

Public Exhibition for the Explanation of Intended Effect New State Environmental Planning Policy (Design and Place)

Your Name

Your Organisation

Postcode: 2040

Phone

Email

Stakeholder group

☒ Industry ☐ Council ☐ Aboriginal Community ☒ Community ☐ State Agency

Age demographic

☐ 18-25 ☐ 26-45 ☒ 46-65 ☐ 65+

Your feedback

How to make a formal submission

We welcome your feedback on the Explanation of Intended Effect for a New Design and Place State Environmental Planning Policy. **Submissions close on 31 March 2021.**

Feedback is sought on all parts of the document. Please consider if the proposal:

- Reflects contemporary understanding and practices
- Clearly articulates the intentions of the policy
- Should consider other opportunities.

Explanation of intended effect (EIE)

PART 1

Introduction

This is a great initiative and I am very supportive of its overall direction.

PART 2

Proposed new State Environmental Planning Policy (Design and Place)

2.1: The structure of part 2 is clear and simple. (nice to see a photo of one of our projects (CLOUSTON Associates) as the chapter heading cover page)

2.3: Support the principle based approach as it provides guidance on outcomes rather than prescriptive measures.

Principle 1: Fully support a design led approach

Principle 2: significance – add reference to cool green cities – especially tree canopy to reduce urban heat island effect.

Principle 2: Intended effect: fully support increase of public open space- all too often it is overlooked and current structure plans / urban development plans are all about increased housing density but no new green spaces.

Principle 3: Significance: Support human scaled walkable neighbourhoods. Should include something about being a public transport friendly city. Eg being able to access public transport in under a 10 minute walk.

This should also talk about bigger issues such as **the climate sensitive city**, where carbon neutrality, climate positive design are targeted and **cities as self-reliant ecosystems**. ie a city that runs on a circular economy. Eg: Water captured in the city used for drinking, recycled and

used again for drinking and irrigation – this would create a *Zero ocean outfall city*. Eg: Food grown in the city on rooftops, used locally and waste composted to be re-used in urban farming.

Principle 3; Intended effect: Net Zero needs to be clear about being net embodied carbon and net operational carbon to be truly Net Zero.

Remove get out of jail “where possible” escape clause for tree retention.

Principle 5: Significance and outcomes. Climate change resilient is very important here, including increased effects of urban heat island, more severe weather events and sea level rise.

It needs to talk about Cities adapted to intense rain events and extended dry periods. Dealing with intense rainfall events / flooding, slowing down flood waters, mimicking natural systems, sponge cities, passive irrigation, water harvesting capture and re-use.

3.1.1: support requisite design skills

3.1.2 Support place based approach

3.1.3 Design evaluation and review. Fully support DRP having the correct mix of design expertise, related to the project and fully support giving commensurate review timeframes depending upon complexity.

By way of example the West Connex Rozelle interchange had an expert design review panel that in my opinion had very limited time to fully understand the complexities of this \$3.6 Billion project. I’m not aware if the panel included experts in urban design for transport infrastructure as the members of the DRP members were kept secret from the community.

In my opinion the limited time available to the DRP would have made it difficult for them to fully understand the full range of issues from the large scale to the fine grain including community concerns. These included some significant visual impact issues, and pedestrian connectivity essential to locals. As far as I am aware there were no community representatives present at any DRP meetings and all of the minutes are confidential and have not been released to the public, so we don’t exactly know what they agreed to and signed off on, other than the outcomes of the EIS and resultant modification plans.

PART 3

Key components of the new State Environmental Planning Policy

Sufficient time funding, resources, and direct expert experience need to be allocated to DRP panels for complex projects.

