



forestry, fisheries & the environment

Department:
Forestry, Fisheries and the Environment
REPUBLIC OF SOUTH AFRICA

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Cape EAPrac Environmental Assessment Practitioners

Att: Ms. Melissa Mackay

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Dear Ms. Mackay

SUBJECT: COMMENTS ON THE COMMENTS ON THE DRAFT BASIC ASSESSMENT REPORT FOR ARCH ROCK ON REMAINDER PORTION 5 OF ERF 296, KEURBOOMSTRAND

The Department of Forestry, Fisheries, and the Environment (DFFE) Oceans & Coasts (O&C) Branch appreciates the opportunity granted to comment on the Draft Basic Assessment Report for Arch Rock on Remainder Portion 5 of Erf 296, Keurboomstrand. This Branch has provided recommendations in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), ("NEMA") and the National Environmental Management: Integrated Coastal Management Act, 2008 (Act No. 24 of 2008) ("**ICM Act**").

1. The Branch O&C has the mandate to ensure the holistic management of the coast and estuarine areas as an integrated system and promote coordinated coastal management. It ensures that the ecological integrity, natural character, and the economic, social, and aesthetic value of coastal zones are maintained to ensure that people, properties, and economic activities are protected against the impacts of dynamic coastal processes.

2. Guided by the principles of integrated coastal management, this Branch continues to strive for environmental sustainability and socially justified sharing of benefits derived from a resource-rich coastal area without compromising the ability of future generations to access those benefits.
3. Based on practical knowledge and experience in the application of environmental legislation, the assessment of associated impacts, this Branch concludes that it **is in support** of the competent authority to grant environmental authorisation for the proposed redevelopment of Arch Rock resort on Portion 5 of 296 Keurboomstrand.

4. Conditions and Recommendations for the Attention of the EAP and CA:

4.1 This Branch notes that the proposed redevelopment comprises the construction of three new cottages on approximately the same footprints as the existing units. From a coastal erosion perspective, setting back the new units from the seafront represents a risk-averse approach that is recommendable. There is, however, no setback limit within the property that can be guaranteed safe. The recommendation is therefore to construct as far back as reasonably possible within the framework of the wider redevelopment goals.

4.2 It is recommended that the foundations of the new beachfront cottages are designed to remain stable in the event of failure of the beach-facing slope due to coastal erosion. As an approach to address this, the applicant can review the recommendation of piled foundation supports which are integrated into the structural design of the building to ensure long-term stability and protection from the coastal interface.

4.3 The vegetation covering the steep beachfront slope offers considerable erosion protection. Care should be taken to limit damage to this vegetation during construction activities and future use.

4.4 Further to this, protection measures to increase public safety need to be considered for steep seaward facing Unit 1. Unlike units 2 and 3, the dune cordon/bank is steep, slopes downwards, and is currently at different elevations. This



would present a safety risk of injuries for older visitors and/or children, it is recommended that the applicant explores the option of designing wooden/timber poles around the boardwalk or near the toe of the dune as a safety measure and to limit the trampling on the vegetation.

- 4.5 A specialist dune vegetation assessment and management plan are recommended to ensure that suitable indigenous species are present to provide optimum bank stabilisation.
- 4.6 This Branch notes and concurs with the recommendations by the coastal engineer that although a revetment is not a preferred solution for this property in the current situation, could be considered in the future should increasing erosion problems become evident. Provision for this should be made in the maintenance management plan for inclusion and consideration by the competent authority.
- 4.7 The Coastal Vulnerability Index and DEA&DP erosion risk lines indicate that significant parts of the property may be at high risk of coastal erosion. However recent historical trends at the site, which is protected to some extent by the presence of a nearshore rocky reef, indicate relatively low coastal erosion risk at present. While this might be the case, adequate measures need to be undertaken to ensure that this property is protected from dynamic coastal processes.
- 4.8 The applicant is made aware of the increasing risk of property damage due to extreme coastal events. Adequate mitigation measures need to be exercised to mitigate the long-term, cumulative, and unintended impacts.
- 4.9 This Branch notes that no geotechnical reports for the site have been provided. It is recommended that a formal geotechnical investigation be conducted before the commencement of detail design and tendering. This will confirm the existence of near-surface bedrock, the suitability of excavated material as fill material, and the depth of the groundwater table and shed further light on the extent of the erosion risk measures that need to be undertaken.
- 4.10 This Branch reiterates the need for understanding the depth of bedrock below the site, specifically as it relates to the units that are 100m from the highwater mark as this significantly affects the coastal erosion risks and will influence the design of the foundations of the new beachfront cottages to ensure stability in the event of shoreline erosion.

