



Hunter Water Corporation
ABN 46 228 513 446

PO Box 5171
HRMC NSW 2310
36 Honeysuckle Drive
NEWCASTLE NSW 2300
1300 657 657 (T)
enquiries@hunterwater.com.au
hunterwater.com.au

28 April 2021

Our Ref: HW2017-440/17/1.002

Department of Planning Industry and the Environment
Locked Bag 5022
Parramatta NSW 2124

Submission on the Design and Place State Environmental Planning Policy – Explanation of Intended Effect

Hunter Water Corporation (Hunter Water) is a State-owned corporation providing drinking water, wastewater, recycled water and some stormwater services to a population of almost 600,000 people in homes and businesses across the Lower Hunter. Hunter Water has reviewed the Explanation of Intended Effect (EIE) for the proposed *Design and Place State Environmental Planning Policy* focussing in particular on those areas related to water efficiency and water management, green infrastructure and the BASIX review and provides the following comments.

Aims, principles and application

Hunter Water supports the proposed aims and principles of the *Design and Place SEPP*. The aims and principles are consistent with and support our vision to be a valued partner in delivering the aspirations for our region.

The 2020 Federal Government Productivity Commission Research Paper on Integrated Water Management identified the boundary between water and land planning and the lack of clear objectives for water-related aspects of urban amenity as two of the policy environment impediments to effective integrated water planning. Principles 1 and 4 of the Design and Place SEPP go some way towards identifying the important role water plays in enabling urban amenity. The principle-based approach will provide space for and support the adoption of more innovative and collaborative integrated water management solutions at the precinct and site level.

Integrated water management, such as water recycling, and groundwater and stormwater harvesting, provides environmental and customer benefits, as well as broader system benefits of building system resilience. Recycled water and stormwater harvesting schemes also have strong support from our community - more than 90% support considering these options in the long-term water supply demand mix. These benefits and community support should be recognised and reflected in policy and infrastructure planning decision making.

The water industry has been investigating the broader social and environmental benefits of integrated water management. A Frontier Economics study on the "Health Benefits from Water Centric Liveable Communities" quantifies the liveability health benefits associated with water industry investments to better inform investment decisions. It found that investing in urban water to create liveable cities improves mental and physical health by supporting more active recreation, reducing the temperatures associated with the Urban

Heat Island effect, lowering air pollution levels and providing greater exposure to green space.

Hunter Water and the local councils in our area of operations have used the benchmarking tool developed by the CRC for Water Sensitive Cities to identify our region's current water sensitive performance and opportunities for improvement. Areas such as governance, community engagement, equity of service, productivity and resource efficiency, adaptability, ecological health and the quality of urban spaces were all assessed as part of the process. The CRC has a large library of research papers and Australian based case studies related to integrated water management.

The Water Services Association of Australia's (WSAA) "Blue+green=liveability" paper outlines the benefits of investing in water-enabled green and blue infrastructure and provides case study examples. To achieve these benefits WSAA identifies the need for the water industry and governments on all levels to collaborate on harnessing the full water cycle, taking an integrated approach to land and water planning, implementing an effective framework for evaluating health and liveability benefits and creating new funding and financing models for green and blue infrastructure as social infrastructure.

Planning and delivering integrated water solutions is a complex area involving multiple stakeholders, such as government agencies, local councils, developers and water utilities. Improved coordination, decision support frameworks which reflect holistic environmental and community outcomes, and new funding models are required to facilitate these environmental and customer benefits.

In order to be successful, integrated land and water planning is required at a larger (catchment, city, region) scale, and supported by precinct and site level integrated water management planning. Small scale schemes can struggle to demonstrate effectiveness both in terms of cost and outcomes in isolation. A broader vision and understanding of planned land and water use can open up opportunities that may not make sense at a precinct level. For example, larger water recycling projects can generally be expected to benefit from significant economies of scale. These economies of scale include both up front capital investment as well as ongoing operating and management costs and the more centralised management of such schemes would assist the long term viability and benefits realisation of these schemes.

