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20/11/2021

MR Angus Gordon
- 46 Taiyul RD
North Narrabeen NSW 2101

RE: DA2021/2173 - 394 Barrenjoey Road NEWPORT NSW 2106

Newport Surf Club Proposed coastal protection seawall

Introduction

Surfrider and I met with Northern Beaches Council on 3rd March 2021 to express concerns regarding the proposed seawall protection proposed as part of a project to expand the clubhouse. The potential adverse impacts of the proposed beachfront extension of the clubhouse were expressed along with the potential longer term "end effects" of the proposed seawall on the adjacent dune and beach system. However, a very critical issue raised was the fact that in 1974 the clubhouse suffered damage as a result of direct wave impact because the existing clubhouse is at too low a level. Concern was expressed that the proposed wall would not relieve this situation and in fact could enhance the hazard.

At the meeting it was recommended that to properly understand the issue Council engage WRL to undertake a relatively simple physical modelling project. The aim would be to demonstrate the potential problems the seawall could cause in terms of wave impact on the clubhouse and its contents.

At the meeting it was also recommended that Council re-consider its proposal and instead adopt a more robust risk management approach as Warringah Council had done at Freshwater by leaving the existing building in place until such time as it suffers major damage or needs to be replaced for other reasons but in the meantime ensuring all new development be located on the landward side of the building, away from the direct coastal hazard impact region. A similar situation had previously occurred at North Narrabeen where the surf club was relocated to the north and inland of the previous beach-back building. Further, Pittwater Council took the same approach with the more recent re-development of Bungan surf club whereby the new club was located landward of the old club and temporarily joined to the old club for convenience but if attacked by storm waves could stand alone if the old club suffered major damage.

The managed retreat of surf clubs was a significant theme in the 1985 Warringah Coastal Strategy report that was adopted by Council and the State Government, following an extended public consultation period including several public meetings.

Comment

NBC, instead of implementing the relatively simple recommendation from the meeting regarding a physical model test instead requested WRL undertake a "peer review" of the Engineering report that contained the preliminary design of the proposed seawall. That is, Council did not ask WRL to physically model the wall to demonstrate/assess the likely impacts on the building and importantly didn't ask WRL the basic coastal management question as to whether the optimum hazard management and economic solution would be to relocate the proposed clubhouse extensions on the landward side of the building rather than to build the proposed seawall. Interestingly despite not being asked WRL both highlighted the Freshwater

approach and also ended up recommending a physical model test be undertaken

The First WRL Letter report provided 14th May 2021

This report importantly contains the following:

"The Water Research Laboratory (WRL) of the School of Civil and Environmental Engineering at UNSW Sydney is pleased to provide an expert peer review of the following document: Horton (2020a), "Coastal Engineering Report and Statement of Environmental Effects for Buried Coastal Protection Works at Newport SLSC", prepared by Horton Coastal Engineering Pty Ltd for Adriano Pupilli Architects, Issue 2 dated 16 November 2020."

So Clearly WRL was only asked to review the engineering behind the proposed wall, not whether it represented appropriate coastal risk management nor as to the potential extent overtopping waves might damage the existing clubhouse.

The WRL report should give the Council no comfort as it states (again emphasis in red):

"For the quantitative parameters derived in Horton, some values are accepted by WRL, some are more conservative while others are less conservative than would be adopted by WRL.

However, some parameters have not been quantified in Horton and have been deferred until detailed design. This may be normal practice, but in the case of Newport SLSC, the quantification may affect the overall viability or geometry of the project, so additional quantification is recommended. "

Importantly, although not part of the brief WRL made the following comments clearly demonstrating that it was not convinced the proposed seawall was the appropriate coastal management solution (again emphasis is in red):

While the decision to retain the existing clubhouse and add a new portion on the ocean front appears to have been made within the project planning process, the philosophy adopted at Freshwater Beach was to construct the new building landward of the old. If the present Newport clubhouse is to be protected to an engineering degree of certainty over 60 years, a seawall will be required.

There are numerous examples where seawalls have survived but infrastructure behind them has been damaged through wave overtopping. Examples of buildings which were damaged/destroyed behind undamaged seawalls occurred in the June 2016 storm include Dee Why (café), Fairy Bower (toilet block and cafe) and Coogee (SLSC clubhouse)."

The Second WRL letter report provided 8th July 2021

The Council went back to WRL for further advice. Again this was not as to whether the proposed seawall was the appropriate management solution but rather to try to "firm up" the design criteria for the proposed seawall:

"The Water Research Laboratory (WRL) of the School of Civil and Environmental Engineering at UNSW Sydney is pleased to provide this coastal engineering advice in relation to proposed coastal protection works at Newport SLSC. "

"Additional work arising from the peer review is presented below, and provides enhanced quantification and detail on a number of design parameters, namely:

- Estimate the likely range of sand level (scour) at toe of proposed seawall
- Estimate wave runup levels and overtopping which could impact Newport SLSC
- Estimate wave loads due to overtopping which could impact Newport SLSC
- Assessment of seawall end effects"

In response WRL provided a range of calculations of design criteria, different to those of Horton, and possible issues. In addition, it recommended changes to the design in an attempt to try to better manage the overtopping wave issues. That is, WRL recognised there were significant potential issues with the proposed design. Interestingly the WRL considerations included raising the crest of the wall which, as was clearly stated to Council in the meeting of 3rd March, meant the Club would have access to beach difficulties if the seawall was modified to manage the potential for wave damage to the clubhouse. Interestingly the other modification options indicated by WRL would also impact on access from the clubhouse to the beach,

especially for surf craft. Again, this was not discussed fully by WRL as it was not in the brief, however it was eluded to.

Importantly in regard to the safety of the existing clubhouse if the proposed seawall is constructed WRL states:

"Additional input from a structural engineer would be needed to estimate the likely resilience of the existing building."

That is, WRL provided "desktop" assessment of the issues it was asked to comment on but importantly did not conclude that the proposed wall would adequately manage the risk to the existing building.

But again, WRL was not asked to undertake a simple physical modelling exercise as was recommended in our meeting with Council.

Again, WRL appears to have felt that it was incumbent on it to professionally make the following statement, although it was not in the Brief."

"Best practice coastal engineering desktop techniques appropriate to the scale of the proposal were applied. The reference material relied upon recommends that physical modelling be undertaken for critical decisions. WRL recommends that this be undertaken during the detailed design of the project."

Conclusions

Council has repeatedly chosen to not ask the obvious, and simple questions of WRL:

1. Is the proposed seawall a sensible and justifiable risk and economic coastal management proposal or would it be better to locate the proposed expansion of the clubhouse to the landward side?
2. Will the proposed seawall fail to provide protection to the existing clubhouse and is there the potential that it may increase damage to the clubhouse and its contents?

It is difficult to understand why the Council has delayed this matter by commissioning reports that do not go to the heart of the concerns we clearly enunciated at the meeting of 3rd March 2021. It is noted, that despite not being part of their brief, in both letter reports WRL made attempts to warn Council that they were asking the wrong questions.

If the correct questions were asked Council would be in a far better position to determine the likely impacts the proposed seawall will have on the existing clubhouse and hence whether the proposed substantial expenditure is in the public and the club's interest or whether, rather than using these funds to build a wall that all the available evidence suggests will result in damage to the existing club during severe storm events the Council should implement the long practiced adopted strategy of creating the new facilities on the western side of the clubhouse.