



Greater Sydney Water strategy - Submission by Wilton Action Group

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Executive Summary – Wilton Action Group concerns: Sydney Water and Greater Sydney Water Strategy

1. A key theme of the advocacy of WAG since its inception is the need to provide sustainable and environmentally responsible solutions for wastewater and resilient water supply for the proposed development of Wilton in a time of the escalating impacts of climate change, its urgency has now given an even greater impetus from the Covid19 impact.
2. We are concerned that Developer driven adhoc planning of the wastewater systems delivered under commercial agreement by Sydney Water or private interests in Wilton will lead to inefficient designs servicing each individual developer's patch, the inability to connect neighbouring suburbs, and overall higher expenditure over the full life cycle of the system, which will pass to consumers. These package style solutions may produce less than desirable service levels, and result in higher environmental impact and footprint.
3. The risk of poor planning outcomes due to rapid and vast expansion of Sydney Water's assets, amongst this highly constrained and valuable environment, is real. This risk needs to be responsibly managed to avoid system failures and unplanned costs passing to consumers. These concerns have been given real validation by the release of the NSW Auditor General's report of 23 June 2020 – Water Conservation in Greater Sydney.

<https://www.audit.nsw.gov.au/sites/default/files/documents/Water%20conservation%20in%20Greater%20Sydney.pdf>

Auditor General - Executive Summary conclusion:

“The Department and Sydney Water have not effectively investigated, implemented or supported water conservation initiatives in Greater Sydney.

The agencies have not met key requirements of the Metropolitan Water Plan and Sydney Water has not met all its operating licence requirements for water conservation. There has been little policy or regulatory reform, little focus on identifying new options and investments, and limited planning and implementation of water conservation initiatives.

As a result, Greater Sydney's water supply may be less resilient to population growth and climate variability, including drought. “

WAG comment: It would appear the Greater Sydney Water Strategy is a major response to such findings by the Auditor General. But by whom will the success of this strategy and its implementation be monitored and measured?

Wilton Action Group – recent advocacy on Wilton water and wastewater issues

Wilton Action Group makes this submission following previous dedicated briefings from Sydney Water regarding Sydney Water's proposed servicing for the Wilton Growth Area for water supply and wastewater infrastructure on 8 May 2019 (attached) and 22 April 2020.

More recently WAG have attended the Water Symposium on 19 May 2021 at Wollondilly Council and follow up Community Consultation in Campbelltown on 10 June for our input into the Greater Sydney Water strategy.

Since those events we have continued to make strong representations to Wollondilly Council which has led to Council voting unanimously in its Extraordinary Meeting of 22 September for the following in respect of future water supply and wastewater infrastructure for North Wilton and the Wilton Growth Area; that

“That, in regard to Wilton North Precinct and Draft Neighbourhood Plan:

4. Note, that in relation to the supply of water and the disposal and management of sewerage, Council is not satisfied at this point with the public utility infrastructure that is essential for the proposed development is available or that adequate arrangements have been made to make that infrastructure available when it is required.

Link: <https://agendasandminutes.wollondilly.nsw.gov.au/>

WAG submission to Wollondilly Council's Integrated Water Management Strategy

In a previous submission to Council of 24 June 2020 on its Integrated Water Management Strategy WAG noted that:

“We have been in consultation with Sydney Water, in particular on the Wilton Servicing measures. We are disappointed to report that progress seems to be slow, and an integrated design is yet to be progressed or finalised in a meaningful way. It is likely that this will result in multiple sewerage treatment package plants being constructed by developers as an interim measure in the area which will increase the environmental footprint and impact across the shire.

It is likely that no integrated, central wastewater processing and recycling facility will be available for the Wilton New Town for some time, possibly decades. Sydney Water have chosen an "adaptive pathway model" to enable this sort of development, which is essentially allowing out of sequence suburbs to be created in a hap hazard way without adequate consideration of the principles of Integrated Water Management Design.

It is fantastic that council are now specifying the objectives of such a strategy to bring this poor outcome back into line, but we need to ensure that this loophole is closed, where interim measures are put in place which compromise the environmental outcomes in the short to medium term. Better planning could result in more effective use of resources and staged development in consideration of the Wastewater Recycling system could remove the need for such interim solutions. As we have previously said - DAs should not be approved without effective Water and Wastewater design”.

