



Reg No.: [REDACTED]

Thursday, 11 July 2024

Your Reference: [REDACTED]

To: NSW DEPARTMENT OF PLANNING HOUSING
AND INFRASTRUCTURE

Request for comments on Rezoning Proposal

Dear Sir / Madam,

Proposed Activity: PROPERTY DEVELOPMENT
Location: MACQUARIE PARK INNOVATION
PRECINCT
Proponent: NSW DEPARTMENT OF PLANNING
HOUSING AND INFRASTRUCTURE
Date: 10/07/2024

The approx. ground height 55m AHD.

The majority of the site lies outside Sydney Airport's Obstacle Limitation Surface (OLS).

Under Reg 7.1.5.1 of CASA Manual of Standards Part 139 – objects taller than 100m above ground must be referred to CASA.

The most Southerly portion site lies under Sydney Airport's Obstacle Limitation Surface and would be subject to Airports (Protection of Airspace) Regulations 1996.

Construction cranes may be required to operate at a height significantly higher than that of the proposed development and consequently, may not be approved under the Airports (Protection of Airspace) Regulations.

Sydney Airport advises that approval to operate construction equipment (ie cranes) should be obtained prior to any commitment to construct.

Sincerely,

Sydney Airport

Sydney Airport Corporation Limited ACN 082 578 809 — The Nigel Love Building, 10 Arrivals Court, Locked Bag 5000
Sydney International Airport NSW 2020 Australia — Telephone +61 2 9667 9111 — sydneyairport.com.au

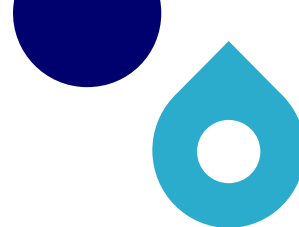
SYD Classification: Confidential



Manager, Airfield Infrastructure Technical Planning

Note:

1. a person who conducts a controlled activity otherwise than with an approval commits an offence against the Act.
 - s. 183 and s. 185 Airports Act 1996.
 - Penalty: 250 penalty units.
2. if a structure is not authorised, the Federal Court may order a person to carry out remedial works, mark or light, or reduce the height of or demolish, dismantle or remove a structure.



20 August 2024

Brendan Metcalfe
Director, State Rezoning
Department of Planning, Housing and Infrastructure

Reference: [REDACTED]

Macquarie Park Transport Oriented Development Precinct

Dear Brendan

Thank you for the opportunity to provide comment on the Macquarie Park Transport Oriented Development (TOD) Precinct. We understand the proposed amendments to planning controls will enable the delivery of approximately 4,622 dwellings and 66,327 new¹ jobs. We understand that data centres will be permissible within the TOD precinct, however note that data centres are proposed to be prohibited within the E2 Commercial Centre zone.

We support government-backed growth initiatives within our area of operations and endeavour to provide services in a timely and prudent manner that delivers cost effective water and wastewater infrastructure whilst not impacting our current customer base economically, environmentally, or unduly impacting current service levels.

We are committed to providing water and wastewater services to facilitate growth within the National Housing Accord (Accord) period. In 2023 and early 2024, we collaborated with Government to review the financial and infrastructure impact relating to water and wastewater servicing of the proposed acceleration of growth in 7 Tier 1 transport nodes selected across Sydney, including Macquarie Park. These reviews however were based on different boundary and growth parameters. We therefore provide the following comments for the proposed Macquarie Park TOD precinct and our requirement for further clarification on growth numbers to support DPHI's long-term planning beyond 2029. Detailed comments can be found in Appendix 1.

Servicing within Accord period

Our current [Growth Servicing Plan \(GSP\)](#) shows the expected availability of trunk water and wastewater services in the Macquarie Park precinct over the next 5 years. The GSP indicates Sydney Water will have services available to enable housing within the Accord period:

- Trunk drinking water upgrades to the Macquarie Park and North Ryde Station precincts are underway and anticipated to be delivered by FY2026 which will enable servicing of the expected growth within the Housing Accord period.

¹ Sydney Water notes that it is unclear in the application what percentage of the 66,327 jobs are additional jobs or existing, and as outlined in Appendix 1 requests clarification on this.

- Trunk wastewater upgrades to the Macquarie Park and North Ryde Station precincts are anticipated to be delivered FY2026-2028 which will enable the servicing of the expected growth within the Housing Accord period.
- Please refer to Appendix 1 for detailed servicing advice within the Accord period.

Servicing post Accord period

Once finalised growth information including annual and ultimate staging is received, we will plan for longer term growth in the TOD and assess the cumulative growth plans in the area.

- As a result of proposed increased growth within the TOD and the potential impact of additional cumulative growth within the wider water and wastewater catchments, augmentations to our water and wastewater systems will likely be required to service the Macquarie Park TOD beyond the Housing Accord period.
- Subject to DPHI finalising ultimate TOD growth numbers and providing agencies more certainty around staging, we will implement a growth assessment review to plan for servicing future phases. These plans will define servicing strategies and detail potential augmentations for growth beyond 2029. It is anticipated that our planning studies will be carried out by 2026.

Recycled Water and Integrated Water Cycle Management

As data centres are very high volume water users, locating these facilities within areas of high residential growth, will require substantial augmentation of our water systems to avoid impacts to the services we provide other existing and future customers, including residential growth. We are in discussions with major data centre providers to understand their expansion plans and water demands and to inform the servicing pathways for the future.

There is currently no recycled water scheme in Macquarie Park. Sydney Water is investigating recycled water opportunities including supply to data centres within Macquarie Park. This is an ongoing investigation. Please see further details in Appendix 1.

We would welcome government coordination on the location of future data centres given the impact on utility infrastructure.

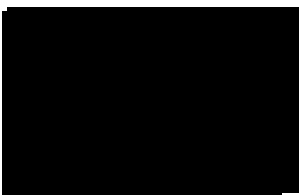
Clarification and amendment requests

Please refer to Appendix 1 for further clarification and amendment requests, including our requirements for updated growth information.

Next Steps

We welcome the opportunity to continue working with DPHI to finalise requirements relating to future servicing of the Macquarie Park precinct. If you need further information, please contact our Growth Planning team at [REDACTED]

Yours sincerely,



Head of Growth and Development

Enclosed: Appendix 1 – Detailed comments and requests for exhibition clarifications or amendments.

Sydney Water Corporation ABN 49 776 225 038

1 Smith Street, Parramatta, NSW 2150 | PO Box 399, Parramatta, NSW 2124

Telephone 13 20 92 **Media (24/7)** 8849 5151 [sydneywater.com.au](https://www.sydneywater.com.au)



Appendix 1 - Sydney Water detailed comments and requests for exhibition clarifications or amendments on Macquarie Park TOD

Document and Section	Page. No.	Comment type	Comment
N/A – Sydney Water comments on growth numbers within Macquarie Park Innovation Precinct	N/A	Detailed comments	<p>The Macquarie Park TOD precinct is also known as the Macquarie Park Innovation Precinct (MPIP) Stage 2. The MPIP Place Strategy, approved in September 2022, established a framework for creating an additional 20,000 jobs over the next 20 years, supported by up to 7,650 dwellings in the investigation area. Sydney Water was issued growth numbers for this strategy. The growth proposed as part of the Macquarie Park TOD significantly exceeds growth proposed under the Strategy. We are therefore requesting clarification on ultimate and anticipated annual growth forecasts for the different scenarios within the MPIP so we can plan in the long term for the Macquarie Park TOD and MPIP.</p> <p>Sydney Water will work with DPHI to review growth numbers and longer-term servicing strategies when robust growth information and staging information is provided.</p>
N/A – Sydney Water comments on servicing within Accord period	N/A	Detailed comments	<p>Sydney Water has not yet received growth staging information for the MPIP as requested in previous correspondence to DPHI. The following servicing advice is based on previous data provided as part of early engagement.</p> <p>Once the requested detailed staging information is provided, Sydney Water can meet with DPHI to discuss servicing.</p> <p>Drinking Water</p> <p>The majority of the Macquarie Park TOD falls within the Marsfield Water Supply Zone. Sydney Water is working to increase water supply in the area by constructing an additional reservoir in Marsfield. Construction of the reservoir is in progress, and it is expected to be operational by FY2026 based on current project schedules. Following operation of the additional reservoir at Marsfield, Sydney Water can accommodate growth of circa 2,043 dwellings in the Macquarie Park TOD (Neighbourhoods 1,4, 5 and 6) within the Accord period. Growth can be accommodated in Neighbourhood 7 within the Accord period.</p>

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			<p>Wastewater</p> <p>The Macquarie Park TOD falls within the Lane Cove Catchment. Sydney Water is proposing amplifications of the wastewater network in the area. These amplifications would support up to circa 22,000 additional dwellings in this TOD area and is expected to be operational by FY2027 based on the current project schedule.</p> <p>Growth beyond 22,000 could trigger further capacity augmentations which may have significant impact on the downstream infrastructure. This would need a detailed assessment once we receive better clarity around the certainty and staging of additional growth.</p>
N/A – Sydney Water comments on recycled water servicing	N/A	Detailed comments	<p>To date, Sydney Water has worked with DPHI to develop a concept recycled water scheme, including costings for MPIP Stage 1 development areas only.</p> <p>Delivery of a plant size large enough to service both Stage 1 and 2 should also be considered. Further, Sydney Water is currently investigating recycled water options, and as such, we advise the allocation of the proposed plant land as RE1 Public Recreation or SP2 Infrastructure to futureproof the area for recycled water or other water sustainability opportunities for both public and private water providers. Suitable access and egress to the green space should be considered to facilitate future construction and maintenance requirements.</p> <p>The Utilities Report notes a potential location for a centralised wastewater treatment plant to provide recycled water to Stage 2 of the MPIP. Sydney Water seeks further details of the area earmarked for the recycled water plant, including the basis of selecting the location, and consideration of integrating stormwater and wastewater to provide recycled water.</p> <p>Sydney Water will continue to engage with key stakeholders, including developers and DPHI, to explore potential funding pathways for the proposed Stage 1 scheme. Planning for the Stage 2 scheme has not yet commenced.</p>

N/A – Sydney Water comments on integrated water cycle management	N/A	General comment	<p>Water management</p> <p>Sydney Water strongly recommends precinct level strategic water management assessment, that includes clear objectives for water efficiency and recycled, waterways, stormwater management and flooding, and related objectives for green space and canopy management.</p> <p>Integrated land and water planning</p> <p>The Macquarie Park TOD rezoning must be able to meet Water Quality Objectives for receiving waterways and demonstrate application of the risk-based framework for considering waterway health outcomes in strategic land use planning decisions.</p> <p>Additionally, all rezonings located in "regulated catchments" in the Biodiversity and Conservation SEPP must conduct this planning to ensure proposed development meets the requirements of Chapter 6 that (a) the effect on the quality of water entering a natural waterbody will be as close as possible to neutral or beneficial, and (b) the impact on water flow in a natural waterbody will be minimised. The principles of total catchment management required in Chapter 6 must be observed.</p> <p>Sydney Water recommends adopting best practice approaches to integrated urban design, land use planning and water management, adopting the approach demonstrated by integrated planning for Mamre Road and the Aerotropolis, and the integrated water management analysis conducted by DPHI to inform the Greater Sydney Water Strategy (and being undertaken for the Prospect Creek sub-catchment).</p> <p>Such analysis is required to ensure the rezoning proposal and the land use objectives can feasibly enable the achievement of performance requirements for stormwater, waterways, pervious area, green space maintenance and urban cooling. As an example, it is not sufficient for a stormwater study to identify the use of water sensitive urban design (WSUD) - WSUD must be planned and delivered at an appropriate scale to meet the stormwater and waterway goals for the precinct.</p> <p>Additionally, rezoning proposals must consider additional performance requirements and community outcomes required in Masterplans such as the PRCG's Living River Masterplan.</p>
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			<p>Good erosion and sediment controls are required to ensure redevelopment does not create unacceptable impacts on stormwater and waterway health during construction. We recommend the delivery of the Macquarie Park TOD require implementation of best practice site management, as guided by the updated blue book.</p> <p>Water efficiency and recycled water</p> <p>The rezoning proposal should assess how best practice water efficiency can be achieved both at the precinct and household and business scale. This must encompass external use and link to the land use and stormwater management approach described above, as well as internal use. Developments such as data centres and commercial buildings can have high water use, which must be addressed by embedding efficiency in design, specification of fixtures, and ongoing management.</p> <p>The assessment should also consider opportunities for recycled water provision to contribute to outdoor water demand and reduce household use. The rezoning should consider opportunities for precinct scale recycled water/sewer mining.</p>
N/A – Sydney Water comments on growth numbers	N/A	Detailed comments and clarifications	<p>As previously requested, Sydney Water seeks clarity regarding growth in the Macquarie Park Innovation Precinct.</p> <p>Sydney Water requests updated growth forecasts for the entire MPIP and the different scenarios (including use of commercial land for Build to Rent), for Stage 1 and the Macquarie Park TOD.</p> <p>We acknowledge that this information is an indication only and is provided as a guide to assist Sydney Water to provide more nuanced feasibility or servicing advice. We note that timescales are often subject to developer intent/demand and approval timescales. Sydney Water uses the information at its own risk.</p> <p>Please refer to the letter sent to DPHI dated 18 Dec 2023 requesting clarification on growth scenarios and staging and our letter dated 27 June 2024 <i>Macquarie Park Innovation Precinct growth and impact on Macquarie Park TOD (Innovation Precinct Stage 2)</i> for an example of the growth information requested.</p>

