Our Ref: DOC21/1047404
Your Ref: PP 10.2021.630.1

General Manager
Byron Shire Council
PO Box 219
Mullumbimby NSW 2482

Attention: Mr Chris Larkin

Dear Mr Arnold

RE: Temporary Coastal Protection Works, Clarkes Beach, Byron Bay Café.

Thank you for your e-mail dated 10 December 2021 about the proposed temporary coastal protection works at the Byron Bay Café, seeking comments from the Biodiversity and Conservation Division (BCD) of the Biodiversity, Conservation and Science Directorate in the Environment, Energy and Science Group of the Department of Planning, Industry and Environment. I appreciate the opportunity to provide input.

We have reviewed the proposed development application and accompanying information and have identified several issues about the proposal. These issues are discussed in detail in **Attachment 1** to this letter.

In summary, the BCD recommends that:

Recommendations

1. A more detailed management strategy addressing monitoring, maintenance and works-impact mitigation activities must be prepared for the life of the works, which should include:
    a. details of the works maintenance and repair in the event of damage, and
    b. the management and restoration of the beach and adjacent land in the event of impacts from the works, and
    c. decommissioning of the works and site rehabilitation at the expiration of the development application, as well as in the event of a severe erosion event occasioning wall failure, and
    d. a detailed monitoring strategy involving inspections and topographic / beach profile surveys and a monitoring and maintenance frequency that is increased proportionally during periods of increased risk, and
    e. impact mitigation activities that address impacts to adjacent areas in a timely manner

2. Further information is required to ensure that any adverse impacts to coastal processes resulting from the works are appropriately managed throughout the consent period.

3. The proposal should include a strategy to progressively manage any adverse impacts to coastal processes resulting from the works through beach nourishment and revegetation, rather than at the end of the consent period, with impacts rectified before any further impacts may be realised from subsequent (following) erosion events.

4. The management strategy for the decommissioning of the works should consider a range of beach state scenarios and describe how the works are intended to be removed within the proposed consent period.

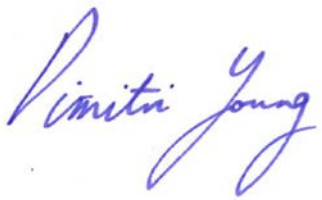
5. The proponent should actively engage with the council in the development of the Coastal Management Program for the area.

6. The mitigation measures identified in the Biodiversity Impact Assessment should form part of the development consent.

7. Further detail should be provided in relation to the dune rehabilitation mitigation measures to ensure these measures can contribute to biodiversity values and dune stabilisation.

If you have any questions about this advice, please do not hesitate to contact Mr Krister Waern, Senior Operations Officer, at krister.waern@environment.nsw.gov.au or 6640 2503.

Yours sincerely



23 December 2021

DIMITRI YOUNG
Senior Team Leader Planning, North East Branch
Biodiversity and Conservation

Enclosure: Attachment 1 Detailed BCD comments – Temporary coastal protection works - Byron Bay Café

Attachment 1: Detailed BCD Comments – Temporary coastal protection works - **Byron Bay Café**

The Biodiversity and Conservation Division (BCD) of the Department of Planning, Industry and Environment has reviewed the development application and associated information for the proposed temporary coastal protection works at the Byron Bay Café and we provide the following comments.

Coastal Processes

Proposed Works:
The proposal involves retention of the existing (emergency) coastal protection works comprising 650+ geobags (0.75m3 volume each) forming a 5-tiered geobag seawall approximately 90m long and 7m deep, and dune nourishment works, for an estimated period of five years, and associated activities (monitoring, maintenance, impact mitigation measures, decommissioning and restoration of the site).