Our continuing concerns outlined below strongly reinforce both Council and WAG's position on adequate wastewater servicing solutions needed for the Wilton Growth Area.

From Executive Summary Greater Sydney Water draft Strategy: p.7

Sydney's growing population and economy mean that, without action, we are almost certain to face a future gap between our demand for drinking water and the available supply. Our sustainable supply level is up to 540 gigalitres (GL) per year (a bit less than the volume of water in Sydney Harbour) and modelling suggests this may be about 40 to 70 GL/year less than we need under a moderate growth scenario. Increasing climate variability means that, without action, we could face a shortage of drinking water with more and longer periods of severe drought. This draft strategy examines a wide range of potential solutions, including

- **Continue investment in comprehensive water conservation and efficiency programs** to save up to 49 GL/year by 2040 at a relatively low cost
- **Increase utilisation of the existing Sydney Desalination Plant** to produce up to an extra 20 GL/year
- **Make much greater use of stormwater and recycled water** to cool and green the city and support recreational activities
- **Continue planning for new rainfall-independent supply options** such as desalination and investigating purified recycled water where appropriate
- **Invest in upgrades, new connections and leak management** to address the risks posed by ageing water and wastewater systems and infrastructure
- **Integrate our water and land use planning more effectively** to incorporate sustainable water use into building and landscaping design.

These are then represented in the following objectives and priorities on p14

Figure 1. Greater Sydney Water Strategy: Objectives, principles and priorities

Objectives	Support economic growth and community wellbeing by providing confidence in the sustainability of Greater Sydney's water supply to meet growth and adapt to a changing climate to 2040 and beyond	Support delivery of the Greater Sydney Region Plan—A Metropolis of Three Cities and the Premier's Priorities for greening the city	Identify the strategic pathways for decision making in consultation with customers and the community	Set the pathways to identify highest economic value and most affordable investment portfolios for water infrastructure	
Resilience principles	 Use what we have better	 Increase integration and interconnection	 Diversify supply sources	 Plan ahead	 Review and adapt
	Priority 1 We understand how much water we need and when	1.1 Change the way we think about future water needs (enduring supply) 1.2 Consider future drought and climate risks			
	Priority 2 Our water systems are sustainable for the long term and resilient to extreme events	2.1 A strong focus on water conservation and efficiency 2.2 Make best use of the assets we have by optimising use of the Sydney Desalination Plant 2.3 Plan for new infrastructure with a focus on rainfall-independent supply 2.4 Manage location-specific or asset-specific risks 2.5 Respond to the impacts of flood mitigation decisions on the system			

Priorities and actions	Priority 3 Our city is green and liveable	3.1 Integrate water cycle and land use planning 3.2 Support the design principles for Greater Sydney 3.3 Prioritise alternative water sources for greening and cooling 3.4 Progress a circular economy approach for water services
	Priority 4 Our waterways and landscapes are healthy	4.1 Maintain and improve ecosystem health 4.2 Invest in wastewater management 4.3 Improve stormwater management 4.4 Protect water for recreation
	Priority 5 Water management and services meet community needs	5.1 Recognise and protect Aboriginal rights, interests and access to water 5.2 Enhance community confidence through engagement and transparency 5.3 Manage price impacts for customers

Comment: WAG' concerns and advocacy have aligned with these solutions, priorities and objectives particularly Priority One and Two in relation to 'a future gap between our demand for drinking water

and the available supply'. This will occur as a result of a very large projected population increase in the next 15 years for Wilton and the Greater Macarthur Growth Areas and from the future impacts of climate change, most recently seen in the drought which saw the Upper Nepean dams record a record low of 25% capacity. WITH THE CURRENT POPULATION!

The resilience principles stated above do not take into account management through drought, or resilience of infrastructure. With extreme drought it can be foreseen that availability and consumption will alter the supply available for recycled water and generate higher demands for recycled water, which may not be available. The strategy must consider an extreme drought scenario.

The pathways consider highest economic value and most affordable – to what extent will housing owners be burdened by the infrastructure objectives?

Sydney Water should work with DPIE and Council to ensure drought prone landscapes are designed to reduce the burdens on infrastructure to provide water for greening.

