIES NOT RECOGNISED IN THE STATEMENT OF FINANCIAL POSITION

There are no contingent assets or liabilities to be recorded.

There is no outstanding or pending legal issue which needs to be disclosed.

Note 13 - EVENTS AFTER BALANCE SHEET DATE EVENT

There are no events occurring after balance date which require disclosure in the Financial Statements.

WATERPROOFING NORTHERN ADELAIDE REGIONAL SUBSIDIARY

NOTES TO AND FORMING PART OF THE FINANCIAL STATEMENTS for the year ended 30 June 2010

Working Paper - RECONCILIATION OF GRANTS RECEIVED

This schedule records all grants received, including from other levels of Government, whether described as grants, subsidies or otherwise. (Amounts shown as negative are awaiting reimbursement to Council.)

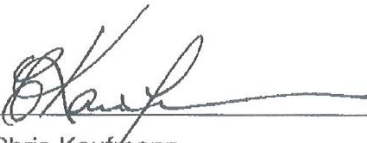
GRANTS	Opening Balance 1 July 2009	Movements		Closing Balance 30 June 2010
		Received/ Receivable	Expended	
	\$'000	\$'000	\$'000	\$'000
SPECIFIC PURPOSE				
Dept Environment, Water, Heritage & the Arts	654		654	0
Natural Resources Management	280		280	0
Council Contribution to Executive	0	300	204	96
Subtotal	934	300	1,138	96
TOTAL OTHER GRANTS	934	18,618	19,456	96
				934
Recognised as revenue in advance of expenditure	934			(1,994)
Current receivable - Other levels of Government	5	0		2,090
				96

Waterproofing Northern Adelaide Regional Subsidiary

ANNUAL FINANCIAL STATEMENTS FOR THE YEAR ENDED 30 June 2010

STATEMENT BY CHIEF EXECUTIVE OFFICER

I, Chris Kaufmann, the person for the time being occupying the position of Executive Officer of Waterproofing Northern Adelaide Regional Subsidiary, do hereby state that the Financial Statements of the Subsidiary for the year ended 30 June 2010 are to be best of my knowledge presented fairly, and in accordance with accounting procedures which have been maintained in accordance with the *Local Government Act 1999* and the *Local Government (Financial Management) Regulations 1999* made under that Act.



Chris Kaufmann

EXECUTIVE OFFICER

Dated this 14th day of September 2010

ADOPTION STATEMENT

Laid before the Waterproofing Northern Adelaide Regional Subsidiary and adopted on the 22 day of September 2010.



Peter Fairlie-Jones

CHAIR

Waterproofing Northern Adelaide Regional Subsidiary

**ANNUAL FINANCIAL STATEMENTS
FOR THE YEAR ENDED 30 June 2010**

CERTIFICATION OF AUDITOR INDEPENDENCE

To the best of our knowledge and belief, we confirm that, for the purpose of the audit of Waterproofing Northern Adelaide Regional Subsidiary for the year ended 30 June 2010, the Subsidiary's Auditor, Dean Newbery & Partners, has maintained its independence in accordance with the requirements of the *Local Government Act 1999* and the *Local Government (Financial Management) Regulations 1999* made under that Act.

This statement is prepared in accordance with the requirements of Regulation 16A(2) *Local Government (Financial Management) Regulations 1999*.



.....
Tim Jackson

CHIEF EXECUTIVE OFFICER – CITY OF PLAYFORD

Date: 8 / 9 / 10

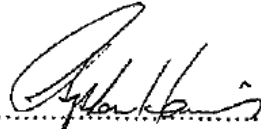
Waterproofing Northern Adelaide Regional Subsidiary

**ANNUAL FINANCIAL STATEMENTS
FOR THE YEAR ENDED 30 June 2010**

CERTIFICATION OF AUDITOR INDEPENDENCE

To the best of our knowledge and belief, we confirm that, for the purpose of the audit of Waterproofing Northern Adelaide Regional Subsidiary for the year ended 30 June 2010, the Subsidiary's Auditor, Dean Newbery & Partners, has maintained its independence in accordance with the requirements of the *Local Government Act 1999* and the *Local Government (Financial Management) Regulations 1999* made under that Act.

This statement is prepared in accordance with the requirements of Regulation 16A(2) *Local Government (Financial Management) Regulations 1999*.



.....
Stephen Hains

CHIEF EXECUTIVE OFFICER – CITY OF SALISBURY

Date: 7 / 9 / 10


Waterproofing Northern Adelaide Regional Subsidiary

**ANNUAL FINANCIAL STATEMENTS
FOR THE YEAR ENDED 30 June 2010**

CERTIFICATION OF AUDITOR INDEPENDENCE

To the best of our knowledge and belief, we confirm that, for the purpose of the audit of Waterproofing Northern Adelaide Regional Subsidiary for the year ended 30 June 2010, the Subsidiary's Auditor, Dean Newbery & Partners, has maintained its independence in accordance with the requirements of the *Local Government Act 1999* and the *Local Government (Financial Management) Regulations 1999* made under that Act.

This statement is prepared in accordance with the requirements of Regulation 16A(2) *Local Government (Financial Management) Regulations 1999*.


.....
D Rogowski

CHIEF EXECUTIVE OFFICER – CITY OF TEA TREE GULLY

Date: 8 / 9 / 2010

Auditor's Independence Declaration Under Section 16A of the Local Government (Financial Management) Regulations 1999 to Waterproofing Northern Adelaide Regional Subsidiary

In conducting our audit, we have complied with the independence requirements of the Local Government Act 1999 and Local Government (Financial Management) Regulations 1999. In accordance with Regulation 16A of the Local Government (Financial Management) Regulations 1999, we state as follows:

We confirm that, for the audit of the financial statements of the Waterproofing Northern Adelaide Regional Subsidiary for the financial year ended 30 June 2010, we have maintained our independence in accordance with the requirements of APES 110 – Code of Ethics for Professional Accountants, Section 290, published by the Accounting Professional and Ethical Standards Board, and in accordance with requirements of the Local Government Act 1999 and the Local Government (Financial Management) Regulations 1999 made under that Act.



DON VENN

Partner

**DEAN NEWBERY & PARTNERS
CHARTERED ACCOUNTANTS
214 MELBOURNE STREET
NORTH ADELAIDE SA 5006**

NORTH ADELAIDE, this 14th day of September 2010

5.6 WNARS Accounts as at 30th June 2010

The WNARS Cash Statements for the Regional Subsidiary as at 30th June 2010 are as follows:

Waterproofing Northern Adelaide
Regional Subsidiary
“WNARS”
Financial Statements

as at June 2010

Waterproofing Nthn Adel Regional Subsid.

12 James Street
SALISBURY SA 5108

Financial Year - Profit & Loss Statement

As of June 2010

	July	August	September	October	November	December	January	February	March	April	May	June	Total
Income													
Grants, Subsidies, Contrib'ns													
EWHA Funding (formerly NWC)	99,808	1,723,830	2,203,968	140,625	(364,742)	331,228	47,581	146,744	(121,674)			8,031	4,215,400
NRM Funding	-	200,000	80,000	-			150,000					100,000	530,000
Council Reimb - Uni SA	-	-	-	-									-
Council Contribution-TTG	-	-	-	254,543	173,631	104,611	30,305	101,134	187,111		171,585	94,246	1,117,166
Council Contribution - Playford	-	-	-	-		300,000		715,703				4,407,094	5,422,797
Council Contribution - Salisbury	25,484	257,167	361,853	(44,147)	360,951		1,751,646	1,072,967		619,396	934,516	1,489,257	6,829,090
Council Contributions - Executive									124,766	48,066	7	30,932	203,770
Total Grants, Subsidies, Contrib'ns	125,292	2,180,997	2,645,821	351,021	169,840	735,839	1,979,532	2,036,548	190,203	667,462	1,106,108	6,129,560	18,318,223
Investment Income													
Interest Rec'd - CBA	111	5	5	74	43	11		495	2,989	252	658	704	5,347
Interest Rec'd - LGFA	-	-	17,998	10,099	4,090	4,651	4,740		7,726	426	815	2,341	52,886
Interest - ATO	-	-	-	-									-
Total Investment Income	111	5	18,003	10,173	4,133	4,663	4,740	495	10,714	678	1,473	3,045	58,233
Total Income	125,403	2,181,002	2,663,824	361,194	173,973	740,502	1,984,272	2,037,043	200,917	668,140	1,107,581	6,132,605	18,376,456
Expenditure													
Tea Tree Gully	-	1,340,053	366,886	280,296	173,631	104,611	180,305	101,134	187,111		171,585	97,246	3,002,858
Playford	-	-	1,726,694	-		598,487	-	852,314				4,527,184	7,704,679
Salisbury	112,182	840,937	515,445	70,720	(3,796)		1,770,351	1,072,967		619,396	934,516	1,944,052	7,876,770
Hydrological Modelling	-	-	-	-									-
Executive	13,110	7	36,796	5	6	32,741	28,876	10,133	3,092	48,066	7	38,832	211,671
Total Expenditure	125,292	2,180,997	2,645,821	351,021	169,840	735,839	1,979,532	2,036,548	190,203	667,462	1,106,108	6,607,314	18,795,977
NET SURPLUS / (DEFICIT)	111	5	18,003	10,173	4,133	4,663	4,740	495	10,714	678	1,473	(474,709)	(419,521)

Waterproofing Nthn Adel Regional Subsid.

12 James Street
SALISBURY SA 5108

Inception to Date - Profit & Loss Statement

To June 2010

	Actuals				Inception to date	Budget Inception to date	Variance Inception to date fav / (unfav)	Entire Project Budget
	2007	2008	2009	2010 YTD				
Income								
EWHA Funding (formerly NWC)	3,350,570	12,353,199	18,080,831	4,215,400	38,000,001	38,000,001	(0)	38,000,000
NRM Funding	191,800	308,200	(30,000)	530,000	1,000,000	1,000,000	-	1,000,000
Council Reimb - Uni SA	-	-	9,000	-	9,000	-	9,000	-
Council Funding	-	2,080,855	5,066,382	13,572,823	20,720,060	20,110,000	610,060	20,110,000
Land Mgt Corp Funding	-	-	-	-	-	-	-	-
Dept Premier & Cabinet Funding	-	-	-	-	-	-	-	-
Interest Income	37,388	271,016	117,100	58,233	483,738	460,001	23,737	475,000
Total Income	3,579,759	15,013,270	23,243,313	18,376,456	60,212,799	59,570,002	642,797	59,585,000
Expenditure								
Tea Tree Gully	1,026,446	3,164,746	5,711,178	3,002,858	12,905,228	12,460,000	(445,228)	12,460,000
Playford	141,788	2,297,635	8,009,694	7,704,679	18,153,796	17,580,000	(573,796)	17,580,000
Salisbury	2,311,000	8,944,232	8,970,397	7,876,770	28,102,399	28,210,000	107,601	28,210,000
Executive	63,136	135,640	434,944	211,671	845,391	1,120,000	274,609	1,135,000
Hydrological Modelling	-	200,000	-	-	200,000	200,000	-	200,000
Total Expenditure	3,542,370	14,742,254	23,126,213	18,795,977	60,206,814	59,570,000	(636,814)	59,585,000
NET SURPLUS / (DEFICIT)	37,388	271,017	117,100	(419,521)	5,984	1	5,983	-

Waterproofing Nthn Adel Regional Subsid.

12 James Street
SALISBURY SA 5108

Balance Sheet

As of June 2010

Assets

Current Assets

Cash On Hand	-
Commonwealth Chq Account	12,799
LGFA 24 Hr Account	636,477
Total Cash On Hand	<u>649,276</u>

Other Current Assets

Accrued Interest	126
Debtors	<u>2,089,700</u>
Total Other Current Assets	<u>2,089,825</u>
Total Current Assets	<u>2,739,101</u>
Total Assets	<u>2,739,101</u>

Liabilities

Current Liabilities

Trade Creditors	2,511,702
Grant Rec'd In Advance - DEWHA	-
Grant Rec'd In Advance - NRM	-
Council Contribution to Executive	96,229

GST Liabilities

GST Collected	189,973
GST Paid	<u>(64,788)</u>
Total GST Liabilities	<u>125,185</u>
Total Current Liabilities	<u>2,733,117</u>
Total Liabilities	<u>2,733,117</u>

Net Assets **5,985**

Equity

Retained Earnings	425,506
Future Projects Reserve	-
Current Year Surplus/Deficit	<u>(419,521)</u>
Total Equity	<u>5,985</u>

Waterproofing Nthn Adel Regional Subsid.

12 James Street
SALISBURY SA 5108

PLAYFORD - Sub-Project Transactions

Inception To June 2010

Date	Memo	Actuals Inception to date	Budget Inception to date	Variance Inception to date	Entire Project Budget
				fav / (unfav)	
PLAYFORD					
CB	COMMUNITY BORES PLAYFORD				
	30/06/2007 Playford Claim Totals	85,000			
	30/06/2008 Playford Claim Totals	1,091,337			
	30/06/2009 Playford Claim Totals	1,052,575			
	30/09/2009 Playford Claim	556,950			
	31/12/2009 Playford Claim	246,772			
	31/12/2009 Playford Claim (Council)	150,000			
	28/02/2010 Playford Claim (Council)	-	150,000		
	28/02/2010 Playford Claim	136,611			
	30/04/2010 Playford Claim (Council)	356,165			
	30/04/2010 Playford Claim	117,090			
	30/06/2010 Playford Claim (Council)	-	537,782		
	30/06/2010 Playford Claim adj (Council)	2,613,391			
		<u>5,718,109</u>	<u>\$ 4,623,579</u>	<u>\$ (1,094,529)</u>	<u>5,212,669</u>
SC	SMITH CREEK				
	30/06/2007 Playford Claim Totals	396,000			
	30/06/2008 Playford Claim Totals	867,086			
	30/06/2009 Playford Claim Totals	6,957,120			
	30/09/2009 Playford Claim	1,089,745			
	30/09/2009 Playford Claim (NRM)	80,000			
	31/12/2009 Playford Claim	51,715			
	31/12/2009 Playford Claim (Council)	150,000			
	28/02/2010 Playford Claim (Council)	865,703			
	30/04/2010 Playford Claim (Council)	1,567,430			
	30/06/2010 Playford Claim (Council)	-	3,404		
	30/06/2010 Playford Claim adj (Council)	414,294			
		<u>12,435,689</u>	<u>\$ 9,887,330</u>	<u>\$ (2,548,358)</u>	<u>12,367,330</u>
TOTAL PLAYFORD		18,153,797	14,510,910	(3,642,887)	17,579,999

Waterproofing Nthn Adel Regional Subsid.

12 James Street
SALISBURY SA 5108

SALISBURY - Sub-Project Transactions

Inception To June 2010

Date	Memo	Actuals Inception to date	Budget Inception to date	Variance Inception to date	Entire Project Budget
SALISBURY					
AS	ASTR				
	30/06/2007 Salisbury Claim Totals	536,000			
	30/06/2008 Salisbury Claim Totals	1,280,424			
	30/06/2009 Salisbury Claim Totals	474,031			
	30/09/2009 Salisbury Claim	74			
	31/10/2009 Salisbury Claim	10,000			
	31/10/2009 Salisbury Claim (Council)	-	363,955		
	30/06/2010 Salisbury Claim (Council)	-	48,814		
	30/06/2010 Salisbury Claim	263,426			
		2,151,186	\$ 2,200,000	\$ 48,814	2,200,000
CD	CONTROLLABLE DETENTION				
	30/06/2007 Salisbury Claim Totals	74,000			
	30/06/2008 Salisbury Claim Totals	72,574			
	31/08/2009 Salisbury Claim	73,011			
	30/09/2009 Salisbury Claim	2,448			
	31/10/2009 Salisbury Claim	7,423			
	20/01/2010 Salisbury Claim	2,444			
	30/04/2010 Salisbury Claim (Council)	17,339			
	31/05/2010 Salisbury Claim (Council)	17,237			
	30/06/2010 Salisbury Claim (Council)	45,700			
	30/06/2010 Salisbury Claim	68,100			
		380,276	\$ 550,000	\$ 169,724	550,000
DC-L	LOWER DRY CREEK				
	30/06/2007 Salisbury Claim Totals	620,000			
	30/06/2008 Salisbury Claim Totals	4,933,169			
	30/06/2009 Salisbury Claim Totals	6,286,930			
	31/07/2009 Salisbury Claim	86,698			
	31/08/2009 Salisbury Claim	57,952			
	31/08/2009 Salisbury Claim	510,759			
	30/09/2009 Salisbury Claim	75,786			
	30/09/2009 Salisbury Claim	151,070			
	31/10/2009 Salisbury Claim	97,444			
	31/10/2009 Salisbury Claim (Council)	222,643			
	30/11/2009 Salisbury Claim	42,014			
	30/11/2009 Salisbury Claim (Council)	321,006			
	20/01/2010 Salisbury Claim	16,261			
	20/01/2010 Salisbury Claim (Council)	721,269			
	28/02/2010 Salisbury Claim (Council)	547,960			
	30/04/2010 Salisbury Claim (Council)	601,808			
	31/05/2010 Salisbury Claim (Council)	889,779			
	30/06/2010 Salisbury Claim (Council)	984,854			
	30/06/2010 Salisbury Claim (NRM)	100,000			
	30/06/2010 Salisbury Claim	20,269			
		17,287,671	\$ 15,400,909	\$ (1,886,762)	16,910,000
HR	HELPS ROAD				
	30/06/2007 Salisbury Claim Totals	313,248			
	30/06/2008 Salisbury Claim Totals	2,501,917			
	30/06/2009 Salisbury Claim Totals	2,194,280			
	31/07/2009 Salisbury Claim	21,690			
	31/08/2009 Salisbury Claim	198,830			
	30/09/2009 Salisbury Claim	283,768			
	30/09/2009 Salisbury Claim (CREDIT)	-	17,001		
	31/10/2009 Salisbury Claim (Council)	95,376			
	30/11/2009 Salisbury Claim (Council)	39,945			
	20/01/2010 Salisbury Claim (Council)	1,030,377			
	28/02/2010 Salisbury Claim (Council)	120,247			
	31/05/2010 Salisbury Claim (Council)	27,452			
	30/06/2010 Salisbury Claim (Council)	577,902			
		7,388,031	\$ 7,800,000	\$ 411,969	7,900,000
LP-L	LOWER LITTLE PARA				
	30/06/2007 Salisbury Claim Totals	782,752			
	30/06/2008 Salisbury Claim Totals	-	142,153		
	30/06/2009 Salisbury Claim Totals	99,324			
	31/07/2009 Salisbury Claim	3,794			
	31/08/2009 Salisbury Claim	385			
	30/09/2009 Salisbury Claim	2,299			
	30/09/2009 Salisbury Claim (CREDIT)	-	386,345		
	31/10/2009 Salisbury Claim	1,789			
	1/11/2009 Salisbury Claim	-	1,789		
	1/11/2009 Salisbury Claim	-	1,626		
	28/02/2010 Salisbury Claim (Council)	404,760			
	30/04/2010 Salisbury Claim (Council)	249			
	31/05/2010 Salisbury Claim (Council)	48			
	30/06/2010 Salisbury Claim (Council)	-	67,385		
		696,102	\$ 600,000	\$ (96,102)	650,000
TOTAL SALISBURY		27,903,267	26,550,910	(1,352,357)	28,210,001

Waterproofing Nthn Adel Regional Subsid.

12 James Street
SALISBURY SA 5108

TEA TREE GULLY - Sub-Project Transactions

Inception To June 2010

Date	Memo	Actuals Inception to date	Budget Inception to date	Variance Inception to date	Entire Project Budget
TEA TREE GULLY					
DC-U UPPER DRY CREEK					
30/06/2007	TTG Claim Totals	824,784			
30/06/2008	TTG Claim Totals	1,051,467			
30/06/2009	TTG Claim Totals	2,543,993			
31/08/2009	TTG Claim	90,674			
31/08/2009	TTG Claim (NRM)	200,000			
30/09/2009	TTG Claim	177,439			
31/10/2009	TTG Claim	12,385			
31/10/2009	TTG Claim (Council)	144,828			
30/11/2009	TTG Claim (Council)	15,788			
31/12/2009	TTG Claim (Council)	48,985			
31/01/2010	TTG Claim (NRM)	150,000			
28/02/2010	TTG Claim (Council)	41,442			
31/03/2010	TTG Claim (Council)	56,169			
31/05/2010	TTG Claim (Council)	44,255			
30/06/2010	TTG Claim (Council)	1,095			
		<u>5,403,304</u>	<u>\$ 5,124,718</u>	<u>\$ (278,586)</u>	<u>5,124,718</u>
ID INTEGRATED DISTRIBUTION					
30/06/2007	TTG Claim Totals	-			
30/06/2008	TTG Claim Totals	210,213			
30/06/2009	TTG Claim Totals	3,796,536			
31/08/2009	TTG Claim	972,886			
31/08/2009	TTG Claim	187,378			
31/10/2009	TTG Claim	11,928			
31/10/2009	TTG Claim (Council)	75,346			
30/11/2009	TTG Claim (Council)	131,068			
31/12/2009	TTG Claim (Council)	15,162			
31/01/2010	TTG Claim (Council)	30,305			
28/02/2010	TTG Claim (Council)	24,250			
31/03/2010	TTG Claim (Council)	81,468			
31/05/2010	TTG Claim (Council)	13,755			
30/06/2010	TTG Claim (Council)	1,060			
		<u>5,551,355</u>	<u>\$ 5,599,553</u>	<u>\$ 48,198</u>	<u>5,599,553</u>
LP-U UPPER LITTLE PARA					
30/06/2007	TTG Claim Totals	-			
30/06/2008	TTG Claim Totals	549,837			
30/06/2009	TTG Claim Totals	-	243,827		
31/08/2009	TTG Claim	18			
30/09/2009	TTG Claim	2,069			
31/10/2009	TTG Claim	767			
31/10/2009	TTG Claim (Council)	28,669			
30/11/2009	TTG Claim (Council)	26,775			
31/12/2009	TTG Claim (Council)	12,759			
28/02/2010	TTG Claim (Council)	35,442			
31/03/2010	TTG Claim (Council)	49,474			
31/05/2010	TTG Claim (Council)	113,575			
30/06/2010	TTG Claim (Council)	94,070			
		<u>669,628</u>	<u>\$ 54,062</u>	<u>\$ (615,566)</u>	<u>494,971</u>
TR TORRENS					
30/06/2007	TTG Claim Totals	201,662			
30/06/2008	TTG Claim Totals	1,339,370			
30/06/2009	TTG Claim Totals	-	371,666		
31/08/2009	TTG Claim	76,475			
31/10/2009	TTG Claim	673			
31/10/2009	TTG Claim (Council)	5,700			
31/12/2009	TTG Claim (Council)	27,705			
30/06/2010	TTG Claim (Council)	1,021			
		<u>1,280,940</u>	<u>\$ 1,240,758</u>	<u>\$ (40,182)</u>	<u>1,240,758</u>
TOTAL TEA TREE GULLY		\$ 12,905,227	\$ 12,019,091	\$ (886,136)	\$ 12,460,000

Waterproofing Nthn Adel Regional Subsid.

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DIRECT EXPENDITURE - Transactions

Inception To June 2010

Date	Memo	Actuals Inception to date	Budget Inception to date	Variance Inception to date	Entire Project Budget
EX EXECUTIVE					
30/06/2007	Totals	28,124			
30/06/2008	Totals	467,812			
30/06/2009	Totals	336,917			
1/07/2009	LG Mutual Scheme	13,104			
15/07/2009	Bank Fees	6			
17/08/2009	Bank Fees	7			
15/09/2009	Bank Fees	5			
30/09/2009	Salisbury Exec Officer Fees	32,459			
30/09/2009	Playford Accounting Fees	4,332			
31/10/2009	Bank Fees	5			
16/11/2009	Bank Fees	6			
15/12/2009	Bank Fees	6			
31/12/2009	Salisbury Exec Officer Fees	27,696			
31/12/2009	Salisbury Exec Officer Vehicle	138			
31/12/2009	Salisbury Exec Officer Comms	1,197			
31/12/2009	Playford Accounting Fees	3,705			
19/01/2010	Sinclair Knight Merz	4,325			
31/01/2010	Playford Steboneath Park Opening Contrib	15,000			
31/01/2010	TTG Day at the Dam Sponsorship	4,545			
31/01/2010	Salisbury - Watershed Art Prize Sponsorship	5,000			
31/01/2010	Bank Fees	5			
28/02/2010	Norman Waterhouse	10,126			
28/02/2010	Bank Fees	7			
3/03/2010	Executive Media	3,086			
31/03/2010	Bank Fees	5			
30/04/2010	Playford Accounting Fees	1,723			
30/04/2010	TTG Accounting Fees	3,736			
30/04/2010	The Lighthouse PR	2,848			
30/04/2010	Sinclair Knight Merz	10,700			
30/04/2010	Internode - DNS regn	50			
30/04/2010	Salisbury Exec Officer Fees	28,350			
30/04/2010	Salisbury Exec Officer Vehicle	176			
30/04/2010	Salisbury Exec Officer Comms	261			
30/04/2010	Salisbury Exec Officer Catering	216			
30/04/2010	Bank Fees	6			
31/05/2010	Bank Fees	7			
30/06/2010	TTG Accounting fees	880			
30/06/2010	Salisbury Exec Officer Fees	25,819			
30/06/2010	Salisbury Exec Officer Vehicle	39			
30/06/2010	Salisbury Exec Officer Comms	338			
30/06/2010	The Lighthouse PR	1,850			
30/06/2010	Touche Adaptive Systems	2,000			
30/06/2010	Bank Fees	6			
30/06/2010	Audit Fees	7,900			
		<u>1,044,523</u>	<u>\$ 1,059,091</u>	<u>\$ 14,568</u>	<u>1,135,000</u>
HM HYDROLOGIC MODELLING					
30/06/2007	Totals	-			
30/06/2008	Totals	200,000			
		<u>200,000</u>	<u>\$ 200,000</u>	<u>\$ -</u>	<u>200,000</u>
		Actuals	Budget	Variance	Total Budget
TOTAL PROJECT SPEND TO June 10		60,206,813	\$ 54,340,002	\$ (5,866,811)	\$ 59,585,000

Waterproofing Nthn Adel Regional Subsid.

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Sub Project - Budget / Expenditure Overview

Inception to June 2010

Sub Project	ENTIRE PROJECT			COMMONWEALTH			COUNCIL			STATE (NRM)		
	Actuals Inception to Date	Entire Project Budget	Variance Inception to Date	Actuals Inception to Date	Budget Entire Project	Variance Inception to Date	Actuals Inception to Date	Budget Entire Project	Variance Inception to Date	Actuals Inception to Date	Budget Entire Project	Variance Inception to Date
						fav / (unfav)			fav / (unfav)			fav / (unfav)
PLAYFORD												
Playford Community Bores	5,718,109	5,212,670	(505,439)	3,286,335	3,286,335	-	2,431,774	1,926,335	(505,439)	-	-	-
Smiths Creek	12,435,689	12,367,330	(68,359)	7,113,666	7,113,665	(1)	5,142,023	5,073,665	(68,358)	180,000	180,000	-
TOTAL - PLAYFORD	18,153,798	17,580,000	(573,798)	10,400,001	10,400,000	(1)	7,573,797	7,000,000	(573,797)	180,000	180,000	-
SALISBURY												
Lower Dry Creek	17,287,671	16,910,000	(377,671)	10,059,837	10,060,000	163	6,927,834	6,550,000	(377,834)	300,000	300,000	-
ASTR	2,151,186	2,200,000	48,814	2,200,000	2,200,000	-	(48,814)	-	48,814	-	-	-
Controllable Detentions	380,276	550,000	169,724	300,000	300,000	-	80,276	250,000	169,724	-	-	-
Lower Little Para	696,102	650,000	(46,102)	300,163	300,000	(163)	345,939	300,000	(45,939)	50,000	50,000	-
Helps Road	7,388,032	7,900,000	511,968	4,800,000	4,800,000	0	2,588,032	3,100,000	511,968	-	-	-
TOTAL - SALISBURY	27,903,267	28,210,000	306,733	17,660,000	17,660,000	0	9,893,267	10,200,000	306,733	350,000	350,000	-
TEA TREE GULLY												
Torrens	1,280,940	1,240,000	(40,940)	1,171,000	1,171,000	-	109,940	69,000	(40,940)	-	-	-
Upper Dry Creek	5,403,304	5,125,000	(278,304)	3,755,000	3,755,000	-	1,298,304	1,020,000	(278,304)	350,000	350,000	-
Integrated Distribution	5,551,355	5,600,000	48,645	4,300,000	4,300,000	-	1,251,355	1,300,000	48,645	-	-	-
Upper Little Para	669,628	495,000	(174,628)	274,000	274,000	-	395,628	221,000	(174,628)	-	-	-
TOTAL - TEA TREE GULLY	12,905,227	12,460,000	(445,227)	9,500,000	9,500,000	-	3,055,227	2,610,000	(445,227)	350,000	350,000	-
OTHER												
Executive	1,044,523	1,135,000	90,477	712,853	715,000	2,147	211,670	300,000	88,330	120,000	120,000	-
Hydrologic Modelling	200,000	200,000	-	200,000	200,000	-	-	-	-	-	-	-
Uni SA Reimbursement	-	-	-	(12,000)	-	12,000	3,000	-	(3,000)	-	-	-
Claims against interest	-	-	-	(460,854)	-	460,854	460,854	-	(460,854)	-	-	-
TOTAL PROJECT to June 10	60,206,815	59,585,000	(621,815)	38,000,000	38,475,000	463,000	21,197,815	20,110,000	(1,084,815)	1,000,000	1,000,000	-

Waterproofing Nthn Adel Regional Subsid.

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Reconciliation of Grants Received in Advance

To June 2010

NATURAL RESOURCES MANAGEMENT (ADEL & MT LOFTY NATURAL RESOURCES MANAGEMENT BOARD)

	New Grants	Applied / Expensed	Liability Acct Balance
<i>b/forward</i>			-
Jul-08	0	0	0
Aug-08			0
Sep-08	250,000	0	250,000
Oct-08	0	0	250,000
Nov-08		300,000	(50,000)
Dec-08			(50,000)
Jan-09			(50,000)
Feb-09			(50,000)
Mar-09		(50,000)	0
Apr-09			0
May-09			0
Jun-09		(280,000)	280,000
Jul-09			280,000
Aug-09	250,000	200,000	330,000
Sep-09		80,000	250,000
Oct-09			250,000
Nov-09			250,000
Dec-09			250,000
Jan-10		150,000	100,000
Feb-10			100,000
Mar-10			100,000
Apr-10			100,000
May-10			100,000
Jun-10		100,000	0
Grants Received in Advance Balance (as per Balance Sheet)			-

NATIONAL WATER COMMISSION (NOW CALLED DEPT ENV WATER HERITAGE & ARTS)

	New Grants	Applied / Expensed	Liability Acct Balance
<i>b/forward</i>			1,994,230.49
Jul-08	0	829,579	1,164,652
Aug-08	2,274,091	1,866,126	1,572,617
Sep-08	0	2,398,023	(825,406)
Oct-08	0	1,340,262	(2,165,668)
Nov-08	6,680,000	2,684,711	1,829,621
Dec-08		1,823,383	6,238
Jan-09		1,876,440	(1,870,202)
Feb-09		285,065	(2,155,267)
Mar-09		2,576,960	(4,732,227)
Apr-09		459,246	(5,191,473)
May-09		96,031	(5,287,504)
Jun-09	7,795,455	1,854,006	653,945
Jul-09		99,808	554,137
Aug-09		1,723,830	(1,169,693)
Sep-09	1,652,727	1,800,622	(1,317,588)
Oct-09		140,625	(1,458,214)
Nov-09		38,604	(1,496,818)
Dec-09		331,228	(1,828,046)
Jan-10		47,581	(1,875,627)
Feb-10		146,744	(2,022,371)
Mar-10		(121,674)	(1,900,697)
Apr-10			(1,900,697)
May-10			(1,900,697)
Jun-10	1,899,727	468,885	(469,854)
Jun-10		(9,000)	(460,854)
Jun-10		(460,854)	(0)
Grants Received in Advance Balance (as per Balance Sheet)			(0)

**COUNCIL CONTRIBUTION
TO EXECUTIVE EXPENDITURE**

	New Grants	Applied / Expensed	Liability Acct Balance
Feb-10	300,000		300,000
Mar-10		124,766	175,234
Apr-10		48,066	127,168
May-10		7	127,161
Jun-10		30,932	96,229
Grants Received in Advance Balance (as per Balance Sheet)			96,229

Waterproofing Nthn Adel Regional Subsid.

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Debtors & Creditors Summary

As at 30th June 2010

Debtors

Name	Total Due	0 - 30	31 - 60	61 - 90	90+
Dept Environment, Water, Heritage & Arts	2,089,700	2,089,700			
Total:	2,089,700	2,089,700	-	-	-

Creditors

Name	Total Due	0 - 30	31 - 60	61 - 90	90+
Playford Council	607,407	128,799			478,608
Salisbury Council	1,294,290	525,789			768,501
TTG Council	597,871	968		-	596,903
The Lighthouse PR	2,035	2,035			
Touche Adaptive Systems	2,200	2,200			
Dean Newberry	7,900	7,900			
Total:	2,511,702	667,691	-	-	1,844,011

Waterproofing Nthn Adel Regional Subsid.

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Cash Position

As At 30th June 2010

Current Cash Balances Held

Commonwealth Bank Chq Account	12,799	
LGFA 24hr At Call Account	636,477	
		<u>649,276</u>

Current Amounts due in

Dept Environment, Water, Heritage & Arts	2,089,700	
	<u>2,089,700</u>	2,089,700

BAS Payment Due

(125,185)

Current Payments Due

Salisbury - August Claim	(642,147)	
Salisbury-October Claim	(126,354)	
Salisbury - June Claim	(496,975)	
Salisbury - Exec Officer	(28,815)	
	<u>(1,294,290)</u>	
TTG - October	(28,328)	
TTG - September Claim	(403,575)	
TTG - January Claim	(165,000)	
TTG - Accounting fees	(968)	
	<u>(597,871)</u>	
Playford - December Claim	(328,336)	
Playford - Feb Claim	(150,272)	
Playford - June Claim	(128,799)	
	<u>(607,407)</u>	
The Lighthouse PR	(2,035)	
Touche Addaptive Systems	(2,200)	
Dean Newberry	(8,690)	
	<u>(2,512,492)</u>	

Current Estimated Cash Surplus / (Shortfall)

101,299

5.7 Assets

Neither WNARS, nor the Constituent Councils, have used any of the WNA funds to acquire Assets as defined in the terms of the Funding Deed.

No Asset Register is required.

5.8 Insurance

WNARS has maintained its insurance cover up to 30th June 2010.

5.9 Other Financial Information

As Executive Officer for WNARS for the period to 30th June 2010, I state that:

1. The Summary Tables appearing in Item 5.4 and the accounts provided in Item 5.6 are a fair and true record of the activities of the Constituent Councils and the Regional Subsidiary.
2. The Funding and Other Contributions have only been spent for the purposes of Waterproofing Northern Adelaide in accordance with the Funding Deed.
3. The Summary Tables appearing in Item 5.4 shows the financial position of WNA as at the end of June 2010 and at the end of September 2010. The accounts provided in Item 5.6 shows the financial position of WNARS at the end of June 2010.
4. The current liabilities which have been entered into by WNARS and the Constituent Councils to implement WNA stand at approximately \$2.8m (ex GST) as at 30th June 2010.
5. WNARS has outstanding commitments to its Constituent Councils which will be met from the Final Payment from the Australian Government.
6. WNARS has earned \$483,738 in interest over the project duration to the end of June 2010. This has been utilised in accordance with the Board approved policy solely for the project purposes.
7. There are no outstanding court or tribunal orders known to the Subsidiary.
8. WNARS does not pay any fees to Directors.
9. WNARS does not employ any staff; the Constituent Councils employ staff and agents in accordance with relevant awards and agreements.
10. The remaining Funds, comprising the Final Payment, have been spent by the Constituent Councils who will be paid when the payment is received.
11. No Assets have been created.
12. Capital Works have been undertaken in accordance with Clause 5 of the Funding Deed.
13. As at 30 September 2010, WNARS and Constituent Councils can pay all debts as they fall due, provided the Commonwealth makes its Final Payment.
14. Associated projects, Tea Tree Gully CWMS Plant and Salisbury Stormwater Harvesting are being coordinated with WNA but the funds are kept completely separate.

6 ACHIEVEMENT OF OBJECTIVES

The Commonwealth funding was provided on the basis that WNA would achieve a number of defined Objectives. The magnitude of some of these Objectives was varied by approval (Project Variation 2) and the following Table presents the summary of their achievement.

This is then followed by a brief description of the way in which these were measured.