Utilities Report (Section 3.2.2)	12	Amendment request	Dot point 3 should be 230KL/ET/a instead of 230KL/EP/a
Utilities Report (Section 3.4.2)	16	Amendment request	<p>For network sizing Sydney Water uses Peak Dry Weather Flow using 150L/person/d ADD (inclusive of BASIX) with the contribution to the peak determined from the local existing diurnal curve.</p> <p>PDWF to be less than 60% pipe full capacity to provide satisfactory operation and maintenance.</p> <p>The calculation of demand may require review.</p>

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Telephone 13 20 92 **Media (24/7)** 8849 5151 [sydneywater.com.au](https://www.sydneywater.com.au)



09 August 2024



Macquarie Park Team, State Rezoning
Department of Planning, Housing and Infrastructure
4 Parramatta Square,
12 Darcy Street,
Parramatta NSW 2150

24-28 Campbell St
Sydney NSW 2000
All mail to
GPO Box 4009
Sydney NSW 2001
T +61 2 13 13 65
ausgrid.com.au

To whom this may concern,

RE: Rezoning proposal for Macquarie Park Innovation Precinct Stage 2

We thank you for the opportunity to provide a response to the draft rezoning proposal for Macquarie Park Innovation Precinct Stage 2 as part of the Transport Oriented Development (TOD) program. Ausgrid is committed to providing safe, reliable and affordable electricity supply to the customers in our area, in terms of both providing a connection, but also by providing a means for exchanging energy between customers. Timely and effective inclusion of electricity supply infrastructure in the proposed development is a key element of meeting government, developer and customer needs over the life of the precinct.

Ausgrid has been liaising with the various NSW Government bodies involved in this project throughout the planning process and has appreciated the cooperation in identifying the electricity infrastructure requirements necessary to successfully provide for the Macquarie Park Place.

We have worked closely with numerous stakeholders including Greater Sydney Commission, Transport for NSW, Sydney metro and Planning NSW. To date we have been able to effectively meet the growing demand for electricity in cooperation with those bodies.

Ausgrid has established an additional new major substation on our existing site at 21 Waterloo Rd to enable the supply at high voltage of new data centres being established in the area. It is imperative that the rezoning proposal for Macquarie Park Innovation Precinct Stage 2 does not clash with existing and proposed Ausgrid equipment and infrastructure.

In terms of the rezoning proposed for Stage 2, in addition to the general reticulation of power within the precinct, Ausgrid confirms the need for a suitably sized and located site¹ for an additional Macquarie Park substation, which will be required to meet the ongoing growing electricity demand of the proposed rezoning and surrounding development for employment. It is likely that this site will be required on the western side of Macquarie Park near the University precinct.

¹ For context and subject to further detailed feasibility investigations, the land requirements for the site/s would likely be in the order of 0.5-1ha with adequate street frontage on a level site

Connecting communities,
empowering lives

We look forward to continuing our effective engagement with all stakeholders to ensure we manage all the risks and to realise all the opportunities to deliver a successful project.

Please do not hesitate to contact me for clarification or further information if required.

Yours Sincerely,



Head of Asset Management & Planning (acting)
Ausgrid
Ph 02 92692759





Your ref: IRF24/1250
Our ref: DOC24/563999, DOC24/622159

Ms Anthea Sargeant
Executive Director State Rezoning
Department of Planning, Housing and Industry

By email: [REDACTED]

Dear Ms Sargeant

Thank you for your letter of 12 July 2024 on the proposed Macquarie Park Innovation Precinct – Transport Orientated Development (TOD) Precinct, in line with the consultation requirements set out in section 3.25 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

The Biodiversity, Conservation and Science Group (BCS) of the Department of Climate Change, Energy, the Environment and Water (DCCEEW) has reviewed the package of exhibition documents including the Explanation of Intended Effect (EIE), planning controls, supporting technical studies and the Biodiversity Vegetation Assessment dated 4 June 2024. Our advice on the biodiversity and flooding impacts of the proposal is at Attachment A.

The precinct adjoins Lane Cove National Park, which is reserved under the *National Parks and Wildlife Act 1974* to protect and conserve biodiversity values, Aboriginal and historic heritage and provide for sustainable recreation. The National Parks and Wildlife Service (NPWS) manages the Lane Cove National Park under the 2016 [Lane Cove National Park Plan of Management](#). As such, NPWS maintains a keen interest in the Macquarie Park redevelopment and comments from NPWS are provided in Attachment B.

If you have any further questions about this issue, please contact Ms [REDACTED] Director, Greater Sydney Branch, Regional Delivery division at [REDACTED]

Yours sincerely

[REDACTED]

Deputy Secretary
Biodiversity, Conservation and Science

Attachment A – Biodiversity, Conservation and Science advice – Macquarie Park TOD rezoning proposal

Biodiversity

DPHI has not indicated if it has formed an opinion under section 3.25 of the EP&A Act on whether the rezoning proposal and associated SEPP will adversely affect critical habitat, threatened species, populations or ecological communities, or their habitats. BCS provides the following information and advice to assist DPHI in determining the likely impacts on biodiversity:

Threatened species and ecological communities

The Macquarie Park Innovation Precinct Stage 2 – Biodiversity Vegetation Assessment prepared by Eco Logical Australia dated 4 June 2024 (Biodiversity Assessment) identifies the following threatened ecological communities (TECs) within the TOD area:

- Duffys Forest Ecological Community in the Sydney Basin Bioregion (Duffys Forest) Endangered Ecological Community (EEC), which is listed under the *Biodiversity Conservation Act 2016* (BC Act)
- Sydney Turpentine-Ironbark Forest in the Sydney Basin Bioregion Critically Endangered Ecological Community (CEEC), listed under both the BC Act and *Environmental Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act).

Serious and Irreversible Impact entities

Both the Duffys Forest EEC and Sydney Turpentine-Ironbark Forest CEEC are Serious and Irreversible Impact (SAIL) ecological community entities under the BC Act. In addition, the Swift Parrot Important Area Map includes the Macquarie Park TOD Precinct, and the Swift Parrot is a SAIL species. BCS recommends the Biodiversity Assessment be updated to reflect these potential impacts to SAIL entities and that efforts be made to avoid impacts to SAIL entities.

Biodiversity Values Map

The Macquarie Park TOD precinct includes areas identified on the DCCEEW Biodiversity Values Map as land with high biodiversity value, such as native vegetation, threatened species habitat and creek lines, which means it is sensitive to impacts from development.

Biodiversity Offsets Scheme

BCS notes that the Biodiversity Offsets Scheme (BOS) will apply to future state significant development unless the Planning Agency Head and the Environment Agency Head determine that the development is not likely to have any significant impact on biodiversity. The BOS will also apply to local development under Part 4 of the EP&A Act (other than state significant development or complying development) that is likely to significantly affect threatened species. For both state significant development and local development, SAIL will need to be addressed.

Avoiding biodiversity impacts

Section 4.3 and Figure 12 (pages 28-29) of the Biodiversity Assessment categorises the TOD into areas of low, moderate, high and very high biodiversity constraints. It also recommends “*to implement the avoid, minimise and mitigate hierarchy for biodiversity values, with avoidance of both very high and high biodiversity constraint areas recommended as priorities*” (p.28).

BCS supports prioritising avoiding high and very high constraint areas, as well as areas of EEC, CEEC and SAIL entities.

However, the EIE, *Macquarie Park Innovation Precinct - Stage 2 Neighbourhoods Urban Design Framework* (AJC Architects, July 2024) (Urban Design Framework) and the *Macquarie Park Innovation Precinct Urban Design Guide* (DPHI, July 2024) (Design Guide) currently do not avoid impacts to high and very high biodiversity constraint areas.

For example, the land use zoning and Key Site outcomes in the EIE do not incorporate the areas of high constraint into a C2 Environmental Conservation zoning. The high or very high biodiversity constraint areas should be considered for open space in the Structure Plan or Open Space Network Maps in the Design Guide.

BCS recommends impacts to biodiversity values be avoided as part of the rezoning proposal, rather than at the future development stage, as this will to maximise the extent to which conservation measures are integrated with other planning outcomes including planning for infrastructure and roads, flood management, and lot patterns.

Planning Controls (Urban Design Guide)

BCS notes that Section 6.5 of the Design Guide includes objectives and provisions relating to canopy coverage and biodiversity. BCS considers that the provisions could be strengthened and recommends the Design Guide include the following biodiversity provisions:

- Provision 1 – Development applications should retain trees with supporting vegetation that provide significant landscape or amenity value, are part of a threatened ecological community, or provide habitat (including hollow bearing trees, dead standing trees, recruitment trees, roost trees, nest trees, or trees with any other habitat features). Retaining existing canopy cover will provide shade for urban heat mitigation and contribute to the NSW government tree canopy targets for Greater Sydney.
- Provision 2 – Development applications should avoid existing biodiversity values on the land and incorporate its protection into the final development. Consent conditions are designed to enable the in-perpetuity management of the biodiversity values within avoided land. Where biodiversity values are absent from the subject land, reconstruction of these biodiversity values can be conditioned by the creation of Landscape Plans which use local provenance plants including groundcovers, shrubs and canopy species. The size of the avoided and reconstructed land containing significant biodiversity values for both terrestrial and aquatic species are to be provided at multiple scales, including ecological pockets. Where existing vegetation is retained, development applications are to retain existing soil profiles and prohibit the regrading of soils and levels of soils.
- Provision 3 – Local provenance native species are to be used in all landscaping across the precinct that are reflective of the locally endemic plant community types. Landscape plans are to include growth forms from all strata in the locally endemic plant community types including groundcovers, shrubs and canopy species.
- Provision 4 – Where existing trees, vegetation and habitat for native species are to be avoided and retained, the adjacent supporting ecosystem features including trees of various class sizes, native shrubs (mid-story) and ground covers, bush rock, fallen logs and branches and water courses should be retained to support the retained biodiversity values.
- Provision 5 – Development applications are to undertake an analysis of the biodiversity values within the Subject Land and the context of the surrounding sites to determine the location and extent of the biodiversity values. The results of the analysis of biodiversity values will be used to plan for the retention and reconstruction of habitat and retention or creation of buffers to biodiversity values within the precinct.

Flooding

BCS has reviewed the Civil, Flooding and Stormwater report for Macquarie Park Innovation Precinct Stage 2 (TTW, June 2024) and the draft City of Ryde Flood Harmonisation Study – Flood Study Update prepared by WMAWater and dated January 2023.

The precinct covers areas with significant flood risk (i.e. the Flood Planning Area shown in red below in Figure 1) that require appropriate development controls. DPHI should consider the proposed intensification inside the Flood Planning Area to minimise the extent to which risks increase in areas with higher flood risk.

