



SYDNEY OLYMPIC PARK AUTHORITY

Submission to IPART - June 2005

**Review of Water and Wastewater Industry
Structure and Pricing in the
Greater Sydney Metropolitan Area**

Introduction

The Sydney Olympic Park Authority (SOPA) appreciates the opportunity to make a submission to the above review.

The Authority's submission consists of:

- Background information describing our water management approach, lessons learned and financial inequities arising;
- Specific comments on IPART's Issues Paper of May 2005;
- Recommendations; and
- Contact details

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The Authority would welcome the opportunity to discuss the issues raised in this submission with IPART at any time.

Background

In March 1999, the Olympic Coordination Authority was granted Ministerial approval to be a water supply authority under the Water Supply Authorities Act (1987). This legal status has now been transferred to the Sydney Olympic Park Authority through the Water Management Act (2000) and the SOPA Act (2001), which permits the Sydney Olympic Park Authority to:

“exercise in its area of operations only such functions as relate to the Water Reclamation and Management Scheme (WRAMS) at Sydney Olympic Park, including:

- a) The collection of waste water, and*
- b) The treatment of waste water, and*
- c) The distribution of treated water”*

WRAMS operations began in July 2000. It now delivers over 800 ML / year of recycled water to over 1000 customers at Sydney Olympic Park and nearby Newington. This will increase to over 1000ML/ year in the next 1 to 2 years through addition of further customers within Sydney Olympic Park.

WRAMS recycled water has Department of Health approval for a range of uses (some of which are unique to this recycle water system):

- Toilet flushing;
- Irrigation of parks and gardens;
- Fire fighting;
- Construction;
- Washdown and dust suppression;
- Fountains and water features;
- Playing fields;
- Vegetable gardens;
- Laundry clothes washing; and
- Commercial air conditioning water cooling towers

IPART Review of Water and Wastewater Industry Structure and Pricing Sydney Olympic Park Authority Submission June 2005

Approximately 75% of WRAMS source water is from local sewage by “sewer mining”. The remainder is sourced from locally collected stormwater.

Please see attached diagram for details of the Scheme.

Sydney Olympic Park is planned to grow to a township of approximately 50,000 residents, workers and students by 2025.

WRAMS forms the heart of a comprehensive integrated water cycle management approach to providing sustainable water services to the existing and future township of Sydney Olympic Park.

Positive outcomes of this approach to water management include:

- Usage of potable (drinking) water is reduced by more than 50%;
- Discharge of sewage from the collection areas is reduced by well over 90%;
- Stormwater is now managed as a valuable resource;
- Recycled water use is not restricted;
- Drinking water has not had to be used to supplement recycled water;
- Recycled water performance standards have been continuously achieved for the 5 years of operation;
- Continued strong local support built on good operational performance and community involvement;
- Potential exists to significantly expand the scheme to reduce the drinking water demand of nearby major residential and commercial developments.

Sydney Olympic Park’s integrated water cycle approach is a working example of the implementation of the Metropolitan Water Plan’s “Principles for managing Sydney’s water supplies”. ie. The approach is:

- Diversifying the sources of supply;
- Increasing the security of Sydney’s and Sydney Olympic Park’s supply;
- Protecting and enhancing the health of local waterways;
- Involving the local community as an essential partner in sound water management;
- Ensuring quality of supplies is appropriate and cost effective to customers;
- Fostering innovation;
- Encouraging efficient use of water by all customers;
- Matching water grades to end use;
- Increasing the capacity of existing drinking water and sewerage infrastructure;
- Ensuring water related decision making is adaptive;
- Generating strong and sustained local support.

Lessons Learned

Discussion of some of the lessons learned by SOPA in achieving the above may be of value to IPART in undertaking its review.

Issues which have had to be identified and resolved in the development, commissioning and operation of WRAMS include:

- Implementing a 25 year design, build and operate agreement with United Kilpatrick Green;
- Negotiating and implementing a sewer mining agreement and other agreements with Sydney Water Corporation (SWC), including addressing access, liability and administrative arrangements;
- Obtaining regulatory approvals covering planning, health and environmental requirements;
- Ensuring that the design and management of buildings, facilities, parks, public and open spaces are appropriate for a locally “closed loop” water cycle; and
- Creating, building, and maintaining customer and public confidence in recycled water.

