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## **Coastal Engineering Advice on Planning Proposal to Rezone and Consolidate Lot into 88 Bower Street Manly**

### **1. INTRODUCTION AND BACKGROUND**

It is proposed to rezone Lot 1 in DP1244511 (which is located on the seaward side of 88 Bower Street Manly, and is currently zoned RE1 Public Recreation) for residential purposes (E4 Environmental Living), and to consolidate this into the main 88 Bower Street property (Lot 3 DP8075). A planning proposal for this is being prepared for submission to Northern Beaches Council. This is being prepared to correct an apparent anomaly in the *Manly Local Environmental Plan 2013* maps, and to enable the orderly use of the site for residential purposes, consistent with the site's existing use and surrounding area.

As the property is potentially affected by coastline hazards, in particular ocean inundation, Council requires consideration of coastal engineering issues as part of the planning proposal. Horton Coastal Engineering was engaged to consider these issues, as set out herein.

*Manly Local Environmental Plan 2013*, *State Environmental Planning Policy (Coastal Management) 2018*, and *Local Planning Direction 2.2 (on Coastal Management)* under Section 9.1(2) of the *Environmental Planning Assessment Act 1979* are specifically considered herein.

The report author, Peter Horton [BE (Hons 1) MEngSc MIEAust CPEng NER], is a professional Coastal Engineer with 28 years of coastal engineering experience. He has postgraduate qualifications in coastal engineering, and is a Member of Engineers Australia (MIEAust) and Chartered Professional Engineer (CPEng) registered on the National Engineering Register (NER). He is also a member of the National Committee on Coastal and Ocean Engineering (NCCOE) and NSW Coastal, Ocean and Port Engineering Panel (COPEP) of Engineers Australia.

Peter has prepared coastal engineering reports on numerous private properties and Council land in the Manly area, and has inspected the area in the vicinity of the subject property on several occasions in the last decade and beyond, including a specific recent inspection on 30 December 2019.

Note that all levels given herein are to Australian Height Datum (AHD). Zero metres AHD is approximately equal to mean sea level at present.

## 2. EXISTING SITE DESCRIPTION

An aerial view of the subject property is provided in Figure 1, with the subject lots shown. Note that the lot boundaries shown are only approximate.



**Figure 1: Aerial view of subject property on 7 April 2018, with subject lots shown**

Based on Airborne Laser Scanning data captured in 2018, Marine Parade is at a level of about 2.6m AHD near the seawall and 3.0m AHD adjacent to the property. The crest of the seawall is at about 3.4m AHD. Ground levels increase moving landward to about 3.9m AHD at the dwelling.

The seawall can be overtopped by wave action at times of coastal storms with large waves (particularly coming from directions north of east) and elevated ocean water levels, and wave

overtopping can enter the property. This does not preclude the proposed lot consolidation, as the impacts of wave overtopping and coastal inundation could be managed through various measures (such as elevated floor levels, setbacks from Marine Parade and/or wave runup 'trip' barriers) in any future redevelopment over the subject lots.

It can be assumed that the subject property is not at significant risk of erosion/recession, as it is expected that the Marine Parade seawall would be maintained by Council, and reinstated if damaged, given the public demand for use of the Marine Parade walkway.

Photographs of and near the property at the time of the site inspection on 30 December 2019 are provided in Figure 2 to Figure 4.



**Figure 2: View of subject property (at arrow) to SSW from Marine Parade on 30 December 2019**



**Figure 3: View of subject property (at arrow) to west on 30 December 2019**



**Figure 4: View seaward of subject property to north on 30 December 2019**

### **3. PLANNING PROPOSAL**

It is proposed to rezone Lot 1 in DP1244511 (yellow boundary in Figure 1) from RE1 Public Recreation to E4 Environmental Living, and to consolidate this into the main 88 Bower Street property (Lot 3 DP8075, red boundary in Figure 1). The yellow area is already essentially (and practically) part of the one property, being fenced together with the red area as part of 88 Bower Street.

### **4. MERIT ASSESSMENT**

#### **4.1 *Manly Local Environmental Plan 2013***

One of the aims of *Manly Local Environmental Plan 2013* (LEP 2013) is, as per clause 1.2(2)(f)(iv), is “to protect existing landforms and natural drainage systems and minimise the risk to the community in areas subject to environmental hazards, particularly flooding, bush fires, acid sulfate soils, sea level rise, tsunami and landslip”. A future development at the subject lots could be designed to have an acceptably low risk of being damaged by coastal processes and hazards (including tsunami) over an acceptably long life, considering projected sea level rise, such that the proposed lot consolidation does not need to be precluded considering these issues.

