

12 July 2024

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The General Manager  
Byron Shire Council  
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Attention: Mr Ben Grant & Mr Chris Larkin  
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Dear Sirs

**RE: Request for additional information DA 10.2023.287.1 (PAN-355981) Coastal  
Protection Works LOT: 1 DP: 1215893 - 144 Bayshore Drive BYRON BAY**

We refer to Councils correspondence dated 14 February 2024 and the subsequent meeting held with Council officers and the Regional Planning Panel on June 4, 2024. The matters raised in Councils correspondence are addressed as follows:

1. *The proposed extension of the existing geobag coastal protection works is intended to comprise a temporary structure with a proposed lifespan of 5 years, while the Coastal Management Program (CMP) for the Byron Shire Northern Coastline is completed.*

*Given that Stage 3 of Council's CMP is underway, please address the key matters and observations contained in the letter from Biodiversity Conservation and Science division of Department of Climate Change, Energy, the Environment and Water, dated 9 February 2024, to demonstrate why the temporary works are critically required prior to the development of long-term solutions.*

**Comment**

The key recommendations and findings provided in the correspondence from the Department of Climate Change, Energy, the Environment and Water dated 9 February 2024 provide as follows:

*In summary, BCS is of the view that the most appropriate pathway to consider and give effect to the management of coastal hazards at the subject location is through the development and implementation of the Byron Shire Open Coast – Coastal Management Program (CMP). The CMP will identify a long term coordinated coastal management strategy for the Byron Bay embayment, including the Belongil Estuary entrance and subject land, in accordance with the Coastal Management Act 2016.*

*BCS recommends:*

1. *The proponent works closely with the Byron Shire Council, Department of Primary Industries (DPI) - Marine Parks Authority, DPI - Crown Lands, National Parks and Wildlife Service, Bundjalung of Byron Bay Aboriginal Corporation (Arakwal) and other relevant stakeholders, to develop a long-term strategy for the management of coastal hazard risks at the Belongil Estuary entrance and open coast through the development of the CMP.*

2. *In the interim, the proponent*
  - a. *relocates all non-critical, non-coastal dependent development and infrastructure from areas affected by current or projected future coastal hazards impacts and risk over the short to medium term, thereby removing coastal hazards impacts and risks to existing infrastructure and avoiding the need for new works that may exacerbate risks and impacts in the location such as enhanced 'end-effect' erosion, changes in wave and hydraulic interactions at the dune face, and risks to public safety and access.*
  - b. *considers seeking approval for 'soft' maintenance works to reduce erosion impacts to the subject land, including dune restoration works (beach nourishment, beach scraping, dune reprofiling and revegetation) along the foreshore impacted by erosion.*
3. *If the Byron Shire Council recommends to the Northern Regional Planning Panel that the proposal be approved, then:*
  - a. *the proponent be required to provide additional information to the Panel, describing:*
    - i. *how any cumulative impacts from the existing works and proposed new works (total works) will be considered, monitored and managed to limit impacts to natural coastal processes, including avoiding increased impacts or risks of coastal hazards on the subject land and adjacent land, and avoid increased risk to public safety or impacts to public access.*
    - ii. *how management approaches such as beach scraping, beach nourishment and dune restoration may be used to address cumulative impacts as observed through a monitoring strategy with appropriate triggers and thresholds for a management response.*
  - b. *a condition of consent be imposed requiring a Biodiversity Management Plan to be prepared that protects and manages biodiversity values within and adjacent to the proposed works area, including but not limited to:*
    - i. *a detailed monitoring strategy involving regular surveys for any threatened and migratory shorebirds inhabiting the locality to be undertaken before, during and after construction.*
    - ii. *mitigation actions to prevent any adverse impacts on threatened or migratory shorebirds detected within or adjacent to the works area.*
    - iii. *contingency measures to rapidly address any adverse impacts on threatened or migratory shorebirds or their habitats.*
    - iv. *mitigation actions to prevent any adverse impacts on native vegetation adjacent to the works area including the implementation of tree protection measures in accordance with AS 4970-2009 Protection of trees on development sites.*
    - v. *a revegetation strategy for the replacement of any native vegetation impacted during construction.*

