

Our Ref: ID 3935
Your Ref: SSD-79261463

7 July 2026

Justin Keen
Department of Planning, Housing and Planning
Locked Bag 5022
Parramatta NSW 2124

Via Major Portal

email: justin.keen@dpie.nsw.gov.au
CC: shelly.stingmore@one.ses.nsw.gov.au

Dear Justin,

State Significant Development Application for Residential development with in-fill affordable housing - Reid Street and Woodside Avenue, Lindfield (Advice on Assessment)

Thank you for the opportunity to provide advice on the State Significant Development Application for 1-3 Reid Street and 2-4 Woodside Avenue, Lindfield. It is understood that the proposed development seeks to undertake:

- site preparation works, including the demolition of existing site structures, tree removal, basement excavation and preparatory earthworks
- the construction of a nine storey residential flat building development comprising:
 - 89 dwellings (including 14 infill affordable housing apartments and 3 transport oriented development affordable housing apartments)
 - communal open space on the rooftop including barbeques, seats and picnic areas
 - construction of a two level basement consisting of 118 parking spaces and 89 bicycle spaces and services and waste room
- associated landscaping, public domain works and infrastructure improvements.

We have reviewed the following documents provided as part of the preparation of our advice.

- Hydracor, June 2026, *Flood Impact and Risk Assessment* [FIRA]
- Water Technology, June 2026, Flood Emergency Response Plan [FERP]
- Hydracor, 12 February 2026, Flood Planning Levels Letter
- Mecone, 23 June 2026, Re: Request for Additional Information – Residential development with in-fill affordable housing at Reid Street and Woodside Avenue, Lindfield (SSD- 79261463) [RFI Letter]

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.

We recommend flooding issues are considered in accordance with the requirements of NSW Government's 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](#) and relevant planning circulars and directions under the *Environmental Planning and Assessment Act, 1979*, including 4.1 Flooding and Planning Circular [PS 26-001 Flooding and land use planning](#).

We reference our previous advice dated 4 August 2025 and 25 February 2026 and note that many of our key concerns have not been addressed or mitigated.

In summary, we:

- **Recommend** the Department of Planning, Housing and Infrastructure (DPHI) **ensures the proposal does not result in an increase in flood risk** on the existing development and roadways. The proposed development is expected to increase flood hazards on surrounding streets.^{1 2}
- **Recommend** DPHI ensures consistency with **the NSW Shelter in place guideline** for flash flooding³ or the Flood risk management guideline EM01⁴ as the **site can become "isolated within 4-8 minutes of the start of rainfall."**⁵ This includes ensuring the following is addressed:
 - the assessment of evacuation off-site to determine that evacuation off-site is not achievable. (7)
 - the development is not subject to high hazard flooding or **surrounding roadways** are not subject to high hazard flooding (8c), noting the roads immediately adjacent to the site are prone to **high hazard flash flooding**.
 - *"Longer duration PMFs would need to be modelled to confirm the maximum duration of isolation due to overland flows"*⁶
- **Recommend** seeking advice from the Department of Climate Change, Energy, the Environment and Water regarding the suitability of the modelling, including climate change and potential risks of damage or failure to the proposed "flood deflection wall" on the eastern side of the site.^{7 8}

¹ Hydracor, June 2026, *Flood Impact and Risk Assessment*, pages 96 and 98.

² Mecone, 23 June 2026, *Re: Request for Additional Information – Residential development with in-fill affordable housing at Reid Street and Woodside Avenue, Lindfield (SSD- 79261463)*, Point 5, page 22.

³ State of NSW, 2024, *Shelter in place guideline for flash flooding*.

⁴ State of NSW, 2023, *Support for emergency management planning; Flood risk management guideline EM01*.

⁵ Water Technology, June 2026, *Flood Emergency Response Plan*, Section 2.4.1, page 25.

⁶ Water Technology, June 2026, *Flood Emergency Response Plan*, Section 2.4.1, page 28.

⁷ Hydracor, June 2026, *Flood Impact and Risk Assessment*, Section 8.1, page 21.

⁸ Water Technology, June 2026, *Flood Emergency Response Plan*, Section 2.4.3, page 29.