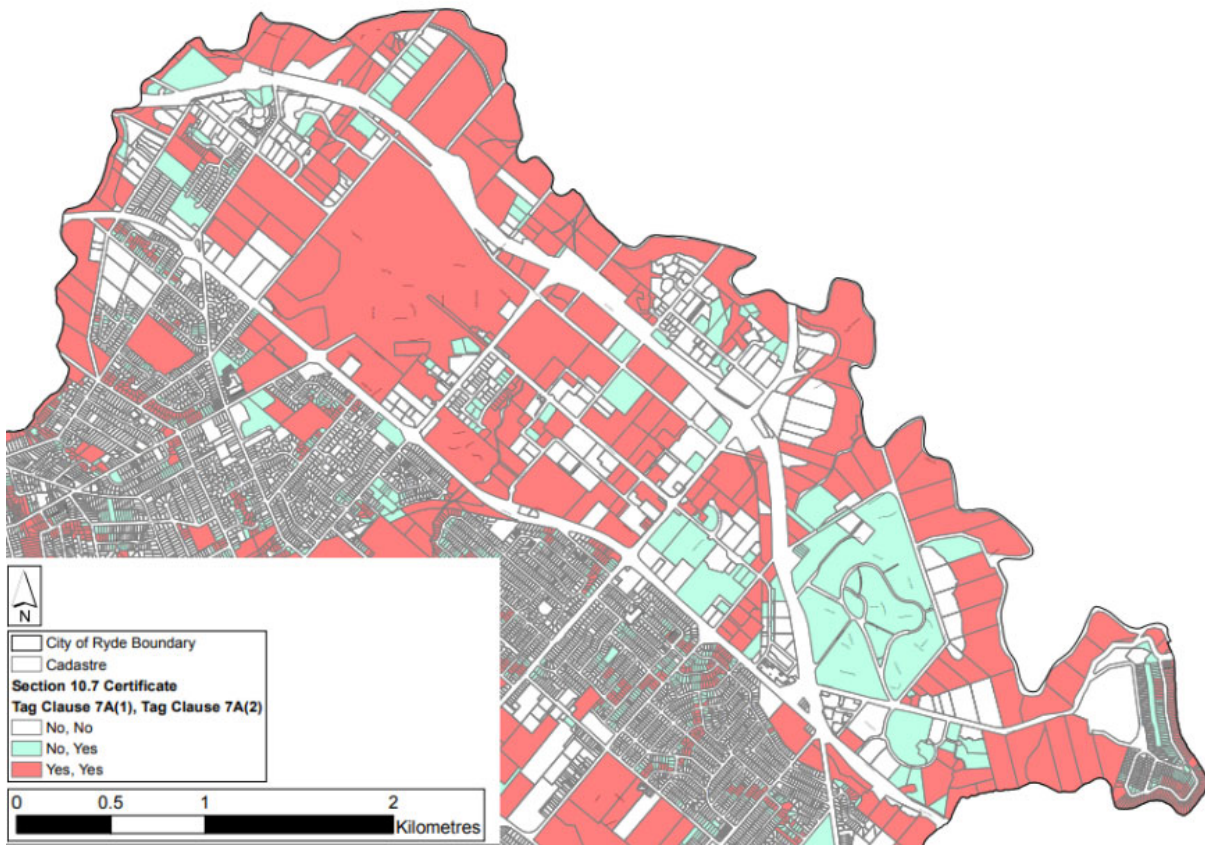


Figure 1. Flood Planning Areas around the Macquarie Park TOD rezoning area (Source: City of Ryde Draft Flood Study, 2023)

BCS notes that the Urban Design Framework (AJC, July 2024) in Section 2.6 (page 39):

“Macquarie Park is extensively flood affected, with flood lines following the above- and under- ground creek lines as well as local depressions through the precinct. As can be seen in the map above, there are consolidated sections of flood prone land in each of the studied neighbourhoods. Of key consideration for this study: the most recent flood study undertaken for Ryde Council (2023) identified a number of flood pathways which involve areas unsafe for people and vehicles. These areas may require either avoidance of planning changes or selective open space and building placement to ensure safety.”

Managing flood risk

Aside from the Urban Design Framework showing building placement for Key Sites 9 and 11 to avoid flood ‘pathways’ (pages 107 and 109), BCS could not identify any other areas of the precinct where flood risk has specifically been addressed in the land use planning outcomes. In addition, the EIE and Appendix A to the Urban Design Guide do not include planning controls to ensure that Key Sites 9 and 11 are developed as envisaged.

BCS recommends that the flood risk in the red circled areas below in Figure 2 needs be addressed as part of the rezoning process for Macquarie Park TOD.



Figure 2. 1% AEP Flood for the Macquarie Park TOD rezoning area (Source: Section 2.6, Urban Design Framework (AJC, July 2024))

The [Understanding and Managing Flood Risk FB01 guideline](#) of the NSW Government's 2023 Flood Risk Management (FRM) Manual Manual recommends that land-use planning controls ensure that new development is compatible with flood behaviour and risk both for the existing community as well as the new development and its users. The Flood Planning Constraint Categories (FPCC) provide a framework for understanding the constraints associated with flood-prone land and guiding decisions on land use planning.

BCS highlights that when intensifying and rezoning existing development in flood-prone areas, it is important to:

- consider the implications of the FPCC categories
- assess flood risks through a Flood Impact Risk Assessment (FIRA), and
- then address flood-related constraints.

BCS recommends DPHI complete a FIRA for the Macquarie Park TOD precinct to identify areas within the proposed neighbourhoods that are not constrained by high hazard, flood function, and emergency management considerations.

BCS recognises that the flood risks for significant portions of the precinct can be managed if development is appropriately positioned. As such, BCS recommends the rezoning consider Table 14 of the [Understanding and Managing Flood Risk FB01 guideline](#).

Flood Impact and Risk Assessment

BCS recommends that the Civil, Flooding and Stormwater report be revised to ensure it:

- meets the minimum requirements for a FIRA as per the FRM Manual and associated [Flood Impact and Risk Assessment Guideline LU01](#)
- adequately presents relevant details on the risk of flooding and emergency management constraints to the site for the full range of flooding
- provides further details regarding building footprints and how flood conveyance through the rezoned sites (circled in red in Figure 2) will remain unobstructed to achieve no significant impact on flooding.

Based on the amount of detail in the Urban Design Framework and EIE about the future development of the precinct, BCS considers that sufficient information is available about possible building footprints/massing to assess the impact of flooding on the proposed development, as well as impacts of the development on flooding. This analysis is essential for maintaining effective flood risk management while allowing for appropriate development.

If Ryde Council does not have a hydraulic numerical model of the catchment that would allow DPHI to complete a flood impact assessment, DPHI can consider alternative methods to assess flood

impacts and risks. BCS recommends the Civil, Flooding and Stormwater report be revised to provide details on the proposed development, existing and developed cases, impacts, and the capacity of the development to manage impacts, as well as the residual risk.

Ultimately, the goal of a FIRA is to provide a clear understanding of the potential flood risks associated with the rezoning, even in the absence of the flood model from Council, which can be used to support informed decision-making and effective flood risk management. A FIRA should include analysis of key flood constraints, including conveyance, hazard and flood function to the existing and future communities (for pre and post development conditions, with approximate locations if final design is not available), using suitable techniques outlined in the Australian Rainfall and Runoff (ARR) guidelines for the full range of flooding up to the Probable Maximum Flood (PMF).

BCS recommends that the Civil, Flooding and Stormwater report is updated to meet the requirements of a FIRA prepared in accordance with the FRM Manual, with particular attention to the requirements under the [Flood Impact and Risk Assessment LU01](#) and the [Support for Emergency Management \(EM01\)](#) guidelines.

The FIRA should be prepared by an appropriately qualified professional engineer with experience and advanced skills in catchment hydrology, floodplain hydraulics and have a good working knowledge of FRM practices and guidance in NSW. Specifically the FIRA should:

- Identify existing flood behaviour by providing maps of:
 - existing flooding for the full range of events including the 5%, 1%, 0.2%, 0.5% and PMF events for the vicinity of the site and its surroundings. BCS recommends assessing sensitivity to an increase in rainfall intensity of flood producing rainfall events under climate change in accordance with the Section 2.6.2 of the [Understanding and Managing Flood Risk \(FB01\)](#) guideline.
 - peak flood depths, velocity, hydraulic hazard, and hydraulic function for the full range of flooding and at key locations such as access points.
- Identify impacts of the development on flood behaviour to other properties and impact of flooding on development by:
 - Identifying developed flood behaviour (post development conditions, with approximate layouts of building footprints where available) using afflux mapping for the full range of flooding and outline the impacts of the development on flood behaviour within and outside the precinct and then identify management measures to offset these impacts.
 - Providing inset maps for impact figures where significant impacts occur. Significant impacts would include greater than 0.01m increase in flood level in the 1% Annual Exceedance Probability (AEP) flood and a significant increase in the PMF. BCS recommends a no significant impact scenario. If this is not achievable, then commentary around additional impact assessment to achieve no significant impact (prior to rezoning being finalised) should be added to the FIRA.
- Address emergency management constraints, noting that the precinct will be subject to significant intensification with the rezoning proposal allowing for between 4,066 and 9,718 new dwellings. The FIRA can address this through
 - identifying and mapping critical access routes, such as roads and bridges, that remain elevated/operational during floods to manage the primary and secondary risks from flooding to the heavily intensified population, in consultation with the NSW State Emergency Service (SES) as the lead combat agency for flood emergency management
 - addressing the 2023 Flood risk management guideline [EM01 Support for emergency management planning](#), including by:
 - identifying site emergency management constraints and emergency management considerations consistent with any applicable local flood plan and provide adequate information on regional evacuation capacity
 - providing commentary on the duration of flooding, frequency of inundation and isolation of the users of the site

- presenting the results at a scale that is appropriate to understand the isolation and emergency management of the site with respect to the flooding in the catchment
- considering the PMF long duration (greater than 6 hours) given the scale of the proposed rezoning to assess the duration of isolation of the communities if preliminary assessment identifies access routes are of concern.

Ministerial Direction 4.1 Flooding

The EIE, Urban Design Framework and Urban Design Guide should be revised to address several of the requirements set out in the [Ministerial Direction 4.1 Flooding, specifically](#) Section 3 stipulates that:

A planning proposal must not contain provisions that apply to the flood planning area which:

- a) permit development in floodway areas,*
- b) permit development that will result in significant flood impacts to other properties,*
- c) permit development for the purposes of residential accommodation in high hazard areas,*
- d) permit a significant increase in the development and/or dwelling density of that land,*
- e) permit development for the purpose of centre-based childcare facilities, hostels, boarding houses, group homes, hospitals, residential care facilities, respite day care centres and seniors housing in areas where the occupants of the development cannot effectively evacuate,*
- f) permit development to be carried out without development consent except for the purposes of exempt development or agriculture. Dams, drainage canals, levees, still require development consent,*
- g) are likely to result in a significantly increased requirement for government spending on emergency management services, flood mitigation and emergency response measures, which can include but are not limited to the provision of road infrastructure, flood mitigation infrastructure and utilities, or*
- h) permit hazardous industries or hazardous storage establishments where hazardous materials cannot be effectively contained during the occurrence of a flood event.*

While a rezoning proposal may be inconsistent with the Direction in certain circumstances, the Macquarie Park TOD needs to demonstrate how it meets these specific circumstances.

Attachment B – National Parks and Wildlife Service advice – Macquarie Park TOD rezoning proposal

Stormwater management

Documentation accompanying the rezoning proposal should be revised to recognise the precinct's location in a regulated catchment, as defined in Chapter 6 of the State Environmental Planning Policy (Biodiversity and Conservation) 2021 (BCSEPP).

This planning context for the precinct is most relevant in terms of managing stormwater, and so the Civil, Flooding and Stormwater Report should be updated to reflect this.

There are two elements of stormwater management:

- improvements to water quality through, for example, reduction in gross/chemical pollutants and sedimentation and
- use of detention, infiltration and reuse to control and reduce peak flows.

The Civil, Flooding and Stormwater Report only mentions the water quality aspects of water sensitive urban design (WSUD), identifying WSUD opportunities for the precinct but noting these opportunities are constrained and so may not be implemented and/or will not reach the water quality measures set in the Master Plan because treatment trains will be undersized. NPWS supports the improved water quality targets, including hydrocarbons and free oils, plus incorporating treatment of heavy metals across the precinct.

The Civil, Flooding and Stormwater Report does not recognise the significant impacts that the pulse of stormwater currently has on downstream environments during storm events, and NPWS believes there is an opportunity for the Macquarie Park Innovation Precinct redevelopment to provide a significant contribution in addressing this problem.

The Civil, Flooding and Stormwater Report assumes that Ryde Development Control Plan (DCP) for onsite detention systems is adequate. However, the DCP allows for up to 25% of runoff from a development site to bypass any onsite detention system, which is not an appropriate standard given the sensitive receiving environment.

In contrast, the Urban Design Guide establishes a set of design principles. Design Principle 1 clearly recognises the importance of waterways and wetlands as part of the value hierarchy. Applying this principle across the precinct will be fully consistent with its location in a regulated catchment.

Under section 6.6(1) of the BCSEPP, a consent authority must consider the following matters related to the control of runoff from a development:

- (b) whether the development will have an adverse impact on water flow in a natural waterbody,*
- (c) whether the development will increase the amount of stormwater run-off from a site,*
- (d) whether the development will incorporate on-site stormwater retention, infiltration or reuse,*
- (f) the cumulative environmental impact of the development on the regulated catchment.*

Under section 6.7(1) of the BCSEPP the following are relevant considerations:

- (a) whether the development will have a direct, indirect or cumulative adverse impact on terrestrial, aquatic or migratory animals or vegetation,*
- (c) whether the development will minimise or avoid—*
 - (i) the erosion of land abutting a natural waterbody, or*
 - (ii) the sedimentation of a natural waterbody,*
- (d) whether the development will have an adverse impact on wetlands that are not in the coastal wetlands and littoral rainforests area,*

(e) whether the development includes adequate safeguards and rehabilitation measures to protect aquatic ecology.

It would be appropriate for these considerations to be clearly outlined in the Civil, Flooding and Stormwater Report, and for the rezoning proposal to include an amendment to the Ryde DCP to reduce the amount of runoff that can bypass onsite detention systems, consistent with the objective of reducing adverse impacts on water flow in a regulated catchment.

The recommendations of the Civil, Flooding and Stormwater Report in terms of water quality (inclusive of hydrocarbon, free oil and heavy metal targets) should also be incorporated into the planning proposal. The higher water quality standards are necessary considering a downstream sensitive receiving area, and the neutral or beneficial standard required under the BCSEPP for works in a regulated catchment.

