

DA CP 13-001

**PROPOSED BEACHFRONT REVETMENT WALL
NO.8 BERRIMA CRESCENT, UMINA BEACH**

**DRAFT ASSESSMENT REPORT & RECOMMENDATION
PREPARED FOR THE NSW COASTAL PANEL**

MARCH 2014

1. BACKGROUND

In May 2012 a Development Application (DA 42286/2012) was lodged with Gosford City Council (GCC) for the subdivision of Lot 13 DP 880692 (No. 8 Berrima Crescent, Umina Beach) into two residential lots of 1,255m² and 1,913m². This proposal was accompanied by a Coastal Engineering Assessment (Cardno, 2013) which noted, that within GCC's Broken Bay Beaches Coastal Management Plan (1999), it is/was intended that council would complete a rock revetment that was partially built in the 1990s along the subject land's Ettalong Creek bank, but not completed along the subject land's beachfront due to lack of funding.

In the DA documentation submitted to GCC, the owner of the subject land indicated a preparedness to construct council's proposed rock revetment along the subject land's beach frontage and indicative design drawings accompanied the development application, although they did not formally form part of the development application. In June 2012 GCC 'returned' DA 42286/2012, requesting that a development application for the purpose of erecting a sea wall should first be lodged with the NSW Coastal Panel and once consent has been obtained for the seawall a subdivision application may be lodged with the council.

The events relevant to this application are listed below:

- DA accepted by NSW Coastal Panel on 29 August 2013;
- DA exhibited from 9 October to Wednesday 23 October 2013;
- Submission received in response to exhibition of DA;
- Request for further information/clarification made by OEH on behalf of the NSW Coastal Panel 04 December 2013 (refer **Appendix A**);
- Response to OEH letter of 04 December 2013 on behalf of the NSW Coastal Panel received 17 December 2013 (refer **Appendix B**);
- Request received asking for extension for response for further information/clarification to the NSW Coastal Panel 04 February 2014 (refer **Appendix B**);
- Submission received in response to further information/clarification and revised DA 21 February 2014 (refer **Appendix C** and **Appendix D**);

2. SITE LOCALITY AND DESCRIPTION

Umina Beach is located on the NSW central coast, approximately 88 km north of Sydney within the GCC Local Government Area (LGA) and is characterised by low wave heights and a relatively flat beach slope. The subject site (Lot 13 DP 880692) is located at No. 8 Berrima Crescent at the southern end of the Umina embayment and adjacent to the entrance of Ettalong Creek. Erected on the subject's land is a two story dwelling house with a detached garage, shed buildings and a bitumen car park to the east. The subject site does not contain any significant trees or native coastal vegetation.

The subject's land has an area of 3168m² and whilst there are minor site level variations, the site is generally level at approximately 2.5m AHD. The site is bounded to the north and west by Ettalong Creek, to the east by Umina Beach and south by the Berrima Crescent road reserve. Neighbouring properties comprise low density residential development, encompassing No. 1 to 7 Berrima Crescent (Figure 1). Significant residential development has occurred along Ettalong Creek over the past 50 years, with the subject's site located on the southern bank adjacent to the entrance of the creek. Located on the northern (opposite) bank of the creek is the NRMA Ocean Beach Holiday Park. The majority of banks along Ettalong Creek, including the creek entrance and along the northern and north-western boundary of the subject's land have been bound by sandstone revetment works. The entrance to Ettalong Creek is also known to intermittently open and close, and council currently opens the entrance to the creek during significant rainy periods.

Along the seaward front of Berrima Crescent, it is understood that rock protection has previously been placed following past storm events, with storms in 1974 and 1978 suggested to have resulted in substantial losses of the front dune. Under present day conditions, the crest of the embankment seaward of the residences varies from about RL 4m to 4.5m AHD. In more recent storm events wave runup debris lines have been observed along the seaward fence of properties.



Figure 1 - Subject Land

3. PROJECT DESCRIPTION

The DA seeks consent for construction of a rock armour revetment within the eastern boundary of the subject's land (Figure 2). The proposed revetment is designed to be interwoven with the existing council constructed sandstone wall, located on northern and north-western boundary of the subject's land. According to the DA it is noted that within council's Broken Bay Beaches Coastal Management Plan (1999), that it was intended that council would complete this rock revetment, which was partially built in the 1990s along the southern creek bank, but was not completed along the beachfront land fronting Berrima Crescent due to a lack of financial resources.

Regarding the proponents design and specifics for the revetment wall as proposed in the revised DA is summarised as follows:

- Armour Stone: Igneous SG 2.6 (preferred) = 2-7 tonne; or
Sandstone¹ SG 2.3 = 3.5-11 tonne
Under Layer: To be of same material as the primary armour
Igneous SG 2.6 = 150-1000kg; or
Sandstone SG 2.3 = 250kg-170kg²
- Wall Slope: 1V:1.5H
- Crest level: 2.6m AHD
- Tow level: -1.5m AHD
- Sand back-fill (if required) imported to site and to be similar to the native sand
- Suitable geotextile fabric is to be used and properly held in place between the under layer and the sand core material
- Provisions to be made for runoff from the site and wave overtopping water to discharge back into the sea. That is a concrete or paved strip about 1m wide integrated with the rear crest line of rocks.

The DA advises that the length of wall is intended to be constructed in two sections (Figure 3). The first of these sections (green line) is to be constructed by the owner(s) whose land lies landward of this line – solely Mr McCloskey. The second section (blue line) would protect public land and the applicant has proposed would be built by GCC. The DA advises this may not necessarily proceed at the same time as the proponents intended structure and is

¹ The proponent acknowledges sandstone could be used in the place of igneous material to be consistent with the existing Council constructed Ettalong Creek revetment wall, but must be free of cracks, is less durable and is likely to require large rocks

² Value as listed in Assessment Report needs to be verified, reported value appears incorrect.

subject to council's intentions. The proponents section of the revetment (green line) would be contained entirely on the owners land, although the DA acknowledges would require some excavation during construction on public land, and therefore associated access and reinstatement matters will need to be addressed. The proposed revetment also includes a return section of the wall at the southern end in order to prevent outflanking. This has been amended from the original DA (received 22 August 2013) to be wholly contained within the property boundary (Figure 3).

The DA also recognises that should Council not proceed with their section of the revetment wall sequentially/simultaneously with Mr McCloskey's proposed works, then 'end effects' may occur that would exacerbate erosion on this unprotected area south of the proposed works. The DA and accompanying revised coastal engineering assessment advises this estimated loss of sand to be no more than 200m³, with a maximal erosion increase of 4m, extending south for 28m, and suggests beyond which point no end effects would occur (Cardno, 2014).