Objective:	Performance			
a. Provide a sustainable recycled water supply				
Measure	Pre WNA	WNA	Total	Target PV2
• Wetland ASR's operating	8	10	18	18
• Community bore operating	17	14	31	31
• Distribution Main in Place (km)	21	96	117	100
b. Recharge groundwater systems				
Measure	Pre WNA	WNA	Total	Target PV2
• Recharge locations	8	14	22	26
• ASTR capacity (GL/an)	0	0.6	0.6	0.6
• Sustainable Recharge Capacity (GL/an)	1.7	9.2	10.9	14.4
c. Sustain Riverine Environments				
Measure	Pre WNA	WNA	Total	Target PV2
• Reaches being provided with environmental flow management	3	17	20	23
• Length of reaches (km)	6.5	72	78	70
d. Provide sustainable harvest of recycled water				
Measure	Pre WNA	WNA	Total	Target PV2
• Harvest Capacity (GL/an)	1.7	13.8	15.5	16
• % of average annual run off	7	57	64	67
e. Implement water pricing based on NWI and COAG principles				
Measure	Pre WNA	WNA	Total	Target PV2
• Current Estimate of Average	\$/MI	\$/MI		fcr
- Upper Bound Price	880	2100		
- Current Average Price	850	2200		
f. Enhance Urban Environments				
Measure	Pre WNA	WNA	Total	Target PV2
• Urban areas improved by water (ha)	524	4944	5468	2300
g. Demonstrate best practice and innovation				
Measure				
• Focus on larger and more effective sites				
• Transition from independent ASR sites to interconnected sites				
• Improved assessment processes for MAR in fractured rock				

Objective:**Performance**

h. Implement sustainable management of catchments, surface and groundwater				
Measure				
<ul style="list-style-type: none"> • Catchment management; systems in place • Commitment to hazard analysis and management for each catchment • Monitoring - agreed locations & system requirements with NRM Board, installed & operating 				
i Reduce Ocean Outfall				
Measure	Pre WNA	WNA	Total	Target PV2
<ul style="list-style-type: none"> • Calculated reduction (GL/an) (allows for environmental flows) 	8.2	12.5	20.7	20
j Substitute for Drinking Water				
Measure	Pre WNA	WNA	Total	Target PV2
<ul style="list-style-type: none"> • Replacement supply (GL/an) 	1.8	6.4	8.2	8
k. Replace and recharge groundwater				
Measure	Pre WNA	WNA	Total	Target PV2
<ul style="list-style-type: none"> • Replacement supply (GL/an) • Recharge capacity (GL/an) 	0	1.9	1.9	1.2
	0.3	5.3	5.6	5
l. Promote increased efficiency of water use				
Measure				
<ul style="list-style-type: none"> • Cooperate in business efficiency promotion, includes audits • Link to SA Government Water Management Plans process for largest water users 				
m. Provide flood protection				
Measure				
<ul style="list-style-type: none"> • Improvements completed in parts of Helps Road catchment • Definition of requirements is in progress and is the basis for funding from SMA for: <ul style="list-style-type: none"> - Upper Dry Creek - Lower Dry Creek (particularly Main North Road) - Helps Road (particularly Edinburgh Parks & Direk) - Smith Creek (particularly Playford North) 				

6.1 Explanatory Notes

These notes set out the manner in which we have defined and measured the outcomes which are used to demonstrate the achievement of the Objectives.

a. Provide a sustainable recycled water supply**1. *Wetland ASR's operating***

These are only the wetlands which are supplying water directly to an ASR. In six cases there are multiple wetlands working as a set, these are counted as one. There are many more wetlands which supply cleansed water into the waterways to be harvested lower in the catchments, these are not counted.

- 2. *Community Bores*
 - These are extraction only bores, drawing native groundwater for use alone or blended with other recycled water.
 - The extraction is balanced by credits derived from injection of recycled water at other locations.
 - Many of these have Extraction Allocations which are no longer used.
- 3. *Distribution Mains*
 - The dedicated mains provided for the supply of recycled water from the ASR sites to the customers. It does not include the mains within the customers property.
 - This only includes mains owned by the Councils, in particular it excludes mains owned by SA Water.

b. Recharge Groundwater Systems

- 1. *Recharge locations*
 - The number of sites at which urban stormwater is introduced into the aquifer.
 - This includes the bed recharge location in Little Para which has been brought back into effect as part of WNA.
- 2. *Sustainable Recharge Capacity*
 - The calculated volume which can be recharged into the aquifer taking into account the sustainable capture and treatment facilities which have been built as well as the ASR facilities, excluding ASTR. It also includes a conservative estimate of bed recharge in the Little Para.
- 3. *ASTR Recharge Capacity*
 - The capacity for the redeveloped research wellfield to store water generated sustainably at either Parafield or Bennett Road.

c. Sustain riverine environments

- 1. *Reaches provided with environmental flow*
 - The number of reaches in natural or landscaped condition which are downstream of a wetland ASR which is managed to sustain environmental flows.
 - The final reach from the last urban area to the mangrove fringes of Gulf St Vincent has been excluded for each waterway.
 - In the Torrens only the two reaches adjacent to the wetlands have been included.
- 2. *Length of Reaches*
 - The approximate centreline length is used, derived from mapping.

- d. Provide sustainable harvest of recycled water
1. *Harvest Capacity*

The calculated average sustainable harvest which can be achieved by the infrastructure as built, particularly the volumes of detention created. The WaterCress modelling then provides the design harvest.

This capacity is in general greater than the recharge capacity, reflecting the injection pumping capacity.

Evaluation will indicate the extent to which the design capacity is achieved.
 2. *% of average Annual Run-off*

The WaterCress modelling has provided an estimate of the Average Annual Run-Off from the urban catchments and this is used to provide the percentage.
- e. Implement water pricing based on NWI and COAG Principles
1. *Current Estimate of Upper Bound Price*

Using cost information from the Councils the Upper Bound Price – based on COAG and NWI principles as defined by the NWC – of

 - Operating (using renewable energy):
 - Depreciation
 - Return on Equity (excluding grants)
 - All planning and regulatory costs
 - Monitoring
 - Excluding Tax Equivalent Regime.
 2. *Current Supply Price*

The price per ML which a Council would charge a new customer, excluding start up discount arrangements for connection and the supply component of price.
- f. Enhance the Urban Environments
1. *Urban Area Improved*

An estimate of the area which will benefit from the immediate presence of a wetland or a sustained waterway.

Allows only for urban areas which are developed or programmed for development within the next few years.

Unless separated by some physical barrier an allowance of 350m of effect has been allowed, based on research from CSIRO.
- g. Demonstrate best practice & innovation
1. *Text note* used in Milestone Reports a description of major innovations will be included

- h. Implement sustainable resource management
1. *Text notes* used in Milestone Report, a description of key aspect of resource management will be included.
- i. Reduce Ocean Outfall
1. *Current Reduction* calculated number based on WaterCress modelling allowing for the Harvest and other extractions which have been developed.
 2. *% Reduction* presentation of the previous calculation as a percentage.
- j. Substitute drinking water
1. *Supply* designed supply capacity which includes the capacity and extent of the distribution system to provide water to users.
During the Evaluation Period this will be replaced by meter readings of supplied water.
- k. Replace & Recharge Groundwater
1. *Replacement Supply* designed supply capacity to provide water as a substitute for groundwater used prior to the project.
This includes the substitution of credits for pre-existing groundwater allocations on bores owned by the Councils prior to WNA.
During the Evaluation period this will be replaced by meter readings of supplied water.
 2. *Recharge Capacity* the calculated volume left in the aquifer from the operation of the ASR sites as designed.
During the Evaluation period the actual performance of these sites will become clearer and will be reported upon.
- l. Promote increased efficiency of water use
1. *Text entry* Text will present key initiatives undertaken during WNA
- m. Provide flood protection
1. *Text entry* Text will present major works undertaken in association with WNA.

6.2 Success in achieving the Objectives

The scheme as completed has been varied from the initial conception to focus the investment on a smaller number of larger wetland ASR facilities with higher capacity and linked with larger, longer distribution systems.

This change which was approved in Project Variations 1 and 2 has resulted in a scheme in which the output Objectives (Ocean Outfall reduction, Drinking (potable) water and Groundwater Substitution and Groundwater Recharge) are all exceeded as has been the length of Distribution Main while the System Objectives (Wetland ASR sites, Bores, Recharge Locations, Sustainable Recharge Capacity and Harvest Capacity) have been held to a minimum commensurate with producing the outputs. The most notable is a reduction in recharge locations which reflects the focus on a smaller number of higher performing sites.

In the qualitative Objectives of best practice, education and promotion the Board believes it has discharged its obligations in a very effective manner.

In conclusion the Board is confident that the Capital Works developed and the Other Activities undertaken have delivered the Objectives required of Waterproofing Northern Adelaide.

7 BASE FOR EXPANSION

WNA was planned to be the initial stage of an integrated scheme which would serve the region as it grows. The current 30 Year Plan for the region will see population increase by over 50% (100,000 people) predominantly in Playford and employment more than double, focussed on Edinburgh Parks. WNA has provided the base for the expansion of the urban water reuse system to supply the three Councils. The following projects are not part of WNA but would not have been possible without it.

7.1 Stormwater Reuse & Distribution

Smith Creek

Waterproofing Playford – Water for Future fund

This expands the current scheme to add a wetland at the intersection of Stebonheath and Curtis Roads in Munno Para West and develop a wetland at Andrews Farm South to meet the needs of Playford Alive as it expands. The Andrews Farm South wetland will be supplemented with water captured in the new Detention Basin developed for the Northern Expressway (NEXY). These sites are shown on the plan included in the Capital Works Chapter.

This scheme will expand further west as urban growth progresses to the eastern boundary of the Northern Expressway in accordance with the 30 Year Plan

Helps Road Drain

Salisbury Stormwater Harvesting – Water for Future fund

This is the development of a final downstream harvesting location on Helps Road Drain. This is combined with a downstream harvest from Little Para River and supplies into the distribution system developed in WNA and extended in this project. This is shown on the plan included in the Chapter 4 on Capital Works.

Greater Edinburgh Parks – the development of the predominantly industrial area between the Edinburgh RAAF base and the Northern Expressway, generally called Greater Edinburgh Parks, will have a central waterway constructed and a series of detention and treatment wetlands, some with ASR. This water will feed into an extended distribution system serving the industrial areas and then back into the broader community over the coming decades.

Little Para River

Salisbury Stormwater Harvesting – Water for Future fund

The development of a final downstream harvesting location on Little Para, based on existing sets of wetlands. This is combined with the downstream harvesting from Helps Road Drain and supplies from a common ASR borefield into the distribution system developed by WNA and extended by this project. This is shown on the plan included in the Chapter 4 on Capital Works.

Dry Creek

Tea Tree Gully CWMS Plant – Watersmart Australia

The treated effluent which is suitable for irrigation use (Class A) will be combined with the recycled stormwater to distribute through the system developed in WNA.

This plant is capable of expansion to match increased demands.

Unity Park Expansion – Water for Future fund

Development of additional treatment, by way of bio-filtration beds which will double the supply from the Unity Park facility developed in WNA.

Links to Eastern Alliance – Water for Future fund

Development of a major distribution system through the eastern suburbs supplied for the Torrens facilities developed in WNA and supplemented by local small stormwater reuse schemes. This has the potential to add more small schemes and extend the distribution over time.

Residential Retrofit trial - Water for Future fund

An application has been lodged to trial the provision of recycled stormwater to a suburb. This will explore the technical, social and financial aspects of mains water substitution in an existing residential area.

Link to Western Adelaide – Water for Future fund

An has been application made to extend the distribution system through existing heavy industry areas to link with the approved Barker Inlet system being developed by SA Water.

7.2 Other Water Resources

Groundwater

It would appear that the urban expansion will reduce the demand on groundwater for agricultural use. Where the resource is suitable these bores could be used to provide water for urban uses and supplied with injection credits from the current schemes developed under WNA. These are long term plans.

Role for desalination of groundwater

The native groundwater is brackish under much of the region, for low volume uses desalination may prove more economic than piped distribution. To better understand the practicalities of operation and cost of this, Salisbury is undertaking trials of a pilot plant.

As part of WNA the University of SA students undertook some laboratory research to identify suitable membranes and to consider the need for pre-treatment of the brackish water. The report which concluded that the water is within the effective scope of commercial membranes without pre-treatment is on the web site.

Windesal

Salisbury is acting as a host for a private feasibility study of the commercial application of wind powered desalination of brackish groundwater. This project is still in the analysis stage but could provide a model for transfer of credits to a desalinators powered by renewable resources.

8 ADDITIONAL RESEARCH & DEVELOPMENT

WNA has fostered an ongoing interest in innovative approaches to urban water management and reuse among its constituent Councils and they are working in at least four areas at present. These are:

Residential Retrofit

While use of recycled urban stormwater to substitute for drinking water uses in community open space, private recreation facilities, schools, new subdivisions (residential and industrial) is now proven to be practical the next possible major substitution is for existing residential users. This is a difficult retrofitting exercise where the individual users will substitute only small volumes at a high capital cost.

Thus Salisbury has initiated research in the areas of:

- Valve development, to produce a control for supply of recycled water to a storage and rainwater tank on site
- System development, to supply during the day, while the open space irrigation demands are not being served.
- Identification of customer preferences and impediments to take up of residential retrofit.

Operational Decision Support System

The stormwater management and reuse system is complex with many catchment control points, supply points, some infrastructure working for both storage and supply and many users connected to the distribution. It would be advantageous to have a decision support to help optimise harvest volumes, assist in responding to flood warnings and to analyse investment strategies.

This involves linking the catchment modelling, flood warning information (managed by Bureau of Meteorology), SCADA control systems of the stormwater harvesting and distribution. An associated outcome is developing report generating routines for SCADA to meet regulatory requirements for surface water, groundwater and public health.

Salisbury is undertaking some scoping work in this area.

Value of Wetlands

The benefits, quantified and subjective of wetlands and more generally of public Greenspace have been the subject of a range of individual studies. These have focussed on recreational use, environmental benefits, land value improvements, public health benefits.

This research which is being planned by Universities of Adelaide, Flinders and South Australia, plus CSIRO and local government, on a whole of Metropolitan Adelaide spread will attempt to combine these into a decision support tool for local government which provides guidance on the need to acquire space or retain it, the investment in development and management of the space and the quantifiable benefits which will accrue from it. One particular area is the relationship between open space, its development and the presence of wetlands and property values.

Carp Control in Wetlands

This is a project led by South Australian Research and Development Institute (SARDI) and is in collaboration with Adelaide & Mt Lofty Ranges NRM and other Councils. Carp are one of the major management problems in open water wetlands. The program is investigating a wide range of approaches to the reduction in carp infestation.

9 COMMUNICATIONS

WNARS Communications Group developed and the Board approved a Communication and Consultation Strategy which was incorporated into the Business Plan and implemented through the course of the project. The detail of the Strategy is included within the Business Plan (refer Item D2 of Appendix C).

In this section an outline of the Communications and Consultation Strategy and the achievements is presented.

9.1 Communication and Consultation Issues

These were defined at the commencement of the project.

“The success of the scheme is dependent not only on engineering excellence but also requires ongoing community support. The risk management planning process identified that loss of public/community support represented an Extreme risk to WNA.

Possible causes for this may be:

- community knowledge and understanding of the scheme and its benefits is reasonably high, but probably general rather than specific;
- the public has been subjected to enormous publicity about drought, water restrictions, ‘Waterwise’ practices, grey water and rainwater tanks but there is little that links this to the specifics of WNA;
- the scheme involves disruption to community during installation;
- there is increased community anxiety about future supplies of water, combined with increased interest in securing water for their own use;
- the project straddles council boundaries with potential for confusion, particularly with different people talking about different aspects of WNA;
- media interest is significant, very high support levels at present expose WNA to the risk of adverse reporting if an incident occurred eg supply of contaminated water, drowning in a wetland.”

9.2 Strategy & Goals

Thus the goals for the Strategy are:

- that users can have confidence in the quality and reliability of supply of recycled water and its sustainability;
- engineering excellence in designing and implementing a scheme that must last for generations;
- innovation in devising a scheme that reflects world’s best practice;
- benefits that will result from the take-up of the scheme together with water conservation practices.
- sensitivity to community disruption during the major works program in order to complete works and commence supply on program.

To achieve these Goals WNARS undertook the following:

- Formed a Communication Group to oversee and coordinate the activities of individual Councils. This would be by way on an agreed Annual Communications Plan for each Council. As the project progressed the level of Community support was sufficiently high (over 70% in surveys) that the need for formal planning could be relaxed.
- Prepared a formal Strategy, which follows

9.3 Communication Objectives

The communication objectives reflected in the Terms of Reference for the working group are to:

- gain and maintain wide community, business and government understanding and ongoing support for the social, economic and environmental benefits that will result from the WNA scheme;
- demonstrate to all tiers of government and water professionals that an integrated and regional approach can economically convert urban storm water from a disposal problem into a valuable resource;
- illustrate and promote regional collaboration by adjoining Councils along with the benefits arising from cooperation across all three tiers of Government.;
- ensure local property owners are informed at the commencement of works and manage the risks associated with complaints concerning the delivery of the project especially during the potentially disruptive heavy engineering phases;
- manage media interest in the project through the implementation of proactive strategies.
- maximize revenues and returns from the sale of recycled water and related commercial benefits to residents, business and state agencies.

9.4 Audiences

This strategy recommends a program of communications to reach diverse audiences including:

- ratepayers in the councils who will benefit from the scheme;
- groups and businesses that will be encouraged to take up recycled water;
- Government agencies involved directly and indirectly in the WNA initiative;
- local and national media to promote the scheme and its concept to external audiences; and
- private and public project partners who need to be kept informed and acknowledged.

Given the diversity of audiences and the complex nature of the communications, it is proposed that implementation should be undertaken through a number of key stages.

The communication strategy was implemented by:

- continual information on the works and their benefits through the Councils' newsletters and the local press, these were reported in detail in the Milestone Reports.
- Close attention to direct communications with residents and ratepayers whose properties would be affected by construction works.
- Urgent and effective response to residents affected by construction activity, mainly noise and dust
- Linkage of the project to the ongoing programs for water conservation
- Direct and ongoing communication with the Government agencies involved
- Support for Colin Pitman as the media figure to speak for and promote urban stormwater reuse.
- Frequent events (about 2 per year) which were promoted through local, state and national media
- Coordination of publications with those organized as part of the Demonstration program.

9.5 Communication Messages

While the communication messages will change over the life of WNA and will be adjusted to the target audience, the current key messages for the community are:

WNA will convert urban stormwater from a disposal problem into a sustainable resource for the region.

WNA is:

- an ongoing collaboration between three Councils, their communities, the three levels of government and a range of private partners and water users
- reducing the reliance on the water supplies from the mains water system and the River Murray
- ensuring that the community has water to irrigate its sports facilities and school ovals
- sustaining the main waterways and the biodiversity of their ecosystems, as well as the groundwater resources and reducing contamination of the ocean
- encouraging the community to care for and use the wetlands, waterways and linear parks
- improving the flood protection for the region

WNA is not a simple construction project; it requires the upgrading of the urban water systems so that they perform the three functions of:

- protecting properties and infrastructure from flooding,
- improving the environment by removing pollution from the stormwater, and
- creating water bodies and allowing the cleaned storm water to be harvested for community uses.

During construction there will be local disruption and inconvenience; these are balanced by the long-term benefits.

For our sponsors and regulators the emphasis changes to: "WNA is:

- regional, cooperative and coordinated
- well managed and providing value for money
- innovative and pursuing better practice and research
- implementing national, state and regional plans for water management and pricing, these are formalized in Integrated Water Cycle Management Plans
- monitoring its outcomes and effects and adapting its management of water in accordance with the information collected"

The formal development of these messages and emphasis, at the commencement of the project repaid the effort and allowed for consistency of communication throughout. This has been a successful message and taken up by the community.

9.6 Website

A Website would be the focus of formal communication.

Create a website which provides for at least:

- Description of WNA
- Progress – based on Board Reports
- Evaluation – based on Board reports
- Research – based on Board reports
- WNARS – formal documents
- WNARS – publications
- WNARS – forthcoming events
- Arrange an inspection
- Links to Partners/Participants websites.

This has been established and despite some difficulties in securing and loading full content has been a focus for a wide variety of people seeking information on stormwater management.

The web address is www.wna.gov.au.

9.7 Promotional Kit

A comprehensive suite of information will be prepared in such a way as to be tailored to the needs of the different types of people visiting or interested in WNA. This will include:

- WNA summary
- DVD
- facts sheets
- regional maps
- cover to package information
- merchandise.

The existence of a common stock of material has been of considerable use and benefit to the Councils. A side benefit is to keep the message on track through changes in Council staff.

9.8 Community Perception Surveys

The Councils each conduct formal surveys of their ratepayers on an annual or bi-annual basis to ascertain perceptions regarding a range of Council services and activities. WNA was included in these and registered high and increasing levels of awareness and support.

In each Council area the community was surveyed at least twice and this showed:

- Majority community awareness of the project at its start
- A significant increase in community awareness of the project part way through
- A majority community support for the project at the start increasing as the project progressed.

In each Council there was a significant change in elected membership and all mayors were replaced. In none of the elections was the project an issue and political support for the project has been unwavering.

9.9 WNA Display Material

A basic map was prepared which could be used as part of all displays.

A set of pop up display panels was created, one for WNARS and one for each Council.

This set of material received considerable use and was a good investment; a total outlay of about \$10,000 was involved.

The existence of this material has been of considerable benefit to the Councils and has been a cost saving overall.

9.10 Style Guide

WNARS invested about \$2,000 to have a common suite of letterheads, communications formats and title blocks, these incorporated the Commonwealth and State logos and were also used as the basis for signage.

This was used by all Councils and proved an economical means to achieve a common communication approach.

9.11 Media Strategy

An acknowledgement paragraph was developed and agreed to by the Commonwealth and then insisted upon in all formal communications. This saved enormous time and debate about the text of many letters, brochures, press releases and articles. The paragraph is:

“Waterproofing Northern Adelaide is a collaborative project to improve urban water management in Adelaide’s northern region. WNA is being undertaken by the Cities of Tea Tree Gully, Salisbury and Playford with the assistance of a \$41.8 million grant from the Australian Government’s Water Smart Australia programme as well as State and private partners.”

9.12 Press releases

The use of the acknowledgement paragraph and the format from the Style Guide were insisted upon. After a few months of learning, this also became an easy and efficient approach.

9.13 Media Enquiries

It was agreed that enquiries would be dealt with by Councils communications staff or referred to the Executive Officer if a Council thought that the matter should be dealt with on a regional level.

9.14 Complaints Strategy / Crisis communication

A similar approach to media enquiries was discussed and adopted.

Each Capital work would have a nominated contact whose details would be included in communications and advised to the relevant Council’s customer service section.

The focus was back to each Council with the agreement that the matter could be forwarded to the Executive Officer or Chairman to deal with on a regional basis if needed.

In the case of crisis the Executive Officer was the designated initial response person.

The vast bulk of matters was local and was dealt with effectively by the Council.

9.15 Government Liaison – Fundraising

This was dealt with by the Executive and the Technical Group.

It was decided that direct negotiations with potential funding bodies was more effective than a media campaign.

More generic promotion of urban stormwater reuse will be discussed in the Demonstration Program.

9.16 Signage

The Style Guide was used to help develop a standard approach to signage in terms of acknowledgements and logo blocks and the basic layout was adapted by each Council for construction sites and permanent signage. This has been quite successful and has fostered the other media promotion of Waterproofing Northern Adelaide.

9.17 Council Responsibilities

Each Council is responsible for its own communications with WNARS providing leadership and coordination.

This included all communications with ratepayers regarding Capital Works and promotion of WNA particularly using their own magazines and newsletters.

9.18 Conclusion

The preparation of a formal Communication Strategy, the formation of a group to coordinate activities and the consistent use of style, messages and acknowledgement have been successful in securing and maintaining community support.

10 DEMONSTRATION STRATEGY

Part of the Commonwealth's support for the project was based on its ability to provide a demonstration to other Council's of the value of urban stormwater reuse.

To ensure that the project delivered this outcome the Funding Deed required the preparation and implementation of a Demonstration Strategy. This appears in full in the Business Plan.

The responsibility for this was given to the Executive Officer, assisted by the Communication Group.

WNARS has made use of the high media profile that Colin Pitman from Salisbury has achieved as an expert in urban stormwater management. He has been supported in his promotion of reuse of urban stormwater and this will be discussed after the presentation of the formal elements of the Strategy.

10.1 Goal

To demonstrate to Australian Local Government and water professionals, that an integrated approach can economically convert urban stormwater from a disposal problem into a valuable resource.

10.2 Program

WNARS will undertake to achieve the following:

Website

Develop and maintain a website which can act as a resource to local government and water professionals while providing information to the general public.

From our experience during the project the main interest has been the general public and students.

Publications

WNARS will produce material in electronic form (on the website or on Council websites) and as

- Print – brochures and Fact Sheets
- DVD – upgraded for the Final Report
- Publications

These have proven useful and been well received by many Councils.

Conference papers

WNARS encouraged and assisted its council staff, consultants and research partners to produce and deliver papers at appropriate conferences.

The target was a paper per year and this has been met.

One of the most influential was a paper presented by the CEO of Salisbury Council to the Australian Local Government Management Association, which was followed up with a very well attended post conference tour at the subsequent conference.

The papers were lodged on the website.

Post Conference Tours

WNARS with the collaboration of the constituent Councils have provided tours for conference delegates after; engineering, water management, local government administration and environmental conferences. These have included:

- Water Down Under 2008
- Local Government Engineers 2008
- Local Government Expo 2009
- Murray Darling Association AGM 2009
- Local Government Managers Association 2010

In addition there have been a continual stream of international, interstate and local visitors from government, water industries and water and planning professions who have been impressed and expressed interest in taking some part of the approach back with them.

Awards

WNARS and its constituent councils and their consultants have been much awarded for aspects of the project and have received recognition for:

- 2007 Water Industry Association, Environmental Engineering (world award) for Parafield.
- 2008 Water Industry Alliance Award for Teaming & Cooperation
- 2010 Stormwater Industry Association Honorable Mention for Infrastructure Excellence

Courses

Some aspects of the project were intended to result in courses being delivered to relevant professionals and students.

These have included:

- Hydrologic Modelling using WaterCress delivered by University of South Australia
- Plumbing for recycled water, in association with TAFE.
- Stormwater Reuse Field Day – over 60 South Australian practitioners

Events

From the outset the project has provided venues and a focus for urban stormwater related events in Adelaide.

As set out in the Communications chapter these were planned to provide a showcase for the project and the concept of catchment wide water management and reuse.

These have included:

- Local Government Expo
- Murray Darling Association AGM and Tours
- Announcement of funding for Salisbury Stormwater Harvesting
- Opening of Solandra Wetlands
- Announcement of the Stormwater Reuse Funding Program
- Opening of Stebonheath Park and wetlands
- Community event to celebrate Wynn Vale Dam upgrades

Professional Publications

WNARS has encouraged its research partners and consultants to publish papers in appropriate professional journals and magazines. This has met with limited success.

CSIRO have published papers on risk assessment in catchments and ASTR.

University of South Australia is working with NWC to publish WaterCress as one of the recommended modeling tools.

There have been articles published in water management, environmental management and local government management periodicals during the course of the project. The background information for these articles, with the acknowledgement, has been provided by WNARS.

WNARS has secured the publication annually of an article in the "Natural Resource and Water Management Review" the article is accompanied by paid advertising and has generated substantial level of enquiry from other Councils and from professionals.

10.3 Influence on State Strategic Planning & the wider community

As mentioned earlier WNARS has supported Colin Pitman as the local media's expert on urban stormwater management. He has appeared, been interviewed and provided advice and opinion to the many arms of local, state and national media to promote the conversion of urban stormwater into a sustainable resource. Other staff have also contributed to this promotional effort.

This has been built on the public understanding that WNA, often described as the "Salisbury Wetlands" is a great success and provides a lead to others.

WNARS invested in the preparation of a submission to the South Australian Water Commissioner to provide input for the preparation of the State Water Security Plan, called "Water for Good". The submission, and the community awareness campaign has succeeded in that the State has adopted much of the position which WNARS was promoting on the role for urban stormwater reuse and has committed significant funds to its implementation. Refer Appendix H for the Waterwise Adelaide submission.

10.4 Influence on other Councils in Adelaide

WNARS has provided leadership, encouragement and assistance to several Councils in Adelaide as they have explored the possibilities for urban stormwater reuse. Some of these have proceeded to define their needs and opportunities and have progressed to varying levels.

Charles Sturt and Onkaparinga have secured funds for the initial stages of Waterproofing the West and Waterproofing the South.

The Eastern Adelaide Alliance of 5 councils, led by Tea Tree Gully, has been offered funds for Waterproofing the East.

Barossa, Gawler & Light have been offered some funding to advance their plans to Waterproof Greater Gawler.

Other Councils are proceeding but with less direct influence from WNARS.

10.5 Conclusions

WNARS has more than met its obligations to demonstrate to Local Government and to the water profession that urban stormwater can be practically and sustainably converted from a disposal problem to a water resource.

WNARS also believes that the demonstration role it has played and its support of the public media role of Colin Pitman from Salisbury Council has provided persuasive influence on both the State's strategic position and on the investment actions of Councils which cover much of Adelaide.

APPENDIX A

CHARTER

WATERPROOFING NORTHERN ADELAIDE REGIONAL SUBSIDIARY

CHARTER

October 2006

(Gazetted 6 December 2006)

1. INTRODUCTION

1.1. Name

The name of the subsidiary is Waterproofing Northern Adelaide Regional Subsidiary (referred to as “the Authority” in this Charter).

The Authority is established by the City of Playford, the City of Salisbury and the City of Tea Tree Gully to facilitate the implementation of “Waterproofing Northern Adelaide” - an initiative that aims to provide infrastructure to integrate stormwater, groundwater, wastewater and drinking water systems in the northern Adelaide region.

1.2. Definitions

In this Charter:

- 1.2.1. “absolute majority” means a majority of the whole number of the Board members;
- 1.2.2. “Act” means the Local Government Act 1999;
- 1.2.3. “catchments” means catchments within the Region, a catchment being a topographically defined area, drained by a stormwater drainage system such that all outflow is directed to a single point;
- 1.2.4. “Constituent Councils” means the Councils identified at clause 1.3 of this Charter;
- 1.2.5. “Equitable Interest” means the monetary quantum of the assets which has been calculated, in the manner set out in this Charter, as being the contribution of each Constituent Council;
- 1.2.6. “Funding Arrangements” has the meaning given to that term in clause 1.5.1.1 and includes the funding arrangements under the Funding Deed;
- 1.2.7. “Funding Deed” means the agreement for funding between the National Water Commission and the Authority in relation to Waterproofing Northern Adelaide;
- 1.2.8. “Gazette” means the South Australian Government Gazette;
- 1.2.9. “net assets” means total assets (current and non-current) less total liabilities (current and non-current) as reported in the annual audited financial statements of the Authority;

- 1.2.10. “northern Adelaide” means the areas comprising the Constituent Council areas excepting the area identified as outside the Urban Growth Boundary in the Urban Growth Boundary Plan Amendment Report;
- 1.2.11. “Region” means the collective areas of the Constituent Councils;
- 1.2.12. “water management” means:
 - 1.2.12.1. the provision of flood protection;
 - 1.2.12.2. water control, water cleansing, water harvesting and reuse of rainwater, stormwater and groundwater;
 - 1.2.12.3. the improvement of the sustainability of water management including wastewater through the management of the catchments;
 - 1.2.12.4. the development of infrastructure; and
 - 1.2.12.5. the maintenance and operation of water systems, across and within the Region; and
- 1.2.13. “Waterproofing Northern Adelaide” has the meaning given to that term in clause 1.1.

1.3. Establishment

The Authority is a regional subsidiary established pursuant to Section 43 of the Act by:

- 1.3.1. the City of Playford;
- 1.3.2. the City of Salisbury; and
- 1.3.3. the City of Tea Tree Gully.

1.4. Local Government Act 1999

This Charter must be read in conjunction with Parts 2 and 3 of Schedule 2 to the Act. The Authority shall conduct its affairs in accordance with Schedule 2 to the Act except as modified by this Charter in a manner permitted by Schedule 2.

1.5. Objects and Purposes

- 1.5.1. The Authority is established with the following Objects and Purposes:
 - 1.5.1.1. to seek and enter into funding arrangements to facilitate the implementation by the Constituent Councils of Waterproofing Northern Adelaide (the “Funding Arrangements”);

- 1.5.1.2. to reach agreement with each Constituent Council regarding that Constituent Council's deliverables (and related funding requirements) in relation to Waterproofing Northern Adelaide (linked to obligations and funding entitlements under the Funding Arrangements), and to secure undertakings from each Constituent Council in relation to those deliverables;
 - 1.5.1.3. to disburse funding secured under the Funding Arrangements to the Constituent Councils (in accordance with agreed funding requirements) to facilitate the implementation by the Constituent Councils of Waterproofing Northern Adelaide;
 - 1.5.1.4. to coordinate and oversee compliance by the Constituent Councils with their respective undertakings in relation to the implementation of Waterproofing Northern Adelaide including without limitation to coordinate information from Constituent Councils and as otherwise required to provide reports and information required under the Funding Arrangements;
 - 1.5.1.5. to undertake any acts necessary to secure approvals, extensions or variations to the Funding Arrangements considered appropriate by the Authority; and
 - 1.5.1.6. to provide a forum for discussion and/or research for the ongoing improvement for the waterproofing of northern Adelaide; and
- 1.5.2. The Authority must in the performance of its objects and purposes and in development and implementation of all of its manuals, plans, policies, and activities give due weight to economic, social and environmental considerations.

1.6. Powers and Functions of the Authority

- 1.6.1. The powers, functions and duties of the Authority are to be exercised in the performance of the Authority's objects and purposes. The Authority shall have those powers, functions and duties delegated to it by the Constituent Councils from time to time which include but are not limited to –
- 1.6.1.1. investment of any of the funds of the Authority in any investment authorised by the Trustee Act 1936 or with the Local Government Finance Authority provided that:
 - (a) in exercising this power of investment the Authority must exercise the care, diligence and skill that a prudent person of business would exercise in managing the affairs of other persons; and

- (b) the Authority must explicitly declare in its reports any investments which it considers to be of a higher risk or are more hazardous in nature, than the usual investments made by the Authority;
- 1.6.1.2. distribution of all or any funds and/or making payment to the Constituent Councils provided that such distribution or payment will be made to the Constituent Councils in accordance with the Funding Arrangements or in the case of surplus funds in the proportions of their Equitable Interest in the Authority;
- 1.6.1.3. incurring expenditure in accordance with clause 1.7 of this Charter;
- 1.6.1.4. opening and operating bank accounts;
- 1.6.1.5. entering into contracts or leases provided that it is referred to in an approved budget or business plan;
- 1.6.1.6. employing, engaging or dismissing the Executive Officer of the Authority;
- 1.6.1.7. employing, engaging or retaining professional advisors to the Authority;
- 1.6.1.8. charging whatever fees the Authority considers appropriate for services rendered to any person, body or Council (other than a Constituent Council) for functions and activities undertaken outside the Region provided that such fees charged by the Authority shall not be less than the cost to the Authority of providing the service except where the Authority considers the circumstances are extraordinary or special;
- 1.6.1.9. charging the Constituent Councils fees for services that cover the cost to the Authority of providing the services;
- 1.6.1.10. providing a forum for the discussion and consideration of topics related to the Constituent Councils' obligations and responsibilities in respect of water;
- 1.6.1.11. without limiting the Authority's objects and purposes, to make submissions to and negotiate with the Federal Government, State Government or other sources of grant funding in relation to provision of additional funding for Waterproofing Northern Adelaide; and
- 1.6.1.12. anything else necessary or convenient for or incidental to the exercise, performance or discharge of its powers or functions.

- 1.6.2. The Authority must in the performance of its powers and functions give due weight to economic, social and environmental considerations.

1.7. Borrowings and Expenditure

The Authority has the power to incur expenditure

- 1.7.1. in accordance with the approved budget of the Authority;
- 1.7.2. for the purposes of unapproved unbudgeted expenditure:
 - 1.7.2.1. in cases of genuine emergency or hardship; and/or
 - 1.7.2.2. with the prior unanimous written approval of the Constituent Councils.

The Authority has no power to borrow monies other than with the prior unanimous written approval of the Constituent Councils.

1.8. Delegation by the Authority

The Authority may by resolution delegate to the Executive Officer of the Authority any of its powers, functions and duties under this Charter but may **not** delegate:

- 1.8.1. the power to impose charges;
- 1.8.2. the power to enter into transactions in excess of \$20,000;
- 1.8.3. the power to approve expenditure of money on works, services or operations of the Authority not set out in a budget approved by the Authority or where required by this Charter approved by the Constituent Councils;
- 1.8.4. the power to approve the reimbursement of expenses or payment of allowances to members of the Board of Management;
- 1.8.5. the power to adopt or revise a budget or any financial estimates and reports; and
- 1.8.6. the power to make any application or recommendation to the Federal Government or the State Minister.

A delegation is revocable at will and does not prevent the Board from acting in a matter.

1.9. National Competition Policy

The Authority does not and will not undertake any commercial activities which constitute a significant business activity of the Authority and to which the principles of competitive neutrality must be applied.

The Authority is a body corporate and is governed by a Board of Management (referred to as “the Board” in this Charter) that shall have the responsibility to manage the business and other affairs of the Authority ensuring that the Authority acts in accordance with this Charter.

2.1. Functions of the Board

- 2.1.1. The formulation of strategic plans and strategies aimed at ensuring the efficient and effective implementation of the obligations of the Authority under the Funding Arrangements in relation to Waterproofing Northern Adelaide.
- 2.1.2. To provide professional input and policy direction to the Authority.
- 2.1.3. Monitoring, overseeing and measuring the performance of the Executive Officer of the Authority.
- 2.1.4. Ensuring that a code of ethical behaviour and integrity is established and implemented in all business dealings of the Authority.
- 2.1.5. Assisting in the development of Business Plans and Annual Budget.
- 2.1.6. Exercising the care, diligence and skill that a prudent person of business would exercise in managing the affairs of other persons.

