Our Ref: ID 3349
Your Ref: DA 25/7071

18 September 2025

Ingrid Berzins
Department of Planning, Housing & Infrastructure
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Parramatta NSW 2124

email: Ingrid.Berzins@planning.nsw.gov.au
CC: helen.slater@ses.nsw.gov.au

Dear Ingrid,

Concept Development Application (Concept DA) for Penrith Lakes Tourism-orientated Concept & Early Works

Thank you for the opportunity to provide comment on the Statement of Environmental Effects (SEE) and accompanying documents for the proposed Penrith Lakes Tourism Orientated Concept & Early Works at 39-65 Old Castlereagh Road, Castlereagh. It is understood that the proposed concept DA seeks consent for approval for a tourism-orientated development comprising three buildings across separate lots, including a hotel, an indoor recreation facility with two drive-through restaurants, and a registered club. It is understood that this concept DA proposal comprises:

- Three building envelopes, which would create building heights ranging from 3 to 7 storeys (up to 47.5m AHD)
- At-grate and structured parking, providing approximately 491 spaces
- Associated roads, pedestrian pathways, landscaping, and public domain works
- Demolition of existing structures, tree removal and drainage works (no grade works are proposed in this current application)[1]

The SEE also indicates that the proposal will "address the alleviation of existing stormwater and flood issues on the site", however this has not been adequately demonstrated in the provided documentation.

It is also noted that while the building envelopes are proposed in this current DA, the developments are proposed to be subject to future DAs, including:

[1] Planning Ingenuity, August 2025, *Statement of Environmental Effects*, Section 1.1 Overview, page 4.

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- A seven (7) storey hotel with 147 rooms, restaurant, gym, spa, pool, and associated facilities and parking (subject to a separate DA).
- A 5,713 m² indoor recreation facility, including two (2) drive-through restaurants and parking.
- A 5,177 m² club building and parking.
- 50 staff and up to 1,610 visitors at any given time.[2]

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.

Recommendations

We refer to our previous response dated 27 May 2024, and in summary, any developments beyond the approved DA9876 Nepean Business Park (capped at 1000 vehicles) and approved DA23/923 and 21/15298 for the Cafe, Bar and Helipad would exceed the current evacuation capacity for Penrith Lakes.

NSW SES therefore do not support the proposed development which would add an additional 1660 vehicles to the evacuation network, increasing the risk to life.

NSW SES recommend any future development in the Penrith Lakes area should consider the cumulative impacts of proposed development across the valley on impacts to the flood behaviour, evacuation capacity and emergency services into the future and ensure consistency with the draft Disaster Adaptation Plan and Regional Land Use Planning Framework. Flooding issues should be assessed in accordance with the Flood Risk Management Manual 2023 (the Manual) and supporting guidelines, as this supersedes the Floodplain Development Manual 2005.[3] This should include the consideration of the impacts of climate change on the flood risk, for both riverine and overland flood risks. Some of the key considerations are further detailed in Attachment A.

Evacuation Capacity

Regional evacuation in this area is already complex, particularly regarding evacuation capacity in the Penrith area. The current road evacuation routes out of the Penrith Lakes area includes Castlereagh Road to Andrews Road and Coreen Avenue to the Northern Road. Currently there are five Penrith Lakes Subsectors, which are triggered for evacuation from around a prediction of 10.9m at the Penrith gauge. The areas are evacuated due to loss of access to the evacuation

[2] Water Technology, 2025, *39-65 Old Castlereagh Rd – Flood Evacuation Modelling Assessment*, page 1.
[3] Planning Ingenuity, Statement of Environmental Effects, Page 41

route and to reduce the risk of evacuees trapped in their cars for hours in rising floodwaters. These local evacuation routes are also shared with the nearby Penrith North area. The Northern Road regional evacuation route capacity is shared between evacuation traffic from across the Hawkesbury LGA and Penrith LGA. A flood evacuation model has been developed by the NSW SES, Infrastructure NSW, Transport for NSW for a range of scenarios across the Hawkesbury-Nepean Valley including the Penrith Lakes precinct (referred to as the Flood Evacuation Model (FEM)). Based on this model, there is insufficient evacuation capacity for the Penrith Lakes area considering all future possible development in the precinct[4].