*Reviewed documents***:**
The BCD reviewed the following documents:

- Temporary Coastal Protection Works, Clarkes Beach - Environmental Impact Statement (EIS), Final Draft Report. Hydrosphere Consulting, September 2021.
- Geobag walls at Clarkes Beach, Byron Bay, WRL TR 2021/12, September 2021

General Comments
The risks to beachfront land, values and assets along Clarkes and Main Beach resulting from coastal hazards; including short-term beach erosion and underlying long-term coastal recession have been recognised for several decades. Projected sea level rise is likely to exacerbate coastal hazard risks into the future.

We understand the initial geobag seawall and dune stabilisation works (now subject to this Development Application (DA) 10.2021.630.1) were constructed in October/November 2020 as 'coastal protection works' authorised under Part 5 of the *Environmental Planning and Assessment Act 1979* (EP&A Act), in accordance with s.19(2)(a) of the State Environmental Planning Policy (Coastal Management) 2018 (Coastal Management SEPP) permitting them to remain in place for a period of 90 days. We note the works approval expired some time ago and the works currently have no legal status.

We recognise that these temporary works, installed by or on behalf of a public authority as development permitted without consent under the Coastal Management SEPP are not intended as permanent or ongoing works. The fact these works were installed and remain on the beach highlights a need for improved recognition of, and strategic planning for, the management of current and projected future coastal hazard risks at the subject site. The coastal hazard risks at Clarkes Beach have been known and described in various studies over several decades.

We note in correspondence to the Department dated 8 April 2021 that 'the coastal protection works were designed to mitigate, over the short term, coastal erosion risks to the adjacent Crown reserve, Crown road and 'Beach Byron Café'. Crown Lands is seeking development consent for the works, so they can remain in place until arrangements for retreat of the café are implemented (expected to take between two to five years).

The DA seeks to retain the existing works for a period of five years. However, the EIS states that 'geobags will be removed opportunistically after the five-year period, if and when they are exposed'. It is envisaged the proposed five year consent period will provide ample time for the proponent to evaluate and resolve adaptive options for the management of the site with due consideration of public access and safety, Aboriginal cultural heritage, environmental and economic values, and existing infrastructure and development. The Coastal Management Program (CMP) being prepared by the Byron Shire Council is also highly relevant to the future management of the site.

The council is currently developing a CMP in accordance with provisions of the *Coastal Management Act 2016* (CM Act) to set the long-term strategy for the coordinated management for the area covering Cape Byron to South Golden Beach, including Clarkes Beach. Division 2 of the CM Act describes the purpose and scope of a CMP. We anticipate the CMP will be completed within the near future.

The CMP will consider the appropriate means of developing and implementing a suitable and coordinated coastal management strategy for the Byron Bay embayment.

We note that a significant volume of sand has recently been transported into the eastern margins of the Byron Bay embayment via natural coastal processes, resulting in the partial recovery of the Clarkes Beach profile. However, this currently observed trend may continue, stall or indeed reverse at any time, as it is subject to the influence of physical coastal processes at that time.

Development consent relating to coastal protection works (s27 CM Act)

Section 27 of the CM Act requires that development consent for coastal protection works must not be granted unless the works will not, over the life of the works, unreasonably limit public access, pose a threat to public safety, and that satisfactory arrangements have been made for maintenance of the works and restoration of the beach if increased erosion is caused by the presence of the works.

The DA is supported by a technical report prepared by the Water Research Laboratory (WRL) School of Civil and Environmental Engineering, UNSW Sydney, to investigate the impact of the proposed works on coastal processes over the estimated five year design life, and the monitoring and maintenance requirements that will be associated with the works. The report also assesses the risk of coastal hazards on the proposed works.

Based on the technical report, in the event of a 5-year ARI storm event, there is a likelihood that the geobag seawall will experience more than 2% damage and likely wave overtopping necessitating repairs. There is a 63% probability of a 5-year ARI event occurring during the proposed 5-year design life of the works. It is noted that the works would be expected to fail in a 20-year ARI erosion event.

Should the works be exposed to the impacts of wave action during the proposed 5-year period they may alter coastal processes, resulting in impacts to the beach or land adjacent to the beach, public access and safety, and beach amenity. The works may adversely impact coastal values within the adjacent Cape Byron Marine Park, National Parks estate and Crown Land. It is, therefore, critical that the works are subject to continued monitoring.