Recent history of Sydney Water planning for Wilton

In our submission to the Sydney Western City Planning Panel on 2 September 2019 we were able to achieve a deferment of the Panel's decision on the Wilton Stage 1 DA as it was not satisfied by Sydney Water's assurances on water and waste water servicing viz:

9. The Panel noted the advice of Sydney Water conveyed in letters dated 28 March 2019 and 29 August 2019 to the effect that "satisfactory arrangements will be in place to ensure drinking water, wastewater and recycled water services will be provided to the Wilton South East Precinct". However, the means by which those arrangements will ultimately be implemented remains unresolved. The ultimate design may have impacts on the final form of the development and/or its planning impacts. Further information as to the works proposed should be provided, noting that any associated treatment or recycling plant might possibly be identified as the subject of a further development application.

In a split decision, the DA was approved by the Panel on 9 October 2019 with assurances repeated from Sydney Water that arrangements were in place as above. Two Wollondilly Council staff members on the Panel voted to refuse the DA principally on the basis of not being satisfied with such assurances by Sydney Water.

Almost two years later Wollondilly Council itself unanimously voted it was not satisfied at this point on water/ waste water infrastructure for Wilton North.

This Panel decision did not take into account our presentation of our analysis of the great supply gap looming for the future water supply for Wilton and Macarthur Growth Areas. Viz:

Facts about our local water storages

- Information obtained from the *Water NSW Greater Sydney Water Supply Yield 2018 report* states 41.61 GL/annual is supplied to Macarthur, and Picton and Bargo (which is serviced by the Nepean Dam). Based on the planned growth to 2040 and average consumption, our calculations show the water demands will rise to

58.14GL/p.a . This will well exceed the current availability of 41.61GL without considering climate change impact

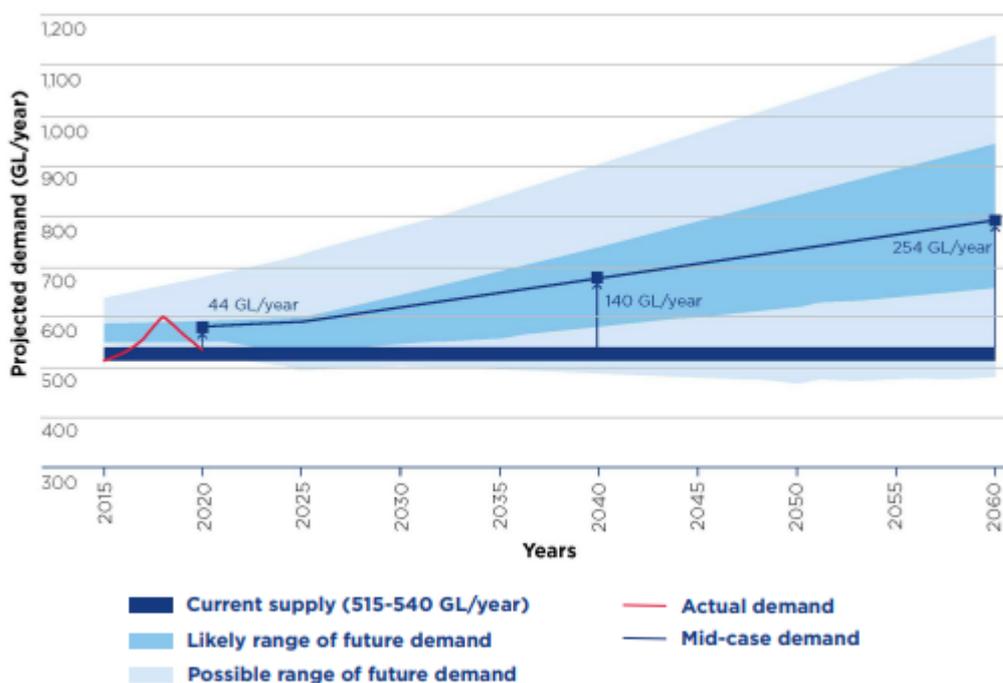
- How much population can our water supply withstand is the unanswered question?
- It's not likely there is going to be more water over the longer term, and the four local dams must cope with new demands for housing growth that doubles the Wollondilly population in addition to mining, climate change and drought impacts.