2.2. Membership of the Board

- 2.2.1. The Board shall consist of three (3) members being one person appointed by each Constituent Council and being a person who in the opinion of the Council has the skills and experience attuned to the purposes of Waterproofing Northern Adelaide.
- 2.2.2. The Chair of the Board shall be elected from the members of the Board by a ballot of the Board.
- 2.2.3. Excepting any Board Member who is also an elected member or employee of one of the Constituent Councils, all Board Members (including the Chair) shall be eligible for such allowance from the funds of the Authority as determined by the Board from time to time.
- 2.2.4. A Board Member shall, subject to this Charter, be appointed for a term not exceeding four (4) years as specified in the instrument of appointment and at the expiration of the term of office will be eligible for re-appointment.
- 2.2.5. The Constituent Councils must appoint a Deputy for each Board Member appointed pursuant to clause 2.2.1, being a person who in the opinion of the Council has the skills and experience attuned to the purposes of Waterproofing Northern Adelaide. In the absence of a Board Member the Deputy will be deemed to be the Board Member for that time and will exercise and hold all rights, privileges and obligations of the Board Member during the absence of that Board Member

2.3. Term of Office

- 2.3.1. The office of a Board Member or Chair will become vacant upon –
 - 2.3.1.1. the death of the Board Member; or
 - 2.3.1.2. the respective Constituent Council providing written notice of termination to the Board Member and the Board; or
 - 2.3.1.3. if the Board Member is an elected member of a Constituent Council upon ceasing to be an elected member; or
 - 2.3.1.4. if the Board Member is an officer of a Constituent Council, upon ceasing to be employed by the Council which appointed him/her; or
 - 2.3.1.5. upon the Board Member providing his/her resignation in writing to the Authority and the Constituent Council which appointed them; or
 - 2.3.1.6. upon the happening of any other event through which the Board Member would be ineligible to remain as a member of the Board; or
 - 2.3.1.7. upon the Board Member becoming a bankrupt or applying for the benefit of a law for the relief of insolvent debtors; or
 - 2.3.1.8. upon the Constituent Council which appointed the Board Member withdrawing from the Authority.
- 2.3.2. The Board may by a two thirds majority vote of the Board Members present make a recommendation to the relevant Constituent Council requesting the Constituent Council to terminate the appointment of a Board Member that it has appointed under clause 2.2.1 for:
 - 2.3.2.1. any behaviour of the Board Member which in the opinion of the Board amounts to impropriety;
 - 2.3.2.2. serious neglect of duty in attending to his/her responsibilities as a Board Member;
 - 2.3.2.3. breach of fiduciary duty to the Authority or the Constituent Council(s);
 - 2.3.2.4. breach of the duty of confidentiality to the Authority and/or the Constituent Council(s);
 - 2.3.2.5. breach of the conflict of interest provisions; or
 - 2.3.2.6. any other behaviour which may discredit the Authority.

- 2.3.3. A Board Member appointed pursuant to clause 2.2.1 may be removed from office as a Board Member prior to the expiration of a term of appointment by resolution of the Constituent Council which originally appointed the Board Member.
- 2.3.4. If any casual vacancy occurs in the membership of the Board it will be filled in the same manner as the original appointment. The person appointed to the Board to fill a casual vacancy will be appointed for the balance of the term of the original appointment.

2.4. Propriety of Members of the Board

- 2.4.1. The principles regarding conflict of interest prescribed in the Act apply to all Board Members in the same manner as if they were elected members of a council.

[See Chapter 5, Part 4, Division 3 of the Act for conflict of interest]

- 2.4.2. Each Board Member is required to comply with Division 2, Chapter 5 (Register of Interests) of the Act unless that Board member is an officer of a Constituent Council.
- 2.4.3. The Board Members will at all times act in accordance with their duties of confidence and confidentiality and individual fiduciary duties including honesty and the exercise of reasonable care and diligence with respect to the performance and discharge of official functions and duties as required by Part 4, Division 1, Chapter 5 of the Act and clause 23 of Part 2 of Schedule 2 to the Act.

2.5. Chair of the Board

- 2.5.1. The Chair of the Board shall be appointed in accordance with clause 2.2.2 of this Charter.
- 2.5.2. The Chair of the Board shall hold office for a term of one (1) year, unless he/she resigns or is removed from office pursuant to clause 2.3 or is otherwise no longer eligible to act as a Board Member. The Chair is eligible for re-appointment as Chair at the expiration of the term of office.
- 2.5.3. In the event that the appointed Chair either resigns or is no longer eligible to act as a Board Member prior to the expiration of that person's term, the Board shall elect from amongst the other Board Members a new Chair who shall hold office for the duration of the original appointment.
- 2.5.4. The Board may choose a person from amongst the other Board Members appointed to be the Deputy Chair of the Board for a term determined by the Board.

- 2.5.5. The Chair shall preside at all meetings of the Board and, in the event of the Chair being absent from a meeting, the Deputy Chair shall preside and in the event of both the Chair and the Deputy Chair being absent from a meeting the Board Members present shall appoint a member from amongst them, who shall preside for that meeting or until the Chair or the Deputy Chair is present.

2.6. Meetings of the Board

- 2.6.1. The provisions of Part 2 of the Local Government (Procedures at Meetings) Regulations 2000 shall, insofar as the same may be applicable and not inconsistent with this Charter, apply to the proceedings at and conduct of all meetings of the Board.
- 2.6.2. Ordinary meeting of the Board must take place at such times and places as may be fixed by the Board or the Executive Officer of the Authority from time to time. There shall be at least one (1) ordinary meeting of the Board held every three (3) calendar months. Meetings shall not be held before 5.00 pm unless the Board resolves otherwise by resolution supported unanimously by all of the Board Members present at the meeting which determines the issue.
- 2.6.3. An ordinary meeting of the Board will constitute an ordinary meeting of the Authority. The Board shall administer the business of the ordinary meeting.
- 2.6.4. For the purposes of this clause, the contemporary linking together by telephone, audio-visual or other instantaneous means (“telecommunications meeting”) of a number of the Board Members provided that at least a quorum is present, is deemed to constitute a meeting of the Board. Each of the Board Members taking part in the meeting, must at all times during the telecommunications meeting be able to hear and be heard by each of the other Board Members present. At the commencement of the meeting, each Board Member must announce his/her presence to all other Board Members taking part in the meeting. A Board Member must not leave a telecommunications meeting by disconnecting his/her telephone, audio visual or other communication equipment, unless that Board Member has previously notified the Chair of the meeting.
- 2.6.5. A proposed resolution in writing and given to all Board Members in accordance with proceedings determined by the Board will be a valid decision of the Board where an absolute majority of Board members vote in favour of the resolution by signing and returning the resolution to the Executive Officer or otherwise giving written notice of their consent and setting out the terms of the resolution to the Executive Officer. The resolution shall thereupon be as valid and effectual as if it had been passed at a meeting of the Board duly convened and held.

2.6.6. Notice of ordinary meetings of the Board must be given by the Executive Officer to each Board Member not less than 3 clear days prior to the holding of the meeting.

2.6.7. Notice of any meeting of the Board must:

- (a) be in writing; and
- (b) set out the date, time and place of the meeting; and
- (c) be issued by the Executive Officer; and
- (d) contain, or be accompanied by, the agenda for the meeting; and
- (e) be accompanied by a copy of any documents or reports that are to be considered at the meeting (so far as this is practicable).

All documents or reports delivered to Board Members in accordance with this clause are not confidential unless indicated otherwise.

2.6.8. The Executive Officer must maintain a record of all notices of meetings given under clause 2.6.7 to Board Members.

2.6.9. Notice under clause 2.6.7 may be given to a Board Member:

- (a) personally; or
- (b) by leaving the notice for a Board Member at an appropriate place at the principal office of the Constituent Council which appointed the Board Member; or
- (c) by a means authorised in writing by the Board Member as being an available means of giving notice.

2.6.10. A notice that is not given in accordance with clause 2.6.9 will be taken to have been validly given if the Executive Officer considers it impracticable to give the notice in accordance with the clause and takes action that the Executive Officer considers reasonably practicable in the circumstances to bring the notice to the Board Member's attention.

2.6.11. Any Board Member may by delivering a written request to the Executive Officer of the Authority require a special meeting of the Board to be held. The request will only be valid if it is accompanied by the agenda for the special meeting. On receipt of the request the Executive Officer shall send a notice of the special meeting to all Board Members at least twenty four (24) hours prior to the commencement of the special meeting. Such notice shall comply with clauses 2.6.7 and 2.6.9 of this Charter.

2.6.12. The quorum for any meeting of the Board shall be all three of the Board Members in office and no business will be transacted at a meeting of the Board unless a quorum is present.

2.7. Voting

2.7.1. Every Board Member, including the Chair, shall have a deliberative vote. The Chair shall not in the event of an equality of votes have a casting vote.

2.7.2. All matters will be decided by an absolute majority vote of the Board Members except where this Charter provides otherwise.

2.7.3. Subject to clause 2.4.1 of this Chapter, all Board Members present at a meeting shall vote.

2.8. General Matters – Board of Management

2.8.1. Any meeting of the Board may be adjourned from time to time and from place to place.

2.8.2. Meetings of the Board will be conducted in a place open to the public unless the Board otherwise resolves.

2.8.3. The Executive Officer must cause minutes to be kept of the proceedings at every meeting of the Board.

2.8.4. If the Executive Officer is excluded from attendance at a meeting of the Board, the person presiding at the meeting shall cause the minutes to be kept.

2.8.5. Each Board Member must be supplied with a copy of all minutes of the proceedings of a meeting within five days of the meeting.

2.8.6. All documents presented to, received at or derived from a Board Meeting, including but not limited to:

- minutes of a Board Meeting;
- reports to the Board received at a meeting of the Board;
- recommendations presented to the Board in writing and adopted by resolution of the Board

will be available for public inspection unless the Board otherwise resolves.

2.8.7. Prior to the conclusion of each meeting of the Board, the Board must identify which agenda items considered by the Board at that meeting will be declared confidential and which will be the subject of an information report to the Constituent Councils.

2.8.8. Subject to this Charter and to any direction of the Constituent Councils the Board may determine its own procedures.

- 3.1. The Board must appoint an Executive Officer of the Authority to manage the business of the Board on terms agreed between the Executive Officer and the Board. The Executive Officer may be a natural person or a body corporate.
- 3.2. The Executive Officer shall cause records to be kept of the business and financial affairs of the Authority in accordance with this Charter, in addition to other duties provided for by this Charter and those specified in the terms and conditions of appointment.
- 3.3. In the absence of the Executive Officer for any period exceeding two weeks a suitable person to act in the position of Executive Officer of the Authority may be appointed by the Board.
- 3.4. The Board shall delegate responsibility for the day to day management of the Authority to the Executive Officer, who will ensure that sound business and human resource management practices are applied in the efficient and effective management of the operations of the Authority.
- 3.5. The functions of the Executive Officer shall be specified in the terms and conditions of appointment and shall include but are not limited to:
 - 3.5.1. attending at all meetings of the Board unless excluded by resolution of the Board;
 - 3.5.2. ensuring that the decisions of the Board are implemented in a timely and efficient manner;
 - 3.5.3. providing information to assist the Board to assess the Authority's performance against its Strategic and Business Plans;
 - 3.5.4. appointing, managing, suspending and dismissing other employees of the Authority;
 - 3.5.5. determining the conditions of employment of employees of the Authority, within budgetary constraints set by the Board;
 - 3.5.6. providing advice and reports to the Board on the exercise and performance of its powers and functions under this Charter or any legislation;
 - 3.5.7. ensuring that the Authority is at all times complying with Schedule 2 to the Act and all other relevant statutory obligations;
 - 3.5.8. co-ordinating and initiating proposals for consideration of the Board including but not limited to continuing improvement of the operations of the Authority;
 - 3.5.9. ensuring that the assets and resources of the Authority are properly managed and maintained;
 - 3.5.10. ensuring that records required under the Act or any other legislation are properly kept and maintained;

- 3.5.11. exercising, performing or discharging other powers, functions or duties conferred on the Executive Officer by or under the Act or any other Act, and performing other functions lawfully directed by the Board;
 - 3.5.12. achieving financial outcomes in accordance with adopted plans and budgets of the Authority;
 - 3.5.13. inviting any person to attend at a meeting of the Board to act in an advisory capacity;
 - 3.5.14. representing the Board (Authority) at such public forums as provided for by the Boards policies;
 - 3.5.15. providing reports to the Constituent Councils in accordance with clause 2.8.7; and
 - 3.5.16. monitoring and ensuring compliance by the Authority with the requirements of the Funding Arrangements.
- 3.6. The Executive Officer may delegate or sub-delegate to an employee of the Authority or a committee comprising employees of the Authority, any power or function vested in the Executive Officer. Such delegation or sub-delegation may be subject to any conditions or limitations as determined by the Executive Officer.
- 3.7. Where a power or function is delegated to an employee, the employee is responsible to the Executive Officer for the efficient and effective exercise or performance of that power or function.
- 3.8. A written record of all delegations and sub-delegations must be kept by the Executive Officer at all times.

4.1. Financial Management

- 4.1.1. The Authority shall keep proper books of accounts in accordance with the requirements of the Local Government (Financial Management) Regulations 1999.
- 4.1.2. The Authority's books of account must be available for inspection by any Board Member or authorised representative of any Constituent Council at any reasonable time on request.
- 4.1.3. The Authority must establish and maintain a bank account with such banking facilities and at a bank to be determined by the Board.
- 4.1.4. All
 - 4.1.4.1. cheques must be signed; and
 - 4.1.4.2. electronic funds transfers authorised,
 in each case by two persons authorised by resolution of the Board.

- 4.1.5. Notwithstanding clause 4.1.4.2, any payments made by Electronic Funds Transfer must be made in accordance with procedures which have received the prior written approval of the Auditor.
- 4.1.6. The Executive Officer must act prudently in the handling of all financial transactions for the Authority and must provide a monthly statement of the financial position of the Authority to the Board and quarterly financial and corporate reports to the Board and if requested, the Constituent Councils.
- 4.1.7. The Authority's activities will be funded by the Constituent Councils pro rata in proportion to their Equitable Interest in the Authority. Forecast funding requirements must be incorporated in the annual budget prepared and adopted in accordance with clause 4.4.

4.2. Audit

- 4.2.1. The Authority shall appoint an auditor in accordance with the Local Government (Financial Management) Regulations 1999 on terms and conditions set by the Board.
- 4.2.2. The Auditor will have the same powers and responsibilities as set out in the Act in relation to a council.
- 4.2.3. The audit of Financial Statements of the Authority, together with the accompanying report from the Auditor, shall be submitted to both the Board and the Constituent Councils in accordance with relevant statutory requirements but otherwise within 90 days of the end of the relevant financial reporting period.
- 4.2.4. The books of account and financial statements shall be audited at least once per year.
- 4.2.5. The Authority is not required to establish an audit committee.

4.3. Business Plan

The Authority shall:

- 4.3.1. prepare a four year Business Plan linking the implementation of Waterproofing Northern Adelaide to funding distribution, strategic, capital expenditure, operational and organisational requirements with supporting financial projections setting out the estimates of revenue and expenditure as necessary for the period; and
- 4.3.2. review the Business Plan annually; and
- 4.3.3. consult with the Constituent Councils prior to adopting or amending the Business Plan.
- 4.3.4. formally adopt and make publicly available the Approved Business Plan

[See Clause 24, Part 2, Schedule 2 to the Act for the contents of the Business Plan.]

4.4. Annual Budget

- 4.4.1. The Authority shall, after 31 May but before the end of June in each financial year, prepare and adopt an annual budget for the ensuing financial year in accordance with the Act.
- 4.4.2. The proposed annual budget must be referred to Constituent Councils on or before 31 March of each year.
- 4.4.3. A Constituent Council may comment in writing to the Authority on the budget at least three business days before the meeting at which they will be considered by the Board or, alternatively, may comment through its Board Member at the meeting of the Board.
- 4.4.4. The Authority must provide a copy of its annual budget to the Constituent Councils within five business days after adoption by the Board.
- 4.4.5. The annual contributions (if any) will be paid by each Constituent Council in advance by quarterly instalments.
- 4.4.6. Reports summarising the financial position and performance of the Authority against the annual budget shall be prepared and presented to the Board every three calendar months and copies provided to the Constituent Councils within five (5) days of the Board meeting to which they have been presented.

[See Clause 25, Part 2, Schedule 2 of the Act for the contents of the budget.]

4.5. Reporting

- 4.5.1. The Authority must submit to the Constituent Councils by 30 September in each year in respect of the immediately preceding financial year, a report on the work and operations of the Authority detailing achievement of the aims and objectives of its Business Plan and incorporating the audited Financial Statements of the Authority and any other information or reports as required by the Constituent Councils.
- 4.5.2. The Board shall present a balance sheet and full financial report to the Constituent Councils at the end of each financial year.
- 4.5.3. The Board shall present audited financial statements to the Constituent Councils in accordance with the requirements of the Local Government (Financial Management) Regulations 1999.

- 4.5.4. The Board shall report quarterly, by forwarding the progress report from its quarterly meeting, and at any other time to the Constituent Councils on receipt of a written request from one or more Constituent Council on matters being undertaken by the Authority.

4.6. Policies

- 4.6.1. The Board shall prepare a Corporate Governance Manual (“the Manual”) within one year of its establishment and such other manuals and policies as required from time to time linking to the activities of the Authority and the Authority’s Business Plan and strategic, operational, financial and organisational related matters.
- 4.6.2. The Authority shall review the Manual (and any other policies) on an annual basis.
- 4.6.3. The Authority shall consult with the Constituent Councils prior to adopting or amending the Manual and any other policy.
- 4.6.4. The Authority must in undertaking its activities have regard to and comply with matters set out in its Manual and any other relevant policy adopted in accordance with this clause 4.6.
- 4.6.5. The Authority shall incorporate a risk management approach to all capital expenditure in its Manual.
- 4.6.6. The Authority shall include public consultation processes in its Manual.

5.1. Equitable Interest

- 5.1.1. Subject to clause 5.1.2 the equitable interest of the Constituent Councils in the Authority is agreed as follows:
 - 5.1.1.1. City of Salisbury –33.33%
 - 5.1.1.2. City of Tea Tree Gully –33.33%
 - 5.1.1.3. City of Playford–33.33%.
- 5.1.2. The equitable interest of the Constituent Councils in the Authority as set out at clause 5.1.1 may be varied by agreement of the Constituent Councils and will be varied where a new Constituent Council or Councils is admitted pursuant to Clause 5.3.

5.2. Withdrawal

- 5.2.1. A Constituent Council may not withdraw from the Authority except with the approval of the Minister and subject to the Act and this Charter.
- 5.2.2. A Constituent Council which intends to withdraw from the Authority shall give to the Board and the other Constituent Councils written notice of such intention, specifying the date of intended withdrawal.

The notice shall be a minimum of six (6) months notice expiring on 30 June of the relevant financial year.

- 5.2.3. The withdrawal of any Constituent Council does not extinguish the liability of that Constituent Council for the payment of its contribution towards any actual or contingent deficiency in the net assets of the Authority at the end of the financial year in which such withdrawal occurs.
- 5.2.4. The withdrawal of any Constituent Council does not extinguish the liability of that Constituent Council to contribute to any loss or liability incurred by the Authority at any time before or after such withdrawal in respect of any act or omission by the Authority prior to such withdrawal.
- 5.2.5. Payment by or to the withdrawing Constituent Council must be fully paid by 30 June of the financial year following 30 June of the year in which the withdrawal occurs unless there is common agreement of alternative payment arrangements by the Constituent Councils.

5.3. New Members

Subject to the provisions of the Act, this Charter may be amended by the unanimous agreement of the Constituent Councils to provide for the admission of a new Constituent Council or Councils, with or without conditions of membership.

5.4. Insurance and Superannuation Requirements

- 5.4.1. The Authority shall register with the Local Government Mutual Liability Scheme and comply with the Rules of that Scheme.
- 5.4.2. The Authority shall advise Local Government Risk Management Services of its insurance requirements relating to Local Government Special Risks including buildings, structures, vehicles and equipment under the management, care and control of the Authority.
- 5.4.3. If the Authority employs any person it shall register with the Local Government Superannuation Scheme and the Local Government Workers Compensation Scheme and comply with the Rules of those Schemes.

5.5. Winding Up and Statutory Guarantee

- 5.5.1. The Authority may be wound up by unanimous resolution of the Constituent Councils and with the consent of the Minister.
- 5.5.2. On winding up of the Authority, the surplus assets or liabilities of the Authority, as the case may be, shall be distributed between or become the responsibility of the Constituent Councils in the proportions of their Equitable Interest in the Authority in accordance with clause 5.1.
- 5.5.3. If there are insufficient funds to pay all expenses due by the Authority on winding up (or at any other time there are unfunded liabilities which the Authority cannot meet), a call shall be made

upon all of the Constituent Councils in proportion to their equity share for the purpose of satisfying their statutory guarantee of the liabilities of the Authority.

5.6. Direction by Constituent Councils

5.6.1. The establishment of the Authority does not derogate from the power of any of the Constituent Councils to act independently in relation to a matter within the jurisdiction of the Authority.

5.6.2. Provided that all of the Constituent Councils have first agreed as to the action to be taken, the Constituent Councils may direct and control the Authority.

5.6.3. For the purpose of this clause, any decision of the Constituent Councils under clause 5.6.1 and/or direction given or control exercised by the Constituent Councils must be given in writing to the Executive Officer of the Authority.

5.7. Review of Charter

5.7.1. This Charter will be reviewed by the Constituent Councils acting in concurrence at least once in every three years.

5.7.2. This Charter may be amended by unanimous agreement expressed by resolution of the Constituent Councils.

5.7.3. The Executive Officer must ensure that the amended Charter is published in the Gazette and a copy of the amended Charter provided to the Minister.

5.7.4. Before the Constituent Councils vote on a proposal to alter this Charter they must take into account any recommendation of the Board.

5.8. Board Deadlock

If the Board is unable to resolve a matter requiring unanimous approval of the Board, then the matter shall be referred to the CEO's of the Councils to seek direction from the Constituent Councils.

5.9. Disputes Between Constituent Councils

5.9.1. The Constituent Councils agree to work together in good faith to resolve any matter requiring their direction or resolution.

5.9.2. Where the Constituent Councils are unable to resolve a matter within seven days of the matter being presented to them or such longer period as agreed among the Constituent Councils, the matter will be referred for arbitration by the President (or his/her nominee) of the Institute of Arbitration.

- 5.9.3. The Constituent Councils agree to be bound by the decision of the Arbitrator (except in relation to any decision relating to the acquisition or disposal of any real property) and will endeavour to work together in good faith in the implementation of that decision.
- 5.9.4. The costs of arbitration shall be borne equally by the Constituent Councils.

5.10. Committees

- 5.10.1. The Board may establish a committee comprised of any persons for the purpose of enquiring into and reporting to the Board on any matter within the Authority's functions and powers and as detailed in the terms of reference given by the Board to the committee.
- 5.10.2. The Board may establish a committee comprised of persons representing the constituent councils to coordinate a program of public communications, approved by the Board, in such manner as directed by the Board.
- 5.10.3. The Board may establish a committee comprised only of Board Members for the purpose of exercising, performing or discharging delegated powers, functions or duties.
- 5.10.4. A member of a committee established under this clause holds office at the pleasure of the Board.
- 5.10.5. The Chair of the Board is an ex-officio a member of any committee established by the Board.
- 5.10.6. The Authority may create a forum or Reference group to seek the involvement and opinions of such persons and entities as the Authority deems appropriate to inform it on matters of water management.

5.11. Common Seal

- 5.11.1. The Authority will have a common seal, which may be affixed to documents requiring execution under seal and where affixed must be witnessed by two Board Members or where authority has been conferred by instrument executed under the common seal of the Authority, by the Chair of the Board and the Executive Officer.
- 5.11.2. The common seal must not be affixed to a document except to give effect to a resolution of the Board.
- 5.11.3. The Executive Officer must maintain a register which records the resolutions of the Board giving authority to affix the common seal and details of the documents to which the common seal has been affixed with the particulars of persons who witnessed the fixing of the seal and the date that the seal was affixed.
- 5.11.4. The Board may by instrument under seal authorise a person to execute documents on behalf of the Authority.

5.12. Constituent Council Undertakings

- 5.12.1. Each of the Constituent Councils has made certain undertakings to the Authority and to the other Constituent Councils, based on which, the Constituent Councils have each resolved to form the Authority and support the execution by the Authority of the Funding Deed.
- 5.12.2. Those undertakings are reflected in the undertakings of the Authority contained and referenced in the Funding Deed.
- 5.12.3. Without limiting the above, the Authority also relies on the performance and conduct of each of the Constituent Councils in order to meet its obligations under the Funding Deed. Each Constituent Council has considered and understands the obligations of the Authority under the Funding Deed and accordingly, each Constituent Council further undertakes that it will:
 - 5.12.3.1. not do anything which results in the Authority breaching its obligations under the Funding Deed; and
 - 5.12.3.2. maintain and provide such reports and information, in a form required by the Authority in order that the Authority can meet its obligations under the Funding Deed.

The above undertakings are, in the case of each Constituent Council, referred to as that Council's "**Undertakings**".

- 5.12.4. Each Constituent Council acknowledges that a failure on its part to meet its Undertakings could result in loss to the Authority and the other Constituent Councils.
- 5.12.5. A Constituent Council that defaults in meeting its Undertakings (the "Defaulting Council") indemnifies the Authority and the other Constituent Councils (the "Indemnified Parties") in respect of loss suffered by them arising from a breach by the Defaulting Council of its Undertakings.
- 5.12.6. The liability of the Defaulting Council to an Indemnified Party is reduced proportionately to the extent that the loss suffered by the Indemnified Party caused or contributed to the event giving rise to the loss.
- 5.12.7. Without limiting the application of applicable law, each of the Constituent Councils and the Authority must act reasonably to seek to reduce or mitigate any loss suffered through a breach by a Defaulting Council of its Undertakings.

5.13. Circumstances Not Provided For

If any circumstances arise about which this Charter is silent, incapable of taking effect or being implemented according to its strict provisions, the Board has the power to consider the circumstance and determine the action to be taken.

WATERPROOFING NORTHERN ADELAIDE REGIONAL SUBSIDIARY

CHARTER

LOCAL GOVERNMENT ACT 1999

October 2006

APPENDIX B

CHARTER REVIEW

Waterproofing Northern Adelaide Regional Subsidiary

Report to Councils

Final – December 2009

Contents

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1. INTRODUCTION

The Charter of the Waterproofing Northern Adelaide Regional Subsidiary requires that a review of its operation and role be undertaken 3 years after its formation. In order to assist the constituent Councils with this review this report has been prepared.

This report presents a snapshot of the Waterproofing Northern Adelaide (WNA) project and of the status of the Waterproofing Northern Adelaide Regional Subsidiary (WNARS) at the end of November 2009. WNA is a large and complex project which is being implemented in a period of rapid change in the water industry. The report is thus a very brief presentation of the status, issues and opportunities.

WNA is to provide recycled stormwater for community, industry and residential needs for the three Councils with contributions of \$38m from the Commonwealth, \$16m from the Councils and \$22m from the State.

The report sets out:

The Capital Works;

Which have been varied from the original approval to account for geohydrology and a change in cost of reticulation. The Commonwealth has approved the changes.

WNA will complete the capital works.

The financial position;

WNA will complete the project on budget.

The Outcomes;

Which have been varied with Commonwealth approval, WNA will meet the agreed performance Outcomes.

The Subsidiary and the Councils will deliver the project by June 2010, as approved.

This is a time of rapid change in the water industry in South Australia and for the three Councils. Some of the key issues are presented to provide a context for considering WNARS.

The mechanics of the Charter review and a likely time frame for comprehending them is presented and the report recommends a one year extension of the current Charter to allow time for the Councils to consider the future of their own operations and the role of WNARS.

2. STATUS OF WATERPROOFING NORTHERN ADELAIDE PROJECT

2.1 Capital Works – Operational System

By the completion of the project in June 2010 the works being undertaken will have delivered three systems capable of supplying recycled water for community, industrial, residential and agricultural non-potable uses.

These systems will be linked to allow water to be traded from one to another.

These systems have been planned to be expanded to allow for the urban growth and consolidation over the coming decades as well as works which have already been approved for funding or have been submitted for funding assistance.

2.1.1 Playford

A system drawing water from Smith Creek and Adams Creek for use irrigating reserves and schools and supplying part of the third pipe supply for Playford Alive and Blakeview.

- 3 sets of wetlands with ASR, 2 complete
- 9 bores, all constructed, 2 operational
- 12Km of distribution main, 11 constructed
- the bulk of the water being supplied to Council, SAW and Schools
- Sales of 1.3GI at \$1.73m = \$2.25m/an
- Operating staff of approximately 2 FTE

2.1.2 Salisbury

A system drawing water from Helps Road Drain and Dry Creek for use irrigating reserves, schools and private recreation facilities, supplying industry and the third pipe systems operated by the Council or SA Water.

- 8 wetland/ASR sites, 6 operating
- 19 bores, 19 operational
- 80Km of distribution main, 70Km constructed
- water being sold to; Council, Industry, schools, private recreation facilities, SAW, about 600 residential customers
- Sales revenue is a mix of prices reflecting past contracts and will in the medium term become approximately \$10.5m
- Operating staff of approximately 6 FTE

2.1.3 Tea Tree Gully

A system drawing water from Little Para and Dry Creek for use irrigating reserves, schools and private recreation facilities and third pipe systems operated by the Council.

7 wetland/ASR sites, 5 operating
1 mechanical water treatment unit 1 operating
25Km of distribution main, 25Km constructed
the bulk of the water being supplied to Council and to schools, about 500 residential customers
Sales of 0.7GI at \$1.73m = \$1.2m/an
Operating staff of approximately 2 FTE

2.2 Research

2.2.1 Aquifer Storage Treatment and Recovery (ASTR)

Goal: To define the rate of pathogen reduction over the time treated stormwater is detained in the aquifer.

Infrastructure – 4 injection bores, 2 extraction bores, monitoring bores, connection mains, monitoring equipment, all constructed and operational
Research – substantially completed,
Results – reports on website

Preliminary conclusions:

Most pathogens decay rapidly, viruses appear to be much slower and would require many years of detention to reach drinking water quality levels.

2.2.2 Controllable Detentions

Goal: To demonstrate the effectiveness of using flood control dams and rainwater tanks for controlled release to increase harvest.

Preliminary Conclusions:

Flood control dams proven effective, storage volume is the determinant of effectiveness.

Rainwater tanks still in progress, little expectation of providing cost effective harvest increases

2.2.3 Hydrologic Modelling

Goals: To produce a set of models which both verify the harvest estimates and to provide for the monitoring of harvest effectiveness.

Preliminary Conclusions:

The modelling confirmed that as the catchments move to full development the yields will be sufficient for the harvest volumes planned.

The development of an operational model to enhance management is in progress.

2.2.4 Geohydrologic Modelling

Goal: To model the operation of the full WNA system and check if there are any additional operational constraints and define the combined effects on the aquifers throughout the region.

Conclusions:

The modelling was completed.

No additional operational constraints were identified as being needed.

The individual ASR's will have pressure effects on the aquifers for about 5Km radius, thus in full operation WNA will create an artesian zone from north of Munno Para to Cavan.

The results have been shared with NRM and will form part of the Water Allocation Plan for the Northern Adelaide Plains.

2.2.5 Integrated Water Cycle Management Plan (IWMP)

Goal: To review the individual IWCMPs for each Council and combine them into a single plan for sustainable water supply and management over the region over the coming 30 years.

A draft has been prepared.

This will provide the underpinning for WSUD, flood mitigation planning, water supply and demand balancing.

For the entire region of the three Councils, in 30 years, a demand of 81.1GI of beneficial use, plus 13.7GI of environmental water can be supplied from urban stormwater (31.5GI), Natural recharge of groundwater (15GI), recycled waste water (16.9GI), mains water (22.2GI) and environmental release from Little Para Reservoir (1.2GI).

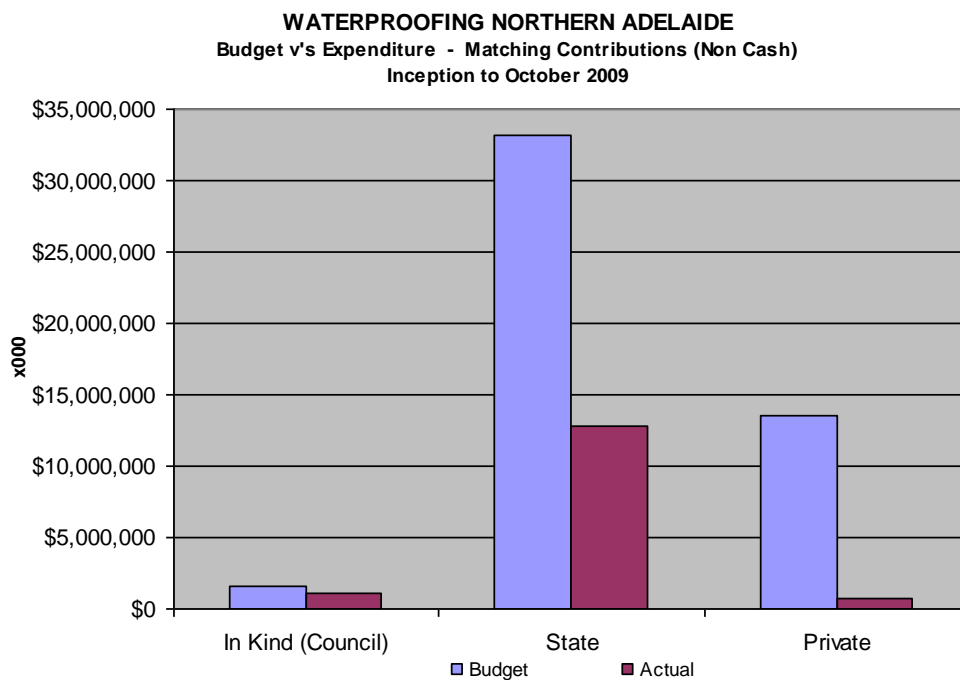
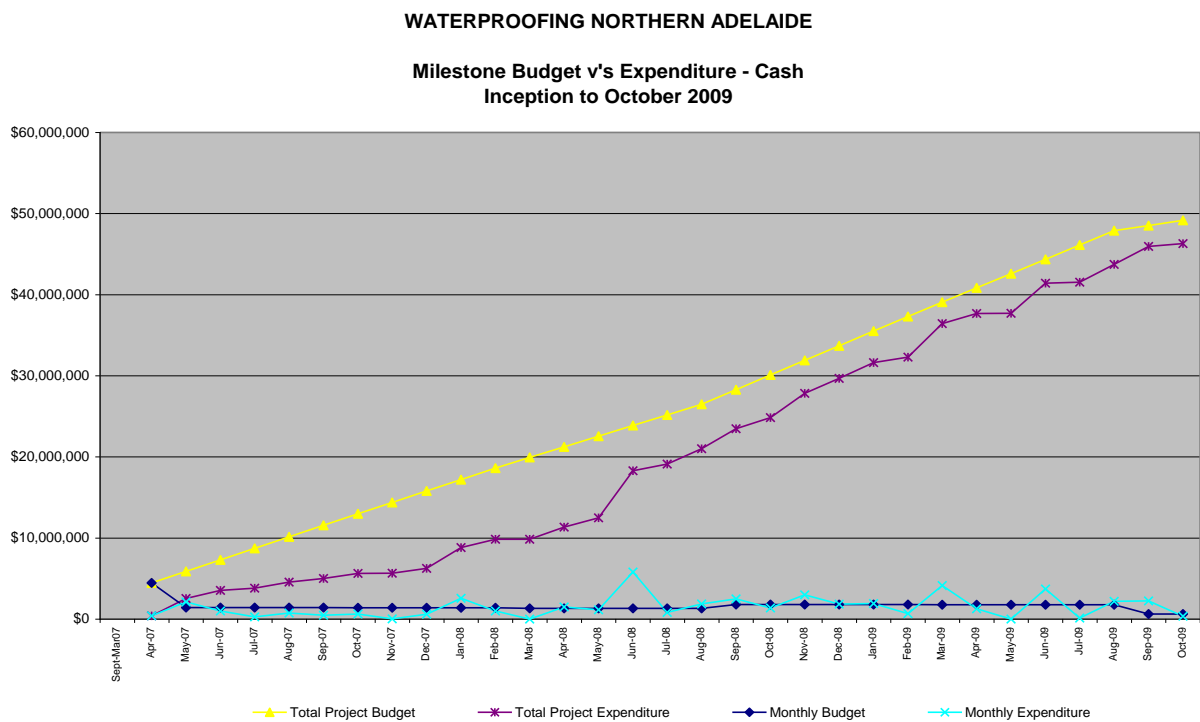
This reduces mains water dependence to 27% of beneficial water supply.

The plan identifies at least \$80m of flood mitigation works which will be required over the 30 year time period. This excludes developer funded works, Buckland Park and Gawler River flood management

2.3 Financial Position

The subsidiary does not handle the full extent of the project's finances. The individual Councils handle all non-cash items such as donated land and infrastructure, payments by others direct to Council and in-kind contributions.

