

2019 Review of the Sydney Water Operating License

Flow submission to IPART

August 2018

Table of Contents

1.	Summary	4
2.	Competitive Market	5
2.1.	Competitive market where customers belong to the market not Sydney Water	5
2.2.	Current policy drives Sydney Water's business as usual approach	5
3.	Independent Market Operator	7
3.1.	Remove Sydney Water's obligation to serve new growth areas	7
3.2.	Obligation to provide services to WIC Act licensees	8
3.3.	Exercising monopoly powers	8
4 Ze	ero sewerage outfall targets	11
4. 201	Recommendations from Flow submission to INSW Recycled Water Review Dec 7	12
5.	Conclusion	<u>21</u>

Flow 2019 Sydney Water Operating Licence Review - Flow Response Page 3 of 21

1. Summary

Flow welcomes the opportunity to respond to IPART's review of the Sydney Water Operating Licence. In responding to the key questions on the appropriateness, design and administration of the Licence, Flow believes the following must occur to ensure NSW customers and communities can access the best possible water services and technologies to deliver liveability, resilience, sustainability and downward pressure on pricing:

- 1. Recognition of a competitive market where future customers belong to the market, not Sydney Water.
- 2. Removal of Sydney Water's obligation to service new growth and prioritising its servicing to areas where WIC Act participation is unlikely to occur
- 3. Need for an Independent Market Operator (IMO) (separate to IPART) to identify those new growth areas best suited to market competition and to oversee the infrastructure planning and servicing strategies for these areas
- 4. Targets for zero ocean outfall and discharge to the environment and waterways.

These recommendations are discussed in detail in the following sections.

In addition, Flow has included the recommendations from its submission to INSW Review of Recycled Water in December 2017 (see Section 4). These recommendations are focused on industry improvements which may provide background for our recommendations to the current review of Sydney Waters Operating Licence.

2. Competitive Market

2.1. Competitive market where customers belong to the market not Sydney Water

The WIC Act has catapulted NSW into a global leadership position enabling world-leading Next-Gen water management solutions with Central Park, Discovery Point, Green Square and Barangaroo. It has enabled much-needed competition across the State, particularly in Sydney where future growth is planned for the Western City with limited existing water infrastructure and an aspiration to become a Garden City. Increased demand for irrigation water, community resilience and housing affordability is driving development needs beyond the current water in, wastewater out approach. This requires a change in thinking, a change in the way water services are delivered and a change in the way utilities interact with developers and customers. Change is best achieved through competition and Flow therefore proposes the identification of new growth areas within Sydney Water's Licence area where they are not obligated to serve. The customers belong to the market, not Sydney Water

The Western Sydney growth areas would be an example of a growth area suitable for market customers.

2.2. Current policy drives Sydney Water's business as usual approach

Existing water policy, legislation, regulation and price settings currently drives a centralised water infrastructure business as usual (BAU) approach to the exclusion of local water innovation approaches, including recycled water.

The WIC Act introduced by the NSW Government almost a decade ago to catalyse competition, water innovation and more water recycling cannot, on its own, drive the much-needed transition to next-generation water infrastructure. Significant reform is required urgently to enable the uptake of and investment in recycled water schemes.

2.3. Incentivise sustainability

In areas where Sydney Water has installed infrastructure, much of that infrastructure is gravity-fed sewer systems. These are notorious for allowing the ingress of stormwater, which results in wet weather peak flows that are not able to be managed by the system. This results in untreated or poorly treated wastewater being leaked or discharged into the environment. Furthermore, in eastern Sydney, wastewater is discharged through the ageing (and expensive to replace) deep ocean outfall system, which is not a sustainable long-term solution for a growing city.

The Policy should support innovation in sustainability in areas where this existing infrastructure already exists. This is critical to encourage and support new growth in a sustainable manner and to ensure the resilience of our increasingly dense urban lifestyle.

IPART's wholesale pricing decision of June 2017 effectively kills off WIC Act projects in areas with previously established Sydney Water infrastructure. This is contrary to the legislative aims of the WIC Act and results in Sydney being locked into old, unsustainable ways of doing things with no realistic prospect of fostering any innovation and solution finding for the future.

Sydney Water should be obliged to allow WIC Act participants to develop innovative wastewater treatment facilities in existing urban areas. This could be by way of innovation rebates or "credits" to the minus element of wholesale pricing to recognise the benefits of innovation and resilience that WIC Act participants can bring.

3. Independent Market Operator

Flow would like to see an *Independent Market Operator (IMO)* set up to ensure innovation and sustainable services are delivered to the market and there is a level playing field between Sydney Water and WIC Act licensed utilities.