We note from the 19 May Council hosted Water Symposium briefing that Sydney Water said it has quietly shelved its proposed Prospect to Macarthur pipeline proposal. The proposal was heavily criticised by Ipart for not being a cost-effective solution to augmenting this region's future water supply as it was effectively just cycling existing water from the local dams to Warragamba and Greater metropolitan Sydney and back again.

Currently the Upper Canal provides the boosted supply to Warragamba from the local dams and the Shoalhaven. WAG is concerned about the condition of the Upper Canal and whether it will need extensive maintenance and repair in the coming years, being aged colonial heritage water infrastructure.

Future water demand and supply projections from p.52 – Greater Sydney

Figure 11. Projected demand for water to 2060



Even in mid case demand there is a significant gap. Clearly water efficiency, recycling and storm water harvesting will be critical to closing that gap.

Sydney Water is now pursuing a rainfall independent and circular economic strategy as outlined in the Greater Sydney Water Strategy's Priorities 2 and 3 above. But will that be enough? In our submission to Ipart on the Pro-Mac pipeline proposal we noted the following:

“The scale and rate of the Sydney Water’s infrastructure development over the next 30 years is unprecedented in NSW. Such a project should require extensive and independent oversight. We also seek a moratorium on development approvals in the area, as there has been no concept planning, climate modelling, and zoning of land required to service the water and energy infrastructure needed to support the greenfield developments. This is planning done in reverse and puts our water security at risk.

What is even more absurd, is Minister Rob Stokes decision to exempt Wilton developers from having to provide a Water Recycling Plant under clause 18 of the Growth Centre’s SEPP.

Water management in this sensitive water catchment environment is not being efficiently planned. It is also not helpful that responsibility for the water system is split across multiple organisations such as WaterNSW, Sydney Water, and is reactive to the housing projects and staging led by DPIE.

“With development of the magnitude proposed for Greater Macarthur and Wilton, we feel that IPART must consider the capability of Sydney Water to deliver such a large-scale project”.

The risk of poor planning outcomes due to rapid and vast expansion of Sydney Water’s assets, amongst highly constrained and valuable environment, is real. This risk needs to be responsibly managed to avoid system failures and unplanned costs passing to consumers.

This current generation must conserve/recycle water (which remains unresolved to date), so that the quality of the resource can be maintained for future generations. The right to potable water supply is fundamental to intergenerational equity.”

In line with the Priorities 1 and 2 above, Sydney Water has the following Priority 6 in its submission to NSW Water Strategy

<p>Priority 6: Support resilient, prosperous and liveable cities and towns</p>	<ul style="list-style-type: none"> • Action 6.1 could be further expanded to incorporate innovative solutions to improve the sustainability of water services (including towards a more circular economy and the NSW Government's energy and climate change goals). A systematic approach would see innovation consider the different parts of a water system and other services such as waste or energy as a whole, to enable solutions that reduce and reuse, while improving service costs efficiently. • Resilience should be aligned to the NSW strategy for critical infrastructure, which includes the 5Rs of Resilience: Resistance, Reliability, Redundancy, Response and Recovery. The application needs to consider the cost of applying the different permeations of the 5Rs to select the best value resilient approach that will meet the risk appetite and community expectations. • Climate change modelling, including NARCLIM, should be applied for all new and renewed water infrastructure to consider the impact over the life of the asset, not just the financial life. • Sydney Water supports the directions of the Greater Sydney Region Plan and its adoption of green infrastructure concepts. Like other forms of infrastructure, green infrastructure needs to be planned, managed, and maintained. Positive policy action is required to support thriving canopy and grasses and optimise cooling and amenity benefits. • Sydney Water acknowledges there are opportunities to improve the scope and reach of water conservation activities in Greater Sydney. Current pricing frameworks could be improved to provide greater confidence for investment in water conservation. We are also keen to explore the opportunities for pricing to support water conservation efforts. • Sydney Water is pleased to see the Government will support water utilities to diversify water sources. We urge the Government to consider recommending the construction of a small-scale Foundation Plant, which can demonstrate the purified recycled water treatment process to regulators and the community. • Sydney Water supports competition, but clearer objectives for customers and environment and waterways need to be established. Market structure needs to recognise water management dependencies on land use planning (which is not a contestable service).
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WAG comment:

We note the recommendations for resilience and its components to and that 'climate change modelling should be applied for all new and renewed water infrastructure to consider the impact over the life of the asset not just the financial life 'and for a 'small scale Foundation Plant which can demonstrate the purified recycled water treatment process to regulators and the community'.