The following graphs show;
 first the cash position of the subsidiary,
 second the other matching items.



The cash expenditure has lagged the Budget from the commencement but is approaching budget and is programmed to complete on target.

The remaining capital works are on schedule now for completion by May 2010.

The matching contributions appear to be lagging behind Budget (by \$21m). However this is principally the result of three factors:

- Delays in receiving land from the State, this is a timing issue, not a change in commitment and accounts for over \$16m.
- Delays in bringing the contributions into the accounts, this is mostly a matter of recording and will be overcome in the next 2-3 months, this accounts for over \$3m.
- Delay in drainage work which is to form part of the matching, this is in hand and accounts for about \$2m

In summary the project will finish on budget, both in terms of cash expenditure and matching contributions.

2.4 Outcomes

The funding agreement with the Commonwealth specified a set of outcomes which the project was to meet with their assistance.

WNARS has secured two amendments to these and the following summarises the position which the Council teams and the WNARS Board estimate to have achieved by the completion of the project.

a.	<u>Provide a sustainable recycled water supply</u>			
	<u>Measure</u>	<u>Pre WNA</u>	<u>WNA</u>	<u>Total</u>
	Wetland ASR's operating	8	5	13
	Community Bores operating	15	16	31
	Distribution mains, Km	41	80	121
b.	<u>Recharge groundwater systems</u>			
	<u>Measure</u>	<u>Pre WNA</u>	<u>WNA</u>	<u>Total</u>
	Recharge locations (ASR)	8	8	16
	Sustainable recharge capacity, GL/an	1.7	4.9	6.6
	ASTR recharge capacity, GL/an	0	0.6	0.6
c.	<u>Sustain riverine environments</u>			
	<u>Measure</u>	<u>Pre WNA</u>	<u>WNA</u>	<u>Total</u>
	Reaches provided with env. Flow	3	14	17
	Length of reaches	6.5	45.3	51.8
d.	<u>Provide sustainable harvest of recycled water Target 16GI</u>			
	<u>Measure</u>	<u>Pre WNA</u>	<u>WNA</u>	<u>Total</u>
	Harvest Capacity (S/W), GL/an	1.7	3.85	5.55
	% of Average Annual Run-Off	7	16	23
e.	<u>Implement water pricing based on NWI & COAG principles</u>			
	Current estimate of Upper Bound Price	\$1500/ML		
	Current Supply Price	\$1780/ML		
f.	<u>Enhance Urban Environments Target 2300ha</u>			
	<u>Measure</u>	<u>Pre WNA</u>	<u>WNA</u>	<u>Total</u>
	Urban area improved, ha	524	715	1239

- g.** Demonstrate best practice & innovation
- h.** Implement sustainable resource management
 - catchment management, systems in place
 - Catchment hazard analysis, in progress
 - Monitoring systems, in place, linked to NRM
- i.** Reduce ocean outfall Target 20Gl
- | Measure | Pre WNA | WNA | Total |
|--------------------------|---------|------|-------|
| Current reduction, GL/an | 8.2 | 9.75 | 17.95 |
| % reduction | 22 | | 50 |
- j.** Substitute drinking water Target 8Gl
- | Measure | Pre WNA | WNA | Total |
|---------------|---------|-----|-------|
| Supply, GL/an | 1.5 | 1.3 | 2.8 |
- k.** Replace & Recharge Groundwater Target 1.2Gl & 5Gl
- | Measure | Pre WNA | WNA | Total |
|--------------------------|---------|-----|-------|
| Replacement Supply, GL/a | 0 | 0.6 | 0.6 |
| Recharge Capacity, GL/an | | 0.3 | 1.2 |
| 1.5 | | | |
- l.** Promote increased efficiency of water use
 Participate in joint promotions
 Link to SA Water Water Management pLanning by large users
- m.** Provide flood protection
 Works in progress and completed in Smith Creek, Helps Road Drain, Little Para, Dry Creek catchments

2.5 Conclusion

At the completion of the project the requirements of the Commonwealth and State funding agreements, as varied, will have been met.

The three Councils will be left in possession of stormwater reuse schemes which are:

- Not compromising flood protection
- Enhancing the environmental services provided by the waterways
- Improving the urban and social amenity of the waterways
- Providing a sustainable water supply for community, industrial and residential use
- Linked together to provide a more integrated and robust system
- Establishing a base for further expansion of the systems to meet increased demands and to process increased stream flows

2.6 Evaluation Reports

The Funding Deed requires the preparation submission and approval of an annual evaluation report which measures the Outcomes of the project and provides assurance that the environmental, physical and financial aspects of the project remain sustainable.

These reports are to be submitted for 4 years after completion.

3. CONSIDERATIONS IN REVIEWING THE CHARTER

WNARS was established as a fundraising, reporting and administrative entity. The Charter provides for the powers, processes and functions for that role.

Since the formation of WNARS the three Councils have individually secured funding for further water projects which will add to the system developed as WNA. These projects are; Tea Tree Gully CWMS Plant (Stage1), Salisbury Stormwater Harvesting, Waterproofing Playford, Unity Park Bio-filtration.

When completed these projects will bring the three systems to a supply capacity of;

Tea Tree Gully	1.3Gl
Salisbury	13.1Gl
<u>Playford</u>	<u>2.4Gl</u>
<u>Total</u>	<u>16.8Gl</u>

Each Council is undertaking a review of the way in which it will operate its water activities into the future. An important feature of these reviews is ensuring stability in staffing the water operations. The Councils are sharing their ideas in the process of these reviews and should have a clear direction by mid 2010.

The State has recognised the importance of diversifying water supplies into the future and has planned on urban stormwater to provide about 20% of Adelaide's water needs in the future. This stronger role is accompanied by proposals for new regulations for water providers and a State role in planning for stormwater management and in water price regulation. The direction these will take should be clear by mid 2010.

The financial position of the Councils in undertaking the harvesting and supply of water will depend on the price which can be secured. The State has announced increases which will result in a non-residential price in excess of \$3 by 2014. By mid 2010 the State should have clarified the price beyond this time. This will allow Councils to plan for their operations.

Other Councils, external to Northern Adelaide, have had stormwater reuse projects approved and several others are planning to make funding applications in February 2010. These applications should be resolved by mid 2010. This will allow the Councils to consider whether they could offer WNARS business opportunities in operating their systems.

The conclusion is that it would be most appropriate to defer decisions on the WNARS until mid 2010 by which time the costs, incomes, business opportunities and regulatory environment will be clearer and the Councils will have considered what will be best for them.

4. CHARTER REVIEW OF WNARS

4.1 Need and Timing

It is a requirement of the Charter that a formal review be undertaken by 6 December 2009.

The outcome of the review is to be considered by the constituent Councils and then forwarded to the Minister for Local Government.

4.2 Cost of Maintaining Inactive Subsidiary

The subsidiary cost a some \$20-30,000 to establish and now has a minimal cost to maintain, depending upon its functions.

At a minimum it would need to continue with; Insurance, Audit, Reporting. This would probably cost less than \$15,000 per year if the insurance and audit fees could be reduced to reflect the lower levels of activity.

4.3 Recommended Action on the Charter Review

Conclude that the Waterproofing Northern Adelaide Regional Subsidiary is satisfactorily undertaking its functions and that it would be appropriate to extend its current Charter for 18 months to 30th June 2011 during which time the Constituent Councils can complete their reviews and determine the manner in which they prefer to operate.

Approved by the Board at Meeting 33, 8th December 2009, Item 9.1

Endorsed by Cities of Playford, Salisbury, Tea Tree Gully

Approved by Minister for Local Government.

APPENDIX C

BUSINESS PLAN

Waterproofing Northern Adelaide Regional Subsidiary
Business Plan 2008-2010

Outline

1. Introduction
2. Parts of WNARS Business Plan
 - A Raising of Additional Funds
 - B Capital Works from Funding Deed
 - C Other Project Activities from Funding Deeds
 - D Funding Deed Requirements
3. Part A (Raising of Additional Funds)
 - State Matching Funding Strategy
 - Land Management Corporation
 - NRM Board
 - Stormwater Management Authority
 - DECS
 - SA Water
 - Premier's Research Fund
 - Rec & Sport
 - UniSA
 - ROSES Program
 - Additional sources
 - Commonwealth approvals included in Nov 2007 election announcement
 - TTG CMWS plant
4. Part B (Capital Works from Funding Deed)
 - Proposal to vary project scope (Variation 1)
 - Torrens
 - Upper Dry Creek
 - Integrated Distribution Main
 - Lower Dry Creek
 - Little Para
 - Helps Road
 - Smith Creek
5. Part C (Other Project Activities from Funding Deed)
 - ASTR
 - Controllable Detentions
 - Hydrological Modelling
6. Part D (Funding Deed Requirements)
 - Summary of Funding Deed obligations
 - Communications and Consultation Strategy
 - Demonstration Strategy
 - Monitoring and Evaluation
 - Risk Management Plan
 - Regional Geohydrology
7. Part E (Administration)

Reference	Amendment Required	Responsibility/Status
3. Part A. DECS matching funding.	Remove Broadmeadows Primary reference (school now closed)	Playford to confirm 2008/09 school priorities. EO to update spreadsheet
3. Part B. Mahogany wetland.	Confirm title, volume, folio. Is this Torrens 2/3?	TTG
3. Part B. Provide land title volume and folio details.	Lindblom Park, Bennett Road, Parafield, ASTR, Salisbury Community Bores, Edinburgh Parks North/South	CoS
3. Part B. Program of work milestones	8 amendments	EO to update milestones spreadsheet

1. Introduction

This Business Plan explains the activities that Waterproofing Northern Adelaide Regional Subsidiary (WNARS) will engage in - “the what” – to achieve its objectives. It should be read in conjunction with the Governance Manual – the “why” and “how” and the annual Budgets, to obtain the full picture of the methods of operation and priorities employed in collaboration with its Constituent Councils, funding partners, and other parties.

This Business Plan is based on the premise that Councils from continuing to maintain and implement their own Operating Manuals and processes to underpin their achievement of Councils’ budget outcomes (including those outcomes achieved with grant funding allocations).

The Business Plan is focussed on the raising of funds for the development of a project called “ Waterproofing Northern Adelaide” and then for its subsequent expansion and completion in line with the requirements of its constituent Councils. Thus the Business Plan deals primarily with securing and reporting on funding, while the constituent Councils will undertake the planning, design, construction and operation of the project.

2. Parts of WNARS Business Plan

This plan is divided into four parts:

- A Raising of Additional Funds
- B Capital Works from Funding Deed
- C Other Project Activities from Funding Deeds
- D Funding Deed Requirements

Part A outlines additional works that have received endorsements or approvals by other parties, but that require further effort before they can be integrated into the scope of WNA. Parts B & C describe the nature and extent of the approved works and activities for which funds have and will be sought and which Councils are responsible for their delivery. Part D describes sound business practices and activities that funding agencies have recognised as essential to delivery of project outcomes, and to establishment of the business on a sound and sustainable foundation.

Part A – Raising of Additional Funds

This part of the Business Plan details how additional works that have received endorsements or approvals by other parties will be integrated into scope of WNA.

State Matching Funding Strategy

Waterproofing Northern Adelaide (WNA) has been structured in such a way as to secure a \$38m (excluding GST) grant from the National Water Commission (NWC) by applying existing sources of State funds which the region would normally expect to obtain for works related to drainage, environmental management of water and related activities. These have been accumulated and designated as the State contribution of \$16.4m. This section explains what these are and sets out the strategy for securing these and additional funds.

It is likely that WNA will be seeking additional funding to cope with cost escalation and potential scope increase. If we do secure additional grants from NWC we will have to provide matching funds, hence the aim to secure additional State funds.

This section deals with the State agencies individually, in order of importance. The following Table sets out the Agency, its committed contribution and WNARS target for its total contribution. The following table sets out the funding required at the commencement of the Funding Deed with the current status of funding.

WNA	MATCHING FUNDING STRATEGY		Jun-08
AGENCY	COMMITTED FUNDING	TARGET FUNDING	CURRENT
	\$xm	\$xm	
Land Management Corporation	14.8	14.8	16.3
Natural Resource Management Board	0.25	1.45	1
Stormwater Management Committee	0.74	9.3	1.09
Department of Education	0.03	1.5	0.2
SA Water	0.06	0.2	0.25
Premier's Research Fund	0.35	0.35	0.35
Department of Recreation & Sport		0.7	0
University of SA		0.3	0.35
ROSES Grant			1.05
Total	16.23	28.6	20.59

Land Management Corporation (LMC)

The Land Management Corporation is the State's land and property development agency. The scope of WNA includes three major developments in which LMC is active. These are:

Mawson Lakes, in this development LMC is a joint venture partner with Delfin Lend Lease and is providing land and cash contribution to drainage infrastructure and landscaping. The reclaimed water distribution system is the property of SA Water and is not included in WNA.

Edinburgh Parks, in this development LMC is the developer and is providing land, drainage and recycled water distribution infrastructure and cash contribution to drainage infrastructure which will become the property of City of Salisbury.

Playford North Urban Renewal Project (Playford North), in this development LMC is the lead developer with SA Housing Trust and the Council as partners. LMC will be providing land and cash contribution to drainage system infrastructure which will become the property of City of Playford.

The current LMC minimal commitment is summarized as follows:

Development	Land \$xm	Infrastructure \$xm	Cash \$xm
Mawson Lakes	1.15	-	1.5
Edinburgh Parks	3.8	0.5	1.1
Playford North	6.28	-	2.0
Total	11.23	0.5	4.6
Grand Total	116.33m		

There is potential for increased contributions in the following areas:

Edinburgh Parks, the rate of development may increase and this will result in increased length of distribution main being donated as well as increased land and drainage works being provided to the Council. This is in accordance with the agreements which are in place. The strategy is to monitor the development and document the additional donated assets

Playford North, the extent of development may increase and the provision of recycled water to all new residential allotments may increase the scope considerably. The strategy is for the Council to work closely with the LMC to define the system to capture and distribute recycled water and secure LMC's contribution. The Technical Group should monitor the situation and submit a proposal to WNARS Board if additional NWC funding should be sought.

Yatala, the LMC will be planning for the development of this area subsequent to the relocation of the jails. This will probably include supply of recycled water to the new dwellings. While this is unlikely to be constructed during the project period there may be contribution to distribution from Dry Creek to prepare the site. The strategy is for the Council to work closely with the LMC in the planning for the site and determine if this represents an opportunity to expand the project. If so it will be submitted to the WNARS Board for consideration.

Natural Resource Management (NRM) Board

The NRM Board is the lead agency for the State in assisting Councils in the management of the environmental and resource aspects of catchments. Traditionally they have provided assistance with planning, erosion control, environmental enhancement and monitoring. They are also the funding agency for Water Watch and Pollution Prevention Programs.

WNARS has a Funding Agreement with NRM for \$1m over 4 financial years. In addition WNARS has secured, the use of the NRM Board's numeric model for predicting groundwater behavior which with in-kind assistance with community education have been estimated to total about \$0.4m over the WNA project.

The strategy is to prepare a detailed application to the NRM Board for assistance and to continue with the NRM Board as a partner and observer at WNARS Board meetings as well as a participant in the Communications Group.

Stormwater Management Authority (SMA)

The Stormwater Management Authority is the new State agency formed to provide financial support from the State for flood mitigation, and to administer the Commonwealth's Natural Disaster Funding Program for flood mitigation. The key feature of WNARS Integrated Water Cycle Management System is that the flood mitigation works enhance the ability to cleanse and reuse urban stormwater; hence these works form part of the whole scheme.

Some existing commitments from the precursor to the SMA have been accepted as providing \$0.74m of matching funding. Subsequent to this an additional \$0.35m has been approved with applications in train for the remaining \$8m of flood mitigation works

A regional assessment has been prepared as follows, and this has been submitted to the SMA as a preliminary advice to determine a process for securing these funds.

Upper Dry Creek	Estimated Cost	Drainage Contribution	Notes	Time	
				2008/2011	Beyond 2011
Wynn Vale Dam	940	260		260	
Edinburgh	800	200		200	
Berri	860	220		220	
Banksia park	750	190		190	
Gifford - Smart	800	200		200	
Lower Dry Creek					
Airport West	1044	0 LMC 522			
Bennett Road	576	0 LMC 288			
Balloo St	600	400 Approved		400	
Rowe Park	560	226 Approved		226	
Bridgestone Drain	550	438		438	
Main North road	3700	2150 Extended timing		1150	1000
Greenfields	300	100 NEXY ?		100	
Little Para					
Harpers Field	850	210		210	
Helps Road					
Edinburgh Parks North	2200	1100 LMC 1100		1100	
Burton West -current	340	166 Approved		166	
Burton West	4300	3150 Extended timing		1500	1650
Angle Vale Crs	600	300 Approved at 350		300	
Smith Creek					
Blakeview	3400	1700 LMC 1700, flood detention only			1700
Munno Para West	3400	1700 LMC 1700, flood detention only		1700	
Andrews Farm South	1900	950 LMC 950, flood mitigation only		950	
Total	28470	13660		9310	4350

The strategy is for

- All Councils to review costs,
- WNARS to then follow up as a special purpose regional bid based on an updated Integrated Water Cycle Management Plan.

Department of Education and Childrens Services (DECS)

DECS has contributed \$0.03m for the connection of Paralowie R-12 school to the recycled water mains, other schools have either secured NWC Community Water Grants or paid their own way.

There have been ongoing discussions at officer level which have led to a prioritised list of schools being submitted to DECS with a request for a partnering arrangement. The current list has over 50 schools which, at the usual cost of about \$30,000 per school could amount to \$1.5m over the project.

Current payments are averaging about \$25,000 per school and to date 8 schools are connected

<u>WATERPROOFING NORTHERN ADELAIDE</u>					Mar-07
SCHOOLS CONNECTION					
COUNCIL	SCHOOL	Connected	CONNECTION		
			2007/8	2008/9	2009/10
Playford	Freemont HS		X		
	Elizabeth South J&P		X		
	Elizabeth Grove J&P		X		
	Elizabeth East P		X		
	Elizabeth Park P		X		
	Craigmore HS			X	
	Craigmore P			X	
	Broadmeadows P			X	
	Playford P			X	
	Elizabeth Downs J&P			X	
	Craigmore S&P			X	
	Elizabeth Vale				X
	Peachey Belt Super Schools				X
	Smithfield P				X
	Smithfield Plains P				X
	Blakeview P				X
	Swallowcliff P				X
	Davoren Park J&P				x
Salisbury	Salisbury HS	X			
	Paralowie P	X			
	The Pines	X			
	Mawson Lakes J&P	X			
	Burton P		X		
	Direk P		X		
	Settlers Farm P		X		
	Riverdale P		X		
	Parafield Gardems P&H		X		
	Karendi P		X		
	Salisbury J&P		X		
	Pooraka P		X		
	Salisbury North P			X	
	Salisbury Downs P			X	
	Ingle Farm P			X	
	Para Vista J&P			X	
	Valley View HS			X	
	Salisbury East H				X
	Brehma Lodge P				X
	Para Hills P				X
	Para Hills East J&P				X
	North Ingle J&P				X
Tea Tree Gully	Redwood Park P			X	
	Wynn Vale P (whole Campus)			X	
	Banksia Park HIS			X	
	Banksia Park J&P			X	
	Fairview Park P			X	
	Modbury J,P&Hs				X
	Modbury South SS				X
	Ardonish P				X
	Modbury West J&P				X
	St Agnes P				X
	Ridgehaven J&P				X
	The Heights R-12				X
	Golden Grove P				X
	Golden Grove HS				X

The strategy is to continue to work with DECS officers to secure connection fees on an annual basis.

SA Water Corporation

SA Water are contributing to the Aquifer Storage Treatment and Recovery research sub-project in the form of meeting \$15,000 per year of water testing at Australian Water Quality Centre.

There is one further aspect of SA Water contribution which has been secured;

- formal confirmation and valuation of the use of the Parafield recycled stormwater main for transmission of water to ASTR injection and from ASTR back to Parafield or on to Greenfields (ASTR sub-project)

The estimated value of this contribution is about \$200,000

Premier's Research Fund

A grant of \$350,000 has been secured from the Premier's Research Fund to assist in the development of the infrastructure for ASTR. It is not anticipated that there will be any more contributions to this sub-project nor to other parts of WNA from this source.

The strategy is to maintain close contact with the Division of Climate Change and Sustainability in case opportunities for funding can be identified through Greening of Government Program or similar sources. This can also support the WNARS approaches to DECS and Recreation and Sport for additional allocations.

Department of Recreation & Sport (Rec & Sport)

There have been some preliminary discussions of contributions from this agency in two distinct areas:

- connection fees to connect the facilities in Salisbury Sport Park (velodrome and hockey), possible value \$0.07m minimum.
- program of assistance to sports clubs to connect to recycled water, this could cover approximately 30-40 clubs (mostly located on Council reserves) and could be approximately \$20,000 per club, giving a contribution of say \$0.6m.

The strategies for these opportunities are to treat the two separately

- Sports Park can be dealt with by City of Salisbury as a water supply matter.
- The club connection starts with compilation of a list of potential clubs, followed by a formal WNARS request for a partnering arrangement, similar to DECS. This should be in place before November 2008 for budget build up.

University of SA

The University of SA is working with the staff of the Constituent Councils in several areas which form part of WNA. The most significant of these are:

- Hydrologic Modelling, where the University will provide the project partnering to include Richard Clarke & Associates for completing a catchment yield and water balance model using "Watercress" and providing training for Council staff in the process.
- In-Line Monitoring, development of new in-line testing for critical contaminants of Stormwater eg Simazine.
- Mathematical modeling of the performance of linked storages on Helps Road, to assist in the development of decision support tools to optimise the harvesting from the stream.

Both of these are at the project definition stage however the current estimates of the University's in-kind contribution are about \$0.3m over the project

The strategy is to define these to the point where an agreement can be presented to the Board for approval.

ROSES Program

This program administered by Planning SA has provided \$1.05m to assist in landscaping and recreational development of some major waterways which form part of the Metropolitan Open Space System. (MOSS).

Additional funding is being pursued for the development of an integrated system of landscape, waterway and trails which is being called Northern Greenways. This is part of the funding for future stages of WNA.

Additional Sources

Should any additional sources of State funds be identified, possibly through the Premier's Department, these will be submitted to the Board for endorsement prior to finalizing agreements.

Commonwealth approvals included in Nov 2007 election announcement

Included in the Federal Government's National Water Security Plan for Towns and Cities (2008-11) is a Commonwealth commitment of \$4m towards development of the Summer Road aquifer (\$7.9m project cost) to capture, cleanse and store 4,800ML of urban stormwater.

Also included in the Federal Government's National Water Security Plan for Towns and Cities (2008-11) is a Commonwealth commitment of \$2.55m to develop the Walpole Road, Whites North Road and Whites South Road aquifers (\$5.1m project cost) to capture, cleanse and store 1,500ML of urban stormwater.

This will be the subject of a Funding Deed between Salisbury and the Commonwealth with WNARS providing the coordination and reporting role.

TTG CMWS plant

The City of Tea Tree Gully has committed to the development of a plant to treat the effluent from 4400 dwellings with septic tanks. This treated effluent will supplement the recycled stormwater.

The Local Government Association has approved the provision of a grant of \$1m for the first stage of the CWMS plant which has a total development cost of \$4m.

Funding will be required to complete the plant at a total cost of \$12m

Waterproofing Northern Adelaide Future Stages

A strategy is being prepared to seek additional funding, of approximately \$11m for the completion of the framework of WNA infrastructure.

This will be included in the Business Plan when approved by the Board.

It is anticipated that the application will be lodged late in 2008 or early in 2009.

Subsequent to this it may be possible to secure additional funding for WNA as part of a whole of Adelaide approach which is being pursued by the WNARS staff and teams.

Part B – Capital Works

Proposal to Vary Project Scope (Variation 1)

Introduction

Waterproofing Northern Adelaide Regional Subsidiary has had approval from the Commonwealth to vary the Funding Deed and the following table reflects that approval. KmKmKmKmKm

Format of table which follows

NAME

Budget Sub-project

Capital Works name

LOCATION

Suburb and land title, volume and folio

Description of works

Upper Dry Creek

Wynn Vale Expand existing

Upgrade existing wetlands to cleanse water passing into an existing dam on Dry Creek. Also construct an ASR scheme and supply **150ML/annum** minimum into the integrated distribution main.

Banksia Delete

Lower Dry Creek

Walkley Heights New facility

Develop a series of in-stream Controllable Detention Basins (with trash collection, GPT's) in the area located directly East of Bridge Road. To provide sufficient detention storage (**50ML minimum**) to facilitate maximum harvesting at the downstream Pooraka facility. The Walkley Heights project will also provide improved downstream flood management and reduction in erosion

Pooraka Expand existing

Upgrade the existing harvesting and ASR infrastructure to harvest **600ML** Upgrade in stream weir and GPT, add a new wetland and additional ASR facilities. The distribution network will be expanded to serve local users.

Lindblom Park New

Extend a new main from Pooraka to Lindblom Park.

Montague Road

Construction of a GPT in Dry Creek and ASR scheme. The GPT in Dry Creek will act as a catch weir to supply a redeveloped existing landscaped linear wetlands on both sides of Montague Road. The Wetlands and ASR will have the capacity to harvest a minimum of **1000 ML** per year, which can be increased later to a planned **2500ML**, to industrial users and to the Parafield 'spine' distribution network.

The Paddocks Expand existing

Increase the harvest and storage capacity of the existing wetland and ASR to **200ML** per year and link the distribution to the Parafield spine as well as to local industry and Council reserves.

Bennett Road New

Bennett Road wetlands at Pooraka, to the South East of Parafield Airport will be developed to have a capacity of **800ML**. The distribution will be integrated with the existing Parafield ASR storage and distribution system.

Parafield Expand existing

Reroute drainage systems to increase the availability of stormwater to the existing wetland and ASR, producing a capacity of **2200ML**. Upgrade the infrastructure (transfer pumps, wetland and ASR in conjunction with ASTR and Bennett Road to allow for an increase of supply to community (all schools and reserves), industrial and residential through a major distribution spine.

Greenfields Upgrade existing

Upgrade the existing wetlands and infrastructure, including aquifer injection, to improve the harvestable water quality, increase storage capacity and increase supply to adjacent salt producer, total harvest capacity **3500ML**

ASTR

Complete the injection and extraction works (6 bores) and pipework to connect to the Parafield distribution spine. These works are for a research project to determine the effectiveness of aquifer detention for purification of recycled stormwater.

Helps Road Drain

Edinburgh Parks North Upgrade and expand existing basin

Re-shape to become an integrated flood control basin, with twice the capacity, with a small in-stream wetland as well as providing flow control for the Edinburgh South ASR facility. The facility will have a **600ML/annum** harvest capacity and supply into the Edinburgh Parks distribution network

Edinburgh Parks South Upgrade existing

Edinburgh Parks South ASR will undergo a major expansion to supply reWater to industry in the rapidly developing Edinburgh Parks Industrial Estate. The scheme will be expanded to a capacity of **1260ML/yr** by replacing the proposed diversion weir and low flow channel with a new harvesting pump station in the RAAF drain piping the water directly to a new off-stream polishing wetland located adjacent to the existing Stage 1 tanks and pumping station.

Kaurna Park Upgrade existing

The existing Kaurna Park wetlands on Waterloo Corner Rd will have an upgraded harvesting pump station, new tanks and distribution pumping station to complement the two existing ASR wells. The original ASR well will be re-equipped to bring it up to the standard of the recently commissioned 2nd well. The distribution piping network will be expanded to provide up to **600 ML/yr** of reWater to local users.

Springbank/Burton Upgrade existing

Springbank/Burton will be further developed with a harvesting structure established in the 4th stage of the Springbank wetland and a dedicated ASR to service the adjacent Ingham's poultry processing plant. A pipeline from the Kaurna Park Wetlands has been modeled. This would enable early customer connection and provide risk reduction by being able to supply customers from multiple supply nodes

Proposal Benefits

1. Better value for money in development

Eliminating three small facilities and linking the system through distribution mains provides a much greater scope of supply of recycled water to community facilities. It also set the scene for increased supply to residential and industrial customers. At present supply to whole urban areas is focused on:

- Mawson Lakes
- Parafield Gardens
- Edinburgh Parks
- Playford North Urban Renewal Area
- Blakeview

Other developers are enquiring to have their new developments connected in Tea Tree Gully.

A tipping point will be reached where the community seeks connection to recycled water for existing areas, this project variation will enable WNA to be expanded to meet this need.

2. Economy of operation

Elimination of the three small facilities and the linkage of the facilities allows the optimization of operational expenditure on cleansing, harvest, storage, recovery and distribution. While WNARS does not have a detailed estimate of the proposed savings it appears to be in the order of 5-10%.

3. Robustness

The greater development of flow control to provide for an increase of 30-40 days of harvest during winter stabilizes the harvest as the number of harvestable events declines with climate change.

The ability to back up the supply from several facilities rather than depending on either a single facility or a single extraction bore allows for continuity of supply despite equipment or water quality failures.

The storage infrastructure can be optimized by transferring water to facilities which have short harvest periods. This again reduces the effect of a reduction in harvestable events without having to increase the infrastructure.

4. Protect Dry Creek gorge, improved riverine environment

Development of flow control dams in Dry Creek Gorge allows the creation of long term water features and increases habitat for water dependant ecosystems in this bio-diversity corridor.

The attractiveness of the linear park will be enhanced with long term pools in the creek and a wider range of aquatic and riverine species being sustained.

5. Extend the period of flow in waterways, improved riverine environments

Flow control will add 30-40 days to the flow (over 150days average) in Dry Creek, Little Para, the lower reaches of Helps Road drain and Smith Creek.

This has both environmental effects in sustaining the riverine environments and urban effects by improving recreational opportunities and visual amenity

6. Extend coverage of supply, additional schools and reserves

The scheme as proposed will allow over 20 more reserves and 12 schools to be connected, predominantly in Salisbury.

This complements the expansion of residential areas being supplied with recycled water in all council areas, the largest change being the LMC commitment to provide the new developments in Playford North and Blakeview with recycled water.

7. Prepare for future expansion – reserves, schools & dwellings

Having a more extensive distribution system and one linked together to allow transmission of water to areas which were not originally planned for supply such as the eastern areas of Playford and Salisbury. This will allow for the expansion of supply in the future. The ability to more completely substitute recycled for mains water in an urban area increases the attraction for many Councils. The reserve maintenance has only one operating system for irrigation rather than splitting it between mains and recycled and the community can focus on complete substitution as an achievable goal rather than a partial reduction.

Torrens

<u>Torrens 1</u>	Dernancourt	New
	5513/523	Construction of a 80 ML/year capacity, off-stream wetland, ASR scheme and distribution network for community users
	5732/428	
	5888/70	

<u>Mahogany</u>	Highbury	New
	5828/756	Construction of a 70ML/annum capacity, off-stream wetland, ASR scheme and distribution network for community users.

<u>Torrens 3</u>	Highbury	New
	5890/14	Construction of a 70ML/annum, off-stream wetland, ASR scheme and distribution network for community users.

Upper Dry Creek

<u>Tilley</u>	<u>Surrey Downs</u>	New
	5718/892	Construction of a 60ML/annum wetland and ASR scheme to be fed by both groundwater from an extractive industry area and stormwater. Also includes connection into the integrated distribution main.
	5436/954	
	5539/894	
	5532/968	

<u>Wynn Vale</u>	<u>Wynn Vale</u>	<u>Expand existing</u>
	5374/186	Upgrade existing wetlands to cleanse water passing into an existing storage dam on Dry Creek. Also construct ASR scheme and supply 150ML/an into the integrated distribution main
	5519/168	
	5798/142	
	5819/869	
	5542/393	
	4007/690	
	5519/167	
	5553/534	
	5426/25	
	5542/653	
<u>Kingfisher</u>	<u>Modbury Heights</u>	<u>Existing</u>
	5847/589	Upgrade the existing off-stream wetland to harvest stormwater from Dry Creek, store in ASR and supply 40ML/an into the integrated distribution main.
	5721/732	
	5474/548	
	5552/955	
	5711/962	
<u>Solandra</u>	<u>Modbury</u>	<u>New</u>
	5552/392	Construction of an off-stream wetland and ASR scheme to supply 20ML/an to the integrated distribution main
	5398/883	
	5752/914	
<u>Berri</u>	<u>Hope Valley</u>	<u>New</u>
	5516/877	Construction of an off-stream wetland and ASR scheme to supply 50ML/an to the integrated distribution main
	5421/336	
	4042/604	
	4098/478	

<u>Edinburgh</u>	Modbury	<u>Expand existing</u>
	5920/108	Upgrade an off-stream wetland and ASR to increase storage capacity of an off-line facility. Supply 50ML/an to the integrated distribution main.
	5682/421	
	3299/124	
	5867/365	
	3134/35	
	5866/961	
<u>Smart Road</u>	<u>Hope Valley</u>	<u>New</u>
	5518/650	Construction of an off-stream wetland and ASR scheme to supply 50ML/an to the integrated distribution main
	5742/576	
	5516/871	
	5516/870	
	5552/950	
	5632/668	
	5553/739	
	5552/949	
	6532/670	
	5553/738	
	5553/737	
<u>Integrated Distribution Main</u>	[refer to map]	Design and construct a ring main and pressurising pumping system to receive water from the 10 harvest sites, combine it with recycled wastewater from proposed STEDS plant and potentially other sources as well as groundwater to supply community users throughout most of the Tea Tree Gully Council area.

Lower Dry Creek

Walkley Heights

Walkley Heights

New

CR5845/475

Develop a series of in-stream Controllable detention Basins (with trash collection, GPTs) in the area located directly east of Bridge Road. To provide sufficient detention storage (50ML minimum) to facilitate maximum harvesting at the downstream Pooraka facility. The Walkley Heights project will also provide improved downstream flood management and reduction in erosion

Pooraka

Pooraka

Expand existing

5451/149

Upgrade the existing harvesting and ASR infrastructure to harvest 600ML. Upgrade in-stream weir and GPT, add a new wetland and additional ASR facilities. The distribution network will be expanded to serve local users.

Lindblom Park

Pooraka

New

Extend a new main from Pooraka to Lindblom Park

<u>Montague Road</u>	<u>Cavan</u> <u>5372/99</u> <u>5372/102</u>	<u>New</u> Construction of a gross pollutant trap in Dry Creek, and ASR scheme. The GPT in Dry Creek will act as a catch weir to supply redeveloped, existing, landscaped, linear wetlands on both sides of an Montague Road. The wetlands and ASR will have the capacity to harvest a minimum of 1000ML per year, which can be increased later to a planned 2500ML, to industrial and to the Parafield 'spine' distribution network.
<u>The Paddocks</u>	<u>Para Hills West</u> 572/719	Expand Existing Increase the harvest and storage capacity of the existing wetland and ASR to 200ML/an and link the distribution to the Parafield spine as well as to local industry and Council reserves.
<u>Bennett Road</u>	<u>Parafield</u>	<u>New</u> Bennett Road wetlands at Pooraka, to the south east of Parafield Airport will be developed to have a capacity of 800ML. The distribution will be integrated with the existing Parafield ASR storage and distribution system.

<u>Parafield</u>	<u>Parafield</u>	<u>Expand Existing</u> Reroute drainage systems to increase the availability of stormwater to the existing wetland and ASR producing a capacity of 2200ML. Upgrade the infrastructure (transfer pumps, wetland and ASR in conjunction with ASTR and Bennett Road to allow for an increase of supply to community (all schools and reserves), industrial and residential users through a major distribution spine.
Greenfields	<u>Greenfields</u> 5144/381 5148/853 5148/854 5951/374 5951/375 5967/695 5285/464 5265/466	<u>Upgrade Existing</u> Upgrade the existing wetlands and infrastructure, including aquifer injection, to improve harvestable water quality, increase storage capacity and increase supply to adjacent salt producer, total harvest capacity planned 3500ML/an.
ASTR	<u>Parafield Gardens</u>	<u>Existing</u> Complete the injection and extraction works (6 bores) and pipework to connect to Parafield distribution spine. These works are for a research project to determine the effectiveness of aquifer detention for purification of recycled stormwater.

Upper Little Para

Harpers Field

Golden Grove

5218/242

5218/243

New

Develop an off-stream wetland and ASR taking water from Cobbler Creek into the wetland and ASR for supply of 50ML/an to the Integrated Distribution Main

Satsuma

Golden Grove

5121/439

5170/779

5861/213

New

Develop an off-stream wetland and ASR on a tributary of Cobblers Creek for supply of 40ML/an to the Integrated Distribution Main.

Lower Little Para

Community Bores

Parafiled Gardens

Paralowie

New

Construct 2 additional extraction bores and associated distribution systems in the Little Para catchment (balanced by additional recharge at Greenfields) for reserve and school supply

Helps Road Drain

Edinburgh Parks North

Edinburgh Parks

Upgrade and expand existing basin

Reshape to become an integrated flood control basin with twice the capacity, with a small instream-wetland as well as providing flow control for for the Edinburgh South ASR facility. The facility will have a 600ML/an harvest capacity and supply into the Edinburgh Parks distribution network

Edinburgh Parks South

Edinburgh Parks

Upgrade existing

Edinburgh Parks South ASR will undergo a major expansion to supply rewater to industry in the rapidly developing Edinburgh Parks Industrial Estate. The scheme will be expanded to a capacity of 1260ML/yr by replacing the proposed diversion weir and low flow channel with a new harvesting pump station in the RAAF drain, piping the water directly to a new off-stream polishing wetland located adjacent to the existing Stage 1 tanks and pumping station

Kaurna Park

Burton

5069/787

5452/11

5911/326

Upgrade existing

The existing Kaurna Park wetlands on Waterloo Corner Rd will have an upgraded harvesting pump station, new tanks and distribution pumping station to complement the two existing ASR wells. The original ASR well will be re-equipped to bring it up to the standard of the recently commissioned 2nd well. The distribution piping network will be expanded to provide 600ML/yr of rewater to local users.

