



**Parramatta River  
Catchment Group**



**LET'S MAKE OUR RIVER  
SWIMMABLE AGAIN BY  
2025**

Parramatta River Catchment  
Group  
c/- City of Canada Bay  
Locked Bag 1470  
Drummoyne NSW 1470

Thursday, 25 June 2020

To Department Planning, Infrastructure and Environment, Major Projects

The Parramatta River Catchment Group (PRCG) is an alliance of councils, government agencies and community groups. Together we are working to revitalise the Parramatta River and make it a safe and enjoyable place to swim. In October 2018, we launched [DUBA, BUDU, BARRA: Ten Steps to a Living River - The Parramatta River Masterplan](#). This Masterplan details the steps required to make the Parramatta River swimmable again by 2025.

The PRCG thank you for the opportunity to provide comment on the Sydney Metro West (concept and Stage 1) works. This submission will focus mainly on the impacts of the proposed works to the water and ground water quality, minor waterways, potential sediment contamination and water quality issues that may impact on the Parramatta River.

This proposal is of importance to the PRCG as it directly impacts on 4 of our member Councils and SOPA. To achieve the vision of the Central River City from the District Plans, we need to go beyond providing a baseline service for our community but strive to achieve an improved environment for our community. We recognise that the waterways most closely impacted by the proposed works, ie Duck Creek A'Beckett Creek, are currently in a degraded state, however there are plans and investment to revitalise these waterways and work within the catchment to improve water management, and open swim sites downstream.

The Clyde stabling facility will sit between two identified community recreation corridors, the T6 corridor and The Underline (under M4 between James Ruse Drive and Church St, Parramatta). As such consideration of the potential aesthetic, recreational and biodiversity benefits of all works in this area should be acknowledged.

The PRCG are also currently participating in the development of a Greater Sydney Harbour Coastal Management Program (CMP) required under the *Coastal Management Act 2016*. A key focus of the CMP is to improve waterway health. It is therefore vital that the project considers the development of this program when finalising its environmental controls for the proposed works.

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## Ch7 placemaking

The PRCG commends the Sydney Metro West project for including water sensitive urban design considerations that encapsulate the green grid and greener places into its placemaking considerations for station, interchange and precinct scales.

The PRCG requests a greater nexus be established in this section between the placemaking outcomes described, and positive design outcomes. The document outlines that there is a call to action for this as part of core considerations for greener Places and the Sydney Green Grid (in s7.2), however this is not reflected in station design principles. As an example, Westmead has a landscaped area as part of a new public place, but this is not reflected in other stations and general considerations for urban greening and permeable surfaces are not reflected in any design principle basis currently. The PRCG sees these principles as core considerations of any successful place making outcome.

Therefore, in the design and place principles of each station there is an opportunity to establish a standardised design principle that for example, could be as follows:

*'maximise pervious surface area and deep soil vegetation on site to improve stormwater runoff outcomes and reduce the urban heat island effect, which will contribute positively to green grid and water sensitive urban design outcomes'*

This will ensure standardised design criteria that supports urban greening outcomes that are reflective of the current NSW Government vision of a greener urban form. A further assurance mechanism could be an extra design objective (as shown in section 7.11.1) that incorporates urban cooling and greening outcomes, as part of a sustainable and water sensitive design outcome:

'Objective 6: delivering a water sensitive, green urban outcome'.

## Ch8 concept environmental assessment

The PRCG commends the breadth and detail of environmental considerations covered in this section. There is however opportunity to strengthen the overall consideration of water outcomes within the assessment framework established which will contribute positively to both surface water quality outcomes as well as greener city and place making outcomes for surface development.

Regarding the assessment criteria resulting in 'no net loss of trees' for landscaping outcomes, it is recognised that many of the station sites are highly urbanised with few trees on site. The PRCG recommends a more aspirational criteria when approaching tree planting that ensures increased tree planting on sites, that is more reflective of the Premiers Priority to increase tree planting and also the Central River City vision and place making vision



established by the Greater Sydney Commission and Department of Planning, Industry and Environment.