If the existing DCP rules were to continue to be applied, the proposed intensive development of Macquarie Park will not meet its own Design Principle 1, nor will it assist in either limiting future stormwater impacts or addressing its existing impacts to the aquatic and riverine ecosystems of Lane Cove River. These impacts have long been recognised as the major impact on the natural and social values of Lane Cove National Park.

Recommendation:

- Revise the planning proposal to set the higher water quality standards as recommended in the Civil, Flooding and Stormwater Report (inclusive of targets for hydrocarbon, free oil and heavy metal) and to impose a reduction in the proportion of stormwater that may bypass onsite detention systems to ensure the precinct's redevelopment will result in a reduction in the magnitude and devastating impacts of the stormwater pulse entering the waterways in Lane Cove National Park.

Provision of good quality open space

Based on the figures provided in the EIE, the Stage 1 and Stage 2 rezonings may result in between 7,682 and 17,818 new dwellings and up to 89,000 additional jobs. It will be essential to provide sufficient quality open space to meet the demands and needs of the new residents and workers proposed for the Precinct.

There is limited existing public open space in the precinct. NPWS fully supports Design Principle 7 to create additional open spaces to support future growth and Design Principle 8 to improve tree cover.

However, NPWS is concerned that the canopy cover targets outlined in Table 6 of the Urban Design Guide for Stage 2 will be 40% in Mixed-use zoned land to 15% where apartments are built, as this is below the target set by the NSW Government under the Greening our City Program. These lower targets for tree canopy may affect water infiltration and groundwater recharge, micro-climatic control and biodiversity.

A consideration of whether open space will be used is its amenity, which is influenced by the degree to which it will be overshadowed by buildings, particularly in winter. In Stage 1 and most neighbourhoods in Stage 2, most of the nominated public open spaces will have solar protections, guaranteeing some sunlight reaches the park in the middle of the day.

In contrast, the open space identified in Neighbourhood 7 (Julius Avenue Park OS-701) will have no specific solar protection which may make the park less attractive to people working in this precinct or existing residents in the vicinity. This may, in turn, place additional pressure on the neighbouring section of Lane Cove National Park.

Recommendation:

- Consider designating Julius Avenue Park (OS-701) as an area of open space where solar access is protected for 50% of the time between 10am and 2pm to improve its attractiveness for workers and residents.

Active transport routes and pathways

NPWS notes that, unlike the Master Plan there are no proposals to create cycleways into Lane Cove National Park and that the pathway shown entering the park is in the wrong location – it is located further west than indicated (see Figure 3b Connecting With Country Map of the Urban Design Guide's Appendix A).

Recommendation

- Revise Figure 3b Connecting With Country Map in the Urban Design Guide to indicate the correct location of the entry point into Lane Cove National Park from Neighbourhood 7.

Bushfire risk management

The documentation recognises that bushfire hazards exist in part of the precinct due to its proximity to Lane Cove National Park. These risks mean there are major constraints to the development potential, particularly in Neighbourhood 7. In this precinct, no area would be considered suitable under Planning for Bushfire Protection (RFS 2019) for a Special Fire Protection Purpose development such as a childcare or aged care facility, and new residential buildings would not be suitable in a large part of this neighbourhood.

The planning for Neighbourhood 7 accepts these constraints and concludes there should not be any adjustments required for bushfire management on adjoining lands (including in Lane Cove National Park). This is stated in section 6.3 of the Strategic Bushfire Study.

However, the Strategic Bushfire Study's designation of indicative access and evacuation routes (Figure 24) and its listing of nearby Neighbourhood Safer Places (Table 1, Figure 25) does not apply these constraints to the same degree. Although a major road, Delhi Road cannot not be considered a safe evacuation route in the event of a wildfire. If more Neighbourhood Safer Places are required in addition to Macquarie Centre, it should not be accessed via a route through bushfire prone land.

Recommendation

- Add a clarification in the Strategic Bushfire Study that Delhi Road (east) will not be a safe evacuation route in the event of a wildfire and so none of the neighbourhood safer places accessed via this route should be considered as servicing Macquarie Park residents.

END OF SUBMISSION



Your ref: IRF24/1250
Our ref: DOC24/862248

Ms Anthea Sargeant
Executive Director State Rezoning
Department of Planning, Housing and Infrastructure

By email: [REDACTED]

24 October 2024

Dear Ms Sargeant,

Thank you for your letter of 17 October 2024 on the exhibited Macquarie Park Transport Oriented Development rezoning proposal (TOD) and the Macquarie Park Innovation precinct - Stage 1 rezoning proposal (Stage 1), in line with the consultation requirements set out in section 3.25 of the *Environmental Planning and Assessment Act 1979 (EP&A Act)*.

The Biodiversity, Conservation and Science Group (BCS) of the Department of Climate Change, Energy, the Environment and Water (DCCEEW) understands that the TOD and Stage 1 rezoning proposals are to be finalised in a single self-repealing State Environmental Planning Policy (proposed SEPP).

BCS notes that the Department of Planning, Housing and Infrastructure (DPHI) has formed an opinion under section 3.25 that 'the proposed SEPP may adversely affect critical habitat or threatened species, populations or ecological communities, or their habitats'.

BCS has reviewed the exhibited packages of information for the TOD and Stage 1 rezoning proposals as they relate to the section 3.25 consultation request, including the Explanation of Intended Effects (EIE), planning controls and supporting technical studies. BCS considers its previously provided advice remains relevant and provides its response on the Macquarie Park TOD at Attachment A, and Macquarie Park Innovation Precinct – Stage 1 at Attachment B.

National Parks and Wildlife Service (NPWS) advice provided on the TOD rezoning proposal on 13 August 2024 (ref DOC24/556500, DOC24/622159) and the Stage 1 rezoning proposal on 18 December 2023 (ref DOC23/988555) remains relevant.

BCS is available to work with DPHI on any post exhibition amendments and studies prepared to address the advice provided.

If you have any further questions about this issue, please contact [REDACTED], Director Greater Sydney at [REDACTED]

Yours sincerely

Executive Director
Regional Delivery
Biodiversity, Conservation and Science

Attachment A – Biodiversity, Conservation and Science Group’s Advice – Macquarie Park TOD rezoning proposal

Documents considered

BCS has reviewed the following exhibited documents:

- Explanation of Intended Effect | Macquarie Park Innovation Precinct Transport Oriented Development Precinct (DPHI, July 2024) (EIE)
- Macquarie Park Innovation Precinct Stage 2 – Biodiversity Vegetation Assessment (Ecological Australia, 4 June 2024) (Biodiversity Assessment)
- Macquarie Park Innovation Precinct - Stage 2 Neighbourhoods Urban Design Framework (AJC Architects, July 2024) (Urban Design Framework)
- Macquarie Park Innovation Precinct Urban Design Guide (DPHI, July 2024) (Design Guide).

Biodiversity

Threatened species and ecological communities

The Biodiversity Assessment identifies the following threatened ecological communities (TECs) within the TOD area:

- Duffys Forest Ecological Community in the Sydney Basin Bioregion (Duffys Forest) Endangered Ecological Community (EEC), which is listed under the *Biodiversity Conservation Act 2016* (BC Act)
- Sydney Turpentine-Ironbark Forest in the Sydney Basin Bioregion Critically Endangered Ecological Community (CEEC), listed under both the BC Act and *Environmental Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act).

Serious and Irreversible Impact entities

Both the Duffys Forest EEC and Sydney Turpentine-Ironbark Forest CEEC are listed as Serious and Irreversible Impact (SAIL) ecological community entities under the BC Act. In addition, the Swift Parrot Important Area Map includes the Macquarie Park TOD Precinct, and the Swift Parrot is a SAIL species. BCS recommends the Biodiversity Assessment be updated to reflect these potential impacts to SAIL entities and revises the proposal to avoid impacts to SAIL entities.

Biodiversity Values Map

The Macquarie Park TOD precinct includes areas identified on the DCCEEW Biodiversity Values Map as land with high biodiversity value, such as native vegetation, threatened species habitat and creek lines, which means it is particularly sensitive to impacts from development.

Biodiversity Offsets Scheme

BCS notes that the Biodiversity Offsets Scheme (BOS) will apply to future State significant development (SSD) unless the Planning Agency Head and the Environment Agency Head determine that the development is not likely to have any significant impact on biodiversity. The BOS will also apply to local development under Part 4 of the EP&A Act (other than SSD or complying development) that is likely to significantly affect threatened species. For both SSD and local development, SAIL will need to be addressed.

Avoiding biodiversity impacts

Section 4.3 and Figure 12 (pages 28-29) of the Biodiversity Assessment categorises the TOD into areas of low, moderate, high and very high biodiversity constraints. It also recommends “to implement the avoid, minimise and mitigate hierarchy for biodiversity values, with avoidance of both very high and high biodiversity constraint areas recommended as priorities” (p.28).

BCS supports prioritising avoiding high and very high constraint areas, as well as areas of EEC, CEEC and SAIL entities. However, the EIE, Urban Design Framework and Design currently do not avoid impacts to high and very high biodiversity constraint areas.

For example, the land use zoning and Key Site outcomes in the EIE do not incorporate the areas of high constraint into a C2 Environmental Conservation zoning. None of the high or very high biodiversity constraint areas are identified for open space in the Structure Plan or Open Space Network Maps in the Design Guide.

BCS recommends impacts to biodiversity values be avoided as part of the rezoning proposal, rather than at the future development application stage. This will maximise the extent to which conservation measures are integrated with other planning outcomes including planning for infrastructure and roads, flood management, and lot patterns. This will enhance biodiversity outcomes within the precincts and help in delivering a more liveable precinct by contributing to local amenity and urban cooling.

Planning Controls

BCS notes that Section 6.5 of the Design Guide includes objectives and provisions relating to canopy coverage and biodiversity. Following feedback from DPHI on the TOD design guide provisions for biodiversity, BCS has made updates to provide further clarity and improve the implementation of the measures. BCS recommends that the following biodiversity provisions are included within the Design Guide:

Provision 1

In addition to the requirements of the BC Act, all development applications complete an analysis of the biodiversity values within the development site, as well as surrounding sites to determine the location and extent of the biodiversity values. The results of the analysis should be used to:

- avoid impacts to biodiversity values and supporting vegetation that provide significant landscape or amenity value, are part of a threatened ecological community, or provide habitat (including hollow bearing trees, dead standing trees, recruitment trees, roost trees, nest trees, or trees with any other habitat features)
- retain and rehabilitate biodiversity values within the site
- retain or create buffers within the site to the biodiversity values within the precinct.

Provision 2

Retained biodiversity values are protected during construction and operation of the development. Prior to any works commencing on site, a vegetation management plan to rehabilitate and manage existing native vegetation must be prepared by a suitably qualified ecologist.

Provision 3

Development is to maintain existing soil profiles and not regrade soils and levels of soils surrounding retained vegetation and buffers to ensure the health of retained vegetation.

Provision 4

Landscape plans are to incorporate:

- a diversity of local provenance native trees, shrubs and groundcover species (rather than exotic species or non-local native species) from the relevant native vegetation community (or communities) that occur or once occurred in the local area
- growth forms from all strata including groundcovers, shrubs and canopy species
- existing ecosystem features including bush rock, fallen logs and branches.

Provision 5

Development should retain existing canopy cover to provide shade for urban heat mitigation and contribute to the NSW government tree canopy targets for Greater Sydney.

Attachment B – Biodiversity, Conservation and Science Group Advice – Macquarie Park Innovation Precinct – Stage 1

Documents considered

BCS has reviewed the following exhibited documents:

- Explanation of Intended Effect | Macquarie Park Innovation Precinct Stage 1 Rezoning Proposal (Department of Planning and Environment, November 2023) (EIE)
- Macquarie Park Innovation Precinct Urban Design Framework (AJC Architects, 7 November 2023) (Urban Design Framework)
- Macquarie Park Innovation Precinct Stage 1 Neighbourhoods – Design Guide (Department of Planning, Land Use, Strategy and Housing, 10 October 2023) (Design Guide)
- Macquarie Park Innovation Precinct Urban Design Guide (DPHI, July 2024) (Design Guide)
- Macquarie Park Innovation Precinct Stage 1 – Vegetation Update (Eco Logical Australia, 23 June 2023) (Ecological Report).

Biodiversity

The Ecological Report does not provide sufficient information to determine whether threatened entities will or may be adversely affected by future development linked to the proposed rezoning. A remnant of the critically endangered ecological community, Sydney Turpentine/Ironbark Forest (STIF), occurs immediately adjacent to the site and therefore there is some likelihood that it also occurs on site, particularly as this ecological community can occur as single trees.

The report has used regional vegetation mapping, rather than a site visit, to conclude that most of the vegetation on site is planted. However, if STIF is present, this could be a major constraint for the proposal given its conservation status. BCS recommends that prior to any decisions at this rezoning stage, that a further ecological assessment is completed, including a site survey, to determine if any TECs are located within the site boundary.