3.2 Design and place considerations. 3.2.1 application considerations

Item 2. Precinct structure plan should include a landscape masterplan

3.3.3 Mandatory matters for consideration.

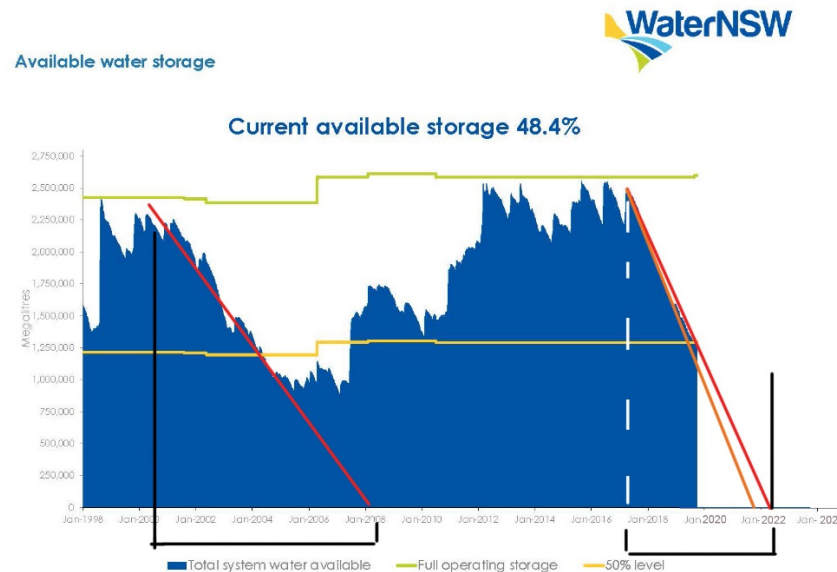
Item 2 Public space. Needs far better metrics and definitions. Eg Minimum high quality 5000m² park located within 5 minute walk (200m for apartments 400m for residential areas). With all the increased development intensity in Sydney there needs to be a commensurate net increase in public space!

No net loss is not acceptable.

Need to provide metrics around quality of open space.

Item 4 local living. Needs to remove get out of jail wording of “where possible” as it will simply not be provided.

Item 6. Water management. This is a critical and complex issue. Sydney had less than 700days of water at the end of the 2019 drought. At current use, inflow and evaporation rates during the last drought, Warragambah dam now only has a capacity of approximately 4.5 years to empty. Our population is set to double by 2036.



We need to capture water where it falls for re-use and have a “Zero ocean outfall” policy target. We need to be recycling sewer at substantially higher rates than currently. We need a basix target of 80% net reduction in potable water as a minimum.

Water retention and re-use needs to be designed properly so that it does not alienate public open space. Again the get out of jail free “where required” in relation to Integrated water management needs to be removed. This should be a mandatory requirement.
Needs a sponge cities approach, to slow down, retain and re-use water.

This section could be expanded and improved. See current Sydney water work for the urban typologies;
https://www.sydneywater.com.au/web/groups/publicwebcontent/documents/document/zgrf/mji0/~e disp/dd_224354.pdf

Metrics: Embed water harvesting and capture and re-use, permeable pavements, passive irrigation for parks and street trees, sponge cities, zero ocean outfall, runoff targets in urban typologies document.

Item 7 Green infrastructure; Again this needs to be clear and have no weasel words such as “where possible”

Replacing lost trees with only 2 trees is insufficient and will lead to a loss of urban tree canopy cover (by area) in the next decade with the planned city expansion. Recommend that it be increased to at least 5:1 if a simple number of trees metric is used. Reasoning below.

1. A replacement ratio of 5:1 is considers the principles of Intergenerational Equity and net environmental gain.
2. It is more consistent with the Premier’s Priorities for Greening our City to increase canopy cover across Greater Sydney by planting one million trees by 2022 and five million trees by 2030, and the NSW Government’s Net Zero Plan.
3. The ratio selected is an average number to capture existing different sized trees from large to small that might be removed from a site and is designed to achieve a net

- environmental gain within a decade. If a 100 year old fig is removed to be replaced by one 100L fig, this is hardly an equitable replacement.
4. New trees usually require 20-30 years of growth to reach maturity and a size where they provide a significant contribution to canopy cover, and a fig potentially a century. This leaves a short to medium term problem in the 0-25year range (to 2045) – particularly the loss of shade, amenity and stored carbon, as well as foregone future carbon sequestration.
 5. The 5:1 ratio is not perfect when it comes to large and visually significant trees. Potentially there needs to be a threshold to deal with significant trees on a case by case basis. For example a like for like replacement of a 100yr old fig would cost easily \$100-150,000 to source and transplant a similar sized fig. This doesn't solve the replacement canopy issue, but provides a guide to the value of large old trees. In that view, A Fig removal might possibly require 300 trees to one replacement ratio on a cost equity basis assuming a 100 litre tree costs say \$500 to plant.
 6. The ratio of 5 to 1 encourages the retention of existing trees over removing and planting new ones. This may hopefully encourage Developers and designers to work harder to accommodate existing trees with tailored design if the alternative requires them to have to find space for 5 x new trees.
 7. The Australian Institute of Landscape Architects (AILA) Climate Positive Design Position Statement supports a number of initiatives including "Measures that greatly reduce or halt land clearing, or provide 5 times the biodiverse offsets where it cannot be avoided"

OPTIONS FOR TREE REPLACEMENT METRICS;

Number of trees

Has many limitations but is very simple. Ratio really needs to be reviewed every 5-10 years

Simple linear scale based on trunk diameter.