While it is commended that there is a recognition for staged assessments and future impacts regarding soils and surface water quality in section 8.13.4, the PRCG also recommends a 'post construction' or 'staged application' assessment framework be established to adequately assess the impacts of increased runoff from developed sites as a result of the project. This operational/ future consideration is recognised in 8.13.4 but is not reflected in the impact tables provided in section 8.13.5 and beyond, which focus solely on construction. There is thus scope to increase assurance by providing a robust 'activity, impact, performance' outcome for soils and water quality at the operational stage which will improve placemaking as well as surface water quality outcomes.

Again, such considerations could be improved in section 8.15.4 by emphasising 'water sensitive drainage infrastructure outcomes' including passive filtration and dedicated permeable/semipermeable materials to address additional impacts on stormwater infrastructure of the development, that are recognised in this section.

#### Ch 14 property and land use

Regarding property and land use, it is commended that where there is a net loss of recreational or open space, the NSW Government is committed to replacing this (the loss of the Sydney Speedway). However, regarding generalised impact on urban form, this net loss would have an immediate adverse environmental health outcome within the local area.

Therefore, the PRCG recommends that the land use change caused by the Clyde stabling and maintenance facility be upgraded from minor impact, as it would result in a loss of the Sydney Speedway and any associated public/ open space and vegetated area associated with this site.

To offset this impact, if possible, it would be appropriate to ensure that any net loss in RE2 zoning, say for example at Clyde, would be able to be offset for public space purposes at other sites post construction, within the site itself with respect to limitations of the proposed stabling yard (i.e. having a highly vegetated permeable design) or within the designs of stations, to maximise placemaking, green grid and permeable surface/ urban cooling outcomes. An alternative would be ensuring public space provision *within the affected catchment area of the Parramatta River catchment* to ensure the balance of cumulative waterway and environmental health outcomes overall for the area is maintained.

This would ensure that the overall project would result in a neutral or positive net yield of open or vegetated space for above ground works, which would result in positive placemaking, environmental health and surface water quality outcomes.

### Ch15 landscape character and amenity

The thorough analysis for each site for landscape character and amenity impact is commended. However within the mitigation measures there is scope for additional items that would help the immediate local as well as precinct level impacts that would ensure that placemaking analysis under chapter 7 is wholly captured within this highly relevant consideration. The current mitigation measures only aim to minimise impact and do not currently aspire to improve landscape character and amenity outcomes for the immediate and surrounding area.

This is particularly pertinent regarding 'trees' under Table 15-48, which should be expanded to include natural vegetation and landscaped areas for all sites covered and should aim to go beyond existing conditions by having more trees on site than are there currently.

Ensuring appropriately naturalised sites through these measures in this impact assessment process would significantly improve site environmental health outcomes and amenity outcomes through an *improved* landscape character.

There is also scope to improve the amenity of streetscapes generally on a more permanent basis around stations, through activation and naturalisation (currently only temporary measures are considered to alleviate construction impact). Currently only the Five Dock station is considered so affected as to consider this. It should be however, a general consideration for all sites to aspire to such an outcome. For example, currently there is a 'moderate adverse' impact recognised for Parramatta Road under table 15-36, which is not captured by mitigation measures.

### Ch19 soils and surface water quality

The breadth of impacts on water quality and soils in this chapter is well considered, covers all core impacts and is fully supported by the PRCG

Regarding water quality mitigation measures, there is scope to consider passive responses outside the typical scope of assessment considered in this chapter. Currently the mitigation measures do not reflect the breadth of impacts for surface water quality described under table 19-8.

Elements described above that increase landscaped area, passive vegetated filtration and permeable surfaces are appropriate mitigation measures for surface water impacts caused

by the respective developments that could be captured in this mitigation table (19-12) which would adequately address all the impacts in table 19-8.

The PRCG also recommends that in addition to the extensive water quality analysis undertaken, some consideration for the quantity of surface water (of which a strong methodology is included for the total water balance of sites) be included as if there is a significant increase in runoff for sites, this would potentially offset any benefits of water quality improvement described in this section.