We understand that the Foundation Plant will be built following a Scoping Proposal for the Upper South Creek Advanced Water Recycling Plant.

However, in our recent question at the Council Community Forum of 12 October we noted the divergence by Sydney Water in the planning for such a pilot recycling plant and the current planning for Wilton Growth Area for individual package plants quote:

Given the new philosophy of Sydney Water about the need for a circular economy it is interesting to note that Sydney Water is now working with Wilton developers to deliver interim package plants for wastewater treatment and according to Sydney Water's latest Wilton North update, attached, Sydney Water 'has developed a reference design for these plants. They are ready to move into detailed design when accelerated development is wanted by the developer. They are located with consideration of existing and future residents. The proposed interim package treatment plants would service the initial stages of development for around five years, depending on the speed of development and delivery of permanent infrastructure'. Recycled water will be critical for their operations.'

So the question is: Given that the lack of detail in these assurances quoted above by the proponent and Sydney Water essentially restates the previous assurances by Sydney Water which led to Council adopting its resolution of 22 September as not being satisfied at this point on water/ waste water

infrastructure and given that Sydney Water has announced in the Greater Sydney Water Strategy a scoping proposed for an advanced single water recycling plant at Upper South Creek, after considering the option of multiple plants as not being best value for money and, quote: While we found the ‘three sites’ option to be better value than Option 1, the ‘single plant’ option presented the lowest net present value and greatest value-for-money outcome. The advantages of the single treatment plant included the ability to minimise disruption to the community, maximise opportunities for bulk provision of recycled water in the future, and similarly provide the best opportunity for Sydney Water to pursue various modes of resource recovery, including biosolids management, energy generation and other resource recovery options.’ See

<https://www.sydneywatertalk.com.au/53513/widgets/322594/documents/193879>

So why does Sydney Water pursue multiple package plants for Wilton whilst deciding that the single plant option for Upper South Creek represented the ‘lowest net present value and greatest value-for-money outcome?’ With current planning indicated that a single STP for Wilton will only come on line in 20 year’s time .i.e about 2040?

And for Wilton will Sydney Water ensure that climate change modelling will be applied for ‘all new and renewed water infrastructure to consider the impact over the life of the asset not just the financial life.?’

Finally we note on community engagement on p121 in relation to Priority 5:

As part of the consultation on this Strategy, there will be opportunities to:

- Provide precise, easy to understand information about the science and technology behind a range of water supply options including desalination and purified recycled water, using a range of different media and methods
- Highlight examples of leading technologies for rainfall-independent supply options operating in other major cities and deliver demonstration projects that increase community familiarity with and acceptance of those
- Clearly articulate the environmental benefits of different rainfall-independent supply options.
- Research customer and community perceptions about where and when rainfall-independent supply options would be accepted, under what conditions and at what price

WAG comment: WAG would appreciate involvement in progressing such opportunities. And recommend Sydney Water pursue a much fuller engagement process, especially with indigenous communities as per Priority 5.1: Strengthening the role of Aboriginal communities in water planning, management governance and decision-making.

For a global best practice of full community engagement WAG recommends Sydney Water study the thorough community engagement process adopted by, ironically, the Wilton Town Council in the UK for implementing its Neighbourhood Plan:

<http://www.wiltontowncouncil.gov.uk/VirDir/CoreContents/News/Display.aspx?id=24159>

On p.212 We also note:

The NSW Water Strategy incorporates several new state-wide approaches that will also improve public trust in Greater Sydney’s water management:

- Improving how the water sector engages with communities, including using plain English to explain complex technical and regulatory concepts, and exploring ways to build the community's capacity to participate in water management processes and decisions.
- Making water information open, transparent and easy to find, including through a new WaterInsights portal that provides easy access to information about how water is used, managed, shared and traded in NSW.
- Improving and expanding our water modelling capabilities and giving the public access to these models and the data generated by them

WAG comment: Given the lack of real ongoing engagement and transparency by Sydney Water with WAG and other community stakeholders in the Wilton developments we submit that Sydney Water should rectify that consultation and engagement void as soon as practicable in line with the NSW water strategy Sydney Water initiatives outlined above.

