Report to Council

Title: OZ Water 13 – Australia's International Water Conference and Exhibition

Date: 7 – 9 May 2013

Venue: Perth Convention and Exhibition Centre

Theme: Competing for Water in a Climate of Change

SCC Representatives: Carmel Krogh, Amanda Findlay, Mark Kitchener

Key Note Speakers:
Sue Murphy
Chris Loughlin
Karlene Maywald
John Lloyd
Kusum Athukorala

Conference Format:

The conference was opened by Terry Redman who spoke about climate change hot spots and decreasing rainfall. Changes in thinking and behavior about water and how to meet the needs of a growing population were highlighted. Water saving measures are more successful as people become aware of living in one of the driest continents on earth. Ground water replenishment is becoming the next water rectifying strategy. Lucia Cate President of Australian Water Association spoke on how to manage water in a more innovative and integrated way.

Key note speakers presented on a number of issues pertinent to Water in Australia and around the world.

Christopher Loughlin spoke about the water industry facing significant challenges including volatile weather patterns, population growth and ever increasing customer expectations. Facing these challenges the UK government has published a new policy direction in its White Paper which is to be followed shortly with a new Water Bill. Supplementing this, and in part to implement these changes, the economic regulator (Ofwat) is embarking on its next 5 year price review, which itself is proposing fundamental reform. Together this signals the most radical change since privatization.

By 2030 the United Kingdom will be required to produce 50% more food, water and energy to meet the needs of the population. By 2080 average summer temperature is expected to rise to 10% higher than today. Rainfall is expected to reduce by 20% and intensity and frequency of extreme weather is to increase. Since the beginning 2012 the United Kingdom has been experiencing the most challenging weather on record.

The United Kingdom is embarking on a major change to water supply and sewerage to meet the increasing demand. The government's white paper, 'Water for Life' is a call to action. Water resources are already under pressure. There is a need to halt and reverse damage to water eco

systems. There is a greater reliance on market mechanisms and significant private sector investment. Private investment will be required well into the future. The United Kingdom may need significant new water resources. There is much to be resolved.

The UK water industry stands at a crossroads. The presentation considered the challenges, changes and potential outcomes.

Karlene Maywald Chair National Water Commission

Internationally, Australia has been renowned for its changes to water policy and management since the early 1990s. The Australian water sector has responded to crises in supply security and is still dealing with the aftermath and challenges of cost recovery. During this era, the reform agenda was largely led by governments and driven by intergovernmental agreements such as the National Water Initiative, coupled with significant investments in resources, knowledge and infrastructure.

In 2013 the outlook is very different. For the most part, water is no longer the backyard BBQ topic or on the front page. As competing issues have become current priorities, political commitment and government investment in water reform have waned. Yet much still remains to be done to achieve the long-haul goal of sustainable water management. Australia's water sector today faces many risks and uncertainties including population growth, climate variability, regulatory interventions, funding cuts and skills shortages. At the same time, new policy interface issues demand attention: water and energy, water and mining, water and natural resource management, and water and sustainable urban planning.

So as stewards of Australia's water resources and custodians of substantial assets, perhaps this is the time for the water industry to pick up the baton and lead the reform agenda. Where do we want to be in 2020? What innovations are on the horizon? What roadblocks must be removed to deliver more efficient, cost-effective, customer-driven and fit for purpose services? What public conversations are needed now if we are to avoid the next water crisis and build a truly resilient water future.

John Lloyd

A progressive water supply deficit in Libya and inherent difficulties with some of the conventional supply sources led to an innovative policy of major groundwater transfer from the interior to the coast. A project, known as the Great Man-Made River Project was designed and implemented. The paper described the decision processes entailed in the location and construction of the principle well fields for the Project. While the emphasis was on hydrogeological factors, contributory constraints related to some of the Project contracts and issues were also noted.

Kusum Athukorala

"Let not a drop of water, go to the sea without being made useful for mankind."