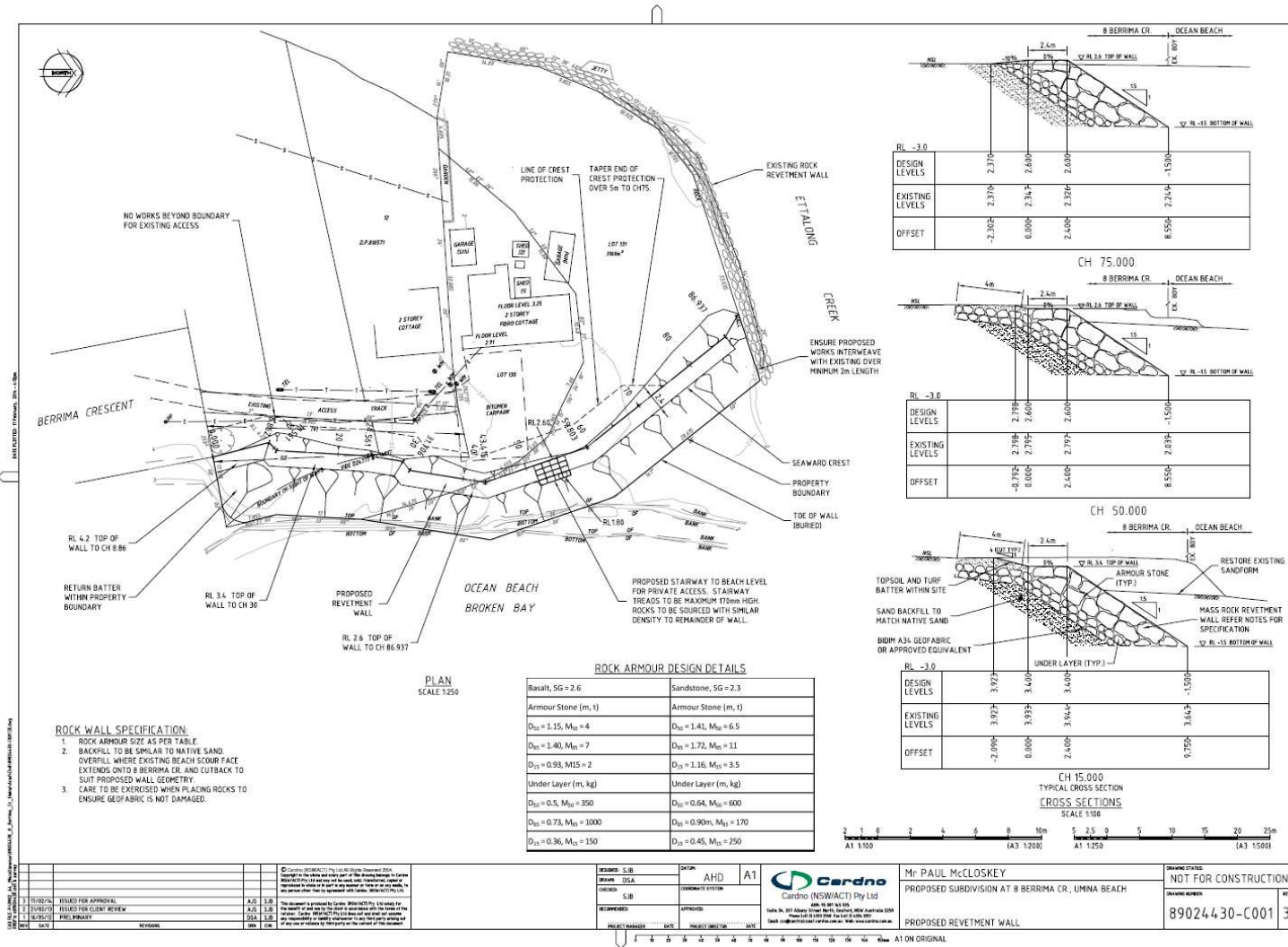


Figure 2 - Proposed Revetment Wall Design

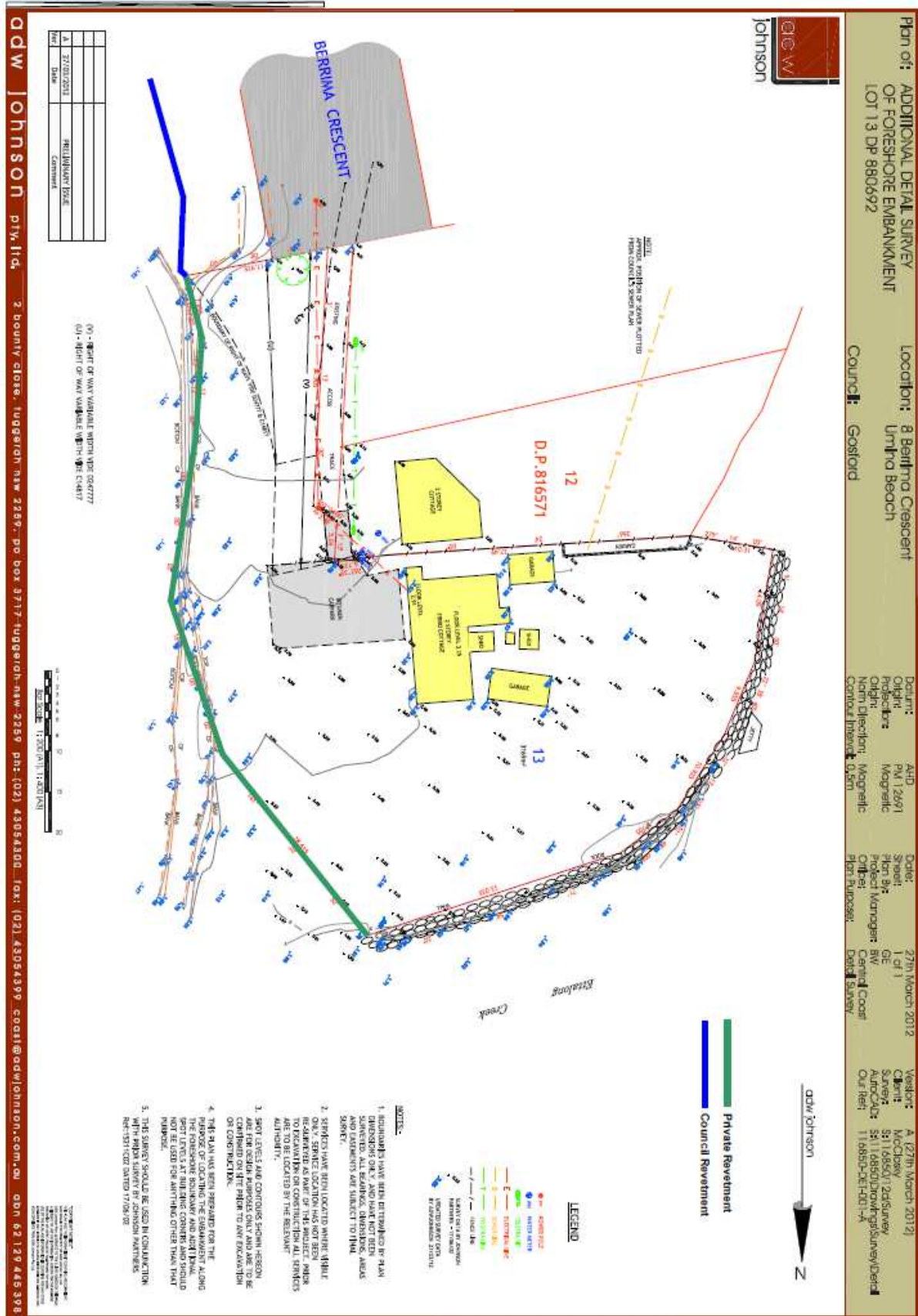


Figure 3 – Design Schematic for Private and Council Seawall Revetment

4. COASTAL PANEL REQUEST FOR FURTHER INFORMATION/CLARIFICATION

Following an initial review of the original DA and inspection of the site, OEH behalf of the NSW Coastal Panel wrote to the proponent on 04 December 2013 and requested further information/clarification on the following issues:

