

14 May 2024

TfNSW Reference: SYD24-00666  
Planning Proposal PP-2022-731

Mr Ian Woods  
Department of Planning, Housing and Infrastructure  
Level 31, 4PSQ,  
12 Darcy Street  
PARRAMATTA NSW 2150

**Attention:** Mr Ian Woods

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**RE: PLANNING PROPOSAL - 488-492 Old South Head Road and 30 Albemarle Avenue, Rose Bay**

Dear Mr Woods,

Transport of NSW (TfNSW) appreciates the opportunity to provide comment on the above Planning Proposal as referred on 27 March 2024. We note consultation is being undertaken with TfNSW under Condition 3 of the Gateway Determination dated 23 February 2024.

TfNSW notes the Planning Proposal seeks the following amendments to the Woollahra Local Environmental Plan (WLEP) 2014 to enable redevelopment of the site for a 4-storey mixed use development containing a supermarket and 14 residential apartments. In summary, it seeks to:

- Insert a new clause in Schedule 1 Additional permitted uses to permit retail premises at 30 Albemarle Avenue, provided it is as part of a shop top housing development at 488-492 Old South Head Road.
- Create a new local provisions clause that applies only if 488-492 Old South Head Road and 30 Albemarle Avenue are developed together that:
  - Allows a maximum Gross Floor Area (or "GFA") of 3,720m<sup>2</sup> on 488-492 Old South Head Road and 480m<sup>2</sup> on 30 Albemarle Avenue.
  - Permits a maximum Height of Building of 14.5m at 30 Albemarle Avenue.

TfNSW has reviewed the exhibition documents and raises no objections to this planning proposal subject to the advice provided in **Attachment 'A'**.

For any further enquiries, please contact Stephen Briant – Land Use Planner on mobile 0414 949 990 or email: [development.sydney@transport.nsw.gov.au](mailto:development.sydney@transport.nsw.gov.au)

Yours sincerely,



Carina Gregory  
**Senior Manager Strategic Land Use – Eastern  
Planning & Programs, Greater Sydney Division**

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OFFICIAL

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W [transport.nsw.gov.au](http://transport.nsw.gov.au)

## Attachment A – TfNSW Comments on Planning Proposal PP-2022-731

### 1. Vehicular access

- All vehicular access / egress for the site to be from Albermarle Avenue with no vehicular access / egress for the site to be permitted from / to Old South Head Road.
- The proposed location of any vehicular access on Albermarle Avenue to be located as far as possible from the traffic signals at Old South Head Road.
- Pedestrian safety should be considered along the driveway crossover in considering the ultimate design.
- Council are to give consideration to parking restrictions being provided on Albermarle Avenue adjacent to the driveway and loading dock entrance, to ensure sight distance requirements are met and pedestrian safety and amenity is maintained.
- Council to consider the provision of 'Keep Clear' markings across the driveway access on Albermarle Avenue.
- Internal Traffic Management Plan is to be provide as part of the future Development Application that provides detailed practices to ensure queuing from the car park does not impact footway adjacent or on Albermarle Avenue.

### 2. Traffic control signals at Old South Head Road and Albermarle Avenue

- TfNSW does not support any changes to the current traffic signal design at Albermarle Avenue / Old South Head Road, such as the provision of an exclusive right turn lane on Old South Head Road (southbound) as is proposed in this Planning Proposal. This proposed mitigation measure would lead to further delays to upstream traffic on Old South Head Road, bus operations and reduction in green time for protected pedestrian crossings at the affected intersection.
- TfNSW advises that Council are to consider parking restrictions being provided on Albermarle Avenue on the approach to the signalised intersection at Old South Head Road consistent with approaching queue length requirements shown in the SIDRA modelling results.

### 3. Other transport/traffic issues

- The development should design streets that are reflective of NSW Futures and NSW Active Transport Strategy including:
  - Delivering integrated land use and transport planning connecting people to their local metro centre and strategic centres within 30 minutes by public transport.
  - Enable 15-minute neighbourhoods.
  - Deliver connected and continuous cycling networks.
  - Promote safer and better precincts and main streets.
- It is recommended that a Green Travel Plan (GTP) be provided to demonstrate a commitment to sustainable transport and modal shift and that a Travel Access Guide (TAG) be prepared and included as an appendix in the GTP.

- The reference scheme proposes 70 parking spaces for the use of the Woolworths supermarket, which is higher than the minimum 53 required under the Woollahra DCP 2015. TfNSW advises that additional parking above the minimum is not warranted in this situation given the supporting information provided. Council is recommended to constrain parking supply for the development to encourage sustainable transport such as public transport and active transport in alignment with the excellent access to public transport of the site.
- Bicycle parking and end of trip facilities are to be designed to the quantity and quality of design that reflect the access to active and public transport services to the site. For bicycle parking and end of trip facilities, the layout, design and security of bicycle facilities must comply with the minimum requirements of:
  - Australian Standard AS 2890.3:2015 Parking Facilities Part 3: Bicycle Parking Facilities,
  - 'Austroads Bicycle Parking Facilities: Guidelines for Design and Installation', and;
  - Councils DCP.
- It is noted that this site is in close proximity to current and proposed safe walking and cycling connections including:
  - A walking and cycling link which forms part of **Strategic Cycleway Corridors network's** Sydney CBD – Double Bay – Rose Bay.