Water infrastructure servicing and investment information must be available to the market and managed by an IMO advised by Planning NSW – rather than Sydney Water. An IMO should oversee and review inter-utility agreements which are currently informed and dictated by centralised water management practices and therefore incumbent utilities. No IWM review mechanism exists for these agreements, they remain difficult to negotiate, lengthy to implement and are challenged to encompass integrated decentralised water management solutions. IPART stepping in to mediate between Sydney Water and WIC Act licensees is not appropriate.

In a competitive market landscape enabled by the WIC Act - Sydney Water cannot continue to control the market and determine water management approaches. Planning for new water infrastructure must occur in a transparent way that ensures the most innovative and sustainable services are provided to customers. At the moment this is not occurring.

An IMO will ensure the WIC Act sector can contest water services currently dominated by monopoly players in Sydney Water/ Hunter Water. It should determine servicing plans for new growth. Those plans then determine who has an obligation to serve, see below section 3.1.

The following information should be held by an IMO:

- Servicing strategies
- Hydraulic modelling data
- Operational data flow rates, water quality,
- Sewage overflow rates
- Inter-utility agreements

3.1. Remove Sydney Water's obligation to serve new growth areas

IMO should determine which areas Sydney Water will serve and which areas should be opened to WIC Act proponents. The IMO will assess the capacity of the market to deliver and will identify strategies suitable for all new growth areas based on principles of sustainability, customer benefit, access and affordability. IMO will identify the areas where Sydney Water has an obligation to serve and the remaining regions where competition will be procured by the IMO to deliver. Sydney Water's obligation to serve new growth areas would, therefore, be effectively removed except in identified by the IMO from time to time.

Flow believes a best practice licensing framework would acknowledge the competitive marketplace enabled by the WIC Act and allow innovation in all new growth areas.

This framework must recognise that there is a competitive marketplace inside Sydney Water and Hunter Water's operating Licence areas. It should not deem that WIC Act utilities are taking customers away from Sydney Water/ Hunter Water. At the moment Sydney Water's licence assumes an obligation to serve all new growth areas. The WIC Act facilitates competition across the entire State, not in locations where Sydney Water deems it to be efficient.

Flow believes future customers do not belong to Sydney Water; rather new growth belongs to the market. If no one in the marketplace takes up those customers, then Sydney Water is obligated to serve them.

3.2. Obligation to provide services to WIC Act licensees

IPART has proposed four options for new obligations on Sydney Water to provide services to WIC Act licensees. Flow has concerns about all four options as none will tackle the anticompetitive and monopolistic pressures facing the WIC Act industry often enshrined in interutility agreements. For example, none of the options impact on the current uneconomic retailminus pricing framework and where negotiations may fail there is not currently an independent arbiter with IWM perspectives.

Flow believes an obligation for Sydney Water to serve WIC Act licensees should be in place for drinking water only, for the following reasons:

- WIC Act licensees are customers whereby drinking water is used as a top up for the provision of Recycled Water to its customers
- It is inconsistent to charge a retail minus price (which treats the end customers as SWC's) but not have an obligation to serve WICA licensees
- Sydney Water should not have an ability to exclude WICA licensees from the market both because it is inconsistent with the policy rationale and express terms of WIC Act and because it is a misuse of market power.

There should not be an obligation to serve wastewater:

• The obligation to serve wastewater evaporates any chance WIC Act proponents have to argue avoided costs under a retail minus regime.

Regarding set or minimum terms both have their downfalls. The first brings the risk of having terms that locked WIC Act proponents in; the second brings the risk of having a low standard on the minimum terms and an inappropriate arbiter. Therefore:

- any terms should be no more onerous than for the equivalent I&C customer
- Sydney Water must act reasonably and not misuse its market power
- The arbiter needs to be an IMO, not IPART.

3.3. Exercising monopoly powers

Inter-utility agreements

Evidence of Sydney Water exercising market power includes the execution of inter-utility agreements. For example, at Shepherds Bay Sydney Water refused Flow service unless Flow agreed to forgo its position to have that site on a non-residential tariff basis to avoid a retailminus wholesale tariff.

Without Development Servicing Plans for Sydney Areas, the cost of services is unknown. Sydney Water has changed its approach to service plans to ensure that the marketplace does not know the proposed servicing strategy nor the costs. A greater level of information is required, covering the full planning lifecycle of Sydney Water infrastructure - from planning to installation to replacement and maintenance.

Government agencies rely on Sydney Water to determine the servicing strategies for development areas, yet this is not shared with the marketplace. An independently administered process to get services set by an IMO would solve this.

