

COUNCIL ASSESSMENT REPORT

Panel Reference	PAN 128905
DA Number	DA 10.2021.630.1
LGA	Byron Shire
Proposed Development	<p>Development consent is sought to retain the existing temporary coastal protection works (geobag structure) for a five-year period. The applicant states that this will provide a degree of temporary protection to the Beach Byron Bay café site (and Aboriginal middens) from coastal erosion and provide sufficient time to achieve the reconfiguration and/or relocation of the café. Other works that are part of this application include dune stabilisation and revegetation, dune forming fencing, regular monitoring of the works, maintenance of the geobags and beach nourishment (the importation of sand). Temporary machinery compounds are proposed to be used when maintenance is required. Tree removal will only be required if trees collapse or become dangerous.</p> <p>The existing geobag structure and works are located mostly on Lot 18 DP 1269368 and partly on Lot 9 DP 1049827. The existing wall includes 6 x layers of bags and is 90m in length. The wall contains approximately 650 geobags. The total development footprint is approximately 1,500 m².</p> <p>It is a Crown development. It is also Integrated development because approvals are required under section 90 of the National Parks and Wildlife Act 1974 (known Aboriginal sites - AHIP).</p> <p>It is Designated Development because it affects land mapped in SEPP (Resilience and Hazards) as littoral rainforest.</p> <p>It requires a marine parks permit as part of the geobag structure is partly below Mean High Water Mark.</p> <p>The development is defined as coastal protection works and is permitted in the 7(f) (1) zone under Byron LEP 1988.</p>
Street Address	2 Massinger Street, Byron Bay
Applicant/Owner	<p>Applicant: Robyn Campbell, Hydrosphere Consulting Pty Ltd</p> <p>Owner: NSW Department of Planning, Industry & Environment - Housing and Property / Crown Lands</p>
Date of DA lodgement	29 October 2021
Total number of Submissions Number of Unique Objections	<ul style="list-style-type: none"> • No public submissions • No objections raising issues of concern
Recommendation	Approval

<p>Regional Development Criteria (Schedule 6 of the SEPP (Planning Systems) 2021)</p>	<p><i>8A Certain coastal protection works</i></p> <p><i>(1) The following development on land within the coastal zone that is directly adjacent to, or is under the waters of, the open ocean, the entrance to an estuary or the entrance to a coastal lake that is open to the ocean—</i></p> <p><i>(a) development for the purpose of coastal protection works carried out by a person other than a public authority, other than coastal protection works identified in the relevant certified coastal management program,</i></p> <p><i>(b) development for the purpose of coastal protection works carried out by or on behalf of a public authority (other than development that may be carried out without development consent under clause 2.16 of State Environmental Planning Policy (Resilience and Hazards) 2021.</i></p> <p><i>(2) Words and expressions used in this clause have (in relation to coastal protection works) the same meaning as they have in State Environmental Planning Policy (Resilience and Hazards) 2021.</i></p>
<p>List of all relevant s4.15(1)(a) matters</p>	<ul style="list-style-type: none"> • Byron Local Environmental Plan 1988 • Byron Development Control Plan 2010 • State Environmental Planning Policy (Resilience and Hazards) 2021 • State Environmental Planning Policy (Planning Systems) 2021 • State Environmental Planning Policy (Transport and Infrastructure) 2021 • Coastal Management Act 2016 • Marine Estate Management Act 2014 • NPWS Act 1974
<p>List all documents submitted with this report for the Panel's consideration</p>	<ul style="list-style-type: none"> • Schedule of Conditions and GTAs (Appendix 1) • Plan Set (Appendix 2) • Pre-lodgement Submissions (Appendix 3) • Agency Submissions (Appendix 4) • EIS and Appendices (Appendix 5 – under separate cover) • RFI(s) and additional Information Supplied by Applicant (Appendix 6)
<p>Clause 4.6 requests</p>	<ul style="list-style-type: none"> • None
<ul style="list-style-type: none"> • Summary of key issues 	<ul style="list-style-type: none"> • Timing and triggers for geobag removal • Erosion in proximity to structures (end effects) • Aboriginal midden protection and management and AHIP • Littoral rainforest protection and management • Visual impact and beach amenity • Marine Park protection

	<ul style="list-style-type: none"> Public access
Report prepared by	Mike Svikis, RPIA (Life Fellow) – Consultant Planner on behalf of Byron Shire Council
Report date	8 June 2022

Summary of s4.15 matters

Have all recommendations in relation to relevant s4.15 matters been summarised in the Executive Summary of the assessment report?

Yes**Legislative clauses requiring consent authority satisfaction**

Have relevant clauses in all applicable environmental planning instruments where the consent authority must be satisfied about a particular matter been listed, and relevant recommendations summarized, in the Executive Summary of the assessment report?

Yes

e.g. SEPP - Resilience and Hazards, Clause 4.6(4) of the relevant LEP

Clause 4.6 Exceptions to development standards

If a written request for a contravention to a development standard (clause 4.6 of the LEP) has been received, has it been attached to the assessment report?

Not applicable**Special Infrastructure Contributions**

Does the DA require Special Infrastructure Contributions conditions (S7.24)?

Note: Certain DAs in the Western Sydney Growth Areas Special Contributions Area may require specific Special Infrastructure Contributions (SIC) conditions

Not applicable**Conditions**

Have draft conditions been provided to the applicant for comment?

Note: in order to reduce delays in determinations, the Panel prefer that draft conditions, notwithstanding Council's recommendation, be provided to the applicant to enable any comments to be considered as part of the assessment report

Yes

EXECUTIVE SUMMARY

Development Application 10.2021.630.1 (planning portal reference PAN 128905) was lodged with Byron Shire Council on 29 October 2021 as a designated development accompanied by an EIS. It was publicly exhibited from 15 November to 15 December 2021, and no public submissions were received. The pre-lodgement public consultation provides some indication of public opinion. Agency submissions were received from Biodiversity, Conservation and Science Directorate (BCD), DPI Fisheries (Marine Parks) and Heritage NSW.

Development consent is sought to retain the existing temporary coastal protection works (geobag structure) for a five-year period to provide a degree of temporary protection to the Beach Café site (and Aboriginal middens) from coastal erosion and provide sufficient time to achieve the reconfiguration and/or relocation of the café. The geobags will be removed after the five-year period. The sandbag structure is physically linked to a similar structure located in front of the adjacent Reflections Clarkes Beach Holiday Park but this structure is subject to a separate development application (DA 10.2021.698.1). Other works that are part of this application include dune stabilisation and revegetation, dune forming fencing, regular monitoring of the works, maintenance of the geobags and beach nourishment (the importation of sand). Temporary machinery compounds are proposed to be used when maintenance is required.

The subject land has an approval for a restaurant (known locally as the Beach Café). It applies to Lot 9 DP 1049827. Lot 9, DP 1049827 is within Crown Lease LX 566595 for the Beach Café. A small part of the works affect this land. The majority of the works are located on Lot 18 DP 1269368. The subject land is part of Crown Reserve 82000 (R82000), managed by Byron Shire Council (Council) as Crown Land Manager. Lot 18, DP 1269368 is also a Crown public road. The eastern portion of Lot 18 DP 1269368 is bounded to the south by Lawson Street, with Lot 410 DP 729062 encompassing Reflections Holiday Park to the east.

The total development footprint is approximately 1,500 m². It is comprised of approximately 650 geobags filled with sand. It was installed in November / December 2020.

The subject land is a Deferred Matter under Byron LEP 2014 and this LEP does not impose any controls. It is zoned 7(f1) Coastal Land under Byron LEP 1988. Under LEP 1988 the development is defined as beach and coastal restoration works and this use is permitted with consent in the 7(f1) zone. Byron Development Control Plan 2010 applies to the development.

It is a Crown development. The consent authority does not have the ability to refuse this application without the approval of the relevant Minister. If the consent authority agrees to apply conditions to the Crown DA, these conditions need to be approved by the relevant Crown body or the Minister.

It is Integrated Development because approvals are required under section 90 of the National Parks and Wildlife Act 1974 (known Aboriginal sites). The DA was referred to Heritage NSW

and it has provided General Terms of Approval. It confirms that an AHIP is required for the proposed works.

It is Designated Development because it affects land mapped in SEPP (Resilience and Hazards) 2021 as littoral rainforest. The EIS produced to support the DA is adequate and generally meets the requirements of the SEARs issued on 21 May 2021.

The main planning controls relevant to the proposal include:

- State Environmental Planning Policy (Resilience and Hazards) 2021
- State Environmental Planning Policy (Planning Systems) 2021
- State Environmental Planning Policy (Transport and Infrastructure) 2021
- Byron Local Environmental Plan 1988
- Byron Development Control Plan 2010

The proposal is consistent with relevant provisions of these planning controls.

Section 55 of the Marine Estate Management Act requires that determining authorities do not determine a development application within a Marine Park (below MHWL) without considering a range of matters and obtaining the concurrence of the Minister for the Environment. This concurrence has been delegated to DPI Fisheries (Marine Parks) who are able to issue a permit. As part of the geobag structure is below MHWL a marine park permit is required. Obtaining this permit is a condition of any approval.

Jurisdictional prerequisites to the grant of consent imposed by the following controls have been satisfied including:

- Clause 4.6 of SEPP (Resilience and Hazards) 2021 (consideration of whether the land is contaminated);
- Clause 4.8 of SEPP (Biodiversity and Conservation) 2021 (approval is consistent with the approved koala plan of management that applies to the land);
- Clause 2.7, 2.10, 2.11 of SEPP (Resilience and Hazards) 2021 (the consent authority is satisfied that sufficient measures have been, or will be, taken to protect, and where

possible enhance, the biophysical, hydrological and ecological integrity of the littoral rainforest, as well the coastal use and coastal environment provisions).

Key issues are:

- Timing, triggers and method of geobag removal
- Erosion in proximity to structures (end effect)
- Aboriginal midden protection and management and AHIP
- Littoral rainforest protection and management
- Biodiversity
- Visual impact and beach amenity
- Marine Park protection
- Public beach access
- Vehicle beach access and machinery compound
- Agency submissions and concerns
- Consideration of adjacent DA for geobags at Reflections Clarkes Beach Caravan Park

Timing, triggers and method for geobag removal

A key aspect of this proposed development is that the geobags only protect the dune system when they are exposed. When the beach accretes (as it is now) and covers the geobags in sand then they effectively serve no purpose other than “insurance” against the next major erosion event. They have not been constructed as a permanent protection structure and will eventually disintegrate and potentially enter the marine park and become non-biodegradable rubbish that pollutes the ocean. Approximately 650 bags make up the structure.

One option is to remove the geobags when they are covered in sufficient sand that the beach has to some extent recovered and will remain stable without the geobags in place. This option could be undertaken when the sand above the geobag top layer is at a predetermined level. This was discussed with the applicant and they sought advice from their coastal engineer. The coastal engineer advised that it is preferred that the bags be removed when the top 50 % are fully exposed. The logic being that the excavation required to remove the exposed bags would be smaller and less likely to disrupt the steep dune face.

At first, it does not seem to make sense to remove the bags when they are exposed because they are at that point doing the job of protecting the main dune. However, if a decision has been made to allow for planned retreat of the coast and the Aboriginal middens and Beach Cafe have been moved then what happens after the bags are removed is planned retreat. But is this really any different if the geobags are covered in sand and the beach has recovered and is stable? Probably not. The steep dune face will be impacted in both scenarios over time

but that is the effect of planned retreat. If long term protection of the dune is required then an option other than geobags will need to be pursued.

Rather than have a trigger based on sand levels it is recommended that a time based trigger be applied so that there is a clear period of time in which planned retreat (or permanent protection) of key assets can be implemented.

It is recommended that consent be time limited with the maximum the bags can remain being 5 years from the date of approval. They can be removed sooner if the Aboriginal middens and Beach Café have been moved and a planned retreat approach is adopted for this locality.

The method of bag removal is outlined in the EIS. However, it is recommended that a more detailed Geobag Structure Removal Plan be prepared and submitted to Council for approval within six months of the date of this consent. The objective of this is to remove all of the geobag structure and rehabilitate the site. It must include, but not be limited to, the following:

- (a) Expected timeline for geobag removal and rehabilitation;
- (b) Details of site rehabilitation;
- (c) Details on waste management and recycling of all materials arising from the decommissioning; and
- (d) Expected maintenance period for areas disturbed by the geobag removal process including any landscaping and vegetation that needs to be replaced and re-established. A minimum of 3 months is anticipated.

Erosion in proximity to structures (end effect)

Hard structures on sandy beaches that are subject to wave action can result in the loss of the beach in front of the structure from wave action; and an “end effect” which is caused by wave action scouring at the end of the structure. In this case the sand is currently accreting on this part of the beach and the geobags are mostly buried and not affected by wave action. The geobag structures are underlain by a reef/rock layer which limits vertical scour in their vicinity. If the beach scours down to the reef/rock layer, WRL estimated that more than 2% of the geobags would be displaced in a 5 year average recurrence interval (ARI) wave event, necessitating repairs. Overtopping may also erode some of the backfill sand. The waves that impacted the geobags during the December 2020 storm event were approximately 1 to 2 year ARI. The geobag wall was undamaged, however, wave overtopping eroded some of the backfill sand, which was subsequently topped up. WRL observed that the end effects caused by the geobag structures to date are minor, but the potential seawall end effects extend into two beach access points. One access has been closed as a result. The end effects observed to date may not be the totality of end effects over the design life of the works. Beach nourishment with clean sand will be required to address end effects.

The applicant has responded to an RFI about the erosion potential further north within the embayment by commissioning a further report by WRL (Appendix 6). This new WRL report is

the same for this application as for the Reflections Clarkes Beach Holiday Park. The report states:

“The distance from the western end of the Clarkes Beach geobags to the eastern end of the Jonson Street protection works is approximately 750 m. The maximum alongshore distance observed to date for end effects from the Clarkes Beach geobags is 20 m. The maximum alongshore end effect distance estimated for the Clarkes Beach geobags for a 20 year ARI erosion event is 170 m to 250 m, noting that a 5 year design life is proposed.

It is proposed to import nourishment sand to offset sand ‘locked up’ by the Clarkes Beach geobags. Local planform change west of the Clarkes Beach geobags may still be observed following storm events, however, there will be no long-term loss of sand from the system.”

A minimum of 1,500 m³ (over five years) of “suitable sand” is required to be placed on Clarkes Beach to compensate for locked up sand within and behind the Beach Café part of the geobag structure.

Conditions can require that beach nourishment be used to address any end effect or erosion behind the geobag structure over the 5 year consent period.

Aboriginal midden protection and management and AHIP

The development application is supported by a report “Beach Byron Bay Clarkes Beach, Byron Bay NSW: Aboriginal Cultural Heritage Assessment”, by Everick Heritage August 2021. Everick note that there are three known midden sites in the vicinity of the works. It is assumed that middens may also be located in the dunes in the vicinity of the Beach Café. The middens

are significant to the Bundjalung of Byron Bay Aboriginal Corporation (BoBBAC). They support retaining the temporary geobags until a permanent solution is in place to protect the middens.

It is important that this assessment recognises that alongside obvious built structures (eg the Beach Cafe) these middens are very important to the local community.

It is recommended that an AHIP is sought for the following activities:

- Decommission of the coastal protection works when triggered or at the end of the agreed consent period;
- Revegetation works to provide medium to long-term stability to the dune face, including the use of fabric material to support the establishment of root structures;
 - Restrict pedestrian access to the midden area to protect it in the short term;
- As a mitigation measure it is further recommended that salvage of midden material is undertaken by BoBBAC that has
 - i. Slumped down the dune face and around the temporary geobag system; and
 - ii. Is at imminent risk of loss from storm surge and high tides.

BoBBAC will need to be involved in all works with the potential to impact on the middens.

These matters can be addressed in conditions. As Integrated development this DA has been referred to Heritage NSW and GTAs have been issued and are included in the proposed conditions of consent.

Littoral rainforest protection and management

Part of the subject land is mapped as an area of Littoral Rainforest under SEPP (Resilience and Hazards) that has been impacted heavily by coastal erosion events. The DA is designated because of the SEPP mapping. The location of the geobags is largely clear of substantial native vegetation. A key feature of dune restoration is over time to rehabilitate the site with native plants. There are important stands of coastal bushland and littoral rainforest in the adjacent Reserve and this will be protected by the proposed works unless the geobag structure is exposed and end effects occur. On balance the works will not harm any littoral rainforest and should assist in preserving and restoring remnants. No threatened flora species would be likely to be impacted by the proposal. Conditions requiring screening and protection of the littoral rainforest (etc) are included in the proposed conditions of consent.

Biodiversity

The application acknowledges that part of the subject land is mapped on the NSW Biodiversity Values Map. However no vegetation is to be cleared. A BAM and BDAR was not undertaken.

Vegetation impacts are likely to be minimal. Screening and replanting will have a positive effect.

In this case the development is temporary and the impact on threatened marine turtles or seabirds is ephemeral and dependant on the sand levels on the beach as much as the presence or absence of the geobag structure.

Placing machinery on a beach for maintenance works may impact on fauna that lives in the sand (eg pipis and worms). However, this is also likely to be a temporary impact with minimal impact in the long term.

It is noted that migratory Rainbow Bee-eater birds have nested in the steep dune face over summer. These birds will abandon these nests when the juveniles have fledged. Works on the dune face need to avoid the period of time that these birds are nesting.

It is unlikely that the development will have a significant effect on threatened species or ecological communities subject to conditions.

Visual impact and beach amenity

As the location of the geobag wall stabilises it will reduce visual impacts. As the beach builds up in front of it the impact on beach users will also be minimal. Use of sandy or green tones in screening and fencing material will also reduce visual impacts as will the growth of native vegetation on the dune face. Conditions to address visual impacts are proposed.