Ian Woods  
Planning Officer, Agile Planning  
Planning, Land Use Strategy and Housing  
Department of Planning, Housing and Infrastructure  
4PSQ, 12 Darcy Street,  
PARRAMATTA NSW 2150

15 May 2024

**Subject: Exhibition of Planning Proposal – 488-492 Old South Head Road and 30 Albemarle Avenue, Rose Bay (PP-2022-731)**

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Dear Mr Woods,

I refer to your request for consultation with the Environment and Heritage Group (EHG) under section 3.34(2)(d) of the *Environmental Planning and Assessment Act 1979* (EP&A Act) received on 5 April 2024. From 1 January 2024, the former EHG is known as the Biodiversity, Conservation and Science Group (BCS) as part of the New South Wales Department of Climate Change Energy, the Environment and Water (NSW DCCEEW).

BCS understands that the planning proposal (PP) for 488-492 Old South Head Road and 30 Albermarle Ave, Rose Bay (PP-2022-731) seeks to facilitate a 5-storey mixed use development containing a supermarket and 14 residential apartments. To facilitate this development, it is proposed to amend the *Woollahra Local Environmental Plan 2014* (Woollahra LEP) to:

- Insert a new clause in Schedule 1 Additional permitted uses to permit retail premises at 30 Albemarle Avenue, provided it is as part of a shop top housing development at 488-492 Old South Head Road.
- Create a new local provisions clause that applies only if 488-492 Old South Head Road and 30 Albemarle Avenue are developed together that:
  - allows a maximum Gross Floor Area (GFA) of 3,720sqm on 488-492 Old South Head Road and 480sqm on 30 Albemarle Avenue.
  - permits a maximum Height of Building of 14.5m at 30 Albemarle Avenue.

BCS has reviewed the PP and supporting technical documents and provides detailed comments at Attachment A.

In respect to flooding, BCS considers that insufficient information has been provided to demonstrate consistency with Section 9.1 Ministerial Direction 4.1 Flooding. BCS also consider that the flood assessment carried out to support the proposal is inadequate.

BCS does not recommend any additional biodiversity assessment requirements for this PP.

Should you have any queries regarding this matter, please contact Theo Wilkinson, Senior Conservation Planning Officer via [theo.wilkinson@environment.nsw.gov.au](mailto:theo.wilkinson@environment.nsw.gov.au).

Yours sincerely,



Shaun Hunt  
A/Senior Team Leader Planning  
**Greater Sydney Branch**  
**Biodiversity Conservation and Science Group**

## **BCS advice on the planning proposal for 488-492 Old South Head Road and 30 Albemarle Avenue, Rose Bay (PP-2022-731)**

### **Flooding**

BCS provides comments below with respect to flood risk at the subject site based on the following reports provided by the proponent and relevant flood studies prepared by WMA outlined below:

Reports reviewed:

- Planning Proposal Report – Ethos Urban (dated 27th March 2024)
- Flood Impact Assessment – Northrop (dated 3rd March 2022)

Relevant flood studies considered:

- Rose Bay Catchment Flood Study – WMA Water (dated September 2010)
- Rose Bay Floodplain Risk Management Study and Plan (FRMS&P) 2013 – WMA Water

### Consistency with Ministerial Direction 4.1 Flooding

The relevant flood study and flood impact risk assessment (FIRA) presented by Northrop Engineers indicates that both Old South Head Road and Albemarle Avenue are high hazard floodways and subject to flood depths between 0.15m and 0.8m in a 1% Annual Exceedance Probability (AEP) flood and 0.3m to 1m deep in a Probable Maximum Flood (PMF). Flooding is flash flooding with little or no warning and expected to be of relatively short duration (approximately 2 hours). No flood warning systems are in place and evacuation is not considered safe.

To accommodate a large supermarket, comply with the proposed maximum building heights and provide the required parking it is proposed to provide 3 levels of basement carparking, 2 levels of supermarket related development and 2 levels of residential apartments. The nominated floor level for the proposed supermarket is currently suggested to be below the level indicated as 1EY (1 exceedance per year) and well below the recommended flood planning levels of the 1% AEP flood plus 500mm. BCS understands this is partially to ensure activation of the streetscape and to minimise overall height of building. Flood protection has been proposed through active flood barriers (5 potentially required) and flood resilient construction.

BCS considers that the documents provided in support of the proposal do not adequately consider the risks at this site and the development is inconsistent with the Ministerial Direction 4.1 Flooding and the [NSW Flood Risk Management Manual \(2023\)](#) and guidelines. Reasons for this are outlined further below.

### Increase in residential land use in a high hazard area

The current land uses at the site include a Woolworths pick up point within the disused petrol station and a single residential dwelling. The proposed use of the site as shop top housing will increase the number of dwellings to 14 in this location.

The proposal is inconsistent with [Planning Circular PS24-001 Update on addressing flood risk in planning decisions](#). Planning Circular 24-001 requires consideration of whether the proposal provides for safe occupation and efficient and effective evacuation in flood events and how it is achieved together with any known evacuation constraints such as flood emergency response classification for the area and the available warning times (including rate of rise and when the evacuation route is cut off by flood water).

Shelter in place is not considered a suitable justification for the significant intensification in land use. The technical guidance in Flood Risk Management Guideline EM01 Support for Emergency

Management Planning (Table 11), which is associated with the NSW Flood Risk Management Manual 2023, indicates that shelter in place should only be considered as a flood risk management measure for the existing community or through redevelopment in existing zoned areas. The existing permitted uses within the R1 Low Density Residential zone (prior to intensification) would have a significantly lower population exposed to the flood hazard. The intensification of the existing R1 Low Density Residential zone to allow shop-top housing at the subject site while also increasing GFA and the height of building will increase the population exposed to the flood hazard. Residents and visitors will be required to travel to and from the site and the possibility that they will drive or walk through flood water to do so is considered to pose significant risk to residents/visitors and to emergency services in the event of assistance needed during a flood event. Access for emergency services together with how the welfare of those sheltering, flood warning availability and duration of isolation would need to be assessed appropriately if shelter in place was to be considered. Evacuation and shelter in place considerations should be referred to the NSW State Emergency Service (SES) for comment. BCS notes that SES are a consultation authority under the Gateway Determination.