In addition, it is also not clear from the Ecological Report whether threatened species would be adversely affected, as no site surveys were completed. The report notes that targeted threatened species surveys would be required prior to any development application. BCS recommends that an ecological assessment for the Precinct includes threatened flora surveys and at least, a threatened fauna habitat assessment.

There is also not enough information to determine whether threatened entities offsite may be adversely affected through indirect impacts. Given this, the ecological assessment should include an assessment and discussion of potential indirect impacts of the development, as well as recommendations on measures that could be applied to mitigate these indirect impacts. Some potential indirect impacts include:

- impacts to water quality and quantity within Shrimptons Creek, and the connecting Lane Cove River, including the sensitive environments downstream within Lane Cove National Park
- impacts to fauna flight paths from increased building height
- changes to micro-climate around the proposed high-rise developments (including shading, lighting, noise).

END OF SUBMISSION

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Australian Government

**Department of Infrastructure,
Transport, Regional Development,
Communications and the Arts**

Anthea Sargeant
Executive Director
NSW Planning Department

28/08/2024

Dear Ms Sargeant,

Feedback on Transport Oriented Development program

The Department of Infrastructure, Transport, Regional Development, Communications and the Arts (the Department) is informed that the NSW Department of Planning, Housing and Infrastructure (DPHI) is currently consulting with key stakeholders on strategic rezoning proposals as part of the Transport Oriented Development (TOD) program.

Land-use planning and development proposals in the vicinity of Federal Leased Airports (FLAs) may be subject to certain considerations and constraints in relation to airport safeguarding and airspace protection. This includes proposed changes to State and Local government's planning controls.

The Department provides the following comments for your consideration as feedback on rezoning proposals as part of the TOD program.

Airport Safeguarding

The National Airport Safeguarding Framework (NASF) is a national land use planning framework that established principles and guidelines to inform planners' consideration of potential aviation implications when assessing development proposals, rezoning requests and developing strategic land use plans.

NASF Guidelines relevant for consideration in rezoning proposals for development include:

- Guideline A: aircraft noise
- Guideline C: wildlife strikes
- Guideline E: lighting distraction for pilots
- Guideline F: airspace protection
- Guideline H: strategic helicopter sites.

Airspace Protection

Part 12 of the *Airports Act 1996* (Airports Act) and the Airports (Protection of Airspace) Regulations 1996 (the Regulations) establishes a regulatory regime for the protection of airspace at and around federal leased airports. The object of the Regulations is to protect airspace at and around airports in the interests of the safety, efficiency or regularity of existing or future air transport operations into or out of airports. The Airports

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Act and the Regulations are administered by the Australian Government's Department of Infrastructure, Transport, Regional Development, Communications and the Arts.

The protected airspace under the Airports Act is known as 'prescribed airspace'. Buildings and structures (such as cranes and concrete pumps) that intrude into prescribed airspace are defined as a "controlled activity". Controlled activities must not be carried out unless an approval has been obtained under the Regulations. Under the Regulations, building authorities or proponents are required to refer potential controlled activities to the relevant airport to assess the impact on the safety, efficiency or regularity of air transport operations. Decisions made under the Regulations are separate and in addition to any State/Territory or Local Government planning regulations.

Next Steps

The Department recommends DPHI engage with relevant FLAs. FLAs as referral authorities, are best placed to assess the potential impacts of proposals under the TOD program on airport operations. FLAs liaise with aviation agencies (the Civil Aviation Safety Authority and Airservices Australia) and refer proposals to the Department for assessment under the Airports Act and Regulations where appropriate. FLAs will also liaise with proponents and DPHI where required to discuss any planning constraints, mitigations or conditions that DPHI would need to have regard to in making its determination.

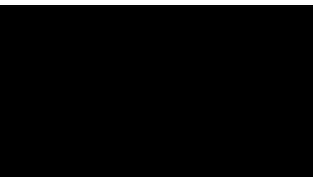
The contact details for the officers at the relevant airports are as follows.

- Sydney Airport: Peter Bleasdale, Airfield Technical Planning, airspaceprotection@syd.com.au
- Western Sydney Airport: Kirk Osborne, Executive Manager Land Use Planning & Approvals, planning@wsaco.com.au; and
- Bankstown and Camden Airports: Alan Collins, Aviation Compliance Manager, aviation@aeria.co.

I have cc'd the relevant FLAs on this letter. I encourage DPHI continue to keep the relevant FLA informed as proposals under TOD program progress.

We recognise DPHI is also seeking to streamline NSW planning and assessment processes and its interface with Commonwealth legislation, we would be happy to meet with you discuss this further. If you require any further information on the above please contact me on [REDACTED] or via [REDACTED]

Yours sincerely



A/g Director
Airspace Protection & Airport Safeguarding
Domestic Aviation & Reform

6 September 2024

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Metropolitan Local Aboriginal Land Council – Proposed Pathway changes to support Transport Oriented Development Submission

Metropolitan Local Aboriginal Land Council (MLALC) has reviewed the proposed Transport Oriented Development (TOD) Accelerated Precincts program and provides the following submission.

The MLALC footprint includes the following precincts:

- [Crows Nest](#)
- [Macquarie Park](#)
- [Hornsby](#)
- [Homebush](#)

MLALC requests a detailed discussion (potentially in September) regarding the Precincts' controls, subject to DPHI's schedule and MLALC Board endorsement.

The recommendations of the exhibited documents will require further consultation to clarify MLALC role, and to ensure that MLALC aspirations are delivered through the program and are designed in a manner that respond to the needs, restrictions and considerations of the LALC.

MLALC looks forward to working with the Department of this city-shaping opportunity.

Daran Williams

Aboriginal Heritage and Cultural Officer

E: [REDACTED]

30/08/2024

Comment	Information
Embedding Aboriginal outcomes into controls	
Embed Connecting with Country, including Aboriginal consultation and co-design, into controls and legislation	<p>The master-planning for the TODs should ensure MLALC and community are partnered with to deliver heritage and culture through Connecting with Country for development and public domain</p> <p>MLALC supports the intention of the Connecting with Country (CwC) Framework and emphasises the need for the relevant planning controls to embed and implement these principles into deliverable outcomes in the precincts.</p> <p>By legislating CwC outcomes as a requirement, DPHI will ensure that consultation, co-design and the management of Aboriginal heritage is implemented across the precincts for both private development, government led projects, and public domain urban design.</p> <p>Legislating/ strengthening these controls will ensure Aboriginal consultation and partnership is an integral component in the planning process for decision makers.</p>
Create project control group to manage ongoing consultation	<p>The program's recommendation for ongoing consultation as part of private and public developments will need to be effectively managed to avoid consultation-fatigue for the LALC.</p> <p>A project control group could be implemented to support these elements. MLALC and the local community should be consulted on procedures for determining group membership and function, with terms of reference that ensure the voices of each party are considered.</p> <p>Effective scheduling and programming for any project control group should be designed to allow for careful consideration of proposals, whilst responding to the resource requirements of MLALC or community members.</p> <p>Formalised engagement would enable MLALC to bring our Elders and knowledge holders to contribute, with appropriate timing and environment for effective collaboration.</p>
Aboriginal Heritage in private proposals and public domain	
Create Aboriginal Heritage Interpretation Strategies	<p>An Aboriginal Heritage Interpretation strategy should be developed in partnership with MLALC and other relevant stakeholders:</p> <ul style="list-style-type: none"> • stories and history re-introduced to the area (including environment landscaping) • ensure art and culture are in high-value and highly visible areas in the precincts • establishing new creative trials to promote active transport, creativity, and Aboriginal heritage in the precincts

	<p>MLALC supports the opportunity to reinterpret its knowledge into the centre of the precincts, and encourage the Department to consider legislation that will ensure Aboriginal cultural knowledge is included and delivered through the precincts.</p> <p>MLALC recognises the successful implementing of this at the Redfern precinct. The precinct includes Aboriginal history and re-interpretation into public art, public domain and building design. MLALC would like to see this continued across the precincts.</p> <p>MLALC has significant cultural and local knowledge, including resources, for enhancing an interpretation strategy to ensure art, culture and environment are enhanced and genuinely representative of the precincts.</p> <p>There is an opportunity for the Local Council to partner with MLALC to design and deliver public domain improvements with cultural knowledge</p> <p>Further to the above, any ongoing procedure or program for identifying, interpreting and implementing delivery of Aboriginal knowledge in the public domain or within the private development, should be designed with the appropriate representatives.</p>
Aboriginal Jobs and Business opportunities	
<p>Secure jobs for local Aboriginal community during design, construction and operation of the precinct</p>	<p>An Aboriginal Procurement strategy could be included or supported by the TOD masterplan and legislation.</p> <p>The city-shaping development of the precincts through master-planning is an opportunity for governments (state and local) to partner with MLALC. This could facilitate creation of jobs for MLALC community members, including intergenerational uplift for youth.</p> <p>Through providing procurement opportunities for the LALC and local Aboriginal controlled businesses, the shaping of the precinct is an opportunity for jobs for the local community.</p> <p>MLALC requests investigation into the planning policy and control levers that could be integrated into the plan to require, or enable, the procurement of Aboriginal staff through the lifecycle of the program.</p> <p>Jobs created should extend beyond guidance for art and design, and provide ongoing work and jobs across all projects aspects and at all levels.</p>

Partner with MLALC to provide opportunities for Aboriginal Businesses	<p>MLALC supports the creation of mixed-use zones with commercial spaces as well as residential uplift. MLALC requests spaces dedicated to Aboriginal owned and run business within the precincts.</p> <p>It is noted that occupancy of commercial spaces will be subject to market and tendering, however MLALC requests DPHI to investigate what planning levers and legislative opportunities are available for securing spaces for Aboriginal businesses, community space and jobs.</p>
Provide opportunity for Aboriginal operated community space	<p>MLALC supports the provision of a First Nations Oriented Space included into the master-planning for the precinct, and would like to discuss further how this would be delivered and managed ongoing.</p> <p>Further discussion as to the operation of any space or facility should clarified with MLALC, including the ownership status of any such development.</p>
Affordable Housing	
Provide dedicated affordable housing for Aboriginal community	<p>MLALC is supportive of the 3-10% target of affordable housing delivered in the precinct and request consideration for how a proportion of this could be reserved to support members of the local Aboriginal community.</p> <p>Such a consideration will enable the local community to connect back to their Country.</p> <p>MLALC also request that any consideration of affordable housing (Aboriginal or otherwise) respond to the local need, including large sized dwellings to cater for diverse family sizes (large families, intergenerational families etc).</p>

The following section explains how this submission is supported by Closing the Gap Priority Reforms.

Closing the Gap Priority Reforms

Improved outcomes for Aboriginal Community through the design, construction and operation of the TOD precinct will contribute directly to the National Agreement on Closing the Gap, including NSW Governments commitment to its achievement.

Shared decision making, collaboration and co-design

Collaboration, co-design and management with Aboriginal community will contribute to Closing the Gap Closing the Gap Priority Reform 1 - Formal Partnerships and Shared Decision Making by ensuring decision-making is shared between government and Aboriginal and Torres Strait Islander people.

It will also contribute to Priority reform 3 - Transforming Government Organisations by delivering services in partnership with Aboriginal and Torres Strait Islander organisations, communities and people.

Jobs

Provision of allocated spaces for business and jobs will contribute directly to Closing the Gap Priority Reform 2 - Building the Community-Controlled Sector. In particular a partnership between Government and the LALC will Recognise that building strong community-controlled sectors to deliver Closing the Gap services and programs requires national effort and joined up delivery against all sector elements in agreed priority areas.

Housing

Provision of affordable housing in the precincts will contribute to Closing the Gap Priority Reform 1 - Formal Partnerships and Shared Decision Making. In Particular it would address how Government will commit to establishing policy and place-based partnerships to respond to local priorities; including housing need.

Aboriginal Land Rights Act 1983

Access to opportunities for provision of affordable housing for our community would contribute to principle of self-determination which underpins the Aboriginal Land Rights Act 1983 (ALRA) in NSW.

MLALC is required by their Community Land and Business Plan will investigate options arising through the acquisition of new land, to construct and manage new housing stock that meets the diverse needs of our communities. While the LALC currently manages mostly larger family homes, priorities for new housing will include a mix of smaller dwellings.

The ALRA recognises the traditional ownership and occupation of the land by Aboriginal peoples and the importance of their connection to land. This means the ALRA recognises the spiritual, social, cultural and economic importance of land to the state's Aboriginal peoples.

The ALRA also acknowledges that past governments' decisions have progressively reduced the lands set aside for Aboriginal people without compensation.

The ALRA also acknowledges that past governments' decisions have progressively reduced the lands set aside for Aboriginal people without compensation.



Your ref: Macquarie Park TOD rezoning
Our ref: [REDACTED]

Ms Monica Gibson
Deputy Secretary
Planning, Land Use Strategy and Housing
NSW Department of Planning, Housing and Infrastructure
Locked Bag 5022
PARRAMATTA NSW 2124

Submitted via Planning Portal

Dear Monica,

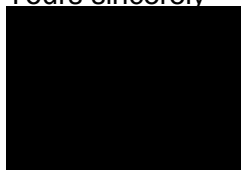
I refer to the Macquarie Park Transport Oriented Development (TOD) Stage 2 rezoning proposal which is on exhibition until 9 August 2024.

