

2 March, 2006

Recycled Water Review
Independent Pricing and Regulatory Tribunal
PO Box Q290
QVB Post Office
NSW 1230

Attention: Kate Drinkwater

Dear Ms Drinkwater,

IPART REVIEW – RECYCLED WATER REVIEW

Reference is made to the IPART Issues Paper (February 2006) outlining the content and methodology of the above review.

Council, in assessing the best way to structure this submission, notes from the Issues paper that as the pricing/regulatory framework for recycled water “is still in it’s infancy in NSW” the initial approach by the Tribunal will be to identify a range of options for pricing in order to determine the most appropriate pricing arrangement. It is also noted that a question exists as to the future role of the Tribunal in price setting.

Given the above uncertainties and to enable the Tribunal to gain a broad understanding of where Council is placed in the implementation and operation of recycled water, Council believes the most appropriate approach to this submission is as indicated below: -

Part 1 – What has Council achieved to date on recycled water?

Part 2 – Where is Council going in the future on recycled water?

Part 3 – Sewer Mining

Part 4 – Respond to specific issues raised in the IPART Issues Paper (where appropriate).

PART 1 – WHAT HAS COUNCIL ACHIEVED TO DATE ON RECYCLED WATER?

a) **Background**

Council has developed tertiary treated recycled water supply schemes at each of its 6 Sewage Treatment Plants as part of its Potable Water Demand Management and Integrated Water Cycle Management Strategies. Recycled water is a sustainable alternative to use of the potable water for non-potable uses. Two of the schemes (Bateau Bay and Toukley) provide a reticulated metered supply, delivering recycled water directly to suitable sites, with the remaining four schemes providing supplies to water carts for use in road construction, verge watering, drain cleaning etc.

In the implementation of these schemes, Council targeted the following markets as potential users of recycled water: -

- Golf course irrigation;
- Irrigation of recreation and sporting areas;
- Selected commercial uses (eg Car washing);
- Hydroponics;
- Residential dual reticulation supply (eg, Magenta Shores, future urban release areas);
- Major Industrial (eg. Power Stations)

A brief overview of the six schemes is provided below: -

1. Bateau Bay Scheme (Metered Reticulation Scheme)

Capacity	- 1.8 ML/day
Effluent Quality	- Tertiary Treatment
Commissioned	- January 2005
Cost	- \$1.948 M
Use	- Irrigation
Connections Finalised to Date:	- Tuggerah Lakes Golf Club - Bateau Bay Croquet Club - Bateau Bay Soccer Fields - Bateau Bay Rugby League Fields
Connections to be Finalised:	- Bateau Bay Bowling Club - Golden Hind Bowling Club - Bateau Bay Golf Driving Range - Our Lady of the Rosary Primary School - The Entrance High School - Long Jetty Council Depot

2. Toukley Scheme (Metered Reticulation Scheme)

Capacity	- 4.0 ML/day
Effluent Quality	- Tertiary Treatment
Commissioned	- September 2005
Cost	- \$4.475 M
Use	- Irrigation and Residential Use
Connections Finalised to Date:	- Toukley Golf Club - Magenta Shores - Toukley RSL Bowling Club - Toukley Bowling Club - Toukley Public School - Our Lady of the Rosary Primary School - Darren Kennedy Oval - Harold Moore Oval
Connections to be Finalised:	- Camp Toukley

3. Charmhaven/Wyong South/Gwandalan/Manning Park Schemes

Capacity	- 0.3 ML/day (each)
Effluent Quality	- Tertiary Treatment
Commissioned	- March 2006
Cost	- \$0.4 M per plant
Use	- Supply water carts for non-potable use (eg. road construction, verge watering, etc)

More detailed information relating to the above facilities can be provided on request.

During the concept development stage of the two metered reticulated schemes (Bateau Bay and Toukley), large users were identified and pricing agreements were developed that provided incentive for these large users to commit to the scheme. Early commitment from large users was a key requirement prior to moving forward to construction. At that time, an over-arching framework had not been developed for determining charges for reclaimed effluent. As such, individual agreements were developed with the Tuggerah Lakes Golf Club and the Toukley Golf Club based on the particular characteristics relevant to each site.

b) Current Prices/Methodologies/Agreements

To date, pricing agreements have been prepared and finalised in respect of three customers, ie: -

- Magenta Shores (Mirvac);
- Tuggerah Lakes Golf Club; and
- Toukley Golf Club

Pricing agreements are either presently being drafted or under negotiation with the remaining customers.

The Magenta Shores agreement is based on an “up front” user pays system with prices reviewed annually in the light of actual costs from the previous year. The developer has funded a substantial capital component of this system.

The Tuggerah Lakes Golf Club agreement is based on a gradual transition to full cost recovery.

The Toukley Golf Club agreement is similar to the Tuggerah Lakes agreement.

Council sees the above as “pioneer” or “legacy” agreements that were prepared with a view to launch the Bateau Bay and Toukley Schemes. The methodologies used reflect the relative infancy of the industry and industry pricing

Wyong Council is now developing a more rigorous pricing methodology for use with future community based customers. The proposed methodology is outlined in Section 2 below.

Now that the Bateau Bay and Toukley schemes have been developed and are operating, it is considered appropriate that Council use this experience to develop a pricing methodology that will be applied in considering the extension of these schemes to service other users or in the development of new schemes.

