

17th May 2025

BAYVIEW FLOOD MAPPING RESPONSE

Adopted flood study, flood mapping and Estuary Hazard Map

The relevant adopted flood study for the Bayview locality is the McCarrs Creek, Mona Vale and Bayview Flood Study / Flood Study Review prepared for Northern Beaches Council. The attached flood mapping is understood to be derived from the adopted flood study information and shows mapped PMF flood behaviour in the broader Bayview locality.

The important distinction for the present development is that the mapped PMF flow paths and PMF flood level labels are shown along the external drainage / overland flow corridors and low-lying road areas. The proposed development footprint is not shown as being inundated by the mapped flood extent. Accordingly, the off-site PMF labels should not be treated as flood levels applying to the proposed building platform.

A standalone FIRA is generally directed to situations where the proposed development is located on flood-prone land or where the works have the potential to alter flood behavior, flood storage, flood conveyance, flood levels, velocities or flood hazard. That is not the circumstance identified by the attached mapping for this site.

The available mapping indicates that the proposed development footprint is outside the mapped flood extent. On that basis, there is no identified inundation of the proposed building platform, no basement / carpark entry exposure to mapped floodwaters, and no proposed works within a mapped floodway, flood storage area or flood fringe. The proposal therefore does not create the type of hydraulic interaction that would ordinarily require a full site-specific flood impact assessment.

The lowest proposed development level is RL 20.48 m AHD. However, because the development footprint is outside the mapped flood extent, the primary assessment issue is not a comparison between the floor level and off-site PMF spot levels. The PMF labels shown on Figure 1 are location-specific outputs along external flow paths and should not be applied as a uniform flood level across the site. The relevant conclusion is that the mapped PMF does not extend to the development footprint.

The same reasoning applies to the estuarine hazard mapping. We acknowledge that the broader lot may be identified within the Pittwater Estuarine Planning Level (EPL) Hazard Zone. However, that mapping appears to reflect low-lying portions of the broader lot and foreshore locality, and should not be interpreted as indicating that the proposed building platform is subject to estuarine inundation. The base EPL referred to for the locality is RL 2.64 m AHD, with a potential reduction factor based on distance from the foreshore. The lowest proposed development level is RL 20.48 m AHD, which is approximately 17.84 m above the base EPL before any reduction factor is applied. Accordingly, the EPL does not control the proposed building platform, carpark entries or operational areas, and a separate estuarine inundation assessment is not considered necessary for the development footprint.

DIRECTORS

M. Grogan BE, MEng, MIEAust, CPEng, NER, APEC Engineer, IntPE(Aus)
P. Grogan BE(Hons), ME(Struct), MIEAust, CPEng, NER

ASSOCIATE DIRECTORS

R. Faustino BE(Hons), MIEAust, CPEng, NER, APEC Engineer, IntPE (Aus)
J. Walujono BE(Hons), ME(Struct), MIEAust, CPEng, NER

In relation to emergency management, OPAL's site-specific Emergency Procedures Manual / Flood Emergency Response Plan will be prepared prior to occupation, once the facility has been constructed, commissioned and is becoming operational. It is appropriate for the final operational manual to be prepared at that later stage because final staffing arrangements, resident management procedures, operational protocols and site commissioning details are not yet available at the planning stage. For the purposes of this response, OPAL confirms that the future site-specific operational procedures will include shelter-in-place measures for rare events where external road access is temporarily affected.