There is currently no market operator to determine best practice servicing strategies nor to manage a fair and equitable procurement process. Without an IMO prescribed, negotiation fails to help WIC Act utilities, as Sydney Water can discharge its obligations without really giving the WIC Act utility the opportunity to influence the outcome.

Retail minus tariff

The introduction of the retail minus tariff is further evidence of Sydney Water exercising its market power - it initiated and lobbied for the introduction of the tariff, which has increased the cost of IWM/recycled water operations by 400 per cent to 1200 per cent yet affected Sydney Water's operations by less than 1 per cent over the five-year pricing period, the equivalent of Sydney Water's margin of error! This is impacting on recycled water investment and has sent a message to the development market that recycled water is too expensive. This is an entirely unacceptable outcome for NSW and customers. The NSW water market and policy settings prioritise Sydney Water's centralised water management approaches over WIC Act licensee decentralised solutions.

Services agreements

Flow has negotiated three inter-utility service agreements with Sydney Water and expects to negotiate another 15 over the next five years. Developing the first inter-utility agreement took over two and a half years. This represents a significant barrier to new market entrants.

Prescribed processes

Flow is happy to have pre-agreed template terms and conditions and then limit the negotiation to the site-specific requirements – thereby limiting the prescribed negotiation process. Prescribed benefit processes need to be reframed from an IWM lens rather than the current centralised lens.

Minimum service standards

Larger WIC Act schemes are less reliant on centralised networks like Sydney Water. This is because the customer base is large enough to invest in sustainable solutions. IWM is a more effective and efficient water management approach than centralised for new growth communities. Today's reliance on the existing water grid can be reduced by 70 per cent with current IWM schemes – over the next five years this could easily reach zero as technology and innovation improve outcomes for communities. Yet service standards continue to be dominated by centralised approaches – again an unacceptable outcome.

Provision of information

Flow has never been able to obtain the required information from Sydney Water in a timely manner. Nor has it been able to get this information from the market. This is because:

- Accredited consultants are tied up in confidentiality agreements with Sydney Water: Sydney Water guard information to the point where consultants and developers also have to be very careful about how they interact with competitors so as not to breach the confidentiality agreements they have had to sign.
- Consultants are nervous to share information or work closer with WIC Act proponents: Business development practices mean consultants are nervous they won't get future work with Sydney Water if they share what should be publicly available information with WIC Act proponents and/or work closesly with Sydney Water competitors.

<u>Planning gateway public authorities do not include WIC Act utilities/Sydney Water competitors</u> Sydney Water embodied in new growth planning across all government agencies across the whole of Sydney. WIC Act licensee are not listed as public authorities under the EP&A Act.

Other examples include:

- Consultants becoming institutionalised on centralised service approaches
 This reduces their ability to innovate and their investment in IWM.
- Sydney Water announcing servicing strategy release dates early, but not delivering them:
 - Developers hold off engaging with WIC Act licensees, as developers want to wait to learn what their Sydney Water delivery options are.
- Developers risk harsher negotiations with Sydney Water on other projects after engaging with Flow on a project:
 - Developers have asked that if we are providing wastewater and recycled water services, whether Flow can also provide drinking water services, as developers are concerned that Sydney Water may create delays in giving approvals.
- Sydney Water confidentiality clauses in inter-utility service agreements: These prevent WIC Act proponents from disclosing the agreement terms and commercials.

4 Zero sewerage outfall targets

4.1. Set targets to deliver zero sewerage ocean outfall.

With the environmental limits on the Hawkesbury-Nepean System (including South Creek), the capacity constraints in the coastal transport systems (SWOOS), and the need to decrease sewage nutrient discharges to the ocean, nil discharge targets are desirable. Local recycled water schemes can meet these targets. NSW can learn from other global jurisdictions on how to recycle wastewater to return high-quality recycled water to the environment.

For example, Finland has its own regulations concerning the treatment level of recycled water to be released into oceans/ waterways – which exceeds European Union requirements. Finland's national legislation - *Water Act: Licence to conduct wastewaters by Water Court 264/1961*¹ - licenses plants and their treatment requirements to remove from wastewater 95 per cent of solid and oxygen-consuming matter and phosphorus, and 90 per cent of nitrogen.

Over 80 per cent of Sydney's wastewater is discharged to the ocean, with minimal treatment. Approximately 0.5 per cent of Sydney's wastewater is discharged untreated to the ocean at Vaucluse, Diamond Bay and Diamond Bay South. NSW must strengthen its commitment to moving towards zero discharge to water.

The Sydney Water Act (s21(7)) has included a provision "to adopt as an ultimate aim the prevention of all dry weather discharges of sewage to water including from ocean outfalls". Sydney Water's Operating Licence 1995e2000 cl 8.3.1 stated that Sydney Water must "reduce discharges through non-potable reuse". This clause has been removed from the most recent operating licence.