Proposed elements and design process

Hunter Water supports the inclusion of water management and green infrastructure in the Design and Place SEPP as mandatory matters for consideration in precinct design, in particular the reference to safeguarding potable water and maximising water re-use is valuable. As noted above, in order to achieve integrated water management solutions, it is important that the broader regulatory environment is supportive of alternative water supply and that there is guidance available to ensure that these systems can be safely and sustainably operated and maintained. Hunter Water would also suggest that water management as a mandatory matter for consideration be extended to include significant development.

The emissions and resource efficiency requirements for offices, shopping centres, hotels and apartment buildings includes energy targets but not water efficiency targets. The Green Building Council of Australia's Green Star Rating scheme is an alternative approach that includes an assessment of both energy and water efficiency at planning stage.

Hunter Water suggests that the design evaluation and review process and the proposed Design Review Guide include consideration of integrated water management and that expertise in this area be considered for inclusion in the design review panels.

Apartment Design Guide

Hunter Water is supportive of the proposed design criteria requiring the provision of real-time water use meters for each apartment and the introduction of minimum WELS standards for apartment fittings. These measures support and empower consumers to reduce their water use.

The design criteria related to the requirement for on-site water re-use is also welcome as it reduces demand for drinking water and is strongly supported by our community. There are, however, technical and affordability challenges associated with using recycled water or stormwater for irrigation. It is recommended that specialist irrigation advice be sought to ensure any targets or benchmarks are fit for purpose and encourage the safe and sustainable adoption of these alternative water sources. As noted above, policy settings and targets should consider the affordability implications of water savings measures. In some instances, larger scale schemes may provide more cost-effective water efficiency outcomes.

BASIX reforms

While it is acknowledged that BASIX, in its current form, provides water efficiency benefits, Hunter Water supports reforms to improve the efficiency and effectiveness of the policy in this area.

A review of 30,000 single dwelling properties newly connected to Hunter Water's network in the last 20 years found that those properties connected between 2000 and 2007 consumed on average 10% more water than those connected after 2007. While there are some geographical differences in key development locations over the same period which could influence water consumption patterns, there is a noticeable reduction in average consumption in homes built after the introduction of BASIX.

To meet current BASIX requirements, most homes install a rainwater tank which is then connected to toilets, laundries and garden taps. In 2019, Hunter Water carried out a small pilot program, where customers in selected suburbs were offered plumbing audits of their rainwater tank systems. Around one third of the systems inspected were not functioning, generally because of a failed pump or switching device. This observed failure rate is consistent with that reported by the Institute of Sustainable Futures as part of a review of rainwater tank effectiveness in other parts of Australia. These findings suggest a large portion of the water efficiency benefits anticipated under BASIX are not being realised. A review of rainwater tank system design, and installation and maintenance methods may identify areas for improvement.

The site-based nature of BASIX and the timing and funding characteristics of residential developments mean that rainwater tanks are generally favoured over other alternative water supplies. However, as described above, rainwater tank systems may not be the most effective or cost-efficient option to deliver water and energy savings, particularly once energy and maintenance costs are included. More reliable and cost-effective alternative water supplies may be achieved by subsidising investments in stormwater harvesting or reticulated recycled water schemes at a precinct scale.

Showering represents the largest portion of indoor residential water use and efficient shower heads reduce both water and energy consumption. The Institute of Sustainable Futures completed an evaluation of the environmental and economic impacts of the WELS scheme in 2017. The report included data indicating that more than half of the shower heads installed under BASIX had 3-star WELS ratings while the average star rating for new washing machines and dishwashers had increased to more than 4 stars. A review of the efficiency requirements for household water fittings under BASIX may identify opportunities to deliver a similar shift to more efficient showers and taps providing both water and energy efficiency benefits.

Hunter Water would be more than happy to discuss these matters further. Please contact Mr David Derkenne, Program Director Water Resilience on [REDACTED] or [REDACTED] for more information.

Yours sincerely



Emma Berry
Chief Investment Officer