The NSW Environment Protection Authority (EPA) understands the proposal is located within the Macquarie Park Innovation Proposal area and builds on the existing Macquarie Park Place Strategy and Macquarie Park Stage 1 rezoning. Features of the proposal include amendments to the Ryde Local Environmental Plan 2014 (LEP) for planning controls relating to land use zoning, height of buildings and floor space ratio to allow for the creation of high and medium density residential development, mixed use, public recreation and infrastructure.

Based on review of the information provided, the EPA has identified that the proposal is likely to interact with scheduled and non-scheduled activities as defined under section 5 of the *Protection of the Environment Operations Act 1997* (POEO Act), as well as main roads, rail corridors and contaminated lands. To assist in delivering improved environmental outcomes and reduce possible land use conflict, the EPA has identified several matters for consideration. These detailed comments are provided in **Appendix A**.

If you have any further questions about this submission, please contact [REDACTED], Strategic Planning Unit, at [REDACTED]

Yours sincerely



**A/Unit Head – Environment Protection Planning
Strategy and Policy Division**

2 August 2024

Appendix A – EPA comments of Macquarie Park TOD Stage 2 rezoning proposal

General Comments

The EPA seek engagement on planning matters that have the potential to pose a significant risk to the environment and human health. This could include issues such as a proposal or strategy seeking approval to locate sensitive receivers in proximity to:

- notified or regulated contaminated sites
- existing or proposed new heavy industrial uses
- other existing activities which hold a current environment protection licence (EPL).

Licensed Facilities that may interact with the proposal

There are a range of scheduled and non-scheduled activities within the vicinity of the proposal area that have the potential to interact with future sensitive receivers within the proposal area. These interactions may cause land use conflict in the form of noise, odour, and air quality impacts.

The EPA has issued licences for premises in the vicinity of the proposal area. The following is a list of these premises and their potential impacts on sensitive receivers:

a) Ryde Resource Recovery Centre

- The Ryde Resource Recovery Centre is located at 162 Wicks Road, Macquarie Park NSW.
- The premises is licensed under EPL 13044 for resource recovery and waste storage.
- The premises is located within 150 metres of the proposal area and has the potential to create dust and noise that may impact on future sensitive receivers.

b) Ryde Transfer Station

- The Ryde Transfer Station is located at 145 Wicks Road, North Ryde NSW.
- The premises is licensed under EPL 4527 for resource recovery, waste processing (non-thermal treatment) and waste storage.
- The premises is located within 150 metres of the proposal area and has the potential to create dust and noise that may impact on future sensitive receivers.

c) AstraZeneca Pty Ltd

- AstraZeneca is located at 47 Talavera Road, North Ryde NSW.
- The premises is licensed under EPL 6891 for chemical production (pharmaceutical and veterinary products production).
- The premises is located within the proposal area and may have the potential to create noise that may impact on future sensitive receivers.

Landfill Gas Impacts

The EPA's [Solid Waste Landfill Guidelines \(2016\)](#) states that it is inappropriate for a residential zone or dwelling, school or hospital not associated with the facility to be less than 250 metres from a landfill. In rare cases, landfill gas can migrate through soil and preferential pathways, such as residential service trenches, where it can accumulate in buildings and pose an explosive risk.

The EPA notes that the proposal area is located within 150 metres from a former landfill. The City of Ryde Council formerly held EPL 4553 for the former Porters Creek Garbage Depot at 162 Wicks Road, Macquarie Park NSW. The surrender of this licence was approved, subject to conditions, in December 2004 following closure of the landfill.

Ongoing landfill gas monitoring is currently not required by the conditions of the licence surrender. Further information is available on the EPA's [Public Register](#).

The former landfill is now the location of Ryde Resource Recovery Centre.

Potential to interact with contaminated lands

The EPA notes the presence of potentially contaminated lands within the proposal area that do not require regulation under the *Contaminated Land Management Act 1997*.

Rezoning should be supported by information demonstrating that the land is suitable for the proposed use or can be made suitable, either by remediation or by the way the land is used (see [Managing Land Contamination Planning Guidelines SEPP 55–Remediation of Land](#) (EPA and Department of Urban Affairs and Planning, 1998)).

Additionally, under section 60 of the *Contaminated Land Management Act 1997*, the EPA must be notified of contamination that meets certain triggers. These are outlined in the [Guidelines on the duty to report contamination under the Contaminated Land Management Act 1997](#) (EPA, 2015).

Water quality

Stormwater discharges from areas of increased residential density have the potential to impact on local surface water and groundwater quality.

The EPA recommends the use of the [NSW Water Quality and River Flow Objectives](#) (NSW WQO and RFOs) when assessing potential surface water and groundwater quality impacts from a proposed development. NSW WQO and RFOs provide the agreed environmental values, community values and long terms goals for assessing and managing the likely impacts of an activity on water for each catchment in NSW.

Additionally, the [Local Planning for Healthy Waterways using NSW Water Quality Objectives](#) (Department of Environment and Conservation, 2006) provides guidance on how to incorporate these objectives into strategic planning. [The Risk-based Framework for Considering Waterway Health Outcomes in Strategic Land-Use Planning Decisions](#) (NSW OEH and EPA 2017), provides a practical case study on how cost-effective management strategies can be used to accommodate urban growth.

Noise and air impacts from major roads and rail corridors

A number of major roads and rail corridors are located within the proposal area and have the potential to cause noise and air impacts on proposed residential receivers.

The EPA recommends that the department review the noise limits for development in proximity to busy roads contained in the [State Environmental Planning Policy \(Transport and Infrastructure\) 2021](#) (see cl 2.120), as well as the [NSW Road Noise Policy](#) (Department of Environment, Climate Change and Water NSW 2011) and [Development Near Rail Corridors and Busy Roads – Interim Guideline](#) (The NSW Department of Planning 2008) when determining the suitability of locations within the proposal area for increased residential density.

Waste management considerations

The proposed increase in residential and commercial receivers has the potential to burden existing solid waste management facilities. The EPA encourages the NSW Government to collaborate with the local council and waste management operators to plan for increased volumes of waste resulting from the expected growth in the number of residential and commercial receivers.

Consideration of the Department of Planning, Industry and Environment 2021, [NSW Waste and Sustainable Materials Strategy 2041, Stage 1: 2021-2027](#) and [Better Practice guide for resource recovery in residential developments](#) (EPA, 2019) is recommended.

Ms Kristian Jebbink
Macquarie Park Team, State Rezoning
Planning Land Use Strategy Housing and Infrastructure
Department of Planning, Housing and Infrastructure

Re: Macquarie Park Innovation Precinct Stage 2 Rezoning Proposal

20 August 2024

Dear Ms Kristian Jebbink,

Macquarie Park Innovation Precinct Stage 2 Rezoning Proposal

Thank you for you for the opportunity to comment on the Macquarie Park Innovation Precinct Stage 2 Rezoning Proposal 2024.

The Macquarie Park Innovation Precinct Stage 2 Rezoning will increase the proposed population in areas of the precinct that previously were expected to have very little residential population. This additional residential population will increase the sports and active recreational infrastructure needs for the precinct.

To maintain the current level of service within the Macquarie Park Innovation Precinct, the Office of Sport recommends that the following sports infrastructure be developed as near as possible to the precinct by the following years:

- By 2026 the following additional infrastructure may be required:
 - one regional level Indoor centre with eight multi-use courts – (basketball + badminton + volleyball + futsal + netball) & separate gymnastics hall
 - one aquatic centre each with a 50m pool + program pool
- By 2056 the following additional infrastructure may be required:
 - one multi-use outdoor oval and one rectangular field (such as a hockey pitch)

These facilities are needed to service the expected additional community.

The Office is available if any further work or information is required for the progress of the Macquarie Park Innovation Precinct Stage 2 Rezoning Proposal.

The Office recognises the wellbeing benefits that public open spaces and community sports and active recreational infrastructure provides to the community.

Sincerely,



Chief Executive



RFS



Macquarie Park Team, State Rezoning
Planning Land Use Strategy Housing and Infrastructure
Department of Planning Housing and Infrastructure
12 Darcy Street
Parramatta NSW 2150

20 August 2024

Attention: Karen Lettice, Manager, Infrastructure and Place

Dear Ms Lettice

Exhibition of the Macquarie Park Innovation Precinct Stage 2 Rezoning Proposal

The NSW Rural Fire Service (RFS) thanks the Department of Planning Housing and Infrastructure (DPHI) (the planning proposal authority) for the opportunity to provide comments on the Macquarie Park Transport Oriented Development Program (TOD) rezoning proposal.

The RFS notes that Macquarie Park has been identified as accelerated precinct under the TOD Program and supports the Macquarie Park Place Strategy. The Macquarie Park TOD proposes to deliver up to 4,622 additional homes.

The RFS has reviewed the following exhibited documents:

- *Explanation of Intended Effect*, prepared by DPHI dated July 2024
- *Macquarie Park Innovation Precinct Stage 2 – Public Domain Master Plan* prepared by DPHI dated 7 June 2024
- *Strategic Bushfire Study* prepared by Eco Logical Australia Pty Ltd dated 14 June 2024
- *Macquarie Park Detailed Precinct Transport Study* prepared by Transport for NSW dated September 2023.
- *Macquarie Park Innovation Precinct Place Strategy* prepared by State of New South Wales through Department of Planning and Environment 2022.

Bush fire prone land

While the majority of the Macquarie Park TOD is largely residential/commercial, there are small pockets of the Macquarie Park TOD that are located on bush fire prone land or within the buffer of vegetation hazard with the Lane Cove National Park, located to the north and east.

The RFS notes the vegetation hazard in proximity to Neighbourhood 7 (North Ryde Riverside) can support bush fires that could spread rapidly and could reach the urban interface.

The RFS has consulted with Fire and Rescue NSW who has operational jurisdiction for fires within Macquarie Park precinct.

Land use zoning

The *Explanation of Intended Effect* notes the land in Stage 2 Area is currently zoned E2 Commercial Centre, E3 Productivity Support and SP2 Infrastructure and it is proposed to amend the land use zoning map to rezone specific lots within stage 2 Area to MU1 Mixed Use, RE1 Public Recreation and SP2 Infrastructure and retain existing commercial centre.

Based on the *Macquarie Park Innovation Precinct Place Strategy*, it is proposed that Neighbourhood 7 will see an increase of up to 2000 new homes.

POSTAL ADDRESS

NSW Rural Fire Service
Locked Bag 17
GRANVILLE NSW 2142

STREET ADDRESS

NSW Rural Fire Service
4 Murray Rose Ave
SYDNEY OLYMPIC PARK NSW 2127

RFS.NSW.GOV.AU

T (02) 8741 5555
F (02) 8741 5550

Evacuation and egress

The RFS appreciates while the majority of the Macquarie Park precinct is surrounded by safer urban areas and the place strategy encourages public transport use, rather private car use, it could not be determined from reviewing the *Macquarie Park Detailed Precinct Transport Study* if the existing urban road network could facilitate access and egress for evacuation in the event of a bush fire emergency.

Landscaping – greening the neighbourhood

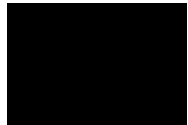
The RFS notes the *Public Domain Master Plan* provides details regarding the street tree strategy and consideration has not been given to the landscaping risks from potential bush fire. As stated above the vegetation hazard in proximity to Neighbourhood 7 (North Ryde Riverside) can support bush fires that could spread rapidly and could reach the urban interface. The planning proposal authority should consider landscaping that will not support or exacerbate bush fire from ember attack.

RFS consideration

Based on the information above, the RFS request the planning proposal authority consider the following for the proposed rezoning of the Macquarie Park TOD:

- consider the capacity of local roads to facilitate egress and evacuation for the proposal
- consider moving any residential development in Neighbourhood 7 away from bush fire prone land to reduce the risk of the impact from bush fire or ember attack
- consideration of landscaping in Neighbourhood 7 that does not increase or exacerbate bush fire impacts from street tree strategy.

If you have any further questions, please do not hesitate to contact me via email [REDACTED] or mobile [REDACTED]



Manager Development Planning and Policy
Built and Natural Environment



RFS



Macquarie Park Team, State Rezoning
Planning Land Use Strategy Housing and Infrastructure
Department of Planning Housing and Infrastructure
12 Darcy Street
Parramatta NSW 2150

20 August 2024

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The RFS notes the vegetation hazard in proximity to Neighbourhood 7 (North Ryde Riverside) can support bush fires that could spread rapidly and could reach the urban interface.

The RFS has consulted with Fire and Rescue NSW who has operational jurisdiction for fires within Macquarie Park precinct.

Land use zoning

The *Explanation of Intended Effect* notes the land in Stage 2 Area is currently zoned E2 Commercial Centre, E3 Productivity Support and SP2 Infrastructure and it is proposed to amend the land use zoning map to rezone specific lots within stage 2 Area to MU1 Mixed Use, RE1 Public Recreation and SP2 Infrastructure and retain existing commercial centre.