The proposal is also considered to be inconsistent with Section 4.1(3)(g) of the local planning direction which indicates that planning proposals should not increase reliance on emergency services. Increased residential occupation together with increased visitation to the large Woolworths will expose large numbers of people to flash flooding situations who may then require assistance by emergency services.

Construction of more flood resilient buildings potentially reduces losses but does not reduce risk to life. Increase in reliance on emergency services is also likely to result from increased occupation of the high hazard areas.

#### Flood Planning requirements

The current proposal is recommending a floor level which is well below the flood planning level and relies on self-activated flood barriers at all building and carpark areas to prevent water ingress into the building. BCS does not generally support the use of active flood protection (flood gates and barriers) due to the significant additional risk compared to passive protection. Passive protection can be provided by designing floor and entry levels to prevent the ingress of floodwater. Further investigation must demonstrate that the additional risk due to flood gates is acceptable.

The proposed flood gates would be likely to prevent or restrict access, which would add new risks to shoppers, visitors, and residents of the development. Secondary risks such as fire and medical emergencies should be considered. The proponent should state if (and how) the building would remain accessible to emergency services when flood gates are activated.

The safety of the floodgates as they activate, has not been considered. Young children and people with disabilities or reduced mobility, for example, may be exposed to an unacceptable hazard. The proposed heights of flood gates vary however adopting a finished floor level of 12.4 for the supermarket means that barriers are likely to exceed 600mm in height and should not be considered reasonable as part of the flood risk mitigation response. While the gate is rising, this may be even more hazardous.

The flood gates would pose considerable risks to shoppers and staff considering how much floodwater they would control. The volume of flood water potentially entering the building and in particular the proposed basement area could be dangerously high and would pose risk to life for all users of the building in the event of flood gate failure or malfunction. The consequences of failure must be considered. The basement must be evacuated to higher floors should the flood gates activate. If floodwaters start flowing into the basement people might try to remove their cars to higher levels and be unable to leave via access ramps.

There are also issues with the reliability, operability, and activation of flood gates due to the level of accuracy of flood warning services. There is no available service from the Bureau of Meteorology

that provides reliable flash flood warnings. The proponent must detail how the flood gates would be activated.

The frequency of gate activation and associated false alarms also needs consideration. The flood gates may activate based on actual flood levels or anticipated flood levels. As the location is subject to flash flooding, there is unlikely to be sufficient warning time for these events. Flash flooding means active flood protection and associated emergency management measures would need to be activated early, while flood forecasts are still uncertain. This situation typically results in a high proportion of false alarms. For example, flood gates to protect against a 1% AEP flood, if manually triggered, may need to be activated multiple times each year because of the high degree of uncertainty in rainfall forecasts. There are multiple negative consequences of false alarms, including significant risk that the operators abandon the flood gates if they perceive their cost to outweigh their benefit.

Flood gates would introduce significant and possibly unacceptable risks and create compliance issues as there are currently no regulations to enforce their continued use for the life of the development. Maintenance of the flood gates may be perceived as too onerous and expensive by the building operators. Unlike for fire alarms and onsite stormwater detention systems, there is no statutory mechanism to ensure that flood gates are maintained nor that the supporting Flood Emergency Response Plan (FERP) would continue to be employed.

If flood gates are proposed, the proponent should provide further detail, including a comprehensive analysis of:

- The feasibility of installing flood gates at the proposed locations
- The rise and fall of floodwater for a range of durations and events including the PMF event (i.e., time versus water level). The critical storm for peak flood levels is unlikely to be the same as the critical storm for rate of rise of floodwaters.
- Duration of inundation and/or expected time for isolation when the gates are active. The critical storm for peak flood levels is unlikely to be the same as the critical storm for flood duration. East Coast Lows are a common cause of flood producing rain in Sydney and can cause flooding for multiple days.
- Failure of the flood gates to determine the anticipated risks, including population at risk and potential loss of life. Failure of the flood gates at the entries may have effects akin to dam break conditions. An estimate of the volume of floodwater that would enter the building during failure conditions of a flood gate is required. The dewatering of floodwater from an underground basement following a failure of a flood gate would take considerable time and the development may not be operable during that period or in a subsequent period whilst inundated services located below the flood planning are restored. Such consequences should be documented.
- The number of occupants, shoppers, workers and residents that would be isolated when flood gates are activated at different times and how their welfare would be managed during that time.

The proponent should present an evaluation of the performance and anticipated reliability of flood gates as well the risks (such as vulnerabilities of students and staff), explore alternative arrangements to mitigate risks and present justification of the conclusion. Even if it is not possible to preclude the use of flood gates, every effort should be made to increase the level of passive protection, because this will reduce (or eliminate) some of the risk associated with flood gates. If flood gates are proposed, all relevant details must be presented in the FERP, including the type of gate, mode of activation and triggers.

Adopting an artificially low finished floor level (noted as 100mm above road reserve) means that active protection (automatically triggered) is likely to activate in very low rainfall events, even those where a motorist drives close to water flowing down the kerb and gutter. This should not be considered a suitable risk mitigation technique.