The emerging WIC Act market can provide affordable alternatives to treating this waste at the source for the generation of high-quality recycled water to meet up to 70 per cent of the community's daily needs along with complementary waste to energy from the organic by-products of wastewater.

¹ http://www.ielrc.org/content/e0107.pdf

4. Recommendations Flow submission to INSW Recycled Water Review Dec 2017

Below are a set of recommendations Flow presented to the INSW Review into barriers to the uptake of water recycling. If implemented, they will ensure the NSW water sector transitions into the future.

1. Independent Market Operator

- 1.1 Enable the Independent Operator to establish water plans and water servicing strategies and manage utility procurement processes.
- 1.2 Ensure decision making about private sector access to the market is removed from Government and public water utilities and given to the Independent Market Operator.
- 1.3 Ensure all data relating to water infrastructure strategies are accessible to both the public and private sector through the Independent Market Operator.
- 1.4 Oversee and set the scope for inter-utility arrangements between WIC Act utilities and public utilities.

2. Fair pricing for IWM

Under the new framework, system-wide regulated wholesale prices have been set to allow recovery by IWM providers of retailing and local reticulation services. All other customer revenue is allocated to regulated wholesale charges. These arrangements mean that, except for excluded schemes (already in operation on 31 December 2017), all customer revenue received by Flow necessary to fund the ownership and operation of IWM plant, other than for reticulation, is appropriated by Sydney Water and Hunter-Water.

There is no system-wide wholesale prices for 'on-sellers with recycled water plants. These prices can be determined only under a scheme specific review. The proposed timeline for a scheme specific review is four months. IPART suggests a scheme specific review could take place in parallel with a licence application process.

This framework makes IWM and recycled water schemes unviable in NSW. For example, an urban recycled water scheme such as Green Square will now face wholesale charges that are 10 times more expensive.

The critical problem with retail-minus pricing is that it does not deliver wholesale pricing that relates to the cost of providing the service used by recycled wastewater schemes and vastly over-charges those schemes.

Flow acknowledges the widespread use of postage stamp pricing in a range of sectors, including water and sewerage. It notes, however, that IPART and other Australian regulators have never applied retail minus approaches outside the 2017 decision. This is because retail-minus is fundamentally at odds with sound public policy.

The underlying rationale for IPART's decision appears to be a view that competition is not efficient where the entrant is substituting for existing capacity. On this view, competition is efficient (and is to be permitted) only where: a) the entrant is competing with new capacity, and b) the entrant's new capacity cost is lower than the incumbent's new capacity cost. The intention of these arrangements appears to be that competition should be permitted only where the introduction of a water recycling scheme would result in material avoided costs for Sydney Water.

This is inconsistent with IPART's legislated objective of encouraging competition where efficient. IPART is implicitly adopting a view that productive efficiency is the principal aspect of efficiency. Productive efficiency is where the supply cost for an industry (serving a defined market and volume) is minimised. Where competition reduces productive efficiency (raises the industry cost curve), regulated prices should be set so that competition does not arise.

In other words, IPART is overlooking or denying there are benefits from dynamic efficiency gains from competition. Dynamic efficiency is a separate aspect from productive efficiency as it refers to efficient responses over time to changing technology and market (consumer demand) conditions. While the industry supply cost curve may increase in the short term, it may be reduced over a longer period, due to competition and innovation.

IPART is maintaining a view that water and wastewater services are natural monopolies and not subject to technology or market (demand) change. In other words, IPART's argument is circular and not based on sound policy principles or evidence.

The current pricing framework creates an impenetrable barrier to market entry for all water innovation schemes that require connectivity to public water infrastructure. IPART has defended its decision on the basis it is unable to allow for efficient wholesale pricing due to policy settings that dictate the pricing of water in Sydney and the Hunter including:

- o the nature of wholesale services and customers
- o the requirements of the IPART Act
- the structure of Sydney Water's and Hunter Water's regulated retail prices, including the current postage stamp retail pricing policy for Sydney Water's and Hunter Water's water and sewerage services
- the NSW Government's current direction that Sydney Water and Hunter Water set water and sewerage developer charges to zero
- o the effects of IWM and recycled water supply

IPART however, agreed that "all unnecessary impediments to competition in the water industry (should be) removed and that, where necessary, policy and regulatory settings should be

adjusted. (They) also agree(d) that competition in the water industry extends beyond wholesale pricing."2

- 2.1 Establish transparent pricing that values the broader benefits of IWM and reduced impact on centralised infrastructure and reflects these benefits in tariff structure.
- 2.2 Halt the application of the new retail-minus pricing framework finalized by IPART in June 2017 and due to begin from 1 January 2018.
- 2.3 Establish a new framework under which wholesale prices are based on the efficient cost of delivering the services actually supplied.
- 2.4 Consider a pricing framework that incorporates the external benefits delivered by IWM, including increased water security, avoided pollution from sewage discharge, and any avoided augmentation of centralised infrastructure.