- 4.11 While there is little evidence that suggests that this area is at risk from coastal erosion, it is crucial to note that the effects of climate change (including sea-level rise and increased storm intensity) potentially increase the coastal risk to beachfront properties in this area.
- 4.12 The Coastal Vulnerability Risk Index and the DEA&DP erosion risk lines indicate that significant parts of the property may be at high risk of coastal erosion. The Keurboomstrand Beach sand erodes and accretes intermittently over time and appears to be currently “dynamically stable.” The Coastal Viewer further confirms that the remainder of Portion 5 Erf 296 is situated beyond the moderate risk zone and is within the low-risk zone for coastal erosion.
- 4.13 To further reduce the potential risks to the public property associated with failure of the existing wall, all excavations, and construction-related activities should be setback landwards, away from the seaward facing of Remainder of Portion 5 of Erf 296. No excavation, digging, or removal of sand should be undertaken within 3m of the toe of the bank to prevent structural failure.
- 4.14 No stormwater runoff (or other runoff, e.g., swimming pool backwash water) must be allowed to concentrate onto the steep seaward slope where it can contribute to erosion problems. Runoff from the roof of the new proposed buildings should be planned around the existing formal stormwater drainage system (if present) or directly infiltrate into soft landscaped areas surrounding the building (in such a way that it is not likely to form an erosion channel).
- 4.15 The Terrestrial and Biodiversity Compliance Statement outlines that various protected and indigenous trees occur at the property with gardens beds and lawns surrounding the chalets. The applicant should note that a permit from Forestry Western Cape should be acquired to relocate, remove or prune Protected trees within the development footprint. This Branch strongly maintains that all protected trees that are found on site should be built into the architectural design for the site and, as far as possible be retained.
- 4.16 Construction and operational management of the development must ensure that the Milkwood Trees are not impacted by proposed construction activities at all development stages.
- 4.17 Only indigenous plant species should be used in the landscaped areas of the redevelopment.

- 4.18 In line with the Bitou Municipality Spatial Development Framework (Keurbooms River Draft SDF), this development should be subject to strict urban design, architecture and adhere to relevant land-use guidelines.
- 4.19 The potential security and safety impacts associated with the presence of construction workers and other impacts associated with noise, dust, and safety impacts associated with construction-related activities and the movement of heavy vehicles were identified as key socioeconomic issues associated with this development proposal. While most of these impacts are unavoidable, the onus lies with the applicant to ensure that the construction activities result in a minimal disturbance to neighboring.
- 4.20 The construction and operational plan should not clash with the residential land use of this neighborhood. The construction schedule/operational plan/ times be communicated and, if possible, avoid holiday periods. As far as possible, the construction schedule should be available to neighbor properties to ensure that they are aware of the proposed activities and that they can make adequate means to mitigate noise and impacts.
- 4.21 Construction work should be restricted to weekday working hours between 08h00- 17h00. This Branch further stresses that the responsibility to keep noise levels within reasonable limits and hours lies with the applicant and appointed building contractor.

5. Specific Considerations for Inclusion in the Environmental Management Plan (EMP)

- 5.1 Should there be any archaeological evidence on-site, work should cease immediately, and the case reported to Heritage Western Cape for a professional investigation.
- 5.2 Clearing must be preceded by a plant search-and-rescue operation by a botanist, to remove any scarce, significant, or useful indigenous species that can be transplanted on the property post-construction.
- 5.3 No wastewater containing harmful chemicals should be released on-site, to avoid contamination of the sand/soil.
- 5.4 Ensure drainage and runoff are controlled to prevent erosion and soil loss. Install contour berms where erosion has occurred to ensure that no new erosion pathways are formed.