## Adequacy of the FIRA

The FIRA has not adequately addressed the additional risk proposed by the development. In addition, no flood modelling has been provided with the FIRA instead relying on the mapping provided in the Rose Bay flood study. This study was carried out in 2010 and the methodology used restricted flow paths to roadways without adequately showing where flow would pass over private property. This gives a broad assessment of hazards in an area but does not fully articulate if land is flood impacted. The FIRA indicated that as the lot was not currently shown as flood impacted in events up to and including the PMF no assessment of afflux as a result of the proposed large building footprint is required. This statement is not correct. The Floodplain risk management study and plan prepared in 2013 notes that 488 to 492 Old South Head Road experiences large overland flows in heavy rainfall and the location is mapped as a problem area in the Figure B2, page 100 of the WMA FRMS&P 2013. This indicates that flow does currently pass across the site.

In addition, the site survey data together with the flood mapping depths indicate that flooding would not be confined to the roadway as described in the FIRA. Construction of a building of this bulk and scale which is designed to prevent water flowing onto the site can be expected to have adverse impacts on existing overland flow paths regardless of the mapping shown on the current flood study.

The FIRA has also not considered impacts of climate change as required by technical guideline LU01 provided as part of technical guidance to support the NSW Flood Risk Management Manual. The FIRA has not considered the WMA Flood Risk Management Plan 2013 which not only shows the site to be flood impacted but includes potential mitigation options for further investigation which may adversely impact flood levels in this location. This must be considered when assessing the risk at this site.

## Potential for very large losses to occur

The Flood Risk Management Manual requires that flood risk be managed now and into the future. This requires consideration of climate change induced rainfall increases together with increased flows as a result of development. No assessment has been carried out of these matters. Construction of a large building with expensive fittings and contents together with associated service areas and parking for 93 cars all below existing flood planning levels is not considered to be meeting the requirements of management of flood risk now or in the future.

**End of Submission**



Ian Woods  
Planning Officer, Agile Planning  
Department of Planning, Housing and Infrastructure  
4 Parramatta Square, 12 Darcy St,  
Parramatta NSW 2150

7 November 2024

**Subject: RTS – 488-492 Old South Head Rd and 30 Albemarle Ave, Rose Bay (PP-2022-731)**

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Dear Ian,

Thank you for your referral received 14 October 2024 requesting advice from the Biodiversity, Conservation and Science (BCS) Group on the Response to Submissions (RTS) for the planning proposal at 488-492 Old South Head Road and 30 Albemarle Avenue, Rose Bay (PP-2022-731). BCS has reviewed the updated Flood Impact Risk Assessment (FIRA) Submissions Report prepared by Northrop (dated 4 October 2024).

BCS considers that the updated FIRA does not adequately address the previous submission (dated 15 May 2024) regarding flooding and emergency management constraints associated with the proposed development. At this stage, insufficient information has been provided to demonstrate consistency with the Ministerial Direction 4.1 Flooding. BCS provides detailed comments and recommendations at Attachment A.

Should you have any queries regarding this matter, please contact Theo Wilkinson, Senior Conservation Planning Officer via [theo.wilkinson@environment.nsw.gov.au](mailto:theo.wilkinson@environment.nsw.gov.au).

Yours sincerely,

Susan Harrison  
**Senior Team Leader Planning, Greater Sydney  
Regional Delivery  
Biodiversity, Conservation and Science**

**BCS advice on the Planning Proposal RTS for 488-492 Old South Head Road and 30 Albemarle Avenue, Rose Bay (PP-2022-731)**

**Flood Risk Management**

BCS provides comments below with respect to flood risk at the site based on a review of the updated FIRA prepared by Northrop (dated 4 October 2024).

Flood risk management guideline (LUO1)

The site is affected by the 1% Annual Exceedance Probability (AEP) flood. As such, as per the [Flood Risk Management Guideline LU01](#), a FIRA should consider the following:

- Impact of flooding on the proposed development: assess the risk of inundation during various flood events.
- Impact of the proposed development on flood behaviour: understand how the development may alter flood patterns and affect adjacent properties and infrastructure.
- Impact on the safety of people: Evaluate the safety of individuals in the area, ensuring the proposal does not compromise emergency service accessibility or contribute to isolation during flood events.

The updated FIRA does not provide sufficient detail to conduct a comprehensive flood risk assessment as it lacks an adequate demonstration of full flood risk impacts and emergency management considerations. The planning proposal should be consistent with the Ministerial Direction 4.1(1) which requires consistency with the flood prone land policy, the principles of the manual and the land use planning guideline 2021. The matters underlined below are of particular concern.

The site is a floodway in the Probable Maximum Flood (PMF) event

Floodways are designed to convey floodwaters efficiently. If these areas are obstructed, it can lead to increased water levels upstream, exacerbating flooding in surrounding areas. In urban areas, floodways are crucial for managing water flow during heavy rainfall and flood events. The site becomes a floodway in a PMF event (as shown in Figure 1). Development in these areas can block natural drainage paths, creating backflows that worsen flood risks for nearby properties, infrastructure and roadways. As new floodways developed during rarer flood events, the planning proposal should be updated to consider compatibility of the proposed development and users with rare flood flows in this area.



