

Our Ref: ID 3496  
Your Ref: SSD-86017721

1 December 2025

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Dear Adela,

**Environmental Impact Assessment for Residential development with in-fill affordable housing, 23-31 Dover Road, Rose Bay**

Thank you for the opportunity to provide comment on the Environmental Impact Assessment (EIS) for the State Significant Development (SSD) Residential development with in-fill affordable housing at 23-31 Dover Road, Rose Bay (SSD-86017721). It is understood that the project seeks consent for:<sup>1</sup>

- Demolition of five dwellings and existing vehicular crossovers.
- Removal of 27 trees and excavation to a depth of 3.95m – 9.38m (RL 2.82).
- Construction of an 8-storey building comprising:
  - 49 residential apartments in 1, 2, 3 and 4-bedroom configuration.
  - 11 affordable housing dwellings (5x 1 bedrooms, 5x 2 bedrooms, 1x 3 bedrooms) to be managed by a community housing provider for a 15-year period.
  - Communal open space (664 m2).
  - Two basement levels for parking, storage, waste storage areas, plant and services.
  - Site landscaping at ground level, to resident private open spaces and rooftop communal open space.
  - **An impervious wall (flood barrier)** on the Dover Road frontage.
- Variation to the height of building control under the Housing SEPP of 4.8% to accommodate the rooftop lift overrun.

The NSW State Emergency Service (NSW SES) is the agency responsible for dealing with floods, storms and tsunamis 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.

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<sup>1</sup> Urbis. 2025. Environmental Impact Statement – 23-31 Dover Road, Rose Bay, page 12 - 13

The NSW SES recommends that consideration of flooding issues is undertaken 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 directions and circulars relating to the *Environmental Planning and Assessment Act, 1979*. Some of the issues which are of concern to the NSW SES are detailed in Attachment A.

We emphasise that a **risk-based approach to future development decisions requires a clear understanding of the full extent of flood risks to life and property** associated with development at the site, to ensure emergency management risks to the community can be effectively managed. Currently, the Flood Impact and Risk Assessment (FIRA) does not clearly outline the flood risks at the site that future users would be exposed to should this development be pursued, therefore it is not suitable to inform decision-making. If development is approved without providing a thorough FIRA to clearly outline the full extent of flood risks at the site up to and including the Probable Maximum Flood (PMF) this could result in risks to life and property not being appropriately managed. We therefore **advise** the Department of Planning, Housing and Infrastructure (DPHI) to carefully consider the risks to life and property associated with intensifying development at this location and recommend the below recommendations are addressed *before consent is granted*:

- **Advise the consent authority to request** the Flood Impact and Risk Assessment (FIRA) be resubmitted to adequately address existing and post-development conditions in accordance with the NSW Government Guidelines,<sup>2</sup> as this would inform future site development and appropriate flood mitigation measures.
- **Recommend seeking advice** from the NSW Department of Climate Change, Energy, the Environment and Water (DCCEEW) in relation to the modelling approach and regarding the impact of the proposed development on flood behaviour at the site and neighbouring areas, and any appropriate mitigation measures, particularly noting the proposed impervious **flood wall** along the Dover Road frontage and the eastern lot boundary,<sup>3</sup> which has the potential to create adverse impacts on flooding to the subject land or surrounding properties.
- **Emphasise** that the shelter in place strategy is not equivalent, in risk management terms, to evacuation and it should not be used to justify *future development*. Should development be pursued, **the consent authority must be satisfied** that the proposal demonstrates consistency with the Shelter in Place Guideline (NSW Government, 2024) to ensure the risk to life is adequately managed and/or mitigated. This includes addressing (but not limited to) the following considerations:
  - flooding occurs within less than 6 hours from the commencement of causative rain and the duration of shelter in place due to isolation by floodwaters is less than 12 hours from the commencement of rainfall (8b)

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<sup>2</sup> DPE. 2023. LU01 Flood Risk Management Guideline: Flood Risk and Impact Assessment

<sup>3</sup> Catchment Simulation Solutions. 2025. Flood Impact and Risk Assessment 23-31 Dover Road, Rose Bay, page 7