- **Emphasise**, per the Flood risk management guideline EM01,⁹ *“Requiring a site-specific flood response plan as a condition of consent for development is not considered a genuine attempt to manage flood risk to future occupants.”* **In addition, evacuation must not require people to drive or walk through flood water.** We do not support the statement in the FIRA that *“Evacuation of the site on foot is likely possible for able bodied adults”*¹⁰, as **people must not be expected to be able to safely judge the depth and velocity of floodwater** in a flood event, especially in flash flood events where conditions can change rapidly.
- **Recommend ensuring all openings to the basement** (ramp, vents, lift wells, stairways, etc) are situated above the PMF or 1% AEP plus freeboard, whichever is higher, as a condition of consent. If this is not feasible reconsider basement carparking as any openings to the basement below the PMF will pose risk to life and property.

You may also find the following Guidelines 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 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,

A handwritten signature in grey ink, appearing to read 'P. Cinque'.

Peter Cinque
Senior Manager, Emergency Risk Management
NSW State Emergency Service

⁹ State of NSW, 2023, *Support for emergency management planning; Flood risk management guideline EM01*, sA2.4.

¹⁰ Hydracor, June 2026, *Flood Impact and Risk Assessment*, page 7

ATTACHMENT A: Principles Outlined in the Support for Emergency Management Planning Guideline¹¹

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 Plan¹² and the Hornsby Ku-ring-gai Local Flood Plan,¹³ where evacuation is the preferred emergency management strategy for people impacted by flooding.

However, we also note *“It would not be possible during a rainfall event for site occupants to determine the magnitude of flooding that will eventuate and therefore evacuation would not be an appropriate flood emergency response strategy as it would risk site occupants exiting the site into hazardous floodwaters.”*¹⁴

Therefore, if safe evacuation is not feasible and the site also does not meet the considerations in the shelter in place guideline for flash flooding, the consent authority should consider the suitability of the site for intensification.

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. The impacts of climate change on the flood risk should also be considered in line with the latest NSW Government guidelines and the latest Australian Rainfall and Runoff Guideline.¹⁵

It is noted that the site itself is currently located within a known overland flow path¹⁶ and is prone to flooding in a 5% AEP event, with high hazard flooding on the road during this event. In the proposed development this hazard appears to be improved in the 5% AEP event, however the road still becomes inundated with high hazard (H5) flooding during events equal to and greater than a 1% AEP event. This hazard is unsafe for all vehicles and people, and any buildings exposed to this hazard are vulnerable to structural damage.¹⁷ Increasing the number

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, 2021, *Hornsby Ku-ring-gai Flood Emergency Sub Plan*, Section 5.8, page 16.

¹⁴ Water Technology, June 2026, *Flood Emergency Response Plan*, page 38.

¹⁵ Commonwealth of Australia (Geoscience Australia), 2019, *Australian Rainfall and Runoff: A Guide to Flood Estimation*, Version 4.2, Book 1, Chapter 6. Last updated 2024.

¹⁶ Water Technology, June 2026, *Flood Emergency Response Plan*, Section 1.1, page 7.

¹⁷ AIDR, 2017, *Guideline 7-3 Flood Hazard*, Figure 6, page 10.

of people on a site within the floodplain also introduces a greater number of people to the risks posed by flooding, particularly noting *“the building is expected to be occupied on a 24-hour basis, with residents potentially present at any time of the day or night.”*¹⁸

Modelling

The FIRA appears to underestimate the increase in rainfall due to climate change^{19 20 21}. We therefore recommend seeking additional advice from the Department of Climate Change, Energy, the Environment and Water regarding the suitability of the modelling and assumptions, including the risk of partial or total failure of the proposed flood walls. There are currently no regulations to enforce the continued use of flood walls for the life of the development. There is also a risk that maintenance of the flood walls may also be perceived as too onerous and expensive by the operators of the site.

We also recommend consideration of the risks of prolonged flooding, as historical events often have longer time of isolation than design events due to them often being caused by east coast lows that can last several days.

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.

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.

¹⁸ Water Technology, June 2026, *Flood Emergency Response Plan*, Section 1.5, page 18.

¹⁹ Hydracor, June 2026, *Flood Impact and Risk Assessment*, Section 7.4 Sensitivity Assessment – Climate Change / Increased Rainfall, page 19.

²⁰ Commonwealth of Australia (Geoscience Australia), 2019, *Australian Rainfall and Runoff: A Guide to Flood Estimation*, Version 4.2, Book 1, Chapter 6. Last updated 2024.