Figure 1: Extract of Developed Scenario Hydraulic Category PMF Flood Event (Source: Northrop)



## Excessive flood afflux in the developed scenario

The planning proposal raises concerns as it may result in excessive flood impacts on public roads, which increases in flood depth reaching up to 0.2 m in some areas of Albemarle Avenue (as shown in Figure 2). This depth compounds the existing high hazard classification (H5) of public roads (within the PMF zone), further intensifying flood risk and safety concerns as the development can cause significant flood impacts to other properties and public road infrastructure. The FIRA should be updated to address any adverse impacts on the emergency management arrangement of existing community including managing risks that may be faced by the itinerant population.

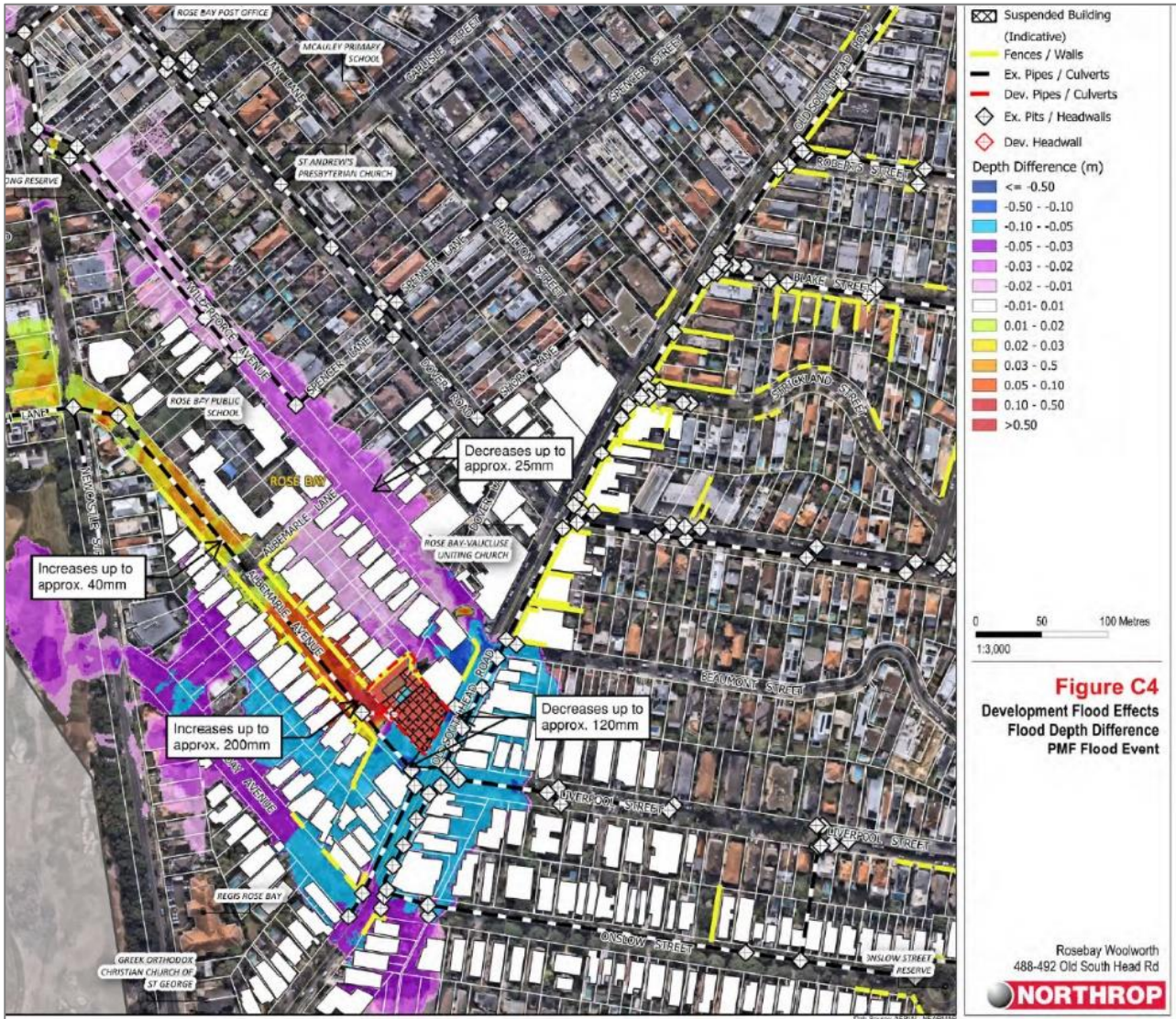


Figure 2: Extract of Development Flood Effects Flood Depth Difference PMF Flood Event (Source: Northrop)

## Emergency management constraints

The site is surrounded by H5 floodwaters in the PMF event, creating substantial challenges for emergency management and evacuation due to the high hazard level and the risk of isolation (as shown in Figure 3). This classification signals extreme flood risk, which complicates evacuation routes and heightens danger for both residents and emergency responders.

BCS recommends that the proponent demonstrates that safe, elevated access can be maintained across the full range of flood events. BCS request further information about the duration of isolation for the full range of events. BCS do not support a 'Shelter in Place' strategy for new developments in high hazard flood prone land. BCS consider it likely that the development would require additional government expenditure to enhance emergency management services, flood mitigation



infrastructure, and road safety measures to manage increased flood risks. No evidence of consultation with the NSW SES has been provided in the updated FIRA. BCS recommend that the NSW SES should be consulted on all matters related to emergency management constraints to ensure alignment with emergency response requirements resulting from the intensification of the site.