This uses trunk diameter as a proxy for tree size, scale and amenity value.

So 0- 100 mm would require one tree. 100-200 mm, two trees. 200-300 mm three trees and so forth up to a diameter of 1000mm at 10 replacement trees. After this it should be assessed on a case by case basis.

Logarithmic scale based on trunk diameter.

This uses trunk diameter as a proxy for size scale and value but takes into consideration the fact that trees do not grow at a linear rate.

In this example it might be 0.5 trees for trees up to 100 mm diameter on a curving logarithmic scale that might end up at 50 trees for a one meter diameter tree.

Carbon-based assessment using trunk diameter and height and NSW government target of net Zero by 2050

Trunk diameter and height used to determine the total sequestered Carbon of the trees being removed, using software such as itree.

Equivalent number of trees to meet that sequestration as well as lost sequestration would then need to be determined or calculated again using itree, using NSW net zero by 2050 as the target neutral date.

This would then generate a logarithmic sliding scale of tree replacements depending on the date they are planted. The reason for this is because Trees sequester carbon in a non-linear rate.

Using an estimate of embodied carbon in a typical eucalypt such as *Corymbia maculata*, just replacing the lost carbon at the time of the trees removal would result in the following likely replacement ratios as 2050 net zero target approaches. This doesn't include foregone sequestration.

planting date	2020	2030	2035	2040	2045	2049
Carbon Replacement by 2050 ratio of 1 tree removed to number of new trees required to 2050 net zero-	1.0	3.2	6.7	26.8	100.8	1575.0

3.3.3 mandatory considerations item 8 – resilience

Should nominate sea level rise. Predicted to be 90cm by CSIRO by 2100 for Sydney.

Item 14. Impacts on public open space.

As noted previously we need to increase public open space by purchasing land specifically for that purpose. We cannot keep intensifying development and not providing new open space. Yes it's expensive, but it will be essential in 2050.

Item 16 activation. Minimum metrics or objectives should be stated.

Item 17: Emission and resource efficiency.

His needs to be substantially improved. Even 6 star rated building emit far more than net zero. Embodied carbon needs to be substantially reduced. We are working on a Green star rated government building that emits 2million kg of Co2 per year. This would need a forest the size of Centennial Park and Moore park, and Queens park combined to just run carbon neutral. And this is just one building.

There needs to be a targeted strategy for the 10% of building stock comprised of office and commercial buildings which are responsible for approximately 50% of the cities emissions.

As all of our building stock now will still be here in 2050, it needs to be Net zero ready now. Current estimates by the climate council and others place the necessary 2030 reduction target at closer to 74%. 33% is insufficient for us to meet our Paris agreement goals as we have already expended too much of our allowable 2050 carbon budget. See Climate council report here: <https://www.climatecouncil.org.au/wp-content/uploads/2021/04/aim-high-go-fast-why-emissions-must-plummet-climate-council-report.pdf>

item 18 tree canopy:

Again we cannot have “where possible” This was used as the reason to remove huge fig trees and over 8000, trees on the West Connex Rozelle Interchange project.

Retention target need to be very specific, particularly in relation to significant trees.

Replacement trees - 5:1 minimum – see Green infrastructure comments.

Green walls are NOT a substitute for not meeting canopy targets.

Green roof should be mandatory for all commercial buildings.

This section needs to be far clearer with better metrics.

PART 4

**Proposed
amendments to
existing State
Environmental
Planning Policies**

PART 5

**Relationship with
other planning
instruments and
policies**

PART 6

Planning pathways

APPENDIX A

Proposed Amendments to the Apartment Design Guide and SEPP 65

APPENDIX B

Proposed New Public Spaces and Urban Design Guide

APPENDIX C

Sustainability in Residential Buildings

Additional comments

Urban development issues

Deep soil zones. This is a misnomer and problematic. Trees have large flat wide root plates that require wide areas NOT deep areas.

