

**Clean Up Australia Ltd submission on**  
**The Department of the Prime Minister and Cabinet**  
**A Discussion Paper on the Role of the Private Sector in the Supply of**  
**Water and Wastewater Services**

**Executive Summary**

Clean Up Australia provides this submission as probably the only national not-for-profit organisation developing innovative water infrastructure projects.

Clean Up Australia has been developing demonstration water reuse and recycling projects nationally for ten years.

Clean Up Australia offers the following input into the discussion paper;

1. extracts on private sector involvement from the recent NSW Parliamentary Inquiry on a sustainable water supply for Sydney, and a
2. range of experiences from implementing water recycling and reuse projects, such as Busby's Bore water reclamation and reuse project.

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Yours sincerely

Ian Kiernan AO  
Chairman

Ian Kiernan AO, Chairman of Clean Up Australia Ltd made a submission to the NSW Parliamentary Inquiry into a Sustainable Water Supply for Sydney<sup>1</sup> in February this year.

Two parts of this submission address questions raised in the discussion paper: Working with industry and governance.

#### Working with industry

The Government has been working with industry in Port Kembla to improve water recycling. It has announced an amplification of this proposal by extending the water recycling to other plants in the area. Another large recycling scheme is also proposed for the Shell Refinery and other industries at Rose Hill-Camellia. The water available from the processing of groundwater at the Orica Plant at Botany represents another significant opportunity for water harvesting.

Many smaller industrial installations can benefit from a grouping of industries together to solve water management problems. Some commercial properties or groups have improved water efficiency, but there is still significant scope for improved water management. The program should include recycling of sewage (sewer mining) where appropriate.

It is sometimes difficult for industry to bring about water savings. Different Government agencies and regulators have different agendas and few approach water through the concepts of the total water cycle or what is best for the individual business. Regulatory reform is necessary if the full potential of savings by industry are to be realised.

A concerted program of awareness and assistance, similar to the one proposed for households, should be implemented with industry.

Many abandoned coalmines within the Warragamba Catchment contain large quantities of water that have come from groundwater. There is no incentive scheme for the owners of these mines to pump them through a treatment process and into the streams of the catchment. Similar disincentives mean that the methane emanating from these mines is not channelled into the energy cycle. Investigation of an incentive scheme to tap these resources should be undertaken.

Some operating coalmines also have groundwater that could be diverted into the storages of Sydney's water supply catchments or be polished to potable water standards and taken directly into the distribution grid.

#### **Recommendations:**

That the Inquiry recommends to the Government that:

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<sup>1</sup> A full copy of the submission is available at <http://www.cleanup.com.au/PDF/au/submission-water--for-sydney-210206.1.pdf>

- The Government conducts an education and awareness program that assists industry, including commercial properties, in managing their water resources;
- The Government encourages private enterprise to invest in commercial and industrial recycling projects removing existing regulatory impediments and provides subsidies where there is a price differential between potable water and recycled water.
- The Government investigates sources and processes for releasing groundwater trapped in abandoned coalmines or discharged from existing mines.

### Governance

Just as Sydney's housing was designed at a time when water was regarded as plentiful; so too was the regulatory system that is used for water management in the city. The housing problem is being addressed by improved urban design in new housing releases and through the application of BASIX. There needs to be a similar overhaul of the regulatory system for water management in the city and its water supply catchments. Without this overhaul, councils, industry and even state agencies will continue to be frustrated by the labyrinth of regulations that prevent them doing the right thing with water.

The Government, through the Hawkesbury-Nepean Catchment Management Authority, is conducting a case study on water management regulatory processes in the Nepean River. This case study should be used as the basis for an overhaul of the regulatory processes affecting water management. The outcome of the regulatory review should be focussed on better environmental, health and water use outcomes.