Springbank/Burton

Burton

Upgrade existing

Springbank/Burton will be further developed with a harvesting structure established in the 4th stage of the Springbank wetland and a dedicated ASR to service the adjacent Inghams poultry processing plant. A pipeline from the Kaurna Park wetlands has been modelled. This would enable early customer connection and provide risk reduction by being able to supply customers from multiple supply nodes

Playford Community Bores

Elizabeth
Elizabeth Downs
Elizabeth Park
Elizabeth Vale
Elizabeth North
Smithfield
5597/656
5326/835
5553/528
5821/166
5940/173
5490/173
5497/858
2693/89
5433/130
5786/172
5786/171

New
Develop 10 new bores to extract low salinity groundwater from the T1 aquifer and installation of distribution infrastructure to supply community users.
The volume extracted will be balanced by injections closer to the two cones of depression in the T1.

Smith Creek

Munno Para West

Munno Para West
5257/87

New
Within the Smith Creek riverine linear park develop an off-stream wetland and ASR scheme which will draw water from the main channel into a wetland and ASR for distribution through an integrated distribution main to supply over 770ML/an to the residences and for community uses within the Playford North urban Renewal Area.

Andrews Farm

Andrews Farm
5908/950
5908/949
5882/42
5882/40

Existing
Expand the existing recreation lake, detention basin, wetlands and ASR to supply 240ML/an to the integrated distribution system supplying reWater to residences and for community uses within the Playford North urban renewal Area.

The integrated distribution main will also be developed to allow energy recovery for cooling and heating.

Andrews Farm South

Andrews Farm
Penfield
5179/954
5179/953
5179/950

New
Within the main channel riverine park develop an off-stream wetland and ASR which will divert flows from Smith Creek into a wetland and ASR to supply 360ML/an to the integrated distribution system for the Playford North urban Renewal Area

Program of Work

The program for this work is:

WATERPROOFING NORTHERN ADELAIDE - MILESTONES

Rev 1

11-Mar

ITEM	Mar-07 1	Sep-07 2	Mar-08 3	Sep-08 4	Mar-09 5	Sep-09 6	May-10 Final
<u>Torrens River</u>							
Torrens 1							
Torrens 2							
Torrens 3							
<u>Dry Creek</u>							
Tilley							
Wynn Vale							
Kingfisher							
Banksia							
Solandra							
Berri							
Edinburgh							
Smart Road							
Integrated Distribution							
Walkley Heights							
Pooraka							
Lindblom Park							
Montague Road							
The Paddocks							
Bennett Road							
Parafield							
Greenfields							
ASTR	4						Report
Controlable Detentions						Report	
<u>Little Para River</u>							
Harpers Field							
Satsuma							
Environmental Flow Management							
Salisbury Community Bores							
<u>Helps Road Drain</u>							
Edinburgh Parks North							
Edinburgh Parks South							
Kaurna Park							
Springbank/Burton							
Playford Community Bores		3	6				
<u>Smiths Creek</u>							
Munno Para West							
Andrews Farm							
Andrews Farm South							
<u>All Catchments</u>							
Executive							Final Report
Hydrologic Modelling							

Part C – Additional Project Activities from the Funding Deeds

The Water Smart Program Funding Deed lists thirteen environmental, economic and social objectives for Waterproofing Northern Adelaide, including reuse stormwater to reduce ocean outfalls through the Barker Inlet by a target of 20GL per year lowering the adverse impacts on ocean ecosystems (Objective A.8.i.). Consequently, WNARS has commissioned downstream monitoring to measure ocean outfalls, and improvements towards the target.

In order to achieve objectives relating to recharge of Northern Adelaide Plains groundwater systems (Objective A.8.b) and integrated water management in an urban setting including the use of aquifers to treat water to drinking water quality (Objective A.8.g.), a regional hydrogeological model has been developed, and will be calibrated and enhanced.

As part of WNA, specific activities will be undertaken to develop regional and business capabilities.

- a. **ASTR (Aquifer Storage, Treatment and Recovery)** – water from the Parafield wetlands will be transmitted to the test site using existing pumps and mains and injected into 4 bores for extraction through 2 other bores after a period of controlled detention in the T2 aquifer. The purpose is to manage detention of stormwater within the aquifer to determine how to achieve drinking water quality, before extracting. It may be many years before this water is required to meet drinking water standards, however the infrastructure and treated water will for part of the integrated reWater supply.
- b. **Controllable Detentions** – which consists of the installation of new rainwater tanks at residential properties within the City of Salisbury with controllable release valves for managed release into wetlands. These valves will be controlled from a central SCADA system in City of **Salisbury** offices. When the valves are opened the water will be released from the rainwater tanks into the existing stormwater system (kerb, drains) to be harvested for reuse at the nearby wetland and ASR. The system includes software to combine the volume of storage available, the Bureau of Meteorology flood warning and storm monitoring systems and wetlands, This system is intended to increase the harvest capacity from a catchment and will be extended to work on at least one flood control dam.
- c. **Hydrological Modelling**: Develop an existing composite hydrological yield and flood peak model (Watercress) for the whole catchment; Licence the three Councils to use the models in their areas; train students and Council staff in the use of the Watercress model; develop the model to the point of commercial release with software, manuals and training; make the model available to the profession through University of South Australia. For 2008/09, hydrologic modelling expenditures will comprise \$0.22m.
- d. **Executive**: ensure the effective oversight, coordination and reporting on the Project; support the Board on the Regional Subsidiary; facilitate regional cooperation, procurement and effective use of resources. For 2008/09, Executive expenditures will comprise \$0.212m, as itemised at Part E of this Plan.
- e. **Demonstration Program**: Produce a formal program for approval by Us which will ensure that decision makers, professionals and interested parties associated with the management of urban water are made aware of and have access to the

knowledge gained from the implementation of the Project. This will include establishment of a website, production of publications and DVDs; promotion of site visits and inspections, particularly for decision makers and in association with professional conferences; staging of a formal seminar in the last year of the project; community awareness raising program. For 2008/09, Demonstration Program expenditures will comprise \$0.01m.

- f. **Groundwater augmentation** – stormwater will generally be harvested in winter, cleansed in wetlands and stored in aquifers for recovery and use in summer. Water quality will be monitored prior to injection and extraction from the aquifer. 28 ASR wetlands will be established on Torrens River, Dry Creek, Helps Road and Smith Creek. 26 Community bores will be established for extraction. A minimal of 20% injected water will be left in the aquifer as a contribution to the groundwater resources and at each ASR site a buffer volume equal to a years production will be built up as protection against drought. Water will be injected into cones of depression for transfer of credits to areas of useable groundwater. The Andrews Farm South ASR in Playford will be established 10 years in advance of urban renewal allowing for prolonged recharge without extraction (Table 1).

**WATERPROOFING NORTHERN ADELAIDE
GROUNDWATER INPUTS**

ASR NAME	HARVEST AQUIFER		ANNUAL ENVIRONMENTAL CONTRIBUTION	BUFFER STORAGE
	ML/an		ML/an	ML
Torrens				
1. Mahogany	70	FR	14	70
	2 70	FR	14	70
	3 80	FR	16	80
Dry Creek				
Tilley	60	FR	12	60
Wynn Vale	150	FR	30	150
Kingfisher	40	FR	8	40
Solandra	20	FR	4	20
Berri	50	FR	10	50
Edinburgh	50	FR	10	50
Smart Road	50	FR	10	50
Pooraka	600	T2	120	600
Montague Road	1000	T2	200	1000
The Paddocks	200	T2	40	200
Bennett Road	800	T2	160	800
Parafield	2200	T2	440	2200
ASTR	0	T2	0	
Greenfields	3500	T1	2600	
Little Para				
Bed Recharge	1200	T1	400	
Harpers Field	50	FR	10	50
Satsuma	40	FR	8	40
Salis. Comm Bores		T1	-900	
Salis. Allocn		T1	900	
Helps Road				
Adams Creek	60	FR	12	60
Ed Parks North	600	T1 & T2	120	600
Ed Parks South	1360	T1 & T2	272	1360
Kaurna Park	600	T1 & T2	120	600
Springbank/Burton	600	T2	120	120
Playford Comm Bores		T1	-500	
Smith Creek				
Munno Para West	1500	T1 & T2	300	1500
Andrews Farm	1300	T1&T2	260	1300
Andrews Farm South	1200	T2	240	1200
Overall	17450		5050	10800
Direct Recharge				
T1 Dry Creek			2600	0
T1 Waterloo Corner			536	2680
T2 Virginia			896	14800
Indirect Recharge				
T1 & T2			158	790
T2			960	4800

- g. **Monitoring System** – in close cooperation with the AMLNRM Board develop and operate a monitoring system to measure of the outcomes achieved by the project. This will incorporate existing systems and programs including surface flows, water quality, groundwater and environmental status undertaken by State agencies, Councils and Waterwatch.
- h. **Environmental flows** – the project will facilitate environmental flows along Dry creek and Little Para River and produce flows to sustain redeveloped, riverine, linear parks along Smith Creek and Helps Road drain.

Integration with urban development

Playford North the project will produce the sustainable reWater to facilitate the urban renewal, sustain the landscape spine, and demonstrate the use of water mains as an energy source while contributing to the groundwater recharge.

Edinburgh Parks the project will provide flood protection for vital national infrastructure, defence facilities and the industrial estate while providing a sustainable supply of reWater for process and landscape uses.

Dry Creek Catchment the project will demonstrate the integration of flood mitigation, stormwater cleansing and recycling and the provision of a sustainable supply of reWater for community, residential and industrial uses while sustaining the environmental flows and recharging the groundwater.

Part D – Funding Deed Requirements

D1 Summary of Funding Deed obligations Compliance with Local Government Act Compliance with Funding Deed

Waterproofing Northern Adelaide				
Funding Deed Obligations				Jan-07
Clause	Obligation	Board	EO	Councils
	Other AGWF Agreements			
3.1	Manage other AGWF funding	X		Responsible
	Payment			
4.1	Compliance with deed	X	X	
	Management of the Project			
5.1	Management Principles	X	X	Responsible
5.2	Compliance with EPBC Act	X		Responsible
5.4	Review performance of Project	X		
5.5	Initiate scope change of Project	X	X	Initiate
5.6	Warrant approval and legal compliance of Capital Works	X		Responsible
5.7	Responsible for Councils management of works	X	X	Responsible
5.8 a)	Legal compliance of works	X	X	Responsible
	b) Works Location and Works fit for purpose	X	X	Responsible
	c) Works locations do not have legal impediments	X	X	Responsible
	d) Works Locations secure	X	X	Responsible
5.9	Seek prior approval to encumber or dispose of works	X	X	Initiate
5..10	Secure control of works locations if needed		X	Responsible
5.11	Ensure Building Code is a condition of contract	X	X	Responsible
5.12	Ensure Contractors are insured	X	X	Responsible
5.13	Ensure contractors provide security or retention money	X	X	Responsible
5.14	Provide copy of contracts and proofs of 5.11, 12, 13		X	Responsible
	Management of the Funding			
6.1	Repay unspent funds if project is terminated	X		Responsible
6.2	Ensure funds appropriately spent	X	X	Responsible
6.3	Not cover expenditure prior to 1/9/6	X	X	Responsible
6.4	Manage funds being held by WNARS	X	X	
6.5	Keep Financial Records	X	X	Responsible
6.6	Manage WNARS funds	X	X	
6.9	Refund unspent funds on completion	X		Responsible
6.12	Provide security if required	X		Responsible
	Your and Other (State) Contributions			
7.1	Ensure Councils provide their contributions	X	X	Responsible
7.2	Provide confirmation of State matching funds	X	X	
7.5	Notify NWC of additional contributions	X	X	
	Assets			
8.1	Seek approval to acquire Asset (not Capital Works)	X	X	Responsible
8.5	Proper management and recording of assets	X	X	Responsible
8.6	Seek approval to sell assets and disburse funds	X	X	Responsible
8.7	Replacement of assets	X	X	Responsible
8.8	Deal with assets at completion of Project	X	X	Responsible
	Records			
9.1	Keep and ensure records are kept	X	X	Responsible
	a) conduct of the Project	X	X	Responsible
	b) use of the Completed Works	X	X	Responsible
	Reporting			
10.1	Report as per Schedule	X	X	Input
10.2 a)	Completion Report	X	X	Input
	b) Financial Year report	X	X	Input
	f) Auditors report		X	Input
10.3	EO's report		X	Input
	Taxes			
11.1	Bear taxes	X	X	Responsible
11.4	Not claim an amount NWC could claim GST		X	
	Intellectual Property			
13.4	Create documents to allow use of IP if required	X	X	Responsible
13.6	Obtain approval of authors to NWC use of IP	X	X	Responsible
	Confidential Information			
14.1	Protect confidentiality of NWC information	X	X	Responsible
14.2	Protect confidentiality of Project Material	X	X	Responsible
14.3	Secure confidentiality agreements if required		X	Responsible
14.6	Notify NWC of internal use of confidential information	X	X	Responsible
14.7	Add confidential information to Schedule	X	X	Responsible

	Protection of Personal Information			
15.2	To protect private information - Schedule L	X	X	Responsible
15.3	Ensure contracts extend this Obligation to contractors		X	Responsible
	Indemnity			
16.1	Protect NWC from claim or expense from Project	X	X	Responsible
	Insurance			
17.1	Ensure Schedule J insurance is in place	X	X	Responsible
17.3	Provide proof of insurance when requested		X	Responsible
	Conflict of Interest			
18.1	Warrant that no conflict exists or is likely to	X	X	Responsible
18.3	Notify of emerging conflicts		X	Responsible
	Access to Premises and Records			
19.1	Make premises and records available if requested	X	X	Responsible
19.2	Provide reasonable assistance if requested	X	X	Responsible
19.3	Ensure contracts extend this Obligation to contractors		X	Responsible
	Delay			
20.1	Take reasonable steps to minimise delay	X	X	Responsible
20.2	Ensure all parties use best endeavours to minimise delays	X	X	Responsible
20.3	Notify NWC of delay and steps taken to contain it		X	Responsible
	Termination with Costs			
21.2	Upon notice terminate Project	X	X	Responsible
21.3	b) Return unspent funds	X	X	Responsible
21.5	Pursue compensation	X	X	Responsible
	Termination for Default			
22.1	Actions which constitute Default	X	X	Responsible
22.2	b)Return unspent funds			
	Subcontracting			
23.1	Responsible for delivery of Project			
	- warrant suitability of contractors	X	X	Responsible
	- warrant works meet requirements of Deed	X	X	Responsible
23.2	Include right of termination 21 & 22 in contracts		X	Responsible
23.3	Not engage Contractors not complying with EO for Women		X	Responsible
	Acknowledgement and Publicity			
24.1	Ensure acknowledgement of NWC assistance in all publicity	X	X	Responsible
24.3	Consult NWC on major promotional and media opportunities	X	X	Responsible
24.4	Copy of all publications to NWC		X	Responsible
24.5	Clause 24 continues to 2017.			Responsible
	No legal relationship			
25.2	Do not allow any one to represent themselves as NWC	X	X	Responsible
	Assignment and Novation			
28.1	Seek approval to assign or novate rights under this Deed	X	X	
28.2	Seek approval before entering negotiations	X	X	Responsible
	Corporate Governance			
29.1	Advice of any changes in structures and staff		X	
29.2	Staff rules	X	X	
	Dispute Resolution			
30.1	Follow this procedure before taking legal action	X		
30.6	Inform NWC of any disputes or claims with contractors		X	Responsible
	Liason & Monitoring			
32.1	a) liase and provide information to NWC	X	X	Input
	b) comply with reasonable requests for information	X	X	Input
	Review			
34.1	Assist 3rd party review for NWC if requested Schedule A19	X	X	Responsible
	Compliance with Laws			
35.1	Comply with laws in Schedule O	X	X	Responsible
35.2	Comply with NWC policies as notified	X	X	Responsible
	SCHEDULE			
	Objectives			
A8	Ensure Project will achieve Objectives listed	X	X	Responsible
	Capital Works and Locations			
A9	Ensure that Capital Works are in accordance with list or seek ammendment to list	X	X	Responsible
	Other Project Activities			
A11	Ensure that these activities are in accordance with Deed or seek ammendment to list, particularly Demonstration Program Monitoring System	X	X	Responsible

	Project Management			
A12	Ensure compliance with requirements			
	a) Procurement		X	Responsible
	b) Tender documentation		X	Responsible
	c) Project Implementation Plan		X	Input
	d) Communications Strategy & Program	X	X	Responsible
	e) Board to monitor progress	X	X	Input
	f) Advise NWC of Consultants engaged		X	Input
	g) Risk assessments	X	X	Responsible
	h) continually seek to apply technology to reduce costs		X	Responsible
	i) Water data to comply with ESCARWI standards		X	Responsible
	j) ensure water data is in format set by NWC		X	Input
	k) Ensure State and Local Govt funding matches NWC	X	X	Input
	l) public availability of ASR scheme descriptions	X	X	Responsible
	m) Pricing of water consistent with SA policies NWI and COAG	X	X	Responsible
	n) Ensure project is monitored and evaluated	X	X	Input
	Steering Committee			
A13	Ensure that the Board			
	a) manage, coordinate and oversee Project	X	X	Input
	b) enables members and observers to be informed and to guide	X	X	Input
	c) arrange regional forums to discuss urban catchment and water	X	X	Input
	Invites representative of NRM to Observe			
A14	NWC to attend and participate		X	
A15	Progress report at each meeting		X	Input
	Evaluation Reports			
A18	Annual Evaluation Reports 2011 to 2014	X	X	Responsible
	Milestone Payments			
B3	Payments will require:			
	a) Satisfactory Progress Report		X	Input
	b) Project on time and on Budget	X	X	Responsible
	Project within scope	X	X	Responsible
	Board satisfied with progress	X		
	c) Funds provided fully spent or fully spent in near future		X	Responsible
	Council Contributions			
C1	Ensure Council contributions are made and recorded	X	X	Responsible
	Other Contributions			
C2	Ensure Other Contributions are made and recorded	X	X	Input
	Budget			
D2	Provide draft annual financial year Budget	X	X	Input
D6&7	Approve transfers between Budget lines up to 10% of Budget	X		
	Seek approval from NWC of larger transfers	X		
	Reports			
E3	Financial Report	X	X	Input
	EO's report (Clause 10.3)		X	Input
E4	a) Statement of Budget reconciliation and action	X	X	Input
	b) Asset Schedule and comparison to Budget	X	X	Input
	c) Project Generated Income and its applications	X	X	Input
E5&6	Progress Report			
	Project Title		X	
	Progress against Milestones against Project Implementation Plan		X	Input
	Difficulties		X	Input
	Achievement of Objectives		X	Input
	Promotional and Media activities - against Communications Plan		X	Input
	Work to meet next Milestone		X	Input
	Potential difficulties, risks, issues anticipated		X	Input
	Discussion of progress, possible delay and action to overcome delay	X		Input
E7	Financial Information on Project			
	Funds Statement		X	Input
	Budget Compliance Statement and Actions	X	X	Input
	Income and Expenditure Statement		X	Input
	Estimate of expenditure to next Milestone		X	Input
	Asset Report		X	Input
	Project generated Income Statement		X	Input
	Statement of current liabilities		X	Input
	Final Progress Report - May/June 2010			
E8,9,10,11	Produce comprehensive report on project	X	X	Input
	Other Reports			
E12&13	Provide other reports to NWC as requested	X	X	Input

	Evaluation Reports			
E14	30 June each year provide an Evaluation Report	X	X	Input
	Assets			
F1	Maintain an Asset Register for WNARS		X	
	Maintain an Asset Register for each Council for Project			Responsible
	Insurance			
J1	Maintain insurance for WNARS		X	
	Maintain insurance for Councils			Responsible
	Acknowledgement & Publicity (Clause 24.1)			
M1	Acknowledge funding and assistance in all activities	X	X	Responsible
M2	Ensure			
	all material carries NWC logo	X	X	Responsible
	all material to NWC prior to release	X	X	Responsible
	launches etc NWC acknowledged	X	X	Responsible
	all parties role acknowledged at all project related for a	X	X	Responsible
	Compliance with Laws (Clause 35)			
O1	comply with listed Laws	X	X	Responsible
	advise Councils of additions to list of Laws		X	
O2	Comply with listed Policies	X	X	Responsible
	Advise of additions to Policy List		X	

D2 Communication and Consultation Strategy

Introduction

The Board and Constituent Councils have been implementing an approved Communications and Consultation Strategy for Waterproofing Northern Adelaide (WNA) since the signing of the Funding Deed in April 2007. The Communications Group reviewed the Strategy in January 2008 and presented this revised version to reflect the progress to date, and to direct the communications for the remaining 3 years of WNA. For 2008/09, WNARS expenditures on Communications and Consultation strategy activities will comprise \$0.045m for web site development, printing and consulting services.

Background

Work has commenced on the implementation of the \$104m WNA scheme in the adjoining councils of Playford, Tea Tree Gully and Salisbury. This project will significantly enhance the urban stormwater systems of the region to produce a sustainable supply of 12GL for use by community, industry, residents and irrigators.

It is difficult to overstate the impact which achieving the WNA scheme would have – not only on the region which it targets but on the wider South Australian community. The plan is recognized as ambitious, comprehensive and on a scale of national significance to serve as a demonstration of best practice to other councils.

Whilst the benefits of the scheme are far-reaching, its implementation requires extensive capital works during the construction stages over the next three years, and will have a direct impact throughout the adjoining cities.

Scope

The infrastructure to be developed in Stage 1 includes:

- 25 new or expanded stormwater detention, cleansing and harvesting facilities
- 14 new community bores
- over 120km of distribution water mains to serve consumers
- water and energy distribution water main in Playford
- an improved environmental monitoring system for the entire system
- Aquifer Storage Treatment and Recovery (ASTR) research site for recycled stormwater
- controllable detention elements.

The key outcome of the project is the construction of a world-class water resource management system that will benefit 300,000 residents of Northern Adelaide.

The Australian Government's Water Smart Australia Program is providing \$41.8m of assistance and requires the development and implementation of:

- a Communication and Consultation Strategy, to ensure that the community is kept informed and remains supportive of the project;
- a Demonstration Program to inform other Councils and water profession of best practice in urban water management.

The Councils have formed a regional subsidiary called “Waterproofing Northern Adelaide Regional Subsidiary” (WNARS) to coordinate and oversee the project as the Councils undertake the capital works.

The Board of WNARS recognizes that loss of community support could jeopardise WNA and that it may require specialist assistance with aspects of this and the Demonstration Strategy.

Context

WNA will be an icon project for the region, South Australia and a project of national and international significance, demonstrating the practicality of water recycling, harvesting and substitution in order to achieve a substantial reduction in the use of potable water across a major urban development.

The project is being undertaken in a period of drought and against a backdrop of growing community concern about environmental issues, especially increasing anxiety about the long term supply and quality of water for community and business needs. The WNA project will deliver real benefits to the Northern region which is increasingly vulnerable through its dependence on the River Murray and reservoirs outside the region.

Of critical importance to the success of WNA is the need to maximise the use of recycled water by community users, residents and business. In order to achieve this, the project partners will need to demonstrate:

- that users can have confidence in the quality and reliability of supply of recycled water and its sustainability;
- engineering excellence in designing and implementing a scheme that must last for generations;
- innovation in devising a scheme that reflects world’s best practice;
- benefits that will result from the take-up of the scheme together with water conservation practices.
- sensitivity to community disruption during the major works program in order to complete works and commence supply on program.

The project will also educate all residents of the region about the benefits of harvesting stormwater, particularly in Tea Tree Gully.

The entire proposal is presented within the framework of the South Australian Government’s Water Proofing Adelaide Strategy that seeks to establish a blueprint for the management, conservation and development of Adelaide’s precious water resources to 2025.

Communication and Consultation Issues

The success of the scheme is dependent not only on engineering excellence but also requires ongoing community support. The risk management planning process identified that loss of public/community support represented an Extreme risk to WNA.

Possible causes for this may be:

- community knowledge and understanding of the scheme and its benefits is reasonably high, but probably general rather than specific;

- the public has been subjected to enormous publicity about drought, water restrictions, Waterwise practices, grey water and rainwater tanks but there is little that links this to the specifics of WNA;
- the scheme involves disruption to community during installation;
- there is increased community anxiety about future supplies of water, combined with increased interest in securing water for their own use;
- the project straddles council boundaries with potential for confusion, particularly with different people talking about different aspects of WNA;
- media interest is significant, very high support levels at present expose WNA to the risk of adverse reporting if an incident occurred eg supply of contaminated water, drowning in a wetland.

The response to these risks is a sustained communications program to inform the community of the benefits, the inconveniences and the issues related to WNA.

In addition to the communication requirements of the community there is a parallel need to demonstrate the viability and real benefits of an integrated approach to other Local Government regions, water professionals and State and Federal agencies.

Organization

The structure for delivering WNA comprises a regional subsidiary with accountability to the National Water Commission supported by a secretariat led by the Executive Officer. The Board of the regional subsidiary has formed three working groups to coordinate and oversee the implementation of WNA. These are: Finance & Reporting, Communications, and Technical which are made up of members of the project teams of the participating Councils.

The principal engineering and technical accountabilities are with the combined Technical Group comprising representatives from the participating Councils and key stakeholders.

Communication Group

The Communications Group has been established with a representative from the WNARS Board and one from each Council. The NRM Board has been invited to send an Observer to the Group.

The Board may invite other interested persons to attend meetings eg communications staff nominated by a partner or a sponsor or specialists engaged to support the work of the Group.

Aims and Purpose

On behalf of the Board of WNARS, coordinate the communications activities of the three Councils in respect of Water Proofing Northern Adelaide by:

- implementing a Communications and Consultation Strategy and the Demonstration Strategy;
- implementing the Communications and Consultation Strategy by way of Annual Communications Plans for the Board and individual Councils;
- providing regular briefings to the Board of WNARS of opportunities to communicate the benefits and impacts of Water Proofing Northern Adelaide in addition to the Communications Plan and Demonstration Program.

Communication Group Roles

The purpose of the Communications Group will be to review, agree and recommend for approval by the Board the communication activities and products prepared in accordance with the WNA Communication and Consultation Strategy and supporting actions.

The focus of the Group should be directed to the development and implementation of:

- Strategy and Action plans
- Key messages and branding
- Suite of promotional materials
- Displays
- Advertising and public notices
- Public events
- Media relations
- Securing and maintaining the support of sponsors.

All parties, including the Australian Government Water Fund, shall approve the nature, form and content of all materials produced in relation to the WNA Scheme for use. It is vitally important that messages are consistent at all times and by all parties.

The Board will be the approving authority for:

- Communications and Consultation Strategy
- Demonstration Strategy
- annual Communications Plans
- Communications budget.

The Board will provide direction to the Communications Group as required.

The Communications Coordination Group will:

- manage the daily operations and routines of the two strategies in accordance with this Strategy and the annual Communications Plans
- report progress to the Board for inclusion in the regular Progress Reports to NWC and Annual Reports to Councils
- advise the Board of any emerging issues regarding project support or of media opportunities

Meeting Procedure

The Group will hold formal, regular meetings and include:

- a progress report on communication activity measured against approved annual plans which are the responsibility of the Communications Group;
- a progress report on any matters which the Board has directed to the Group for action
- a report from each Council of work in progress that is linked to the agreed action plan
- a forecast of communications and demonstration actions proposed for the period until the next meeting
- advice on any emerging issues which may affect the public support for the project
- advice on any emerging media opportunities

Strategy

Communication Objectives

The communication objectives reflected in the Terms of Reference for the working group are to:

- gain and maintain wide community, business and government understanding and ongoing support for the social, economic and environmental benefits that will result from the WNA scheme;
- demonstrate to all tiers of government and water professionals that an integrated and regional approach can economically convert urban storm water from a disposal problem into a valuable resource;
- illustrate and promote regional collaboration by adjoining Councils along with the benefits arising from cooperation across all three tiers of Government.;
- ensure local property owners are informed at the commencement of works and manage the risks associated with complaints concerning the delivery of the project especially during the potentially disruptive heavy engineering phases;
- manage media interest in the project through the implementation of proactive strategies.
- maximize revenues and returns from the sale of recycled water and related commercial benefits to residents, business and state agencies.

Audiences

This strategy recommends a program of communications to reach diverse audiences including:

- ratepayers in the councils who will benefit from the scheme;
- groups and businesses that will be encouraged to take up recycled water;
- Government agencies involved directly and indirectly in the WNA initiative;
- local and national media to promote the scheme and its concept to external audiences; and
- private and public project partners who need to be kept informed and acknowledged.

Given the diversity of audiences and the complex nature of the communications, it is proposed that implementation should be undertaken through a number of key stages.

Communication Messages

While the communication messages will change over the life of WNA and will be adjusted to the target audience, the current key messages for the community are:

WNA will convert urban stormwater from a disposal problem into a sustainable resource for the region.

WNA is:

- an ongoing collaboration between three Councils, their communities, the three levels of government and a range of private partners and water users

- reducing the reliance on the water supplies from the mains water system and the River Murray
- ensuring that the community has water to irrigate its sports facilities and school ovals
- sustaining the main waterways and the biodiversity of their ecosystems, as well as the groundwater resources and reducing contamination of the ocean
- encouraging the community to care for and use the wetlands, waterways and linear parks
- improving the flood protection for the region

WNA is not a simple construction project; it requires the upgrading of the urban water systems so that they perform the three functions of:

- protecting properties and infrastructure from flooding,
- improving the environment by removing pollution from the stormwater, and
- creating water bodies and allowing the cleaned storm water to be harvested for community uses.

During construction there will be local disruption and inconvenience; these are balanced by the long-term benefits.

For our sponsors and regulators the emphasis changes to:

“WNA is:

- regional, cooperative and coordinated
- well managed and providing value for money
- innovative and pursuing better practice and research
- implementing national, state and regional plans for water management and pricing, these are formalized in Integrated Water Cycle Management Plans
- monitoring its outcomes and effects and adapting its management of water in accordance with the information collected”

Program

It is proposed that the Consultation and Communications program should be divided into three individual Council programs and the common activities which are assigned to WNARS.

WNARS Communication and Consultation Group responsibilities

Annual Communications Plans and Budgets

The Group will coordinate for the Board the preparation of the detailed Annual Plans

for each Council and the Board, with associated Budgets.

This Plan sets out the detailed actions to be taken each year.

This will be in place for the preparation of the 2008/09 budget.

Website

Create a website which provides for at least:

- Description of WNA
- Progress – based on Board Reports
- Evaluation – based on Board reports
- Research – based on Board reports
- WNARS – formal documents
- WNARS – publications

- WNARS – forthcoming events
- Arrange an inspection
- Links to Partners/Participants websites.

This is shown in diagrammatic form below:

<u>WNARS WEBSITE</u>					
HOME					
Waterproofing Northern Adelaide	Whats Happening	Monitoring & Evaluation	Publications	Partners & Sponsors	Board
Project Description	Media Releases	<u>System Description</u> Surface Water Ambient Process	Fact Sheets	NWC Councils NRM Board CSIRO UW	Membership Role
Progress			Reports		
<u>Playford</u>	Events	Groundwater Ambient Process	Articles	U of SA SA Water	Minutes
Project Description	<u>Progress Reports</u>				Presentations
Progress	Full	reWater Harvest Stored Sales	SA Water SMC LMC	Reports Publications	
<u>Salisbury</u>	Summaries				
Project Description	Mailing List				
Progress	Inspection/Visit				
<u>Tea Tree Gully</u>	Awards				
Project Description					
Progress					
ASTR					
<u>Controllable Detentions</u>					
Hydrological Modelling					

Fact Sheets

- Waterproofing Northern Adelaide
- WNA Playford
- WNA Salisbury
- WNA TTG
- WNA ASTR
- WNA Controllable Detentions
- WNA Watercress
- WNA Integrated Water Cycle Management

WNARS will create a series of Fact Sheets.

These will be in standard format and include the acknowledgement of AGWF assistance.

Consultants are working on the creation of the website and writing the Fact Sheets which are the core of the content. This is programmed for operation in March 2008.

WNA Fact Sheets

- WNA – 1
 - Problem into sustainable resource - Summary
- Waterways – 7
 - Smith Creek
 - Helps Road
 - Little Para
 - Upper Little Para
 - Lower Dry Creek
 - Upper Dry Creek
 - Torrens
- Wetlands/ASR -
 - Smith Creek 3
 - Helps Road 5, inc Adams Creek
 - Little Para 2
 - Lower Dry Creek, 6 or 8
 - Upper Dry Creek 8
 - Torrens 3
- Infrastructure
 - Integrated Distribution Main, TTG
 - Playford Community Bores
 - Salisbury Community Bores
 - possible – Playford North Main
 - possible – Salisbury Spine
- Research
 - ASTR
 - Energy from Mains
 - Controllable Detentions
- Monitoring
 - System

Draft Pro-Forma for WNA Fact Sheets

Header

WNA boilerplate

Name: eg **Kaurna Park**

Insert photo

Where: Waterloo Corner Burton
4th wetland ASR in Helps Road Catchment

What: Combined flood detention dam and in-line wetland
Harvest capacity 400ML/an
Two ASR bores into T1.
Walking trail in wetland
Water supplied to –Burton Reserve, Burton Primary School,
Nursery, Industry.

Special Features:

Planted with local indigenous species
Walking trail offers a Kaurna interpretation of the wetland.

Links: CoS Walking Trail
 Monitoring Records
 Helps Road Drain
WNA

Kaurna Park – More detail

Plan/Diagram - showing
Layout
Public Access
Trail
Parking
Water infrastructure
Distribution Mains

Detailed information

Area of wetland
Volume of Water stored in wetland
Area of catchment
Average Annual Run Off
Harvest Capacity
Aquifer
Delivery Capacity

Promotional Kit

A comprehensive suite of information will be prepared in such a way as to be tailored to the needs of the different types of people visiting or interested in WNA.

This will include:

- WNA summary
- DVD
- facts sheets
- regional maps
- cover to package information
- merchandise.

A specific version of this kit will be prepared for schools in the region, this will include:

Information package for teachers, linking it to Waterwatch programs

Information specific to the school and where its recycled water is coming from, and nearby wetlands and waterways.

Specific information for schoolchildren, prepared in consultation with Waterwatch.

Appropriate merchandise.

This material is based on the existing information and the Fact Sheets being prepared for the web site.

The DVD exists in draft form.

The layouts and logo treatments are settled.

It is anticipated that the general kit will be available by March 2008 and the schools version by May 2008

Community Perception Surveys

Survey questions have been included in 2007 Annual Community Surveys regarding the awareness of WNA.

City of Tea Tree Gully has conducted its 2006/2007 Community Survey with a 37 per cent recognition of WNA, Salisbury has recorded similar levels, Playford are in the analysis stage. The final results of the three surveys will be collated and included in the September Progress Report

For 2008 the Communications Group will develop a follow-up question or questions for inclusion in the community surveys, the results to be included in both risk reviews and September Progress Reports

WNA Display Material

Individual Councils and the Watershed have developed displays for their own use and this has shown the need for a core of WNA display material. The current proposal is for a display package consisting of:

- Pop-up banner
- Large format Regional Map (laminated)
- DVD (same as in Promotional Kit)

At least one copy would be made for each Council and one for WNARS. This is the same material as the Promotional Kit and would be available in March 2008.

Style Guide

Develop a formal Style Guide for approval by the Board including:

- WNA templates
- WNA PowerPoint presentation format
- Logo usage
- Fonts & Colours
- Approved material for inclusion
- Protocols for approval of various items eg press releases, presentations

This is based on existing material and is planned for submission to the Board in March 2008.

Media Strategy

- Councils to implement their Annual Communications and Consultation Plans to promote / educate the community about individual projects.
- Milestone Progress Reports from WNARS to NWC will include copies of articles, press releases etc and a list of upcoming events.
- Collaborative media can be arranged with NWC around the Milestones of the project.
- In emergency or crisis management situations. Chris Kaufmann, as Executive Officer of WNARS, will be the interim spokesperson.
- Press releases, articles in Council publications and flyers will include the following line:

“Waterproofing Northern Adelaide is a collaborative project to improve urban water management in Adelaide’s northern region. WNA is being undertaken by the Cities of Tea Tree Gully, Salisbury and Playford with the assistance of a \$41.8 million grant from the Australian Government’s Water Smart Australia programme as well as State and private partners.”

The Australian Government Water Fund Water Smart Australia Style Guide 2006 states that for the coordination of Water Smart Australia promotional material Councils and WNARS should ensure that any communications activities are developed in conjunction with the National Water Commission’s Communications team. Contact Kim Ulrick on 02 6102 6023 or email kim.ulrick@nwc.gov.au. The NWC’s Communications team will coordinate the appropriate clearances, for example with Minister’s offices or within the NWC.

This task covers Section 24.1 of the Deed (Acknowledgement and Publicity).

Press releases

Councils can generate individual press releases regarding local projects (i.e. wetland development, drilling works, sectioned-off areas etc). These will be reported to the Executive Officer for records management purposes.