Marine Park protection

The ocean to the north of the proposed works site is part of a Habitat Protection Zone in the Cape Byron Marine Park. The Habitat Protection zone extends to “any area of waters of the sea or subject to tidal influence”. Although the geobag wall is currently above tidal influence it was not when it was installed (see survey) and may not be at some time in the future if the beach erodes again. Protecting the Cape Byron Marine Park, particularly from pollution by geobags is an important aspect of this assessment. The Marine Estate Management Act, 2014 and the Cape Byron Marine Park apply to the works. A marine park permit is required because part of the geobag structure is located below Mean High Water Mark. Conditions to address marine park impacts and require a permit are proposed.

Public beach access

The geobag structure occupies public land being located on a Public Reserve. Informal access to the dune will be discouraged with fencing and signage to allow it to recover. It is acceptable that the public be excluded from this damaged dune area.

A pedestrian access immediately west of the Beach Café was destroyed by coastal erosion and a separate process (under Part 5 of the EPA Act, 1979) is being pursued to close this access permanently once the beach has stabilised.

The public are using an access 50 m further to the west to reach the beach. This was a disabled access point but the erosion has made it unsuited to wheel chairs. It is still an ambulant access. Full restoration of this access can also be dealt with under Part 5 of the Act when the beach has stabilised and does not require development consent. However, it is appropriate that if the geobag structure comes back out of the sand and this access is affected

by “end effects” then its maintenance by sand nourishment is the responsibility of DPE Crown Lands (shared with Reflections).

Conditions to address public beach access impacts are proposed.

Vehicle beach access and machinery compound

The applicant has indicated two machinery compounds may be required, one east of the Beach Café and one near the “kayak hire” vehicle access to the west of the Beach Café. This is because they anticipate having to undertake sand nourishment east of the Beach Café and adjacent to the Reflections Holiday Park. While it may be appropriate to have a sand stockpile in this location it should not be a machinery compound as it is too close to the road access to the Holiday Park and too close to the remaining littoral rainforest in this location.

Only one machinery compound not larger than 1000 m² is to be located on the public reserve for maintenance or emergency works or geobag removal. It is to be located adjacent to the “kayak hire” vehicle access point.

Refuelling and maintenance of machinery should only be undertaken in the machinery compound. A spill kit will be maintained in the machinery compound at all times when machinery is located on the site. A second kit shall also be available in proximity to machines when they are being used on the beach.

The machinery compound should be removed and the site rehabilitated within 14 days of maintenance works being completed

Vehicle access to Clarkes Beach will only be via the “kayak hire” vehicle access point at approximately Easting 560692 and Northing 6831449.

Prior to the use of heavy vehicles in the reserve and on Clarkes Beach the applicant needs to prepare a Traffic Management Plan that addresses the safety issues related to the locality.

Conditions to address vehicle beach access, traffic management and the machinery compound are proposed.

Agency submissions and concerns

Agency submissions were received from Biodiversity, Conservation and Science Directorate (BCD), DPI Fisheries (Marine Parks) and Heritage NSW. None of these agencies objected outright to the development or gave reasons that it should be refused. A range of matters raised by the agencies have been incorporated into conditions of approval.

Heritage NSW has a key role to play in issuing an AHIP for the proposed works. The AHIP can also be subject to conditions.

DPI Fisheries (Marine Parks) has a key role to play in issuing a marine park permit for the proposed works which can also be subject to conditions.

Consideration of adjacent DA for geobags at Reflections Clarkes Beach Caravan Park

The geobag structure is physically linked to a similar structure located in front of the adjacent Reflections Clarkes Beach Holiday Park, but this structure is subject to a separate development application (DA 10.2021.698.1). However, it is appropriate that the two

developments be considered simultaneously and that any conditions imposed be consistent (not necessarily identical).

In particular the two structures need to be maintained in a consistent manner and preferably at the same time to avoid duplication of impacts. They also need to be removed at the same time to avoid the potential for one wall to be weakened without the other or cause end effects.

Conditions to achieve this are proposed.

Crown response to proposed conditions

The draft conditions were supplied to the applicant and a range of suggested amendments were agreed. The final conditions recommended by this report were supplied to the applicant for consideration on 26 May 2022. On 3 June 2022 the applicant advised:

“We are in general agreement with the revised conditions as per the attached document. However, we would like to request amendments to condition A1 and A2, as follows:

amend condition A1 to expressly include the Environmental Impact Statement dated 29 September 2021 and WRL report TR 2021/12, Geobag Walls at Clarkes Beach, Byron Bay (September 2021) as supporting documents endorsed by Council.

Comment: Inclusion of the EIS and other supporting documentation is not supported because these detailed documents are the work of the applicant and may not be entirely consistent with the position of the determining authority. Parts of the EIS and supporting documentation are inconsistent with proposed conditions and this will create uncertainty. Best practice is to only reference documents in a consent that are required for the interpretation and implementation of the consent. The EIS (etc) is not required to interpret or implement this approval.

amend condition A2 to clearly provide that DPE - Crown Lands will:

- decommission the coastal protection works (geobag structure) and/or cease associated works by the 5th anniversary of the determination date of the development consent, or*
- decommission the coastal protection works (geobag structure) and/or cease associated works at any time before the 5th anniversary of the determination date of the development consent if, in the opinion of DPE - Crown Lands, there has been a significant failure of the coastal protection works and/or associated works due to coastal processes, and it is not considered by DPE – Crown Lands to be feasible to repair or reinstate the works due to impacts from coastal processes on the beach and dunal system.”*

Comment: This condition has been amended to incorporate the bulk of the text suggested by DPE Crown Lands. The final conditions recommended by this report contain the amended condition A2.

A briefing was held with the Panel on 9 February 2022 where key issues were discussed.

Following a detailed assessment of the proposal, pursuant to Section 4.16(1)(b) of the EP&A Act, DA10.2021.630.1 is recommended for approval subject to the conditions at Appendix 1.

1.0 Introduction

Development Application 10.2021.630.1 (planning portal reference PAN 128905) was lodged with Council on 29 October 2021 as a designated development accompanied by an EIS (Appendix 5). The development is designated because it includes works in a Littoral Rainforest mapped in the Resilience and Hazards SEPP. The development is also Integrated Development, as per section 4.46 of the *Environmental Planning and Assessment Act 1979*, requiring the general terms of any approval proposed to be granted in relation to known Aboriginal sites which would require an Aboriginal Heritage Impact Permit pursuant to s.90 of the National Parks and Wildlife Act 1974. It is a Crown Development and pursuant to Section 4.33 of the EPA Act 1979 it cannot be refused except with the approval of the Minister or have a condition imposed upon it except with the approval of the relevant Crown body or the Minister.

It was publicly exhibited from 15 November to 15 December 2021, and no public submissions were received. The pre-lodgement public consultation provides some indication of public opinion (Appendix 3). Agency submissions were received from Biodiversity, Conservation and Science Directorate (DPIE), (BCD), Heritage NSW and DPI – Fisheries (Cape Byron Marine Park) (Appendix 4).

Part of the subject land has an approval for a restaurant (known locally as the Beach Café). It applies to Lot 9 DP 1049827. The approval has been amended on many occasions over a number of years.

Clarkes Beach was subject to significant coastal erosion event from mid-July 2019 when an east coast low event occurred coincident with spring high tides. To mitigate the coastal erosion risk to assets to the Clarkes Beach Holiday Park (adjacent site to the east), a geotextile sand container (sandbag) revetment was constructed in two sections in July 2019 as emergency coastal protection works. These works are still in place and subject to a separate development application.

In October 2020 coastal and structural/geotechnical engineers determined that the Beach Café building was at imminent risk of collapse onto the beach. NSW Department of Planning & Environment – Crown Lands (DPE - Crown Lands) constructed a temporary geotextile sand container (geobag) seawall and associated dune nourishment works in front of the Beach Café in November and December 2020. Some sand has also been brought to the site and used to stabilize the dune escarpment. More recently jute cloth has been used to further protect the escarpment.

The existing works were authorised under Part 5 of the Environmental Planning and Assessment Act 1979 (EP&A Act), in accordance with section 2.16 of State Environmental Planning Policy (Resilience and Hazards) 2021 which allows for the placing of sandbags by a public authority for a period of not more than 90 days for the purposes of temporary protection from coastal erosion.

2.0 Details of Proposal

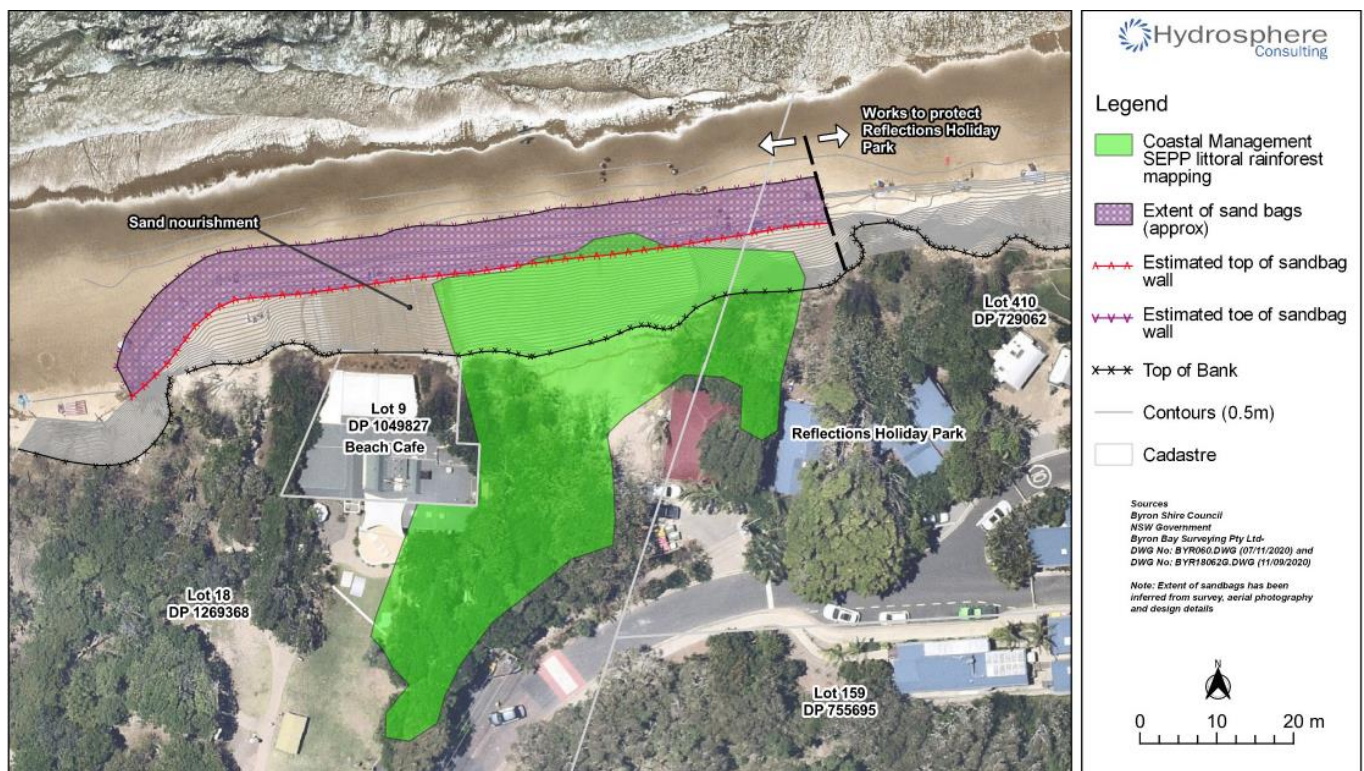
Development consent is sought to retain the existing temporary coastal protection works (sandbag structure) for a five-year period to provide a degree of temporary protection to the Beach Café site from coastal erosion and provide sufficient time to achieve the reconfiguration and/or relocation of the café. The geobags will be removed opportunistically after the five-year period has lapsed, if/when they are exposed. The sandbag structure is physically linked to a

similar structure located in front of the adjacent Reflections Clarkes Beach Holiday Park but this structure is subject to a separate development application (DA 10.2021.698.1).

The majority of the works are located on Lot 18 DP 1269368 (Figure 1). The subject land is part of Crown Reserve 82000 (R82000), managed by Byron Shire Council (Council) as Crown Land Manager. Lot 18, DP 1269368 is also a Crown public road. The eastern portion of Lot 18 DP 1269368 is bounded to the south by Lawson Street, with Lot 410 DP 729062 encompassing Reflections Holiday Park to the east.

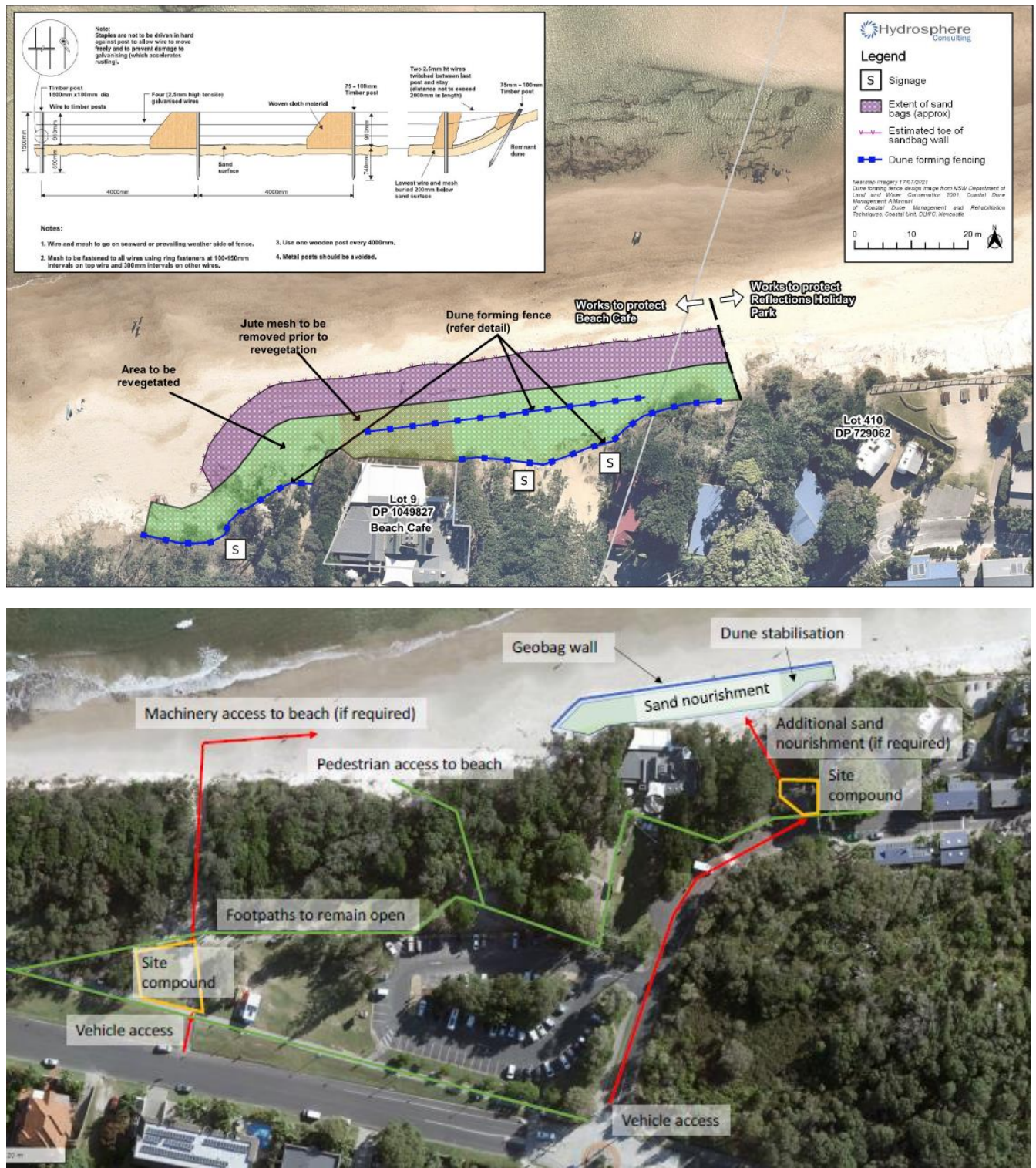
Lot 9, DP 1049827 is within Crown Lease LX 566595 for the Beach Café. A small part of the works affect this land (Figure 1).

Figure 1: Subject site and existing works



Other works that are part of this application include dune stabilisation and revegetation, dune forming fencing, regular monitoring of the works, maintenance of the geobags and beach nourishment (the importation of sand). Two temporary machinery compounds are proposed. The location of the proposed works is at Figure 2.

Figure 2: Subject site and proposed works, proposed compounds and access locations



The application also includes a site compound in the reserve to the west of the Beach Café in the public car park. It will temporarily occupy a section of the public park and the beach access typically utilised by a local kayak business. The compound would be required during

maintenance activities that require machinery access on the beach as well as during the decommissioning of the works.

The applicant states that decommissioning works proposed after 5 years will be subject to the advice of a geotechnical and/or structural engineer, noting that removal of geobags may cause the instability and collapse of the dune. The applicant states that timing of the removal will depend on several variables including:

- The volume of sand in the beach profile and the exposure and accessibility of the geobags.
- The geotechnical stability of any structures within the area.
- Meteorological, tidal and oceanic conditions.
- Public safety risks and expected beach visitation. School holidays and the peak tourist season will be avoided where possible.