PART 2 – WHERE IS COUNCIL GOING

(a) Background

Council is currently investigating the expansion of the 2 existing metered reticulated schemes at Bateau Bay and Toukley.

A proposal to expand the Bateau Bay scheme is being considered based on a capacity increase from the existing 1.8 ML/day to 3.4 ML/day. The estimated cost of this expansion is \$3.11 M. Properties targeted with the expansion are: -

- Irrigation of Council Ovals and Reserves
- Irrigation of School Ovals
- Irrigation of Caravan Parks
- Toilet Flushing within Caravan Parks

Investigations are also proceeding into an expansion of the Toukley Scheme from the existing 4 ML/day to 8 ML/day. This expansion would be based on opportunities identified as follows: -

- Construction of a new power station at Lake Munmorah
- Servicing of the existing Lake Munmorah Power Station;
- Sporting areas at Budgewoi, San Remo and Blue Haven;

Council has also broadly identified longer term opportunities for recycled water in as yet undeveloped urban release areas. The actions required to develop such a proposal further would be: -

- Review Schedule of proposed release areas;
- Develop supply concepts;
- Review Development Control Plans to include recycling component.

b) Current Prices/Methodologies

i) Background

As a general comment, the difficulty that Council faces is that while the existing water supply system is very large, with consistency in annual usage giving some certainty to expected revenues, by comparison, production and delivery costs for small recycled water schemes are extremely dependent upon the actual usage which, being used mainly for irrigation purposes, is highly variable. In a wet year, revenues will be down. In a drought year, revenues will be up. For example, the annual demand for reclaimed effluent in a dry year could be double that experienced in a wet year. As such, costs and expected revenues are best calculated on expected long term usage with significant variations from year to year being managed by an equalisation account.

Council has initially established a number of principles/objectives in determining a suitable pricing method, ie: -

- * As far as practical pricing for recycled water customers should be consistent across the Shire.
- * A pricing strategy, based on cost recovery over time, be implemented for the current community based schemes. An initial subsidy and subsidised pricing to promote “up-front” development may be required;
- * Industrial/commercial recycling water projects be negotiated on an individual basis.
- * Residential recycled water projects (Magenta Shores) as for Industrial/ Commercial methodology.

All customers identified to date for the Bateau Bay and Toukley Schemes are classified as community based (clubs, sporting facilities), excluding the Magenta Shores development.

ii Pricing Options

Council, in reviewing current pricing methodologies investigated two approaches:-

- Individual project pricing;
- Universal or Shire wide pricing (as with potable water)

Project Based charging provides for each project having different usage charges, based on the economics of the individual project. The Shire-Wide charging methodology would aggregate all project costs and incomes into a single scheme with a single set of charges across the Shire.

The Table below indicates the relative advantages and disadvantages associated with Project based Charging.

Charging Methodology	Advantages	Disadvantages
Project Based	* Charges reflect actual project costs	* Results in different charges for the same service across the Shire
	* Consistent with existing DSP charging methodology	* Higher cost schemes less likely to proceed
		<ul style="list-style-type: none"> • Not consistent with existing water and sewerage availability and usage charging philosophy
		* More complex to manage
		* Economies of scale not shared
		* Charges more sensitive to variations in the actual usage of each scheme.

Based on the above Table, it is considered that Shire wide pricing (as far as practical) is a more preferable methodology to project based pricing.

This is consistent with current water supply and sewerage charging which is uniform (postage stamp pricing) across the Shire, thereby providing Council with the opportunity to optimise the development of systems that benefit the community as a whole.

It is considered appropriate for this approach to also be applied to effluent re-use pricing.

iii Proposed Council Pricing Policy

The costs of production of recycled water are highly sensitive to actual production volumes. Due to the limited extent of these schemes, unit costs can be high until schemes are reasonably developed and utilised.

In establishing prices, it is considered appropriate that the basis of pricing should be the average production cost when the scheme is at a representative production level. For pricing purposes, the representative production level is assumed to be 70% of maximum production capacity. This level recognises that production will only be fully utilised 100% in below average rainfall years.

Within the water industry it is recognised that incentives (subsidised pricing) must be provided to gain acceptance for the use of effluent within the community. For this reason Council has put in place the existing agreements reflecting this position.

Taking into account existing agreements and the above pricing principles it is proposed that the following pricing policy be adopted;

- Tuggerah Lakes Golf Club – Utilise existing agreement which achieves full cost recovery after 17 years
- Toukley Golf Club – Utilise existing agreement which achieves full cost recovery after 17 years
- Magenta Shores (Bulk Golf Course Supply) – Immediate full cost recovery based on actual costs incurred as per existing agreement

PART 3 – SEWER MINING

Council is currently investigating the viability of a range of sewer mining technologies. Advice received to date suggests that the costs for this type of scheme are significant. No firm proposals have yet been developed.

PART 4 – RESPONSE TO ISSUES RAISED IN IPART ISSUES PAPER

In relation to the particular items (for stakeholder feedback) raised by IPART in the Issues Paper, the following is advised: -

* **Item 5.3:-**

Council has proposed a broad methodology for price setting for consideration by the Tribunal. Council believes this approach, particularly in relation to cost recovery, is sound and recommended for adoption.

If you wish to discuss this submission, please do not hesitate to contact me on 4350 5494.

Yours faithfully,

D G Cathers
DIRECTOR SHIRE SERVICES