The NSW Government needs to implement a 21st-century water policy that sets the framework to ensure fair IPART recycled water pricing while encouraging a competitive market with multiple players. A 21st-century water policy must foster new and emerging players into the market who can bring innovation, customer focus and competitive pricing.

3. Mandate recycled water

There are no statutory planning requirements for next-generation water management. The Metropolitan Water Plan has no statutory authority, and nor do the Greater Sydney Commission (GSC) Regional plans³. In a retail-minus water future, the market will not be able to deliver next-generation water solutions, jeopardising the NSW Government's ability to secure resilience, livability and sustainability objectives for Western Sydney.

3.1 Mandate recycled water and IWM as minimum standards for new growth & compel houses to connect through BASIX.

Mandating recycled water for non-potable use in all new developments will catalyse investment in water innovation in NSW while driving local resilience.

A household investment in a recycled water scheme delivers an alternative water supply that is unaffected by water restrictions and not dependent on rainfall, unlike a household investment in a rainwater tank. Considering this is a significant household investment, recycled water will drive a greater return on that investment. A 2013 study by Marsden Jacobs found houses accessing recycled water were found to have a 0.7% or \$5000 median uplift to the value of property"⁴.

² https://www.ipart.nsw.gov.au/files/sharedassets/website/shared-files/pricing-reviews-water-services-metrowater-legislative-requirements-wholesale-pricing-for-sydney-water-corporation-and-hunter-watercorporation/final-report-prices-for-wholesale-water-and-sewerage-services-june-2017.pdf

³ https://www.greater.sydney/draft-greater-sydney-region-plan-page

⁴ <u>https://www.metrowater.nsw.gov.au/sites/default/files/resources/Economic%20Viability%20-</u> %20Marsden%20Jacob%20%26%20Associates.pdf

3.2 Remove Sydney Water and Hunter Water's obligation to service new growth, allowing for next-generation providers to bid for water management and servicing solutions and services in new growth areas.

WIC Act licences issued within three months

Current IPART licensing timeframes are not keeping pace with the speed of land release and best practice licensing timeframes for essential services. Twelve to 18 months for WIC Act licence approval is anti-competitive and remains a significant risk to recycled water schemes.

Licensing hurdles have also included a risk-averse approach to fail-safe technologies and supplier of last resort. These items should no longer be hurdles as Licensees have proven their viability. Delays in licensing are impacting on the ability of families and people to move into their newly constructed and connected homes in a timely way. WIC Act licensing approval delays can be catastrophic as developers financially penalise WIC Act utilities if licences are not signed by the Minister within set timeframes. Licence processing timeframes, including variations, are unacceptably long for WIC Act licensees compared to Sydney Water. This means there is not a level playing field for WIC Act participants.

4.1 Fast-track WIC Act water licensing within three months to accelerate housing supply.

The issuing of licenses within three months will ensure families can move into their homes in a timely manner and send a message to the market that recycled water is a competitive and dependable.

5. Procurement for recycled water and IWM

No procurement processes for IWM and recycled water provision. Councils and Government do not know how to procure next-generation infrastructure solutions and services. While WIC Act has created one of the most comprehensive frameworks for the delivery of high quality recycled water infrastructure and services, the market does not know how to procure.

- 5.1 Establish new procurement methodology and approaches for local recycled water and IWM infrastructure and services for councils, agencies, developers, planners, consultants & contractors.
- 5.2 Require government and developers to demonstrate they have investigated alternative water infrastructure solutions, along with incumbent public utility solutions, and then chosen the most 'suitable' servicing strategy.

'Suitable' would be defined as the solution that most achieves the following outcomes:

- Affordability 0
- Sustainability
- Timeliness 0
- 0
- Future-proofed communities 0
- 0 Community benefit
- Liveable communities 0
- Innovation 0

New procurement processes are required to enable councils and government to procure nextgeneration water infrastructure where BAU would have prevailed. The City of Sydney's Green

Square stormwater and recycled water schemes are examples of successful procurement approaches.

As WIC Act licensee's prices are regulated by IPART and capital works costs are a commercial arrangement between the developer and provider (apart from any DSC funding), procurement by negotiation and comparison with BAU, rather than tender, should be permissible. Tendering would be time-consuming and inhibit providers in participating in pre-commitment concepts and pricing, thus negating private sector competitiveness and ownership of intellectual property.