The subject lots are within a foreshore scenic protection area, so Clause 6.9 of LEP 2013 would apply to any future development at the site. In Clause 6.9(3)(c) of LEP 2013 it is stated that “development consent must not be granted to development on land to which this clause applies unless the consent authority has considered the suitability of development given its type, location and design and its relationship with and impact on the foreshore”.

Although this is mostly related to visual impacts, it could also be interpreted to apply to physical impacts of future development on the foreshore. Consolidation of the subject lots would not be expected to lead to future development that would impact on the foreshore, with the Marine Parade seawall about 9m seaward of the lots.

The subject lots are not within a foreshore area, so Clause 6.10 of LEP 2013 does not apply to any future development at the site.

#### **4.2 *State Environmental Planning Policy (Coastal Management) 2018***

##### **4.2.1 *Preamble***

Based on *State Environmental Planning Policy (Coastal Management) 2018* (SEPP Coastal) and its associated mapping, the subject lots are within a “coastal environment area” (except for a small portion adjacent to Bower Street) and “coastal use area”.

##### **4.2.2 *Clause 13***

Based on Clause 13(1) of SEPP Coastal, “development consent must not be granted to development on land that is within the coastal environment area unless the consent authority has considered whether the proposed development is likely to cause an adverse impact on the following:

- (a) the integrity and resilience of the biophysical, hydrological (surface and groundwater) and ecological environment,

- (b) coastal environmental values and natural coastal processes,
- (c) the water quality of the marine estate (within the meaning of the *Marine Estate Management Act 2014*), in particular, the cumulative impacts of the proposed development on any of the sensitive coastal lakes identified in Schedule 1,
- (d) marine vegetation, native vegetation and fauna and their habitats, undeveloped headlands and rock platforms,
- (e) existing public open space and safe access to and along the foreshore, beach, headland or rock platform for members of the public, including persons with a disability,
- (f) Aboriginal cultural heritage, practices and places,
- (g) the use of the surf zone”.

Consolidation of the subject lots would not be expected to prevent any of the above clauses to be satisfied for a future development at the site.

With regard to clause (a), a future development at the subject lots would be on an already developed residential site and would have stormwater management measures in place such that impact on the integrity and resilience of the biophysical, hydrological (surface and groundwater) and ecological environment would not be expected.

With regard to clause (b), it is expected that a future development at the subject lots could be designed to not affect coastal environmental values or natural coastal processes any differently to the existing development.

With regard to clause (c), it is expected that a future development at the subject lots (given the residential land use) could be designed to not adversely impact on water quality, as long as appropriate construction environmental controls are applied. No sensitive coastal lakes are located in the vicinity of the subject lots.

With regard to clause (d), it is expected that a future development at the subject lots would not impact on the rock platform or marine vegetation seaward of Marine Parade. There are no undeveloped headlands in proximity to the subject lots. No significant impacts on marine fauna and flora would be expected as a result of a future development at the subject lots, as the development would generally not be expected to interact with subaqueous areas. Assuming that there is no native vegetation or fauna or their habitats of significance at the property, this clause could be satisfied for a future development at the subject lots.

With regard to (e), it can be noted that a future development at the subject lots would be entirely within the private property boundary, and would not alter existing public access arrangements seaward of the property.

With regard to (f), a search of the Office of Environment and Heritage “Aboriginal Heritage Information Management System” (AHIMS) was undertaken on 5 March 2020. It was found that there was one (1) Aboriginal site recorded and zero Aboriginal Places declared within 50m of the subject lots. This would need to be considered as part of a future development at the subject lots, but does not preclude the planning proposal. The Aboriginal site is likely to be outside the subject lots and unaffected by future development at the lots.

With regard to (g), a future development at the subject lots would generally not be expected to interact with the surf zone over its design life.

Based on Clause 13(2) of SEPP Coastal, “development consent must not be granted to development on land to which this clause applies unless the consent authority is satisfied that:

- (a) the development is designed, sited and will be managed to avoid an adverse impact referred to in subclause (1), or
- (b) if that impact cannot be reasonably avoided—the development is designed, sited and will be managed to minimise that impact, or
- (c) if that impact cannot be minimised—the development will be managed to mitigate that impact”.

It is expected that a future development at the subject lots could be designed and sited to avoid any potential adverse impacts referred to in Clause 13(1).