In relation to the submission that the proponent should wait for the completion of the Coastal Management Program (CMP) it is noted that the proponent has been waiting for the adoption and implementation of a CMP for many years now. Discussions with Department officers on site have indicated that the timeline for the implementation of the CMP remains uncertain. It is also noted that the impact on the site is significant and continues to affect the ongoing operation of Elements Resort and associated activities. Correspondence provided from the resort at **Attachment A** details the impact on operations and ancillary events held at the resort.

As the application proposes the works are intended to be temporary with a lifespan of 5 years. In the event that the CMP is endorsed and implemented prior to this time, the proposed temporary works may be removed within a shorter time period.

It is also important to note that the proposal provides for what is considered to be a relatively minor extension to the existing protection works. Given the proposed short term nature of the works and their relationship to the existing protection works, it is submitted that the works are appropriate in the subject circumstances and in the context of similar approvals by the Regional Planning Panel in Byron Bay.

The proponent will continue to work with relevant government agencies to progress a long term solution for the management of this area.

2. *Given the nature and extent of current erosion immediately to the west of the existing wall, further information is required to confirm how the current design will prevent future erosion immediately to the west of the proposed structure.*

#### **Comment**

Please find attached a detailed response prepared by Royal HaskoningDHV addressing issues discussed on site with Council officers and officers from the NSW Department of Planning and Environment, Office of Environment and Heritage at a site meeting held on 29 February 2024. The response includes further consideration of potential "end effects" with the proposed continuation of the existing geobank coastal protection works and further information relating to the monitoring, management and removal of the works.

3. *The Coastal Engineering Assessment Report indicates 'it is anticipated the Contractor may construct a temporary bund on the beach seaward of the works to provide a level of protection to the works from wave action and tides during the construction phase*

#### **Comment**

A revised methodology for construction has been prepared and is provided at **Attachment B**. This will enable the works to be undertaken from wholly within the property boundaries and works will not be required to be undertaken on Crown Land.

Further to the above response, the following response is also provided to the panel comments identified in the response to the Council briefing held on Tuesday 12 March.

#### **Panel Comments**

- *Clarification request:*
  - *Clarification of 2017 temporary works being able to remain in perpetuity*
  - *Cadastral survey work and mean high watermark (MHW) to be identified, including confirmation of the relevant approval or consent authority*
  - *Applicant justification for works – need and why it needs immediate works – alternatives to proposal to be outlined, can the uses currently carried out on open space area be accommodated elsewhere on their site.*

In relation to the request for clarification in regarding the temporary works being able to remain in perpetuity, we submit that the temporary coastal protection works were constructed under the relevant provisions of the Coastal Protection Act 1979. We are satisfied that the works are consistent with the requirements of the savings provisions in Schedule 3, Part 2, Section 8 of the Coastal Management Act 2016 which replaced the Coastal Protection Act 1979.

A landowner plan is provided at **Attachment C**. In response to the question posed as to whether the subject land is Crown Land based on the principles of accretion, we submit that those principles do not apply to the context of this site, as the change to the land has been neither gradual or imperceptible. Schedule 6 of the State Environmental Planning Policy (Planning Systems 2021) identifies the proposed coastal protection works as Regionally significant development and as detailed in the Statement of Environmental Effects accompanying the DA, the Regional Planning Panel is the relevant consent authority in our view.

The proposed justification for the works is addressed in **Attachment A** to this response.

We trust that the information provided adequately addresses the concerns raised.

Should you require any additional information or wish to clarify any matter raised in this submission, please feel free to contact me at any time.