NSW SES are currently working with NSW Reconstruction Authority (NSW RA) to incorporate the 2024 Hawkesbury Nepean River Flood Study[5] results into the FEM to understand the current evacuation capacity and constraints. The updated FEM is likely to lead to the same conclusions as previous modelling, that is, there are considerable existing evacuation constraints. The updated FEM results may also indicate exacerbated strain on the already constrained evacuation routes, due to the more detailed flood modelling available in the 2024 Hawkesbury Nepean River Flood Study compared to previous flood studies.

Development beyond the evacuation capacity would negate the philosophy underlying the NSW Government's Hawkesbury-Nepean Flood Management Strategy, as the benefits of the improvements to the regional evacuation routes which have been gained at considerable financial cost will be largely lost and the risk to the communities of Richmond and Bligh Park could be re-instated.

Flood Risks

The site, with regards to riverine flooding, is located both on a low flood island and in a floodway.[6] The site becomes isolated by floodwater during a 2% Annual Exceedance Probability (AEP) riverine flooding event,[7] before becoming inundated by flooding with depths of greater than 8m on the site during a riverine Probable Maximum Flood (PMF).[8] This would pose a significant risk to life and cause extensive property and infrastructure damage and associated economic losses.

The site is also impacted by overland flooding, becoming isolated by road during events as frequent as a 50% AEP overland event, with H3 hazard on the site and H5 hazard on surrounding roads during an overland PMF event.[9] This is unsafe for people and vehicles.

[4] NSW Government. May 2023. Hawkesbury Nepean Valley Flood Evacuation Modelling to Inform Flood Risk Management Planning.
[5] NSW Reconstruction Authority. 2024. Hawkesbury Nepean River Flood Study
[6] Water Technology, July 2025, *39-65 Old Castlereagh Rd – Flood Compliance Report*, pages 9 & 25.
[7] Water Technology, July 2025, *39-65 Old Castlereagh Rd – Flood Compliance Report*, page 9.
[8] Water Technology, July 2025, *39-65 Old Castlereagh Rd – Flood Compliance Report*, pages 9-10.
[9] Water Technology, July 2025, *39-65 Old Castlereagh Rd – Flood Compliance Report*, pages 18-19.

Therefore the statement *"the consequences of failed evacuation for the site occupants thus would not be drowning"* in the flood compliance report is incorrect,[10] as the site is subject to high hazard (H6) flooding wherein all building types are considered vulnerable to failure, and several floors of the proposed development would become partially and totally inundated during a PMF. This statement also assumes the behaviour of people on the site, which cannot be assumed in a flood event.

NSW SES has responded to multiple flood related requests in this area including along Old Castlereagh Road (on this site), Castlereagh Road, Camden Street and Leland Street, including over-floor flooding, flood rescues and multiple sandbagging requests for property protection in the area. Adding additional people to the area would further increase the demand on emergency services.

You may also find useful the following Guidelines available on the NSW SES website useful:

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

Please feel free to contact Claire Flashman via email at rra@ses.nsw.gov.au 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,

Peter Cinque
Senior Manager Emergency Risk Management
NSW State Emergency Service

[10] Water Technology, July 2025, *39-65 Old Castlereagh Rd – Flood Compliance Report*, page 27.

ATTACHMENT A: Principles Outlined in the Support for Emergency Management Planning Guideline[11]

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 strategies identified in the NSW State Flood Plan,[12] Hawkesbury Nepean Flood Emergency Sub Plan[13] and the Penrith Local Flood Plan,[14] where evacuation is the preferred emergency management strategy for people impacted by flooding.

This proposal relies heavily on the flood emergency response strategy for the site, including *"fully evacuating the site before riverine floodwaters reach the site or cut the regional evacuation route".*[15] Should this proposed early evacuation fail for any reason during a flood event, this may lead to:

- reduced evacuation capacity for the surrounding area, due to the converging traffic along regional evacuation routes,
- and/or could lead to dangerous situations requiring rescue or even mass rescue for the site, as the site is situated on a low flood island in a high hazard floodway.

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 PMF and considering climate change.

The site is subject to flooding, both from the Nepean River and from overland flows.

