

SUBMISSION IN RESPONSE TO THE 2022 INDEPENDENT FLOOD INQUIRY

Terms of Reference

This submission responds to considerations in relation to:

- 2b the preparation and planning for future flood threats and risks
- 2e land use planning and management and building standards, including
 - i. the instruments, policies and programs applying to existing development in flood prone locations across NSW; and
 - ii. the instruments, policies and programs applying to proposed future developments in flood prone locations across NSW; and
- 2f appropriate action to adapt to future flood risks to communities and ecosystems;

Introduction

This includes a number of projects located on a floodplain/flood prone land; specifically:

- the Powerhouse Parramatta site which is immediately adjacent to Parramatta River
- the Planning Proposal to substantially uplift Parramatta's CBD
- plans for large Business Park and a major Film Studio as part of the wider Penrith Lake with both sites adjacent to the Nepean River

These sites/precincts have prompted concerns about the appropriate land use and risk to life and property.

Planning Proposal to significantly upzone Parramatta's CBD

The City of Parramatta is located on a floodplain with considerable evidence that regular and frequent flash flooding occurs. This includes feedback from the SES in response to other projects in the CBD, as well as feedback from government agencies such as the Greater Sydney Commission¹ now known as the Greater Cities Commission.

Yet despite the risks, the Department of Planning & Environment recently approved the City of Parramatta's Planning Proposal to substantially upzone the CBD. This will enable up to 114 metre buildings on the city's flood plain, with the reliance on Stay In Place (SIP) as the

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evacuation strategy, given the cost and constraints for a (high level) horizontal evacuation strategy².

The perspective³ below indicates the scale and massing for the CBD along Parramatta River looking west (changes for the northern side of the river are subject to further review).



Notably, the Application was approved before the current Flood Study that is underway is complete, and contrary to requirements in the Gateway Determination.

Moreover the Proposal was approved contrary to advice from the Department's own Environment, Energy and Science (EES) Group (EES) who state that the SIP evacuation strategy is not a strategy⁴.

Furthermore, Council Minutes⁵ indicate the Department of Planning recommended Council proceed with its Planning Proposal despite the Flood Study not being complete and Department being the approval authority.

The Study is required in order to finalise the Floodplain Risk Management Plan. This remains in Draft form pending finalisation of the Flood Study.

Instead Council and the Department rely on a finalised Flood Evacuation Assessment (Assessment) which in part reads: *'Under the assumptions of the NSW SES Timeline Evacuation Model, safe vehicular evacuation would not be realistically achievable under any circumstances'*.

Moreover given the cost constraints for a (high level) horizontal evacuation strategy, the Assessment recommends the SIP strategy, albeit the report notes the strategy:

² Parramatta CBD Flood Evacuation Assessment (Final Revised Report)

³ Department of Planning & Environment Finalisation Report April 2022 <https://bit.ly/3PxKb1y>

⁴ Department of Planning & Environment Finalisation Report April 2022 <https://bit.ly/3PxKb1y>

⁵ Council Minutes , 11 October 2021, item 17.2 <https://bit.ly/3MAarX1>

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‘could expose people to a number of secondary risks to life, including (but not limited to) those arising from: building structural failure, medical emergencies, building fires or people deciding to leave the shelter and walk through floodwaters’.

In addition, the Minutes indicate the Department considered the Assessment adequate given the Flood Study was underway taking into account the Proposal was publically exhibited before the new Ministerial Direction came into effect on 14 July 2021.

Notably however both the Chair of Council’s Flood Management Committee and Council’s in-house flood officer have indicated work underway for the Study indicates the flood levels are much higher than historical data that’s been relied on, has indicated.

Further, experts in the subject area concur, saying that the frequency, intensity and probability of floods are likely to be much higher than historical datasets indicate⁶.

In part this is due to climate change, as well as the quality of information gathered. For example water gauges are often taken in locations that do not indicate the intensity and localisation of flooding; and data in NSW’s Floodplain Development Manual is no longer considered reliable given the timeline.

Powerhouse Parramatta

The location of the Powerhouse Parramatta has received considerable media attention following a long community campaign that sought to save a historic building, called Willow Grove.

The risk from flooding and concerns about the evacuation strategy however has not received the same attention despite the future risk to life and property.

In short, a flood event will need to rely on SIP strategy. This carries greater risks for the site given the large visitor crowds that have been forecast, nominally five to ten thousand people a day on weekends and more for external events as part of the Powerhouse Parramatta Precinct.

However, while the reliance on a SIP as an evacuation strategy for high-rise residential and commercial buildings is considered adequate by some consultants, the use of the strategy for large visitor crowds is widely considered high risk.

Moreover, while various consultant studies have been completed, those studies rely on historic data that is increasingly not considered adequate or reliable. Similarly, initial investigations for the Flood Study that’s underway indicates the river levels will be far higher.

⁶ Australian Water School, Expert Panel discussion 23 March 2022

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Nepean Business Park at Penrith Lakes

According to the Nepean Hawkesbury Valley Flood Study (2019), *‘the Hawkesbury-Nepean Valley has the most significant flood risk exposure in NSW, if not Australia’*.

The study also notes that:

‘Climate change can alter flood behaviour in the Hawkesbury-Nepean by changing:

- *probability of long duration rainfall intensities*
- *storm type and frequency*
- *rainfall spatial and temporal patterns*
- *antecedent conditions*
- *dam levels [Warragamba] prior to flood producing rainfall.*

The interaction of these characteristics makes predicting the impact of climate change on flood behaviour complex’.