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Landscaping – greening the neighbourhood

The RFS notes the *Public Domain Master Plan* provides details regarding the street tree strategy and consideration has not been given to the landscaping risks from potential bush fire. As stated above the vegetation hazard in proximity to Neighbourhood 7 (North Ryde Riverside) can support bush fires that could spread rapidly and could reach the urban interface. The planning proposal authority should consider landscaping that will not support or exacerbate bush fire from ember attack.

RFS consideration

Based on the information above, the RFS request the planning proposal authority consider the following for the proposed rezoning of the Macquarie Park TOD:

- consider the capacity of local roads to facilitate egress and evacuation for the proposal
- consider moving any residential development in Neighbourhood 7 away from bush fire prone land to reduce the risk of the impact from bush fire or ember attack
- consideration of landscaping in Neighbourhood 7 that does not increase or exacerbate bush fire impacts from street tree strategy.

If you have any further questions, please do not hesitate to contact me via email [REDACTED] or mobile [REDACTED]



Manager Development Planning and Policy
Built and Natural Environment

Our Ref: [REDACTED]
Your Ref:

20 June 2024

Lisa Ward
Department of Planning, Housing & Infrastructure
Locked Bag 5022
Parramatta NSW 2124

Via email

email: [REDACTED]
CC: [REDACTED]

Dear Lisa,

Planning Proposal for Macquarie Park Stage 2, Hornsby and Crows Nest TOD State-Led Rezoning

Thank you for the opportunity to provide comment on the Transport Oriented Development for:

- **Macquarie Park** Stage 2 TOD State-led rezoning. It is understood that the planning proposal seeks to rezone land located near Sydney metro stations and other key transport hubs to deliver up to 8100 new homes including build-to-rent development or 3060 new homes and 23000 additional jobs across seven neighbourhoods¹.
- **Hornsby** which seeks to rezone Hornsby Town Centre. The Town Centre encompasses a retail and commercial core, supported by light industrial, community, civic and residential land-uses and the Hornsby Train Station².
- **Crows Nest** which seeks to provide more residential dwellings while utilising the central location and current and future transport links³.

The NSW State Emergency Service (NSW SES) is the agency responsible for dealing with floods, storms and tsunami in NSW. This role includes, planning for, responding to and coordinating the initial recovery from floods. As such, the NSW SES has an interest in the public safety aspects of the development of flood prone land, particularly the potential for changes to land use to either exacerbate existing flood risk or create new flood risk for communities in NSW.

¹ TTW, 2024, Civil, Flooding and Stormwater Macquarie Park Innovation Precinct, Section 1.1 Background, Page 4

² Stantec, 2024, Hornsby State-led Rezoning - Flooding and Stormwater | Flooding and Stormwater Report, Section 1.1 Study Site, Page 8

³ GRC Hydro, 2024, State Led Rezoning Crows Nest – Flooding and Stormwater Study Draft Report, Section 1. Introduction, Page 7

The consent authority will need to ensure that the planning proposal is considered against the relevant Section 9.1 Ministerial Directions, including 4.1 – Flooding and is consistent with the NSW Flood Prone Land Policy as set out in the Flood Risk Management Manual 2023⁴ (the Manual) and supporting guidelines, including the Support for Emergency Management Planning⁵. Key considerations relating to emergency management are outlined in Attachment A.

In summary, we do not have significant concerns regarding the proposals, however we recommend:

- careful consideration is given to the location of proposed increase in density of development in relation to areas identified as flood affected, and its associated increased risk to life and property.
- any future development proposal undertake a Flood Impact Risk Assessment, where it has not already occurred, including the consideration of climate change.

You may also find the following Guidelines, originally developed for the Hawkesbury Nepean Valley and available on the NSW SES website useful:

- Reducing Vulnerability of Buildings to Flood Damage
- Designing Safer Subdivisions
- Managing Flood Risk Through Planning Opportunities

Please feel free to contact [REDACTED] via email at [REDACTED] should you wish to discuss any of the matters raised in this correspondence. The NSW SES would also be interested in receiving future correspondence regarding the outcome of this referral via this email address.

Yours sincerely,

[REDACTED]

A/Director, Emergency Management
NSW State Emergency Service

⁴ NSW Government. 2023. Flood Risk Management Manual

⁵ NSW Government. 2023. Flood Risk Management Guideline EM01: Support for Emergency Management Planning

ATTACHMENT A: Principles Outlined in the Support for Emergency Management Planning Guideline⁶

Principle 1 Any proposed Emergency Management strategy should be compatible with any existing community Emergency Management strategy.

Any proposed Emergency Management strategy for an area should be compatible with the evacuation strategies identified in the relevant local or state flood plan or by the NSW SES. As per the NSW State Flood Plan⁷ and the various local Flood Emergency Sub Plans^{8 9 10 11}, evacuation is the primary emergency management strategy for people impacted by flooding.

Principle 2 Decisions should be informed by understanding the full range of risks to the community.

Decisions relating to future development should be risk-based and ensure Emergency Management risks to the community of the full range of floods are effectively understood and managed.

Further, risk assessment should consider the full range of flooding, including events up to the Probable Maximum Flood (PMF) and not focus only on the 1% AEP flood. Climate change considerations should also be included, in line with NSW Government Guidelines. The proposed rezoning sites have varying levels of flood affectation as summarised below.

MACQUARIE PARK

The precinct is identified as intersecting with four local watercourse catchments¹². Areas of the site are identified variously as high, medium and low risk precincts as well as overland flow precincts¹³, with commercial buildings within the site identified as being inundated during a 20 year ARI event and a number of roads at risk of flooding¹⁴. From an emergency management perspective, we recommend ensuring access and egress available for the

NSW Government. 2023. Principles Outlined in the Support for Emergency Management Planning Guideline

⁷ NSW Government. 2021. NSW State Flood Plan.

⁸ NSW SES. Mosman/North Sydney Flood Emergency Sub Plan, Endorsed December 2021, Section 5.8

⁹ NSW SES. Willoughby/Lane Cove Flood Emergency Sub Plan, Endorsed February 2023, Section 5.8

¹⁰ NSW SES. 2021. Hornsby Ku-ring-gai Local Flood Plan. Endorsed November 2021, Section 5.8

¹¹ NSW SES. 2022. Ryde Hunters Hill Flood Emergency Sub Plan. Endorsed February 2022, Section 5.8

¹² Bewsher Consulting. 2011. Macquarie Park Floodplain Risk Management Study and Plan, Figure 1, page 54

¹³ Bewsher Consulting. 2011. Macquarie Park Floodplain Risk Management Study and Plan, Final Report, Chapter 4: Flood Behaviour Summary, Page 4

¹⁴ Bewsher Consulting. 2011. Macquarie Park Floodplain Risk Management Study and Plan, Final Report, Chapter 5: Flood Management Assessment, Page 8

proposed sites, in particular those with sensitive uses. However, we do highlight that there have historically been flood rescues for people trapped in vehicles in floodwater on Talvara Road and the M2 Motorway as well as a number of flood incidents to flooded houses up to 1 metre deep in Waterloo Crescent, Waterloo Road and Lane Cove Road.

Sites for future development throughout the precinct vary in flood risk and behaviour based on their individual location and proximity to flow paths. As noted in Section 5.2 Flood Response “*site specific studies would need to be carried out for each development*”¹⁵. The locations of increased dwelling and business density should be carefully considered to minimise the risk to life and property. The proposed changes to the current City of Ryde DCP¹⁶ disallow the use of Low Flood Risk sites for sensitive uses and facilities and Medium Flood Risk areas for commercial and residential uses.

HORNSBY

While much of the site is located above the Probable Maximum Flood (PMF) extent, the areas along George Street, Hunter Street, Hunter Lane and Linda Street are affected by flooding up as frequently as a 5% Annual Exceedance Probability (AEP) event¹⁷ with depths in excess of 1.5 metres during a PMF event¹⁸. Hazard levels in these roadways reach Hazard Level 5 which is unsafe for all people and vehicles with some buildings subject to failure¹⁹.

The flooding and stormwater report states “*The proposed 4, 16, 18 and 21 storey buildings along George Street may not have access to safe evacuation route in the PMF event (similar to the existing buildings on the opposite side of George Street). Similarly, the proposed 4 storey buildings along Hunter Lane will not have access to safe evacuation route in the PMF event*”²⁰. We have historical flood incidents along Burdett Street. If possible, we recommend investigating the provision of rising road access/ egress for these sites, particularly as there is little to no warning time for the community to respond appropriately to a flood threat. ‘Shelter in place’ is not an endorsed flood management strategy by the NSW Government for the creation of new communities through zoning²¹. Such an approach is only considered for existing dwellings where the risk of staying is lower than the risk of evacuating, without increasing the number of people subject to such risk/s.

¹⁵ TTW, 2024, Civil, Flooding and Stormwater Macquarie Park Innovation Precinct, Section 5.2 Flood Response, Page 29

¹⁶ TTW, 2024, Civil, Flooding and Stormwater Macquarie Park Innovation Precinct, Section 5.3 Suitable Land Uses, Page 29

¹⁷ Stantec, 2024, Hornsby State-led Rezoning - Flooding and Stormwater | Flooding and Stormwater Report, Existing 5% AEP Flood Depth and Water Level, Page 70

¹⁸ Stantec, 2024, Hornsby State-led Rezoning - Flooding and Stormwater | Flooding and Stormwater Report, Existing Flood Depth and Water Level, Page 72

¹⁹ Stantec, 2024, Hornsby State-led Rezoning - Flooding and Stormwater | Flooding and Stormwater Report, Existing PMF Flood Hazard

²⁰ Stantec, 2024, Hornsby State-led Rezoning - Flooding and Stormwater | Flooding and Stormwater Report, Hornsby Local Environmental Plan 2013 – Clause 5.21, Page 35

²¹ NSW Government. 2023. Flood Risk Management Guideline EM01: Support for Emergency Management Planning

We note *“The proposed development will cause localised flood level increases within and outside the study site, however it is expected that these impacts can be mitigated through drainage network upgrade measure²²”* and recommend advice is sought from DCCEEW on the impacts of flooding on adjacent and downstream properties.

CROWS NEST

While the three proposed rezoning areas appear to be flood free up to a PMF event²³ any future potential rezoning in areas identified as flood affected should be accompanied by a Flood Risk and Impact Assessment (FIRA) to understand the full extent of flood risk to the site, as *“high flood hazard exists in certain locations that would likely preclude rezoning that resulted in intensification of use²⁴”*.

Further, as flood affected areas are located adjacent to the proposed rezoning areas we recommend seeking advice from NSW DCCEEW regarding the impact of the proposed development on flood behaviour and adjacent areas prior to any development in these areas.

Principle 3 Development of the floodplain does not impact on the ability of the existing community to safely and effectively respond to a flood.

The ability of the existing community to effectively respond (including self-evacuating) within the available timeframe on available infrastructure is to be maintained. It is not to be impacted on by the cumulative impact of new development. Evacuation **must not** require people to drive or walk through flood water.

Development strategies relying on an assumption that mass rescue may be possible where evacuation either fails or is not implemented are **not acceptable** to the NSW SES.

Principle 4 Decisions on development within the floodplain does not increase risk to life from flooding.

Macquarie Park site, managing flood risks requires careful consideration of development type, likely users, and their ability respond to minimise their risks. This includes consideration of:

- Isolation – There is no known safe period of isolation in a flood, the longer the period of isolation the greater the risk to occupants who are isolated.

²² Stantec, 2024, Hornsby State-led Rezoning - Flooding and Stormwater | Flooding and Stormwater Report, Hornsby Local Environmental Plan 2013 – Clause 5.21, Page 35

²³ GRC Hydro, 2024, State Led Rezoning Crows Nest – Flooding and Stormwater Study Figures, PMF Flood Level and Depth, Page 11

²⁴ GRC Hydro, 2024, State Led Rezoning Crows Nest – Flooding and Stormwater Study, Section 6 Conclusions, Page 38

- Secondary risks – This includes fire and medical emergencies that can impact on the safety of people isolated by floodwater. The potential risk to occupants needs to be considered and managed in decision-making.
- Consideration of human behaviour – The behaviour of individuals such as choosing not to remain isolated from their family or social network in a building on a floor above the PMF for an extended flood duration or attempting to return to a building during a flood, needs to be considered.

Principle 5 Risks faced by the itinerant population need to be managed.

Any Emergency Management strategy needs to consider people visiting the area or using a development.

Principle 6 Recognise the need for effective flood warning and associated limitations.

As previously noted, there is little to no warning time available at these sites prior to the onset of flooding, therefore there is limited opportunity for the community to respond to a flood threat in an appropriate and timely manner.

Principle 7 Ongoing community awareness of flooding is critical to assist effective emergency response.