#### **Contaminated Waste:**

We recognise that many of the station sites and tunnels are contaminated, safe excavation, testing, transportation and disposal is necessary. The guidelines that should be considered when screening sediment concentrations are as follows:

- NEPM Health Investigation Levels (HILs) (NEPC 1999 amended 2013a) for public open space, HIL-C.
- NEPM Health Screening Levels (HSLs) (NEPC 1999 amended 2013a) for volatile petroleum hydrocarbons, relevant to exposures in public open space areas, HSL-C. It is noted that these guidelines only relate to potential inhalation exposures where volatile petroleum hydrocarbons are present in dry sediments. These do not apply to wet sediment.
- CRC CARE HSLs (CRC CARE 2011) for direct contact exposures with petroleum hydrocarbons, relevant to exposures in public open space areas (HSL-C). These guidelines are derived using an approach consistent with the NEPM HILs and relate to the protection of potential ingestion and dermal contact with petroleum hydrocarbon contamination.

For contaminants that exceed the screening level guideline, a detailed assessment of potential risk should be undertaken.

#### **Testing and treatment of contaminated groundwater prior to discharge into waterways**

The report identifies the probability of contamination migrating to the water table and entering the groundwater system, as a result of construction. Intercepted groundwater will be treated at on-site water treatment plants, but no detail on the capacity of the plant to remove this level of chemical contamination, before discharge to the waterways, has been given.

The NHMRC (NHMRC 2008, 2019) provides guidance on the assessment of chemical contamination in recreational water. These guidelines cover a wide range of recreational exposures in water such as swimming, diving, boating, sailboarding and is protective of exposures by all members of the public, including children, as well as other such as tourists and sporting groups. In relation to the assessment of chemical contaminants the guidelines are intended to address all recreational exposures that include direct contact with water (with absorption via the skin, eyes and mucous membranes), ingestion (particularly important for young children) and inhalation (of water spray).



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The NHMRC recreational water guidelines generally recommend the use of a screening level guideline that is 10 times higher than the Australian Drinking Water Guideline (NHMRC 2011 updated 2018). This approach is consistent with that adopted by the WHO (WHO 2006) for recreational exposures. Where PFAS is present, specific recreational water guidelines from NHMRC should be adopted (HEPA 2020; NHMRC 2019).

For the screening of surface water concentrations, a recreational water guideline that is 10 times higher than drinking water guidelines is recommended. Where drinking water guidelines are not available from NHMRC or the WHO, USEPA RSLs for tap water may be used.

### **Biodiversity.**

The Parramatta River Catchment Group have undertaken an Ecological Health Project and identified five Iconic animal Species as our River Mascots. These are:

The Eastern Long-necked Turtle  
Southern Myotis Bat – identified as present  
Bar-tailed Godwit – migratory bird  
Powerful Owl  
Striped Marsh Frog

The ecological health study articulates the connection between a swimmable river and ecosystem health. The five iconic species are the focal point for the management and monitoring of the river's ecological health. The iconic species were identified by the community as their favourite mascots out of a species list of 19, which represent four habitat zones which have proven links to improving water quality within the river and catchment, such as riparian, terrestrial, freshwater and estuarine.

Our response to the Biodiversity impacts will be informed by our five mascots and other intertidal habitats that are important to improving and maintaining water quality. All five of our Iconic species have habitat near to or in the construction areas, as they are found all over the Sydney Basin not just the Parramatta River catchment. Revegetation with local provenance native vegetation is important for providing native habitat and in our plans to improve and revitalise our cities and waterways.

The Parramatta River is core to the Central River City and the State Governments vision of Three Cities. With expected population growth and more development we acknowledge the need to construct further rail infrastructure, however this should not be at the detriment of our natural and cultural heritage of our Harbour and waterways. Expansion of public transport infrastructure in our city should be the first step in providing sustainable, liveable cities in a changing climate.

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This submission was drafted on behalf of our member councils and community and has been approved by the PRCG Executive team for submission. The PRCG are keen to remain involved and informed of this project, and for further information please contact me on 9121 0009 or [nell.graham@ourlivingriver.com.au](mailto:nell.graham@ourlivingriver.com.au).

Regards,

Nell Graham

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