NSW STATE EMERGENCY SERVICE

Our Ref: ID2405
Your Ref:

29 April 2024

George Curtis
[redacted]

Via email

email: [redacted]

Dear George,

Planning Proposal for Allfarthing 2 Brisbane Grove, Goulburn PP-2024-295

Thank you for the opportunity to provide comment on the Planning Proposal for Allfarthing 2 Brisbane Grove, Goulburn. It is understood that the planning proposal seeks to:

- Rezone 12 existing lots (Lot 60, DP 1090981, Lots 61 to 64 and 71 to 77, DP 976708) from RU6 Transition with a minimum lot size of 10 hectares to R5 Large Lot Residential and C2 Environmental Conservation with a lot size of 2 hectares.

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.

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:

- **Note** in the PMF event several lots proposed to be rezoned as R5 Large Residential Lots are impacted by high hazard floodwaters. Further, the entirety of the site becomes frequently isolated from vehicular access/egress in at least the 10% Annual Exceedance Probability (AEP) event. Therefore, the proposed development would increase the number of people and properties exposed to the effects of flooding and other secondary emergencies.

- **Emphasise** development strategies relying on deliberate isolation or sheltering in buildings surrounded by flood water are not supported by NSW SES and are not equivalent, in risk management terms, to evacuation.
- **Emphasise** NSW SES is opposed to development strategies that transfer residual risk, in terms of emergency response activities, to NSW SES and/or increase capability requirements of the NSW SES.

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 Belinda Lewthwaite 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]

Elspeth O'Shannessy
Manager Emergency Risk Assessment
NSW State Emergency Service

ATTACHMENT A: Principles Outlined in the Support for Emergency Management Planning Guideline[1]

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.

According to the NSW State Flood Plan[2] and the Goulburn Mulwaree Local Flood Plan,[3] evacuation is the primary emergency management strategy for people impacted by flooding.

We note evacuation to Goulburn is prevented in the 20% AEP due to flooding of Braidwood Road and Bungonia Road where they cross the Mulwaree River.[4]

The entirety of the site, excluding lot 11, becomes isolated from vehicular access/egress in the 10% AEP event, restricting evacuation.[5]

In the context of future development, self-evacuation of the community should be achievable in a manner which is consistent with the NSW SES's principles for evacuation. Evacuation must not require people to drive or walk through flood water.

Given the lack of warning time for the site, the FIRA recommends shelter in place. Shelter in 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 risk/s.

Development strategies relying on deliberate isolation or sheltering in buildings surrounded by flood water are not equivalent, in risk management terms, to evacuation.

The flood evacuation constraints in an area must not be used as a reason to justify new development by requiring the new development to have a suitable refuge above the PMF. Allowing such development will increase the number of people exposed to the effects of flooding and other secondary emergencies such as fires and medical emergencies. Similar risks exist for isolation more broadly, requiring the response of Ambulance NSW, NSW SES, NSW

[1] NSW Government. 2023. Principles Outlined in the Support for Emergency Management Planning Guideline
[2] NSW Government. 2021. NSW State Flood Plan. Section 1.6 – Key Principles. 1.6.2, page 5.
[3] NSW SES (2021) Goulburn Mulwaree Flood Emergency Sub Plan.
[4] Goulburn Floodplain Risk Management Study and Plan (2022).
[5] Goulburn Floodplain Risk Management Study and Plan (2022).

Police Force, or NSW Fire and Rescue. During flooding it is likely that there will be a reduced capacity for the relevant emergency service agency to respond in these times.

Emergency services are also exposed to greater risks than if flood-free access was available. This unnecessarily exposes emergency service personnel to flood situations which may lead to injury or death. In recognition of this possibility, emergency services are under an increasing demand to consider the safety of personnel. Each circumstance must be subject to an individual risk assessment at the time. If, after conducting a risk assessment of an incident, a Commander or team leader is unsatisfied with the level of risk involved, the response will be delayed until the risk can be reduced or is no longer present.

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. A risk-based approach is recommended which entails considering the full range of flood events up to and including the PMF.

A significant portion of the proposed site is flood affected due to riverine flooding from Mulwaree River and an overland flow path that crosses the site on the southwestern side. We note flood planning areas of riverine and overland flood as identified by the Goulburn Floodplain Risk Management Study and Plan are proposed to be rezoned as C2 Environmental [redacted] However, the surrounding lots, proposed to be rezoned as R5 Large Lot Residential are flood affected to ranging extents in the PMF.[6]

In the PMF event, the hydraulic hazard classification for the floodwaters impacting the lots reach H2 at lots 9-10 and 12-13. This is considered unsafe for small vehicles. Lots 10-12 are exposed to H4 hazard. This is considered unsafe for vehicles and people. Lots 7 and 8 are exposed to up to H5 hazard which is considered unsafe for vehicles and people and buildings require special engineering design and construction. Finally, lots 4-6 are exposed to up to H6 hazard, which is considered unsafe for vehicles and people and all building types are considered vulnerable to failure.[7]

We note all dwelling pads are located outside of the PMF extent. However, the lots remain exposed to the above risk.

The FIRA indicates that access to the site from Goulburn would be first lost in events rarer than the 5% AEP. However, Braidwood Road becomes flood affected from the 20% AEP event.

[6] GRC Hydro (2023) Brisbane Grove Road Planning Proposal – Flood Assessment. Goulburn Floodplain Risk Management Study and Plan (2022).
[7] GRC Hydro (2023) Brisbane Grove Road Planning Proposal – Flood Assessment. Goulburn Floodplain Risk Management Study and Plan (2022).

Vehicular access/egress is completely cut in at least the 10% AEP event to the entirety of the site, excluding lot 11. Braidwood Road is inundated for up to 22.5 hours during a 1% AEP and 38 hours during the PMF. Depths at Braidwood Road reach up to 8.6m in the PMF event and accordingly are extremely hazardous.[8]

Acknowledging several risk mitigation methods have been proposed to reduce secondary risks, there is no known safe period of isolation in a flood, though the longer the period of isolation, the greater the risk to occupants. There is also the risk that people will not follow emergency management plans, for example they may refuse to remain isolated from family for an extended duration.

The NSW SES is opposed to the imposition of development consent conditions rather than the application of sound land use planning and flood risk management. Further, these conditions are difficult to implement and are unlikely to be achieved at all in a private ownership context where there is no external audit or monitoring.

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.

Zoning should not enable development that will result in an increase in risk to life or property within the floodplain.

NSW SES is opposed to development strategies that transfer residual risk, in terms of emergency response activities, to NSW SES and/or increase capability requirements of the

[8] GRC Hydro (2023) Brisbane Grove Road Planning Proposal – Flood Assessment. Goulburn Floodplain Risk Management Study and Plan (2022).

NSW SES. Development that increases the number of people exposed to the risks of flooding and secondary risks of isolation is likely to increase capability requirements of the NSW SES.

Managing flood risks associated with a site classified as a high trapped perimeter community 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 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 [redacted]

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

Flood warning at the site is challenging, and therefore there would be limited opportunity for the future occupants to respond to a flood threat in a proactive manner.

[redacted]**ngoing community awareness of flooding is critical to assist effective emergency response.**

The flood risk at the site and 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 drills) during and after the construction phase. However, it is important to note that the 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.

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