Such a recommendation is bolstered by the recent Review **of water-related data collections, data infrastructure and capabilities by the NSW Chief Scientist July 2020**

<https://www.chiefscientist.nsw.gov.au/independent-reports/water-data-review>

Water Data review

The effectiveness and efficiency of all water-related decision-making, both in government and by external stakeholders, would be substantially improved and made more resilient if all water data was made 'open' – freely and publicly available to all. 'Open data' is globally now a common place policy in many situations that impact public good and that requires many different experts to contribute to decision-making. Open data encourages collaboration and transparency and drives efficiency and resilience of decision-making.

RECOMMENDATIONS

Recommendation 1

The default position of all NSW water data, collected from both public and private sources, should be 'open data' that is publicly available and managed in accordance with the NSW Information Management Framework and relevant standards.

'Open data' includes data for decision-makers that is high-quality, readily accessible, in usable format and transparent in its applications.

Transparency encompasses collection, processing, storage and use. Use includes selection of data; limitations of that data; selection of analytical approaches; and model and parameter assumptions. The management of risk and uncertainty should be well-described, open to scrutiny and reflect input from a range of experts.

Transparency also encompasses the data sources, gaps and uncertainties used in models and business cases for plans and investment decisions.

The concept for 'open data', supported by integration, has precedents. For example, the California Open and Transparent Water Data Act 2016 (the CA Water Data Act) includes the finding that "The recent drought reveals that California needs to integrate existing water and ecological data into an authoritative open-access platform to help water managers operate California's water system more effectively and help water users make informed decisions based on water availability and allocation." (Assembly Bill No. 1755).

Recycled Water: a bold path to be taken by building community confidence

Despite recycled water being a popular choice and being broadly embraced, the concept of indirect potable reuse schemes have lacked community and political support across Australia to date.

<https://www.mdpi.com/2073-4441/3/3/869/htm>

- (1) Wastewater is a legitimate resource, and relatively climate and rainfall independent. It is a resource that can be utilised for both recycled water and indirect potable reuse. As per the minister's directions, Sydney Water now have responsibility for catchment to tap supply, bringing the responsibility for water back to one organisation to oversee. We see this as a favourable outcome. However Sydney Water need to understand the responsibility that goes with it. All water supply options should be on the table, and given equal weight, even those that may have difficult political and social aspects, such as indirect potable reuse. Many Sydney residents already consume a portion of indirect potable reuse water, without being aware of it, as the Southern Highlands and Blue Mountains areas wastewater discharge points are in the catchment to the water supply dams. Public education on this, and future options for indirect potable reuse to achieve climate resilience rest with Sydney Water.
- (2) The urgency seems to have dropped away with the breaking of the drought, but these planning decisions cannot be left to be made when the water levels next reach crisis point. There also needs to be acknowledgement that Desalination is not available inland and is not a low cost option - it is more expensive than highly treated wastewater. There are water recycling schemes that are close to the catchment and distribution infrastructure. These should be prioritised for potential potable reuse - an example is Wilton. Creating a best practice treatment option at Wilton now could enable wastewater treatment with the treated water being sent to the nearby Pheasants nest weir. It could be directed into the weir for indirect potable reuse through the Upper Nepean Scheme, or below the weir as eflow replacement.
- (3) Having both options piped in could enable the augmentation of supply at the flick of a switch should dam levels go critically low again. This would make up a tiny portion of the bulk of Sydney Water supply, giving almost all Sydney residents (via the Upper Nepean raw water distribution scheme) a small portion of recycled content. Promotion of how small a percentage this is could improve public perceptions. Committing to this type of scheme now could improve the outcomes for the environment, as it would reduce the need for dual pipework systems throughout the new city (more efficient use of resources). We assume it must be challenging to match recycled water production with recycled water demand, and not have lack of supply, or oversupply at some point. Redirecting this type of scheme towards an indirect potable reuse or eflow scheme would enable the actuation of dam releases to even out this supply and demand.
- (4) It is local people who conceive ideas such as this, being more aware of where their waste is going and where their water comes from, local people who have raised concerns of the vulnerability of the Upper Nepean supply area to meet the needs of the project population growth. Having an educated public is a fantastic resource. Community suggestions and needs must be prioritised in the planning system to enable meaningful contribution, and push Sydney Water (and developers) into previously unexplored pathways to sustainability. Sydney Water must not compromise its sustainability goals when it is engaged by developers to provide water and wastewater services.