Any flood risk at or around the sites, along with actions taken to reduce risk to life should be communicated to all site users (includes increasing risk awareness, community connections, preparedness actions, appropriate signage and emergency planning for the life-span of the development. Residents and users of the proposed development should be made aware of their flood risk, the [Hazards Near Me](#) app (a tool to receive flood warnings as part of the Australian Warning System) and the [NSW SES website](#) which contains comprehensive information for the general community about what to do before, during and after floods as well as in-language resources and HazardWatch (NSW SES interactive information and

Development in a floodplain will increase the need for NSW SES to undertake continuous community awareness, preparedness, and response operations.

Our Ref: [REDACTED]
Your Ref:

9 August 2024

Karen Lettice
Department of Planning, Housing & Infrastructure
Locked Bag 5022
Parramatta NSW 2124

Via email

email: [REDACTED]
CC: [REDACTED]

Dear Karen,

Planning Proposal for Macquarie Park Innovation Precinct Stage 2 Rezoning Proposal

Thank you for the opportunity to provide comment on the Planning Proposal for Macquarie Park Innovation Precinct Stage 2 Rezoning Proposal. The proposal seeks to rezone land located near Sydney metro stations and other key transport hubs.

The NSW State Emergency Service (NSW SES) is the agency responsible for dealing with floods, storms and tsunamis in NSW. This role includes, planning for, responding to and coordinating the initial recovery from floods. As such, the NSW SES has an interest in the public safety aspects of the development of flood prone land, particularly the potential for changes to land use to either exacerbate existing flood risk or create new flood risk for communities in NSW.

The consent authority will need to ensure that the planning proposal is considered against the relevant Section 9.1 Ministerial Directions, including 4.1 – Flooding and is consistent with the NSW Flood Prone Land Policy as set out in the Flood Risk Management Manual 2023 (the Manual) and supporting guidelines, including the Support for Emergency Management Planning. Key considerations relating to emergency management are outlined in Attachment A.

In summary, we recommend:

- **Carefully considering** the location of proposed increase in density of development and its associated increased risks to life and property, as some areas of the precinct are impacted by high hazard¹ and overland flooding.²

¹ TTW, 2024, Civil, Flooding and Stormwater – Macquarie Park Innovation Precinct Stage 2, Section 2.4.2 Flood Hazard, Figure 16, page 17

² Bewsher Consulting, 2011. Macquarie Park Floodplain Risk Management Study and Plan, Final Report, Chapter 4: Flood Behaviour Summary, Figure 4.1

- **Considering** future building design that avoids exposure to flooding where possible, or is designed for the potential flood and debris loadings of the PMF so that structural failure is avoided during a flood, especially considering the flash flood nature at the site.
- **Seeking** further information regarding the time to onset and duration of flooding within the precinct and the associated road network, in order to fully understand the risks of isolation for the various parts of the precinct. This should include further modelling of floods that are more frequent than the 1% AEP event (such as the 20%, 10% and 5% AEP), as well as between the 1% AEP and the PMF flood events (such as 0.5% and 0.2% AEP).
- **Seeking advice** from the NSW Department of Climate Change, Energy, the Environment and Water (DCCEEW) regarding the impact of the proposed development within the precinct on flood behaviour, including consideration of offsite impacts.
- **Considering** the impact of flooding on access/egress routes and the risk of isolation within the precinct, for floods up to and including the Probable Maximum Flood (PMF) event. Site design should avoid the entry or exit through flooded roads. We would like to emphasise that shelter in place is not considered an appropriate primary emergency management strategy for *future development*. Therefore, **we strongly recommend that any evacuation constraints are addressed at the rezoning stage.**

In addition, we note and support the proposed water sensitive urban design as part of this precinct proposal, and stormwater management options to reduce flooding impacts and minimise associated risks to benefit the existing and future communities.

You may also find the following Guidelines, originally developed for the Hawkesbury Nepean Valley and available on the NSW SES website useful:

- [Reducing Vulnerability of Buildings to Flood Damage](#)
- [Designing Safer Subdivisions](#)
- [Managing Flood Risk Through Planning Opportunities](#)

Please feel free to contact Ana Chitu via email at [REDACTED] should you wish to discuss any of the matters raised in this correspondence. The NSW SES would also be interested in receiving future correspondence regarding the outcome of this referral via this email address.

Yours sincerely,

[REDACTED]
[REDACTED]

Assistant Commissioner - Director Emergency Management
NSW State Emergency Service

ATTACHMENT A: Principles Outlined in the Support for Emergency Management Planning Guideline³

Principle 1 Any proposed Emergency Management strategy should be compatible with any existing community Emergency Management strategy.

Any proposed Emergency Management strategy should be compatible with the evacuation strategies identified in the NSW State Flood Plan⁴, the relevant local flood plan - the Ryde Hunters Hill Local Flood Plan,⁵ or by the NSW SES.

Principle 2 Decisions should be informed by understanding the full range of risks to the community.

Risk assessment should consider the full range of flooding, *including events up to the Probable Maximum Flood (PMF)*. Climate change considerations should also be included, in line with NSW Government Guidelines. Therefore, flooding impacts at the precinct and road network (including any future roads, at the design stage) should be further investigated. Further information should be requested regarding the time to onset and duration of flooding within the precinct and the associated road network, in order to fully understand the risks of isolation for the various parts of the precinct. This should include further modelling of floods that are more frequent than the 1% AEP event (such as the 20%, 10% and 5% AEP), as well as between the 1% AEP and the PMF flood events (such as 0.5% and 0.2% AEP).

The precinct is identified as intersecting with four local watercourse catchments, and site 7 is adjacent to the Lane Cove River⁶. Areas across the sites are identified variously as high, medium and low risk precincts^{7 8}, as well as overland flow precincts⁹. We recommend that the locations of increased dwelling and business density should be carefully considered to minimise the risk to life and property.

In a 1% AEP flood event there are flooding risks in multiple parts of the proposed Stage 2 rezoning area, with modelling showing flood velocities up to, or even exceeding 2 m/s in neighbourhoods 1, 4, 5 and 6, and flood depths of up to 1 and 2 metres in multiple locations.¹⁰

³ NSW Government. 2023. Principles Outlined in the Support for Emergency Management Planning Guideline

⁴ NSW Government. 2021. NSW State Flood Plan. Section 1.6 – Key Principles. 1.6.2, page 5

⁵ NSW SES. 2022. Ryde Hunters Hill Local Flood Plan, Section 5.8 Evacuation, page 16

⁶ WMA Water. 2023. City of Ryde Flood Harmonisation Study – Flood Study Update - DRAFT Report. Flood Risk Precincts Map

⁷ WMA Water. 2023. City of Ryde Flood Harmonisation Study – Flood Study Update - DRAFT Report. Flood Risk Precincts Map

⁸ WMA Water. 2023. City of Ryde Flood Harmonisation Study – Flood Study Update - DRAFT Report. Flood Risk Precincts Map

⁹ Bewsher Consulting. 2011. Macquarie Park Floodplain Risk Management Study and Plan, Final Report, Chapter 4: Flood Behaviour Summary, Figure 4.1

¹⁰ TTW, 2024, Civil, Flooding and Stormwater – Macquarie Park Innovation Precinct Stage 2, Section 2.4.1 Flood Depths and Velocities, page 11

Flooding also cuts off access roads and effectively isolates several locations during events as frequent as a 1% AEP event,¹¹ with some areas becoming high flood islands and low flood islands (particularly within site 5) becoming trapped and then inundated in a PMF¹².

In a 1% AEP event, *“the overland flow path running through Neighbourhood 5 is categorised as H5 hazard”*¹³ and the floodway crossing neighbourhood 6 along Porters Creek and Epping Road can also reach a H5 flood hazard.¹⁴ High hazard flooding (up to H5 and H6 hydraulic hazards) is present, to different extents, in the PMF event in all neighbourhoods proposed as part of this Stage 2 rezoning.¹⁵ These flood hazards are unsafe for vehicles and people, and buildings exposed to these hazards are considered vulnerable to failure.¹⁶ Due to the flash flood nature of the site in particular, the areas exposed to such hazards should be avoided for future intensification to minimise the increase in risk to life and property.

Isolation, even for short periods of time, can pose a significant risk in a flood event, as medical care and emergency services may be delayed or unable to reach people in need of assistance, particularly given the flash flood nature of this area. These risks will need to be considered and managed appropriately, noting that NSW SES is opposed to the imposition of development consent conditions requiring private flood evacuation plans rather than the application of sound land use planning and flood risk management. Further, development strategies relying on an assumption that mass rescue may be possible where evacuation either fails or is not implemented are not acceptable to the NSW SES.

Principle 3 Development of the floodplain does not impact on the ability of the existing community to safely and effectively respond to a flood.

Shelter in place is not considered an appropriate primary emergency management strategy for *future development*. Therefore, we recommend that any evacuation constraints are addressed at the rezoning stage. Evacuation must not require people to drive or walk through flood water.

Principle 4 Decisions on development within the floodplain does not increase risk to life from flooding.

Managing risks associated with flooding requires careful consideration of development type, likely users, and their ability respond to minimise their risks. This includes consideration of:

¹¹ TTW, 2024, Civil, Flooding and Stormwater – Macquarie Park Innovation Precinct Stage 2, Section 5.3 Suitable Land Uses, pages 29-31

¹² TTW, 2024, Civil, Flooding and Stormwater – Macquarie Park Innovation Precinct Stage 2, Section 2.4.1 Flood Depth and Velocities, Figure 10 & 12

¹³ [REDACTED] Flooding and Stormwater – Macquarie Park Innovation Precinct Stage 2, Section 2.4.2

¹⁴ [REDACTED] Civil, Flooding and Stormwater – Macquarie Park Innovation Precinct Stage 2, Section 2.4.2 Flood Hazard, Figure 15, page 16

¹⁵ TTW, 2024, Civil, Flooding and Stormwater – Macquarie Park Innovation Precinct Stage 2, Section 2.4.2 Flood Hazard, Figure 16, page 17

¹⁶ Department of Planning and Environment, 2023, Flood hazard – Flood risk management guideline FB03, Figure 1 General flood hazard vulnerability curve, page 3

- Isolation – There is no known safe period of isolation in a flood, the longer the period of isolation the greater the risk to occupants who are isolated.
- Secondary risks – This includes fire and medical emergencies that can impact on the safety of people isolated by floodwater. The potential risk to occupants needs to be considered and managed in decision-making.
- Consideration of human behaviour – The behaviour of individuals such as choosing not to remain isolated from their family or social network in a building on a floor above the PMF for an extended flood duration or attempting to return to a building during a flood, needs to be considered.

NSW SES has historically attended several incidents, including flood rescues, relating to flooded roads within the precinct, including Lane Cove Road, Wicks Road and Talavera Road. Parts of the precinct and existing roads become a series of high flood islands, which become isolated.¹⁷ Further, there are areas (particularly along the eastern and southern boundary of site 5) which appear to become low flood islands, becoming first isolated and then inundated in a PMF event¹⁸.

We support the proposed stormwater management and road enhancements to reduce flooding impacts and minimise risks to the community¹⁹. Any improvement that can be made to reduce flood risk will benefit existing and future communities.


Principle 5 Risks faced by the itinerant population need to be managed.

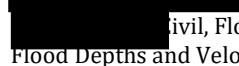
The locations of proposed recreation and community facilities and active transport routes should be carefully considered to minimise the risk to pedestrians.

It is noted that water sensitive urban design has been recommended for the precinct²⁰ and we are in support of these measures to include watercourse restoration and riparian zone regeneration as part of this precinct proposal.

Principle 6 Recognise the need for effective flood warning and associated limitations.



 Flooding and Stormwater – Macquarie Park Innovation Precinct Stage 2, Section 2.4.1
cities, Figure 10

 Civil, Flooding and Stormwater – Macquarie Park Innovation Precinct Stage 2, Section 2.4.1
Flood Depths and Velocities, Figure 12

¹⁹ TTW. 2024. Civil, Flooding and Stormwater – Macquarie Park Innovation Precinct Stage 2, Section 3.0
Public domain Works, page 18

²⁰ TTW. 2024. Civil, Flooding and Stormwater – Macquarie Park Innovation Precinct Stage 2, Section 4.0
Watercourse Restoration, page 23

Given the flash flooding risk across this area²¹, communities may have limited opportunity to respond to a flood in an appropriate and timely manner. This will complicate any emergency response that may be required to manage residual flood risk.

Continuing research by the Bureau of Meteorology and the CSIRO²² are predicting more intense, short duration heavy rainfall events which cause flash flooding. This is likely to see more frequent flash flood events occurring.

Principle 7 Ongoing community awareness of flooding is critical to assist effective emergency response.

Development in a floodplain will increase the need for NSW SES to undertake continuous community awareness, preparedness, and response operations.

The flood risk within the precinct and the broader area, and actions that should be undertaken to reduce the potential risk to life should be clearly communicated to all site users, for the lifespan of the development.

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²¹ WMA Water. 2023. City of Ryde Flood Harmonisation Study – Flood Study Update - DRAFT Report, page 67-68

²² Bureau of Meteorology and CSIRO. 2022. State of the Climate 2022