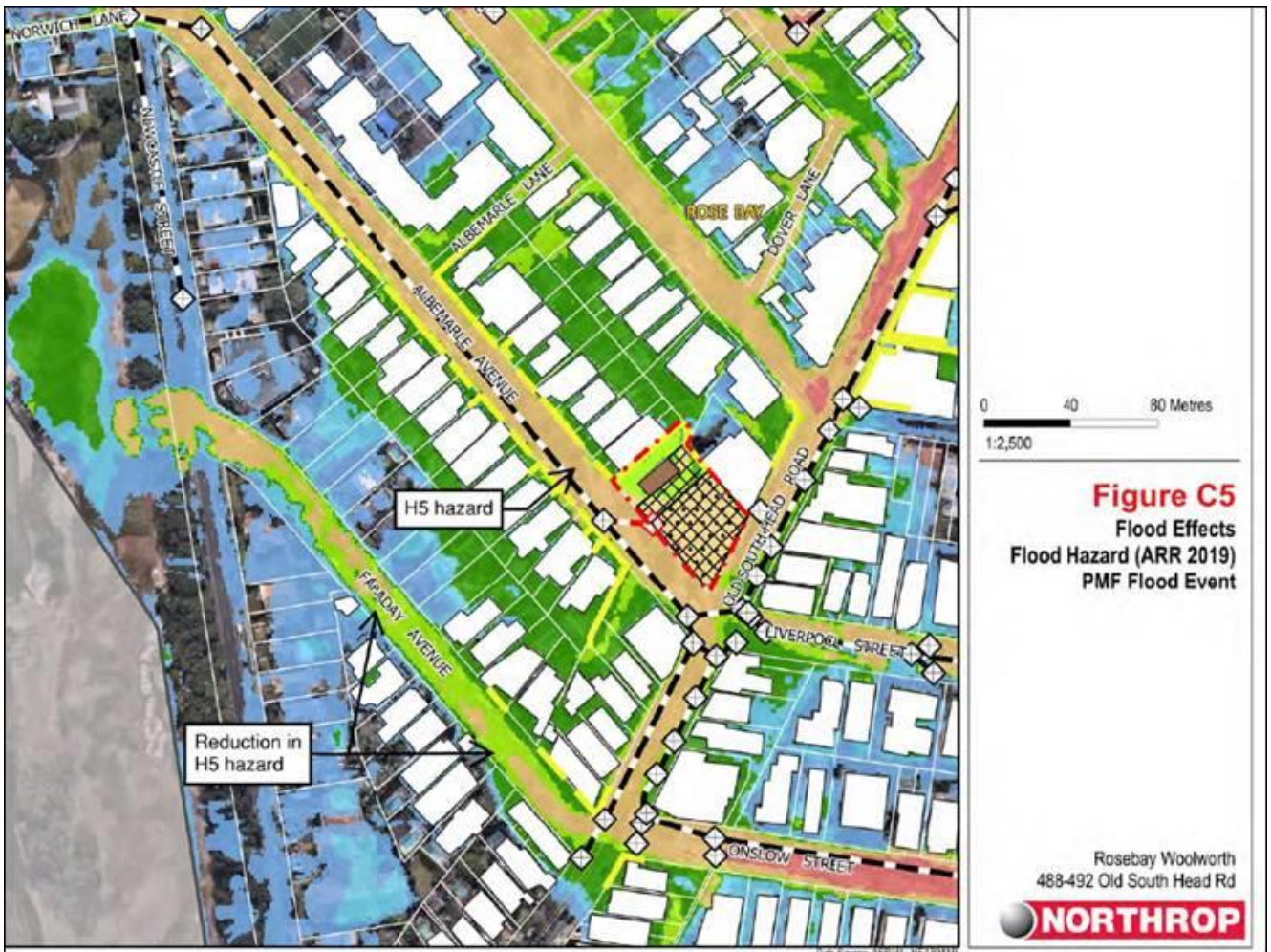


Figure 3: Extract of Flood Effects Flood Hazard (ARR 2019) PMF Flood Event (Source: Northrop)

**End of Submission**

Our Ref: ID 2374  
Your Ref: PP-2022-731

13 May 2024

Ian Woods  
Locked Bag 5022  
Parramatta NSW 2124

email: [ian.woods@dpie.nsw.gov.au](mailto:ian.woods@dpie.nsw.gov.au)  
CC: [shelly.stingmore@one.ses.nsw.gov.au](mailto:shelly.stingmore@one.ses.nsw.gov.au)

Dear Ian,

### **Planning Proposal for 30 Albemarle Avenue, Rose Bay**

Thank you for the opportunity to comment on the Planning Proposal for 488-492 Old South Head Road and 30 Albemarle Avenue, Rose Bay, that would facilitate 14 dwellings and approximately 75 ongoing jobs. It is understood the planning proposal seeks to amend the Woollahra LEP 2014 to permit retail premises as part of a shop-top housing development at the site, as follows:

- A four-storey mixed commercial and residential building with basement parking;
- A supermarket located on the ground floor and part of Level 1;
- 14 apartments on Levels 1 – 3;
- Three basement levels with up to 92 car parking spaces to be used by the supermarket and residential tenants;
- Flood walls and flood gates.

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 recommend:

- **undertaking** a flood impact and risk assessment for the site, including the duration of isolation of the site and duration of flooding on adjacent roads and the impact of climate change; noting that the flood study and risk management plans for the catchment are from 2010 and 2014, respectively. Other recent infrastructure upgrades and approved development in the area should also be considered.
- **Seeking advice** from the Department of Climate Change, Energy, the Environment and Water (DCCEEW) regarding the impact of the proposed development on flood behaviour for adjacent and downstream areas, including consideration of climate change impacts.
- **Investigating** and **pursuing** options for improving stormwater management to reduce flood risk where possible. Any improvements that can be made to reduce flood risk will benefit the community – future residents, visitors, as well as people working on the site.
- **Considering** implementing appropriate safety measures and features to reduce the potential risks associated with the flash flooding at the site; for example the lifts, electrical components, stock, building design and engineering.
- Clearly **communicating** the flood and tsunami to potential future site users, for example through signage, site inductions and other information tools.