- (5) It is the duty of Sydney Water to actively promote such innovative future options of indirect potable reuse, as well as increasing their role in promoting water efficiency, which dropped off when the desalination plant was proposed. Indirect potable reuse should be actively pursued, as a small portion of everyone's water supply, as we are, after all, the driest inhabited continent in the world.

Further reading:

<https://www.waterra.com.au/publications/document-search/?download=1806>

This analysis indicates that the obstacles to (increased) potable reuse in Australia are, for the most part, not technical obstacles. That is, potable water reuse is not held up by a lack of technical ability to build and design effective schemes, but potentially by other less technical aspects.

WAG conclusions and a call to action:

- Sydney Water need to work closely with the Council and community, including Aboriginal communities, who will be burdened with future water shortages as we face a doubling of the population.
- The community require meaningful dialogue and facts to satisfy our concerns.
- Development should not be pushed forward without proper community consultation.
- Temporary systems should not be permitted until a permanent solution is determined and implementation phasing is provided.
- A clear drought scenario solution should be provided as base line information to assess the capacity of the system to cost-effectively supply recycled and/or harvested water for private and public space greening whilst achieving potable water conservation targets and maintaining ecological flows.

Minutes and actions

Venue: Wilton Community Centre, 20 Broughton Street, Wilton

Date and time: 7.30 pm Wednesday 8 May 2019

Meeting title:	Options planning presentation to Wilton Action Group	Subject:	Wilton New Town
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Attendees:

- Fiona Bullivant – Wilton Action Group
- Stewart Bullivant – Wilton Action Group
- Lucinda Hewitt – Wilton Action Group
- Sue Johnson – Wilton Action Group
- Bryan Williams – Wilton Action Group
- Nelly Berry – Sydney Water, Acting Collaborative Service Planning Manager (West)
- David Trinh – Sydney Water, Project Manager
- Liz White – Sydney Water, Communications & Engagement Advisor
- Erin Vais – ENSure, Project Manager

Sydney Water presented to members of the Wilton Action Group, what we have been planning for Wilton New Town during our options study.

A copy of the presentation is included with these meeting notes.

Questions that could not be answered by Sydney Water at the meeting were noted and our responses are now provided below.

No.	Question
1.	Does Sydney Water have any existing package treatment plants within our area of operations? There are no existing package treatment plants currently within Sydney Water's area of operations. However, we have been engaging with the market and wastewater treatment industry in relation to package treatment plants. There are existing package treatment plants operating in Queensland and overseas.
2.	What is the capacity of the package treatment plants? They come in modules and can be expanded to meet growing demand. Each module can treat up to 400 equivalent persons (EP) which is 56.8m ³ /day.
3.	Will there be a hydrological study to ensure that irrigation from the package treatment plants doesn't contaminate ground water? This will be considered in the concept design stage and whether it is required to meet regulatory requirements.

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4. What is the water allocation for the Macarthur Water Filtration Plant?
- Sydney Water provides a yearly forecast to WaterNSW to ensure yields align with requirements. Sydney Water and WaterNSW work together with Department of Planning & Environment (DPE) to ensure our demand and yields are aligned. The current maximum demand for Macarthur Water Filtration Plant is about 150 ML/day. The designed capacity is 265 ML/day.
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5. Where does the raw water currently come from for the Macarthur Water Filtration Plant?
- Raw water comes from Avon, Cordeaux, Cataract and Nepean Dams. There is also additional capacity to transfer from the Shoalhaven System.
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6. Who is ultimately responsible for bulk water supply and overseeing the sustainability for areas?
- DPE is responsible for the long term planning of water supply needs. Sydney Water and WaterNSW work with DPE to ensure this is implemented to meet customer needs in accordance with the Operating Licence.
-
7. Will there be an increase in water allocation for the Macarthur Water Filtration Plant as a result of this project, and if so will there be any community consultation?
- This will be determined in accordance with the Metropolitan Water Plan.
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8. Can Sydney Water provide a contact for Water NSW?
- Unfortunately, Sydney Water is not able to give out direct contact details for representatives of other government agencies. WaterNSW has previously advised that the correct process for the general public to contact them is by calling 1300 662 077, emailing Customer.Helpdesk@waternsw.com.au or completing a contact form on their website at www.waternsw.com.au. They will then allocate an appropriate representative to respond to any questions.
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Sydney Water ref: n/a