Yours faithfully,

**PLANNERS NORTH**



**Kate Singleton RPIA**

PARTNERSHIP PRINCIPAL

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29 May 2024

To Whom it may concern,

RE: Development Application 10.2023.287.1 for extension of temporary Geobag coastal works to the oceanside boundary of Elements Of Byron Resort, 145 Bayshore Drive Byron Bay.

Elements of Byron Resort is a 202 room Luxury Resort at the above address, was opened in 2016 and expanded in 2018, and the resort currently employs 240 staff making it one of the largest businesses and employers in the Northern Rivers.

The Resort caters to a variety of domestic and international leisure travellers, and continues to see strong demand for meetings and events, including weddings, which are operated at various indoor and outdoor locations across the grounds. The outdoor event spaces, particularly the beachfront "Heart of the Bay" area, is incredibly popular due to its location and uninterrupted ocean and bay outlook. There are very few, if any, locations like this in a managed resort setting on the east coast of Australia.

Up until the erosion events of February 2022, the "heart of the bay" area was also used as a private relaxation space for resort guests where afternoon drinks and snacks were served whilst enjoying the outlook. The space was also used daily at 7am for a complimentary group yoga class hosted by the resort. In the year prior to our ownership of the resort (2010) there was a building on this elevated area which was frequently used for events and weddings, dating back to the late 1980's when it was constructed as part of the Byron Bay Beach Resort.

The current eroded state of this elevated beachfront space, which occurred around February 2022, has necessitated the temporary relocation of these operations and the cancelling of a number of booked events which has resulted in lost business to the Resort. Guests and Conference Organisers are not willing to relocate their events to other spaces, with the "heart of the bay" space being a fundamental consideration to their booking and the uniqueness of the overall Resort offering.

The inability to use this space in its current state, particularly through the slower months of May-August over the last 2 years, has impacted on our conference and events bookings and financially impacted the business, and continues to do so. The impact of this is expected to be experienced going forward until the remediation works are complete.

Kind Regards,  
MICHAEL SKINNER  
Resort General Manager

Kate Singleton  
Partnership Principal  
Planners North  
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|-----------------|----------------------------|---------------|--|
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Dear Kate

**Elements of Byron - Extension to Existing Geobag Coastal Protection Works: Responses to Issues Raised at Site Inspection on 29 February 2024**

The purpose of this letter is to address several of the issues raised at the site inspection held on 29 February 2024 to discuss the Development Application (DA) for an extension of approximately 40m to the existing geobag coastal protection works at Elements of Byron Resort. The specific issues addressed in the letter are as follows:

- 'end effects' from the proposed works and will they 'chase up' the beach over time
- would the proposed continuation of the existing geobag coastal protection works 'lock' the Coastal Management Plan (CMP) into this option as the only solution for this area
- demonstration that there would be no net loss of sand due to the proposed works
- more detailed outline of the monitoring and management/maintenance plan for the works
- more detail on the strategy for removal of the works

## 1 End Effects

The coastal engineering assessment prepared for the proposed extension to the existing geobag coastal protection works (RHDHV, 2023) stated that an end effect is predicted to occur due to the presence of the works particularly to the north of the works. The increased erosion was not expected to unreasonably limit public access to the beach (primarily in relation to the existing public access 160m to the north) over the proposed design life of the extension works (5 years) for a number of reasons:

- the limited design life, which may not be sufficient time for the end effect to fully develop
- the ability for sand above the (low) crest level of the works, and below and behind the works, to be released into the active coastal system during wave overtopping and severe erosion events
- the relatively limited end effects observed to the north of the existing 210m long geobag coastal protection works since their construction in March 2015, comprising a distance of approximately 60m.

Having said the above, it was recognised that the coastal and estuary processes in the entrance area to Belongil Estuary are complex and therefore the following was recommended to manage the uncertainty:

- the proposed works and the adjacent land (the beach and dunes) should be subject to a monitoring and management/maintenance plan
- a condition of consent should be imposed to ensure that, for the life of the extension works, restoration of the beach and land adjacent to the beach, including the public accessway to the beach located to the north (if required), is carried out by the owner of Elements of Byron Resort in the event of any increased erosion caused by the presence of the works.