- Detailed information on the coastal processes specific to the site and how the proposed structure may influences these processes;
- Clarification on key design parameters of the proposed works in the Coastal Engineering Assessment, such as the design still water levels and wave heights, and their derivation;
- Clarification as to whether Wave Modelling and EuroTop estimates for design wave heights at the structure and overtopping have included provision for increased depth due to nearshore storm scouring in their calculations;
- Clarification on the location of the proposed return of the wall as depicted in drawing No. 89024430-C001. The application states the wall is to be constructed entirely on the applicant's (private) land. However, this figure indicates the southern return of the wall is to be constructed beyond the property boundary, and extending onto public land. If the return is to be constructed on public land, landowner's consent will need to be submitted as part of the development application documentation;
- Clarification is sought on the design slope of the seawall. There is a discrepancy between the information in the Statement of Environmental Effects which shows the slope of the wall is 1V:1.5H compared to the design of the wall as shown in drawing No. 89024430-C001 indicates a relatively steep wall design of 1.5V:1H;
- Quantification of any potential 'end effects' of the proposed structure on Public and Crown land immediately south, and on the basis that Gosford City Council in their submission to the Coastal Panel has given an indication that currently it does not have the necessary funding to complete the proposed public section of the revetment wall;
- How will any 'end effects' be addressed and managed in both the short and long term if erosion impacts on adjacent land are increased, potentially impacting on Berrima Crescent, the public car park, beach access and amenity;
- If 'end effects' are experienced, how would public safety be managed;
- Confirmation for responsibility for ongoing management and maintenance of the structure and restoration of the beach or land adjacent to the beach resulting from increased erosion by the presence of the works. Potential mechanisms that the Panel is aware of that may warrant consideration include an agreement with Gosford City Council for the levying of a Coastal Protection Service Charge under the *Local Government Act 1993*, or commitment through a

Voluntary Planning Agreement under the *Environmental Planning and Assessment Act 1979*. In the statement of environmental effects the applicant has acknowledged their responsibility for the ongoing maintenance of the wall, but does not appear to acknowledge their responsibility for the restoration of the beach resulting from increased erosion attributable to the wall.

- Further information on the justification for the proposed design in terms of its adequacy across its anticipated design life. Specifically:
 - the wall is considered to be of a relatively low height and therefore potentially susceptible to overwash and possible failure,
 - the wall has a relatively shallow toe and therefore is potentially susceptible to undermining,
 - the wall design has only a primary and no planned secondary rock fill layer, and therefore may be potentially susceptible to a compromised structural integrity resulting from wave run-up and overwash processes, and
 - the impact on the wall arising from the likelihood of movement of Ettalong Creek which could give rise to increased erosion at the toe; and
- Further information on backfilling material may be required behind the proposed wall. The documentation provided suggests that this material could be sourced from the entrance of Ettalong Creek. The Panel does not support the sourcing of backfill material from Ettalong Creek as this would result in sediment that currently forms part of the active coastal system to be removed. As such, the Panel seeks further information in the source and composition of any backfilling material.
- Information about the proposed method to address these design issues to maintain structural integrity such as deeper toe and higher crest levels, a double layer wall, wall slope and the ability to 'top up' the wall into the future if required;

The response to these issues received from the proponent on 21 February 2014 is contained in Appendix C. Included in this response was:

- Drawing 89024430-C001: A revised revetment wall proposal (Figure 2)
- Drawing 89024430-C002: A revised erosion and sediment control plan (Figure 4)
- A revised coastal engineering assessment (Appendix D).

The design of the revetment wall has been amended to return the southern end wall batter wholly within the property boundary and to amend the cross section and armour stone detail along with the accompanying revised coastal engineering assessment that addresses the various coastal engineering and revetment wall design matters raised the correspondence.

In relation to ongoing management and maintenance concerns the revised submission acknowledges:

- *The proposed revetment is contained entirely within the subject property and the owner accepts the ongoing responsibility for maintenance of the proposed structure. This responsibility can be suitably conditioned in a development consent;*
- *In relation to restoration of the beach in the event of increased erosion resulting from the presence of the works, it is far more difficult to impose a consent condition that is reasonable under the circumstances and provides the appropriate level of clarity and certainty for all parties, particular as it would first have to be established that any future beach erosion was a consequence of the presence of the wall and not as a consequence of other characteristics of the particular storm or flood event.*

The revised coastal engineering assessment (Cardno, 2014) also suggests that from a coastal engineering point of view, the existing or any future proposed revetment works will cause minimal interference to normal coastal processes now, and in the foreseeable future. Regarding 'end effects', the report acknowledges a potential of up to 200m³ loss of sand of the adjoining beach to south, should GCC not elect to build the public revetment section (Section 3). In such circumstances Cardno acknowledges Mr McCloskey may need to contribute to the restoration of the beach to the extent of the cost of moving 200m³ of sand back from the beach-face to dune. In the covering letter attached to the revised submission (Appendix C), it is advised the proponent would be prepared to liaise further with the Panel in the development of a suitable consent condition to address the issue of beach restoration in the event that the proposed revetment wall is demonstrated to have caused beach erosion.

5. THE LAND BOUNDARY

Figure 5 in the Statement of Environment Effects (SEE) (Appendix G) was determined to be an approved redefinition survey of the subject allotment. In the signature and seals section it notes *"The location of the right line boundary forming the western northern and eastern boundaries of Lot 13 adjacent to the current and former location of Ettalong Creek shown herein has been approved by the Surveyor General in File 0257123 on September 1990"*. Based on this information any deliberations on the proposal of this DA are therefore taken to be *Acting in Good Faith* regarding any right line land boundary issues.