North Wilton Neighbourhood Plan No 1 – Sydney Water update

Servicing of Wilton Growth Area

The Wilton New Town Sub-Regional Plan Pathways Development water infrastructure planning was finalised in March 2019. The outcome of this planning for the Wilton Growth area was:

- Infrastructure will be staged over three tranches to allow for efficient and prudent delivery of infrastructure in line with expected growth
- Generally, water will be supplied from the Macarthur Water Filtration Plant with new assets staged with growth and built primarily along existing infrastructure routes. New reservoirs will be required in Wilton to service the expected growth.
- Ultimately, wastewater will be treated at a local Recycled Water Plant (RWP); however, interim wastewater servicing may be required depending on alignment of developer timelines with critical path for delivery of ultimate efficient and prudent solution.
- Recycled water will be required throughout the Wilton Growth Area. The use of recycled water within the catchment will be maximised through a portfolio solution, including dual reticulation system supplying residential dwellings, irrigation of active and passive open space and landscaping and potentially commercial and light industrial reuse.

Sydney Water is now working with developers on the concept design of the first tranche of water, wastewater and recycled water assets which will support growth in Wilton to 2030.

Sydney Water is also developing a long-term plan for the whole Macarthur Region through informed and ongoing stakeholder engagement. The plan seeks to provide a holistic integrated water management strategy and identify servicing approaches that deliver the best value for customers while respecting the region's place values. This regional planning will also inform the longer-term strategy for the Wilton Growth Area.

Servicing of North Wilton

Servicing of North Wilton will be in line with the strategy described above.

Based on the Sub-Regional Plan Pathways Development planning Sydney Water is not intending to utilise the lake in North Wilton as a part of the treatment process. All treatment will occur upstream of the proposed lake. However, Sydney Water may use the lake as a potential end use for Recycled Water. Sydney Water can supply the lake via a specific recycled water offtake from the RWP under a customer contract with the owner of the lake.

Sydney Water is investing in desktop research and options for using raingardens for effluent polishing in lieu of reverse osmosis. This investigation will provide Sydney Water with a blueprint to support further research or trials of a raingarden concept for effluent polishing to test and prove its efficacy as a viable option to manage nutrients. Sydney Water also has trials at Picton using wetlands and macroalgae for wastewater treatment

Interim Servicing for North Wilton

All interim infrastructure will be at the developers' expense and will not be reimbursable by SWC. The timeframe for planning and delivery of interim infrastructure will be driven by individual developers and the delivery of permanent infrastructure.

Wastewater:

Sydney Water has communicated to developers who wish to accelerate servicing that packaged plants will be considered as an acceptable interim measure. These packaged treatment plants have a lead time of around 18 months and are being considered for use in other greenfield areas across our area of operations. Sydney Water has developed a reference design for these plants. We are ready to move into detailed design when accelerated development is wanted by the developer. They are located with consideration of existing and future residents.

Package plants are onsite systems to treat wastewater and generate recycled water that may be used for irrigation, civil earthworks and potentially for supply to the dual reticulation network prior to the permanent treatment plant. The proposed interim package treatment plants would service the initial stages of development for around five years, depending on the speed of development and delivery of permanent infrastructure.

Potable water:

Sydney Water is in discussion with the proponent in North Wilton to investigate temporary water infrastructure to service the first stage of their development in advance of the delivery of a permanent water reservoir and relevant network upgrades in line with growth.

Prepared by:

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10 August 2021

Approved

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13 August 2021