There also need to be pathways created for Local Government to participate in the procurement and management of recycled water assets including *for maintaining public assets,* and *to facilitate the mandating of recycled water (and embedded energy) in the DA process. Canada Bay Council East Rhodes Growth Area, and Northern Beaches Council Ingleside Release Area are examples.*

In addition, Priority Growth Areas have not been assessed as to their capacity to be serviced by traditional utilities nor the opportunity for alternative utility provision, including recycled water (which could reduce demand for drinking water by up to 70%).

5.3 Make Sydney Water & Hunter Water capital investment forecasts and servicing data transparent and available to the market.

The lack of transparency and access to Sydney Water capital investment forecasts and servicing data makes any comparison of BAU challenging and often results in less reliable third-hand data sources.

6. Developer Service Charges (DSCs) for IWM

DSCs should be considered on a precinct basis and have the ability to be dedicated to IWM. At a minimum, DSCs could be set at the current CAPEX amount allocated by Sydney Water and Hunter Water, hypothecated over the relevant Growth Area on an ET basis. This amount would be contributed by developers to the relevant service provider. If the traditional methodology is utilised to determine DSC, the finance and augmentation cost components which would be deferred with a WICA provider could be made available as DSC to the WICA provider. This would be cost neutral to the developer.

6.1 Ensure any DSCs are precinct-based and can be dedicated to IWM.

7. A seat at the table for IWM in planning gateway

No equal powers, entitlements and expectations as Public Authorities. Currently only registered 'Public Authorities' are entitled to participate in planning gateway processes with developers and NSW Planning. While private companies (e.g. Telstra, Jemena) are listed under the 'Public Authorities' schedule, WICA licensees are not. This means alternative water and energy providers along with their solutions are shut out, entrenching BAU utility choices and blocking faster, cheaper and more innovative ways to release land.

7.1 Change current out of date gateway procedures enabling WIC Act licensed utilities to be recognised under sec 4 & 56(2)(d) EP&A Act.

Licensed utilities need to be defined as public authorities, so they enjoy the same responsibilities, have the same powers and have the same input to development planning as traditional public utilities. (Appendix A 160209 Gateway statutory + procedural change).

7.2 Include WIC Act licensees in the Conveyancing Regulations so that they are able to create and hold easements in gross under the Conveyancing Act.

The Industry was advised this issue would be addressed in WICA 2.1 by deeming category A scheme operators to be *'authorised'* operators. However, if it is not included in the WICA 2.1, WIC Act licensed operators must be included in the Conveyancing Regulations so they can create and hold easements in gross under the Conveyancing Act. This is critical to the delivery of WIC Act projects.

8. Change water management from centralised to localised IWM

The NSW Government should consider the establishment of an Independent *Water Market Operator* to transition the outdated water market into a 21st-century leader.

The NSW Government established an independent gas market to break AGL's monopoly over the gas market and deliver diverse services to consumers in 2000, the NSW Government can take a similar approach to water. A *Water Market Company* will remove decision-making from public water utilities and Government and put it rightly with an independent body capable of protecting consumers interests and encouraging a level playing field for the delivery of a safe a reliable water supply in a competitive or contestable environment. It would:

- Ensure industry-wide membership and contribution
- Create a logistics framework for the operation of a new market
- Determine the rules on how licensed WIC Act companies/ councils can enter the market, operate in the market, connect to existing infrastructure, and deliver services
- Create a transparent framework through which the market can develop to ensure incumbent monopolies cannot distort the market
- Information sharing
- o Procurement

Local IWM, utilising recycled water, is completely integral to the delivery of the GSC's Vision to 2056⁵ and its 10 Directions including Directions 8 & 9 resilience and efficiency⁶. Without IWM and recycled water the NSW Government will be unable to create and maintain a 'Western Parkland City' and a 'Central River City' which rely on an affordable, sustainable high-quality local water supply. IWM will deliver the public's strong desire for cleaner waterways to support swimmable waterways and water activities such as Our Living River⁷.

Defining IWM and set a new framework for an IWM water market is critical to making the transition away from a centralised market. An IWM management approach must align this with the *Metropolitan Water Plan* and importantly GSC plans by ensuring competitive growth areas are large enough for viable IWM business (around 3,000ET). Larger areas can be serviced by multiple decentralised water facilities.

⁵ https://gsc-public-1.s3.amazonaws.com/s3fs-public/draft_gsrp_structure_plan_the three cities a4 landscape.pdf

⁶ https://www.greater.sydney/directions-greater-sydney

⁷ http://www.ourlivingriver.com.au

- 8.1 Establish a Water Market Company to set a framework to transition from existing centralised approaches to a new competitive IWM market, including:
- 8.2 Defining IWM and how it applies to water management of new precincts.
- 8.3 Aligning precinct water management with GSC District Plans.
- 8.4 Rules of engagement, logistic framework, information & guidance for councils, stakeholders & industry.