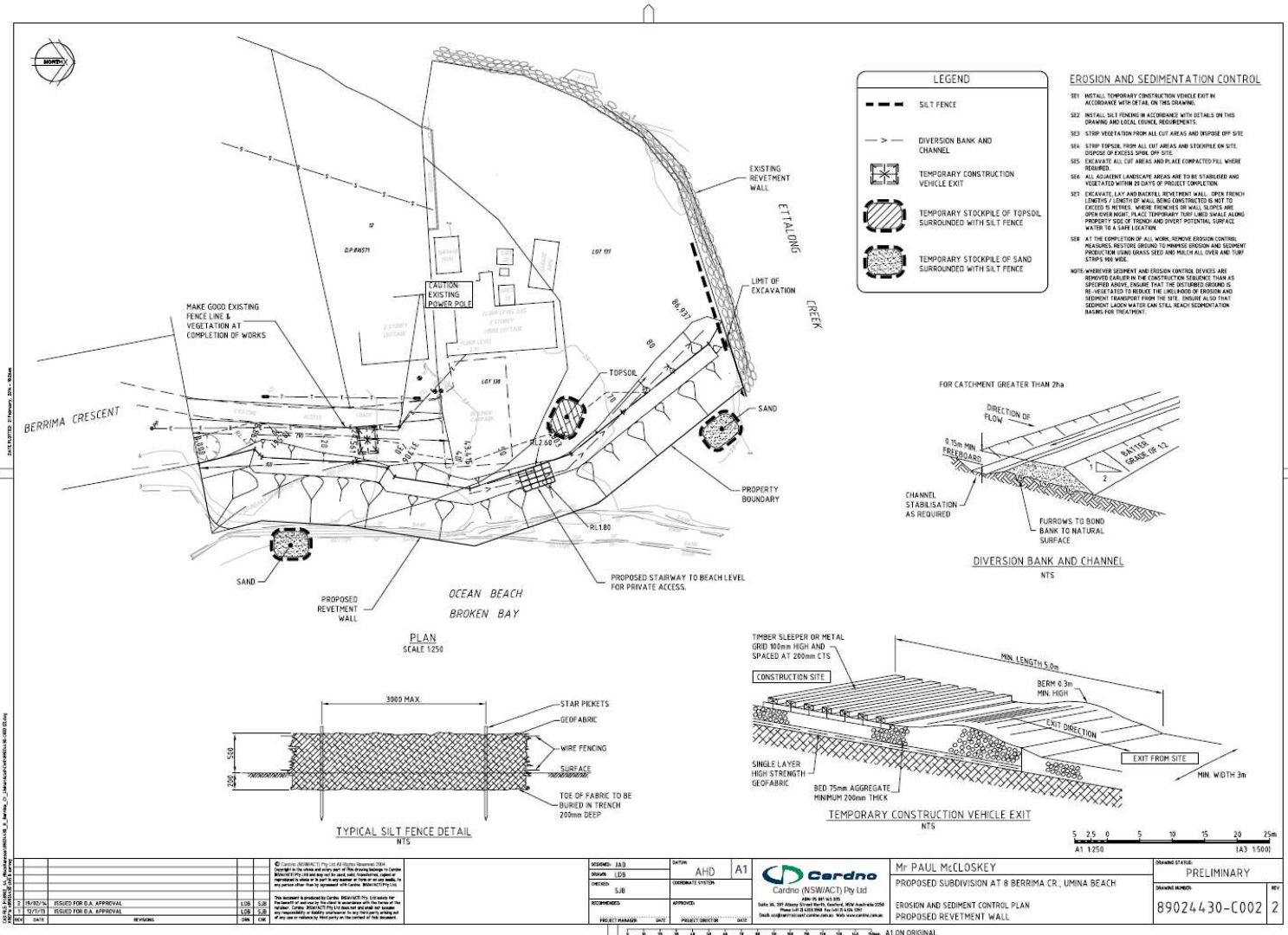


Figure 4 - Revised Erosion and Sediment Control Plan

6. CONSULTATION

In accordance with the Gosford Council's Development Control Plan, the proposed DA was exhibited from Wednesday 9 October 2013 to Wednesday 23 October 2013. In response 2 submissions were received; one in general support of the proposal, although requesting clarification on a couple of issues; and the second neither supporting nor objecting to the development, however wishing to raise some general issues with the proposal. Copies of both submissions to the DA are contained in Appendix E. The matters raised in these submissions from both landholders are summarised as follows:

- Clarification on the return of the wall (as proposed in Drawing 82094430), which indicates the southern return of the wall is to be constructed beyond the property boundary.
- Concerns if the proposed wall is built, it may impact on the southern most end of the beach, beyond the termination of the wall.
- If the wall will have any impact on flows on this area of the beach, Ettalong Creek and the area of council revetment.
- Clarification on if new or increased erosion does occur as a result of this wall, who is responsible for any required beach restoration and/or damage.

7. REFERRALS

7.1 NSW Office of Water

The DA was referred to the NSW Office of Water on 4 October 2013 for concurrence in relation to the *Water Management Act 2000* (with regards section 91 controlled activity on waterfront land). In a letter dated 24 October 2013 the Office of Water responded, raising no major objection to the proposal, providing the following general terms of approval are included with any development consent:

- The Office of Water should be notified if any plans or documents are amended and these amendments significant change the proposed development or result in additional works on waterfront land (which includes (i) the bed of any river together with any land within 40 metres inland of the highest bank of the river, or (ii) the bed of any lake, together with any land within 40 metres of the shore of the lakes, or (iii) the bed of any estuary, together with any land within 40 metres inland of the mean high water mark of the estuary).
- Once notified, the Office of Water will ascertain if the amended plans require review or variation/s to the general terms of approval. This requirement applies

even if the proposed works are part of proposed consents conditions and do not appear in the original documentation.

- The Office of Water should be notified if the NSW Coastal Panel receives an application to modify the development consent and the modification changes any activities on waterfront land.
- The Office of Water requests notification of any legal challenge to the consent.

As the DA is a controlled activity to be carried out on water front land, and cannot commence before the applicant applies for and obtains a controlled activity approval, the Office of Water has recommended that a condition that *no work is to commence over any part of the site requiring a controlled activity approval until a copy of the approval has been provided to the NSW Coastal Panel* be included in any development consent. The Office of Water has similarly requested that the NSW Coastal Panel provides a copy of this letter to the applicant.

Specifics regarding the above conditions, along with several other more general terms of approval for a controlled activity approval under s91 of the Water Management Act 2000 can be found in the Office of Water's General Terms of Approval letter contained in Appendix F.

7.2 Gosford City Council

GCC response in regards to the proposed DA is contained in Appendix F. In a letter received from council dated 17 October 2013, GCC acknowledged the proposed revetment wall is consistent with council's adopted Coastal Management Plan (Broken Bay Beaches 1999), although this protection strategy relies upon the council funding the remaining public section of the revetment that ties to Umina Headland. Consequently, GCC has advised that currently there is no existing funding or funding mechanism in place that can guarantee the council will be in a position to design, approve or construct a revetment wall for the southern section as is proposed in the DA.

In the absence of a revetment for the public section, council has raised the concern that the termination of the proposed wall may exacerbate erosion to the immediate south, potentially impacting on Berrima Crescent, the public car park, beach access and amenity. Council has recommended that post storm management strategies need to be tied to any consent granted.

Regarding the future management of Berrima Crescent GCC has advised that they are currently in the process of undertaking a review of coastal risk for all beaches located within the LGA, including Umina Beach and this risk information will underpin the development of an updated Coastal Zone Management Plan (CZMP). The anticipated completion date for this CZMP is mid 2014. Council has also acknowledged they are also in the process of undertaking a service review to determine financial capacity for service deliver across the local government area including issues such as coastal management. Following the completion of the CZMP and service review, Council has suggested they will be better positioned to further comment on implementation of a potential council constructed revetment or other long term coastal management strategies for Berrima Crescent.