- development is not subject to high hazard flooding (e.g. floodways, high hazard H5 or H6 areas) or surrounding roadways are not subject to high hazard flooding (8c)
  - an understanding of secondary risks and how the proponent proposes they will be managed – to be outlined in the FIRA (10)
- **Caution** that people sheltering in place in a location below the height of the PMF is inadequate, as it poses a significant risk to life, therefore we recommend the consent authority requests the proponent to **demonstrate** if *all habitable floor areas, as well as the basement, are protected to a level above the PMF*,<sup>4</sup> or if the ground floor level, which includes residential units<sup>5</sup> is proposed to be at 9.42m AHD (the peak 100-year ARI + 0.5 metres freeboard) and the basement driveway crest at 8.75m AHD (the peak 100-year ARI flood level + 0.3 metres freeboard).<sup>6</sup>
- **Recommend** that all openings to the basement (ramp, vents, etc) are situated above the Probable Maximum Flood (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 are below the PMF will pose risk to life and property.

You may also find the following Guidelines 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 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,



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

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<sup>4</sup> Catchment Simulation Solutions. 2025. Flood Impact and Risk Assessment 23-31 Dover Road, Rose Bay, page 21

<sup>5</sup> Catchment Simulation Solutions. 2025. Flood Impact and Risk Assessment 23-31 Dover Road, Rose Bay, Appendix C, Drawing DA2002 – Ground Floor Plan

<sup>6</sup> Catchment Simulation Solutions. 2025. Flood Impact and Risk Assessment 23-31 Dover Road, Rose Bay, page 8

## **ATTACHMENT A: Principles Outlined in the Support for Emergency Management Planning Guideline<sup>7</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 strategies identified in the NSW State Flood Plan<sup>8</sup> and the Waverly Council and Woollahra Council Flood Emergency Sub Plan,<sup>9</sup> where evacuation is the preferred 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.**

### ***Flood risk and modelling approach***

It is understood that the Flood Impact and Risk Assessment (FIRA) *was undertaken utilising SOBEK flood model results generated as part of the 'Rose Bay Floodplain Risk Management Study and Plan' (WMA Water, 2014).*<sup>10</sup> This model excluded residential areas from the model domain, with flow directed along roadways and areas of open space, thereby artificially preventing inundation of all residential lots within the flood model domain.<sup>11 12</sup>

Due to the flood modelling approach, *the existing flood risk within the site cannot be determined*<sup>13</sup> *and the impact of the development on flood behaviour cannot be defined.*<sup>14</sup> *As the flood extent has not been mapped across residential areas, no hydraulic category is defined across the development site.*<sup>15</sup>

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<sup>7</sup> NSW Government. 2023. Principles Outlined in the Support for Emergency Management Planning Guideline

<sup>8</sup> NSW Government. 2024. NSW State Flood Plan. Section 5.1.7, page 34

<sup>9</sup> NSW SES. 2021. Waverly Council and Woollahra Council Flood Emergency Sub Plan. Section 1.6.2, page 7

<sup>10</sup> Catchment Simulation Solutions. 2025. Flood Impact and Risk Assessment 23-31 Dover Road, Rose Bay, page iii

<sup>11</sup> Catchment Simulation Solutions. 2025. Flood Impact and Risk Assessment 23-31 Dover Road, Rose Bay, page 4

<sup>12</sup> Urbis. 2025. Environmental Impact Statement – 23-31 Dover Road, Rose Bay, page 80

<sup>13</sup> Catchment Simulation Solutions. 2025. Flood Impact and Risk Assessment 23-31 Dover Road, Rose Bay, page 21

<sup>14</sup> Catchment Simulation Solutions. 2025. Flood Impact and Risk Assessment 23-31 Dover Road, Rose Bay, page 22

<sup>15</sup> Catchment Simulation Solutions. 2025. Flood Impact and Risk Assessment 23-31 Dover Road, Rose Bay, page 6

The FIRA also notes that *“no updates were made to the model to represent post development conditions, and all flood behaviour under post-development conditions would remain consistent with that described for existing conditions”*.<sup>16</sup>

In addition, a survey of the existing site, suggested that *“the existing site is potentially vulnerable to inundation in both the 100-year ARI and PMF events along the entire Dover Road frontage, and also potentially flood liable near the north-eastern corner of the site in the 20-year ARI event”*.<sup>17</sup>

We **emphasise** that a risk-based approach to future development decisions requires a clear understanding of the full extent of flood risks to life and property associated with development at the site, to ensure emergency management risks to the community can be effectively managed. Currently, the FIRA does not clearly outline the flood risks the site and any future users would be exposed to should this development be pursued, therefore it is not suitable to inform decision-making.