5.5 Best practice Rainwater harvesting should be implemented to mitigate impacts.

5.6 Access to sensitive areas outside the developmental footprint must be controlled using signage during construction. The appointed Environmental Control Officer should ensure that all No-Go areas are demarcated.

Kindly note that the Department reserves the right to revise its comments and request further information based on any additional information received. All correspondence, documentation, and/or requests (hard copy and an electronic copy) should be submitted to our office via OCEIA@dffe.gov.za / or **Physical Address: Department of Forestry, Fisheries & the Environment (DFFE), Branch: Oceans and Coast, 2 East Pier Building, East Pier Road, Victoria and Alfred Waterfront, Cape Town, 8001.**

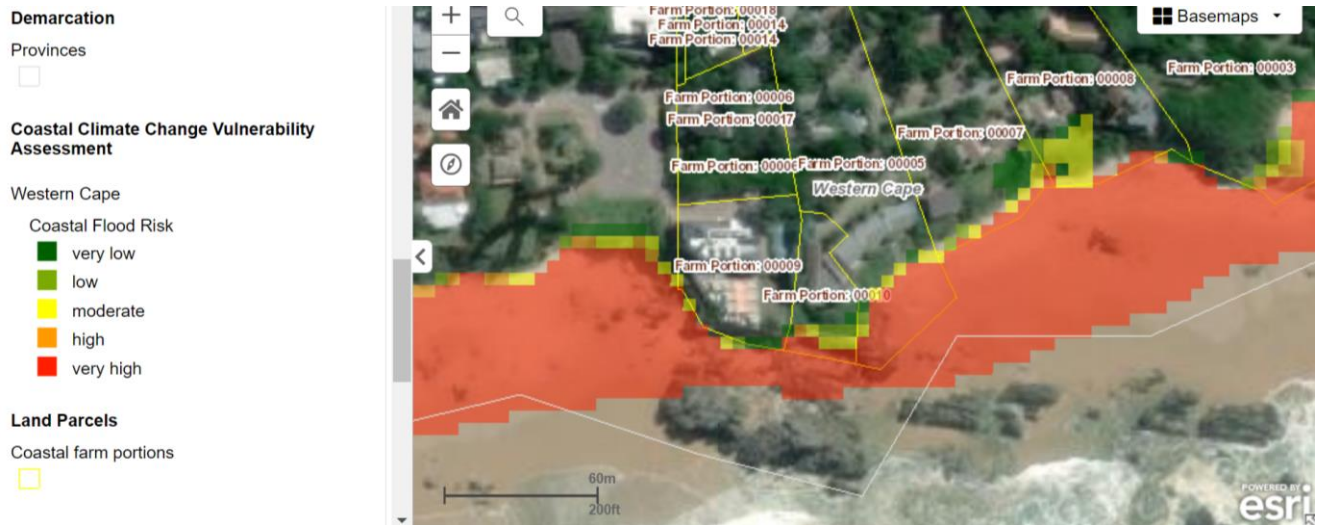
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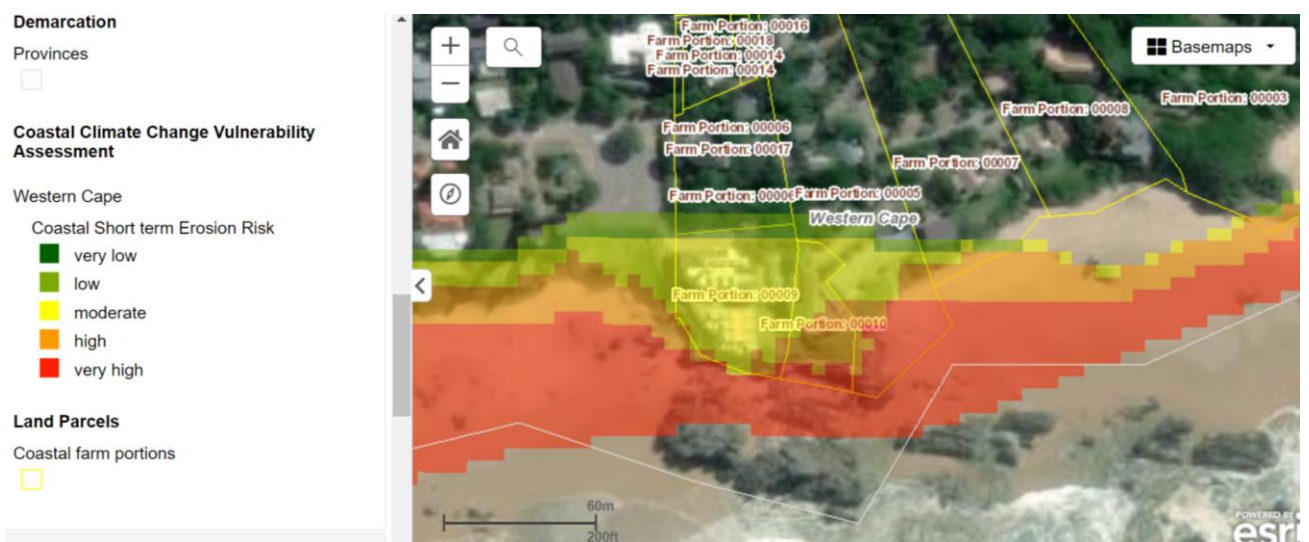
ACTING DIRECTOR: COASTAL CONSERVATION STRATEGIES