7.3 NSW Department of Primary Industries (Fisheries)

The DA was referred to NSW DPI (Fisheries) seeking comment. In a letter dated 21 October 2013, NSW DPI (Fisheries) responded with no objections to the proposal, on the basis of the following provisions:

- Environmental safeguards (e.g. sediment fences) are to be installed consistent with “*Managing Urban Stormwater: Soils and Construction*” (4th Edition Landcom, 2004, aka the Blue Book) to ensure that there is no escape of turbid plumes into the adjacent aquatic environment;
- Any material removed from the beachface that is to be temporarily deposited or stockpiled on land is to be: located away from drainage lines and overland flow paths; above the 1:100 year flood level, and contained by appropriate sediment control devices as outlined in the Blue Book; and
- Fisheries NSW (1800 043 536) and the Office of Environment and Heritage (131 555) are to be immediately notified of any fish kills in the vicinity of the works. In such cases, all works other than emergency response procedures are to cease until the issue is rectified and written approval to proceed is provided by Fisheries NSW or OEH.

A copy of this response can be found in Appendix F.

7.4 NSW Office of Environment and Heritage (OEH)

The response from OEH dated 25 October in respect of the DA can be found in Appendix F. In their response OEH raised the following points of consideration:

Engineering design

The key design parameters for the proposed works as outlined in the engineering assessment require further clarification. In particular:

- It is unclear if the still water level (SWL) and wave heights have allowed provisions for increased depth due to scour from storm erosion in the nearshore zone and vicinity of the structure.
- Although the depth of scour appears to have been addressed in the revetment design by adopting a toe level of -1.5m AHD, there is no indication that the wave modelling and EuroTop estimate for design wave height at the structure and overtopping, have included the nearshore storm scouring
- In the DA the proponent has advised that sandstone could be used in the place of igneous rock (if preferable and available) to be consistent with existing structure. It should be noted various sandstones typically have specific gravity lower than igneous materials and this could affect the design of the primary armour, e.g. block size).

Return of the wall

OEH has raised concerns that should Gosford City Council not elect to construct the section of the wall across the public land to the south a return section would be required to be constructed to reduce the likelihood of outflanking the proposed structure in an erosion event. It is noted that a return section of the proposed wall is shown in the Cardno design plan ref: 89024430-C001-2 (2013), but not shown on the site survey plan (Figure 6 in the SEE). Furthermore in the Cardno design plan, this return is shown to be located on public land. OEH has expressed their concern that if this return is built it should be wholly constructed on private land.

The management of end effects and other off-site impacts

There was no consideration of the likelihood of end effects that may result from the proposed structure and any exacerbation erosion of the public land should also be considered. Similarly, there is no acknowledgement in the SEE of the maintenance of beach amenity and/or any provision to cater for offsite impacts due to the placement of the proposed structure.

Nature of the development

OEH's response has expressed concern about the low lying nature of the land which, at present has the potential to be subjected to coastal inundation and coastal erosion, and similarly is likely to be exacerbated by climate change induced sea level rise. In their response OEH has also raised the issue that, whilst not the subject of this application, part of the purpose of the proposed development is to facilitate the future intensification of the development of the site, subject to a subsequent DA to be submitted to Council for a land subdivision and is at odds with the NSW Coastal Policy. Furthermore, if the subject land is to be subdivided, responsibility for maintenance of different sections of the revetment would also need to be resolved prior to any approvals.

8. STATUTORY CONSIDERATIONS

8.1 Coastal Protection Act 1979

Section 55M(1) of the *Coastal Protection Act 1979* (CP Act) provides that, before granting consent under the *Environmental Planning and Assessment Act 1979* (EP&A Act) to development for the purpose of coastal protection works, the consent authority must be satisfied that:

- (a) the works will not over the life of the works:*
 - (i) unreasonably limit or be likely to unreasonably limit public access to or the use of a beach or headland, or*
 - (ii) pose or be likely to pose a threat to public safety, and*
- (b) satisfactory arrangements have been made (by conditions imposed on the consent) for the following for the life of the works:*
 - (i) the restoration of a beach, or land adjacent to the beach, if any increased erosion of the beach or adjacent land is caused by the presence of the works,*
 - (ii) the maintenance of the works.*

According, as the consent authority in respect of the DA for the subject land, the NSW Coastal Panel must be satisfied that, during the life of the proposed seawall, the seawall will not unreasonably limit public access to beach, or is likely to pose a risk to public safety. In this regard, as the proposed revetment is to be contained in its entirety on the subject's land, OEH is satisfied that public access to the beach will not be impeded, nor will the wall pose a threat to public safety, as public access is obtained elsewhere along Berrima Crescent (adjacent to the Council car park at the southern end) and not through (or over) the subject's land.

Regarding arrangements as referred to in subsection (1)(b), within the accompanying cover letter of the revised DA the landowner has agreed, by constructing the wall within the subject property boundary, adopts responsibility for its ongoing maintenance. Whilst OEH is satisfied with this pronouncement it should be noted the regarding subset (i), the proponent suggests in relation to the restoration of the beach, or land adjacent to the beach, in the event of increased erosion resulting from the presence of the works, it would first have to be established that any future beach erosion was a consequence of the presence of the wall and not as a consequence of other characteristic of the particular storm or flood event. This potential volume of extra sand loss in a very severe storm event has been estimated to be no than 200m³ (Cardno, 2014). In such circumstances it is acknowledged the landowner may need to contribute to the restoration of the beach to the extent of the cost of moving 200m³ of sand back from the beach-face to the dune.

With regards to the above OEH shares a concern that an estimate of 200m³ of sand may underestimate the potential magnitude of end effects experience in a single severe storm or multiple closely storm events. OEH notes that if council were to proceed with the extension of the public section of the revetment wall as outlined in the DA, such recognition may not be required. However, based on responses received from GCC, where at this stage no plans exist to complete this public section. OEH advises the Coastal Panel would need to establish a suitable consent condition regarding the restoration and maintenance of the beach in order to satisfy the provisions of Section 55M(1)(b) before any developed consent could be granted.

Section 55M(2) of the CP Act provides that:

The arrangements referred to in subsection (1)(b) are to secure adequate funding for the carrying out of any such restoration and maintenance, including by either or both of the following:

a) by legally binding obligations (including by way of financial assurance or bond) of all or any of the following:

- (i) the owner or owners from time to time of the land protected by the works,*
- (ii) if the coastal protection works are constructed by or on behalf of landowners or by landowners jointly with a council or public authority - the council or public authority,*

(b) by payment to the relevant council of an annual charge for coastal protection services (within the meaning of the Local Government Act 1993).

8.2 Section 79C Matters for Consideration under Environmental Planning & Assessment Act 1979

8.2.1 SECTION 79C(A)(i): THE PROVISIONS OF ANY ENVIRONMENTAL PLANNING INSTRUMENT

Gosford Planning Scheme Ordinance

Under the Gosford Planning Scheme Ordinance the subject land is zoned part 2(a) Residential and part 9(a) Restricted Development (Flood Prone Land) (Figure 5). The proposed seawall is consistent with the objectives of both planning ordinances and permissible with consent under the provisions of Division 25 (Waterways or foreshore management activities) of State Environmental Planning Policy (Infrastructure) 2007.