This keynote presentation was essentially about traditional and modern day water practices in Sri Lanka. Water security, new models of water cooperation and the need for strengthening cooperation on shared water courses were discussed. The Sri Lankan government has had to look at groupings of unusual alliances and unlikely partners to develop cooperation, coexistence and equity. The speaker touched on the role of women in the water industry and in society generally.

Summary of Presentations:

Fit for Purpose Water Reuse Tamworth's 100% Effluent Reuse

In early 2008, Tamworth Regional council in NSW embarked on the implementation of a 100% effluent reuse project. The project is a result of 16 years of engineering and environmental planning, approval, and subsequent design and construction. In 2011, the reuse scheme was successfully commissioned and entered its operation phase in the winter of 2011.

Designed based on the principle of "fit for purpose" water recycling, the scheme is capable of recycling up to 14.8 ML/day of treated domestic and industrial wastewaters to irrigate up to 600 hectares of stock feed crops. It represents one of the largest effluent reuse projects in inland Australia. The project consists of two major components: the Westdale Wastewater Treatment Plant and the Tamworth Effluent Reuse Farm.

Armed with a Smart Sewerage Network

South East Water has turned an unfortunate sewage spill in Mt Martha into an opportunity to become the industry leader in early warning leak detection systems, revolutionizing the way the company monitors and respond to its sewerage network. Sewage spills contain a mixture of pathogens and contaminants that can be very damaging to the environment, as well as animal and human health. Sewage spills in waterways are a high risk to human health through direct contact from swimming and other recreational uses. They can also affect local communities through the closure of public access to rivers and beaches for fishing and recreational use, which can also negatively impact on the local economy. In 2008, a failure on a section of sewerage rising main resulted in sewage being discharged into a local waterway. This is turn led to the development by South East Water of an Enforceable Undertaking to address systemic issues related to sewerage infrastructure. This was accepted by the Environmental Protection Agency (EPA) as an alternative to prosecution.

Communicating to Community about Recycled Water: An Experimental Investigation

Changing rainfall, population growth and increased demand have placed additional pressure on traditional water supply systems. Alternative supply systems, such as recycled water treatment and desalination may be necessary to augment drinking-water supplies. Recycled water remains less acceptable to the public than desalinated water, despite the relative environmental benefits. Community opposition has been a critical barrier to implementation of potable recycled water schemes, due to health risk concerns that withstand scientific assurance of safety. Numerous studies have considered community acceptance of recycled water however, there are few which consider how to best communicate about these water supply systems. Research has found that scientists and project leaders implementing recycled water schemes remain uncertain about how best to package information, particularly when trying to reach different audiences and stakeholders. Theoretical

frameworks form social psychology that have been applied to risk communication may shed light on the most effective ways of communicating about recycled water.

Water Conservation

Australia is one of the driest continents in the world, with erratic climate patterns and low rainfall. However, we still generally rely on cheap surface water runoff for water supplies and mostly coastal environmental discharge with minimal treatment for wastewater disposal. Water and wastewater services are predominantly supplied by government owned water authorities operating as regulated monopoly businesses.

The Shoalhaven runs its own water and sewerage businesses but If the Shoalhaven sewerage treatment system is reaching its use by date how will it be replaced? Will the Shoalhaven Council take the traditional approach, replace worn out parts, replace like for like or do something different and innovative from best practice suggestions from around the country e.g. East Gippsland.

Does the Shoalhaven Council want to embark upon a different type of service delivery? Clearly a desalination plant is prohibitive by cost but what are the provisions in the Shoalhaven for using grey water and what is its priority? Does the council intend to expand the sustainable integrated solution adapted from the REMS scheme already being implemented?

Recycled water in the Shoalhaven was introduced on a large scale in the year 2000 to be used in the farming industry. Since then other communities have implemented similar and bigger schemes. Are there any plans to expand the REMS scheme to incorporate industry, golf courses, parks, ovals, school grounds, parks and gardens? Can the Shoalhaven Council afford not to investigate the viability of a low carbon foot print system that, minimizes effluent into the river, that minimizes chemical use, that minimizes salinity issues often sensitive to river towns, that preserves nutrients for crop fertilization, that reuses wastewater effluent for irrigation of non-fodder crops.