Clean Up Australia has serious doubts about the governance arrangements for Sydney Water. The functions of commercial boards include ensuring that long-term plans are in place that will sustain the business. Many in the community knew that global warming and a cyclical drought regime were imminent and that this would mean water supply difficulties for Sydney. It would be expected that management plans were in place to manage both supply and demand in such circumstances. Instead, the board appears to have relied solely on regulatory processes imposed by IPART being enough to manage demand. But even these regulatory targets have not been achieved by Sydney Water. On the supply side, very little work appears to have been put in place to address recycling of sewage or stormwater. In fact, the board appears to have been preoccupied by a defensive action against the private sector that did recognise the impending drought. There is clearly something wrong with the governance arrangements at Sydney Water. The Government should not have been forced into a reactive move, like the desalination plant, if Sydney Water's board had its long term planning in place to deal with the expected drought.

### **Recommendation:**

That the Inquiry recommends to the Government that:

- The Government reviews the regulatory and governance arrangements for the management of water in the Sydney metropolis and its water supply catchments.

## **Busby's Bore Water Reclamation and Reuse Project**

### **Background:**

The inspiration of the project was reusing the water from Busby's Bore which was originally the second water source to the colony of Sydney and currently discharges to sewer. The challenge in many urban water reuse projects is water storage and this project is looking to reuse fallow assets: underground storages and tunnels that are no longer used for their original or intended purpose.

The project is now divided into two stages.

The first stage is reconnecting Busby's Bore to the City of Sydney parks: Hyde Park and Cook and Phillip Park. The NSW Government has now committed funds for Sydney Water to construct the pipeline connecting Busby's Bore to a storage tank in one of the City of Sydney parks. City of Sydney will construct the storage tank and use the water in their parks.

The second stage of the Busby's Bore is relevant to the discussion paper as this involves a collaboration between Clean Up Australia, Botanic Gardens Trust, Sydney Water and a range of private sector businesses from small consultancies to multi-national water companies.

The project has already developed a high profile based on the innovativeness of the concept. The project will provide an iconic demonstration of water reuse and recycling to the eight million visitors each year to the Royal Botanic Gardens and Domain. While there are now many other water recycling and reuse project happening, few will have such a high exposure to the residents and visitors to Sydney.

### **Clean Up Australia's track record in developing water reuse and recycling projects**

At the time on inception of the Busby's Bore project, ten years ago Clean Up Australia was starting on its' first Clean Water Campaign Fix-Up project: developing a water reuse and recycling project at Taronga Zoo in Sydney. At the time there was little water reuse and recycling. Clean Up Australia has gone on to develop five other Fix-Up projects with a total value of around \$35m.

Further information on the following five Fix-Up projects is available on the Clean Up Australia website<sup>2</sup>:

1. Karkarook Park Wetland Restoration
2. Richmond Water Reuse
3. Parsley Bay Remediation
4. Monee Ponds Stormwater Initiative
5. Woolgoolga water reclamation plant / CoffsHarbour closing ocean outfalls

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<sup>2</sup> <http://www.cleanup.com.au/au/Campaigns/archive.html>

### **Unique role as a not-for-profit**

Clean Up Australia is probably the only national not-for-profit organisation developing water infrastructure to demonstrate water reuse and recycling to the community.

Clean Up Australia has been able to engage with a wide range of businesses to secure pro bono goods and services based on the previous relationships Clean Up Australia and the Chair, Ian Kiernan, have developed.

Clean Up Australia, as a third sector organisation, has been brokering the relationships across the private sector as well as, state and local government and water authorities.

Project such as Busby's Bore would have been unlikely to be delivered by other parties due to the range of stakeholders involved and the vision and commitment Clean Up Australia has maintained for the project.

It is only recently as governments search for options to extend the potable water supply and governments are providing funding, that more of options are coming forward to reuse and recycle water.

### **Clean Water Campaign**

Today the Clean Water Campaign has broader aims than demonstrating innovative technologies for water reuse and recycling.

The campaign is underpinned by the belief that we need to learn to live with climate change.

The Clean Water Campaign, as one of the key Clean Up Australia programs, is working to engineer the reform of water management by working with the communities to encourage better water management and increase the levels of understanding about practical actions people can take every day.