9. Update old policy & laws for recycled water & stormwater

Outdated planning, environmental and building policy, regulatory and legislative barriers restricting the use of recycled water and stormwater need to be removed.

Legislation, regulation and awareness relating to the non-drinking use of recycled water is outdated and needs to reflect innovation in treatment processes, uses and water quality. Current legislation, for example, requires high quality recycled water discharged into the environment to be licensed as a pollutant. This is despite its categorisation as suitable for 'unrestricted irrigation' in accordance with the Australian Guidelines for Water Recycling. Highquality recycled water is not a pollutant and should not be licensed as such.

An essential part of maintaining an IWM sustainable water balance within a local community is the harvesting of stormwater to provide an additional water source for the production of recycled water and conversely, that excess recycled water be allowed to responsibly integrate with the stormwater and groundwater systems when needed. High-quality recycled water is safe for non-drinking purposes in NSW. Knowledge and awareness around these purposes vary widely. This must be mitigated through policy reform and awareness.

9.1 Remove outdated planning, environmental and building policy, regulatory and legislative barriers restricting the use of recycled water and stormwater by:
9.1.1 Defining IWM as low impact, not high impact. This could be addressed by removing these prescribed zones from the SEPP Infrastructure and/or introducing threshold requirements that allow low-impact facilities to be developed without consent on any land (but subject to environmental impact assessment under Part 5 of the EP&A Act).

9.1.2 Recognising that high-quality recycled water can and should be allowed to form part of responsible IWM without unnecessary red-tape from out-of-date legislation. Review overseas recycled water experiences around the use of recycled water for body contact such as swimming pools/lakes. When recycled water is available for body contact uses, the South Creek corridor could be much more amenable, with large water bodies being topped up with recycled water and used for boating and other recreational pursuits.

9.1.3 Enabling WIC Act utilities to manage parkland and amenity as part of the water balance. Many councils do not have budgets to invest in the maintenance of greening. The management and maintenance of parks and amenity can be extended to WIC Act IWM utilities which rely on these assets as part critical components of the IWM local water balance.

9.1.4 Modernising outdated water definitions, methodologies and assumptions relied on for water and sewer investment decision-making. Government including IPART, economists, analysts and industry rely on redundant water definitions, assumptions and methodologies that distort true costs and impacts of water infrastructure and services. For example, the ET (Equivalent Tenement) used by public water authorities is based on the water consumption of a "standard detached household" from the 1990s. This is an outdated definition compared to today's average household size and the dwelling mix – which includes higher density dwellings even in greenfield areas. Other examples include definitions such as "peak dry and wet weather flows" – which do not reflect modern construction techniques and behavioural patterns.

For IWM solutions, peak dry and wet flow analysis is redundant because the system, in this case, is impervious to infiltration (wet-weather flows) from stormwater. This means there is a deficit of understanding when it comes to IWM and more efficient and affordable water management approaches. Volume assumptions are changing due to more efficient appliances and behaviour, smaller lots and people living in apartments.

9.1.5 Establish an Environmental Impact Assessment Determining Authority. Due to the current drafting of the EP&A Act, WICA licensees unintentionally have no determining authority for the environmental impact assessment of its infrastructure after a WIC Act licence is granted. This causes the administering regulator to be overly cautious before a licence is granted, requiring detailed environmental impact assessment for infrastructure that is to be rolled out over several years and will almost inevitably change over that time, as well as the environment in which it is proposed. Once 'determining authority' is more clearly defined (likely as the Minister in charge of administering WICA), then environmental impact assessment can be carried out in line with the staging of a development over several years and only for that impact which is relevant over and above the housing development's own impact.

9.1.6 Utilities require the legislative power to enforce reasonable requirements relating to recycled water connection and supply in all homes and developments built in approved areas of operation, particularly where these are required to increase the uptake of recycled water and deliver the licensed water balances. This connection is required whether or not the home or development is built with development consent or as complying development. Complying developments currently have the ability to bypass many of the water authority approvals and requirements. For example, Flow requires its communities to connect washing machine cold taps to recycled water. If homes do not follow these requirements it impacts on the water balance – creating too much excess recycled water, Councils tend to be managed. While there is a regulated market for recycled water, Councils tend to be recalcitrant in agreeing to diverse uses.