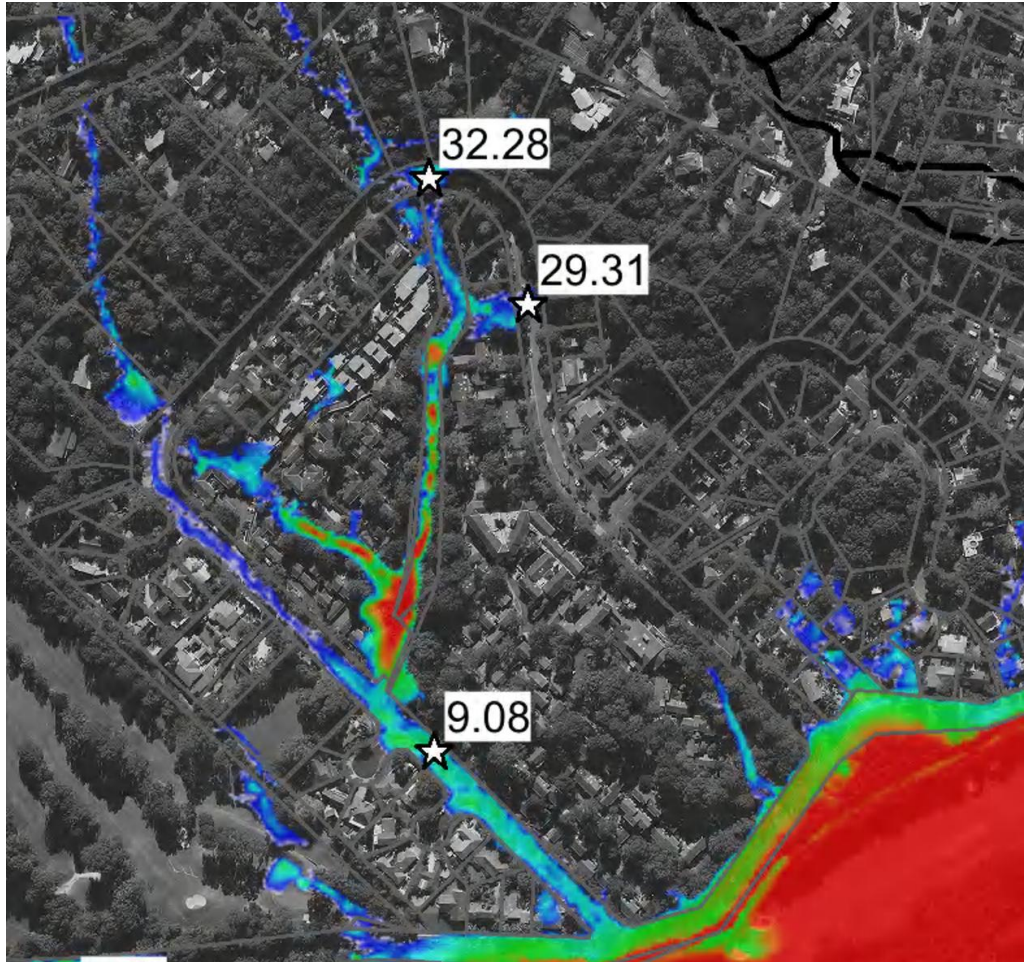


Figure 1: Adopted flood mapping for the Bayview locality showing mapped flood behaviour and PMF level labels in the external overland flow / road corridor. The proposed development site / footprint is not shown within the mapped flood extent.



Figure 2: Estuary Hazard Map

Response to the matters raised

Matter raised	Project position	Proposed close-out response
Need for FIRA	The development footprint is not shown within the mapped flood extent, including the PMF flood mapping.	A standalone FIRA is not proportionate or necessary. Provide a targeted flood mapping response and survey overlay instead.
PMF information	PMF levels shown on the attached mapping are location-specific outputs along external flow paths and do not apply uniformly to the site.	Identify that the mapped PMF extent does not encroach on the proposed development footprint and that the off-site labels are not building platform flood levels.
Floor and carpark levels	Lowest proposed development level is RL 20.48 m AHD and is outside the mapped flood extent.	Confirmed all habitable floors, carpark entries and critical services are located outside mapped flood affectation.
Overland flow	Mapped overland flow is external to the development footprint and follows established drainage / road corridors.	Confirmed that the proposal does not obstruct, divert or fill mapped overland flow paths. Include a survey / drainage plan overlay if required.
Emergency response	Flooding may temporarily affect external road access, but the development itself is not mapped as flood affected.	Address this through OPAL's shelter-in-place procedure and a concise Flood Emergency Response / Shelter-in-Place Statement, rather than a full FIRA to be developed by opal when the project is commissioned.
Site-specific emergency procedures	The final site-specific Emergency Procedures Manual cannot be completed at the planning stage because the facility is not yet constructed or operational.	Commit to preparing the site-specific Emergency Procedures Manual / Flood Emergency Response Plan prior to occupation, with shelter-in-place procedures for temporary access isolation.
Estuarine Hazard Area / EPL	The broader lot may be mapped within the EPL hazard zone because of low-lying portions of the lot / foreshore locality; however, the development footprint is well above the base EPL of RL 2.64 m AHD, with the lowest proposed development level at RL 20.48 m AHD.	Confirm that the EPL does not control the proposed building platform, carpark entries or operational areas, and that a separate estuarine inundation assessment is not warranted for the development footprint.

Conclusion

The attached flood mapping does not identify the proposed development footprint as being affected by mapped flood behaviour up to the PMF. The proposed development is therefore not expected to be subject to direct flood inundation and does not appear to create any hydraulic impact on flood storage, conveyance, levels, velocities or hazard. The estuarine hazard commentary is similarly addressed by the significant level separation between the lowest proposed development level of RL 20.48 m AHD and the base EPL of RL 2.64 m AHD. The requirement for a standalone FIRA or separate estuarine inundation assessment should therefore be reconsidered. A targeted response comprising a Council flood mapping overlay, confirmation of development / EPL levels and OPAL's commitment to prepare site-specific emergency procedures prior to occupation is considered a more appropriate and proportionate response to the matters raised.

Yours faithfully



M GROGAN

Director

References

- Northern Beaches Council, McCarrs Creek, Mona Vale and Bayview Flood Study / Flood Study Review, 2017.
- Northern Beaches Council flood mapping / flood information for the Bayview locality.
- NSW Flood Risk Management Manual and associated flood impact assessment guidance, to the extent relevant to development that is actually located on flood-prone land.
- Pittwater Estuary Mapping of Sea Level Rise Impacts Study, 2015, as referenced in project planning correspondence.