Plate 1: The Beach Café is located above the existing coastal protection works proposed to remain for 5 years

3.0 Description of Subject Site and Surrounds

The majority of the works are located on Lot 18 DP 1269368 (Figure 3). The subject land is part of Crown Reserve 82000 (R82000), managed by Byron Shire Council (Council) as Crown

Land Manager. Lot 18, DP 1269368 is also a Crown public road. The eastern portion of Lot 18 DP 1269368 is bounded to the south by Lawson Street, with Lot 410 DP 729062 encompassing Reflections Holiday Park to the east.

Lot 9, DP 1049827 is within Crown Lease LX 566595 for the Beach Café. A small part of the works affect this land (Figure 3).

The subject land on which the works are located is a public beach because Lot 18 DP 1269368 now extends out into the surf zone and is partly below low water mark. Comparison of Figures 3 and 4 show that approximately 25 metres of vegetated dunes have been eroded from in front of the Beach Café over the last 3 years making it vulnerable to collapsing onto the beach.

Figure 3: Subject site and broader context in 2021 (*Source: Council GIS*)

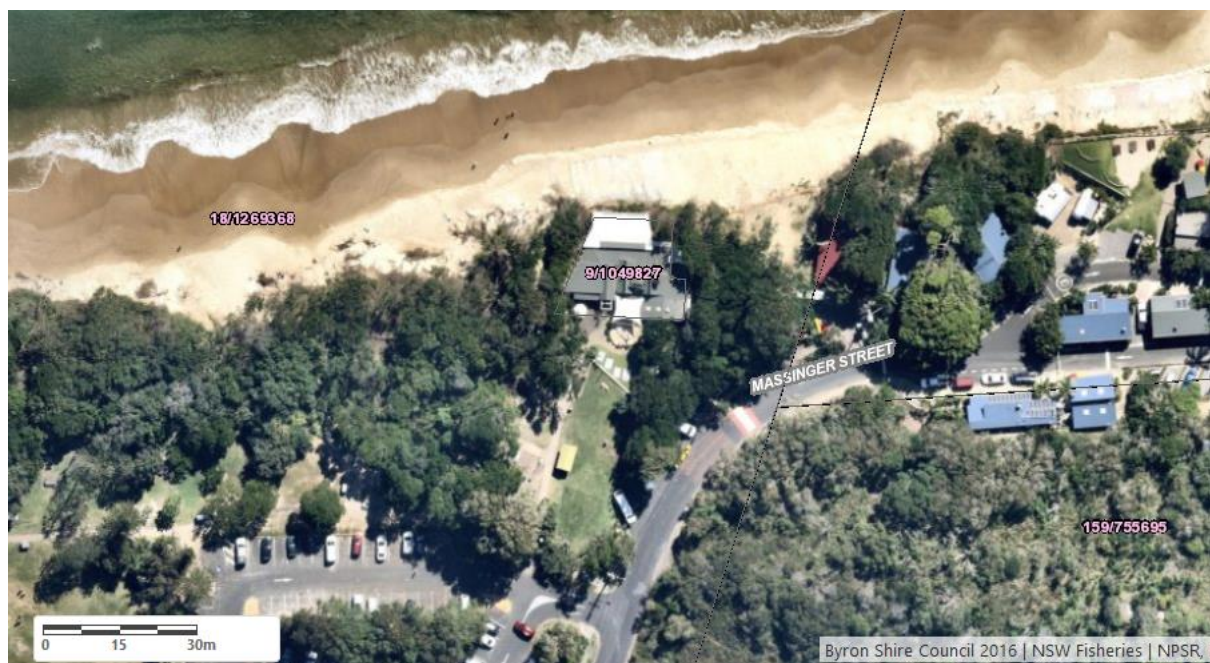


Figure 4: Subject site and broader context c. 2018 (*Source: SIX web site*)



The nearest development is the Reflections Clarkes Beach Holiday Park to the east (including Whites Cottage). A public car park is located to the south and beyond that is Lawson Street and residential development.

The subject land is a Deferred Matter under Byron LEP 2014 and this LEP does not impose any controls. It is zoned 7(f1) Coastal Land under Byron LEP 1988 (Figure 5). Under LEP 1988 the development is defined as **beach and coastal restoration works** and this use is permitted with consent in the 7(f1) zone.

Zone No 7 (f1) (Coastal Land Zone)

1 Objectives of zone

The objectives of the zone are—

- (a) to identify and protect environmentally sensitive coastal land,*
- (b) to enable development for certain purposes where such development does not have a detrimental effect on the habitat, landscape or scenic quality of the locality,*
- (c) to prevent development which would adversely affect, or be adversely affected by, coastal processes, and*
- (d) to enable the careful control of noxious plants and weeds by means not likely to be significantly detrimental to the native ecosystem.*

2 Without development consent

Nil.

3 Only with development consent

*Agriculture (other than animal establishments); **beach and coastal restoration works**; building of levees, drains or clearing of land; bushfire hazard reduction; clearing of land; community buildings; drainage; environmental facilities; forestry; home industries; markets; roads; primitive camping grounds; surf lifesaving facilities; utility installations.*

4 Prohibited

Any purpose other than a purpose specified in item 2 or 3.

beach and coastal restoration works means structures or works to restore the coastline from the effects of coastal erosion.

Figure 5: Land use zones under Byron LEP 1988 – site is zoned 7(f1) Coastal Lands



4.0 Background of Proposal

Part of the subject land has been used for a small beachside café since the late 1970's. It has been subject to numerous alterations and additions and over time it was lawfully expanded to the current format of a restaurant with a substantive dining area as well as a takeaway facility.

SEARs were issued for the preparation of the EIS on 21 May 2021. A facilitated on-line community meeting was held on 9 July 2021 as an early consultation process. The development application was lodged with Council on 29 October 2021 as a designated

development accompanied by an EIS prepared Hydrosphere Consulting. It was referred to a range of government agencies.

It was also notified to neighbouring land owners and placed on public exhibition.

A letter requesting further information was issued on 7 December 2021. A response to that RFI was received by Council on 17 December 2021. The matters raised in the initial RFI and responded to include:

- Trigger and methodology for removal of the geobags after five years
- Consistency with cl 2.12 of SEPP (Resilience and Hazards) “Development in coastal zone generally—development not to increase risk of coastal hazards” and the potential for end effects.
- Absence of a BAM or BDAR.
- Management of Aboriginal middens on site and need for an AHIP to accompany any works.

A further letter requesting information was issued on 11 February 2022. A response to the second RFI was received by Council on 8 March 2022. The matters raised in the second RFI and responded to include:

- The reasons why the geobag structure was not removed after 90 days as expected pursuant to s.2.16 of the Resilience and Hazards SEPP.
- The potential impacts of the geobag structures on coastal land further along Main Beach and beyond.
- The reason that a 5 year consent period (specifically) has been requested.

The RFIs, responses and additional information supplied is at Appendix 6.

5.0 Matters for Consideration

The proposed development has been assessed under the heads of consideration in section 4.15 of the *Environmental Planning and Assessment Act 1979*. The assessment has identified the following key issues, which are elaborated upon for the Panel’s consideration.

5.1 Section 4.15(1)(a)(i) provisions of any environmental planning instrument

5.1.1 State Environmental Planning Policy (Biodiversity and Conservation) 2021

Chapter 4 (Koala Habitat Protection 2021) of this SEPP applies to the subject land because Council has prepared and adopted a Koala Plan of Management that applies to the subject land. The SEPP states:

Part 4.2 Development control of koala habitats

4.8 Development assessment process—approved koala plan of management for land

(1) This clause applies to land to which this Policy applies and to which an approved koala plan of management applies.

(2) The council's determination of the development application must be consistent with the approved koala plan of management that applies to the land.

Comment: The subject land is not identified in a Koala Management Precinct and is not in an area known to have a resident Koala population. A flora and fauna assessment shows that the locality is not potential or core Koala habitat. No vegetation is proposed to be removed as part of this application. No further assessment is triggered. The consent authority is not prevented from granting consent by this SEPP or the Koala Plan of Management.

5.1.2 State Environmental Planning Policy (Resilience and Hazards) 2021

A number of clauses in this SEPP apply to this development and need to be considered. The location of the geobags partly affects an area mapped as Littoral Rainforest under the SEPP (Figure 6). The area is not affected by Coastal Wetland mapping. The SEPP states:

2.7 Development on certain land within coastal wetlands and littoral rainforests area

(1) The following may be carried out on land identified as "coastal wetlands" or "littoral rainforest" on the Coastal Wetlands and Littoral Rainforests Area Map only with development consent—

(a) the clearing of native vegetation within the meaning of Part 5A of the Local Land Services Act 2013,

(b) the harm of marine vegetation within the meaning of Division 4 of Part 7 of the Fisheries Management Act 1994,

(c) the carrying out of any of the following—

(i) earthworks (including the depositing of material on land),

(ii) constructing a levee,

(iii) draining the land,

(iv) environmental protection works,

(d) any other development.

(2) Development for which consent is required by subclause (1), other than development for the purpose of environmental protection works, is declared to be designated development for the purposes of the Act.

(3) Despite subclause (1), development for the purpose of environmental protection works on land identified as "coastal wetlands" or "littoral rainforest" on the Coastal Wetlands and Littoral Rainforests Area Map may be carried out by or on behalf of a public authority without development consent if the development is identified in—

(a) the relevant certified coastal management program, or

(b) a plan of management prepared and adopted under Division 2 of Part 2 of Chapter 6 of the Local Government Act 1993, or

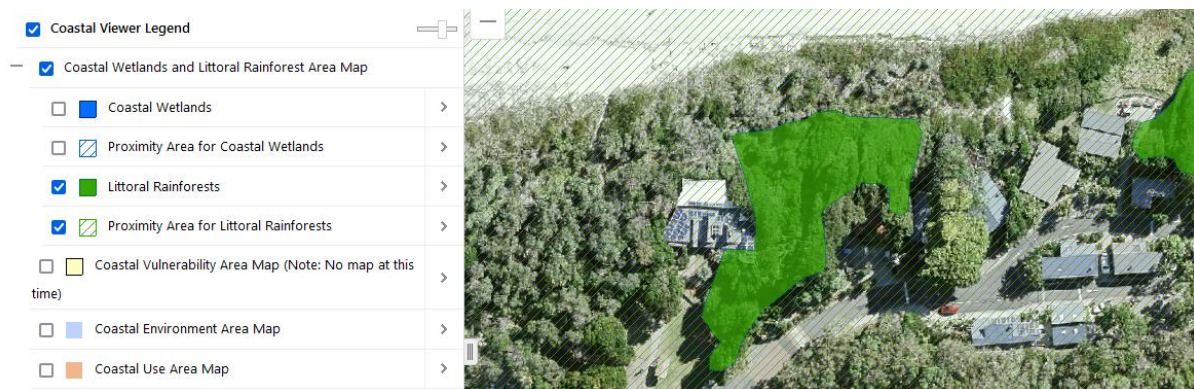
(c) a plan of management under Division 3.6 of the Crown Land Management Act 2016.

(4) A consent authority must not grant consent for development referred to in subclause (1) unless the consent authority is satisfied that sufficient measures have been, or will be, taken to protect, and where possible enhance, the biophysical, hydrological and ecological integrity of the coastal wetland or littoral rainforest.

(5) Nothing in this clause requires consent for the damage or removal of a priority weed within the meaning of clause 32 of Schedule 7 to the Biosecurity Act 2015.

(6) This clause does not apply to the carrying out of development on land reserved under the National Parks and Wildlife Act 1974 if the proposed development is consistent with a plan of management prepared under that Act for the land concerned

Figure 6: SEPP Littoral Rainforest mapping at the site



Comment: This clause provides that any development in the mapped core area requires development consent and that the development application must be accompanied by an EIS. Although the applicant in this case is a public authority it still requires consent because the locality is not identified in a certified coastal management program and has no plan of management. The EIS submitted with this DA fulfils the requirements of this clause. Sub clause 4 provides that a consent authority must be satisfied that the Littoral Rainforest will be protected and where possible enhanced. No vegetation is required to be removed as part of this application. The littoral rainforest was damaged by coastal erosion and dead trees ended up on the beach as a result. The control of erosion by a geobag structure and sand replenishment will act to protect the remaining littoral rainforest. Salt protection from the proposed “dune forming fencing” and eventually rehabilitation of the dune with native vegetation will enhance the littoral rainforest that remains. The proposed development is compliant with this requirement of the SEPP.

The SEPP also states in relation to littoral rainforest:

2.8 Development on land in proximity to coastal wetlands or littoral rainforest

(1) Development consent must not be granted to development on land identified as “proximity area for coastal wetlands” or “proximity area for littoral rainforest” on the Coastal Wetlands and Littoral Rainforests Area Map unless the consent authority is satisfied that the proposed development will not significantly impact on—

(a) the biophysical, hydrological or ecological integrity of the adjacent coastal wetland or littoral rainforest, or

(b) the quantity and quality of surface and ground water flows to and from the adjacent coastal wetland or littoral rainforest.

(2) This clause does not apply to land that is identified as “coastal wetlands” or “littoral rainforest” on the Coastal Wetlands and Littoral Rainforests Area Map.

Comment: This clause identifies an area within 100 metres of a mapped core littoral rainforest area. Part of the geobag structure is located in this area. Sub clause 1 provides that a consent authority must be satisfied that the adjacent Littoral Rainforest will not be significantly impacted in relation to its biophysical, hydrological or ecological integrity. The geobag structure is intended to stabilise the eroded dune face for a period of five years to allow it to recover from the recent severe erosion event. It will have a positive biophysical impact as it will reduce the likelihood of the littoral rainforest collapsing into the ocean over that period. Stabilising the dune face is likely to maintain the hydrology of the subject land. The planting of native vegetation and the proposed “dune forming fencing” will protect the remaining littoral rainforest from excessive salt exposure and as the dune reforms it will enhance the ecology of the littoral rainforest. The proposed development is compliant with this requirement of the SEPP.

The SEPP also identifies the subject land as being mapped within the coastal environment area (Figure 7) and the following provisions apply to development in this area:

2.10 Development on land within the coastal environment area

(1) Development consent must not be granted to development on land that is within the coastal environment area unless the consent authority has considered whether the proposed development is likely to cause an adverse impact on the following—

(a) the integrity and resilience of the biophysical, hydrological (surface and groundwater) and ecological environment,

(b) coastal environmental values and natural coastal processes,

(c) the water quality of the marine estate (within the meaning of the Marine Estate Management Act 2014), in particular, the cumulative impacts of the proposed development on any of the sensitive coastal lakes identified in Schedule 1,

(d) marine vegetation, native vegetation and fauna and their habitats, undeveloped headlands and rock platforms,

(e) existing public open space and safe access to and along the foreshore, beach, headland or rock platform for members of the public, including persons with a disability,

(f) Aboriginal cultural heritage, practices and places,

(g) the use of the surf zone.

(2) Development consent must not be granted to development on land to which this clause applies unless the consent authority is satisfied that—

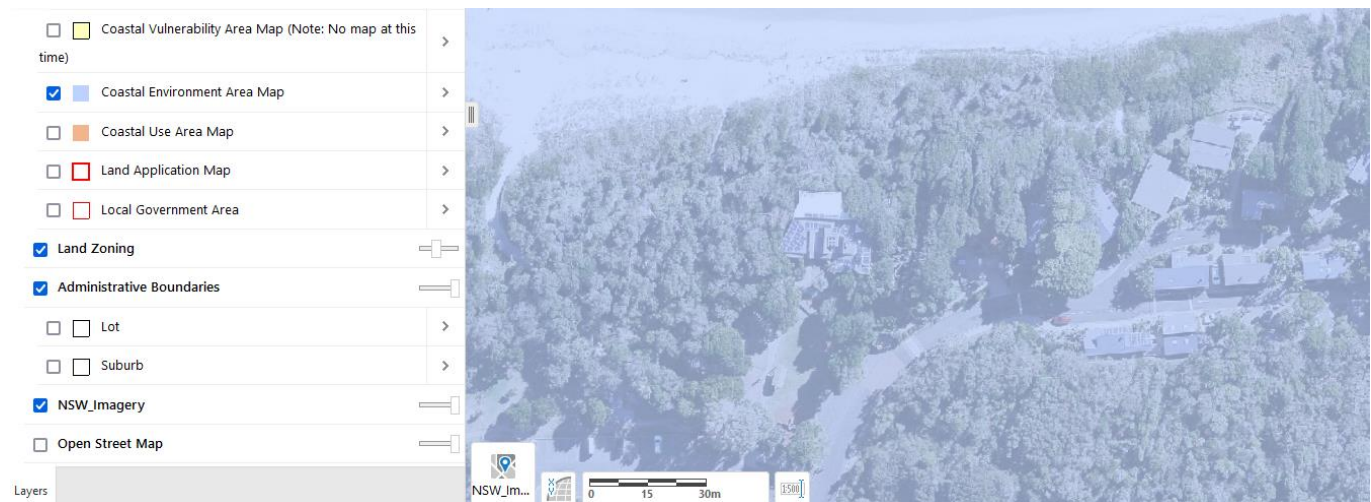
(a) the development is designed, sited and will be managed to avoid an adverse impact referred to in subclause (1), or

(b) if that impact cannot be reasonably avoided—the development is designed, sited and will be managed to minimise that impact, or

(c) if that impact cannot be minimised—the development will be managed to mitigate that impact.

(3) This clause does not apply to land within the Foreshores and Waterways Area within the meaning of Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005.

Figure 7: SEPP Coastal Environment Area mapping at the site



Comment: The following table addresses each subclause within clause 2.10 in relation to impact avoidance, and if relevant impact minimisation and mitigation.

SEPP Clause 2.10	Comment
1(a) the integrity and resilience of the biophysical, hydrological (surface and groundwater) and ecological environment	Retention of the geobag structure and associated dune restoration and vegetation rehabilitation works will have minimal or neutral impacts on hydrology. The bags are porous. The impacts on the ecology will be positive through dune and rainforest plantings and restoration. The biophysical impact will be positive by creating an environment where the steep erosion escarpment can rebuild and stabilise over time.