REMS can be transferred from farms to the above mentioned assets and become a more effective system. We have seen the REMS scheme in action at Callalla and Kangaroo Valley. It is clearly the showcase of the Shoalhaven sewerage system but what happens to Nowra's and Bomaderry's effluent, can a tour of the Nowra sewerage treatment facility be arranged.

Two questions that need to be examined are how much time will it take to expand the REMS scheme to incorporate other council assets and how much will it cost?

Councillor Mark Kitchener

PLAN FORM 2 (A2) DP1186174

WARNING: CREASING OR FOLDING WILL LEAD TO REJECTION

Attachment A

ePlan Sheet 1 of 1 sheets

DP1063393 MGA

Scale: 1: 4000

DIAG 'A'

1: 1500

(A) - EASEMENT FOR WATER SUPPLY 6 WIDE AS SHOWN IN DP646615 VIDE GAZ 16.08.2002 Folio 6118 No. 130

(B) - EASEMENT FOR OVERHEAD POWER LINES SHOWN IN DP1087855 ACQUIRED FOR THE PURPOSES OF THE ELECTRICITY SUPPLY ACT 1995 VIDE GAZ. 15.12.2006 FOL. 11063

SEE DIAG 'A'

1
1.567ha

LAND TO BE ACQUIRED

ROAD 20.115 WIDE

KINGS POINT DRIVE (20.115 WIDE & VARIABLE WIDTH)

Surveyor: MICHAEL G POIDEVIN Date of Survey: 24 September 2012 Surveyor's Ref: 65-2012A	PLAN OF PROPOSED ACQUISTION UNDER THE LOCAL GOVERNMENT ACT., 1993	LGA: SHOALHAVEN Locality: ULLADULLA Subdivision No: Lengths are in metres. Reduction Ratio 1: 4000	Registered 6.6.2013	DP1186174

ADOPTED AT COUNCIL MEETING HELD ON TUESDAY 30 APRIL 2002

511. Acquisition of Proposed New Milton/Ulladulla Wastewater Treatment Plant Site File 1382-05, 21687, 21688

RESOLVED on a MOTION of Clr. Hancock, seconded Clr. Hurley that:

a) Council resolves to purchase Lot 1 and Lot 2 in the Plan of Land proposed to be acquired within Crown Land, Crown Road, ALC3130 and ALC3132 (Reference PW:S.B.55214) from Ulladulla Local Aboriginal Land Council for the sum of $95,000 and for Council to pay the Vendors reasonable legal fees, valuation, survey, plan lodgement and conveyancing costs;

b) Council resolves to compulsorily acquire Lot 3 and Lot 4 in the Plan of Land proposed to be acquired within Crown Land, Crown Road, ALC3130 and ALC3132 (Reference PW:S.B.55214) for the public purpose in accordance with the Local Government Act 1993 and the Land Acquisition (Just Terms Compensation) Act, 1991 and authorise the necessary applications to be made to the Minister and Governor;

c) The compensation amount, purchase price and acquisition costs be funded from the Milton/Ulladulla Sewerage Scheme Augmentation Subsidy funds; and

d) The General Manager be authorized to sign the Contract for Sale and the necessary documentation and the Transfer be executed under the Common Seal of the Council of the City of Shoalhaven.

e) The subject Lands are to be classified as “operational” in accordance with Section 31(2) of the Local Government Act 1993.

Attachment C

ADOPTED AT COUNCIL MEETING HELD ON FRIDAY 26 OCTOBER 2012

1199. Ulladulla Wastewater Treatment Plant - Acquisition of Crown Road File 21687E

MOTION: Moved: Wells / Second: Guile

That

a) Council adopt the previous Council resolution for the compulsory acquisition of Crown road for the Ulladulla Wastewater Treatment Plant, shown as Lot 3 in the attachment to the report; and

b) Compensation be paid for the road as determined by the Valuer General in accordance with the Land Acquisition (Just Terms Compensation) Act, 1991.

CARRIED