Collaborative press releases will be circulated to the Communications Group for comment in a timely fashion.

All press releases will acknowledge the collaboration of the three councils and Australian Government (as set out above).

This covers Section 24.1 of the Deed (Acknowledgement and Publicity).

Media Outlets

A media plan for 2008 shall be prepared to designate target media, the key messages for each and the approach to advertising as part of the Demonstration Program

- National – TV, Specialist Journals, General Magazines, Papers
- State – as above plus radio
- Local – Council Magazines, Messenger Press

Media Enquiries

A key contact should be appointed for all media enquires throughout the construction phase of the project. This contact should coordinate responses back to the media ensuring input and contribution from all project partners. In the interim this shall be the Executive Officer.

The Communications Group representative from each Council and relevant management can handle individual Council's reactive media enquiries.

Complaints Strategy / Crisis communication

The interim strategy is;

- Instance of crisis – Executive Officer to contact Communications Group
- Key messages reinforced regarding WNA
- Briefing session coordinated
- Spokesperson determined, if not Executive Officer

A more detailed Strategy will be developed by the Communications Group

Government Liaison – Fundraising

The maintenance and development of relationships with the State Government Agencies is intended to secure both policy and financial support for WNA. This will involve both briefings and on-going cooperation with:

- Adelaide Mount Lofty Natural Resources Management Board
- Land Management Corporation
- Department of Education and Children's Services
- Department of Recreation and Sport
- Department of Premier and Cabinet (Office of Sustainability)
- EPA
- Department of Water Land and Biodiversity Conservation
- SA Water
- University of SA

This will be the subject of on-going reporting to the Board.

Information to Real Estate Agents

A briefing of the Real Estate Institute should be had, and material prepared for distribution to their members.

Signage

The following signs will be designed and used by the Councils and WNARS

Project Signs

Each construction site will be clearly signed with the standard sign

Display Signs

When an event or display is being held which forms part of WNA a standard sign will be clearly displayed.

Wetland/ASR Permanent signs

Each wetland/ASR which has been developed with NWC funds shall have a permanent sign erected (or a plaque if there was a formal opening) which acknowledges the regional cooperation and Commonwealth assistance. A standard text layout will be designed and included. Each site and each Council may need individual signage, the acknowledgement that this was a WNA project and the Commonwealth assistance will need to be included; eg a wetland in a linear park may need to include Planning SA assistance, a wetland in a LMC development will need to acknowledge their input, the landscape spine for Playford North may have its own signage.

These signs do not replace the need for any regulatory signs.

Project Coordination

The ongoing coordination of this Strategy and the Demonstration Strategy is the responsibility of the Board.

The Communications Group will then coordinate the preparation of the Annual Plans for endorsement by the Board.

The Communications Group will implement the Strategies and Plans and report to the Board and hence to NWC.

Council Responsibilities

Annual Plan

Each Council will prepare a Plan indicating the activities proposed in relation to WNA. This includes both general activities and those actions related to the particular capital works. It is accepted that where activities are linked to the capital works program changes in timing and scope will cause changes to the communications program.

Communications Related to Capital Works

While each work is unique and will need a program of communications tailored to it the following is a general indication of the stages of a project and the communications appropriate to that stage.

- Planning/Concept
 - Messenger Press publicity, seeking comments on concept
 - Letterbox to affected residents and facility users
 - Invitation to stakeholders to provide input into concept
 - Public meeting/display seeking comments

- Design
 - Follow up with stakeholders for comments on design – formal arrangements eg mail out, meeting or direct contact.

- May use formal reference groups, media release or public display to elicit responses to design options.
- Construction
 - Notice in local press of construction program
 - Letters to affected residents
 - On Site signage
 - Viewing area with information signage
 - Site tours for stakeholders and residents
- Opening
 - Local press notice
 - Change of site signage from construction to permanent sign
 - Official opening event with media coverage

It is anticipated that the organizing and funding of this part of the program would be met from the construction budget.

The Councils will also be undertaking a range of activities such as:

- Elected Member communications
- Newsletters/Magazines
- Annual Reports
- Special publications or promotional programs
- Environmental Events
- Community Development Events
- Communications related to development projects

In these WNA forms part of the message, the role of WNARS is to coordinate and perhaps to assist with these, and to ensure that the message is consistent and that all 3 Councils and NWC are informed.

Program Review

It is proposed that the Communications Program will be reviewed each year in January.

D3 Demonstration Strategy

Introduction

The Waterproofing Northern Adelaide (WNA) project provides a demonstration of urban Integrated Water Cycle Management across three Councils and 4 sub-catchments. The area ranges from urban renewal to new development of residential and industrial uses. The water sources include stormwater, groundwater and wastewater. The schemes make extensive use of aquifer storage and recovery (ASR)

This combination provides an excellent vehicle to demonstrate best practice to local government decision makers and to water professionals. This builds on the high level of professional recognition which the region has at present. This Strategy is to be implemented in parallel with the Communications and Consultation Strategy for WNA. For 2008/09, expenditures on Demonstration Strategy activities will comprise \$0.010m.

Goal

To demonstrate to Australian Local Government and water professionals that an integrated approach can economically convert urban stormwater from a disposal problem into a valuable resource.

Organization

The Demonstration Program will be delivered by the Executive of Waterproofing Northern Adelaide Regional Subsidiary (WNARS), University of SA, Councils staff, consultants and contractors. The whole program will be in accordance with an approval from the WNARS Board and will be coordinated by the Communications Group with considerable assistance from the Technical Group. In general the Demonstration Program will rely on the Communications and Consultation Program for production of media materials and on its partners for staff resources.

Program

WNARS will undertake to achieve the following:

Website

Using the website as described in the Communications and Consultation Strategy. Create a website which provides for at least:

- Description of WNA
- Progress – based on Board Reports
- Evaluation – based on Board reports
- Research – based on Board reports
- WNARS – formal documents
- WNARS – publications
- WNARS – forthcoming events
- Arrange an inspection
- Join the mailing list
- Links to Partners/Participants websites.

This is shown in diagrammatic form below:

Waterproofing Northern Adelaide	Whats Happening	Monitoring & Evaluation	Publications	Partners & Sponsors	Board
Project Description	Media Releases	<u>System Description</u> Surface Water Ambient Process	Fact Sheets	NWC Councils NRM Board CSIRO UW	Membership Role
Progress			Reports		
<u>Playford</u>	Events	Groundwater Ambient Process	Articles	U of SA SA Water	Minutes
Project Description	<u>Progress Reports</u>				Presentations
Progress	Full	reWater Harvest Stored Sales		SMC LMC	
<u>Salisbury</u>	Summaries				
Project Description	Mailing List				
Progress	Inspection/Visit				
<u>Tea Tree Gully</u>	Awards				
Project Description					
Progress					
<u>ASTR</u>					
<u>Controllable Detentions</u>					
<u>Hydrological Modelling</u>					

Fact Sheets

- Waterproofing Northern Adelaide
- WNA Playford
- WNA Salisbury
- WNA TTG
- WNA ASTR
- WNA Controllable Detentions
- WNA Watercress
- WNA Integrated Water Cycle Management

WNARS will create a series of Fact Sheets, as described in the Communications and Consultation Strategy and set out above. These will be in standard format and include the acknowledgement of AGWF assistance.

Electronic Mailing List

WNARS will include in its website an ability to register for electronic mailing of information and updates on WNA. The contact details of those registering will be made available to NWC.

Publications

WNARS will produce material in electronic form (on the website) and as

- Print
- DVD

publications.

All such material will include AGWF acknowledgement and will be promoted via the electronic mailing list and website.

Conference papers

WNARS will ensure the publication of papers at professional conferences.

- At least 1 per annum

All such papers will include AGWF acknowledgement and be made available through the website.

Post Conference Tours

- At least 1 per annum to be the target

Awards

WNARS will

- assist agents and participants in applications
- target 1 per annum

All acceptance announcements will include AGWF acknowledgement.

Courses

WNARS will assist in the delivery of the following courses, and ensure AGWF acknowledgement:

Uni of SA

- Watercress
- Urban Water Management' Toolkit

CSIRO & Centre for Groundwater Studies

- ASR course

Regency TAFE

- Ecoplumber

Events

WNARS has planned to arrange at least one event or forum per year for the water profession and local government decisionmakers. The current program plan is:

2008	Forum on Water Pricing
2009	Forum on Regional Cooperation
2009	2 day conference on urban water management
2009	Workshop to present Controllable Detentions
2010	Workshop to present ASTR findings

These may involve other partners and will all include acknowledgement of the assistance being provided by AGWF without implying any endorsement of any policy positions by NWC.

Professional Publications

WNARS has made clear to its project partners that it expects them to prepare articles for publication in professional journals, including acknowledgement of AGWF assistance. This covers at least the following areas:

- Controllable Detentions —with Suburban Water
- ASTR - with CSIRO/UW
- Monitoring - with NRM Board
- Urban Water Toolkit - with U of SA
- Watercress - with U of SA
- Regional Cooperation in Water Management

- Integrated Water Cycle Management in practice – with SKM & NRM Board
These will usually involve or be authored by other partners.

Budget

The material developed for the Communication & Consultation Strategy and the individual project communications will provide the bulk of the requirements of the Demonstration Strategy eg the web site is the largest investment in external expenditure.

In 2007/8 it is anticipated that the Demonstration Strategy will require investment in specialist publication and some minor expenditure on events, the total 2007/8 Budget is planned at \$10,000.

D4 Monitoring and Evaluation

1. Introduction

WNARS will coordinate the implementation and operation of a monitoring and evaluation system that allows Constituent Councils to operate and evaluate the project outcomes until, at the earliest, 30 June 2014 as specified in Schedule A2 of the Funding Deed. This plan is for a Monitoring and Evaluation system to meet several requirements:

1. the operational needs of the Constituent Councils to meet their flood mitigation, environmental enhancement and water harvesting, storage and distribution obligations
2. the requirement to evaluate the achievement of the Objectives of Waterproofing Northern Adelaide
3. the requirement to report on progress to the various organizations funding Waterproofing Northern Adelaide
4. the aim to provide an integrated environmental monitoring system for the urban catchments of Northern Adelaide.

The system proposed is an integration of existing monitoring programs and those proposed as part of the new Wetlands/ASR's. During 2008/09, implementation of capital-funded projects under a 4-year funding agreement with Adelaide Hills & Mount Lofty Ranges NRM Board will continue. Actions are also anticipated as the Bureau of Meteorology assumes a range of NWI operational responsibilities even though, at the time of WNARS Budget Approval, the impact on operations is unclear. These activities will be reviewed during the normal quarterly Budget Review process.

The Monitoring system is described in three parts:

- Ambient - general condition in catchment
- Process - specific to an individual facility
- Community - ancillary to education or special interest activities.

The Environmental elements being monitored are:

- Climate
- Surface Water
- Groundwater
- Water Dependant Ecosystems
- Recycled water utilization
- Water dependant urban amenity

The relationship between these is shown on the following table; the initials represent the entity undertaking the monitoring.

WATERPROOFING NORTHERN ADELAIDE MONITORING							Mar-07
Monitoring Type	Climate	Surface Water	Ground Water	Water Dependant Ecosystems	Recycled Water Utilization	Water Dependant Urban Amenity	
Ambient	X BOM	X NRM, EPA, DWLBC	X DWLBC	x NRM, PIRSA, DEH			
Process		X Councils	X Councils		X Councils, SAW	X Councils	
Community		X WW		X WW			

2. Objectives to be evaluated

The following are the Objectives as set out in the Funding Deed which provides the NWC funding

A.1. “The environmental, economic, social and other Objectives of the Project:

- a.** Provide and manage a sustainable water supply system for the urban areas of the Councils of City of Salisbury, City of Playford and City of Tea Tree Gully;
- b.** recharge groundwater systems (T1 and T2) of the Northern Adelaide Plains by a target of 5gigalitres per year (4.3 gigalitres during the evaluation period). This aims to return stressed aquifers of the Northern Adelaide Plains towards sustainable levels, specifically the additional recharge to aquifers aims to return the Penrice (Dry Creek) T1 cone of depression to sustainable levels, return the Waterloo Corner cone of depression, T1, to sustainable levels and contribute to returning the Virginia T2 cone of depression towards sustainable levels;
- c.** sustain riverine environments in Dry Creek, Little Para, Helps Road Drain and Smiths Creek through provision of environmental flows (through managed releases at appropriate levels and timing to maintain environmental and developed landscape assets), wetlands and linear parks;
- d.** Provide a sustainable harvest of water from recycled stormwater, recycled waste water and groundwater to provide community (parks, recreation facilities, gardens, schools, open spaces), residential (garden and toilet use), industrial users and commercial irrigators (nurseries, intensive horticulture) with water in the project area;
- e.** Implement water pricing consistent with State progress towards COAG and NWI pricing principles;
- f.** enhance urban environments with wetlands, water features, irrigated landscapes and recreation areas, particularly in urban renewal areas;
- g.** demonstrate best practice and innovation in integrated water management in an urban setting, including: aquifer storage and recovery and water reuse, the use of aquifers to treat water to drinking water quality, controllable detentions to maximise capture of stormwater for reuse, hydrological modelling and monitoring and adaptive management;
- h.** implement sustainable management of catchments, surface and groundwater systems in the urban areas of the region;
- i.** reuse stormwater to reduce ocean outfalls through the Barker Inlet by a target of 20GL per year lowering adverse impacts on ocean ecosystems;
- j.** substitute a target of 12 GL of drinking water with recycled water, which will reduce the region’s dependence on drinking water systems by 6%;
- k.** replace a target of 1.2GL of water, currently sourced from stressed groundwater systems, and recharge a target of 5GL per year to the aquifers;
- l.** Increase efficiency of water use by community, industrial, residential and horticultural consumers through education and promotion of efficient water use

practices, through customer programs and in association with State and commonwealth programs; and

m. Provide flood protection for all developed property and infrastructure within the region.”

3. Current Programs & their Adequacy

This is a very brief overview of the programs, mainly focused on establishing what must be done to allow collection of sufficient data to:

- evaluate the achievement of the Objectives,
- provide the basis for effective management of the system and
- provide coverage to add to the data storage and public access being programmed by the NRM Board in the form of a “data warehouse”.

3.1 Climate

The Bureau of Meteorology has automated stations in the region which provide adequate coverage for climate, most particularly rainfall and evaporation.

The Bureau of Meteorology also provides a flood warning service, which is adequate for the region’s needs.

3.2 Surface Water

Ambient

Between them the three State agencies have developed monitoring stations which look at various aspects of the surface water flows and their quality. Most pertinent are:

- The three ocean outfall stations on Dry Creek, Little Para and Helps Road Drain.
- The middle reach stations on Dry Creek, Little Para, Helps Road Drain and Smiths Creek.
- SA Water sewer spill alerts indicate contamination events
- Council spill reports indicate contamination events

Actions:

- 1. an outfall station to be constructed on Smiths Creek*
- 2. an additional mid-reach station to be constructed on Smiths Creek.*
- 3. the existing outfall and mid-reach stations to be upgraded to provide a consistent flow measurement and composite sampling suite for quality*
- 4. where the Councils are collecting data it will be provided to the NRM Board for inclusion in their data warehouse.*

Process

Each Wetland ASR will measure

- the flow and quality of stormwater available as input to the facility
- the quality and quantity of the water being injected into the aquifer and
- the quality and quantity of water being delivered to users (both direct from the wetland and recovered from the aquifer).

A minimal range of parameters is monitored on-line for most sites; flow rates, salinity & turbidity.

A much more extensive and site-specific range of quality parameters are tested at each site on a volume-based regime.

Some contaminants will lead to investigation of sources of catchment contamination and treatment e.g. heavy metals, herbicides.

- Actions:*
- 5. the data collected and the methods of collection are coordinated between Councils.*
 - 6. the data to be provided to the NRM Board for inclusion in their data warehouse.*

Community

Through Waterwatch, water quality is measured and recorded at many Sites and these records are collated into seasonal snapshots of catchment condition. These are focused on wetlands and main stream channels.

- Action:*
- 7. the data collected by Waterwatch groups be combined into a form which can be integrated into the Ambient data, and then made available for inclusion in the NRM Board's data warehouse.*

3.3 Groundwater

Ambient

There is a well-established system of monitoring bores in the T1 and T2 aquifers which provides the input to the numerical model of performance developed for the NRM Board.

- Actions:*
- 8. no additional ambient monitoring bore be developed*
 - 9. groundwater analysis be undertaken using the existing model on a regional basis.*

Process

Each facility, whether ASR, injection or extraction bore, will be monitored for injection rates and pressures, extraction rates and draw-down as well as seasonal and annual totals for injection and extraction. Most of the monitoring is undertaken on-line. Each ASR facility will have additional monitoring bores.

- Actions:*
- 10. the data collected and the methods of collection are coordinated between Councils*
 - 11. the data be provided to the NRM Board for inclusion in their data warehouse.*

3.4 Water Dependent Ecosystems

Ambient

There are a range of partial programs monitoring the condition of native fish and some remnant areas of native vegetation.

- Action:*
- 12. provide reasonable assistance to supplement the current programs.*

Process

The monitoring of flows past each facility and of any releases of water into the main channel for environmental flow maintenance provide information of inputs rather than condition.

Action: 13. the Councils request that the NRM Board lead the development of agreed monitoring of the condition of water-dependant ecosystems.

Community

There are several community-based programs of monitoring which provide additional information of the condition of the water dependant ecosystems. These include:

- Waterwatch monitoring of invertebrates, vertebrates and other wetland fauna
- Waterwatch and other groups interested in bio-diversity monitoring whole ecosystems

Frogwatch

Bird watching programs and groups

Action: 14. the Councils include these programs in the scope of the request to NRM Board to lead ecosystem monitoring.

3.5 Recycled Water Utilization

Process

Recycled water supplies are metered; this provides adequate monitoring of utilization.

Action: 15. the data collected and the methods of collection be coordinated between Councils.

3.6 Water Dependant Urban Amenity

Process

There is no systematic recording of the improvement in urban amenity arising from creation of sustained riverine linear parks, lakes, wetlands, irrigated reserves or irrigated feature landscapes. The Council's recording systems do allow for description of the features themselves but there is no methodology in place for describing their improving effects.

*Actions: 16. The Councils prepare a common listing of the features which depend on recycled water to improve urban amenity.
17. The Councils consider the practicality of a common interpretation of the improvement attributable to these features.*

4. Evaluation

This section considers the manner in which the monitoring data will be presented to demonstrate the effectiveness of the implementation of Waterproofing Northern Adelaide. Thus the basis is the objectives set out in Section 2. This is presented in summary form in the following chart.

Evaluation of each Objective

a. Provide a sustainable water supply

Water Resources available: Recycled Stormwater Delivery Capacity

Recycled Stormwater Stored

Groundwater Allocation

Groundwater Credit

Recycled Waste Water available:

[all information available from Process Monitoring]

Extent of Urban Area Served: Location Area Served

[information derived from GIS location of delivery mains]

[query presentation of Mawson Lakes Reclaimed Water System]

b. Recharge groundwater systems

Groundwater Recharge: T1 Environmental Recharge this year

Environmental Recharge since
commencement of project

T2 Environmental Recharge this year

Environmental Recharge since
commencement of project

[information from Process Monitoring]

[we may add information from the DWLBC groundwater
monitoring system on an annual basis]

c. Sustain riverine environments

Reach & its length [from GIS]

Environmental Flows: Stream Flows [from Ambient Monitoring]

Quality incidents [from Council reports]

Environmental Condition: Fish [from PIRSA]

Vertebrates [from WW]

Macroinvertebrates [from WW]

Water dependant ecosystems [from expanded

WW]

d. Provide a sustainable harvest of reWater

Harvest volumes, direct & from storage [from Process Monitoring]

Supply information volume and user type [from meters, need to provide
explanation for unusual events]

- e. **Full cost pricing**
 Estimate “Upper Bound Pricing” on an annual basis
 [from Operating and Council Budget information]
 Collect revenue [from meters & prices]
 Adjust revenue if customer has contributed to capital or if supply is not typical
 [from historic information]
- f. **Enhance urban environments**
 Estimate extent of improvement, probably ha [from GIS information base]
- g. **Demonstrate best practice & innovation**
 Report actual improvements as they are made.
 [from individual Council reportage]
- h. **Implement sustainable management**
 Catchments [from Council operations]
 Surface Water Systems
 Comparison sustainable yield of actual [from Process Monitoring]
 Groundwater
 Recharge volumes [from Process Monitoring]
 Pressure recovery [from Ambient Monitoring]
- i. **Reduce ocean outfall**
 Actual flows compared to model [from Ambient Monitoring]
- j. **Substitute for drinking water**
 Metered supply volumes, by user type [from meters]
 [may need to assess the extent to which the water is considered substitution
 or new use]
- k. **Replace & recharge groundwater**
 Metered supply volumes, by user type, include saltfield use [from meters]
 Recharge volumes [from Process Monitoring]
- l. **Increase water efficiency**
 Report on activities undertaken and anecdotal reports from customers
- m. **Provide flood protection**
 Definition of areas subject to flooding
 [floodplain mapping as part of Council work]

D5 Risk Management Plan

Background

1.1 Charter

WNA consists of 13 sub-projects as follows:

- Tea Tree Gully
 - Torrens
 - Upper Dry Creek
 - Integrated Distribution Main
 - Upper Little Para
- Salisbury
 - Lower Dry Creek
 - Aquifer Storage Treatment & Recovery (ASTR)
 - Controllable Detentions
 - Lower Dry Creek
 - Helps Road
- Playford
 - Community Bores
 - Smith Creek
- WNARS
 - Executive
 - Hydrologic Modelling

Seven of the sub-projects consist of several individual Capital Works, these are:

- Torrens
 - 1 Mahogany
 - 3.
- Upper Dry Creek
 - Tilley
 - Wynn Vale
 - Kingfisher
 - Solandra
 - Smart Road
 - Edinburgh
 - Berri
- Upper Little Para
 - Harpers Field
- Lower Dry Creek
 - Pooraka
 - Montague Road
 - The Paddocks
 - Bennett Road
 - Parafield
 - Greenfields
- Lower Little Para
 - Salisbury Community Bores
 - Environmental Flow Management
- Helps Road
 - Edinburgh Parks North
 - Edinburgh Parks South
 - Karna Park
 - Springbank & Burton

Smith Creek
Munno Para West
Andrews Farm
Andrews Farm South

Each of the other Sub-projects is the equivalent of a single Capital Work.

The Charter (Clause 4.6.5) requires the WNARS “to incorporate a risk management approach to all capital expenditure in the Corporate Governance Manual”.

This Risk Management Plan was prepared and adopted to provide the basis for this approach. The Plan has been reviewed by the Technical Group for the Board and further amended by the Board in September 2007.

1.2 Funding Deed

WNA has an estimated cost of \$94.5m (exc GST) and is programmed for the completion of construction by June 2010.

The Councils have secured contributions from a range of sources and committed themselves to significant expenditure, \$15.9m.

The major funding contributor, \$38m, is the Australian Government through the Water Smart Australia Program administered by the National Water Commission (NWC). Their Funding is provided in accordance with a legal agreement called a Funding Deed.

Schedule A A.12.g of the Funding Deed requires WNARS to “conduct (and revise as required) risk assessments (including environmental, economic and legal risk assessments) for the project and individual sub-projects in accordance with AS/NZS 4360:2004 and to the reasonable satisfaction of the National Water Commission.”

This Risk Management Plan has been prepared in accordance with the Standard and forms the basis of compliance with this Item of the Funding Deed.

1.3 Process

The City of Salisbury, on behalf of and in anticipation of WNARS engaged a consultant (Alina Lebed) to lead the process of Risk Assessment. This process was undertaken in accordance with the Standard.

The process consisted of:

- Scoping with Council Officers
- 2 workshops with Council Officers and relevant stakeholders
- Briefing of the three Mayors.

The outcome of the process is recorded in the Board’s documents, but no longer included in the plan. The key outcomes are:

- Risk Matrix
- Risk Action Plan

The Board of WNARS has endorsed (4th April 2007) these key elements as comprising their Risk Management Plan and reviewed by the Technical Group for the Board at its September 2007 meeting. The Board endorsed this review as follows. Full formal review will be annual, in April each year.

2. WNA Risk Hierarchy

2.1 Project Risk (WNA)

There are risks which endanger the successful completion or operation of the whole project (WNA) and whose management falls naturally and appropriately within the ambit of the WNARS Board's responsibilities. These have been described as Project Risks and appear in the Risk Matrix and Risk Action Plan.

2.2 Capital Works Risk

There are risks which are applicable to the individual Capital Works (or sub-projects) listed above.

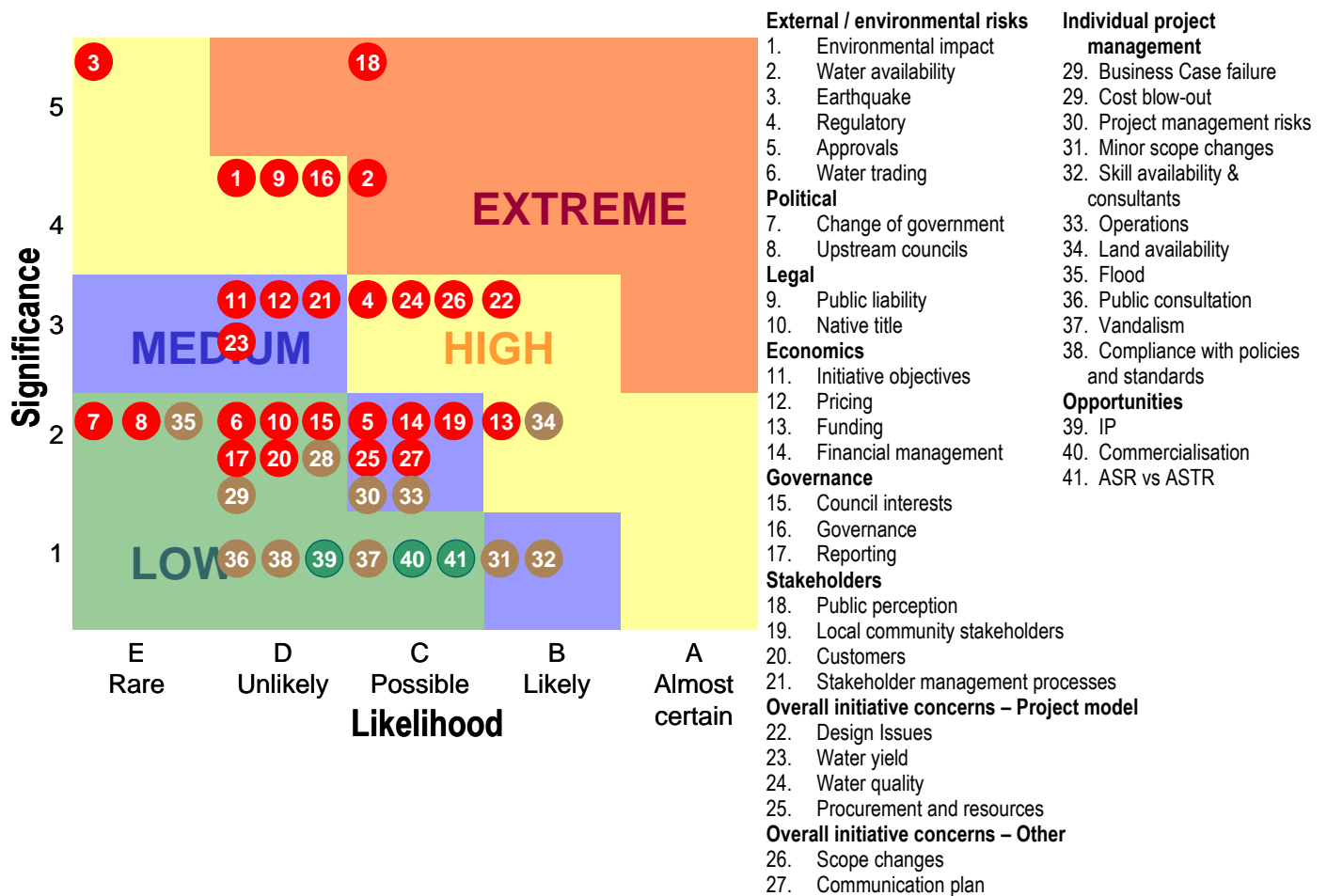
These works are the responsibility of the Council in all respects, ie planning, design, approval, construction, commissioning and operation. While there are many of these risks which are common to many of the works, each site is unique and the Council is responsible for its own risk assessment.

The Technical Group will assist the Board in the coordination and oversight of the responsible Council's assessment of the risk for each Capital Work.

Templates are being developed for this assessment and the first are attached (Attachment B). These will be refined as WNA progresses.

3. Risk Matrix

The following matrix presents the Project Risks (1-27 and N1) assessed by Significance and Likelihood which leads to ranking from Extreme to Low. It also considered a range of Individual or Capital Works Risks (29-38) and these are shown for completeness.



In April 2007 the Waterproofing Northern Adelaide Regional Subsidiary (WNARS) Board endorsed a Risk Management Plan which had been prepared in accordance with Australian and New Zealand Standards. They directed that the Technical Group undertake a review of the Plan during September 2007. This report presents the outcome of that review.

Conclusions

The risk management planning undertaken at the commencement of Waterproofing Northern Adelaide has proven robust

A new risk has been identified “Climate Change” and has been classified “Extreme”, this draws together aspects of several other risks, particularly “Water Availability”

One risk (25 Procurement and Resources) classified Medium should now be reclassified High and transferred from the sole responsibility of the Constituent Councils to be overseen by the Board.

Two risks (13. State Funding and 34 Land Availability) classified a High can now be reclassified as Low and be transferred from the attention of the Board to the Constituent Councils.

The Action Plan has been updated.

The most significant recommendation is to commence the documentation of a Quality Assurance system for the supply of recycled water.

4. Risk Action Plan

The following presents the risks by classification and the approved actions for each.

4.1 Extreme Risks

19. **Public Perception**

Loss of support for WNA from ratepayers & general public

Actions - Communications Group

- Communications Group continue to implement Communications Strategy
- Communications Group to formalise the Complaints Incident Plan and submit for approval.

4. **Water Availability**

Insufficient water to meet WNA Objectives

Actions - Technical Group

- Check hydrologic yield models and secure ownership of the models
- Maintain close liaison with regulatory bodies
- Continue to monitor availability of supplementary water resources.

N1 **Climate Change**

The current projections are for an increase in average temperature, a reduction in total rainfall, an increase in the severity of peak rainfall events, a drying of the catchments and a consequent reduction in run-off.

Actions - Technical Group

- continue to monitor new predictions of the effect of climate change
- review the design philosophy for capture and harvest of storm water
- examine flood mitigation structures to seek opportunities to increase protection and controlled release for improved harvesting

4.2 High risks

2. **Earthquake**

Loss or damage to infrastructure

Change in functioning of aquifers

Actions: Council teams

- continue to design in accordance with Australian Standards
- prefer off-line wetlands as they present lower risk in case of earthquake.

1. Environmental Impact

Adverse impacts jeopardise approvals for WNA

Actions: Technical Group

- Complete the upgrade and operation of the monitoring system in accordance with standards agreed with NRM Board
- Councils to review management of catchments and water in accordance with the monitored outcomes on an annual basis.

9. Public Liability

Financial claim on Councils or WNARS

Actions: Executive Officer

- Maintain insurance cover
- Consider 3rd party access to infrastructure in 2009.

16. Governance

Inadequate governance will jeopardise funding

Actions: Board and Finance & Reporting Group

- Maintain governance structure
- Finalize Financial Procedures
- Finalize Business Planning
- Finalize Risk Management Review

4 Regulatory

Adverse regulation damages WNA

Actions: Technical Group

- Continue to actively influence regulation
- Foster alliances to influence regulatory outcomes

24 Water Quality

Failure to meet regulated limits

Inadequate catchment management impedes harvest

Actions: Technical Group

- Maintain close liaison with EPA
- Review catchment management by end of 2009

26. Scope Changes

Scope of WNA changes so much NWC will not approve

Action Recommended: Board

- Board retains oversight and approval of all scope changes.

1 Design Issues

More detailed version of 26

Action: Technical Group

- Board retains oversight and approval of scope changes.

13 Funding

State matching funds not secured

Actions Recommended: Executive Officer

- Continue close liaison with funding sponsors
- Finalise arrangements with SMA & Recreation & Sport
- Revise risk classification to Medium
- Monitor operation of recording system.

25 Procurement and Resources

Inability to secure supply of goods and services at a reasonable price or time in competition with mining and other larger infrastructure developments leads to failure to complete project in the time span set by the Funding Deed.

Actions:

- Reclassify risk from Medium to High
- investigate and when appropriate use common procurement to attract providers
- when appropriate use common components to make provision easier
- develop a coordinated approach to Project Management and procurement.
- Councils review procurement processes and adapt them to current conditions to ensure their ability to implement the project

34 Land Availability

Failure to secure sites

Actions:

- Revise Risk Classification to Low.

Risk Ranking System

The table below shows the grading to define risk significance as defined by the Project team. Where risks are identified, they are graded on a worst-case scenario basis. The risks were assessed on a residual basis i.e. risks that remain after the existing controls and their adequacy are taken into account. This approach was agreed by the Risk Assessment Workshop attendees during the first workshop.

Assessment of Risk Significance/Impact

	Political/Reputation	Financial	Safety	Contractual/Litigation
5	High impact long-term issue with major political, reputation or community consequences requiring Minister's intervention.	Financial loss over \$6M	Significant public safety issue. Major OH&S or liability incident/issue. Threat of multiple deaths/injuries Water quality issue or contamination leading to long term shut down of the Initiative	Major third party litigation Contractual default Environmental issue causing EPA to shut down the Initiative and requiring major remediation
4	Long-term issue with major political, reputation or community impact requiring NWC intervention.	Financial loss between \$2 - \$6M	Potential treat to public safety. Significant OH&S or liability incident/issue. Water quality issue or serious contamination leading to a long term shut down of a catchment	Serious third party litigation/dispute Fundamental contract breach Environmental issue causing EPA fines and requiring remediation
3	Long-term issue with major political, reputation or community impact requiring WNAC intervention.	Financial loss between \$1 – 2M	Minor threat to public safety or moderate OH&S incident/issue. Water quality issue or contamination leading to shut down of multiple sites	Limited impact third party litigation/dispute Serious contract breach Environmental issue causing EPA fine
2	Medium-term issue with significant political or community impact requiring Mayor or CE intervention.	Financial loss up between \$500k - \$1M	Water quality issue or contamination leading to minor supply disruption	Threat of third party litigation Non-achievement of some KPI's Environmental issue causing EPA order to fix
1	Political or community incident requiring project manager intervention	Financial loss under \$500k	Water quality issue or contamination that can be resolved operationally	Minor threat of third party litigation Minor contractual irregularities Low customer satisfaction Environmental issue that can be addressed operationally

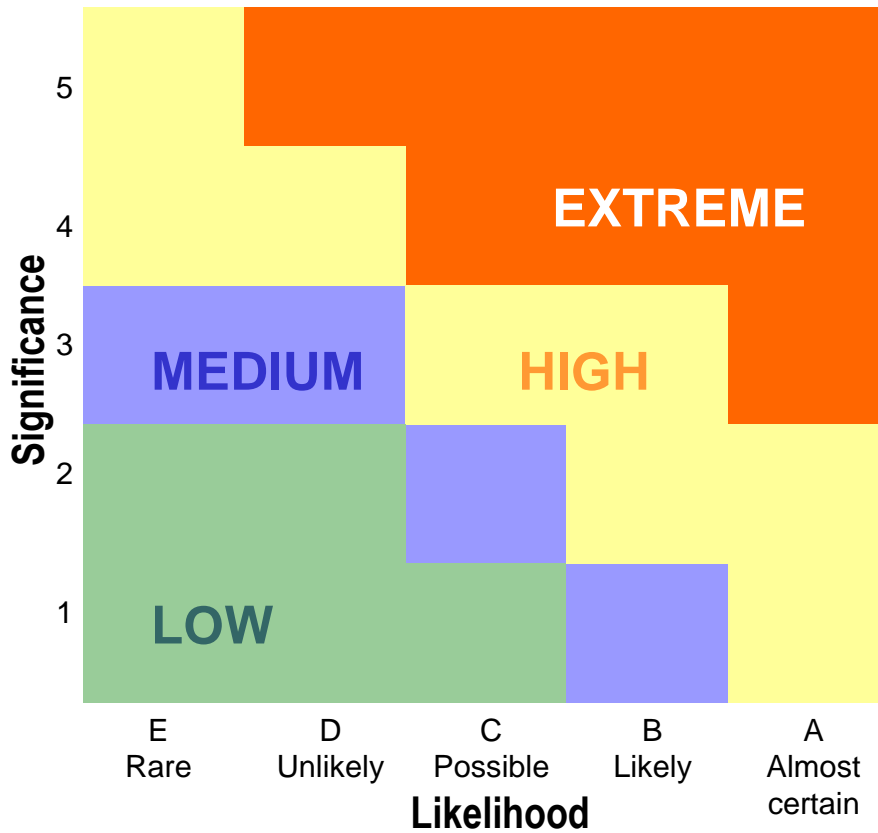
Assessment of Risk Likelihood

Note: Likelihood is assessed for the time period of four years (the life cycle of the Initiative)

Rare	Unlikely	Possible	Likely	Almost certain
1/1000 chance in the Initiative	1/100 chance in the Initiative	1/10 chance in the Initiative	1/5 chance in the Initiative	Will occur during the Initiative
E	D	C	B	A

Risk Decision Matrix

Based on the assessment of risk significance and likelihood, the risk's rank is determined using the following matrix:



Legend:

Risk rank	Description	Action
Extreme	The consequences would threaten survival of the Initiative and also the Councils, possibly causing major problems for residents/water users. Ability to meet targets seriously impaired. Consequences may include the potential to cause significant financial loss, long-term loss of capability, significant political impact	Extreme residual risk, immediate WNAC action required
High	The consequences would threaten the continued effective function of the Initiative. Ability to meet targets significantly impaired but with proper management can be endured. Consequences may include major financial loss, loss of capability, major political impact	High residual risk, senior management attention required (WNAC to decide on the level of Board reporting for high risks)
Moderate	The consequences would not threaten the Initiative but would mean changes to operations or significant review. Ability to meet targets affected. Consequences may include high financial loss, impaired capability, moderate political impact	Moderate risk, management responsibility must be specified
Low	The consequences can be dealt with through routine operations/absorbed through normal business activity. Consequences could include low financial loss, small delays, no injuries, no political impact	Low risk, manage by routine procedures

D6 Regional Geohydrology

REM consultants (now incorporated into SKM) have completed an application of the NRM Board's mathematical model of tertiary aquifer performance to evaluate the impact of and operational constraints of Waterproofing Northern Adelaide.

