



Parramatta River
Catchment Group



LET'S MAKE OUR RIVER
SWIMMABLE AGAIN BY
2025

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The Parramatta River Catchment Group submission to the Explanation of Intended Effect for a Design and Place SEPP (Feb 2021)

Introduction

The Parramatta River Catchment Group (PRCG) welcomes the opportunity to provide feedback on the Department of Planning, Industry and Environment's Explanation of Intended Effect for the new Design and Place State Environmental Planning Policy (SEPP).

The new SEPP will be a significant step towards delivering a more environmentally sensitive and greener urban form and is closely aligned with the liveability and ecosystem goals established by the PRCG.

We commend your work to achieve strong design focused outcomes that align with the Premier's Priorities, to improve access to quality public space and increase tree canopy and green cover. We also acknowledge that the SEPP employs a water sensitive philosophy by recognising the importance of integrating landform, bushland, hydrology and ecology.

The SEPP is considered crucial to fulfilling the vision for the "central river city" identified in the *Greater Sydney Region Plan* and *Central District Plan* and has the potential to deliver benefits to the people, animals and plants that live in the Parramatta River catchment while balancing the need for growth and development.

We support the principles-based approach taken by the SEPP, which will enable flexibility and creativity in seeking design solutions to deliver great places. However we note that mandatory considerations for water management, green infrastructure, emissions reduction, resource efficiency and tree canopy (through BASIX or other mechanisms) will be required to deliver tangible outcomes from the principles set out in this SEPP.

Parramatta River Masterplan

The PRCG is an alliance of councils, NSW government agencies and the community who are all working together voluntarily and cooperatively to improve the health of the Parramatta River. In 2018, the PRCG released [Dubu, Budu, Barra: Ten Steps to a Living River - the Parramatta River Masterplan](#). The Masterplan outlines the suite of reforms required to achieve the goal of making the Parramatta River swimmable again by 2025.

Modelling undertaken by Sydney Water during masterplan development showed that reducing the volume of stormwater reaching the river significantly improves water quality. As a result, much of

the PRCG's work is focused on reviewing the policy, planning and funding frameworks that support the delivery of blue green infrastructure and minimise the impact of stormwater runoff on our waterways, by increasing reuse and infiltration of stormwater.

In February 2021, the PRCG completed a review into the planning reforms that are required to create a living river. The resulting report [Strategic and Statutory Planning Review to create Our Living River – Final Recommendations Paper](#), is the result of many months of work between Sydney Water, PRCG partners and NSW government agencies, through workshops and extensive consultation, including with our project partners in DPIE (specifically the Green and Resilient Places team, District Teams, Planning Policy: Environmental Policy, Codes, Infrastructure funding and public space Public Space and Green Infrastructure Team, EES; Place based Science, Water for the Environment, Water floodplains and Coast; Marine coasts Estuaries and Floods, Water Markets).

While the review was undertaken to achieve the PRCG's vision for the river, the resulting report could be applied to any catchment to deliver improvements to water quality and increase green cover.

The paper makes a number of recommendations that strongly align with the principles of this SEPP. In particular, it provides a potential roadmap to enacting the reforms required to deliver against Principle 4 in the SEPP: *Design sustainable and greener places for the wellbeing of people and the environment*.

The diagram below illustrates the main strategies that can be employed on-lot and at precinct scale, to protect our receiving waterway environment and create deep soil and landscaping opportunities, resulting in greener urban environments.