Impact mitigation works to ‘restore the beach’ and maintain public safety and access in accordance with section 27 of the CM Act should be defined and committed to by the proponent. This includes a strategy to monitor for and respond to any impacts resulting from the works should they be damaged by coastal processes.

A monitoring strategy is required to ensure the potential impacts of the works are adequately monitored, and in addition to monthly inspections, the proponent should undertake topographic / beach profile surveys on a quarterly basis, particularly following storm events.

Any adverse impacts to coastal processes resulting from the works should be managed progressively through beach nourishment and revegetation, rather than at the end of the consent period, with impacts rectified before any further impacts may be realised from subsequent (following) erosion events. This may help to reduce impacts to cultural heritage, littoral vegetation, lands, infrastructure and built assets.

The EIS states that ‘geobags will be removed opportunistically after the five-year period, if and when they are exposed’. This approach creates ambiguity regarding the proposed DA currency period and presents a risk that the investigation and implementation of appropriate adaptive options for the site will be delayed. The management strategy for the decommissioning of the works should consider a range of beach state scenarios and describe how the works are intended to be removed

commensurate with the proposed consent period. Ultimately, decommissioning of the works should be undertaken prior to the expiration of the DA period, or if relevant, be guided by the longer-term strategy determined in the council's CMP being developed for the area. It is important that the proponent works urgently to resolve the management of the site such that the works might be removed as soon as possible should they become exposed within the proposed five-year consent period.

Recommendations

1. A more detailed management strategy addressing monitoring, maintenance and works-impact mitigation activities must be prepared for the life of the works, which should include:
    a. details of the works maintenance and repair in the event of damage, and
    b. the management and restoration of the beach and adjacent land in the event of impacts from the works, and
    c. decommissioning of the works and site rehabilitation at the expiration of the DA, as well as in the event of a severe erosion event occasioning wall failure, and
    d. a detailed monitoring strategy involving inspections and topographic / beach profile surveys and a monitoring and maintenance frequency that is increased proportionally during periods of increased risk, and
    e. impact mitigation activities that address impacts to adjacent areas in a timely manner

2. Further information is required to ensure that any adverse impacts to coastal processes resulting from the works are appropriately managed throughout the consent period.

3. The proposal should include a strategy to progressively manage any adverse impacts to coastal processes resulting from the works through beach nourishment and revegetation, rather than at the end of the consent period, with impacts rectified before any further impacts may be realised from subsequent (following) erosion events.

4. The management strategy for the decommissioning of the works should consider a range of beach state scenarios and describe how the works are intended to be removed within the proposed consent period.

5. The proponent should actively engage with the council in the development of the CMP.

<u>Biodiversity</u>

We note that a Biodiversity Impact Assessment has been prepared by Biodiversity Assessments and Solutions, dated 9 June 2021.

This assessment concludes that a Biodiversity Development Assessment Report is not required for the proposed biodiversity impacts.

The assessment includes mitigation measures (section 5.1) which aim to appropriately manage the proposed works and avoid or minimise biodiversity impacts. The BCD generally agrees with these mitigation strategies and these strategies should form part of the development consent.

One of the mitigation measures states, '*dune revegetation would be undertaken using species endemic to the location and local seed provenance'*. Considering that no biodiversity offsets are proposed by the development, the implementation of this mitigation measure is important to ensure that the biodiversity values of the area can be maintained or improved.

However, further detail should be provided about this mitigation measure. A broader dune rehabilitation program around the site would provide biodiversity values and contribute to dune stabilisation.

Recommendations

6. The mitigation measures identified in the Biodiversity Impact Assessment should form part of the development consent.

7. Further detail should be provided in relation to the dune rehabilitation mitigation measures to ensure these measures can contribute to biodiversity values and dune stabilisation.