A Development Application for a 93 Community Title Lot Business Park on a 49 ha site at Penrith Lakes immediately adjacent to the Nepean River.

Catering for an estimated working population of 4,000 permanent workers, the Business Park is adjacent to the Nepean River on a floodplain.

The Application was formally approved in April. This followed negotiations underway during proceedings in the Land & Environment Court⁷ addressing the flood risk, albeit substantive concerns remain given the evacuation rely on a road system that’s often at capacity:

‘The proposed development also includes an updated Flood Emergency Response Plan (FERP) that has an evacuation trigger of 3-hours and a vehicle cap, and will be enforceable through the community title scheme’ (Judgement)

Further the Proposal relies on land which potentially could present run off challenges for neighbouring properties. Notably, the Court’s decision follows proceedings in Court prior to the most recent flooding events on the Nepean River.

Proposed Film Studios, Media Precinct and Auxiliary Facilities at Penrith Lakes

A State Significant Development Application⁸ for a global Film Studio & Media Precinct (Lakeside Studio) is currently being advanced for Penrith Lakes with the 42 ha site immediately adjacent to the Nepean River.

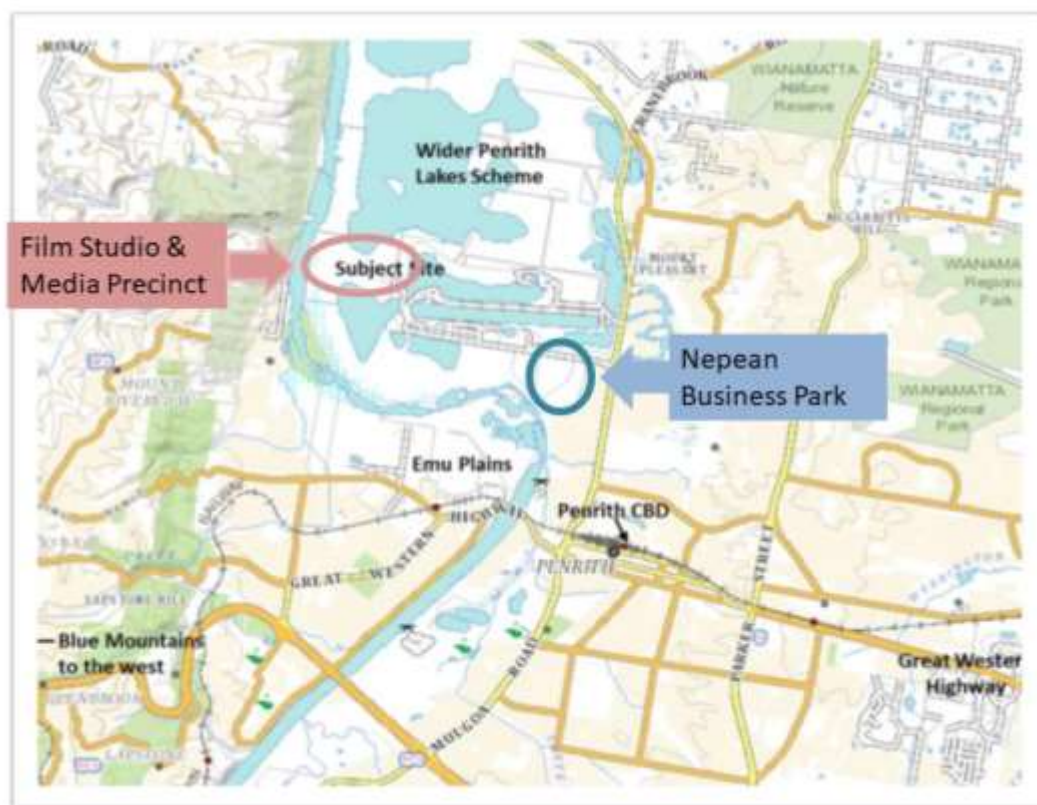
⁷ The Great River NSW Pty Ltd vs the Minister for Planning & Public Spaces <https://bit.ly/3Lra2F6>

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Surrounded by water on all four boundaries and despite significant flooding and evacuation and safety constraints, the site is proposed to accommodate ten sound stages, including one of largest globally, about 2,000 workers and up to 20,000 extras as well as provide parking for 2,579 vehicles and deep dive water facilities.

The application is also subject to changes in use under the Penrith Lakes State Environmental Planning Policy to accommodate the plans.

The following map highlights the location in context with the Nepean River and Penrith Lakes Scheme. It also shows the location for Nepean Business Park.



Critically, there is only one access road, namely Old Castlereagh Road. The road has significant flooding challenges, and feeds into Castlereagh Road which is already at capacity with the access route also required to facilitate access to Penrith Regatta Centre and other development.

Yet the announcement for Lakeside (and Nepean Business Park) was announced effectively as a fait accompli despite the inherent flooding risks, and prior to any investigations.

Moreover Lakeside Studio includes plans to use the surrounding lakes that are an inherent part of the flood mitigation for Penrith Lakes Scheme and adjacent Nepean River.

⁸ <https://bit.ly/3sMjAEg>

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Closing Comments

A key challenge with the current Planning System in NSW is the announcements of major projects and the like long before proper and independent review, whereby the project proceeds despite the risks identified during the public exhibition process or prior.

Moreover the data being relied on is out of date, and increasingly considered unreliable given the time lag. This includes the Flood Risk Management Manual which relies on data now more than 15 years old.

20 May 2022