As a result of a successful Clean Water Campaign in ten years we will see;

1. better appreciation of the value of water, and
2. improved understanding of how to use less water, so that
3. communities accept drinking treated wastewater,
4. industries are closing the water loop, and
5. the rural sector is managing water more sustainably

This will be achieved;

6. through the introduction of cost effective and innovative technologies that emulate nature, and
7. increased use of different grades of water matched to specific purposes

and supported by;

8. more efficient water delivery through reform of water authorities, and

9. effective public-private partnerships with the community

We will see as a result of this;

10. extensive wastewater reuse so that ocean outfalls will be closed for all but peak flows, and

11. water being used sustainably, so that

12. rivers, harbours and oceans health is improved

### **Demonstration projects as a tool for community change**

Clean Up Australia believes that communities will learn to accept water reuse and recycling as part of every-day. Using appropriate grades of water for appropriate purposes will just become the norm.

Clean Up Australia sees its' role in developing iconic demonstration projects as a step in the changing community beliefs and actions that will ultimately lead to communities willingly accepting recycled water as part of the drinking supply.

### **Developing community understanding of sustainable water supply issues**

Ian Kiernan has supported Toowoomba City Councils in their bid to get the Water Futures proposal up.

This examples highlights the issues that urban water utilities will face in meeting future water supply. The Toowoomba community have demonstrated that they will not make a decision about something they see as risk and / or don't understand.

Clean Up Australia supports the Goulburn-Mulwaree Council's approach in engaging with the community to identify a sustainable water supply.

Clean Up Australia's track record as an independent community based organisation dealing with and speaking out on environmental issues offers the trust and credibility to take communities on the journey to understanding and accepting solutions needed for a sustainable water supply.

## **Other issues to consider in the private sector's role in the supply of water and wastewater services:**

### **Clear understanding of private sector requirements**

The private sector will require a commercial return on any project and will require some certainty of that return. If the private sector is expected to make large financial investments in developing infrastructure the public sector needs to be in a position to enter into agreements that provide certainty of return.

If there is a large commercial risk in delivering a project the public sector might need to recognise that the project is not appropriate for a private sector partnership.

### **Many government agencies apart from urban and rural water utilities supply water**

- Clean Up Australia has worked with Taronga Zoo and the Royal Botanic Gardens in Sydney to secure water supply through recycling of waste water. The Royal Botanic Gardens has used around 250 kL potable water/day and the Zoo 370 kL/day. Both are high water users. Clean Up Australia first worked with Taronga Zoo ten years ago to install a water treatment plant to diversify and underpin the supply of water to the Zoo and reduce the amount of waste water entering the Harbour. Clean Up Australia is now looking at upgrading the water treatment plant to expand the reuse of water at the Zoo.
- The primary function of both these agencies is not supply of water, yet as high water users both need to be able to secure water to enable them to provide their primary functions and have or will become water suppliers.
- NWC needs to recognise that the recommendations of the discussion paper in dealing with the private sector apply more widely than just urban and rural water utilities.

### **Capability of government agencies to deal with private sector**

- Given the variety of government agencies now developing water recycling projects, there is a need to develop basic expertise in these range of agencies.
- Clean Up Australia supports development of clear guidelines for all government departments and agencies, not just urban and rural water utilities in dealing with the private sector.
- Government staff need to be trained and need to acquire the skills to be able to engage with the highly experience private sector water companies.
- Opportunities need to be made available for the major water utilities to share their skills with the smaller agencies.

### **Local water reuse projects**

Clean Up Australia continues to identify opportunities to reuse water on a local basis. Projects such as the White Bay project in Sydney cross local government areas. Water might be collected in one council and used in

another council area. This project has the elements of previous Clean Water Campaign Fix-Up projects that Clean Up Australia has taken on: innovative demonstration of water reuse, reuse of fallow assets, cross jurisdictional issues, so no natural 'owner' of the project, public profile. Clean Up Australia is not pursuing this project at present due to lack of resources.

Who else could or would take on such projects?