The modelling showed that the aquifers have the capacity to accommodate the storage of water from WNA as planned.

The report will be posted on the web site by September 2008.

Part E - Administration

WNARS is committed to efficient administration and compliance with governance policies and practices as promulgated in the Governance Manual.

For 2008/09, expenditures on these aspects will comprise:

Expenditure Categories	Budgeted Expenditure 2008/09 (\$m)
Groups administration (Board, Tech, Comms, R&R)	0.050
Staffing costs (Exec Offr, Admin Offr)	0.079
Services (Accounts, Records)	0.010
Administration (consulting, legal, audit, insurance, vehicles, PCs leasing, phone, office sundries, catering accommodation, bank fees)	0.073
TOTAL	\$0.212m

Attachments:

WNARS Annual Budget 2008-9

Waterproofing Northern
Adelaide Regional Subsidiary

Original Budget

2008/09

Budgeted Income Statement

Original Budget

2008/09

Original Budget
2008/09

OPERATING INCOME

Grants, Subsidies & Contributions	20,497,000
Investment Income	-

Total Operating Income	20,497,000
-------------------------------	-------------------

OPERATING EXPENDITURE

Materials, Contracts & Other Exp	20,497,000
----------------------------------	------------

Total Operating Expenditure	20,497,000
------------------------------------	-------------------

NET SURPLUS/ (DEFICIT)	-
-------------------------------	----------

Budgeted Balance Sheet

Original Budget

2008/09

Original Budget 2008/09

Assets

Current Assets

Cash & Cash Equivalents	4,750,200
Trade & Other Receivables	30,000
Other Current Assets	-
TOTAL CURRENT ASSETS	4,780,200
Total Assets	4,780,200

Liabilities

Current Liabilities

Trade & Other Payables	10,000
Total Current Liabilities	10,000
Total Liabilities	10,000

Net Assets **4,770,200**

Equity

Accumulated Surplus	4,470,200
Future Projects Reserve	300,000
Total Equity	4,770,200

Budgeted Statement of Changes in Equity

Original Budget

2008/09

Change
to
Equity

Accumulated Surplus

Balance at end of previous reporting period	6,510,400
Net Result for Year	-
Transfers to other Reserves	-
Balance at end of Period	<u>6,510,400</u>

Other Reserves

Balance at end of previous reporting period	300,000
Transfers from Accumulated Surplus	-
Transfers to Accumulated Surplus	-
Balance at end of Reporting Period	<u>300,000</u>

TOTAL EQUITY AT END OF REPORTING PERIOD	<u>6,810,400</u>
--	-------------------------

Budgeted Statement of Cash Flows

Original Budget

2008/09

Original
Budget
2008/09
Inflows
(Outflows)

Cash Flows from Operating Activities

Receipts

Operating Receipts	
Investment Receipts	22,546,700

Payments

Finance Payments	-
Operating payments to suppliers & employees	(22,546,700)

Net Cash provided by (or used in) Operating Activities	-
---	---

Net Increase (Decrease) in Cash Held	-
---	---

Cash & Cash Equivalents at beginning of period	6,810,400
Cash & Cash Equivalents at end of period	6,810,400



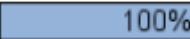

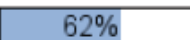
APPENDIX D

TYPICAL COVALENT REPORT






WNA Regional Subsidiary – Monthly Board Report






Generated on: 14 October 2010

G-Hydrologic Modelling






	Capital Work	Overall Progress	Sub-Project	Managed By	Progress	Project Budget	Current Expected Costs
	G-Hydrologic Modelling		Hydrologic Modelling - Cash	Chris Kaufmann		\$200,000.00	\$200,000.00
			Hydrologic Modelling - Kind	Chris Kaufmann		\$400,000.00	\$400,000.00
		Comment	Project completed, final reports received and loaded on the WNA website. Matching UniSA contributions being secured.				


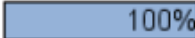

P-Playford Community Bores Project Management Plan

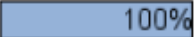

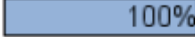
	Capital Work	Overall Progress	Sub-Project	Managed By	Progress	Project Budget	Current Expected Costs
	P01-Playford Community Bores		Playford Community Bores - Cash	Frank Lepore - WNA		\$1,922,700.00	\$1,924,846.00
			Playford Community Bores - In-Kind	Frank Lepore - WNA		\$0.00	\$81,073.00
		Comment	Project Completed.				




	Capital Work	Overall Progress	Sub-Project	Managed By	Progress	Project Budget	Current Expected Costs
	P02-Playford Reticulation Network		Playford Reticulation Network - Cash	Adrian Swiatnik - WNA		\$3,289,970.00	\$3,793,264.00
			Playford Reticulation Network - In Kind	Adrian Swiatnik - WNA		\$0.00	\$0.00
		Comment	Project Completed.				

P-Smith Creek Project Management Plan

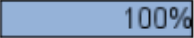


	Capital Work	Overall Progress	Sub-Project	Managed By	Progress	Project Budget	Current Expected Costs
	P03-Munno Para West		Munno Para West - Cash	Adrian Swiatnik - WNA		\$4,808,588.00	\$4,918,484.00
			Munno Para West - In-Kind	Adrian Swiatnik - WNA		\$8,000,000.00	\$10,491,615.00
		Comment	Project completed.				

	Capital Work	Overall Progress	Sub-Project	Managed By	Progress	Project Budget	Current Expected Costs
✓	P04-Andrews Farm		Andrews Farm - Cash	Adrian Swiatnik - WNA		\$6,553,510.00	\$6,673,436.00
✓			Andrews Farm - In-Kind	Adrian Swiatnik - WNA		\$0.00	\$1,084,500.00
			Comment	Project completed.			




	Capital Work	Overall Progress	Sub-Project	Managed By	Progress	Project Budget	Current Expected Costs
✓	P05-Andrews Farm South		Andrews Farm South - Cash	Adrian Swiatnik - WNA		\$278,686.00	\$135,791.00
✓			Andrews Farm South - In-Kind	Adrian Swiatnik - WNA		\$600,000.00	\$350,000.00
			Comment	Project closed. In kind contributions secured.			

	Capital Work	Overall Progress	Sub-Project	Managed By	Progress	Project Budget	Current Expected Costs
✓	P06-Adams Creek		Adams Creek - Cash	Adrian Swiatnik - WNA		\$726,546.00	\$707,975.00
✓			Adams Creek - In Kind	Adrian Swiatnik - WNA		\$0.00	\$0.00
			Comment	Project Completed.			

S-ASTR Project Management Plan

	Capital Work	Overall Progress	Sub-Project	Managed By	Progress	Project Budget	Current Expected Costs
✓	S10-ASTR		ASTR - Cash	Mark Purdie		\$2,200,000.00	\$2,229,585.00
✓			ASTR - In-Kind	Mark Purdie		\$715,000.00	\$130,000.00
			Comment	Project completed.			

S-Controllable Detentions Project Management Plan

	Capital Work	Overall Progress	Sub-Project	Managed By	Progress	Project Budget	Current Expected Costs
✓	S11-Controllable Detentions		Controllable Detentions - Cash	Bruce Naumann		\$550,000.00	\$396,132.00
✓			Controllable Detentions - In-Kind	Bruce Naumann		\$650,000.00	\$0.00
			Comment	Project now ready as a trial and demonstration site. Rainwater tank modelling report received.			

S-Helps Road Drain Project Management Plan

	Capital Work	Overall Progress	Sub-Project	Managed By	Progress	Project Budget	Current Expected Costs
	S14-Edinburgh Parks North		Edinburgh Parks North - Cash	Rocco Ventra		\$2,000,000.00	\$650,000.00
			Edinburgh Parks North - In-Kind	Rocco Ventra		\$6,935,000.00	\$6,935,000.00
		Comment	Project Complete. Partial land transfer completed and brought into the accounts. Remain contributions to be reported during the evaluation period.				

	Capital Work	Overall Progress	Sub-Project	Managed By	Progress	Project Budget	Current Expected Costs
	S15-Edinburgh Parks South		Edinburgh Parks South - Cash	Rocco Ventra		\$3,000,000.00	\$3,530,948.00
			Edinburgh Parks South - In-Kind	Rocco Ventra		\$3,550,000.00	\$3,532,613.00
		Comment	Project completed.				

	Capital Work	Overall Progress	Sub-Project	Managed By	Progress	Project Budget	Current Expected Costs
	S16-Kaurna Park		Kaurna Park - Cash	Rocco Ventra		\$2,895,000.00	\$3,594,166.00
			Kaurna Park - In-Kind	Rocco Ventra		\$690,000.00	\$590,000.00
		Comment	Project completed.				

	Capital Work	Overall Progress	Sub-Project	Managed By	Progress	Project Budget	Current Expected Costs
	S17-Springbank Waters/Burton		Springbank Waters/Burton - Cash	Rocco Ventra		\$5,000.00	\$3,060.00
			Springbank Waters/Burton - In-Kind	Rocco Ventra		\$0.00	\$0.00
		Comment	Project closed.				

S-Lower Dry Creek Project Management Plan

	Capital Work	Overall Progress	Sub-Project	Managed By	Progress	Project Budget	Current Expected Costs
	S01-Walkleys Heights		Walkleys Heights - Cash	Bruce Naumann		\$1,600,000.00	\$1,264,778.00
			Walkleys Heights - In-Kind	Bruce Naumann		\$100,000.00	\$100,000.00
		Comment	Project completed.				

	Capital Work	Overall Progress	Sub-Project	Managed By	Progress	Project Budget	Current Expected Costs
	S02-Pooraka		Pooraka - Cash	Philip Woodham		\$1,850,000.00	\$1,983,667.00
			Pooraka - In-Kind	Mark Purdie		\$1,300,000.00	\$1,300,000.00
		Comment	Project completed. Works continuing under the Unity Park Biofiltration Project (WFF). Anticipated in kind contributions (LMC) not yet secured pending approval of work undertaken, unlikely to be secured in time for submitting the final report and will be reported during the Evaluation period.				
	Capital Work	Overall Progress	Sub-Project	Managed By	Progress	Project Budget	Current Expected Costs
	S03-Lindblom Park		Lindblom Park - Cash	Mark Purdie		\$150,000.00	\$134,251.00
			Lindblom Park - In-Kind	Mark Purdie		\$0.00	\$0.00
		Comment	Completed				
	Capital Work	Overall Progress	Sub-Project	Managed By	Progress	Project Budget	Current Expected Costs
	S04-Montague Road		Montague Road - Cash	Philip Woodham		\$1,500,000.00	\$1,876,538.00
			Montague Road - In-Kind	Bruce Naumann		\$215,000.00	\$215,704.00
		Comment	Minor works to finalise the ASRs required and will be completed shortly.				
	Capital Work	Overall Progress	Sub-Project	Managed By	Progress	Project Budget	Current Expected Costs
	S05-The Paddocks		The Paddocks - Cash	Mark Purdie		\$600,000.00	\$662,413.00
			The Paddocks - In-Kind	Mark Purdie		\$40,000.00	\$40,000.00
		Comment	Project completed. In kind contributions (private) remains uncompleted pending anticipated private developer contributions for 3rd pipe which will be reported during the Evaluation period.				
	Capital Work	Overall Progress	Sub-Project	Managed By	Progress	Project Budget	Current Expected Costs
	S06-Bennett Road		Bennett Road - Cash	Bruce Naumann		\$1,150,000.00	\$939,786.00
			Bennett Road - In-Kind	Bruce Naumann		\$950,000.00	\$950,000.00
		Comment	Project completed. Anticipated in kind contribution will be reported during the evaluation period.				

	Capital Work	Overall Progress	Sub-Project	Managed By	Progress	Project Budget	Current Expected Costs
	S07-Parafield		Parafield - Cash	Mark Purdie		\$6,000,000.00	\$6,854,800.00
			Parafield - In-Kind	Mark Purdie		\$500,000.00	\$500,000.00
		Comment	Project completed. Anticipated State income (SMA/DECS) pending and will be reported during the evaluation period.				

	Capital Work	Overall Progress	Sub-Project	Managed By	Progress	Project Budget	Current Expected Costs
	S08-Greenfields		Greenfields - Cash	Bruce Naumann		\$4,060,000.00	\$3,865,616.00
			Greenfields - In-Kind	Bruce Naumann		\$3,800,000.00	\$2,882,000.00
		Comment	Project complete. Matching private developer contributions for 3rd pipe being secured and will be reported during the evaluation period.				

S-Lower Little Para Project Management Plan

	Capital Work	Overall Progress	Sub-Project	Managed By	Progress	Project Budget	Current Expected Costs
	S13-Salisbury Community Bores		Salisbury Community Bores - Cash	Mark Purdie		\$500,000.00	\$603,680.00
			Salisbury Community Bores - In-Kind	Mark Purdie		\$13,000.00	\$13,000.00
		Comment	Project completed				

	Capital Work	Overall Progress	Sub-Project	Managed By	Progress	Project Budget	Current Expected Costs
	S12-Little Para Environmental Flow Management		Little Para Environmental Flow Management - Cash	Bruce Naumann		\$150,000.00	\$92,752.00
			Little Para Environmental Flow Management - In Kind	Bruce Naumann		\$50,000.00	\$50,000.00
		Comment	Projected completed				

T-Integrated Distribution Project Management Plan

	Capital Work	Overall Progress	Sub-Project	Managed By	Progress	Project Budget	Current Expected Costs
	T12-Integrated Distribution Main		Integrated Distribution Main - Cash	David Baldwin - WNA		\$5,600,000.00	\$5,551,355.00
			Integrated Distribution Main - In-Kind	David Baldwin - WNA		\$758,447.00	\$900,000.00
		Comment	Project completed and anticipated in kind contributions (private) secured.				

T-Torrens Project Management Plan

	Capital Work	Overall Progress	Sub-Project	Managed By	Progress	Project Budget	Current Expected Costs
✓	T01-Torrens 1	100%	Torrens 1 - Cash	Tim Gubin - WNA	100%	\$695,000.00	\$696,031.00
✓			Torrens 1 - In-Kind	Tim Gubin - WNA	100%	\$36,620.00	\$44,927.00
		Comment	Project Completed				





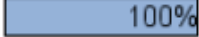
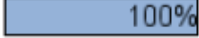

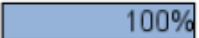







	Capital Work	Overall Progress	Sub-Project	Managed By	Progress	Project Budget	Current Expected Costs
✓	T02-Torrens 2	100%	Torrens 2 - Cash	Tim Gubin - WNA	100%	\$100,000.00	\$108,489.00
✓			Torrens 2 - In-Kind	Tim Gubin - WNA	100%	\$5,261.00	\$6,443.00
		Comment	Project Closed.				

	Capital Work	Overall Progress	Sub-Project	Managed By	Progress	Project Budget	Current Expected Costs
✓	T03-Torrens 3	100%	Torrens 3 - Cash	Tim Gubin - WNA	100%	\$445,000.00	\$476,421.00
✓			Torrens 3 - In-Kind	Tim Gubin - WNA	100%	\$173,413.00	\$171,391.00
		Comment	Project completed and injecting.				

T-Upper Dry Creek Project Management Plan

	Capital Work	Overall Progress	Sub-Project	Managed By	Progress	Project Budget	Current Expected Costs
✓	T08-Tilley	100%	Tilley - Cash	David Baldwin - WNA	100%	\$607,460.00	\$607,460.00
✓			Tilley - In-Kind	David Baldwin - WNA	100%	\$23,384.00	\$23,384.00
		Comment	Project Completed				

	Capital Work	Overall Progress	Sub-Project	Managed By	Progress	Project Budget	Current Expected Costs
✓	T06-Wynn Vale	100%	Wynn Vale - Cash	David Baldwin - WNA	100%	\$1,918,889.00	\$2,197,192.00
✓			Wynn Vale - In-Kind	David Baldwin - WNA	100%	\$379,866.00	\$357,110.00
		Comment	Project completed.				

	Capital Work	Overall Progress	Sub-Project	Managed By	Progress	Project Budget	Current Expected Costs
✓	T05-Kingfisher		Kingfisher - Cash	Tím Gubin - WNA		\$796,495.00	\$796,495.00
✓			Kingfisher - In-Kind	Tím Gubin - WNA		\$30,660.00	\$21,430.00
		Comment	Project completed.				
	Capital Work	Overall Progress	Sub-Project	Managed By	Progress	Project Budget	Current Expected Costs
✓	T07-Banksia		Banksia - Cash	Tím Gubin - WNA		\$928,734.00	\$928,734.00
✓			Banksia - In-Kind	Tím Gubin - WNA		\$185,751.00	\$183,434.00
		Comment	Project Completed.				
	Capital Work	Overall Progress	Sub-Project	Managed By	Progress	Project Budget	Current Expected Costs
✓	T04-Solandra		Solandra - Cash	David Baldwin - WNA		\$580,349.00	\$580,349.00
✓			Solandra - In-Kind	David Baldwin - WNA		\$22,340.00	\$1,474.00
		Comment	Project completed.				
	Capital Work	Overall Progress	Sub-Project	Managed By	Progress	Project Budget	Current Expected Costs
✓	T09-Berri		Berri - Cash	Tím Gubin - WNA		\$3,372.00	\$3,372.00
✓			Berri - In-Kind	Tím Gubin - WNA		\$130.00	\$0.00
		Comment	Project closed.				
	Capital Work	Overall Progress	Sub-Project	Managed By	Progress	Project Budget	Current Expected Costs
✓	T10-Edinburgh		Edinburgh - Cash	Tím Gubin - WNA		\$289,701.00	\$289,701.00
✓			Edinburgh - In-Kind	Tím Gubin - WNA		\$111,152.00	\$104,941.00
		Comment	Project completed.				

	Capital Work	Overall Progress	Sub-Project	Managed By	Progress	Project Budget	Current Expected Costs
✓	T11-Smart Road	100%	Smart Road - Cash	Tim Gubin - WNA	100%	\$0.00	\$0.00
✓			Smart Road - In-Kind	Tim Gubin - WNA	100%	\$0.00	\$0.00
		Comment	Project closed.				

T-Upper Little Para Project Management Plan

	Capital Work	Overall Progress	Sub-Project	Managed By	Progress	Project Budget	Current Expected Costs
✓	T13-Harper's Field	100%	Harper's Field - Cash	Tim Gubin - WNA	100%	\$420,000.00	\$594,805.00
✓			Harper's Field - In-Kind	Tim Gubin - WNA	100%	\$844,029.00	\$1,200,000.00
		Comment	Project completed and matching (private) contributions secured.				

	Capital Work	Overall Progress	Sub-Project	Managed By	Progress	Project Budget	Current Expected Costs
✓	T14-Satsuma	100%	Satsuma - Cash	Tim Gubin - WNA	100%	\$75,000.00	\$74,823.00
✓			Satsuma - In-Kind	Tim Gubin - WNA	100%	\$15,000.00	\$14,953.00
		Comment	Project Closed.				

APPENDIX E

STATEMENTS OF COMPLIANCE

Enquiries: Shaun Kennedy
Telephone: (08) 8256 0577
Facsimile: (08) 8256 0578
Email: skennedy@playford.sa.gov.au



9 September 2010

Mr Chris Kaufmann
Executive Officer
Waterproofing Northern Adelaide Regional Subsidiary
PO Box 571
MODBURY SA 5092

Customer Service Centres & Libraries
Playford Civic Centre
10 Playford Boulevard
Elizabeth SA 5112

Shop 51
Munno Para Shopping City
600 Main North road
Smithfield SA 5114

Postal Address
City of Playford
12 Bishopstone Road
Davoren Park SA 5113

Dear Chris,

Waterproofing Northern Adelaide Compliance Statement - September 2010

On behalf of the City of Playford, I (Shaun Kennedy), in my position as Group Manager Civil Operations can state that in the undertaking of the Waterproofing Northern Adelaide project, as funded by the Commonwealth of Australia under the WaterSmart Program;

- Council staff have been paid in accordance with relevant Awards;
- Council procurement and engagement processes were in place and were followed;
- Council has secured all relevant approvals required for the project;
- Council has no knowledge of any outstanding claims against it arising from the project's construction;
- Council is not aware of any Conflicts of Interest during or subsequent to the completion of WNA;
- The Council has not created any Intellectual Property which it proposes to use commercially from the project;
- The Council has not created any Confidential Information in the terms of the Funding Agreement;
- The Council has not used the Commonwealth funds to acquire (purchase or lease) assets, in terms of the Funding Deed, such as motor vehicles, computers or equipment with an individual value in excess of \$5,000;
- Council will continue to operate the Capital Works for at least the Evaluation Period; and
- Council will consider the National Water Initiative guidelines for setting its price for recycled water.

Yours faithfully

A handwritten signature in black ink, appearing to read "Shaun Kennedy".

Shaun Kennedy
GROUP MANAGER CIVIL OPERATIONS



City of Salisbury
ABN 82 615 416 895

12 James Street
PO Box 8
Salisbury SA 5108
Australia

Telephone 08 8406 8222
Facsimile 08 8281 5466
city@salisbury.sa.gov.au

TTY 08 8406 8596
(for hearing impaired)
www.salisbury.sa.gov.au

8 September 2010

Mr Chris Kaufmann
Executive Officer
Waterproofing Northern Adelaide Regional Subsidiary
C/- City of Salisbury
PO Box 8
SALISBURY SA 5118

Dear Chris,

Re: Waterproofing Northern Adelaide Compliance Statement - September 2010

On behalf of the City of Salisbury:

I, in my position as Manager Water Systems can state that in the undertaking of the Waterproofing Northern Adelaide project, as funded by the Commonwealth of Australia under the WaterSmart Program;

- Council staff have been paid in accordance with relevant Awards
- Council procurement and engagement processes were in place and were followed
- Council has secured all relevant approvals required for the project
- Council has no knowledge of any outstanding claims against it arising from the project's construction
- Council is not aware of any Conflicts of Interest during or subsequent to the completion of WNA
- The Council has not created any Intellectual Property which it proposes to use commercially from the project
- The Council has not created any Confidential Information in the terms of the Funding Agreement
- The Council has not used the Commonwealth funds to acquire (purchase or lease) assets, in terms of the Funding Deed, such as motor vehicles, computers or equipment with an individual value in excess of \$5,000.
- Council will continue to operate the Capital Works for at least the Evaluation Period
- Council will consider the National Water Initiative guidelines for setting its price for recycled water.

Yours faithfully

Bruce Naumann
Manager Water Systems
Phone: 08 8406 8575
Email: bnaumann@salisbury.sa.gov.au

6th October 2010

Mr Chris Kaufmann
Executive Officer
Waterproofing Northern Adelaide Regional Subsidiary



CITY OF
TEA TREE GULLY
Naturally Better

Dear Chris,

Waterproofing Northern Adelaide Compliance Statement - September 2010

On behalf of the **City of Tea Tree Gully**:

I, in my position as Director Assets & Environment can state that in the undertaking of the Waterproofing Northern Adelaide project, as funded by the Commonwealth of Australia under the WaterSmart Program;

- Council staff have been paid in accordance with relevant Awards
- Council procurement and engagement processes were in place and were followed
- Council has secured all relevant approvals required for the project
- Council has no knowledge of any outstanding claims against it arising from the project's construction
- Council is not aware of any Conflicts of Interest during or subsequent to the completion of WNA
- The Council has not created any Intellectual Property which it proposes to use commercially from the project
- The Council has not created any Confidential Information in the terms of the Funding Agreement
- The Council has not used the Commonwealth funds to acquire (purchase or lease) assets, in terms of the Funding Deed, such as motor vehicles, computers or equipment with an individual value in excess of \$5,000.
- Council will continue to operate the Capital Works for at least the Evaluation Period
- Council will consider the National Water Initiative guidelines for setting its price for recycled water.

Yours faithfully

Thornton Harfield
Director Assets & Environment

PO Box 571
Modbury SA 5092
571 Montague Road
Modbury SA 5092
Tel (08) 8397 7444
Fax (08) 8397 7400
TTY (08) 8397 7340
www.teatreegully.sa.gov.au
Email cttg@cttg.sa.gov.au
ABN 69 488 562 969

This business powered by

Accredited Renewable Energy

APPENDIX F

WATER PRICING POLICY

REGIONAL WATER PRICING

At its February meeting the Board directed that the Finance & Reporting Group review the interim pricing recommendations which the Board has made for 2009/10.

There are two recommendations which the Board has made to guide Constituent Councils in the setting of water prices. These recommendations are:

(a) May 2009, Meeting 28, Item 7.4 Inter Council Trading

Board Approved:

Constituent Councils adopt an "interim price of \$1.20/kl for inter-council trading", for year 2009/10

(b) August 2009, Meeting 30, Item 7.3 Interim Pricing Guide

Board Approved:

Constituent Councils consider using as an "interim for 2009/10 the adoption of Salisbury's pricing as an indicative guide for common pricing, to be reviewed on an annual basis".

In reviewing these prices, the following three elements have been considered:

1. SA Water's prices
2. Cost estimates for water supply
3. Salisbury's policy position

1. SA Water's Prices

The current announced government policy is as follows:

- when the desalination plant was announced the price was to rise by a minimum of 12.7% in real terms for 5 years.
- Two years have been announced with a rise of 18% followed by 32% to a price of \$2.48/kl to commence on 1 July 2010
- If the government implements its announced 5 price rises then the price per kl would be:

	SAW Mains	SAW Recycled
2010/11	\$2.48	\$1.86
2011/12	\$2.79	\$2.09
2012/13	\$3.15	\$2.36
2013/14	\$3.55	\$2.66

- Informal advice from SA Water indicates that a price of 75% of the Non-Residential mains price (equal to Tier 2 residential) will be used, until the mains water price reaches \$5/Kl.

2. Cost Estimates for water supply

No further detailed information has been secured for operating costs. However it appears that the full upper bound costs:

- Operation
- Depreciation
- Return on Equity
- Externalities

Will be in the range \$2.00 to \$2.20/Kl this year, to supply to a customer of which 50-60c/kl is the cost of extraction and delivery.

Allow a 60c/kl deduction to establish inter-council trading price.

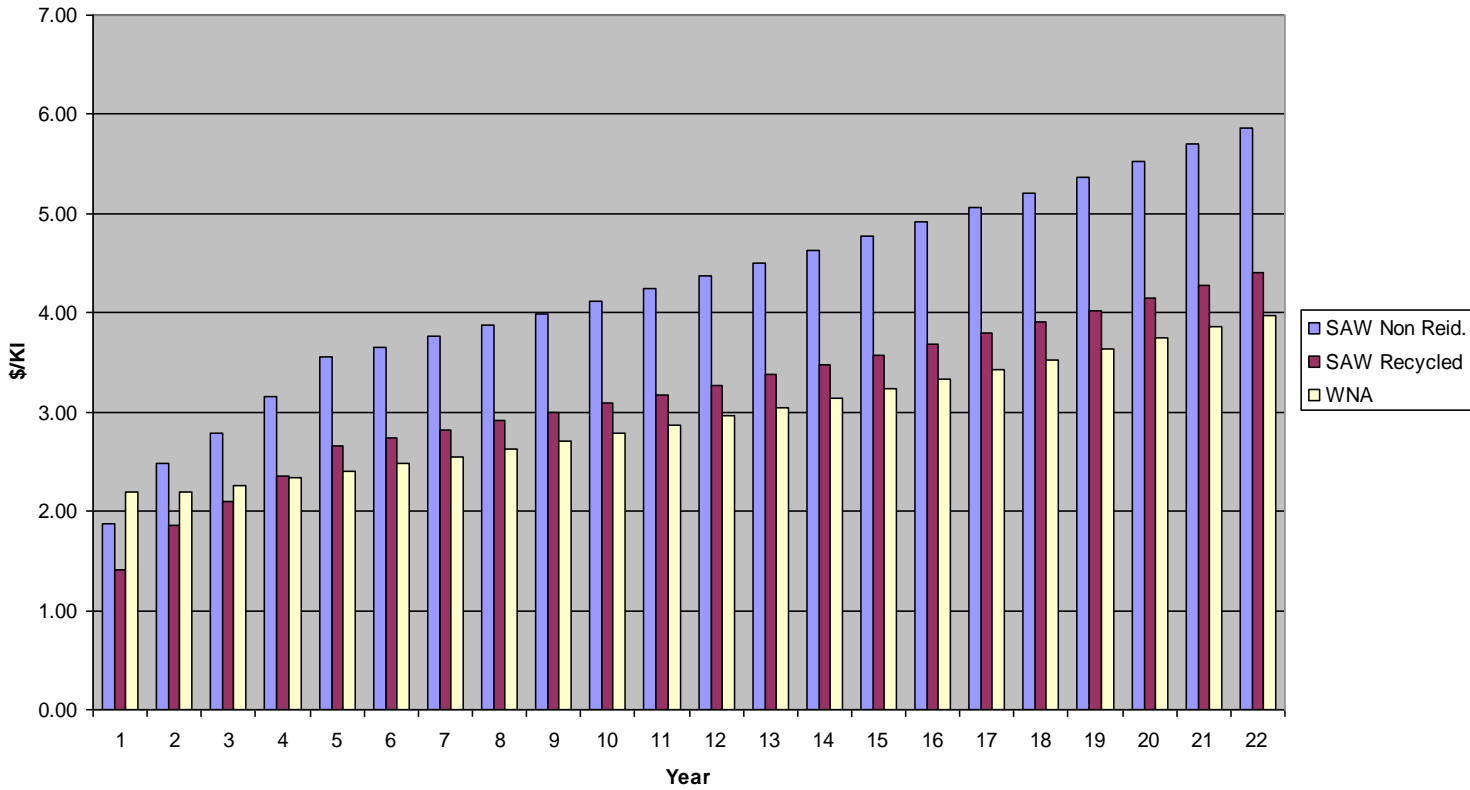
3. Salisbury's Policy Position

For 2009/10 Salisbury is operating at a guideline price of SA Water less 15c/kl (ie. \$1.75/kl).

While not yet formally endorsed Salisbury is using a price of \$2.20/kl for budget purposes. (ie. SA Water less 28c/kl).

A comparison of SAW and the proposed WNA recommended price is shown on the chart

SAW WNA price comparison



Proposed Pricing Guidelines

Applying these factors to the two interim price recommendations would mean that for 2010/11 the recommended prices would be:

- (a) For Inter-Council trading \$1.60/kl
- (b) For Indicative Regional Price \$2.20/kl

The Finance & Reporting Group recommend the Proposed Pricing Guidelines to the Board for consideration. (Meeting 29)

RECOMMENDATION:

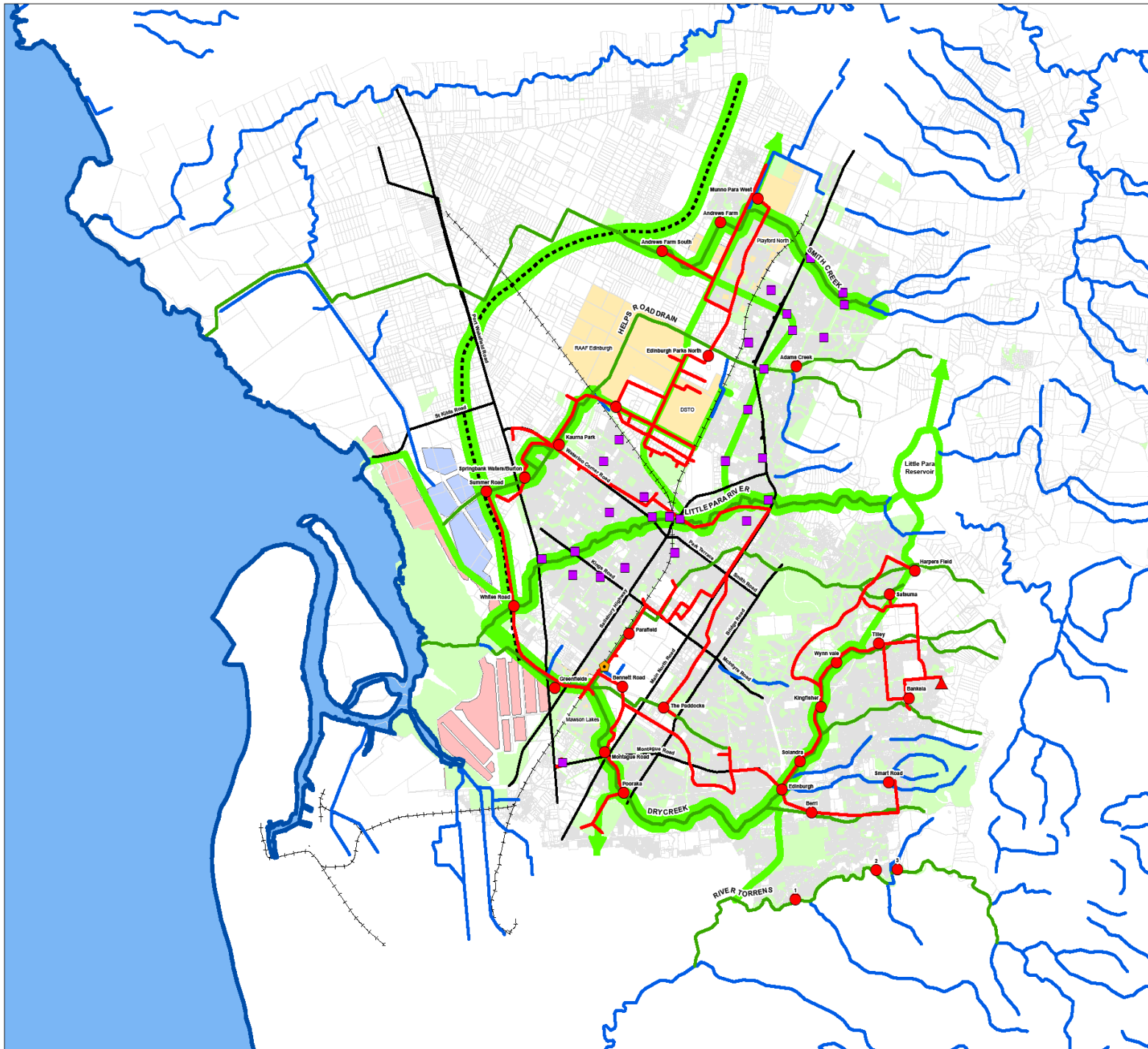
The Board recommend to the Constituent Councils that they adopt the following pricing guidelines for the year 2010/2011:

- 1. Inter Council trading \$1.60/Kl
- 2. Regional Guideline price \$2.20/Kl

APPENDIX G

GREENWAYS PLAN

A regionally linked system of Greenways was proposed, this conformed with emerging State policies and is now included in the 30 Year Plan for Adelaide.