	Removal of the geobag structure in five years will be subject to a management plan to minimise any negative impacts.
<i>1(b) coastal environmental values and natural coastal processes</i>	<p>The coastal values of this locality include: a white sandy beach that is accessible at both low and high tides; an ocean beach that is safe for swimming and surfing; access from Lawson Street through Clarkes Beach Park to the beach; and a natural backdrop of sand dunes that are vegetated and safe.</p> <p>The proposed works will not cause an adverse impact on these values and if successful will be a significant improvement on the severely degraded beach environment that has been created by natural processes in recent times.</p> <p>The natural coastal process in this location are that the coastline is in recession. Sand will come and go but overall the beach is predicted to move south due to a sand deficit. The geobag structure is designed to slow down the recession and accelerate any short term accretion in this location.</p> <p>The studies produced to support the EIS identified that an erosion “end effect” will occur if wave action impacts on the geobag structure. Waves are not able to reach the structure with current sand levels. If the end effect of the geobag structure can be avoided then the likely impact on natural coastal process over a 5 year period will be minimal. Conditions can be imposed to address any issues that arise over than 5 year period and the geobag structure removal process.</p>
<i>1(c) the water quality of the marine estate (within the meaning of the Marine Estate Management Act 2014), in particular, the cumulative impacts of the proposed development on any of the sensitive coastal lakes</i>	The water quality of the marine environment is unlikely to be impacted if the geobag structure is retained for five years and then carefully removed. Conditions will be imposed so that the geotextile bags are not washed in the ocean causing pollution if a major erosion event occurs and the structure is destroyed.

	No sensitive coastal lakes are located in proximity to the subject land.
<i>1(d) marine vegetation, native vegetation and fauna and their habitats, undeveloped headlands and rock platforms</i>	<p>No marine or other native vegetation will be adversely impacted in any way by the development. No significant fauna impacts are predicted. The issue of marine turtles accessing the beach has been addressed by natural sand accretion that now covers the geobag structure. If sand does not remain (or accrete further) then beach nourishment will be required. The geobags will be removed as a condition of any approval after five years (at the longest).</p> <p>No headlands are in proximity to the works. A rock platform exists in front of the works but only when the beach has been stripped of its sand. It is usually quickly covered as sand slugs migrate around Cape Byron.</p> <p>The development will not impact on the rock platform.</p>
<i>1(e) existing public open space and safe access to and along the foreshore, beach, headland or rock platform for members of the public, including persons with a disability</i>	<p>The geobag structure occupies public land being located on a Public Reserve. Informal access to the dune will be discouraged with fencing and signage to allow it to recover. It is acceptable that the public be excluded from this damaged dune area.</p> <p>A pedestrian access immediately west of the Beach Café was destroyed by coastal erosion and a separate process (under Part 5 of the Act) is being pursued to restore it once the beach has stabilised.</p> <p>The public are using a beach access further to the west to access the beach. This was a disabled access point but the erosion has made it unsuited to wheel chairs. It is still an ambulant access. Full restoration of this access (including as a disabled access), can also be dealt with under Part 5.</p>
<i>1(f) Aboriginal cultural heritage, practices and places</i>	<p>The Bundjalung of Byron Bay (Arakwal) identify this locality as culturally significant. There are three recorded middens in the vicinity of the works.</p> <p>Retention of the geobag structure will have minimal impacts on any sites. While the</p>

	<p>works are in place, they provide temporary protection to any middens remaining in the dune behind the geobag structure.</p> <p>Decommissioning of the structure will be undertaken in consultation with the Bundjalung of Byron Bay Aboriginal Corporation (BoBBAC) and other key stakeholders. It will also trigger an AHIP as it will likely affect Aboriginal middens. This will be addressed as a condition of any approval.</p> <p>On the 5 August 2021 the BoBBAC Board of Directors agreed to have cultural site monitors during any excavation work and suggested the geo bags stay in place for 2 - 5 years.</p> <p>Removing the geobag structure before the long term future of the middens has been decided and implemented will likely result in the loss of these sites in the next erosion event that affects the dune face.</p> <p>The location of the middens is a critical factor in recommending conditional approval for this DA.</p>
<i>1(g) the use of the surf zone</i>	<p>The geobag structure occupies land that will become steadily further from the surf zone as the beach accretes. In its current state it has no impact on the surf zone. If a major erosion event occurs and the beach is lowered a rock shelf is exposed and the beach becomes unsuitable for swimming or surfing at this location.</p>

The SEPP also identifies the subject land as being mapped within the coastal use area (Figure 8) and the following provisions apply to development in this area:

2.11 Development on land within the coastal use area

(1) Development consent must not be granted to development on land that is within the coastal use area unless the consent authority—

(a) has considered whether the proposed development is likely to cause an adverse impact on the following—

(i) existing, safe access to and along the foreshore, beach, headland or rock platform for members of the public, including persons with a disability,

(ii) overshadowing, wind funnelling and the loss of views from public places to foreshores,

(iii) the visual amenity and scenic qualities of the coast, including coastal headlands,

(iv) Aboriginal cultural heritage, practices and places,

(v) cultural and built environment heritage, and

(b) is satisfied that—

(i) the development is designed, sited and will be managed to avoid an adverse impact referred to in paragraph (a), or

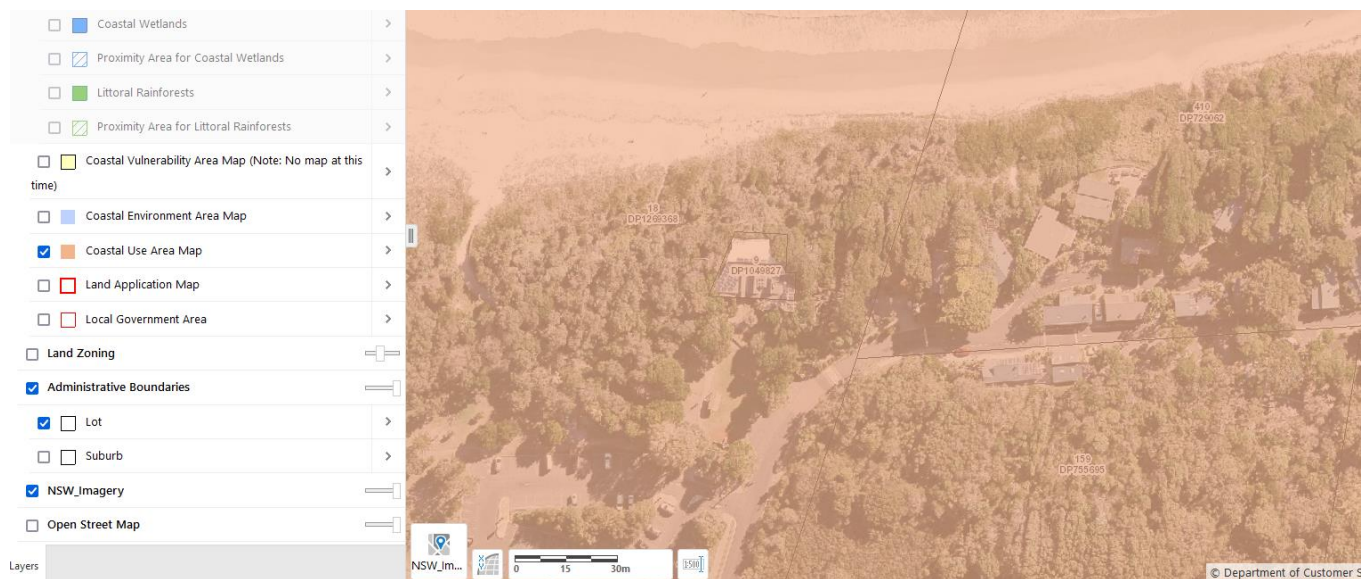
(ii) if that impact cannot be reasonably avoided—the development is designed, sited and will be managed to minimise that impact, or

(iii) if that impact cannot be minimised—the development will be managed to mitigate that impact, and

(c) has taken into account the surrounding coastal and built environment, and the bulk, scale and size of the proposed development.

(2) This clause does not apply to land within the Foreshores and Waterways Area within the meaning of Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005.

Figure 8: SEPP Coastal Use Area mapping at the site



Comment: The following table addresses each subclause within clause 2.11 in relation to impact avoidance, and if relevant impact minimisation and mitigation.

SEPP Clause 2.11	Comment
<p><i>1(a) (i) existing, safe access to and along the foreshore, beach, headland or rock platform for members of the public, including persons with a disability,</i></p>	<p>The geobag structure occupies public land being located on a Public Reserve. Informal access to the dune will be discouraged with fencing and signage to allow it to recover. It is acceptable that the public be excluded from this damaged dune area.</p> <p>A pedestrian access immediately west of the Beach Café was destroyed by coastal erosion and a separate process (under Part 5 of the Act) is being pursued to restore it once the beach has stabilised.</p> <p>The public are using a beach access further to the west to access the beach. This was a disabled access point but the erosion has made it unsuited to wheel chairs. It is still an ambulant access. Full restoration of this access (including as a disabled access), can also be dealt with under Part 5.</p> <p>Access along the beach will not be inhibited by the geobag structure unless it is uncovered in a major erosion event and moved around. If this happens in the first five years the geobags will be restored or removed. After five years they will be removed.</p>
<p><i>1(a) (ii) overshadowing, wind funnelling and the loss of views from public places to foreshores,</i></p>	<p>The proposed works will not overshadow the beach or create wind funnelling effects.</p> <p>The geobag structure is almost completely covered by sand as at February 2022 and therefore it has no impact on views.</p> <p>Initially the dune forming fencing will be visible but it will eventually also be covered in sand as the dune recovers. Fencing and screening will need to be colours that blend into the environment.</p>
<p><i>1(a)(iii) the visual amenity and scenic qualities of the coast, including coastal headlands,</i></p>	<p>The coastal values of this locality include: a white sandy beach that is accessible at both low and high tides; an ocean beach that is safe for swimming and surfing.</p>

	<p>The bay and Cape Byron provide an outstanding coastal backdrop to the locality.</p> <p>Dune restoration will have some visual impact initially but this impact is diminished over time as sand returns and vegetation is planted or regrows.</p> <p>It is important that dune screening is either green or sand coloured to blend into the backdrop.</p>
<i>1(a)(iv) Aboriginal cultural heritage, practices and places,</i>	<p>The Bundjalung of Byron Bay (Arakwal) identify this locality as culturally significant. There are three recorded middens in the vicinity of the works.</p> <p>Retention of the geobag structure will have minimal impacts on any midden sites. While the works are in place, they provide temporary protection to any middens remaining in the dune behind the geobag structure.</p> <p>Decommissioning of the structure will be undertaken in consultation with the Bundjalung of Byron Bay Aboriginal Corporation (BoBBAC) and other key stakeholders. It will also trigger an AHIP as it will likely affect Aboriginal middens. This will be addressed as a condition of any approval.</p> <p>On the 5 August 2021 the BoBBAC Board of Directors agreed to have cultural site monitors during any excavation work to the proposed path works and that the geo bags should stay in place as required for 2 - 5 years.</p>
<i>1(a)(v) cultural and built environment heritage</i>	<p>The proposed works are in proximity to Whites Cottage which is an old holiday cottage on the adjacent Reflections site. It is not heritage listed and not currently used. It was recognised in the 2007 Byron Shire Community-Based Heritage Study and recommended for local heritage listing. It will be protected by the geobag structure in any case.</p> <p>The Beach Café is not a heritage listed structure but it has cultural value as one of</p>

	only a small number of restaurants in Byron Bay that are close to the coast. It has been popular for locals and tourists.
--	---

In its General Provisions the SEPP specifies that any development is not to increase the risk of coastal hazards as follows:

2.12 Development in coastal zone generally—development not to increase risk of coastal hazards

Development consent must not be granted to development on land within the coastal zone unless the consent authority is satisfied that the proposed development is not likely to cause increased risk of coastal hazards on that land or other land.

Seven coastal hazards are defined under the NSW Coastal Management Act (2016) as follows:

The NSW Coastal Management Act (2016) defines seven coastal hazards, namely:

a) beach erosion

b) shoreline recession

c) coastal lake or watercourse entrance instability

d) coastal inundation

e) coastal cliff or slope instability

f) tidal inundation

g) erosion and inundation of foreshores caused by tidal waters and the action of waves, including the interaction of those waters with catchment floodwaters

Comment: This provision does not have the option of avoid, mitigate or minimise. It requires that development is “not likely to cause increased risk of coastal hazards”. The WRL report on this issue states “The end effects observed to date are minor”; and “Potential seawall end effects extend into two beach access points”; and “Until such time that the interim works can be removed, management of the impacts of the works is best undertaken through the following means” (etc).

The applicant is not stating that there will be no increased risk of coastal hazards rather that the increase will be minor and able to be managed.

The increased risk of coastal hazards can only be avoided if the geobags are totally under the sand surface of the beach and therefore outside the wave zone or they are removed.

The applicant has responded to an RFI about the erosion potential further north within the embayment by commissioning a further report by WRL (Appendix 6). This new WRL report is the same for this application as for the Reflections Clarkes Beach Holiday Park. The report states:

“The distance from the western end of the Clarkes Beach geobags to the eastern end of the Jonson Street protection works is approximately 750 m. The maximum alongshore distance

observed to date for end effects from the Clarkes Beach geobags is 20 m. The maximum alongshore end effect distance estimated for the Clarkes Beach geobags for a 20 year ARI erosion event is 170 m to 250 m, noting that a 5 year design life is proposed.

It is proposed to import nourishment sand to offset sand 'locked up' by the Clarkes Beach geobags. Local planform change west of the Clarkes Beach geobags may still be observed following storm events, however, there will be no long-term loss of sand from the system."

A minimum of 1,500 m³ (over five years) of "suitable sand" is required to be placed on Clarkes Beach to compensate for locked up sand within and behind the Beach Café part of the geobag structure.

Conditions can require that beach nourishment be used to address any end effect or erosion behind the geobag structure over the 5 year consent period.

2.13 Development in coastal zone generally—coastal management programs to be considered

Development consent must not be granted to development on land within the coastal zone unless the consent authority has taken into consideration the relevant provisions of any certified coastal management program that applies to the land.

Comment: No certified coastal management plan applies to the land.

In its Miscellaneous Provisions the SEPP specifies the circumstances in which coastal protection works can be undertaken with or without development consent:

2.16 Coastal protection works

(1) Coastal protection works by person other than public authority Development for the purpose of coastal protection works may be carried out on land to which this Policy applies by a person other than a public authority only with development consent.

(2) Coastal protection works by public authority Development for the purpose of coastal protection works may be carried out on land to which this Policy applies by or on behalf of a public authority—

(a) without development consent—if the coastal protection works are—

(i) identified in the relevant certified coastal management program, or

(ii) beach nourishment, or

(iii) the placing of sandbags for a period of not more than 90 days, or

(iv) routine maintenance works or repairs to any existing coastal protection works, or

(b) with development consent—in any other case.

Comment: The applicant in this case is a public authority however a certified coastal management program is not in place, it involves more than beach nourishment and the

geobags are to be in place for five years. On this basis development consent for the works is required.

In the second RFI the applicant was asked why it had not removed the geobags after 90 days as it was required to do so. The response in summary, was:

“The geobag structure, in combination with beach nourishment works, was designed to maintain a specified dune slope of 32 to 35 degrees in front of the café to prevent its collapse. If the geobag structure was or is to be removed, the specified slope cannot be maintained with any confidence, as the dune will be significantly more exposed and vulnerable to dynamic coastal and geomorphological processes. The geobag structure has not been removed since the lapsing of 90 days, as it was and still is, not considered safe to do so”.

State Environmental Planning Policy (Transport and Infrastructure) 2021

This SEPP includes provisions that appear to permit foreshore management activities without consent in clause 2.164.

2.164 Development permitted without consent

(1) Despite clause 2.164, development for the purpose of waterway or foreshore management activities may be carried out by or on behalf of a public authority without consent on any land.

It also includes clause 2.7 that explains the relationship between SEPP Transport and Infrastructure and SEPP Resilience and Hazards.

2.7 Relationship to other environmental planning instruments

(1) Except as provided by subclause (2), if there is an inconsistency between this Policy and any other environmental planning instrument, whether made before or after the commencement of this Policy, this Policy prevails to the extent of the inconsistency.

*(2) Except as provided by subclauses (3) and (4), if there is an inconsistency between a provision of this Policy and any of the following provisions of another environmental planning instrument, the provision of the **other instrument prevails** to the extent of the inconsistency—*

*(a) clausesand **2.16 of State Environmental Planning Policy (Resilience and Hazards) 2021,***

Comment: The fact that Clause 2.16 of SEPP Resilience and Hazards prevails over SEPP Transport and Infrastructure means that coastal protection works (or foreshore management activities) require development consent.

5.1.3 State Environmental Planning Policy (Resilience and Hazards) 2021 (Chapter 4 Remediation of Land)

Clause 4.6 of this SEPP outlines how contamination and remediation is to be considered in determining development applications.

- (1) *A consent authority must not consent to the carrying out of any development on land unless—*
- (a) *it has considered whether the land is contaminated, and*
 - (b) *if the land is contaminated, it is satisfied that the land is suitable in its contaminated state (or will be suitable, after remediation) for the purpose for which the development is proposed to be carried out, and*
 - (c) *if the land requires remediation to be made suitable for the purpose for which the development is proposed to be carried out, it is satisfied that the land will be remediated before the land is used for that purpose.*

Comment: Council's Unhealthy Building Land mapping layer does not identify that this site is contaminated. There is a history of sandmining in Byron Bay including land to the west of Massinger Street that is now occupied by Clarkes Beach Park, Lawson Street and the Sandhills Estate (Figure 9).