Capital budgets versus operational budgets

We have issues on a number of Government projects where energy / emission saving items are not put in because the capital works team don't want to use up their budget even though it will provide operational savings for the same government agency over the lifespan of the building.

Doing the bare minimum

Developers and even Government only do the bare minimum. Basix and current NCC standards do not meet the needs of net zero by 2050 let alone 74% reductions by 2030. These standards need to be brought up as rapidly as possible to 8 star minimum. Then we might have a chance with our building stock. Meeting the Paris Agreement.

Equally Valuing land – large scale development. Government must provide a common amortised valuation for all land in large development areas such as the Aerotropolis. – A common price would avoid winners and losers, and developers land banking for profit. It also rewards those who have looked after their land and tree cover, and will get the same money as those who cleared their land making it seem like an easier place to develop.

Looking after landscapes in the public realm – These are Living systems - who pays and looks after the landscape? At the moment local council cannot maintain the standard of open space that is required in the current rates funding arrangements. This needs to be embedded up front as to how it will be afforded. Some options below:

User pays - Increased resident contributions via local council rates

In the long term, it is the residents that gain the most benefit from quality public spaces. At The Ponds, you can ride your bike for 7Km and not use the same path twice and only cross three roads. You can have a picnic or a BBQ in the park, celebrate kids birthdays or bump into your neighbours while walking the dog. The kids can look for turtles in the water quality ponds, or follow the goslings on the lake. Good parklands improve house values. The Ponds was the fastest selling development in NSW.

So one option is a user pays system via the current rates contribution systems. At Oran Park, residents were asked to contribute a further \$200/year per lot to cover the increased financial load for the council. This is understood up front as a pre-requisite for buying into the area. This equates well to The Ponds, where the total maintenance costs are nominally \$300/year/per lot. The key here will be for Camden Council to have a mechanism to ensure that the additional revenue is expended on the landscape network and not used to fund other non related expenditure.

User pays management by Authority

Unlike Melbourne water, Sydney Water primarily manages Sydney's potable water and the sewerage network, but not stormwater (except in some older suburbs). If an agency like Sydney Water was to manage the whole water supply, it would also need to take over some of the roles provided by local councils, such as street sweeping and management of riparian corridors, GPT's, raingardens and other WSUD infrastructure. These services would be added as a charge to existing water bills.

Tax and rate incentives

The city of Philadelphia levies landowners proportional to the amount of impervious surfaces on their land. This provides incentive for private landowners to manage their run-off and water quality on site through a range of means, easing the burden off the public domain and public purse.

Developer provided sinking superannuation funds.

Landscape is often seen by developers as a way to help sell estates. Beautiful entry ways, well planted parks, tree and shrub planted entry avenues. Developers profit out of having well designed, good looking and great functioning landscapes. Money is expended on large trees to make an early impact, raingardens are built early so they don't look like muddy siltation ponds, expensive to maintain understory planting is placed under the medians of entry avenues. A developer will be looking to generate a 20% profit margin. So one option is to amend section 94 contributions to cover an up front sinking fund for

maintenance. This was the model at The Ponds, but the money was expended to directly fund maintenance for the first 10 years. A different version would see this money go to a managed fund protected by legal mechanisms. The income generated via the fund would be used to provide for the long term maintenance. Clearly this relies on a sufficient up front contribution.

One off levy for Developer / owner provided sinking superannuation funds.

One option is that a very small levy is placed on all construction works, either public or private. Given the total investment at The Ponds was conservatively in the order of \$2Billion, a levy of 1.5% would have provided a \$30million superannuation fund. Enough to generate the \$1.0M per annum required to maintain the public domain in perpetuity.

BOOT - Leased landscapes

Another option, would be an arrangement where the landscape is effectively leased. Rather than a substantial up front cost to construct and then a smaller ongoing cost to maintain, a higher per-annum cost could be amortised over a longer period. This would reduce developer borrowing and a lease could provide a tax write off. This could also incorporate smaller annual indexed levy to landowners. This requires up front investment, but a model set to generate an investment return might provide a vehicle for superannuation funds or government to invest in.

Under this model, one option is that the landscape architects, the landscape contractors and the maintenance crews would all be part of one company. This company would be owned and managed by the superannuation fund. This would provide an incentive for an integrated approach to design, management and maintenance. Given this company would be responsible for whole of life management of the system.

Thank you for your time in preparing this submission.