We **recommend the consent authority should request the** FIRA be resubmitted to adequately address existing and post-development conditions in accordance with the NSW Government Guidelines,<sup>18</sup> as this would inform future site development and appropriate flood mitigation measures.

We also **recommend seeking advice** from the NSW Department of Climate Change, Energy, the Environment and Water (DCCEEW) in relation to the modelling approach and regarding the impact of the proposed development on flood behaviour at the site and neighbouring areas, and any appropriate mitigation measures, particularly noting the proposed impervious wall along the Dover Road frontage and the eastern lot boundary,<sup>19</sup> which has the potential to create adverse impacts on flooding to the subject land or surrounding properties.

### ***Access/egress***

It is understood that site access is provided off Dover Road,<sup>20</sup> and the *“vehicular access point is located on the north-western corner of the site **at the lowest point in the site’s topography**, providing access to two basement levels”*.<sup>21</sup> Openings will be provided in the proposed flood wall at the pedestrian and vehicular entries from Dover Road.<sup>22</sup> Dover Road is classified as a **high hazard floodway**,<sup>23</sup> with the FIRA indicating *“that the flood behaviour on Dover Road*

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<sup>16</sup> Catchment Simulation Solutions. 2025. Flood Impact and Risk Assessment 23-31 Dover Road, Rose Bay, page 7

<sup>17</sup> Catchment Simulation Solutions. 2025. Flood Impact and Risk Assessment 23-31 Dover Road, Rose Bay, page 5

<sup>18</sup> DPE. 2023. LU01 Flood Risk Management Guideline: Flood Risk and Impact Assessment

<sup>19</sup> Catchment Simulation Solutions. 2025. Flood Impact and Risk Assessment 23-31 Dover Road, Rose Bay, page 7

<sup>20</sup> Urbis. 2025. Environmental Impact Statement – 23-31 Dover Road, Rose Bay, page 30

<sup>21</sup> Urbis. 2025. Environmental Impact Statement – 23-31 Dover Road, Rose Bay, page 33

<sup>22</sup> Catchment Simulation Solutions. 2025. Flood Impact and Risk Assessment 23-31 Dover Road, Rose Bay, page 7

<sup>23</sup> Urbis. 2025. Environmental Impact Statement – 23-31 Dover Road, Rose Bay, page 18

*along the site frontage would be hazardous to people and vehicles and **poses a significant risk to life***".<sup>24</sup>

The flood study results indicate that *"at the start of large storms the majority of water does flow down Dover Road **where it ponds in low points to depths that would be deep enough to float cars**"*.<sup>25</sup>

It is understood that inundation in the 20-year ARI, 100-year ARI and PMF events extends across the full width of Dover Road along the site frontage, with peak depths adjacent to the site frontage of up to 0.15 metres in the 20-year ARI event, 0.25 metres in the 100-year ARI event, and 0.40 metres in the PMF.<sup>26</sup> However, according to the mapping provided, Dover Road further east (at the New South Head Road intersections) and west (around the Carlisle Street intersection) of the site can experience up to 1 metre flood depth in the 100- year ARI event, and up to 2 metres in a PMF event.<sup>27</sup> *"Peak velocities can vary from between 2 and 3m/s in the 20-year ARI event, to 6m/s in the PMF. **The floodway hydraulic category is predicted along Dover Road in all flood events, together with H5 hazard in events up to the 100-year ARI, and H6 in the PMF. Flood behaviour of this nature is hazardous to people and vehicles**"*.<sup>28</sup>

With Dover Road being the only access/egress route for the site and it being categorised as floodway in all flood events,<sup>29</sup> this suggests the site would become isolated in all flood events, which would essentially create a flood island leaving people trapped at the site and vulnerable to secondary emergencies; people may also choose not to remain isolated and attempt to exit a building into hazardous floodwaters.