Regarding Nepean River flooding, the site is a low flood island and becomes isolated by floodwater on evacuation routes during a 2% AEP event before becoming inundated during 1% AEP and larger events. The site becomes inundated by high hazard flooding during 0.1% AEP and larger events, with flood depths on the site of more than 8 metres during a Probable Maximum Flood (PMF), completely inundating the first two levels of the hotel (ground and level 1) with above floor flooding of 1.0m in level 2 of the hotel.[16]

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[11] NSW Government. 2023. Principles Outlined in the Support for Emergency Management Planning Guideline
[12] NSW Government. 2024. NSW State Flood Plan. Section 5.1.7, page 34.
[13] NSW SES, 2020, Hawkesbury-Nepean Flood Plan, Annex D, Section 1.1.3 Strategy, page 1.
[14] NSW SES. 2023. Penrith City Local Flood Emergency Sub Plan. Section 5.8, page 17.
[15] Water Technology, July 2025, *39-65 Old Castlereagh Rd – Flood Compliance Report*, page 27.
[16] Water Technology, July 2025, *39-65 Old Castlereagh Rd – Flood Compliance Report*, pages 9-10.

Regarding overland flooding, floodwater overtops several nearby roads during the 20% AEP flood event, with some ponding apparent adjacent to the proposed site. The site becomes partly inundated by floodwater up to H3 hazard level during an 0.2% AEP overland flood, and all evacuation routes away from the Nepean River become inundated by high hazard flooding during an overland PMF.[17]

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.

Risk assessment should have regard to flood warning and evacuation demand on existing and future access/egress routes. Consideration should also be given to the impacts of localised flooding on evacuation routes. Evacuation must not require people to drive or walk through flood water.

The FEM report indicates that large number of people will be trapped in the floodplain if additional vehicles are included. For example, an additional 3500 vehicles for 2041 would increase the total number of vehicles trapped in a 1 in 500 chance per year event to 2700, with an average annual people at risk from 42 to 89 (around a 110% increase). The 10 400 vehicles for 2041 would increase the total number of vehicles trapped in a 1 in 500 chance per year event to 7000, with an average annual people at risk from 42 to 131 (around a 210% increase) (page 47 and 50). In larger floods, there is an even larger increase in the number of vehicles/people trapped (page 65)[18]. Visitors have been included in the evacuation traffic within the Penrith Lakes area due to the high potential numbers.

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

Managing risks associated with Low Flood Islands 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.
- 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

[17] Water Technology, July 2025, *39-65 Old Castlereagh Rd – Flood Compliance Report*, pages 20-23.
[18] NSW Government. May 2023. Hawkesbury Nepean Valley Flood Evacuation Modelling to Inform Flood Risk Management Planning.

for an extended flood duration or attempting to return to a building during a flood, needs to be considered.

We recommend removing the statement *"the consequences of failed evacuation for the site occupants thus would not be drowning"* from the flood compliance report,[19] as the site is subject to high hazard (H6) flooding wherein all building types are considered vulnerable to failure, and several floors of the proposed development would become partially and totally inundated during a PMF. This statement also assumes the behaviour of people on the site (e.g. that if evacuation fails all persons remaining on the site would be able-bodied such to move to higher levels within the building, and would continue to remain isolated for days and not enter floodwater at any point).

Low Flood Islands represent a significant risk factor that would be best avoided for development due to the difficulties in carrying out large scale evacuation operations, resulting a large risk of mass rescue. 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.

Mass rescue has historically been required for low flood islands. The use of flood boats and helicopters may not always be feasible due to weather, resource availability or risks, which can result in large number of people trapped on the floodplain.

There are significant risks associated with mass rescue, including:

- Insufficient number of flood rescue boats for the number of people remaining on low flood islands.
- Insufficient air lift capacity.
- Severe weather which makes rescue by boat or air more difficult e.g. wind fetch caused waves.
- Potential exposure to sewage, contaminants, disease, poisons, hidden snags, dead animals and debris etc.
- Drowning or injuries related to floodwater hazards.

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.

[19] Water Technology, July 2025, *39-65 Old Castlereagh Rd – Flood Compliance Report*, page 27.

An effective flood warning strategy with clear and concise messaging understood by the community is key to providing the community an opportunity to respond to a flood threat in an appropriate and timely manner.

NSW SES utilises the Australian Warning System which is a nationally consistent, three-tiered approach to issue clear warnings and lead people to take action ahead of severe weather events. The three warning tiers consist of Advice, Watch and Act and Emergency Warning. These warnings can be viewed on the SES website and the HazardWatch website and app.

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 requirements.