#### 4.2.3 Clause 14

Based on Clause 14(1) of SEPP Coastal, “development consent must not be granted to development on land that is within the coastal use area unless the consent authority:

- (a) has considered whether the proposed development is likely to cause an adverse impact on the following:
  - (i) existing, safe access to and along the foreshore, beach, headland or rock platform for members of the public, including persons with a disability,
  - (ii) overshadowing, wind funnelling and the loss of views from public places to foreshores,
  - (iii) the visual amenity and scenic qualities of the coast, including coastal headlands,
  - (iv) Aboriginal cultural heritage, practices and places,
  - (v) cultural and built environment heritage, and
- (b) is satisfied that:
  - (i) the development is designed, sited and will be managed to avoid an adverse impact referred to in paragraph (a), or
  - (ii) if that impact cannot be reasonably avoided—the development is designed, sited and will be managed to minimise that impact, or
  - (iii) if that impact cannot be minimised—the development will be managed to mitigate that impact, and
- (c) has taken into account the surrounding coastal and built environment, and the bulk, scale and size of the proposed development”.

With regard to Clause (a)(i), a future development at the subject lots would be entirely on private property and would not affect public foreshore, beach, headland or rock platform access.

Clauses (a)(ii) and a(iii) are not coastal engineering matters so are not definitively considered herein, but it can be noted that it is expected that a future development at the subject lots could be designed to not impact on these matters.

With regard to (a)(iv), as noted in Section 4.2.2, the one (1) Aboriginal site recorded within 50m of the subject lots is likely to be outside the subject lot boundaries and unaffected by future development at the lots.

With regard to (a)(v), the nearest environmental heritage items to the subject lots listed in Schedule 5 of LEP 2013 are:

- the street trees (*Araucaria heterophylla*) in Bower Street (from Cliff Street to College Street);

- the ocean foreshores, which are mapped as a minimum of about 50m from the subject lots, but in reality are located immediately seaward of the Marine Parade seawall (about 9m from the subject lots);
- Fairy Bower pool, located a minimum of about 40m from the subject lots; and
- stone kerbs in Bower Street, located a minimum of about 60m from the subject lots.

It is expected that a future development at the subject lots could be designed and constructed so as not to impact on these and other heritage items.

With regard to (b), it is expected that a future development at the subject lots could be designed and sited to avoid any potential adverse impacts referred to in Clause 14(1).

Clause (c) is not a coastal engineering matter so is not definitively considered herein, but it can be noted that it is expected that a future development at the subject lots could be designed to take account of these matters.

#### 4.2.4 Clause 15

Based on Clause 15 of SEPP Coastal, “development consent must not be granted to development on land within the coastal zone unless the consent authority is satisfied that the proposed development is not likely to cause increased risk of coastal hazards on that land or other land”.

A future development at the subject lots could be designed so as not to increase the risk of coastal hazards on the subject lots nor adjacent properties. There is no reason to preclude the proposed lot consolidation from a coastal hazards perspective.

#### 4.2.5 Clause 16

Based on Clause 16 of SEPP Coastal, “development consent must not be granted to development on land within the coastal zone unless the consent authority has taken into consideration the relevant provisions of any certified coastal management program that applies to the land”.

No certified coastal management program applies at the subject lots.

#### 4.2.6 Synthesis

It is expected that a future development at the subject lots could be designed to satisfy the requirements of *State Environmental Planning Policy (Coastal Management) 2018* for the matters considered herein.

### 4.3 Local Planning Direction 2.2 (Coastal Management)

#### 4.3.1 Preamble

Local Planning Direction 2.2 applies at the subject lots. Based on Section 9.1(2) of the *Environmental Planning Assessment Act 1979*, this should be considered as part of the planning proposal. Items 4 and 5 of Direction 2.2 are considered in turn below.



#### 4.3.2 Item 4

Based on item (4) of Direction 2.2, “a planning proposal must include provisions that give effect to and are consistent with:

- (a) the objects of the *Coastal Management Act 2016* and the objectives of the relevant coastal management areas;
- (b) the NSW Coastal Management Manual and associated Toolkit;
- (c) NSW Coastal Design Guidelines 2003; and
- (d) any relevant Coastal Management Program that has been certified by the Minister, or any Coastal Zone Management Plan under the *Coastal Protection Act 1979* that continues to have effect under clause 4 of Schedule 3 to the *Coastal Management Act 2016*, that applies to the land”.

With regard to item (a), the objectives of the relevant coastal management areas have been considered in Section 4.2.2 and Section 4.2.3. By doing so, the objects of the *Coastal Management Act 2016* have been considered, as the requirements for the management areas embody these objects.

With regard to item (b), given that a future development could be designed to have an acceptably low risk of being damaged by coastal processes and hazards (including tsunami) over an acceptably long life (considering projected sea level rise), and could also be designed to not impact on coastal processes and hazards, this development could be designed to be consistent with the NSW Coastal Management Manual and associated Toolkit.