9.2 Include livability benefits for end users in assessment criteria for publicly funded servicing of new areas

9.3 Enable recycled water to be available for fire-fighting purposes.

10.Equal rights for WIC Act utilities

Often in LEP land use tables, water recycling facilities are listed as 'high-impact' and therefore prohibited in residential and mixed-use land zones, the very locations that benefit from local, low-impact water recycling technology. Lengthy, costly LEP amendment proposals must be prepared and managed just to allow them to be permissible. SEPP (Infrastructure) only allows development without consent in certain, prescribed zones such as rural and industrial zones which reflects the nature of old, high-impact technologies.

10.1 WIC Act compliance certification – legislative power for WIC Act utilities to issue certificates of compliance for subdivision development (s109J(1)(e1) – must be drafted into the new Regulation as it was recently removed from the amended EP&A Act. WIC Act utilities require compliance certification for subdivision development. Planning NSW intends to address this matter by including provisions in the regulations, but the industry has not seen the proposed wording. This is a critical function for WIC Act utilities and must be retained.

10.2 Ensure equal government compliance checks as public utilities. WICA licensees developing dual reticulated developments should expect the same level of compliance checks by government authorities (eg Office of Fair Trading plumbing inspections) as their public counterparts in order to manage the same risks, regardless of whether those WICA developments are connected to public utility infrastructure.

10.3 Ensure development without consent powers & powers of enforcement for WIC Act licensees across all services. Currently, for WIC Act licensees, there is no equal design flexibility – Part 4 or Part 5 of the EP & A Act, no equal development without consent powers, no equal powers of enforcement.

10.4 Clarity in the EP&A Act of who the determining authority is for facilities being developed without consent by WICA licensees under SEPP (Infrastructure) so that utilities can have the same design flexibility over time as their public counterparts.

10.5 If infrastructure intended for use by a public authority can be approved as ancillary development or development with consent as part of a broader development, then this must also be the case for licensees under WICA.

11. Set targets to deliver zero sewerage ocean outfall

Ocean outfalls are a last century water management approach. Sydney produces enough wastewater to fill Sydney Harbour annually, yet Western Sydney needs water to green and to enhance liveability.

Keeping water locally for water features, greater greening, environmental flows, wetlands and for swimmable water features underpins the GSC's three city plan. To achieve this, wastewater resources need to be used in a 21^{st} century way. Sewage and wastewater outfalls into waterways and the ocean must be phased out in the future and targets need to be set. Importantly, high quality treated recycled water should not be considered waterway discharge - see recommendation 8, including 8.1.2 above.

11.1 Set targets to deliver zero sewerage ocean outfall. With the environmental limits on the Hawkesbury-Nepean System (including South Creek), the capacity constraints in the coastal transport systems (SWOOS), and the need to decrease sewage nutrient discharges to the ocean, nil discharge targets are desirable. Local recycled water schemes can meet these targets. NSW can learn from other global jurisdictions on how to recycle wastewater to return high-quality recycled water to the environment. For example, Finland has its own regulations concerning the treatment level of recycled water to be released into oceans/ waterways – which exceeds

flow

European Union requirements. Finland's national legislation - *Water Act: Licence to conduct wastewaters by Water Court 264/1961⁸* - licenses plants and their treatment requirements to remove from wastewater 95 per cent of solid and oxygen-consuming matter and phosphorus, and 90 per cent of nitrogen.

Over 80 per cent of Sydney's wastewater is discharged to the ocean, with minimal treatment. Approximately 0.5 per cent of Sydney's wastewater is discharged untreated to the ocean at Vaucluse, Diamond Bay and Diamond Bay South. NSW must strengthen its commitment to moving towards zero discharge to water.

The Sydney Water Act (s21(7)) has included a provision "to adopt as an ultimate aim the prevention of all dry weather discharges of sewage to water including from ocean outfalls". Sydney Water's Operating Licence 1995e2000 cl 8.3.1 stated that Sydney Water must "reduce discharges through non-potable reuse". This clause has been removed from the most recent operating licence.

The emerging WIC Act market can provide affordable alternatives to treating this waste at the source for the generation of high-quality recycled water to meet up to 70 per cent of the community's daily needs along with complementary waste to energy from the organic by-products of wastewater.

11.2 Commit to and enforce existing targets in the Sydney Water Act to deliver zero sewerage ocean outfall.

11.3 Enable licensed WIC Act businesses to access surplus wastewater to treat and reuse.

5. Conclusion

Flow will continue to work with IPART, Government and Sydney Water to achieve a shared understanding of IWM and the operational and technical requirements to transition the NSW water sector to the future.

Terry Leckie

Founder and Executive Director



⁸ http://www.ielrc.org/content/e0107.pdf

2019 Sydney Water Operating Licence Review - Flow Response