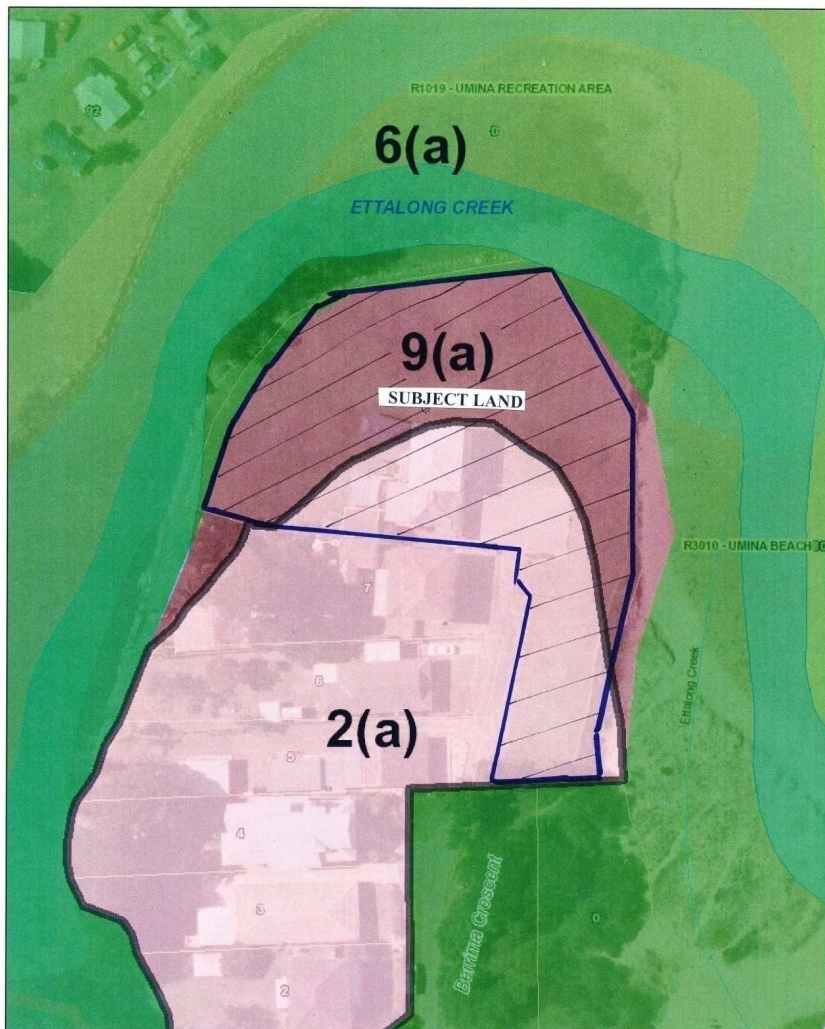


Figure 5 - Zoning Plan

State Environmental Planning Policy (Infrastructure) 2007

Clause 129A(2) of the SEPP requires that, if a coastal zone management plan does not apply to the land on which development for the purposes of a seawall is to be carried out, the NSW Coastal Panel has the function of determining a DA for development to which this clause applies. A coastal zone management plan does not apply to the subject land and therefore the proposal has been referred to the Coastal Panel for determination pursuant to Part 2A of the CP Act.

In determining the DA, the Coastal Panel must take the following matters into consideration under Clause 129A(3) of the Infrastructure SEPP

- (a) *(not applicable)*
- (b) *the matters set out in clause 8 of State Environmental Planning Policy No 71 - Coastal Protection,*
- (c) *any guidelines for assessing and managing the impacts of coastal protection works that are issued by the Director-General for the purposes of this clause and published in the Gazette.*

Note. Section 55M of the Coastal Protection Act 1979 sets out preconditions to the granting of development consent relating to coastal protection works.

The matters for consideration set out under Clause 8 of SEPP 71 are considered in Table 1. No guidelines have been issued pursuant to Clause 129A(3)(c). Section 129A also notes that Section 55M of the CP Act sets out preconditions to the granting of development consent relating to coastal protection works. The matters for consideration in Section 55M are considered below.

State Environmental Planning Policy No 71 – Coastal Protection

The relevant matters for considering under Clause 8 are outlined and addressed in Table 1 below.

Table 1 - Clause 8 Matters for consideration

Development Standard	Requirement	Comment
Clause 8 – Matters for consideration	The aims of this Policy, most relevantly to this DA: <ul style="list-style-type: none">• protect and improve existing public access to and along coastal foreshores to the extent this is compatible with the natural attributes of the coastal foreshore,• ensure the visual amenity of the	Addressed below in relation to the specifics of Clause 8

	<p>coast is protected</p> <ul style="list-style-type: none"> • protect and preserve beach environments and beach amenity • ensure that the type, bulk, scale and size of development is appropriate for the location and protects and improves the natural scenic quality of the surrounding area 	
	<ul style="list-style-type: none"> • existing public access and opportunities for new public access 	<p>The proposed seawall will have no adverse impact on or impede any public access to the beach. Public access to Umina Beach is obtained elsewhere along Berrima Crescent and not over the subject's land.</p>
	<ul style="list-style-type: none"> • the suitability of development given its type, location and design and its relationship with the surrounding area 	<p>The proposed development is considered acceptable and will seek to alleviate shoreline erosion on the subject land, as well as affording protection for low density resident developed on the land. The revetment wall is likely to be successful in providing protection and alleviating shoreline erosion on the subject's land, although also has the potential to induce end effects, which may impact on the beach and public land immediately to the south.</p>
	<ul style="list-style-type: none"> • impact of the proposed development on the amenity of the coastal foreshore 	<p>The proposed development is unlikely to have an adverse impact upon visual amenity of the foreshore; it will not cause overshadowing; and will not result in any loss of view of the coastal foreshore gained from any public place</p>
	<ul style="list-style-type: none"> • how the visual amenity and scenic qualities of the coast can be protected 	<p>The scenic qualities at the site are considered to not be visually significant; The proposed seawall will not adversely affect the scenic quality of the coastal foreshore.</p>
	<ul style="list-style-type: none"> • the likely impact of coastal processes and coastal hazards on development and any likely impacts of development on coastal processes and coastal hazards 	<p>The proposed wall has the potential to increase sand losses on public land south of the property through potential end effects. The proposed works may also potentially interfere with coastal processes and coastal hazards under high water level conditions, storm events and/or flood events.</p>
	<ul style="list-style-type: none"> • measure to protect the cultural places, values, customs, beliefs and traditional knowledge of Aboriginals 	<p>The subject land is assumed in the SEE as unlikely to be of any Aboriginal cultural heritage significance</p>
	<ul style="list-style-type: none"> • likely impacts of development on the water quality of coastal waterbodies 	<p>An erosion and sediment control plan has been submitted with DA to ensure that construction of the proposed wall will not adversely impact the water quality of Ettalong Creek or the beachfront</p>
	<ul style="list-style-type: none"> • conservations and preservation of items of heritage, archaeological or historic significance 	<p>The SEE states the subject land contains no items of heritage, archaeological or historical significance. The subject land has historic use for residential purposes</p>

State Environmental Planning Policy No 19 – Urban Bushland

The subject land partly adjoins bushland zoned 6(a) Open Space (Recreation) (Figure 5) and consequently requires the consent authority to consider a number of matters when determining the DA in relation to the subject land. The aims of SEPP 19 are contained within Clauses 2(1) and 2(2) of the Policy. The General aims (Clause 2(1)) is to protect and preserve bushland within urban areas of the City of Gosford, and the specific aims of the Policy are contained in Clause 2(1)(a)-(n). The relevant matters for consideration (Clause 9(2)(b)) of the consent authority are outlined and addressed in Table 2 below.