With regard to item (c), the NSW Coastal Design Guidelines 2003 could be considered in a future development at the subject lots.

With regard to item (d), no Coastal Management Program nor Coastal Zone Management Plan applies at the subject lots. The *Manly Ocean Beach Coastline Management Plan* was completed in 2008, but only covered Manly Ocean Beach and not the Fairy Bower area incorporating the subject lots. The *Manly Ocean Beach and Cabbage Tree Bay Coastline Hazard Definition Study* was completed in 2003, and there are no issues raised in that study with regard to future development at the subject lots that could not be managed through coastal engineering and geotechnical engineering input into the design.

#### 4.3.3 Item 5

Based on item (5) of Direction 2.2, “a planning proposal must not rezone land which would enable increased development or more intensive land-use on land:

- (a) within a coastal vulnerability area identified by the *State Environmental Planning Policy (Coastal Management) 2018*; or
- (b) that has been identified as land affected by a current or future coastal hazard in a local environmental plan or development control plan, or a study or assessment undertaken:
  - i) by or on behalf of the relevant planning authority and the planning proposal authority, or
  - ii) by or on behalf of a public authority and provided to the relevant planning authority and the planning proposal authority”.

With regard to item (a), the subject lots are not within a coastal vulnerability area.

With regard to item (b), the subject lots are not identified as land affected by a current or future coastal hazard in a local environmental plan or development control plan. However, studies have been completed for Council (eg the *Manly Ocean Beach and Cabbage Tree Bay Coastline Hazard Definition Study* completed in 2003) that have identified that the subject lots are affected by coastal inundation (not specifically, but only in a general sense). That stated, as noted in Section 2, it can be stated that the subject lots are potentially affected by coastal inundation.

Some could then argue that the planning proposal should not proceed as rezoning (that enables increased development or more intensive land-use) is inconsistent with item 5 of Direction 2.2. However:

- it is not necessarily the case that the rezoning will allow increased development, given the potential constraints on developing the seaward lot;
- the fact that both lots are part of the same property means it is anomalous that they do not have the same zoning; and
- a future development at the subject lots could be designed to have an acceptably low risk of being damaged by coastal processes and hazards over an acceptably long life, and could also be designed to not impact on coastal processes and hazards, such that the planning proposal should not be precluded from a coastal engineering perspective.

## 5. CONCLUSIONS

It is proposed to rezone Lot 1 in DP1244511 (which is located on the seaward side of 88 Bower Street Manly) for residential purposes and to consolidate this into the main 88 Bower Street property (Lot 3 DP8075). A planning proposal for this is being prepared for submission to Northern Beaches Council.

The subject lots are subject to coastal inundation in coastal storms. However, this does not preclude the proposed lot consolidation, as the impacts of coastal inundation could be managed through various measures (such as elevated floor levels, setbacks and/or wave runup 'trip' barriers) in any future redevelopment over the subject lots.

A future development at the subject lots could be designed to have an acceptably low risk of being damaged by coastal processes and hazards over an acceptably long life, considering projected sea level rise, satisfying an aim of *Manly Local Environmental Plan 2013*. Consolidation of the subject lots would not be expected to lead to future development that would impact on the foreshore, with the Marine Parade seawall about 9m seaward of the lots.

It is expected that a future development at the subject lots could be designed to satisfy the requirements of *State Environmental Planning Policy (Coastal Management) 2018* for the matters considered herein.

Future development at the subject lots could be designed to satisfy item 4 of Local Planning Direction 2.2. Although the proposal may rezone land which could enable increased development or more intensive land-use, inconsistent with item 5 of Direction 2.2:

- it is not necessarily the case that the rezoning will allow increased development, given the potential constraints on developing the seaward lot;
- both lots are part of the same property means it is anomalous that they do not have the same zoning; and

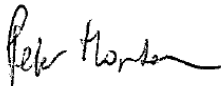
- a future development at the subject lots could be designed to have an acceptably low risk of being damaged by coastal processes and hazards over an acceptably long life, and could also be designed to not impact on coastal processes and hazards, such that the planning proposal should not be precluded from a coastal engineering perspective.

## 6. SALUTATION

If you have any further queries, please do not hesitate to contact Peter Horton via email at [peter@hortoncoastal.com.au](mailto:peter@hortoncoastal.com.au) or via mobile on +61 407 012 538.

Yours faithfully

HORTON COASTAL ENGINEERING PTY LTD



Peter Horton

Director and Principal Coastal Engineer

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