### **Third party access**

The proposed changes in NSW to third party access would bring in other players prepared to develop water infrastructure. This underpinning legislation is critical to enable private sector and non-water authority access to develop water infrastructure.

### **Holistic government approach to water supply**

Other government agencies can potentially be significant providers of water on a local scale through collection of stormwater and seepage, yet because the provision of water is not their primary function, the processes to access the water can be very time consuming and obfuscating.

Whole of government mechanisms to facilitate the ready access to all sources of water, not just those under control of the water utilities would facilitate a rationale approach to expanding local water supply options.

### **Clear strategic direction from government**

In NSW we have seen a number of water recycling projects announced in the Metropolitan Water Plan. Individually each project has value and progresses and builds on the experiences of both the public and private sector.

NSW appears to have shied away from a strategic examination of the potential to reuse and recycle water within Sydney. While the NSW government has committed to some significant water recycling projects, when the question of how can Sydney best reuse and recycle water might reveal other options. For example, Malcolm Turnbull's web site promotes Dr Noel Merrick's option of recharging the Botany aquifer with stormwater from the eastern suburbs.

Clean Up Australia is keen to support reuse of existing fallow asset that can be used to store stormwater and so, facilitate water reuse in the urban environments.

### **National water quality guidelines**

The availability of national guidelines for water reuse will help all organisations working to deliver water reuse projects.

When Clean Up Australia first worked with the NSW EPA at Taronga Zoo in 1996 there were no guidelines. The EPA did develop guidelines at Ian Kiernan's request to help Clean Up Australia design the water treatment plant.

While the Water Ministers have requested that the draft guidelines for indirect potable be fast tracked, Clean Up Australia's inquiries have found that it will be difficult for the staff and the necessary negotiation processes to be fast tracked. It is not expected that these guidelines will be available for another 18 months. National agreement and availability of these guidelines would have helped Toowoomba and probably Goulburn and SE Queensland when discussing water supply options with their communities.

### **Pricing barriers**

The disparity between the price of potable water and the current costs of recycling waste water has not made development of water reuse projects easy.

The government agency partners that Clean Up Australia works with have many budget pressures and do not get additional allocations to pay for recycled water when potable water is available at a lower price.

While Clean Up Australia expects that potable water prices will rise in Australia, the transition for the community and development of these projects will require governments to underwrite these projects until parity is reached with the real costs of both potable and recycled water.

In Sydney prices charged by Sydney Water are regulated by IPART, yet in Queensland individual councils have determine the water price. Currently Ipswich Council are charging 65 c/kL compared to Gold Coast Council which has developed a number of options to secure their water supply, are charging \$1.16/kL. The underpricing of water can be argues to led to under investment in water infrastructure. We are now seeing in SE Queensland, for example, a point where many communities are now facing critical points.

### **Risk allocation**

Clean Up Australia believes that project should be clearly scoped upfront and all risks understood and allocated. In Clean Up Australia's experience the public sector agencies do not always understand the risks or the implications. This can result in an expectation that the private sector has the ability to carry the operational and financial risk. Often it is the private sector who better understands the project risks, as this is their core business. The level of understanding of the public sector can be frustrating for the private sector, yet the private sector do not see it is necessarily their role to bring the public sector up to speed.

### **Whole of community approaches to planning a sustainable water supply**

Clean Up Australia has observed that project development is often limited by the experience of the responsible people developing the project. For example an engineer will often see an engineering solution to a water supply problem and promote an 'expert's' opinion. In can be argued in the case of Toowoomba the issue was not the availability of a technical solution to secure Toowoomba's water supply but an understanding of what it takes to build trust and credibility with a community to be able to address complex questions.

Community engagement processes such as those developed by the International Association of Public Participation provide a solid basis for talking to communities on new issues and ones that they see has some risk.

The challenge is often for the decision makes to let go of delivering the solution. Instead they could be helping communities understand the issues and risks and letting communities make confident decisions about the sustainable water supply they want. To date Goulburn is the first community in Australia where this could happen.