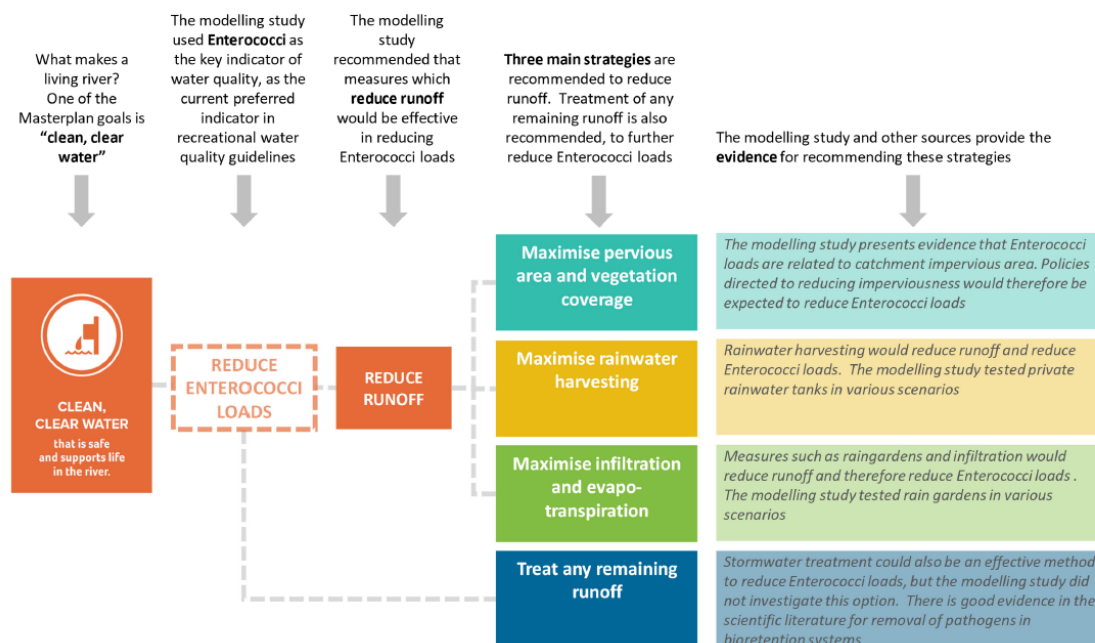


Figure 4: Strategies for improving water quality

Source: Strategic and statutory planning review to create our living river, Parramatta River Masterplan - Step 4 Final recommendations paper, Feb 2021. Accessed 5/3/2021

<https://www.ourlivingriver.com.au/content/uploads/2021/02/Recommendations-paper-Rev-F-11-Feb-2021.pdf>

Potential for a new Blue Green Index Tool

The Explanation of Intended Effects has identified that the existing BASIX SEPP will be incorporated into the new Design and Place SEPP and BASIX targets reviewed. BASIX has been extremely effective in delivering increased sustainability performance from new buildings, however [Section C.2.2](#) of the EIE notes that BASIX in its current format addresses some but not all the environmental impacts associated with development and that there may be a requirement to build new assessment tools.

The PRCG's planning review identified a potential new framework to support healthy waterways and green infrastructure implementation that is well placed to meet this requirement. Termed a "blue green index", this framework could drive better Water Sensitive Urban Design (WSUD) outcomes, provide certainty to developers regarding environmental performance and consistency for planners assessing development applications.

[Chapter 4](#) of the recommendations paper outlines the proposed structure and content of this tool, and a pathway for development, implementation, and improvement over time. The proposed tool would be similar to existing tools (i.e. Melbourne's Green Factor tool) and could build on the existing models used in BASIX. The strategies within the tool centre on:

1. Maximising pervious area and vegetation coverage, on-lot
2. Maximising rainwater harvesting
3. Maximising infiltration and evapotranspiration, and finally
4. Treating any remaining runoff on lot prior to discharge to waterways.

The tool can build upon the performance-based approach and flexibility embedded within the BASIX SEPP, and could consider other existing rating tools such as Green Star Communities. It could apply to a range of development types and scales and incorporate different performance outcomes and scoring for different catchments. As a performance-based tool it would allow different methods to achieve equivalent outcomes, as minimum standards tend to encourage compliance while a performance-based approach encourages more aspirational outcomes.

If required a deemed to comply provision could be included for low density/small scale development. At the forefront we are proposing to develop a tool that is simple to use to guide development design and assessment outcomes. The tool would be suitable for implementation through LEPs and DCPs or in a SEPP.

Our final recommendations paper has outlined the stages of tool development and implementation. The PRCG are hoping to have developed a working pilot of the tool by May 2022, with testing by select PRCG Councils in late 2022. We see DPIE as an essential partner to developing this tool and would be interested in understanding how we can progress this work together to align with the release of the Design and Place SEPP.

Specific comments on the EIE

We are strongly encouraged by the direction of the proposed Design and Place SEPP and the potential review of BASIX as an enabler to healthier waterways and greener urban form. Specific comments on the EIE are provided below:

Section 3.2.2 Mandatory matters for consideration

Table 1, point 6 Water Management

We support the recognition of integrated water management and the way improved water management contributes to wider liveability outcomes for the community. However, we note that there are opportunities to improve water management at the individual lot and 'significant development' scales that would also benefit from a place-based design approach. Decentralising water management can reduce the requirement for large scale detention infrastructure that has high capital and maintenance costs.

Table 1, point 7 Green Infrastructure

We support the objective to improve green infrastructure at the precinct scale. We request that there is consideration of sustainable water management in the establishment of planting in precinct scale development. In particular, this could be delivered through passively watered street trees. (See [Designing for a cool city: Guidelines for passively irrigated landscapes](#)). Multi-purpose green infrastructure needs to be integrated in both the public and private domain, including streetscapes that compliment a water sensitive design approach. The SEPP should consider whether codified or more flexible, performance-based methods for water and landscape outcomes are more appropriate in different types of development.

Review of the BASIX SEPP

BASIX as a stormwater management/ green infrastructure tool

We welcome the expansion of BASIX beyond potable water and energy consumption to assess other impacts of residential development at the lot scale, to include recycled water and irrigation demand, green infrastructure considerations and stormwater management.

We note also that there is currently no mechanism within BASIX or other similar tool to assess development types outside of residential development. We would strongly support the expansion of BASIX or the application of a similar tool such as our proposed Blue-Green Index to assess the full range of development types.

There is little detail provided in the EIE regarding proposed targets, including how the existing BASIX potable water targets will be revised, and the potential alternate assessment pathways available. Any independent merit assessment pathway must set strong targets, to ensure that interventions identified at design stage are implemented.