DATE: 28/03/2022

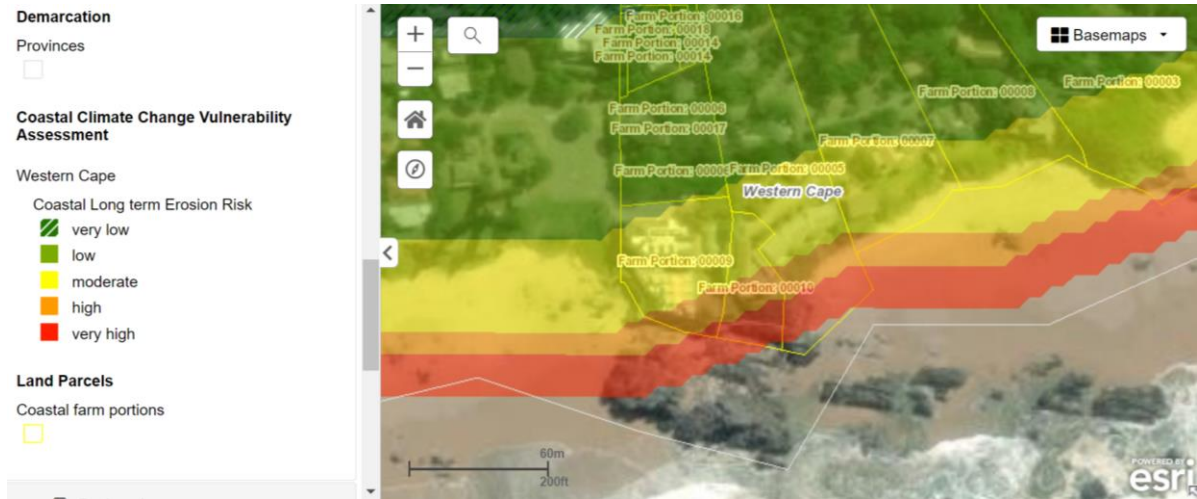
Appendix A: Coastal Vulnerability Assessment of Portion 5 of farm 296



The beach area of the property is at a very high risk of flooding, while the foot of the slope has moderate to low flooding risk of flooding.



The property is located in an area that has short-term erosion risk ranging from very high to low. The slope has a high risk of eroding in the short term while the structures are located in an area that has moderate risk of short-term erosion.



The whole of portion 5 is within an area that is at risk of long-term erosion, ranging from very high to very low risk. The beach area has a very high to high risk of eroding, the slope has high to moderate risk of eroding and the structures located in an area that has moderate risk of eroding.