

Ms Keiley Hunter
Keiley Hunter Town Planning
PO Box 4481
COFFS HARBOUR NSW 2450

Our reference: DOC16/127342
Contact: Marc Daley, (02) 4927 3103

Dear Ms Hunter

I am writing to you concerning the Development Application lodged by you on behalf of Arrawarra Beach Pty Ltd for construction of a rock armoured revetment wall which forms the estuarine edge of Lots 1 and 2 DP 1209371 – 46 Arrawarra Beach Road, Arrawarra.

I wish to advise that a preliminary assessment of the documentation lodged with the DA, has identified some issues that will require further advice in order to consider the application. In particular, beyond the drawings in Appendix C, documentation that would support the selection of the design criteria advised appears absent along with any engineering appraisal that demonstrates the proposed structure can withstand the range of hydraulic loadings and wave impacts relevant at this location.

As you would appreciate the range of physical coastal and estuarine processes impacting upon this site are quite complex given its location at the confluence of Yarrowarra Creek, Arrawarra Creek and the Pacific Ocean, wrapping around the land margin to be protected. In order that the Coastal Panel can assess the suitability or structural adequacy of the proposed protection structure, it would be helpful for the Panel if you could provide further advice on the following aspects:

- how the relevant design wave and water level conditions advised have been determined for application at the proposed site;
- what design approach (or stability assessment) has been applied in order to propose the configuration of structure (slope, toe level, crest level, rock sizes, etc) to withstand the design coastal processes and hydraulic loadings envisaged;
- whether the scour levels at the toe of the proposed structure indicated are sufficient in this location. With a revetment structure in place to prevent channel or bank migration under flood outflows, there might be the potential for high velocities and associated sand losses from the near vicinity of the structure exceeding those considered relevant for normal beach scour levels on the open coast;

- what consideration (if any) has been given to the likelihood of wave overtopping of the structure (given the crest level advised is particularly low in parts). If there is overtopping of the structure, how will this be managed? The crest levels advised might be sufficient to limit overtopping to acceptable levels but, there is no evidence this has been considered from the furnished information; and
- what maintenance regime (if any) is contemplated for such a structure (given what's proposed is a flexible rubble-mound structure) in order that it remain fit for purpose to meet desired level of protection following damage into the future. Further, how will it be adapted or maintained to accommodate projected sea level rise. Whilst sea level rise is acknowledged in the report there is no further information on how the structure has been designed to accommodate (or adapt to) such projections into the future.

Could you please provide the information requested to Marc Daley of the Office of Environment and Heritage. He can be contacted on (02) 4927 3103 or by email marc.daley@environment.nsw.gov.au. Please do not hesitate to call Marc Daley if you wish to discuss any matter concerning the development application further.

Yours sincerely

MARC DALEY
Secretariat
NSW Coastal Panel