In an urban infill context, rainwater tanks are one of the only means to satisfy BASIX targets for water. The current potable water demand reduction in BASIX has led to perverse outcomes, such as the reduction of green space to minimise irrigation requirements.

Under the current approach, having roofscape attached to a rainwater tank it is weighted favourably in terms of BASIX performance, but performance doesn't increase if all the roofscape is attached or the size of the tank increases. It is noted that the tool is sensitive to where water is being reused but does not have any sensitivity to the wider benefits provided by changes in collected roof area or tank volume. As a result, the use of rainwater tanks as a stormwater management tool are currently missed in a BASIX assessment.

Targets around stormwater retention rather than a singular focus on demand reduction would be more appropriate to delivering a blue-green outcome. This can be achieved by:

- Maximising the proportion of the roof connected to the rainwater tank
- Building in a rainwater harvesting tool to quantify the expected reduction

- Set a minimum standard for runoff reduction (% of post-development flows) for different development types.
- Maximise connections to different end uses (e.g. garden, toilets, laundry, hot water)
- Maximise tank volume.
- Encourage "leaky" tanks where water trickles out to a passive irrigation/infiltration area, increasing the potential for rainwater tanks to capture runoff during rain events.
- Build this feature into an infiltration tool.

Research undertaken by Sydney Water has also shown that only two-thirds of rainwater tanks are maintained to standard following their initial installation. The failure of these systems is attributed to:

1. Poor understanding by the property owner/occupant about how the rainwater tank should operate
2. Lack of a regulatory framework requiring systems to be maintained post installation
3. Inability for councils to resource compliance monitoring.

Reviewing the SEPP and/or other legislation to ensure ongoing compliance of installed systems, supported by a targeted education program could assist in resolving these issues. This needs to be supported by robust data capture through BASIX and/ or any other tools that are developed.

Rebuilding the BASIX tool on an updated software platform, would allow further modules to be included, such as those outlined in our [blue-green index tool](#).

We would welcome the opportunity to continue to work with the Department on integrating the blue-green index tool and the development of potential targets and measures to support green infrastructure.

Going beyond BASIX

The primacy of the Place and Design SEPP over other legislation must ensure that it is not a barrier for Councils to pursue a more water sensitive approach. Some Councils in the Parramatta River catchment are seeking to develop an incentive-based scheme to achieve better sustainability outcomes. For example, the Rhodes East Precinct proposed a bonus floor space ratio for developments that exceeded the current energy and water targets.

While this incentive-based approach is suited to high density/ mixed use precincts, it is not widely applied at present and could provide an opportunity to deliver much better sustainability outcomes for larger developments. The Sydney Olympic Park Authority (SOPA) rainwater tank policy has developed policy guidelines which specify more stringent provisions than required by BASIX for all development that is affected by the Major Development SEPP.

Urban Design Guide and Apartment Design Guide

The existing Apartment Design Guide given statutory weight under SEPP 65 directs much of the medium and high-density residential development in NSW (greater than three storeys). This guide has stringent design criteria under Chapter 3 that must be followed in relation to deep soil planting and communal open space (7% total deep soil and 25% open space on lot).

A current issue with the existing target is that designs often use street frontages to create narrow bands of open space which are designated communal. There should be criteria on the minimum dimensions of this communal space to make it meaningful for recreation. There is opportunity to increase the area of deep soil zones to improve tree planting for larger scale development. The

quality of deep soil space should also be considered to avoid isolated bands of deep soil with limited accessibility, which offers limited opportunity for improved tree canopy.

In addition, local streets provide an opportunity to integrate WSUD through passively watered street trees, raingardens and other vegetated systems which collect excess rainwater.

Integration with Exempt and Complying Development Codes SEPP

The Design and Place SEPP must consider how it interfaces with the Exempt and Complying Development Codes SEPP if the delivery of more green infrastructure and improved waterway health is to become a reality.

A huge opportunity for increased urban greening exists within the infill space, with most low-density development occurring as complying development under the Codes SEPP. This SEPP currently has little requirement for increasing trees/ green space or specifying requirements for deep soil areas.

The Greenfield Housing Code provides a potential model which could be applied to all complying development, requiring a tree to be planted in the front and rear yard of each new home approved.

Limited lot sizes and lack of deep soil zones which prevent the planting of larger trees could be addressed by requiring increased alternative green space, require the installation of raingardens and/ or use semi permeable surfaces for driveways and other areas of hard stand.

Future collaboration

The PRCG understands that DPIE is considering the potential for a new "green factor" tool, which could integrate the PRCG's recommendations for a Blue Green Index.

The PRCG is keen to work with DPIE on the development of this tool and sees a potential opportunity to pilot works in the Parramatta River catchment.

Please do not hesitate to contact Nell Graham, PRCG Coordinator on (02) 9121 0009 should you require any further information.

We thank you once more for the opportunity to comment on this important piece of work.

Regards,



Nell Graham

The Parramatta River Catchment Group