Table 2 - Clause 9(2)(b) Bushland zoned or reserved for public open space purposes

Requirement	Comment
<ul style="list-style-type: none">the need to retain bushland on the land	Bushland within the public reserve is located to the north of the subject land and consists of a narrow band of riparian vegetation along the bank of Ettalong Creek. There is no existing bushland on the subject land to be retained or protected.
<ul style="list-style-type: none">the effect of the proposed development on bushland zoned or reserved for public open space purposes, erosion of soil, siltation of streams and waterways, and spread of weed and exotic plants within the bushland	The proposed development does not involve the removal of any vegetation within the 6(a) open space zone. An erosion and sediment control plan has been submitted with DA to ensure that construction of the proposed wall will not result in siltation/sediment impacts or the spread of weed/exotic plant on adjacent bushland.
<ul style="list-style-type: none">any other matters which are relevant to the protection and preservations of bushland zoned or reserved for public open space purposes	The proposed development does not raise any other matters of relevance to the protection and preservation of the adjacent bushland located within the 6(a) Open Space zone

No other State Environmental Planning Policy applies to the subject land or the proposed development.

8.2.2 SECTION 79C(A)(ii): THE PROVISIONS OF ANY DRAFT ENVIRONMENTAL PLANNING INSTRUMENT

Draft Gosford LEP 2009

Under the proposed Draft Gosford LEP (2009), the subject land is zoned part *R2 Low Density Residential* and part *E2 Environmental Conservation*. The Draft LEP does not contain any provisions which prohibits or restricts the construction of a seawall on the subject's land.

8.2.3 SECTION 79C(A)(iii): ANY DEVELOPMENT CONTROL PLANS

Table 3 provides an assessment of the proposals compliance with the requirements in parts of the Development Control Plan. Only the provisions of the DCP of relevance to the assessment of DA are listed.

Table 3 - Development Control Plan Assessment

Development Control	Requirement	Comment
No. 89 – Scenic Quality	The DCP is required to be taken into consideration where development applications may have an impact on the scenic quality of an area.	The proposed seawall is likely to be visually compatible with the character of the bank stabilisation works along Ettalong Creek and the rocky foreshore immediately to the south of the subject land.
No. 106 – Control for Waste Management		A Waste Management Plan has been provided in accordance with GCC's Waste Management Guidelines.
No. 125 – Coastal Frontage	(a) to minimise the risk to life and property associated with the development and building on land which has a coastal beach and/or cliff frontage (b) to provide guidelines for the development of land within the coastal frontage area	Provisions of section 9 of DCP 125 apply to the construction of buildings along the Umina beachfront. As the proposed development is limited to the construction a protective seawall revetment and does not involve the construction of any building, DCP 125 has no practical application to the proposed development. As the subject land is subject to potential coastal erosion hazards and wave inundation, a Coastal Engineering Assessment has been prepared by Cardno and accompanied the submitted DA.
No. 159 – Character (Amendment No.1)	Umina Character Place 7 – Creekland Bungalows	The DA does not involve the construction of a new building, or building alterations, therefore the desired development character guidelines do not have any practical application to the proposed development.

8.2.4 SECTION 79C(A)(IIIA): ANY PLANNING AGREEMENT THAT HAS BEEN ENTERED INTO OR ANY DRAFT PLANNING AGREEMENT THAT THE DEVELOPER HAS OFFERED TO ENTER INTO

No agreement has been proposed as part of this application.

8.2.5 SECTION 79C(A)(IV): ANY MATTERS PRESCRIBED BY THE REGULATIONS

Relevant to the determination of this DA, Clause 92 of the Environmental Planning & Assessment Regulation 2000 (the Regulation) prescribes the provisions of the NSW Coastal Policy as matters to be considered by the consent authority when determining a DA within the coastal zone. In this respect the overriding vision of the Policy is the ecological sustainability of the NSW Coast. The Policy's nine goals give effect to this vision, viz:

- Protecting, rehabilitating and improving the natural environment of the coastal zone.
- Recognising and accommodating the natural processes of the coastal zone.
- Protecting and enhancing the aesthetic qualities of the coastal zone.
- Protecting and conserving the cultural heritage of the coastal zone.
- Providing for ecologically sustainable development and use of resources.
- Providing for ecologically sustainable human settlement in the coastal zone.
- Providing for appropriate public access and use.
- Providing information to enable effective management of the coastal zone.
- Providing for integrated planning and management of the coastal zone.

In considering the Coastal Policy vision of “*protecting, rehabilitating and improving the natural environment of the coastal zone*” as discussed in Section 6.1 of this report OEH, in its assessment is satisfied by the owners commitments regarding the ongoing maintenance for the proposed seawall, however OEH has expressed concern about the potential for end effects and impacts on public land south of the wall. OEH therefore advises the implementation of a consent condition that address the issues of beach restoration in the event that proposed wall and maintenance of the beach in order to satisfy the provisions of Section 55M(1)(b).

Regarding the policy goals of “*appropriate public access and use*” and “*protecting and enhancing the aesthetic qualities of the coastal zone*”, OEH is satisfied that public access to or along the beach will not be impeded, as the development will be entirely located on the subject's land, and public access is obtained elsewhere along Berrima Crescent, not through or over private land. The scenic qualities at the site are not considered to be visually significant and similarly will not cause overshadowing, nor will result in any loss of view of the coastal foreshore gained from any public place. OEH is therefore content that the proposed DA is consistent with both these goals.

8.2.6 SECTION 79C(A)(V): ANY COASTAL ZONE MANAGEMENT PLAN (WITHIN THE MEANING OF THE COASTAL PROTECTION ACT 1979)

No coastal zone management plan applies to the subject site.