In addition, the proposed works include the importation of 800m<sup>3</sup> of sand to offset, conservatively, the sand 'locked up' behind the works.

The possibility that the end effects may 'chase up' the beach over time is a consideration. However, the observations on site of the end effect after 9 years caused by the 210m length of existing geobag coastal protection works together with the temporary nature of the proposed 40m extension works (5 year design life) suggest that the extent of the 'chase up' would be manageable. The recommended condition of consent for restoration of the beach and land adjacent to the beach would address the management of any increased erosion caused by the presence of the works.

## **2 'Locking' of the CMP into the Extension Option as the Only Solution**

The proposed extension to the existing geobag coastal protection works is a temporary measure while the CMP for the Byron Shire Northern Coastline (Cape Byron to South Golden Beach) and/or the Belongil Creek Estuary CMP is prepared.

The nature of geobag structures is that they can be readily removed, as outlined later in this letter in Section 5.

Removal of the temporary structure would be expected to be the subject of a condition of consent, e.g., by way of inclusion of a time limited consent condition.

A CMP would necessarily address a range of long-term options for management of the entrance area of Belongil Estuary. It is not considered that the proposed works, being of a temporary nature and readily removable, would in any way 'lock in' the CMP for such works to be the only solution for the entrance area.

## **3 Net Loss of Sand**

The proposed works would not result in a net loss of sand since:

- sand used to fill the geobags would not be sourced from the beach. Sufficient geobags to complete the works are in fact already stockpiled on site near the northern limit of the works and were filled with sand sourced from a commercial sand extraction operation at Chinderah
- a quantity of 800m<sup>3</sup> of sand would be imported to site to address, conservatively, the volume of sand 'locked up' behind the proposed works
- a condition of consent should be imposed to ensure that, for the life of the extension works, restoration of the beach and land adjacent to the beach, including the public accessway to the beach located to the north (if required), is carried out in the event of any increased erosion caused by the presence of the works.

## 4 Monitoring and Management/Maintenance Plan

A Monitoring and Management/Maintenance Plan for the works should be prepared as a condition of consent. The Plan should cover the proposed extension to the geobag coastal protection works, the beach, and land adjacent to the beach. A proposed outline of the Plan is set out below. The complete Plan should be submitted to Council and other relevant authorities for approval prior to issue of the Construction Certificate.

### Responsibility

Implementation of the Monitoring and Management/Maintenance Plan should be the responsibility of the owner of Elements of Byron Resort (Ganra Pty Ltd).

### Area Subject to the Monitoring and Management/Maintenance Plan

The area subject to the Monitoring and Management/Maintenance Plan should comprise the extension to the existing geobag coastal protection works plus the adjacent beach (to approximately low tide mark) and frontal dune system extending from the commencement of the proposed extension works northwards for a distance of approximately 160m beyond the northern limit of the proposed works (inclusive of the existing public beach accessway opposite the end of Bayshore Drive).

### Monitoring and Inspection Activities

The following monitoring and inspection activities are proposed:

- UAV imagery at intervals not exceeding three months and following ocean storm or creek flooding events which cause damage to the works and/or impacts to beach and adjacent land as identified by the owner of Elements of Byron Resort or Council. If there is uncertainty whether damage or impacts have occurred, UAV images and additional ground level oblique photography should be supplied to the Coastal Engineer<sup>1</sup> who may carry out an inspection at this time (refer below)
- detailed land survey at the completion of the works and at such other times as may be directed by the Coastal Engineer during the life of the works
- high resolution aerial photos or satellite photos
- inspections by the Coastal Engineer at intervals not exceeding six months, or more frequently if in the opinion of the Coastal Engineer damage to the works, or impacts due to the works, has or is likely to have occurred following an ocean storm or creek flooding event.