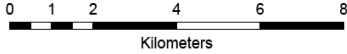


Northern I.W.C.M.P.
August 2008



Legend

● ASR Wetland	--- NEXY
⬢ ASTR	— Main Road
■ Community Bore	++ Railway
▲ CMWS Plant	■ Reserve
— Recycled water mains	□ Property Boundary
— Linear Park	■ Salt Pan
— Watercourse	■ Bolivar WWTP



Produced By: City of Salisbury (James Corletto)
Produced for: W.N.A.R.S (Chris Kaufman)

APPENDIX H

WATERWISE ADELAIDE

Executive Summary

November 2008

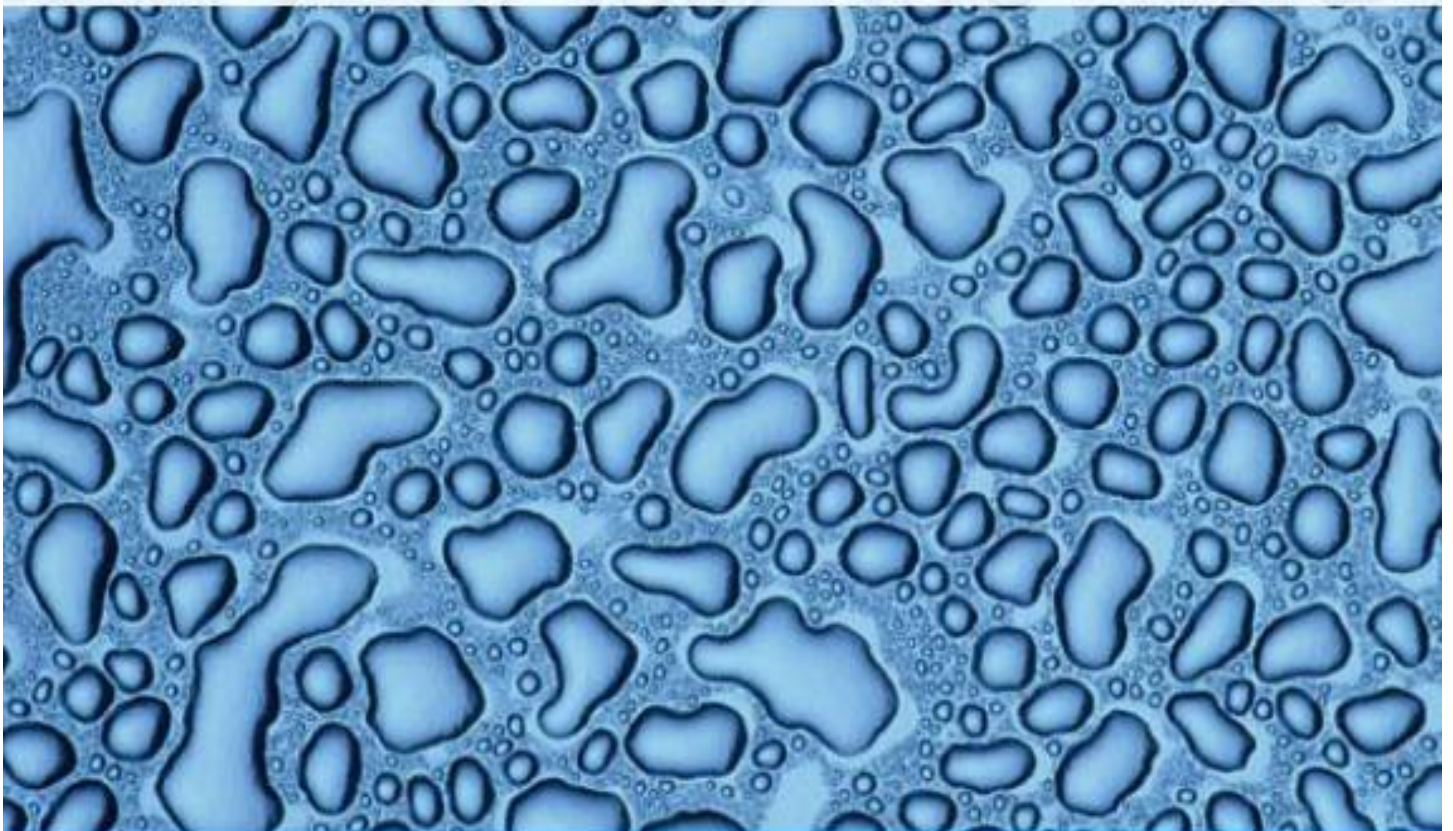


WaterWise Adelaide

The Stormwater Resource

An Executive Summary of the Submission to
the South Australian Water Security Council

November 2008



Vision

To protect, re-use and sustain our most vital resource through city-wide harvesting, aquifer storage and reticulation of stormwater and waste water.

WaterWise Adelaide

The Stormwater Resource

An Executive Summary of the Submission to
the South Australian Water Security Council

November 2008



Water Proofing Adelaide – A Thirst for Change

“Waterproofing Adelaide is a South Australian Government initiative that seeks to establish a blueprint for the management, conservation and development of Adelaide’s precious water resources to 2025.

Meeting the challenges will depend on tackling two significant issues – escalating environmental risks facing our rivers and catchments and Adelaide’s increasing thirst for water (as its population continues to grow).”



Foreword - Water Wisdom

This discussion paper, entitled *WaterWise Adelaide*, responds to these challenges. It proposes greater use of recycled stormwater and waste water across Adelaide.

This submission, at the invitation of the Water Security Council, is not proposed as an implementation solution. Rather, it is a model of what may be possible to maximise water retention across Adelaide. It is based on the experience in stormwater management that has been developed over two decades in the City of Salisbury which is now being successfully applied more extensively in the Waterproofing Northern Adelaide scheme.

The Waterproofing Northern Adelaide Regional Subsidiary has an obligation, under the deed of agreement with the Commonwealth, to demonstrate to others what is being achieved. There is also a tradition in Local Government to exchange information and share best practice knowledge.

WaterWise Adelaide is presented in this spirit to assist the Water Security Council in formulating its important water security plan.

Peter Fairlie-Jones

Chairman

Waterproofing Northern Adelaide (WNA)

The Opportunity

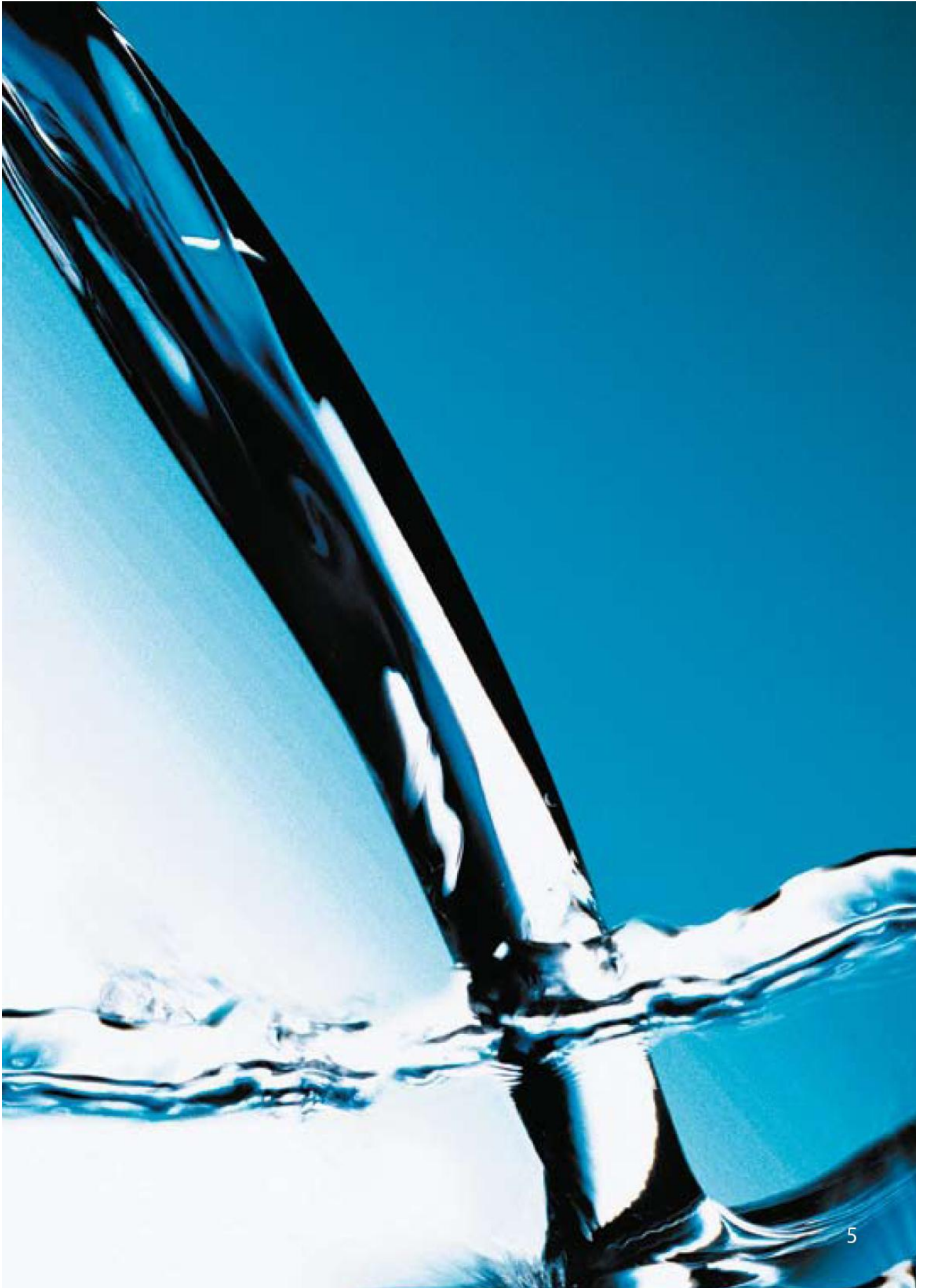
In the driest State and in the face of climate change, Adelaide can sustain much of the water it needs to preserve a cool green city, through innovation, cooperation and shared commitment to city-wide recycling of stormwater and waste water.

WaterWise Adelaide is presented for discussion as a practical response to the water crisis. It proposes that much of the solution to our future water needs can be achieved by better “harvesting” the rain that falls over Adelaide.

The **WaterWise Adelaide** plan is based on a firm foundation of experience, practical knowledge and leading technology that has been developed over more than two decades in the northern City of Salisbury and more recently in other metropolitan Councils.

Over this extended period Salisbury has progressively learnt more about the opportunities and challenges of achieving sustainable water conservation through stormwater harvesting and aquifer storage in a built up environment.

The authors present this proposal to the Water Security Council in the hope that its recommendations will be included in the SA Water Security Plan.





The Promise

Adelaide need no longer be dependent on the River Murray by using the urban water resources and developing additional aquifer storage.

The proposed vision has been conceived and developed by the City of Salisbury and its partners in the Waterproofing Northern Adelaide Regional Subsidiary (WNA), in consultation with the LGA, the Stormwater Management Authority (SMA), the Adelaide Mount Lofty Natural Resource Management Board (NRM) and the Office of Water Security.

Much of the data contained and the model proposed is based on evaluation by a scientific reference group and input from the water industry.



The Proposal

A commitment to a ten year program that will provide 40% of Adelaide's water needs from recycled stormwater and waste water.

The plan presented is ambitious, bold and on a scale of national significance.

WaterWise Adelaide proposes that all three levels of Government commit to a ten year program of construction that will provide one third of Adelaide's water needs from recycled stormwater and re-use of waste water.

The result will be that Adelaide will no longer be solely dependent on the River Murray and Adelaide Hills catchments. An extensive network of wetlands across Adelaide, together with massive aquifer reserves, will reduce the reliance on the river and our reservoirs.

The Risk

*The long-term predictions are dire.
By 2050, the situation will deteriorate rapidly.*

- The River Murray may not be able to supply any of Adelaide's needs.*
- Ground water will be further depleted and may only sustain 60Gl.*
- Mount Lofty catchments are predicted to reduce average yields to 85Gl as a result of climate change.*
- Adelaide will become brown, dry with continuing harsh water restrictions.*
- Over 150Gl of stormwater will continue to flow towards the sea.*
- Meanwhile Up to 50Gl of waste water will be discharged, some of which will make its way into marine environments.*
- Adelaide is predicted to grow rapidly to over 2 million.*

South Australia's prosperity, possibly more than any other State, is critically linked to the provision of a sustainable water supply. That prosperity and future growth is now at risk with little time left to resolve the threat.

The driest State in the driest continent now faces the very real prospect of not having enough water to sustain the city's basic needs within 25 years. The River Murray is no longer a dependable source of drinking water, climate change is resulting in unpredictable rainfalls and Adelaide catchments are under pressure from urban growth.



The Solution

The solution is relatively simple.

- *Adelaide stormwater is captured in wetlands across the city.*
- *Harvested stormwater provides flood protection and improves estuarine flows.*
- *Wetlands cleanse stormwater through natural processes and create biodiverse habitats.*
- *Cleansed water free of metals and contaminants is stored in aquifers.*
- *Water recovered from aquifers, substitutes for non-potable needs or can be supplied to SA Water for treatment and use.*
- *Recycled wastewater is used where appropriate.*

This proposal is based on the recent success of Waterproofing Northern Adelaide and the knowledge gained in establishing Salisbury's network of wetlands. This experience has shown that if all parties work together, the community can be assured that their future water needs will be met.

The authors recommend that a comprehensive feasibility study should urgently be undertaken to assess the feasibility of implementing the WaterWise Adelaide plan. This report would provide the critical technical and engineering data required to prepare an implementation plan and funding proposal for consideration by the Commonwealth and State Governments.

The Source of Adelaide's Water by 2025

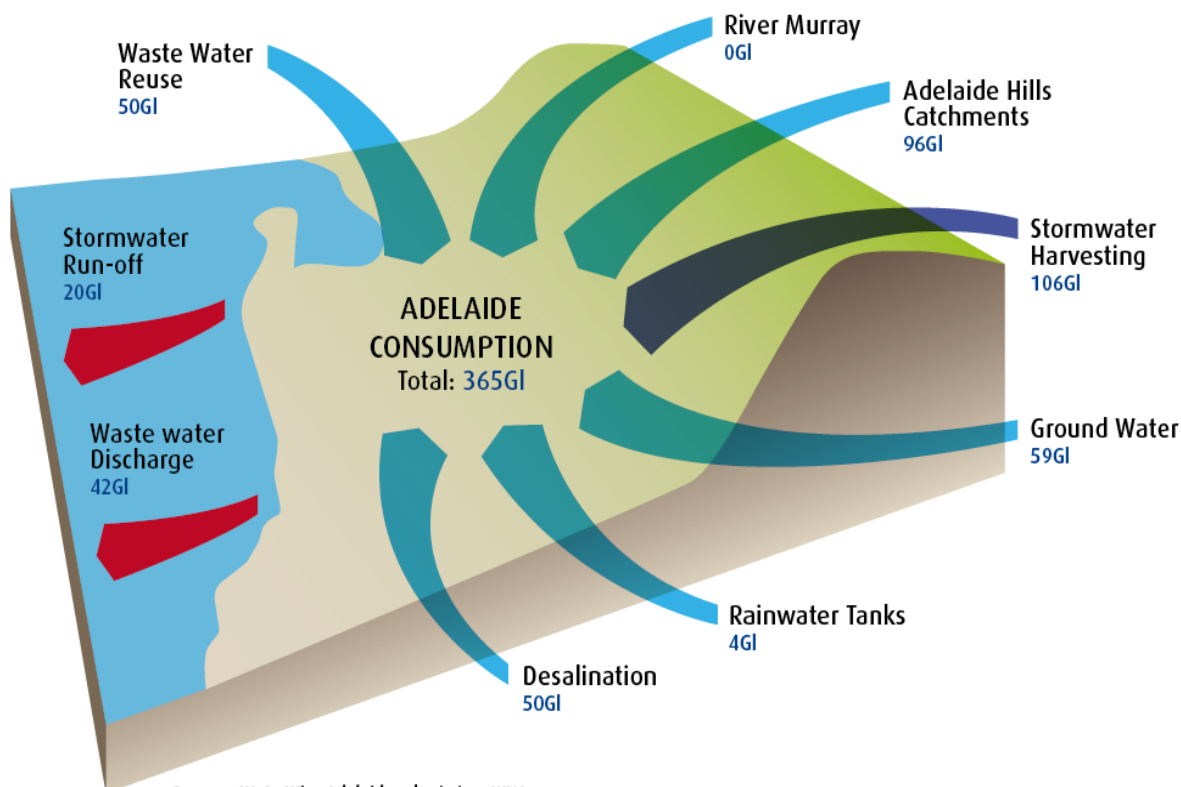
A fully integrated solution.

The solution illustrated in this model is that by 2025 Adelaide can secure the water that is needed for the City's growth by substituting recycled water for current supplies from Mount Lofty catchments and the River Murray. The supply systems can be integrated to provide "fit for purpose" water to the whole city, whilst some water, having been naturally cleansed in wetlands and aquifers, can be delivered to water filtration plants at a comparable quality as that being extracted from the River Murray.

An analysis of Adelaide's surface water and ground water capacity, linked with a review of waste water opportunities, confirms that our future non-potable requirements for all of Adelaide can be met.

MODEL 2025

Total Water use: 365Gl



Sources: *WaterWise Adelaide* submission, WNA

The Plan

This plan seeks to harvest these outfalls across the City from the far northern, central and southern catchments.

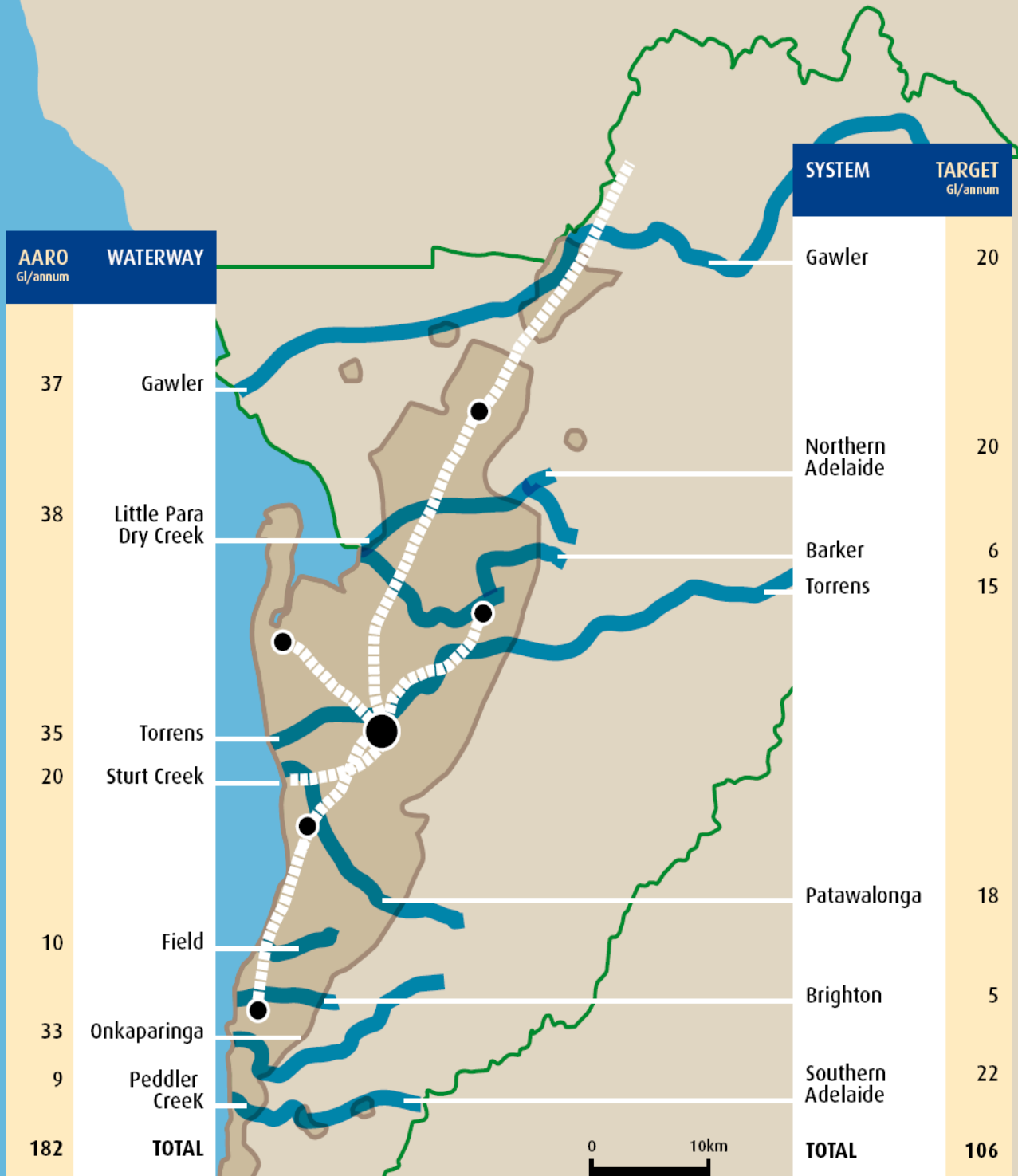
<i>Source</i>	<i>Volume Gl per annum</i>	<i>Sites</i>
<i>Gawler River</i>	<i>20</i>	<i>flood plain sites</i>
<i>Northern Adelaide</i>	<i>20</i>	<i>integrated system</i>
<i>Barker</i>	<i>6</i>	<i>selected sites</i>
<i>Torrens</i>	<i>15</i>	<i>flood plain sites</i>
<i>Patawolonga</i>	<i>18</i>	<i>airport</i>
<i>South Central</i>	<i>5</i>	<i>selected sites</i>
<i>Southern Adelaide</i>	<i>22</i>	<i>extended system</i>
<i>TOTAL YIELD</i>	<i>106 Gl per annum</i>	

The supply systems, both aquifer and pipe based, can be integrated to provide water to the whole city. The wetlands enhance the amenity, biodiversity and recreational use of the waterways and protect the coastal waters from contamination.

Some water, having been naturally cleansed in wetlands and aquifers, could be delivered to the water filtration plants at comparable quality to water extracted from the River Murray.

This model provides the necessary 230Gl per annum for metropolitan Adelaide, 125Gl per annum for rural use with insurance of 45Gl per annum and a bank of over 100Gl in the aquifers below the city.

Surface Water Opportunities



Sources: Surface Water Opportunities, WNA
 Richard Clarke & Associates
 W&G Study for Adelaide Airport

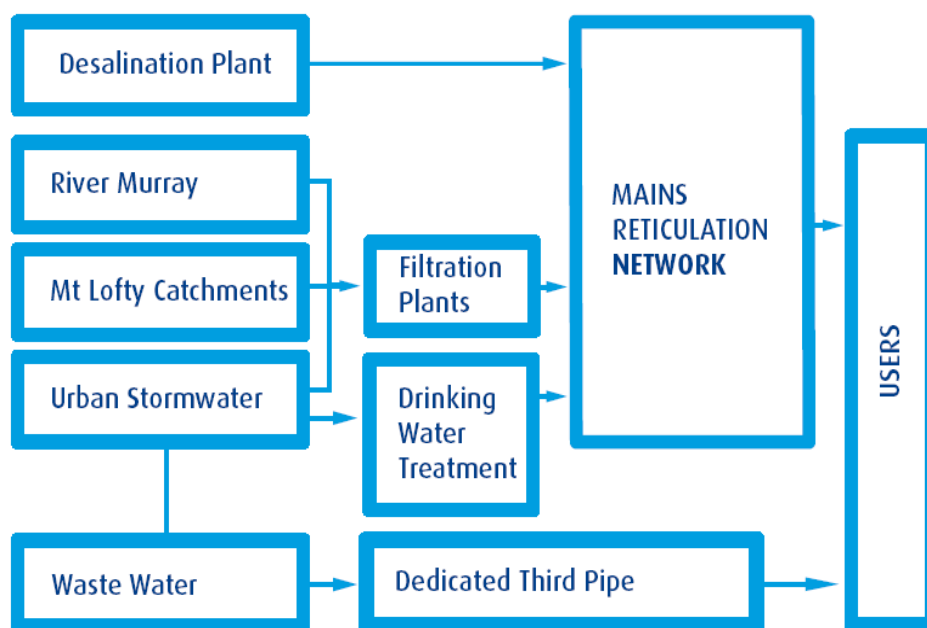
Resources

Water Distribution

There are many options for transporting recycled water from storage to users.

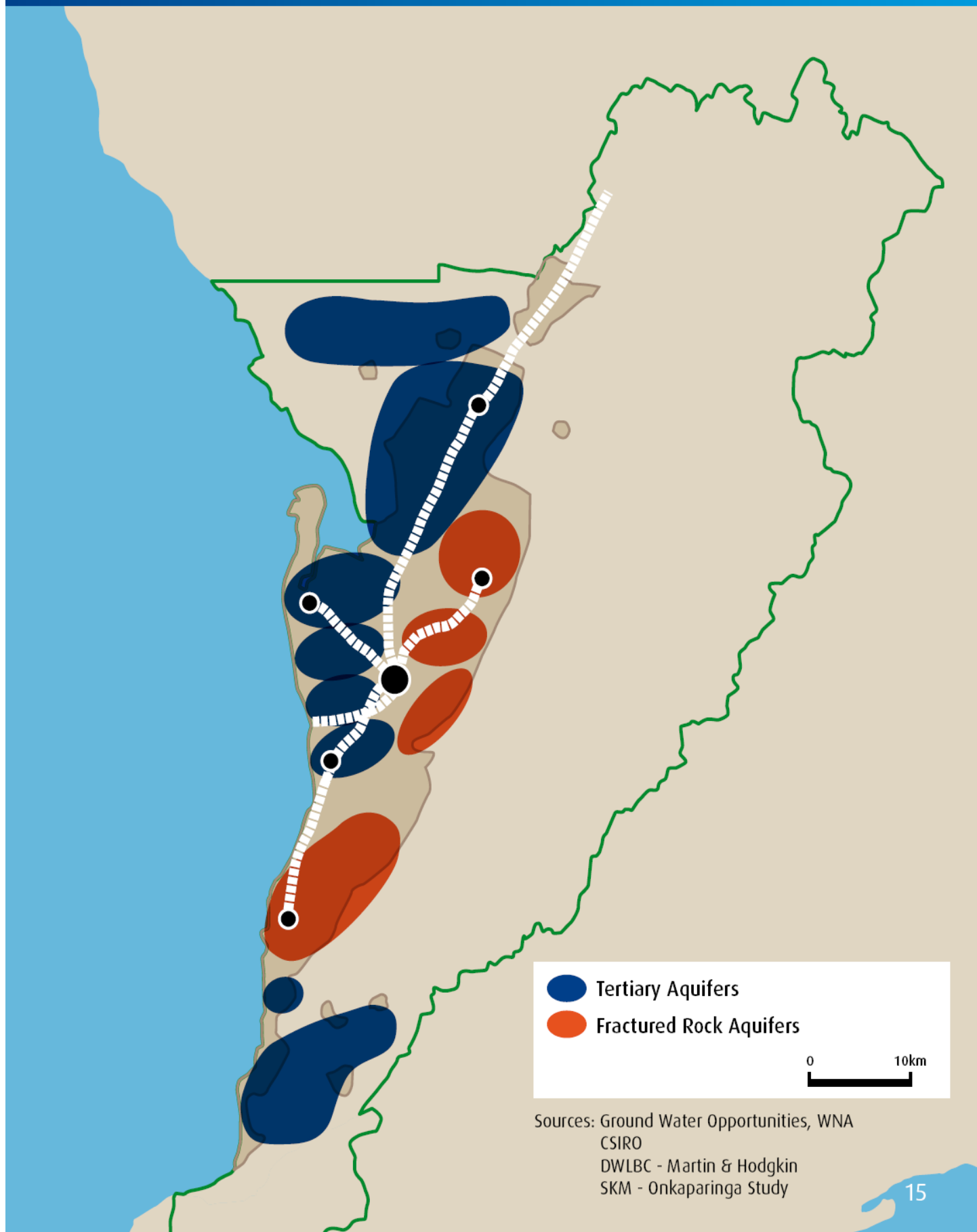
The distribution options for recycled stormwater are outlined below:

- Dedicated pipe, when users are close and their needs fit the supply quality.
- Transfer to SA Water as a drinking water resource, on the basis that stormwater would be naturally cleansed to a quality equivalent to the River Murray and delivered upstream of filtration plants.
- Access to the established reticulation network.



With the support of the broader community the strategy sets out to provide sufficient water to meet Adelaide's needs well beyond 2025 and enable the community to face even major droughts without extensive imposition on the use of water for public irrigation, home gardening and other external purposes.

Aquifer Storage Opportunities



Sources: Ground Water Opportunities, WNA
CSIRO
DWLBC - Martin & Hodgkin
SKM - Onkaparinga Study



The Prospect

Completion of a bold, ambitious and visionary plan through Commonwealth, State and Local Government cooperation resulting in Australia's first truly integrated water management plan.

The reality is that enough rain falls over Adelaide even in a drought year to sustain the thirst of a modern city with a population forecast to reach 1.5 million by 2026.

Even with the real threat of a 30% decline in precipitation, as a result of climate change, nobody has yet suggested that it will stop raining. What is unknown is the exact extent to which rainfall may decline.

The challenge is to harvest every drop of stormwater run-off so that it is available for multiple uses.

The Benefits

Benefits will include:

- *106Gl per annum of harvested stormwater for metropolitan Adelaide by 2026;*
- *50Gl per annum sourced from re-use of waste water for non-potable use;*
- *80% reduction in stormwater discharge to the sensitive marine environment;*
- *200Gl target for reserves held in aquifers across Adelaide at the start of summer;*
- *reduced reliance on the River Murray;*
- *the preservation of city parklands and a cool green city.*

The solution is to turn our attention away from the River Murray to the local water resources of the Adelaide Hills and plains.

To support its growing population, Adelaide will need 230Gl of urban water annually and about 125Gl of rural irrigation water for near metropolitan use by 2026. A total of 350GL will be acquired.

Recycled stormwater and re-use of waste water can deliver 40% of this requirement with no further reliance on the River Murray.

106 GL PER ANNUM OF
HARVESTED STORMWATER ACROSS
ADELAIDE BY **2026**

Results

A sustainable source of water for Adelaide without dependence on the River Murray and with less reliance on Adelaide Hills reservoirs.

WaterWise Adelaide will create the following results:

- substitution of recycled water for Murray and Mt Lofty ranges water for many non-potable applications (156GL);
- establishment of low loss storage in aquifers (200GL) to drought proof Adelaide;
- greater protection of urban areas from flooding;
- improved water quality and riverine environments for all major waterways in metropolitan Adelaide;
- reduced ocean outfall, volume and contaminants, conserving the environmental values of Adelaide's coastal waters;
- insurance that the economy of Adelaide and hence of many associated regions, is buffered against reduced water availability;
- water saved in aquifers with reduced energy inputs, contributing to reductions in greenhouse gas emissions;
- opportunity to "cocktail" treated waste water with recycled stormwater in schemes similar to Mawson Lakes;
- preservation of city parklands and significant trees through greater use of stormwater irrigation;
- cool green city.





The Next Step

*What is needed is the development of a detailed implementation plan covering all of Adelaide through the formation of the **WaterWise Adelaide Implementation Board**.*

The plan that is presented does not claim to resolve all the technical, financial management and integration issues. This will require the creation of the appropriate Government policies, management structures and more detailed planning for each catchment and waste water treatment plant.

This could be accelerated by the formation of a formal body to oversee the further development of the **WaterWise Adelaide** Plan, as an integral strategy of the new Water Security Plan for Adelaide.

The authors and all those who have contributed are committed to moving forward to demonstrate that **WaterWise Adelaide** will deliver secure, safe, cost effective water supplies for all of Adelaide's non-potable needs and in addition, supplement drinking water requirements for a rapidly growing city.

Conclusions – Security for Adelaide

Like Colonel Light, the WaterWise plan sets out a vision. The vision is about planning today for the changes we need to make over the next 20 years and beyond, to ensure healthy and reliable water resources are available to future generations.

WaterWise Adelaide advances the plans of the Water Security Council and the Water for the Future Commonwealth Plan.

- Making a significant contribution to sustainable and efficient management of precious water resources, by converting a waste stream comparable to one third of Adelaide's total water needs, into a sustainable resource.
- Producing significant public benefits, by providing cost effective water for broad unrestricted community use, enhancing the urban amenities and contributing to waterway biodiversity.
- Improving coastal water protection for marine habitats through an extensive reduction in outfalls and discharge of pollutants.
- Reducing energy requirements for water desalination as a buffer to the ongoing running of the plant during severe drought years.
- Showing confidence to the community through cooperation and coordination across all three tiers of Government.

The most important outcome is that Adelaide will no longer be dependent on the River Murray. The water saved can be left to improve environmental flows in the stressed lower river system.

Adelaide, both metropolitan and adjacent rural Councils, can again feel secure in their long-term water needs.

Recommendations

WaterWise Adelaide presents a model of what may be feasible to sustain Adelaide's future water requirements through a combination of greater use of stormwater recycling, re-use of waste water together with the output of potable water from desalination.

On the basis of this model WaterWise Adelaide recommends that the SA Water Security Plan should include the following, to be achieved by 2020:

- set a minimum of 106Gl per annum to be sourced from urban stormwater;
- increase re-use of waste water to a minimum of 50Gl per annum;
- remove reliance on the River Murray as a primary source of Adelaide's water with the aim of achieving nil dependence in average years;
- reduce stormwater and waste water discharge to the Gulf to under 150 Gl per annum;
- adopt open access rules for the water distribution network to allow for stormwater (at a quality comparable to Murray River water) to be included in the reticulation network.

The full submission to the Water Security Council further recommends funding models for consideration and suggests organisational arrangements that give authority to the Stormwater Management Authority, as the lead agency to secure the supply of urban stormwater for Adelaide.



Water Wisdom

WaterWise Adelaide advances the planning of the Water Security Council and the Commonwealth's Water for the Future Plan in the following ways.

- **Water:** 150GI per annum of recycled water without dependence on River Murray.
- **Environment:** improved protection of marine habitats through a reduction in outfalls and discharge of pollutants.
- **Climate Change:** enough water to preserve green city and parklands.
- **Social:** enhanced urban amenities and provision of low cost water.
- **Economic:** accelerated infrastructure projects creating employment.
- **Community:** renewed confidence in maintaining community lifestyles

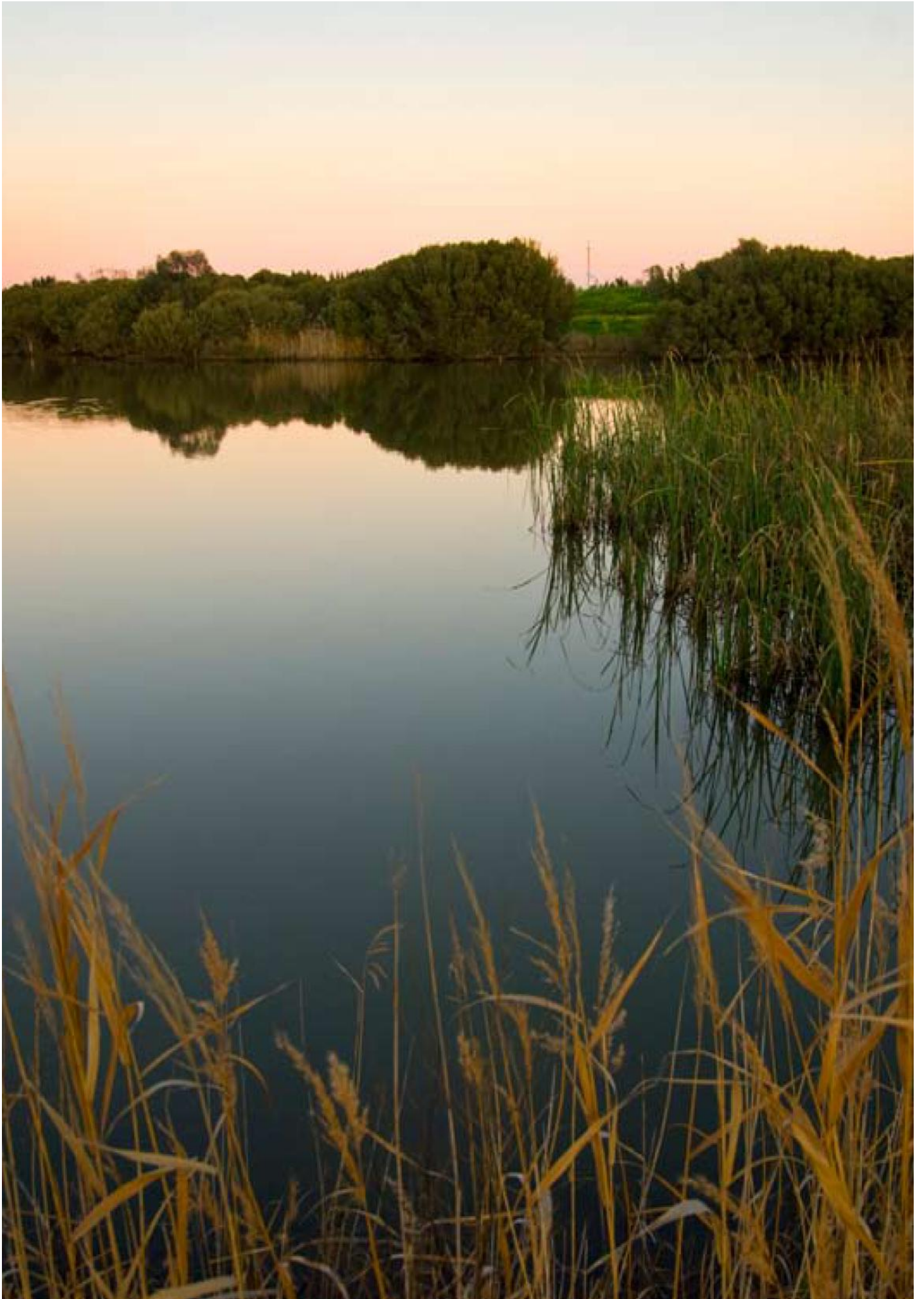
Authors

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The following organisations contributed their expertise and knowledge:

Waterproofing Northern Adelaide Regional Subsidiary
Stormwater Management Authority
Office of Water Security
Local Government Association
Adelaide Mount Lofty Natural Resource Management Boards
Environmental Protection Authority
CSIRO
University of South Australia
University of Adelaide
City of Salisbury
City of Tea Tree Gully
City of Playford
City of Charles Sturt
City of Onkaparinga
City of Marion
City of West Torrens
Adelaide City Council
Water Industry Alliance
Land Management Corporation
Delfin Lend Lease

WaterWise Adelaide drafted by Richard Watson, Principal,
Thinking Strategically



WaterWise Adelaide