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](#)
- [Managing Flood Risk Through Planning Opportunities](#)

Please feel free to contact Ana Chitu via email at [rra@ses.nsw.gov.au](mailto: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,



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

## **ATTACHMENT A: Principles Outlined in the Support for Emergency Management Planning Guideline<sup>1</sup>**

### **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 NSW State Flood Plan<sup>2</sup> and the Waverly Council and Woollahra Council Flood Emergency Sub Plan<sup>3</sup>, where 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). Climate change considerations should also be included, in line with NSW Government Guidelines.

The Study (2014) noted that the area at 488-492 Old South Head Road is likely to experience large overland flows during heavy rainfall events.<sup>4</sup> The site itself appears to remain flood free up to and including the Probable Maximum Flood (PMF) event.<sup>5 6</sup> However, the roads adjacent to the site, Old South Head Road and Albemarle Avenue, appear to become impacted by flooding as frequently as 1 year Annual Recurrence Interval (ARI) events, with depths of up to 0.5 meters.<sup>7</sup> Flood levels on the above mentioned roads can reach up to 0.8 meters in a 1% Annual Exceedance Probability (AEP) event, and up to 1 meter in a PMF event,<sup>8</sup> with access roads (Old South Head Road and Albemarle Avenue) being categorised as a high hazard floodway in the 1% AEP and PMF events.<sup>9</sup>

Understanding that the Rose Bay Catchment Flood Study and Rose Bay Flood Risk Management Study and Plan have been conducted in 2010 and 2014 respectively, and that infrastructure upgrades and additional developments may have been completed since then, we recommend undertaking additional modelling to understand the current flood risk at the site and the broader catchment.

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<sup>1</sup> NSW Government. 2023. Principles Outlined in the Support for Emergency Management Planning Guideline

<sup>2</sup> NSW Government. 2021. NSW State Flood Plan. Section 1.6 – Key Principles. 1.6.2, page 5.

<sup>3</sup> NSW Government. 2021. Waverly Council and Woollahra Council Flood Emergency Sub Plan. Section 1.6 – Key Principles. 1.6.2, page 7.

<sup>4</sup> WMA Water. 2014. Rose Bay Flood Risk Management Study and Plan, page 20.

<sup>5</sup> WMA Water. 2010. Rose Bay Catchment Flood Study, Figure 14.

<sup>6</sup> WMA Water. 2014. Rose Bay Flood Risk Management Study and Plan, Figure 8.

<sup>7</sup> WMA Water. 2010. Rose Bay Catchment Flood Study, Figure 8.

<sup>8</sup> Northrop. 2022. Flooding Assessment, page 2.

<sup>9</sup> WMA Water. 2014. Rose Bay Flood Risk Management Study and Plan, Figure 9 & 10.



The proposed Finished Floor Levels for the ground floor supermarket is placed below the 1% AEP design storm event, with the proposal suggesting the main entryway to be protected, with a self-rising flood barrier and flood resistant walls around the façade, up to the PMF level.<sup>10</sup> In addition, the proposal suggests for all openings into the basement to be protected up to the PMF by raising surface levels or by using flood gates up to the PMF level, with the basement driveway crest proposed at a minimum of the 1% AEP and protected using flood gates up to the PMF event. (..) However, ***“there is a risk of frequent activation of the flood gates as the proposed FFLs are below the 1EY flood level.”***<sup>11</sup>

Noting that flood gates and flood walls are proposed, further modelling (including sensitivity testing for potential partial or complete failure) should be conducted to understand if this will modify the flood behaviour at the site and cause any adverse impacts to surrounding properties and infrastructure. Whilst the installation of retractable flood barriers may provide some protection for the carpark, is not adequate to address all other flood risk concerns. We recommend consulting with the Department of Climate Change, Energy, the Environment and Water (DCCEE) regarding the impact of the proposed development on flood behaviour for adjacent and downstream areas.

Basement car parks have inherent risks to life and property<sup>12</sup> and can often restrict safe evacuation of the occupants. This can be managed through building design, such as crest levels above a certain level (e.g. the PMF) to prevent water ingress and flooding.

In the matter of *Ko v Strathfield Municipal Council* [2021] NSWLEC 1099, the development proposal included a basement car park which was located below the 1 in 100 year flood level. The proposed development sought to mitigate the impact by relying on a driveway crest at the 1 in 100 year flood level and a 500mm high self-closing flood barrier at the basement entrance. The Commissioner found the crest and flood barriers were insufficient to manage overland flow, to minimise damage to occupants and property or to manage risk to life from flood. The Commissioner stated all non-habitable floors, which include basement car parks, must be no lower than the 1 in 100 year flood level.

We recommend that all ground floor businesses and retail floors must be above the 1% AEP flood levels and access to the basement must be above PMF. Should this not be possible, we recommend reconsidering the site design and basement carparking, to reduce risk to life and property. There must also be the provision of sufficient readily accessible habitable areas above the PMF to cater for the safety of potential occupants, clients and visitors in commercial development.

Further, this area is at risk of tsunami. We recommend informing the site users of their flood and tsunami risks, for example through site inductions, emergency drills and other information tools.

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<sup>10</sup> Northrop. 2022. Flooding Assessment, page 3.