### Emergency management

We note *"Emergency response considerations confirm that although evacuation during the peak of a flood would not be possible, all habitable floor levels are located above the PMF. As such, residents would be required to shelter in place for a short period (less than 60 minutes) until safe access is re-established"*.<sup>30</sup>

**We emphasise** that the shelter in place strategy is not equivalent, in risk management terms, to evacuation and it should not be used to justify *future development*. Should development be pursued, **the consent authority must be satisfied** that the proposal demonstrates consistency with the Shelter in Place Guideline (NSW Government, 2024) to ensure the risk to

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<sup>24</sup> Catchment Simulation Solutions. 2025. Flood Impact and Risk Assessment 23-31 Dover Road, Rose Bay, page 6

<sup>25</sup> WMAWater. 2014. Rose Bay Floodplain Risk Management Study and Plan, page 30

<sup>26</sup> Catchment Simulation Solutions. 2025. Flood Impact and Risk Assessment 23-31 Dover Road, Rose Bay, page iii

<sup>27</sup> Catchment Simulation Solutions. 2025. Flood Impact and Risk Assessment 23-31 Dover Road, Rose Bay, Appendix A, Figure 2 & 3

<sup>28</sup> Catchment Simulation Solutions. 2025. Flood Impact and Risk Assessment 23-31 Dover Road, Rose Bay, page iii

<sup>29</sup> Catchment Simulation Solutions. 2025. Flood Impact and Risk Assessment 23-31 Dover Road, Rose Bay, page iii

<sup>30</sup> Urbis. 2025. Environmental Impact Statement – 23-31 Dover Road, Rose Bay, page 80

life is adequately managed and/or mitigated. This includes addressing (but not limited to) the following considerations:

- flooding occurs within less than 6 hours from the commencement of causative rain and the duration of shelter in place due to isolation by floodwaters is less than 12 hours from the commencement of rainfall (8b)
- development is not subject to high hazard flooding (e.g. floodways, high hazard H5 or H6 areas) or surrounding roadways are not subject to high hazard flooding (8c)
- an understanding of secondary risks and how the proponent proposes they will be managed – to be outlined in the FIRA (10)

We also **caution** that people sheltering in place in a location below the height of the Probable Maximum Flood (PMF) is inadequate, as it poses a significant risk to life, therefore we recommend the consent authority requests the proponent to **demonstrate** if *all habitable floor areas, as well as the basement, are protected to a level above the PMF*,<sup>31</sup> or if the ground floor level, which includes residential units,<sup>32</sup> is proposed to be at 9.42m AHD (the peak 100-year ARI + 0.5 metres freeboard) and the basement driveway crest at 8.75m AHD (the peak 100-year ARI flood level + 0.3 metres freeboard).<sup>33</sup>

Any proposed refuge location should be above the height of the PMF and align with the design criteria in the NSW Government shelter-in-place for flash flooding Guideline<sup>34</sup> including water supply, waste management, sanitation, food, and shelter and space management.

We also **recommend** that all openings to the basement (ramp, vents, etc) are situated above the Probable Maximum Flood (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 are below the PMF will pose risk to life and property.

### **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

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<sup>31</sup> Catchment Simulation Solutions. 2025. Flood Impact and Risk Assessment 23-31 Dover Road, Rose Bay, page 21

<sup>32</sup> Catchment Simulation Solutions. 2025. Flood Impact and Risk Assessment 23-31 Dover Road, Rose Bay, Appendix C, Drawing DA2002 – Ground Floor Plan

<sup>33</sup> Catchment Simulation Solutions. 2025. Flood Impact and Risk Assessment 23-31 Dover Road, Rose Bay, page 8

<sup>34</sup> NSW Department of Planning, Housing and Infrastructure. 2024. Shelter-in-place guideline for flash flooding, page 6

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.**

Managing flood risks 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 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 an appropriate and timely manner.

As the site is affected by flash flooding<sup>35</sup> 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.

**Principle 7 Ongoing community awareness of flooding is critical to assist effective emergency response.**

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<sup>35</sup> Catchment Simulation Solutions. 2025. Flood Impact and Risk Assessment 23-31 Dover Road, Rose Bay, page 8

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

If the development proceeds, 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, for the life-span of the development. However, it is important to note that a private flood management plan is insufficient to address flood risk at the site.