Figure 9: Byron Bay Sandmining area c. 1971



It is unlikely that the dunes where the geobags are located have been sand mined as there are multiple middens located there and these would have been destroyed by sand mining. There is no other evidence of past land use that may have contaminated the site. Further detailed investigation is not warranted.

The proposed use in this application is not a residential or otherwise sensitive use as listed in the SEPP.

On balance, it is unlikely that the site is contaminated or requires remediation to enable it to be used as a location for a coastal protection structure for a period of five years.

5.1.4 State Environmental Planning Policy (Planning Systems) 2021

Clause 2.19 of the SEPP declares certain development to be Regionally Significant if it is identified in Schedule 6.

Schedule 6 is as follows:

8A *Certain coastal protection works*

- (1) *The following development on land within the coastal zone that is directly adjacent to, or is under the waters of, the open ocean, the entrance to an estuary or the entrance to a coastal lake that is open to the ocean—*
 - (a) *development for the purpose of coastal protection works carried out by a person other than a public authority, other than coastal protection works identified in the relevant certified coastal management program,*
 - (b) ***development for the purpose of coastal protection works carried out by or on behalf of a public authority*** *(other than development that may be carried out without development consent under clause 2.16 of State Environmental Planning Policy (Resilience and Hazards) 2021.*
- (2) *Words and expressions used in this clause have (in relation to coastal protection works) the same meaning as they have in State Environmental Planning Policy (Resilience and Hazards) 2021.*

Comment: The proposed coastal protection works are regionally significant development to be undertaken by a public authority that are not identified in clause 2.16 of State Environmental Planning Policy (Resilience and Hazards) 2021. They do not trigger the State significant development criteria.

5.1.5 Byron Local Environmental Plan 1988 (and 2014)

Byron LEP 2014 identifies the subject land as a Deferred Matter which means that Byron LEP 1988 applies

Definition, Permissibility and Zone Objectives

The development is defined as *beach and coastal restoration works* and is permitted in the 7(f1) Coastal Lands zone with consent. The development will take place entirely on land in this zone.

beach and coastal restoration works means structures or works to restore the coastline from the effects of coastal erosion.

The objectives of the 7(f1) Coastal Lands zone are as follows:

- (a) to identify and protect environmentally sensitive coastal land,*
- (b) to enable development for certain purposes where such development does not have a detrimental effect on the habitat, landscape or scenic quality of the locality,*
- (c) to prevent development which would adversely affect, or be adversely affected by, coastal processes, and*
- (d) to enable the careful control of noxious plants and weeds by means not likely to be significantly detrimental to the native ecosystem.*

Comment: The proposed development complies with the majority of these objectives, and the others are not relevant or justifiably inconsistent as follows:

The proposed beach and coastal restoration works are located on land correctly identified as environmentally sensitive coastal land.

The works to stabilise and restore the dune will have a positive impact on habitat restoration, and will over time improve the scenic and landscape quality of the locality as native vegetation returns to the exposed dune face and sand accretes along the beach.

The development is intended to be located in an area affected by coastal processes and that cannot be avoided.

Once the geobags are covered by sand and not subject to tide and wave action then there will be no adverse impact on coastal processes in the vicinity. Conditions can be imposed to address the scenario where the geobags become exposed.

Clause 2 Aim, objectives and guiding principles

*(1) **Aim** The aim of this plan is to promote sustainable development in Byron by furthering the objects of the Environmental Planning and Assessment Act 1979, particularly in regard to—*

(a) the application to proposed development of guiding principles for the management, development and conservation of natural and human made resources (including natural areas, forests, coastal areas, water, agricultural land, extractive resources, towns, villages and cultural amenities) for the purpose of promoting the social and economic welfare of the community, protecting ecological and cultural heritage and achieving a better environment,

(b) the promotion and coordination of the orderly and economic use and development of land,

(c) the provision and coordination of community services and facilities,

(d) the protection of the environment, including the protection and conservation of native animals and plants, including threatened species, populations and ecological communities and their habitats,

(e) the provision of increased opportunity for public involvement and participation in environmental planning and assessment, and

(f) the protection and promotion of the use and development of land for arts and cultural activity, including music and other performance arts.

(2) Objectives *The objectives of this plan are—*

(a) to enhance individual and community (social and economic) well-being by following a path of economic development that safeguards the welfare of future generations,

(b) to provide for equity within and between generations, and

(c) to protect biodiversity, and re-establish and enhance essential ecological processes and life support systems.

(3) Guiding principles *The objectives can be achieved through the implementation of the following guiding principles—*

(a) The precautionary principle. The precautionary principle means that where there are threats of serious or irreversible damage to the community's ecological, social or economic systems, a lack of complete scientific evidence should not be used as a reason for postponing measures to prevent environmental degradation. In some circumstances this will mean actions will need to be taken to prevent damage even when it is not certain that damage will occur.

(b) The principle of intergenerational equity. This principle means that the present generation must ensure that the health, integrity, ecological diversity, and productivity of the environment is at least maintained or preferably enhanced for the benefit of future generations.

(c) The principle of conserving biological diversity and ecological integrity. This principle aims to protect, restore and conserve the native biological diversity and enhance or repair ecological processes and systems.

(d) The principle of improving the valuation and pricing of social and ecological resources. This principle means that the users of goods and services should pay prices based on the full life cycle costs (including the use of natural resources at their replacement value, the ultimate disposal of any wastes and the repair of any consequent damage).

(e) The principle of eliminating or reducing to harmless levels any discharge into the air, water or land of substances or other effects arising from human activities that are likely to cause harm to the environment.

(f) The principle of encouraging a strong, growing and diversified economy that promotes local self reliance, and recognises and strengthens the local community and its social capital in ways that safeguard the quality of life of future generations.

(g) The principle of providing credible information in open and accountable processes to encourage and assist the effective participation of local communities in decision making.

Clause 2A Implementation of aim, objectives and guiding principles

(1) The Council shall grant consent to the carrying out of development on land to which this plan applies only where the Council is of the opinion that the carrying out of the development is consistent with the aim, objectives and guiding principles of this plan.

(2) Before determining a development application, the council shall have regard to the information, guidelines and recommendations in the following strategies, policies and studies adopted by the council—

- (a) State of the Environment Report,*
- (b) Byron Flora and Fauna Study,*
- (c) Byron Biodiversity Conservation Strategy,*
- (d) Byron Rural Settlement Strategy,*
- (e) Small Towns and Villages Settlement Strategies,*
- (f) Coastline Management Plan.*

Comment: The beach and coastal restoration works will allow the Beach Café to continue trading in its current location until such time as a decision can be made on its long term future. This is an orderly and economic use of the land assuming that there is a cost benefit for the works against the income generated by the Beach Café.

The Beach Café is a popular venue that provides food and beverage in a coastal location.

The works are intended to protect the dune environment and generate habitat over time as the dune recovers.

The public have been consulted prior to DA lodgement and consulted again as part of the EIS exhibition.

As long as the works do not exacerbate coastal hazards there should not be any intergenerational inequity and the biodiversity should be enhanced by the rehabilitation.

The temporary nature of the geobag structure is a precautionary approach pending the finalisation of policy on the future location of the Beach Café.

Conditions to require the timely removal of the bags is critical to ensure they do not get washed into the ocean and become a pollution source.

Clause 33 Development within Zone No 7 (f1) (Coastal Lands Zone)

(1) This clause applies to all land within Zone No 7 (f1).

(2) A person shall not carry out development for any purpose on land to which this clause applies except with the consent of the council.

(3) (Repealed)

(4) The Council, in deciding whether to grant consent to development referred to in subclause (2), shall take into consideration—

(a) the likelihood of the proposed development adversely affecting, or being adversely affected by, coastal processes,

(b) the likelihood of the proposed development adversely affecting any dune or beach of the shoreline or foreshore,

(c) the likelihood of the proposed development adversely affecting the landscape, scenic or environmental quality of the locality of the land, and

(d) whether adequate safeguards and rehabilitation measures have been, or will be, made to protect the environment.

Comment: The development is intended to be located in an area affected by coastal processes and that cannot be avoided. Once the geobags are covered by sand and not subject to tide and wave action then there will be no adverse impact on coastal processes in the vicinity. Conditions can be imposed to address the scenario where the geobags become exposed.

The key threats posed by structures in the beach zone are loss of the beach in front of the structure from wave action; and the “end effect” which is caused by wave action scouring at the end of the structure. In this case the sand is currently accreting on this part of the beach and the geobags are mostly buried. There is already a small end effect that can be repaired with clean sand brought into the site.

The dune restoration and revegetation works will over time improve the scenic and landscape quality of the locality as native vegetation returns to the exposed dune face and sand accretes along the beach.

The safeguards that can be included as conditions of approval include monitoring and maintenance of the dune restoration, beach access, etc. Plus removal of the geobags after five years (or less) if the long term future of the Beach Cafe is resolved or the dune is stabilised.

5.2 Section 4.15(1)(a)(ii) – the provisions of any proposed instrument

No draft planning instruments apply to the subject land. The Council is preparing amendments to address C zones in the LGA but the coastal hazard C zones matter has yet to be resolved. Council's web site states:

"What happens to 'coastal hazard' environmental zones?"

Some coastal areas were also identified as a Deferred Matter under the Byron LEP 2014, pending the outcomes of the State Government's coastal management review and the possible adoption of a new coastal zone. This applies to the following zones under the Byron LEP 1988: 7(f1) Coastal lands; and 7(f2) Urban Coastal Lands.

Such areas will be considered under a separate review process and remain as a Deferred Matter under the Byron Local LEP 2014 until appropriate planning controls are developed in consultation with the State Government. These areas will therefore remain subject to the zoning and legislative requirements of the Byron LEP 1988 and the relevant controls in the Byron Development Control Plan (DCP) 2010."

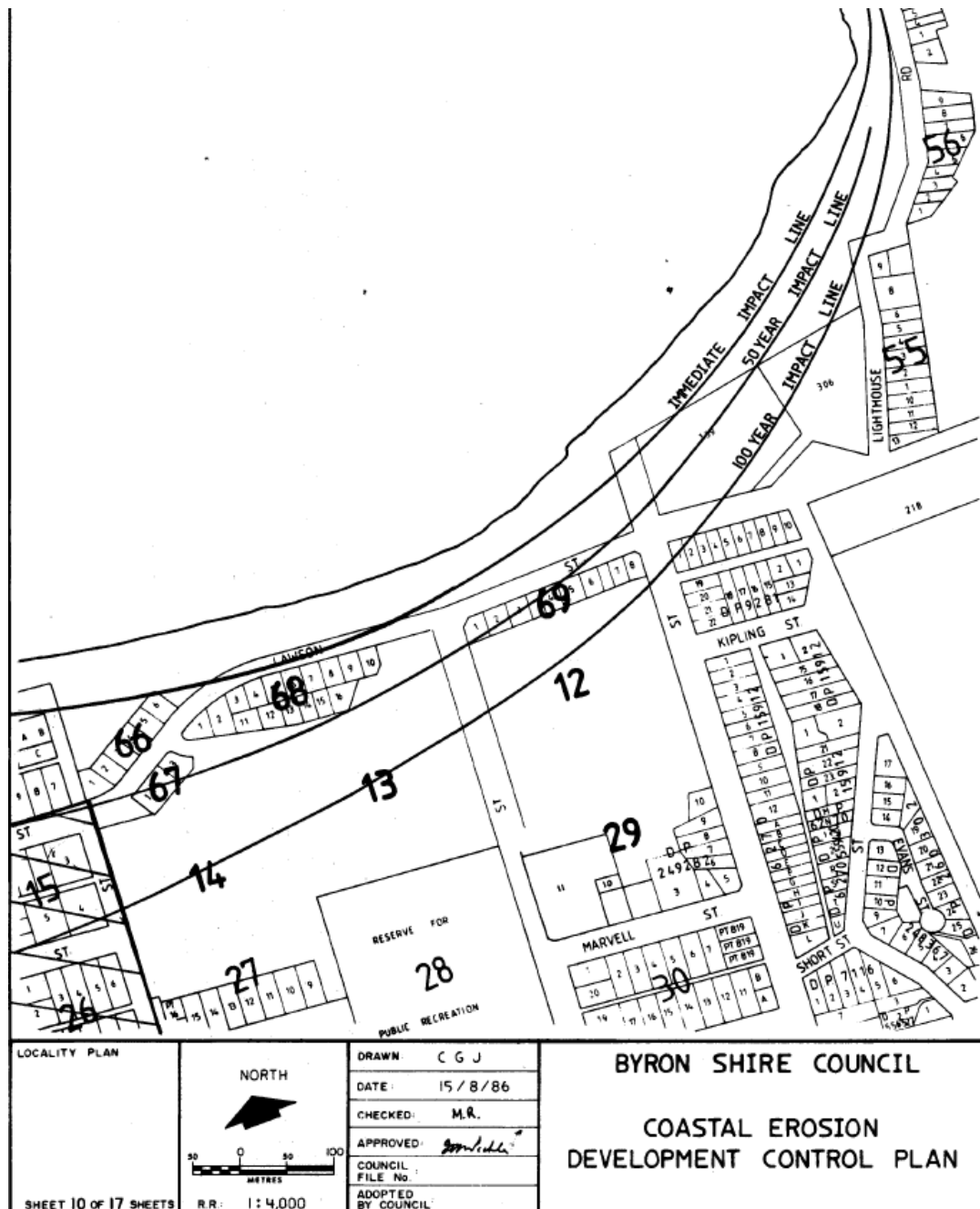
5.3 Section 4.15(1)(a)(iii) – the provisions of any development control plan

5.3.1 Byron Development Control Plan 2010 (DCP 2010)

Chapter 1 Part J – Coastal Erosion Lands

Different controls apply to different hazard category land. The relevant map is at Figure 10.

Figure 10 DCP Part J erosion impact lines



The DCP precincts have been scanned and applied to a recent air photo on the Byron GIS in Figure 11.

Figure 11 DCP erosion precincts map



The geobag structure is entirely seaward of the Immediate Impact Line so it is Precinct 1 controls that that apply under this DCP. The Precinct 1 controls that apply in this case are:

Element Objective

To ensure the impact of coastal processes on potential development is minimised by limiting development and ensuring any development is only temporary.

Performance Criteria

New buildings or works are to be temporary and able to be readily removed in the event of coastal erosion. Development that is of a community nature, which relates to the use of the beachfront, may be considered, provided that any building is easily removable and does not require a major extension to a service main.

(The balance of controls relate to buildings and dwellings).

Comment:

The proposed development is limited to protecting the dune in proximity to the Beach Café (in association with the protection for the Reflections Holiday Park) and the geobag structure is proposed to be temporary. The applicant has suggested they need five years to determine the long term future of the Beach Café which is also in Precinct 1.

The geobag structure is able to be removed by slashing the bags and emptying the sand onto the beach. They are not biodegradable and this cannot be changed easily as the bags are in place and mostly covered in accreting beach sand. There is no requirement for services. Restoring the dune and slowing down the erosion has a community benefit as long

as it does not exacerbate coastal processes elsewhere on Clarkes Beach. This can be achieved with conditions of approval.

The proposed development is consistent with Chapter 1 Part J of Byron DCP 2010.

Chapter 1 Part F – Waste Minimisation & Management

This chapter requires an applicant to prepare a waste minimisation and management plan in accordance with a Council template.

Comment: The applicant states that waste will be limited to the geobags when removed and dune fencing materials when no longer required. The disposal of this material can be addressed in conditions of approval.

Chapter 21 – Social Impact Assessment

An SIA is normally required for any designated development in accordance with this chapter. Byron Council officers indicated to the applicant that it is not required in this case.

Comment: The proposed development is consistent with Chapter 21 of Byron DCP 2010.

5.4 Section 4.15(1)(a)(iiia) – the provisions of any planning agreement that has been entered into under section 7.4, or any draft planning agreement that a developer has offered to enter into under section 7.4

There is no planning agreement or draft planning agreement applying to this development or the subject site.

5.5 Section 4.15(1)(a)(iv) – the regulations (to the extent that they prescribe matters for the purposes of this paragraph)

There are no prescribed matters in the regulations applying to this development or the subject site.

5.6 Section 4.15(1)(b) – the likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality

The following assessment addresses the impacts that the development will have on the surrounding natural and built environment, and the social and economic impacts that the proposal may have on the locality.

5.6.1 Coastal Processes

The development application is supported by a report “Geobag walls at Clarkes Beach, Byron Bay” by Water Research Laboratory (WRL), UNSW dated September 2021.

The stated purpose of the report is to review:

- Coastal processes and hazards at Clarkes Beach and within the Byron Bay embayment
- The stability of the geobags under wave forces
- Impacts of the geobags on coastal processes and management of the impacts over the life of the works
- Monitoring and future removal of the geobags

The applicant summarises how we got to the current situation as follows: Interim geobag (0.75 m³) walls were constructed fronting Reflections Holiday Park in July 2019 in two lengths of approximately 70 m each, separated by a short length (22 m) comprising a stormwater pipe, degraded gabions, coffee rock, boulders and cobbles, with a total effective length of approximately 160 m. In October/November 2020, an approximately 90 m long geobag wall was constructed in front of the Beach Café. The new wall is contiguous with and westward of the Reflections geobag wall. An additional course of geobags was added to a large section of the crest of the Beach Café geobag wall in December 2020 in response to a large storm wave event that overtopped the geobag wall and eroded some of the backfill. The wall was offset seaward of the base of the erosion escarpment to provide geotechnical stability to the Café building and the sand dune. It was backfilled with compatible sand at a stable angle of repose. Hessian cloth was placed over the exposed dune face. Plates 2 and 3 demonstrate what has happened.