<sup>11</sup> Northrop. 2022. Flooding Assessment, page 3.

<sup>12</sup> Collier, L. Phillips, B., and Griffin, M. 2017. Basement Development in the Floodplain. Floodplain Management Australia Conference. Newcastle, 2017.

**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 existing Flood Study defines the critical duration for the Rose Bay Catchment to be 90 minutes for all design events<sup>13</sup>, which suggests that the area is prone to flash flooding. *“Due to the flood behaviour on Old South Head Road and Albemarle Avenue it is anticipated there may be difficulty evacuating from the subject site during the peak of a 1% AEP and PMF events.”*<sup>14</sup> Evacuation can be complicated by the relatively short timeframe until isolation. Further modelling to assess the period of isolation may assist in understanding the full extent of the flood risk at the site.

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 government agencies such as Ambulance NSW, NSW SES, NSW Police Force, Fire and Rescue NSW and others.

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.**

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:

- 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

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<sup>13</sup> WMA Water. 2010. Rose Bay Catchment Flood Study, Page 25.

<sup>14</sup> Northrop. 2022. Flooding Assessment, page 2.

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.**

Consideration should be given to the provision of publicly accessible space above the PMF, with adequate infrastructure to enable the physically impaired to access such space, that is easily accessible 24 hours a day for seven days a week which is clearly identified for this purpose with associated directional signage. This is particularly important considering the commercial use of the proposed development (in addition to residential use), which may attract a higher number of visitors to the site that may be unaware of the flood risk.

However, provision of refuge space for the itinerant population above the PMF should not be used to justify a new development in a flood risk area.

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

As the site is subject to flash flooding, 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.**

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 severe weather and 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).

22/04/2024



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To Whom it May Concern,

RE: PP-2022-731

488-492 Old South Head Road and 30 Albemarle Avenue, Rose Bay

Ausgrid would like to thank you for seeking input and feedback regarding this planning proposal.

Ausgrid requires that due consideration be given to the compatibility of proposed development with existing Ausgrid infrastructure, particularly in relation to risks of electrocution, fire risks, Electric & Magnetic Fields (EMFs), noise, visual amenity and other matters that may impact on Ausgrid or the development.

Ausgrid has no comment to make regarding this planning proposal (Re zoning) at this point in time.

Ausgrid however does look forward to reviewing future Development Application submissions for any development attached to this proposal and will then provide further feedback accordingly.

Please do not hesitate to contact me for further information.

Regards,

A handwritten signature in black ink, appearing to read "Paul Nakhle".

Paul Nakhle - Portfolio Manager - Asset Protection | Transmission Services  
02 9269 7587 | 0419 631 174

Connecting communities,  
empowering lives

30 April 2024

**Ian Woods**

Planning Officer

Department of Planning, Housing and Infrastructure

ian.woods@dpie.nsw.gov.au

**RE: Planning Proposal at 488-492 Old South Head Road and 30 Albemarle, Rose Bay – PP-2022-731**

Thank you for notifying Sydney Water of the planning proposal listed above. The Planning Proposal proposes a site specific amendment of the Woollahra Local Environment Plan 2014 to insert a schedule 1 additional permitted use – 30 Albemarle Avenue, which permits retail premise, change Part 6 to include an additional local provision to increase the building height to 14.5m on Albemarle Avenue. These amendments will result in a supermarket, 2,168m<sup>2</sup>, 1,978m<sup>2</sup> residential floorspace, 14 dwellings and basement parking to accommodate 93 lots. We have reviewed the application based on the information supplied and provide the following comments for your information to assist in planning the servicing needs of the proposed development.

**Water and wastewater servicing**

- Our preliminary assessment indicates that water and wastewater servicing should be available for the proposed development.
- Amplifications, adjustments, deviations and/or minor extensions may be required.

**Trade wastewater requirement**

- If this proposed development is going to generate trade wastewater, the developer must submit an application requesting permission to discharge trade wastewater to Sydney Water's wastewater system. Applicant must wait for approval and issue of a permit before any business activities can commence.
- The permit application can be made on Sydney Water's web page through Sydney Water Tap In. <http://www.sydneywater.com.au/tapin/index.htm>

**Protection of Assets**

This letter constitutes high-level initial advice only. Further advice from Sydney Water may be offered at exhibition, the feasibility or, S73 stages with regards to the protection of our existing assets/easements and any Building over or adjacent to Sydney Water assets. This will be investigated as we receive more detail, and specific protection requirements, adjustments or amendments will be documented as these progress.

This advice is not formal approval of our servicing requirements. The development servicing advice provided above is based on the best available information at the time of the referral (e.g. planning proposal). It is important to note that this information can evolve over time in tandem with the progression of other development projects in the catchment, changes within the local systems and receiving works. This is particularly important in systems with limited capacity.

Furthermore, Sydney Water does not reserve or hold capacity for proposed developments, regardless of whether the area has been rezoned or not. To ensure accuracy and alignment with current conditions, it is best to approach Sydney Water for an updated capacity assessment particularly if an advice letter is more than 12 months old. We advise the proponent to contact Sydney Water directly, via a Water Servicing Coordinator, as soon as possible to lodge their enquiry and initiate servicing requirements.

If you require any further information, please contact the Growth Planning Team at [urbangrowth@sydneywater.com.au](mailto:urbangrowth@sydneywater.com.au)

Yours sincerely,



**Kristine Leitch**

Commercial Growth Manager

City Growth and Development, Business Development Group

Sydney Water, 1 Smith Street, Parramatta NSW 2150