²¹ Commonwealth of Australia (Geoscience Australia), 2019, *Australian Rainfall and Runoff: A Guide to Flood Estimation*, Version 4.2, Book 1, Chapter 6. Last updated 2024.

Managing risks associated with flash flooding 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 attempting to leave or return to a building during a flood, needs to be considered. Unfortunately, our experience is that people change their mind about sheltering in place after they have been surrounded by flood water or when essential services such as water, power and sewer cease to function.

There also continue to be outstanding flood risks for the site and surrounding area which have not yet been appropriately addressed nor mitigated. Also, while we would appreciate that the “*basement crest, electrical substation, fire stairs and western pedestrian entrance*” are proposed to be passively protected above the PMF, we note the Water Surface Level Timeseries in the FERP provided show the currently proposed driveway crest to be below the PMF height.²²

Flash flooding

Flash floods, when compared to other types of flooding, have the highest average mortality rate per event.²³ Where there has been considerable development in flash flood environments, the rates are even higher, for example in Texas “flash flood alley”.²⁴ In Australia, more than 200 fatalities have occurred since 1950 from flooding. The cause of death was mostly because of drowning, but other causes included heart attacks, electrocution and fallen trees emphasising the importance of considering secondary risks associated with “sheltering in place”.²⁵

As the site is affected by flash flooding there are no Bureau of Meteorology quantitative flood warnings available. Severe Weather Warnings and Thunderstorm Warnings will be the most likely form of advice about the potential for flood producing storms and rainfall, which will not provide the community time to respond to a flood threat in an appropriate manner.

Risks with sheltering in place

²² Water Technology, June 2026, *Flood Emergency Response Plan*, Section 2.4.1, Figure 2-8, page 26.

²³ Jonkman, S., 2005. *Global perspectives on loss of human life caused by floods*. Natural Hazards, 34(2), pp. 151-175.

²⁴ Sharif, H., Jackson, T., Hossain, M. & Zane, D., 2015. *Analysis of Flood Fatalities in Texas*. Natural Hazards Review, 16(1).

²⁵ Haynes, K. et al., 2016. *An analysis of human fatalities from floods in Australia 1900-2015*. Report for the Bushfire and Natural Hazard Cooperative Research Centre.

Development strategies relying on deliberate isolation or sheltering in buildings surrounded by flood water are not equivalent, in risk management terms, to evacuation. In summary, a 'shelter in place' strategy is not an endorsed flood management strategy by the NSW SES for *future development*. Such an approach is only considered suitable for existing dwellings where the risk of staying is lower than the risk of evacuating, without increasing the number of people subject to such risks.

There is no known safe period of isolation, however, the longer the period of isolation, the more chance there is for mishap requiring external intervention. Even relatively brief periods of isolation, in the order of a few hours, can lead to personal medical emergencies that have to be responded to. During flooding it is likely that there will be a reduced capacity for the relevant emergency service agency to respond in these times

We recommend referring to the considerations in the NSW [Shelter in place guideline for flash flooding](#) and considering the nature of flooding at the site in relation to the subject site, including noting that:

- the assessment of evacuation off-site to determine that evacuation off-site is not achievable. (7)
- The FIRA should identify that the development is not subject to high hazard flooding or surrounding roadways are not subject to high hazard flooding (8c).

A FERP is insufficient to address the underlying flood risk

As per the Flood risk management guideline EM01,²⁶ *“Requiring a site-specific flood response plan as a condition of consent for development is not considered a genuine attempt to manage flood risk to future occupants. The vulnerability or capability of occupants and their ability to enact a plan, as well as the flood characteristics of a future event are not known at the time of the plan’s creation. Unless occupants are able to self-evacuate for all possible flood events in consideration of future development, and the plan is owned, understood, practised and uncertainties of flooding understood by occupiers, it will almost certainly be forgotten or fail to be effective, particularly in events where the plan assumptions are overwhelmed.”*

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.

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

²⁶ State of NSW, 2023, *Support for emergency management planning; Flood risk management guideline EM01*, sA2.4.

an appropriate and timely manner. As the site can become *“isolated within 4-8 minutes of the start of rainfall”*²⁷ this would not provide sufficient time to safely respond to a flood threat, and may pose significant risks for people who may be attempting to enter or leave the site.

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 within a floodplain will necessitate ongoing involvement from the NSW SES in community awareness, preparedness, and response activities.

²⁷ Water Technology, June 2026, *Flood Emergency Response Plan*, Section 2.4.1, page 25.