Plate 2 Beach Café erosion before geobags but after Reflections geobags (late 2020)



Plate 3 Beach Café erosion after geobags and sand nourishment (Nov 2021)

Hard structures on sandy beaches that are subject to wave action can result in the loss of the beach in front of the structure from wave action; and an “end effect” which is caused by wave action scouring at the end of the structure. In this case the sand is currently accreting on this part of the beach and the geobags are mostly buried and not affected by wave action. The geobag structures are underlain by a reef/rock layer which limits vertical scour in their vicinity. If the beach scours down to the reef/rock layer, WRL estimated that more than 2% of the geobags would be displaced in a 5 year average recurrence interval (ARI) wave event, necessitating repairs. Overtopping may also erode some of the backfill sand. The waves that impacted the geobags during the December 2020 storm event were approximately 1 to 2 year ARI. The geobag wall was undamaged, however, wave overtopping eroded some of the backfill sand, which was subsequently topped up.

WRL observed that the end effects caused by the geobag structures to date are minor, but the potential seawall end effects extend into two beach access points. End effects only occur at the downdrift side of seawalls where the waves almost always approach from one side, which is the case for Clarkes Beach (a drift aligned beach). The end effects will be west of the Beach Café geobag structure. With Clarkes Beach generally accreting during 2021, the recent observations may be the maximum extent of end effects, however, this trend cannot be extrapolated for the next 5 years. The end effects observed to date may not be the totality of end effects over the design life of the works (WRL page 48).

Figure 12 Observed end effects from combined geobag structure (WRL report)



In protecting the dune and the Beach Café there is the potential to exacerbate erosion in front of and to the west of the geobag structure if it becomes exposed to tide and wave action. This can be addressed in a Coastal Protection Works Management Plan ('CPWMP') for the area comprising the geobag structure as well as an area of approximately 250 m in all directions around that structure. As a minimum it would need to address the following issues:

- the site is regularly monitored for signs of erosion in front of and beside the geobag structure
- that any existing end effect is repaired with beach nourishment and then stabilised and maintained
- that any loss of sand landward of the geobag structure is replaced with beach nourishment
- the location and type of fencing or other suitable method of restricting access to the geobag structure and the dune behind it
- the geobag structure must not result in the diversion or concentration of overland surface waters such that substantial stormwater erosion occurs
- A revegetation methodology, including a list of species to be planted during restoration works and measures to ensure their survival
- A weed control methodology that includes a list of weed species presently occurring on the site, as well as those with the potential to invade the site, and specific control strategies for each weed species
- A report on the regular monitoring and the progress of implementing the CPWMP must be submitted to Council's Coastal Officer every six months for the duration of the geobag structure

In Council's second RFI the applicant was asked for advice on the potential impacts of the geobag structures on coastal land further along Main Beach and beyond over the proposed 5 year life of the development.

The applicant's coastal engineers (WRL) offered the following response "The distance from the western end of the Clarkes Beach geobags to the eastern end of the Jonson Street protection works is approximately 750 m. The maximum alongshore distance observed to date for end effects from the Clarkes Beach geobags is 20 m. The maximum alongshore end effect distance estimated for the Clarkes Beach geobags for a 20 year ARI erosion event is 170 m to 250 m, noting that a 5 year design life is proposed.

It is proposed to import nourishment sand to offset sand 'locked up' by the Clarkes Beach geobags. Local planform change west of the Clarkes Beach geobags may still be observed following storm events, however, there will be no long-term loss of sand from the system."

A minimum of 208 M³ per year (on average) of "suitable sand" is required to be placed on Clarkes Beach to compensate for locked up sand within and behind the geobag structure. This can be addressed in conditions of consent.

5.6.2 Biodiversity

The development application is supported by a report "Biodiversity Impact Assessment – Temporary coastal protection works and infrastructure repair, Clarkes Beach, Byron Bay" by Biodiversity Assessments & Solutions dated June 2021.

The subject land has been heavily impacted by coastal erosion in 2019 and 2020 and the location of the geobags is largely clear of substantial native vegetation. A key feature of dune restoration is to rehabilitate the site with native plants. There are important stands of coastal bushland and littoral rainforest on the adjacent Reserve and this will be protected by the proposed works unless the geobag structure is exposed and end effects occur.

It is noted that part of the subject land is mapped on the NSW Biodiversity Values Map (Figure 13). This reflects an area of Littoral Rainforest mapped under SEPP (Resilience and Hazards) that has been impacted heavily by coastal erosion events.

Figure 13 NSW Biodiversity mapping



The biodiversity report includes a Test of Significance (ToS) undertaken for 8 threatened fauna species with the potential to occur within the development footprint and/or considered to have some potential to be impacted by the proposal. The species assessed were:

- Sooty Oystercatcher (*Haematopus fuliginosus*)

- Pied Oystercatcher (*Haematopus longirostris*)
- Little Tern (*Sternula albifrons*)
- Great Knot (*Calidris tenuirostris*)
- Koala (*Phascolarctos cinereus*)
- Common Blossom-bat (*Syconycteris australis*)
- Loggerhead Turtle (*Caretta caretta*)
- Green Turtle (*Chelonia mydas*)

The ToS concluded that the works would not generate a significant impact. No threatened flora species listed under the BC Act 2016 were recorded at the subject land or in the immediate vicinity. Therefore, it is considered that no threatened flora species would be likely to be impacted by the proposal.

State agencies raised the potential for the geobag structure to be a risk for marine turtles. The geobag structure, when exposed, poses a potential barrier for marine turtles coming ashore to nest in the dunes on Clarkes Beach. The level of disturbance attributed to the barrier is likely to vary substantially with the level of exposure at the time. i.e. it is likely to represent a potential barrier when exposed, and there is potential that nesting marine turtles may abort attempts to come ashore at that location if unable to traverse the structure. The level of threat is significantly reduced, and potentially removed, if sand has been redeposited on the beach and covers the structure. At the time of the biodiversity assessment the structure was only partially visible, with the majority situated below the beach surface.

Disturbance to shorebirds is likely more attributable to activities undertaken within the development footprint. This is likely to represent minor short term impacts (noise, workers and machinery). In the context of regular disturbances at the site due to the 'busyness' of the area, it is unlikely that these disturbances would be significant, as shorebirds are likely to generally favour more isolated and less trafficked beaches and sandflats within the local area over busy locations.

The report concluded that no BAM or BDAR is triggered with this application because it:

- Does not involve clearing native vegetation that exceeds the BOS threshold, which in this case is 0.5 hectares because the parent lot has a 40 hectare minimum lot size.
- Does not involve clearing on land mapped on the NSW Biodiversity Values Map.
- Is not development that is likely to have a significant effect on threatened species or ecological communities.

This matter was raised in the initial RFI and the applicant advised it had been discussed with officers of BCD in the course of preparing the EIS. The absence of a BAM and BDAR was not raised as a concern in the BCD agency submission.

In order to protect the biodiversity values that remain on the subject land conditions of approval should include:

- No native vegetation is to be cleared for this development. Trees that have been damaged or killed by coastal erosion can be mulched for use as dune stabilization material.
- All native vegetation used in rehabilitation areas is to be endemic to Byron Bay.
- If a marine turtle nest is identified within 30 metres of a work area then it must be notified to NPWS and advice obtained on measures to avoid and mitigate any impacts from proposed works
- If a shorebird nest is identified within 30 metres of a work area then it must be notified to NPWS and advice obtained on measures to avoid and mitigate any impacts from proposed works
- No work is to impact on Rainbow Bee eater nest/s in the dune face while they are in use.
- If unexpected protected or threatened fauna are encountered, then work must stop immediately, and a qualified ecologist or wildlife carer must be contacted and relevant fauna spotter/catcher protocols must be followed to prevent harm to wildlife
- If a Koala is present within 30 metres of a work area, then 24 hours must be provided for the animal to move from the work area of its own volition
- All machinery and sand for nourishment is to be clean prior to entering the subject land to ensure that weed seeds and propagules are not imported.
- Contingencies are required to address the risk of bushfire, including spark arrestors and suspending works in high bushfire danger periods

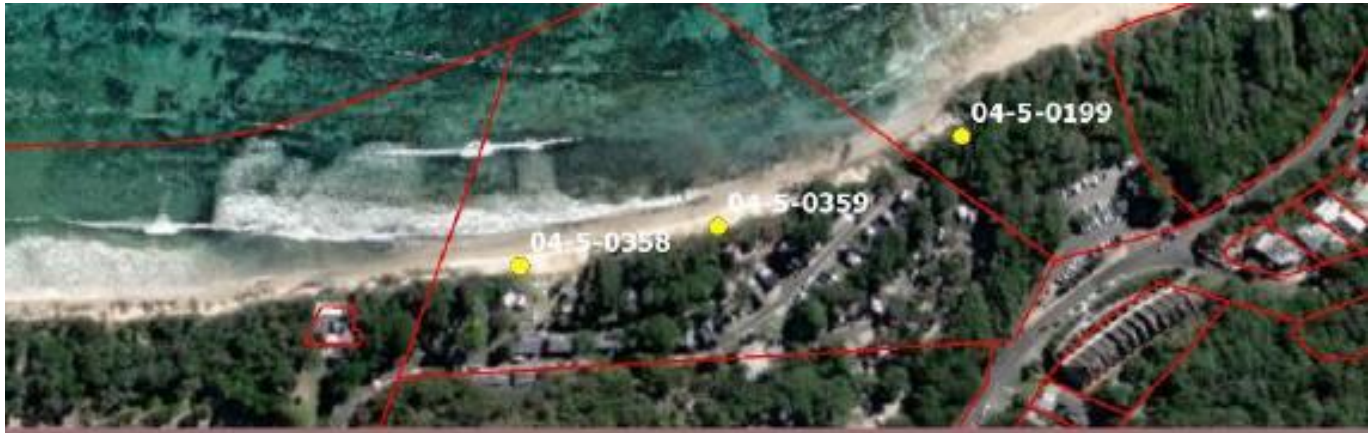
The biodiversity related conditions suggested by BCD have largely been incorporated into the proposed conditions of approval.

5.6.3 Aboriginal Heritage

The development application is supported by a report “Beach Byron Bay Clarkes Beach, Byron Bay NSW: Aboriginal Cultural Heritage Assessment”, by Everick Heritage August 2021.

Everick note that there are three known sites in the vicinity of the works (Figure 14). The intent of the ACHAR is to understand the potential impacts of the dune stabilisation works on the cultural values of the midden site known as Clarkes Beach Holiday Park 1 (AHIMS #04-5-0358) which, based on the dune profile, is understood to extend into the Project Area the subject of this development.

Figure 14 Known midden sites at Clarkes Beach



The ACHAR aims to:

- investigate and articulate the significance of the midden to the Aboriginal community;
- map and describe the nature and extent of the midden;
- discuss the potential impacts to the Clarkes Beach Holiday Park 1 midden during the works phase and over the lifetime of the works, including the decommissioning phase; and
- to provide recommendations to manage/ mitigate impacts including whether an AHIP will be required for the works.
- to provide for the ongoing management of the Clarkes Beach Holiday Park 1 midden with the Bundjalung of Byron Bay Aboriginal Corporation ('BoBBAC').

The report established that the midden is significant to the Bundjalung of Byron Bay Aboriginal Corporation. At a site visit it was advised that the position of BoBBAC was to retain the temporary geobags until a permanent solution was in place. However they are supportive of the dune revegetation and restoration works. The expectation was that BoBBAC would be involved in all works with the potential to impact on the midden. Written support for the proposed mitigation measures was received from Sharon Sloane via email on 05 August 2021. Specifically, that the BoBBAC Board of Directors agree to having cultural site monitors during any excavation work to the proposed path works and the geobags to stay in place as required for 2 - 5 years.

Due to the installation of the temporary geobags and recent slumping of dune archaeologists were not able to physically inspect and map the midden lens. However it is a midden that comprises predominately Eugarie shell which exists at the interface of the old sand dune profile (identifiable by the grey sand layer) which has been buried by a more recent yellow sand deposit within the historic period.

Based on the results of the NPWS dating program it is reasonable to proceed on the basis that the midden lens within the Project Area dates to the period of early contact (approximately 170BP or 1850's) and is not older than 260BP (Everick 2018). The Eugarie middens were very common along the dune systems, however most of the midden sites have now been lost as a result of historic sand mining and more recently coastal erosion.

Any remaining in-situ coastal midden must be considered of high archaeological significance.

The potential harm from the Proposed Works include:

- the retention **and subsequent removal** of the existing temporary sandbag system within the next 2-5 years to stabilise the lower dune face during high tides and storm surge;
- revegetation and dune stabilisation works include stabilisation fencing and replanting; and
- reconstruction of the existing beach access;
- installation of stormwater scour protection features to mitigate erosion from overflowing water off the restaurant roof and surrounding areas;
- salvage of midden by BoBBAC Aboriginal sites officers.

Everick considered the following management and mitigation options for the Clarkes Beach Holiday Park 1 (#04-5-0358) midden:

- a) complete avoidance;
- b) partial avoidance;
- c) harm with salvage and repatriation on-site; and
- d) harm without salvage.

Everick concluded that (c) harm with salvage and repatriation on-site is the most appropriate management response for the Clarkes Beach Holiday Park 1 (#04-5-0358) midden.

This assessment acknowledges the following:

- the views of the Aboriginal community representatives who have participated in the ACHAR ;
- the degree to which the midden has already been disturbed by coastal erosion and the potential for additional impacts to the midden in the immediate future;
- the proximity to the Clarkes Caravan Park Midden (#04-5-0199) which has been subject to archaeological investigation and radiocarbon dating;
- the potential to retain midden material within the dune system and actively manage the midden as a cultural resource (the shell material is retained 'on country'); and
- the potential for more permanent engineering solutions to protect the sand dune and midden complex.

This option triggers an Aboriginal Heritage Impact Permit (AHIP).

It is recommended that an AHIP is sought for the following activities:

- Decommission of the coastal protection works (geobag removal);
- Revegetation works to provide medium to long-term stability to the dune face, including the use of fabric or plastic material to support the establishment of root structures;
- Restrict pedestrian access to the midden area to protect it in the short term
- As a mitigation measure it is further recommended that salvage of midden material is undertaken by BoBBAC that has
 - i. Slumped down the dune face and retained around the temporary geobag system; and
 - ii. Is at imminent risk of loss from storm surge and high tides.

It is recommended that the salvaged midden material be temporally stored within a secure area within the office of either BOBBAC until such time as a permanent storage area is identified between BoBBAC and the Proponent. Permanent storage should in in compliance with Requirement 26 of the *Code of Practice for Archaeological Investigation in New South Wales (2010)* (CoPAI) or in accordance with instructions from BoBBAC. It is noted that the permanent reburial area must be recorded as a new AHIMS site and managed as an Aboriginal site.

It is also recommended that conditions on the development should include:

- implementation of Unexpected Find Procedure;
- Maintain a field log to record basic data from the archaeological salvage program. This would include dates of salvage, species, volume of material and particulars of the event which resulted in the salvage. Should scientific analysis be undertaken this should also be included within the field log. It is recommended that the field log be attached to the AHIMS Site Recording Form.

Given that an AHIP is required for this development to proceed these detailed matters can be addressed as conditions on the AHIP.

5.6.4 Beach Access (Pedestrian and Vehicle) and the Machinery Compound

Three pedestrian beach access points and a vehicle access point are located west of the Beach Café (Figure 15). The pedestrian access immediately west of the Beach Café was badly damaged by coastal erosion and its restoration was contemplated but has now been abandoned (Plate 4). Given its proximity to the geobag structure and the presence of a second access nearby it is appropriate that it not be reinstated.

A pedestrian access located another 50 metres to the west will be the primary pedestrian beach access from the car park. It will be stabilised and improved over time to match the sand levels on the beach (Plate 5). The applicant has requested that any work on this access be subject to a separate approval process (using Part 5 of the EPA Act, 1979). Although Part 5 can be used at any time it is appropriate that if the geobag structure comes back out of the sand and this access is affected by “end effects” then its maintenance by sand nourishment is the responsibility of DPE Crown lands (shared with Reflections).

Vehicle access to Clarkes Beach is required to conduct maintenance on the geobag structure if it is required over the life of the approval. This should be restricted to the “kayak hire” vehicle access point at approximately Easting 560692 and Northing 683144 (blue line in Figure 14).

Figure 14 Pedestrian and vehicle beach access points at Clarkes Beach



Plate 4 Damaged beach access adjacent to the Beach Café at rear of photo (Nov 2021)



Plate 5 Primary pedestrian beach access from car park to Clarkes Beach (Dec 2021)

The applicant has indicated two machinery compounds may be required, one east of the Beach Café and one near the “kayak hire” vehicle access to the west of the Beach Café. This is because they anticipate having to undertake sand nourishment east of the Beach Café and adjacent to the Reflections Holiday Park. While it may be appropriate to have a sand stockpile in this location it should not be a machinery compound as it is too close to the road access to the Holiday Park and too close to the remaining littoral rainforest in this location.

Only one machinery compound not larger than 1000 m² is to be located on the public reserve for maintenance or emergency works or geobag removal. It is to be located adjacent to the “kayak hire” vehicle access point at approximately Easting 560681 and Northing 6831387.

5.6.5 Coastal Management Act 2016

The object of this Act is to manage the coastal environment of New South Wales in a manner consistent with the principles of ecologically sustainable development for the social, cultural and economic well-being of the people of the State. It sets the basis for SEPP (Resilience and Hazards) such as littoral rainforest areas, coastal environment area and coastal use area and these matters are dealt with in section 5.1.2 of this report.

It also provides the basis for a certified Coastal Management Program to set the long-term strategy for the co-ordinated management of land within the coastal zone. However Byron Shire does not have a certified Coastal Management Program.