8.2.7 SECTION 79C(B): THE LIKELY IMPACTS OF THE DEVELOPMENT, INCLUDING ENVIRONMENTAL IMPACTS ON BOTH THE NATURAL AND BUILT ENVIRONMENTS, AND SOCIAL AND ECONOMIC IMPACTS IN THE LOCALITY

Regarding the likely impacts of the proposed development on natural environment, the SEE accompanying the DA advises, as the subject land is subject to a potential coastal erosion hazard and wave inundation, the proposed revetment wall will afford protection to the subject land to facilitate its ongoing use for low density residential development. The specifics regarding the potential impacts of the development as provided by the proponent in the SEE are summarised as follows:

- The proposed revetment will not affect flood levels in the locality and will not be adversely impacted by flood flows from Ettalong Creek;
- Construction of the revetment will alleviate any underlying shoreline recession and erosion on the subject land;
- The proposed revetment wall will not cause increase sand losses or affect neighbouring properties;
- The proposed development will not increase impervious surface within the subject's land and will not result in any increased off-site stormwater flows;
- The proposed development will not impact car vehicle access, parking or have adverse safety impacts on traffic;
- The proposed revetment will not impose any additional demand on utility services in this locality;
- The design of the proposed revetment is visually compatible with the character of bank stabilisation works along Ettalong Creek and the rocky coastal foreshore immediately to the south of the subject land and consequently does not adversely impact the visual amenity of the foreshore;
- As subject land has been historically used for residential purposes and has been extensively modified from its stabilised natural state by residential habitation and coastal erosion, it is therefore highly unlikely the subject land contains no items of heritage, archaeological or historical significance.
- The proposed development provides for positive social and economic effects by alleviating any underlying shoreline recession and erosion of the subject land and facilitates the ongoing economic use of the land for low density residential purposes.

These impacts should be considered by the Coastal Panel in conjunction with the previous issue/comments raised by OEH and other submission summarised in this assessment report.

8.2.8 SECTION 79C(C): THE SUITABILITY OF THE SITE FOR DEVELOPMENT

The proposed revetment is permissible with development consent, having regard to the various environmental planning instruments applying to the site. The subject land is developed for low density residential purposes and zoned part 2(a) Residential and part 9(a) Restricted Development (Flood Prone Land) (Figure 5).

The objectives of the 2(a) Residential zone are:

- (a) *to make provision for the orderly and economic development of suitable land for a variety of low density housing forms which are essentially domestic in scale and which have private gardens; and*
- (b) *to provide for other uses which:*
 - (i) *are compatible with a low density residential environment and afford services to residents at a local level; and* 15 Statement of Environmental Effects: Proposed beachfront revetment wall on Lot 13 DP 880692, No. 8 Berrima Crescent, Umina Beach. Doug Sneddon Planning Pty Ltd – August 2013.
 - (ii) *are unlikely to adversely affect residential amenity or place demands on services beyond the level reasonably required for low scale housing.*

The proposed development is consistent with objective (a) in that it will facilitate the orderly and economic development of land for low density housing forms, which are essentially domestic in scale and have private gardens.

The objective of the 9(a) Restricted Development (Flood Prone Land) zone is *to ensure that buildings for residential use on land in the zone identified as flood prone are appropriately located and constructed.* The SEE advises a Flood Impact Assessment prepared by Cardno (May 2012) (not provided with the documentation submitted) with respect to the future development of the subject land, concludes that residential development on the subject land would not create significant impact on the existing flooding regime of Ettalong Creek or coastal inundation. Future residences can be designed such that the intrusion into the mainstream flood zone will be permitted to match the storage volume taken up by the existing residence and outbuildings in a 1% AEP event. Additional concerns as previously

raised in this report involve the likelihood of any end effects on public land south, although may be addressed through development of a suitable consent condition. If these concerns are adequately addressed, then the site could be demonstrated to be suitable for the proposed development.

8.2.9 SECTION 79C(D): ANY SUBMISSIONS MADE IN ACCORDANCE WITH THIS ACT OR THE REGULATIONS

During the public exhibition period for the DA (9 October 2013 to 23 October 2013) the Coastal Panel received 2 submissions. The matters raised in these submissions are summarised in Section 5 of this report.

8.2.10 SECTION 79C(E): THE PUBLIC INTEREST

With regards to the public interest of key concern is GCC's current position to fund or construct a remaining public section of the Berrima Crescent. In the absence of the revetment for the public section, there is a possibility that under raised water levels and/or storm events the proposed (landholder section) of the wall may exacerbate erosion to the immediate south potentially impacting public land and amenity. In order to satisfy the public interest, OEH recommends a commitment needs to be obtained and clearly stated in the SEE, for the management of any offsite impacts including maintenance, restoration and amenity and tied to any consent granted.

9. CONCLUSION

The DA (CP 13-001) seeks consent for the construction of a rock armour revetment at No. 8 Berrima Crescent, Umina Beach. The purpose of the wall is to alleviate erosion that currently experienced on the land, as well as affording protection for low density residential development on the land.

Consent for the proposed revetment is able to be pursued as permissible developed under Clause 129A(1) of *State Environmental Planning Policy (Infrastructure) 2007*. As the consent authority the Coastal Panel must be satisfied that the proposed wall will not, over its life:

- *unreasonably limit or be likely to unreasonably limit public access to or the use of Umina Beach*
- *pose or be likely to pose a threat to public safety*
- *Impact the visual amenity and scenic quality of Umina Beach*
- *Impact or significant interfere with the natural coastal processes along Umina Beach*
- *Impact or affect water quality*

Similarly, as the consent authority and in relation to Section 55M(1)(b) of the Coastal Protection Act, the Coastal Panel must also be satisfied that satisfactory arrangements have been made for the following, for the life of the works:

- *(i) the restoration of a beach, or land adjacent to the beach, if any increased erosion of the beach or adjacent land is caused by the presence of the works,*
- *(ii) the maintenance of the works.*

OEH is satisfied that public access to the beach will not be impeded, nor will the wall pose a threat to public safety, as public access is obtained elsewhere along Berrima Crescent adjacent to the Council car park at the southern end and not through or over the subject's land.

Regarding arrangement in relation to Section 55M(1)(b)(ii), OEH is satisfied the landowner understands and accepts, by constructing the proposed revetment, the landowner adopts responsibility for its ongoing maintenance, and similarly agrees to be bound by reasonable legally binding obligations regarding ongoing maintenance of the proposed structure. However, with respect to 55M(1)(b)(i) OEH raises concerns about impacts on public land to the south of the proposed works as a result of potential end effects. In relation this concern OEH advises this may be able to be addressed through the development of suitable consent condition or conditions that seek to address issues of beach (and land) restoration as a

result of any increased erosion caused by the presence of the works. The Panel should note such condition(s) would however require careful consideration in order to provide an appropriate level of clarity and certainty for all parties, as well as to discern that any future beach erosion is in effect a consequence of the presence of the wall. The Panel may also need to consider funding arrangements in relation to Section 55M(1)(b)(i) in order to secure adequate funding for the carrying out of any such restoration and maintenance resulting from end effects, having regard to Section 55M(2) of the Coastal Protection Act.

The Panel should note the proponent has expressed they would be prepared to liaise further with the Panel in the development of a suitable consent condition to address the issue of beach restoration if required.

10. RECOMMENDATIONS

The Coastal Panel considers the amended Development Application and the following actions to be pursued:

1. The Coastal Panel determine under what circumstances consent may/may not be granted, and in particular pursuant of Section 55M of the Coastal Protection Act.
2. Consider the need to further liaise with the proponent.