The inspection by the Coastal Engineer should consider the following checklist:

- structural: Number of displaced geobags
- serviceability: Number of geobags with tearing, vandalism, deterioration, or deformation
- erosion: Above the crest of the works, below the toe of the works, and due to end effects.

The inspection carried out by the Coastal Engineer is to be documented in a report. The report should identify and make recommendations as to whether management/maintenance activities are required and,

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<sup>1</sup> Coastal Engineer means a suitably qualified and experienced engineer with experience in geobag coastal protection works and coastal processes/hazards, engaged by the owner of Elements of Byron Resort and approved by Council.

if so, the form that these activities should take. The report should be submitted to Council within four weeks of the inspection.

#### Scope of Management/Maintenance Activities

The scope of the management/maintenance activities may include the following depending on the results of the monitoring activities:

- replacement of geobags which may have become displaced, torn, vandalised, deteriorated or deformed, or the like
- grading of erosion scarps to a safe angle where they present an unacceptable risk to public safety
- restoration of increased erosion caused by the presence of the works, through importation of nourishment sand or beach scraping in consultation with Council
- restoration of public beach access where access has been adversely impacted by the presence of the works, in consultation with Council
- revegetation where vegetation has been lost due to the presence of the works.

In terms of the replacement of geobags due to damage by wave impacts, Coghlan et al (2009) provides a useful damage classification system to guide maintenance. The failure/damage of a geobag coastal protection structure was expressed in percentage terms and defined as the number of displaced geobags divided by the total number of geobags within a reference region x 100%. The damage classification system is summarised in Table 1 for a double layer design as is the case for the proposed extension. Maintenance of the works should be carried out prior to 15% damage or as directed by the Coastal Engineer.

*Table 1 Damage classification system for geobag coastal protection structures*

| <b>Damage Classification</b> | <b>Percentage Displaced<br/>(Double Layer)</b> |
|------------------------------|--|
| No Damage                    | 0%   |
| Initial Damage               | 0-2%   |
| Intermediate Damage          | 2-15%  |
| Failure                      | ≥ 15%  |

#### Timing of Management/Maintenance Activities

The management/maintenance activities recommended by the Coastal Engineer should be carried out as soon as practicable following submission of the Coastal Engineer's report to Council, subject to factors such as beach state, inclement weather, safety considerations, and procurement of a Contractor. The expectation would be that the activities would be commenced within a period of 1 to 2 months from submission of the report.

#### Access for Management/Maintenance Activities

Access to the area for management/maintenance activities should be via Elements of Byron Resort wherever practicable.



It is likely during the life of the works that access would be required from time to time on public land to carry out management/maintenance activities. It is proposed that access requirements be detailed in the Monitoring and Management/Maintenance Plan submitted for approval so that applications for access to public land are not required on each individual occasion of management/maintenance activities.

Relevant authorities should be provided a minimum of 2 days written notice when management/maintenance activities are to be carried out.

#### Ceasing of Responsibility by the Owner of Elements of Byron Resort

The owner of Elements of Byron Resort would cease to be responsible for monitoring and management/maintenance activities following removal of the extension to the existing geobag coastal protection works and upon completion of any management/maintenance obligations due to the presence of the works.

## **5 Strategy for Removal of the Works**

Removal of the works should take place in accordance with requirements of the time limited condition of consent. Removal should be carried out with consideration of public safety, geotechnical stability, beach and creek conditions, and in accordance with an environmental management plan. Removal of the geobags is best affected by cutting one end of the geobag, emptying and spreading the sand beneficially on the beach, and disposing of the empty geobags at a licensed waste disposal or recycling facility.

## **6 References**

Coghlan, I.R., Carley, J.T., Cox R.J., Blacka, M.J., Mariani, A., Restall, S.J., Hornsey, W.P., and Sheldrick, S.M (2009), Two-dimensional Physical Modelling of Sand Filled Geocontainers for Coastal Protection, Australian Coasts and Ports Conference (Wellington, New Zealand).

Yours sincerely,



**Greg Britton**

Technical Director  
Water & Maritime