It also has a specific section that relates to Coastal Protection Works as follows:

27 Granting of development consent relating to coastal protection works

(1) Development consent must not be granted under the Environmental Planning and Assessment Act 1979 to development for the purpose of coastal protection works, unless the consent authority is 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.

(2) 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).

(3) The funding obligations referred to in subsection (2) (a) are to include the percentage share of the total funding of each landowner, council or public authority concerned.

Section 27	Comment
<p><i>1 (a) the works will not, over the life of the works</i></p> <p><i>(i) unreasonably limit or be likely to unreasonably limit public access to or the use of a beach or headland</i></p>	<p>The works will actually limit public access, but not unreasonably. By not rebuilding a damaged public access point near to the Beach Café there will be less locations to access the beach. However, the next access is only 50 metres west and it is not unreasonable to direct the public to this point. General maintenance of this access</p>

	will be dealt with through a separate approval process but if impacted by “end effects” then it will need to be restored by the Crown (and Reflections).
<p><i>1 (a) the works will not, over the life of the works</i></p> <p><i>(ii) pose or be likely to pose a threat to public safety,</i></p>	<p>The use of sand nourishment behind the geobag structure in front of the Beach Café has reduced the dune steepness and made it safer for the public as well as Beach Café patrons.</p> <p>This will need to be monitored and maintained so that it remains stable. As the beach in front of the geobags accretes the height of the dune effectively reduces making it safer.</p> <p>Conditions addressing monitoring and maintenance of geobags and the dune are recommended.</p>
<p><i>1 (b) satisfactory arrangements have been made (by conditions imposed on the consent) for the following for the life of the works</i></p> <p><i>(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</i></p>	<p>This clause makes it clear that if there is any erosion of the beach in front of the geobags or any end effect beside them then fixing that impact is the responsibility of the owner of the works. In this case NSW DPE Crown Lands.</p> <p>Conditions addressing maintenance and restoration of the beach and the dune are recommended.</p> <p>Note that this sub clause specifically anticipates that coastal protection works may increase erosion and that this is only acceptable if conditions can be imposed to fix it. This is at odds with SEPP (Resilience and Hazards) (see discussion at section 5.1.2 of this report). However, if there is any inconsistency then this section overrides the SEPP.</p>
<p><i>1 (b) satisfactory arrangements have been made (by conditions imposed on the consent) for the following for the life of the works</i></p> <p><i>(ii) the maintenance of the works.</i></p>	<p>Conditions addressing maintenance of geobags and the dune are recommended.</p> <p>The maximum life of the works is five years and after this they will be removed. Circumstances may lead to them being removed earlier.</p>

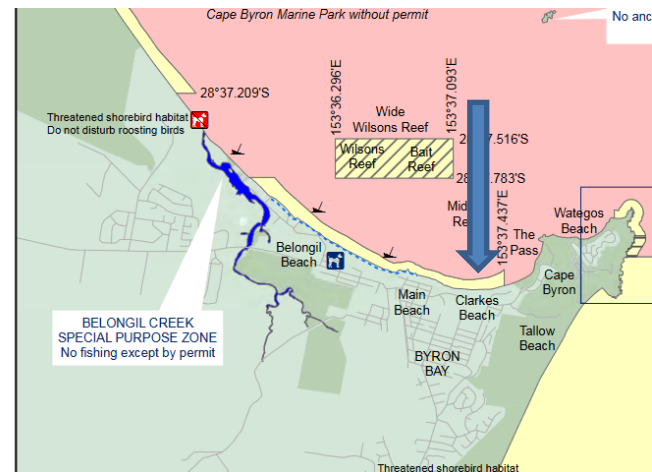
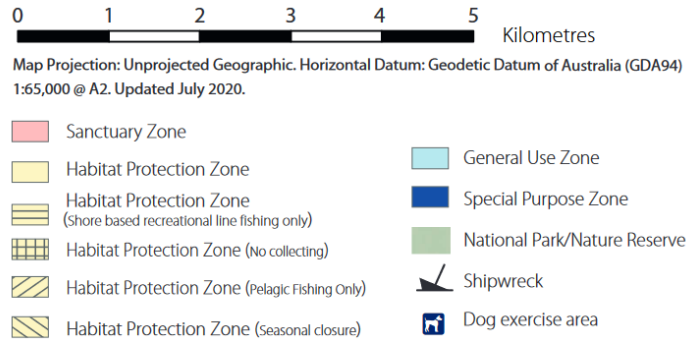
<p>(2) <i>The arrangements referred to in subsection (1) (b) are to secure adequate funding for the carrying out of any such restoration and maintenance, including by either or both of the following—</i></p> <p style="padding-left: 40px;"><i>(a) by legally binding obligations (including by way of financial assurance or bond) of all or any of the following—</i></p> <p style="padding-left: 80px;"><i>(i) the owner or owners from time to time of the land protected by the works,</i></p> <p style="padding-left: 80px;"><i>(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,</i></p> <p style="padding-left: 40px;"><i>(b) by payment to the relevant council of an annual charge for coastal protection services (within the meaning of the Local Government Act 1993).</i></p>	<p>The works are entirely on land owned by NSW Crown lands that is in a public reserve.</p> <p>The application includes a commitment to pay for restoration and maintenance of the works. This will be recommended as a condition of approval.</p>
<p>(3) <i>The funding obligations referred to in subsection (2) (a) are to include the percentage share of the total funding of each landowner, council or public authority concerned.</i></p>	<p>It is not anticipated that Council will be required to pay any share of the cost of restoration and maintenance of the works. No private landowners are affected. The lease arrangements for the Beach Café are a matter for NSW Crown Lands to resolve.</p>

5.6.6 Marine Estate Management Act 2014 and the Cape Byron Marine Park

In NSW, marine parks are declared and managed under the Marine Estate Management Act 2014 (MEM Act) by NSW Department of Primary Industries (DPI). Cape Byron Marine Park extends approximately 37 km along the coastline from the Brunswick River northern training wall to Lennox Head. The ocean to the north of the proposed works site is part of a Habitat Protection Zone (Figure 15). The Habitat Protection zone extends to “any area of waters of the sea or subject to tidal influence”. Although the geobag wall is currently above tidal influence it was not when it was installed (see survey) and may not be at some time in the future if the beach erodes again. The MEM Act and the Cape Byron Marine Park apply to the works.

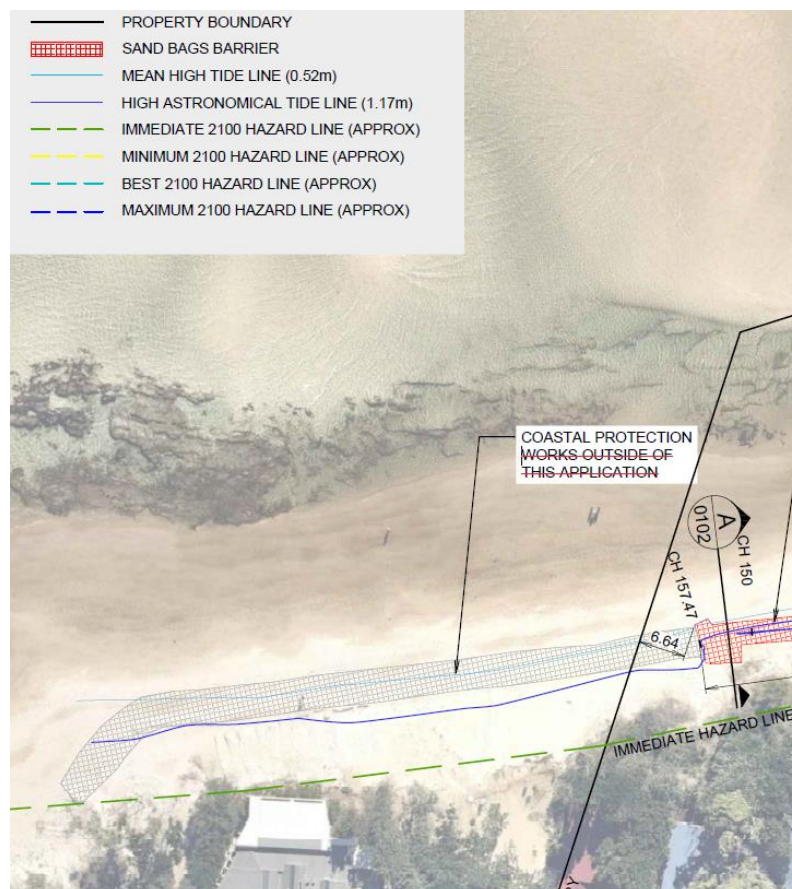
Figure 15 Cape Byron Marine Park zone map

Cape Byron Marine Park Zoning Map



A Marine Parks permit is required for any works or activities conducted below mean high water. Section 55 of the MEM Act requires that determining authorities do not determine a development application within a Marine Park (below MHW) without considering a range of matters and obtaining the concurrence of the Minister for the Environment. This concurrence has been delegated to DPI (Fisheries) – Marine Parks. Figure 16 shows that part of the geobag wall is below MHW.

Figure 16 MHWMM and geobag wall



Section 55 of the MEM Act states as follows:

55 Development within marine parks and aquatic reserves—application of EPA Act

(1) Before determining a development application under Part 4 of the Environmental Planning and Assessment Act 1979 for the carrying out of development within a marine park or an aquatic reserve, a consent authority must—

(a) take into consideration—

(i) if there are management rules for the marine park or aquatic reserve, the purposes of the zone within which the area concerned is situated as specified in those management rules, and

(ii) the permissible uses of the area concerned under the regulations or those management rules, and

(iii) if a management plan for the marine park or aquatic reserve has been made, the objectives of the marine park or aquatic reserve, and

(iv) any relevant marine park or aquatic reserve notifications, and

(b) if the consent authority intends to grant consent to the carrying out of the development, obtain the concurrence of the relevant Ministers to the granting of the consent

Section 55 of MEM requirement	Comment
<p><i>(a) (i) if there are management rules for the marine park or aquatic reserve, the purposes of the zone within which the area concerned is situated as specified in those management rules</i></p> <p><i>(The Marine Estate Management (Management Rules) Regulation 1999 provides that:</i></p> <p><i>1.8 Objects of habitat protection zone</i></p> <p><i>The objects of the habitat protection zone are—</i></p> <p><i>(a) to provide a high level of protection for biological diversity, habitat, ecological processes, natural features and cultural features (both Aboriginal and non-Aboriginal) in the zone, and</i></p> <p><i>(b) where consistent with paragraph (a), to provide opportunities for recreational and commercial activities (including fishing), scientific research, educational activities and</i></p>	<p>The proposed development is consistent with the objectives of the habitat protection zone because it does not have excessive habitat impacts and will help support the dune system and associated cultural heritage sites (middens).</p> <p>The development will not provide opportunity for commercial activity although in protecting the dune and adjacent land it allows an existing business to continue in proximity to the Marine Park. The operation of the Beach Cafe has limited opportunity to impact on fish populations or other plants or animals in the Marine Park.</p>

<p><i>other activities, so long as they are ecologically sustainable and do not have a significant impact on any fish populations or on any other animals, plants or habitats.)</i></p>	
<p><i>(a) (ii) the permissible uses of the area concerned under the regulations or those management rules</i></p> <p><i>(The Marine Estate Management (Management Rules) Regulation 1999 provides that:</i></p> <p><i>1.16 Protection of animals, plants and habitat in habitat protection zone</i></p> <p><i>(1) A person must not, while in the habitat protection zone of a marine park—</i></p> <p><i>(a) harm, or attempt to harm, any animal (other than fish), or</i></p> <p><i>(b) harm, or attempt to harm, any plant, or</i></p> <p><i>(c) damage, take or interfere with, or attempt to damage, take or interfere with, any part of the habitat (including soil, sand, shells or other material occurring naturally within the zone), except with the consent of the relevant Ministers.</i></p> <p><i>(2) Consent is only to be given under subclause (1)—</i></p> <p><i>(a) for research, environmental protection, public health, traditional use or public safety purposes, or</i></p> <p><i>(b) for the purposes of an ecologically sustainable use that does not have a significant impact on fish populations within the zone or on any other animals, plants or habitats.</i></p>	<p>The proposed development will not harm any animal or plant.</p> <p>It will not damage, take or interfere with the habitat of the beach while the geobags are below the sand level.</p> <p>The geobags stabilise the dune face which makes it safer for the public because its less likely to collapse.</p> <p>The development is sustainable as long as the bags are removed when it is safe to do so with minimal environmental impact.</p>
<p><i>(a) (iii) if a management plan for the marine park or aquatic reserve has been made, the objectives of the marine park or aquatic reserve</i></p>	<p>The development is consistent with these objectives because it will not cause significant impacts on marine biodiversity. It</p>

<p><i>The marine park has the Cape Byron Marine Park Operational Plan, September 2010. This adopts the objects of the Marine Parks Act 1997:</i></p> <p><i>conserve marine biological diversity and marine habitats by declaring and providing for the management of a comprehensive system of marine parks</i></p> <p><i>maintain ecological processes; and</i></p> <p><i>where consistent with the preceding objects to provide:</i></p> <ul style="list-style-type: none"> <i>– for ecologically sustainable use of fish (including commercial and recreational fishing) and marine vegetation in marine parks, and</i> <i>– opportunities for public appreciation, understanding and enjoyment of marine parks.</i> 	<p>will lead to dune and beach restoration which is maintenance of ecological processes.</p> <p>It will not affect fish or marine vegetation.</p> <p>It will make the beach a safer place to enjoy and appreciate the marine park.</p>
<p><i>(a) (iv) any relevant marine park or aquatic reserve notifications</i></p>	<p>N/A</p>
<p><i>(b) if the consent authority intends to grant consent to the carrying out of the development, obtain the concurrence of the relevant Ministers to the granting of the consent</i></p>	<p>A condition will be imposed requiring concurrence to be obtained for the geobag wall as it is located partly below the mean high tide line. Concurrence is able to be assumed if a marine park permit is obtained.</p>

Section 56 of the MEM Act states as follows:

56 Development affecting marine parks and aquatic reserves—application of EPA Act

*(1) In determining a development application under Part 4 of the Environmental Planning and Assessment Act 1979 for the carrying out of development on land that is in the locality of a marine park or an aquatic reserve, the consent authority must take into consideration the **objects of this Act**, the permissible uses of the area concerned under the regulations or the management rules and any advice given to it by the relevant Ministers about the impact on the marine park or aquatic reserve of development in the locality.*

(2) If the consent authority is of the opinion that development proposed in the development application is likely to have an effect on the plants or animals within the marine park or aquatic reserve and their habitat, the consent authority must consult with the relevant Ministers before finally determining the application.

56 (1) Is the development consistent with the Objects of the MEM Act, 2014	
<i>(a) (i) promotes a biologically diverse, healthy and productive marine estate</i>	The development (subject to conditions) should not adversely impact on the marine estate.
<i>(a) (ii) facilitates—</i> <ul style="list-style-type: none"> <i>• economic opportunities for the people of New South Wales, including opportunities for regional communities, and</i> <i>• the cultural, social and recreational use of the marine estate, and</i> <i>• the maintenance of ecosystem integrity, and</i> <i>• the use of the marine estate for scientific research and education</i> 	<p>The development will protect the Beach Cafe in the short term. This provides an opportunity to eat a meal adjacent to the marine park.</p> <p>Maintaining the beach and dune system is important for marine animals such as turtles and birds.</p> <p>Monitoring of the works over time will provide information on the issue of coastal erosion.</p>
<i>(b) to promote the co-ordination of the exercise, by public authorities, of functions in relation to the marine estate</i>	The two applications for coastal protection works at Clarkes Beach are being assessed simultaneously and in conjunction with the relevant state authorities.
<i>(c) to provide for the declaration and management of a comprehensive system of marine parks and aquatic reserves</i>	The development will not impact on the declaration or management of the marine park.
56(2) <i>Is the development likely to have an effect on the plants or animals within the marine park?</i>	<p>The development (subject to conditions) is unlikely to have a significant impact on plants or animals within the marine park and if successful will have a positive impact on the beach and dune area.</p> <p>Consultation with the relevant Minister is not triggered by this clause. Note that the concurrence of the Minister is required (pursuant to Section 55 of the MEM Act) because the application is within a Marine Park and partly below MHWL.</p>

The applicant has previously obtained a permit for the temporary works. A new marine park permit will be a condition of any approval for this development.

5.6.7 The Coastal Management Program and a Time Limited Consent

Planning for the Byron coastline has started under the NSW Government's coastal management framework. This involves preparing a Coastal Management Program (CMP).

A CMP is an action plan for Council and other authorities responsible for managing coastal zones to:

- Address coastal hazard risks.
- Preserve habitats and cultural uses.
- Encourage sustainable agricultural, economic and built development in the coastal zone.
- Maintain or improve recreational amenity and resilience.
- Adapt to emerging issues such as population growth and climate change.

A Coastal Management Program will allow Council to access significant State Government funding to do the coastal management actions within the study area.

Byron Council adopted a Scoping Study in 2020 (Stage 1) that included the Clarkes Beach locality (Byron Bay to South Golden Beach).

An outcome of Stage 1 was the identification of studies and activities required to fill key data gaps and to answer questions relating to priority management issues. These include:

- Coastal hazard assessment (funded and in progress).
- Mapping of a coastal vulnerability area identifying all applicable coastal hazards.
- Continue design investigation for the modification of the coastal protection works at Main Beach, Byron Bay (funded and in progress - Main Beach Shoreline Project)
- Assessment of the past effectiveness and likely future utility of existing coastal management strategies

Council will continue to seek State Government grant funding to assist in completing the Stage 2 studies. These will ensure the development of more effective management strategies and actions which will occur in Stage 3 and beyond. Future stages include:

- Identifying and evaluating options.
- Preparing, exhibiting and adopting a CMP.
- Implementing, monitoring and reporting.