The crucial issue that SOPA would like to bring to IPART’s attention is that although the present integrated water cycle approach is strongly aligned with Government Policy, the Metropolitan Water Plan, and Sydney Olympic Park’s needs, *the approach is financially unsustainable* in its present form.

The financial challenge that has proven unsolvable to date is based on the inequity that, although SOPA - through WRAMS – treats and recycles most of the local area’s sewage and a significant proportion of its stormwater:

- **SOPA does not receive the benefit of sewage and stormwater rates paid by customers for these services – other organisations (Sydney Water and local Councils) receive these payments;**
- No mechanisms exist to ensure developers provide adequate capital contributions to fund ongoing growth of the scheme generated by their developments; and

Thus there is no ability to operate the scheme on sound business principles or to expand the operations to supply recycled water to surrounding customers.

The outcomes of the above inequitable financial arrangements are:

- SOPA has affectively subsidised the operations of other organisations providing sewage and stormwater services - probably to the extent of some \$2m over 5 years.
- Continued operation of the scheme is financially unsustainable without ongoing subsidies from Treasury; and
- Expansion of the scheme is financially unviable.

**IPART Review of Water and Wastewater Industry Structure and Pricing
Sydney Olympic Park Authority Submission June 2005**

- SOPA finds it financially very difficult to comply with s48(1) of its own Act requiring the “Authority to maintain and extend, to the greatest extent practicable the use of WRAMS....”

The Future

Opportunities for expansion of the Water Reclamation and Management Scheme (WRAMS) at Sydney Olympic Park are briefly summarised in the following Table:

Time & Funding	No of Customers & location	Physical works required	Result
Now	>1000 customers including major facilities such as Stadium and SuperDome, major commercial customers plus all Newington residents	existing	800ML/year cumulative drinking water savings
Immediate (<i>funded</i> using Every Drop Counts subsidy)	Supply existing sporting and commercial facilities in SOP	Increased sewage treatment capacity and new pipelines	1050ML/year cumulative drinking water savings
Next 2 years (<i>unfunded</i>)	700 new residential units in Baywest development; plus >2000 new residential units in Rhodes under construction	Trunk mains to new developments and pumping improvements	1150ML/year cumulative savings
Next 5 years (<i>unfunded</i>)	> 5000 customers. Supply major new residential and commercial in and around Sydney Olympic Park	Sewerage and water treatment plant upgrades, new pipelines and pumping systems	Up to 3000ML/year cumulative savings

Other than the works subsidised by the Every Drops Counts program of Sydney Water none of the above works are likely to proceed because of the absence of capital funding sources and the inequitable operating funding regime presently in place for WRAMS and the Authority.

The Sydney Olympic Park Authority’s views on how these impediments might be resolved through structural and pricing reforms are outlined below.

SPECIFIC COMMENTS ON IPART ISSUES PAPER.

Options for Industry Reform

The IPART Issues Paper in Section 3.2.7 raises the potential value of a staged implementation of reform and discusses a range of industry structure options in Section 4 with the intent of increasing the level of competition in the water industry. There is also a view expressed that pilot schemes in large or geographically distinct areas have merit.

The Authority would like to outline another compelling reason for water service industry reform and support the concept of pilot schemes in geographically distinct areas such as Sydney Olympic Park.

Reasons for Reform

The Authority believes the provision of water, energy, transport, communications, waste and social infrastructure are essential foundations on which to build truly sustainable townships.

Hence, among other objectives, the water services industry of Sydney should be structured and operated in ways that support the government's and community's imperative for sustainable development of Sydney.

At present, and under most of the structural reform options outlined by IPART, there is a substantial disconnection between the development industry and provision of water services.

Under current structural arrangements landowners, land developers, builders and financiers have a short term focus with little if any interest or accountability for the long term consequences of the approaches adopted for providing basic services, including water.

Water and other services are the province and problem of the utilities that often have limited ability to control or influence the early conceptual planning of landowners and land developers which can significantly influence the water cycle and water servicing opportunities and constraints of the development.

The result of today's structure is strong structural impediments to any new or potentially improved approaches to provision of water services. Innovation in water under the current system can only occur through voluntary co-operation amongst the many parties involved in conceiving, implementing new developments.

In our view, creating true accountability for better long terms solutions across all aspects of the urban water cycle should be a primary driver of industry structural reform - not just creating competition among suppliers.