Both Crown Lands and Reflections are stakeholders in the CMP process. However the critical decision as to whether the Clarkes Beach locality (the subject of this application) will be protected in the long term will not be made until stage 3 or beyond. The applicant has indicated it may take up to 5 years to get to a decision on protection or retreat options and the geobag structure should be maintained till that time if necessary.

It is reasonable that the temporary geobag structure remain in place for a period of time to give some security to the Beach Cafe (and Aboriginal middens) if or when a major erosion event occurs again. However, it was constructed as a temporary measure and there is an expectation that it will one day be removed. From an engineering perspective it was not built

as a permanent structure and will one day have to be removed or it will disintegrate and the non-biodegradable bags will enter the marine park. If it remains in place until the CMP is finalised then the consent is indefinite as the CMP may never be finalised. Coastline management planning has been underway in Byron Shire for more than 25 years in one form or another and it may continue for another 20 years. So a direct link between the removal of the temporary geobag structure and the completion of the CMP (which is an incomplete process over an unknown time frame) is not legally appropriate and is not recommended.

It is appropriate for the consent to be time limited as is the normal practice with approvals for temporary structures. The geobag structure was initially installed in November 2020 so it will be 20 months old in July 2022. The applicant has suggested a five year consent (with removal after five years when it is safe to do so). The BoBBAC Board of Directors support a 2 to 5 year consent to allow them time to consider the future of middens in the dunes. On balance a 5 year approval from say mid 2022 will have allowed the bags to stay in place for almost 7 years in total. It will still give the BoBBAC 5 years to deal with the middens and BSC and the wider stakeholder group 5 years to progress the CMP. It will give the Crown 5 years to move the Beach Café (or pursue other options).

The need to justify the request for a 5 year approval was raised in the second RFI (Appendix 6). The applicant advised:

“There are significant environmental, land status and planning considerations that apply to the café site and surrounding Crown reserves. A comprehensive pre planning phase needs to occur prior to settling on a new configuration and/or location for the café. This will require complex negotiations with key stakeholders, including Byron Shire Council, and technical experts.

There are significant legal, commercial and funding considerations that need to be negotiated and agreed before detailed design commences, and planning approvals are obtained.

Planning and other approvals will need to be obtained for the removal of part or all of the current café building. In addition, detailed design, planning and other approvals will be necessary if the café is to be significantly reconfigured, or a new structure is built in a new location.

There will be procurement processes and the like that need to be undertaken.

There will need to be coordination with Reflections Clarkes Beach Holiday Park.”

Imposing a time limitation on the approval makes it clear that it is a temporary approval and the geobag structure must be removed at the end of the 5 year period. It will be recommended as a condition of approval.

5.6.8 Triggers for Geobag Removal

A key aspect of this proposed development is that the geobags only protect the dune system when they are exposed. When the beach accretes (as it is now) and covers the geobags in sand then they effectively serve no purpose other than “insurance” against the next major erosion event. They have not been constructed as a permanent protection structure and will

eventually disintegrate and potentially enter the marine park and become non-biodegradable rubbish that pollutes the ocean. Approximately 650 bags make up the structure.

One option is to remove the geobags when they are covered in sufficient sand that the beach has to some extent recovered and will remain stable without the geobags in place. This option could be undertaken when the sand above the geobag top layer is at a predetermined level. This was discussed with the applicant and they sought advice from their coastal engineer. The coastal engineer advised that it is preferred that the bags be removed when the top 50 % are fully exposed. The logic being that the excavation required to remove the exposed bags would be smaller and less likely to disrupt the steep dune face.

At first, it does not seem to make sense to remove the bags when they are exposed because they are at that point doing the job of protecting the main dune. However, if a decision has been made to allow for planned retreat of the coast and the Aboriginal middens and Beach Cafe have been moved then what happens after the bags are removed is planned retreat. But is this really any different if the geobags are covered in sand and the beach has recovered and is stable? Probably not. The steep dune face will be impacted in both scenarios over time but that is the effect of planned retreat. If long term protection of the dune is required then an option other than geobags will need to be pursued.

In response to the initial RFI the applicant has supplied a suite of actions that it suggests need to be undertaken before the bags are removed after 5 years:

- Geobag and site monitoring program has been implemented in consultation with stakeholders including BoBBAC, Reflections Holiday Parks, Byron Shire Council and Cape Byron Marine Parks.
- Engagement and consultation has occurred with the BoBBAC, and an AHIP has been obtained for the removal of the geobags.
- All relevant stakeholders have been engaged e.g. BoBBAC, Byron Shire Council, Reflections Holiday Parks, Cape Byron Marine Park.
- Suitably qualified experts have been engaged to assess and mitigate any environmental, geotechnical hazards or public safety risks that may be associated with decommissioning works.
- A detailed decommissioning and environmental management plan has been developed by the contractor, in consultation with experts and stakeholders - outlining removal methods and management of hazards and risks.
- A detailed site rehabilitation plan has been developed, in consultation with relevant experts and stakeholders.

A machine could access the beach at low tide when spring tides and storms are not forecast. The bags could be excavated, slashed and the sand returned to the beach and the bags removed. Some nourishment sand could be added at the completion of bag removal to make up for compaction. Sand catching fences could be replaced and the area generally stabilised.

So the maximum the bags can remain is 5 years but they can be removed sooner if the Aboriginal middens and Beach Café have been moved and a planned retreat approach is adopted for this locality.

It is appropriate that a Geobag Structure Removal Plan be required as a condition of approval.

The objective of this plan would be to remove all of the geobag structure and restore the land to a stable state. It must include, but not be limited to, the following:

- (a) Expected timeline for geobag removal and site rehabilitation;
- (b) Details of site rehabilitation;
- (c) Details on waste management and recycling of all materials arising from the decommissioning.
- (d) Expected maintenance period for areas disturbed by the geobag removal process including any landscaping and vegetation that needs to be replaced and re-established. A minimum of 3 months is anticipated.

5.6.9 Social and Economic Impacts

The geobag structure itself has limited socio-economic effects. It has been constructed by the Crown using public funds and will be maintained from the same source.

As it stabilises it will have reduced visual impacts and as the beach builds up in front of it the impact on beach users will be minimal. Use of sandy or green tones in screening and fencing material will also reduce visual impacts as will the growth of native vegetation on the dune face.

The applicant has estimated the cost for removal of the geobags is \$100,000 (exc GST).

The applicant has also provided an economic benefit report (BDO Advisory Nov 2020) that examines the economic contribution of both the Beach Byron Bay (the Restaurant) and Reflections Holiday Park Clarkes Beach to assess their economic contribution to NSW during 2018/19 (FY-19) and 2019/20 (FY-20). In relation to the Beach Cafe the report notes that it has a Gross State Product of \$7.51 M, generates 50 full time equivalent jobs and results in significant tourism expenditure and jobs beyond the park boundaries.

The link is that if the geobag structure is not approved for a further five years and a future erosion event threatens the Beach Cafe to the point where it closes then this positive socio-economic benefits will be lost to the Byron community and NSW economy.

5.6.10 Sand Source for Nourishment or Replacement Geobags

The source of sand for sand bags and nourishment has been the Dunloe Park sand quarry which is located in the southern end of Tweed Shire. It has been tested and found to be clean and compatible in grain size with Clarkes Beach sand.

Previous Byron coastal protection projects have established that “suitable sand” means sand having a concentration of clay and silt of not greater than 2%, a concentration of shell not greater than 10%, a colour similar to existing beach material, a composition principally of quartzose and a similar or more coarse grading to the upper beach sand at the site.

5.6.11 Integrated Development

Integrated approval is required from Heritage NSW in relation to proposed works (anticipated maintenance works and geobag removal are part of this application) in the form of an AHIP issued under section 90 of the NPWS Act 1974. Heritage NSW has provided GTAs for this DA.

These matters will be addressed in conditions of approval.

5.6.12 NPWS Guidelines for Development Adjacent to NPWS Service Lands

The goal of these guidelines is to guide consent and planning authorities in their assessment of development applications that are adjacent to land managed by NPWS. NPWS advised that it does not consider the Beach Café land as being adjacent the Cape Byron SCA.

5.7 Section 4.15(1)(c) – the suitability of the site for the development

The subject site is considered appropriate for the continued use of coastal protection works and associated monitoring and maintenance. It is compatible with neighbouring land uses including the Beach Café, Crown Reserve 82000, Reflections Holiday Park Clarkes Beach, Cape Byron State Conservation Area and Cape Byron Marine Park. The proposal is not anticipated to have any significant negative impacts on the surrounding receiving environments, subject to compliance with the recommended conditions of consent.

The proposed development is considered to be of a suitable scale, form and character and generally complies with State Environmental Planning Policy (Resilience and Hazards) 2021, other relevant SEPPs, Byron Local Environmental Plan 1988 and Byron Development Control Plan 2010.

5.8 Section 4.15(1)(d) – any submissions made in accordance with this Act or the regulations

The development application and EIS (Council reference DA 10.2021.630.01 and planning portal reference PAN 128905) were placed on public exhibition from 15 November to 15 December 2021, and no public submissions was received. Agency submissions were received from:

- Department of Planning, Industry and Environment (DPIE), Biodiversity, Conservation and Science (BCS) division (BCD)
- Heritage NSW
- DPI – Fisheries (Cape Byron Marine Park)

In the absence of any public submissions it is useful to review the early consultation process required while the EIS was in preparation. The applicant's overview of this process and its summary of feedback is at Appendix 3. The engagement was held over June and July 2021, and attracted feedback from a wide range of local stakeholders.

Written notifications were provided to approximately 250 surrounding landowners plus community groups as follows:

- Tweed Byron Local Aboriginal Land Council.
- Bundjalung of Byron Bay Aboriginal Corporation.
- Green & Clean Dunecare.
- Byron Bay Masterplan Guidance Group.
- Byron Bay Chamber of Commerce.
- Byron Bird Buddies.
- Byron Residents' Group.

A notice was placed in the local paper and a facilitated community meeting was held on 9 July 2021 with up to 45 people registering to attend.

The feedback for this DA was very diverse. Three submissions expressed support for the DA and 12 opposed it – requesting that the bags be removed immediately in combination with the Beach Café retreating.

The written and verbal community feedback is provided in Appendix 3 with a very brief summary of issues as follows:

Public Submissions

Submission issues raised	Response
Request more consultation with the community	Agreed. There was a formal exhibition of the DA and EIS in Nov/Dec 2021 but no submissions were received.
Sandbags should be retained and extended from NPWS holiday dwellings to rockwall in front of the pool	This DA is limited to the Clarkes Beach Café frontage though it has been prepared along with the Reflections DA. It is not appropriate to extend it west at this stage.
Sand nourishment is required to maintain the beaches and protect the cafe	Agreed. Sand nourishment has already been applied to the subject land along with the geobags. It is expected that more will be required to rectify any end effects and repair storm damage over a 5 year period.

Submission issues raised	Response
EIS is required to examine alternatives to the proposal	<p>The EIS reviews a range of alternatives including</p> <ul style="list-style-type: none"> • Immediate removal of temporary coastal protection works – not favoured until Beach Cafe and Aboriginal middens are dealt with (protect or retreat). • Beach scraping - depends on whether sand is available downslope or in the immediate vicinity. • Permanent coastal protection options – not favoured without a CMP in place that addresses the whole beach front not just two small parts of it. • Dune vegetation management – without geobags dune revegetation works alone are not sufficient to mitigate the risk of coastal erosion.
Removing the bags will eliminate the “end effect” erosion and reduce erosion in front of the bags	<p>The coastal processes assessment with the EIS considers the end effect to be minor and manageable over a 5 year period. With the geobags buried there is no end effect. If exposed it can be repaired with sand nourishment. Similarly erosion in front of the bags only occurs when they are exposed and they are currently buried. It can be repaired with sand nourishment or by natural accretion over time.</p>
This project could conflict with or hold up the CMP development process and no work should proceed until the CMP is completed	<p>The CMP is a separate strategic process that has been underway for more than 25 years. A 5 year consent is requested partly to allow the CMP to advance or be completed. The consent will not be directly linked to the progress of the CMP. It will be time limited.</p>
The Reflections sandbag proposal should be dealt in unison with the Crown Lands sandbag proposal	<p>Agreed. They will be reported to the NRPP at the same time.</p>
The need for the Beach café bags was due in part to the Reflections bags	<p>There would have been an end effect when the Reflections geobag wall was constructed and still in the active wave zone. However the extent of erosion in front of the Beach Cafe (and the balance of Main Beach) cannot be substantially attributed to the Reflections geobag wall.</p>

Agency Submissions

Submission issues raised	Response
<p>DPIE – Biodiversity, Conservation and Science Directorate</p> <p>DA fails to give detail on monitoring, maintenance and impact management over the life of the structure. A detailed strategy is required.</p> <p>It also fails to provide detail on the geobag structure removal and timing of removal.</p> <p>The proponent needs to be actively involved in the CMP process to ensure consistency between actions on this site and the CMP.</p> <p>The mitigation measures identified in the Biodiversity assessment should be included in the consent.</p> <p>Dune rehabilitation measures should be undertaken to contribute to biodiversity.</p>	<p>It is agreed that a detailed management strategy (Coastal Protection Works Management Plan) is required and this will be included as a condition of consent.</p> <p>It is agreed that a time limit on the life of the structure is required and detail on how the geobags will be removed is required. A decommissioning plan is required. This will be included as a condition of consent.</p> <p>It is agreed that the proponent has had 20 months already to consider its position on this site and extending the life of the geobag structure is an opportunity to progress with the CMP and a site based position on retreat/protect.</p> <p>Agreed that the biodiversity and dune rehabilitation measures will be included in the consent as conditions.</p>
<p>Heritage NSW</p> <p>This application was referred to Heritage NSW as Integrated Development due to its potential to impact on Aboriginal middens.</p> <p>An AHIP is required to enable the management of the site as proposed.</p> <p>GTAs are provided.</p>	<p>It is agreed that an AHIP is required and the GTAs supplied by Heritage NSW will be included as conditions of approval.</p>

Submission issues raised	Response
<p>DPI – Fisheries (Cape Byron Marine Park)</p> <p>It is critical that displaced or damaged geobags or any other foreign material do not pollute the beach or the marine park.</p> <p>Public access and safety for beach and marine park users also needs to be addressed.</p> <p>Short and long term park impacts from coastal processes needs to be addressed.</p> <p>Works should not proceed without the support of the BoBBAC.</p> <p>All works below MHWL will require a marine park permit.</p>	<p>It is agreed that the geobags need to be kept out of the marine park. This is an important reason why the approval will be time limited. Removing the bags during an erosion event is unlikely to be safe. Geobag removal will be included as a condition of consent.</p> <p>Public access to the beach is an important consideration. But given the presence of middens and the delicate nature of the dune escarpment in its eroded state, public access through the escarpment will not be permitted. It is available about 50 metres to the west of the subject land. Long term public access will also be addressed in the CMP.</p> <p>The geobag structure is a short term protection measure and a detailed management strategy is required to address coastal processes. This will be included as a condition of consent.</p> <p>Long term impacts will need to be addressed in a CMP.</p> <p>An AHIP is required for all works and this will require the support and input of BoBBAC. This will be included as a condition of consent.</p> <p>A marine park permit will be included as a condition of consent for this application.</p> <p>Further consultation with Cape Byron Marine Parks (and others) at the point of bag removal will be included as a condition of consent for this application.</p>

5.9 Section 4.15(1)(e) – the public interest

The proposed development is permitted with consent on the subject land and is substantially already in place.

There were no public objections during the exhibition period and early pre-lodgement consultation yielded multiple public submissions, which raised a variety of issues and concerns. Where possible these have been addressed by conditions of consent recommended by this report.

Agency submissions were detailed and constructive and the issues raised have been addressed by conditions of consent recommended by this report.

The proposed development is considered to be of a suitable scale, form and character and generally complies with State Environmental Planning Policy (Resilience and Hazards) 2021, Byron Local Environmental Plan 1988 and Byron Development Control Plan 2010. It is

compatible with the surrounding environment and surrounding land uses. If coastal hazards are not extreme in the short term it will provide a valuable opportunity to make decisions for the long term management of this site and the wider locality.

The retention of these coastal protection works in the short term (subject to conditions) without excessive environmental, socioeconomic or cultural heritage impacts is in the public interest

6.0 Conclusions

This development application has been considered in accordance with the requirements of the EP&A Act and the Regulations as outlined in this report. Following a thorough assessment of the relevant planning controls, issues raised in agency submissions and the key issues identified in this report, it is considered that the application can be supported.

The proposed development is in the public interest as it will avoid negative social and economic impacts in the short term and will not have significant environmental or cultural heritage impacts, subject to the proposed conditions.

The proposed development has been assessed for possible negative impacts to the natural and cultural environments. The negative impacts anticipated will be mitigated by way of conditions.

It is considered that the reports and assessments provided with the application have satisfied the relevant matters within section 4.15 of the Environmental Planning and Assessment Act 1979.

It is determined that through the application of the attached conditions, the proposed coastal protection works can achieve the goal of stabilising and protecting the dune system for a short period of time while long term options are considered and adopted by various public authorities in conjunction with landowners, BoBBAC and other stakeholders.

7.0 Recommendation

It is recommended that:

- 1 Development Application DA 10.2021.630.01 be **APPROVED** subject to conditions attached at Appendix 1 and plan set at Appendix 2.

Appendices

Appendix 1: Schedule of Conditions

Appendix 2: Plan Set

Appendix 3: Pre lodgement Public Consultation

Appendix 4: Agency Submissions

Appendix 5: EIS and Appendices

Appendix 6: RFI(s) and additional Information Supplied by Applicant