IPART Review of Water and Wastewater Industry Structure and Pricing Sydney Olympic Park Authority Submission June 2005

This outcome would be strongly facilitated by industry structures that permit, or if necessary require, the key players at the beginning of the development process – landowners and land developers – to be a key player in provision of water services and thereby to be accountable for the long term economic, social and environmental consequences of the approach adopted to providing water services.

Pilot Scheme

The Sydney Olympic Park Authority is already adopting this philosophy in its landowner and land development roles for the new township and community being created at Sydney Olympic Park.

Many of the basic elements necessary to facilitate Sydney Olympic Park as a low risk pilot scheme of a new water servicing structure are already in place; ie

- Geographically distinct area;
- Infrastructure and regulatory approvals in place;
- Single owner of land;
- Appropriate legislation;
- Within government;
- Immediate expansion capabilities; and above all
- Strong existing community support

The structure proposed is similar to the option outlined in Section 4.3.1 of the Issues Paper with the significant point of difference being that the party responsible for the long-term success of this development (the Sydney Olympic Park Authority) would also be responsible for the long-term outcomes of water service provision.

Water service provision would entail creating a business managing:

- Demand;
 - Potable (drinking) water
 - Non potable (recycled) water
 - Sewage;
 - Stormwater;
 - Developer interface;
 - Customer services;
 - Education and community services; and
 - Consulting and research services.

Much of the above is already in place and the remainder can be promptly implemented if supported by IPART.

Recommendations

To build on the lessons learnt from Sydney Olympic Park's experience and having regard to the Terms of Reference of IPART's investigation the Authority requests that the following recommendations be supported:

- 1) Structural reform of water services should ensure true accountability for long-term water cycle outcomes of new developments be placed on landowners and land developers;
- 2) When defining the geographical area, roles and responsibilities of new participants in the delivery of water services the principles of Ecologically Sustainable Development and of Integrated Water Cycle Management be paramount;
- 3) Recycled water services must provide incentives for private sector investment and equity through;
 - a) Review of pricing structure for recycled water, and
 - b) Access to credits for sewer mining.
- 4) Sydney Olympic Park be adopted as a low risk pilot scheme for a new water services structure based on the above recommendations to demonstrate government's leadership by example in water reform;
- 5) Within the existing and any new Sydney Olympic Park water services area – and any other areas managed under integrated water cycle principles – IPART implement a single, unified developer contribution amount for funding growth and capital investment in water. This water contribution covers all elements of the water cycle (including water, sewage, recycled water and storm water);
- 6) Within the Sydney Olympic Park water services area, IPART implement equitable recovery of operating costs for all elements of the water cycle to those parties providing the services – in particular the Sydney Olympic Park Authority;

Contacts

The Sydney Olympic Park Authority would welcome the opportunity to discuss and expand on any aspects of the above submission.

Please contact any of the following;

Brian Newman , CEO	9714 7379
Nick Hubble , Executive Director, Finance	9714 7426
Warwick Proctor , Director, Major Assets Management	9714 7260

HOW THE SCHEME WORKS



Water reclamation plant

Sewage from Newington and major venues and facilities at Sydney Olympic Park is treated at the water reclamation plant at a rate of up to 2.2 million litres per day.

Advanced biological treatment processes remove pollutants and nutrients, leaving high quality effluent that is disinfected by ultra violet light and then pumped to the water treatment plant for final processing.

Water storage reservoir

The water storage reservoir in the lower levels of the brickpit at Sydney Olympic Park stores stormwater and excess treated effluent, to provide extra water for final treatment when demand is high. The Brickpit also provides an environment for the endangered green and golden bell frog.

Stormwater from roofs, roads and parks first passes through treatment ponds to remove nutrients and

pollutants. The reservoir holds up to 300 million litres which can be pumped to the water treatment plant for final processing as required.

Water treatment plant

The water treatment plant uses two processes:

1. Continuous micro-filtration, to remove all particles larger than 0.2 microns.
2. Reverse osmosis, to reduce salinity. Chlorine is also used to disinfect the water.

The plant can treat up to seven million litres of water per day from the water reclamation plant and the Brickpit reservoir.

Recycled water is pumped from the treatment plant back to Newington and Sydney Olympic Park's major venues and facilities.

