



MARINE AND COASTAL ACCESS ACT (2009). APPLICATION BY LIVING QUARTER PROPERTIES (PORTH) LTD FOR ASSESSMENT OF STABILISATION WORKS AT THE VIEW, PORTH - RESPONSES

Reference Number: MLA/2018/00527

From: [REDACTED]
Cefas, Lowestoft Laboratory
Date: 17th June 2022

To: [REDACTED] - MMO (via email)
Cc: [REDACTED], Cefas
[REDACTED], SEAL Case Officer

1. With reference to the above application for cliff stabilisation works at Porth by Living Quarter Properties Ltd and your request for comments on the applicant's response dated 10th June 2022 please find my comments below.
2. This minute is provided in response to your advisory request in relation to the above proposal in my capacity as scientific and technical advisor for marine processes. The response pertains to those areas of the application request that are of relevance to this field. This minute does not provide specialist advice regarding benthic ecology, fish and fisheries, shellfisheries, or underwater noise as, whilst these are within Cefas' remit, they are outside my area of specialism.
3. In providing this advice I have spent 7 hours of the 7 hours allocated by the MMO. I have booked my time to MLA/2018/00527 ([REDACTED]).

Document (s) reviewed

4. CLIFF STABILITY ASSESSMENT AT WHIPSIDERRY BEACH NEAR PORTH, CORNWALL FOR LIVING QUARTER PROPERTIES (PORTH) LTD. John Grimes Partnership Ltd, dated 6th August 2015 – 'the report'
5. THE VIEW, PORTH MMO QUERIES – RAISED 27TH APRIL 2022. MMO, undated – 'the responses'

Description of the proposed works

6. The applicant has revised an Environmental Assessment and marine works application for stabilisation of the 25-30m high vertical cliff fronting the (then vacant, now demolished) Paradise Cove Hotel, Newquay. It is proposed to redevelop the clifftop site with ten 3-storey houses with parking. Permission was granted for the same programme of works following a previous application made in 2014 but the permission was allowed to lapse without completion of the works.
7. This is a review of the applicant's responses to previous advice on this application ([REDACTED] to [REDACTED], MMO, dated 10th June 2021).

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Responses to Questions posed by the MMO Case Officer. All responses are observations unless otherwise stated.

MMO Question 1: Could you confirm whether or not the applicant's responses and further information satisfy the original concerns

8. I feel that there is a slight disconnect between the aims of my original comments and the interpretation of them by the applicant. The additional site report and direct responses to comments forwarded to the applicant by the MMO (particularly those marked 'MC' in orange text) are generally addressing the *adequacy of the design for site protection*, whereas the comments address the design's subsequent impact on the natural processes. I consider that the information newly provided is adequate to gauge the capacity for the development to be undertaken. The reports provided are cautious and give a clear indication that the development is proposed for an eroding site which poses considerable, but not impossible, engineering design challenges to enable a development which it judges could be secured until around 2138. I am unable to comment on the engineering feasibility as this is beyond my remit, but I take from this information the recognition that the site is a challenging one due to active coastal processes of erosion and cliff retreat.
9. As a consequence of this setting, my original comments were concerned with the degree to which the application had considered the impacts of the development on those coastal processes (as is my remit), rather than whether the design was adequate to defend the site against them. My reading of the applicant's response is that they continue to address site viability (impacts on the site) rather than impacts caused by the development on the marine (coastal processes) environment. However, the responses do provide a degree of additional relevant information.
10. The report and response discusses the matter of wave reflection, as raised in my original comments. As per the above observation, the report (Section 8.0, paragraph 1) notes that the concrete defences would be shaped to reflect waves efficiently, and this is reiterated in the response document – again, indicating that the defences will be effective as defences. However, the response also highlights the reason for the initial comment since efficient wave reflection implies additional wave energy within the embayment. As noted by the applicant, the surrounding bay edges are not currently eroding as fast and are aligned differently to the incoming waves, but efficiently reflected waves will carry their energy onto these cliff faces in new directions and potentially lead to erosion on the adjacent headland and/or lowering of the beach platform.
11. **Minor comment:** The application (and response) still does not address what effect the development will have on the local coastal processes. The response suggests that modelling of coastal change would be prohibitively expensive for this development, but the exercise proposed to illustrate this is not necessarily required. A smaller-scale wave model which simply indicates the redistribution of wave energy under a small number of typical and potential extreme conditions would provide sufficient information to understand the potential process impact of a development here, and there would be no need to attempt to model the lifetime impacts of this. For example, I note that according to Section 8 paragraph 2, the beach platform may be protected by loose blocks on the beach – the potential stability and utility of this additional potential intervention in natural process could be assessed with respect to mapped wave energy, without the need for further simulations.
12. With respect to the Shoreline Management Plan (SMP; Question 3 on the response document) the applicant's response recognises that the current plan is to allow this section of the coastline

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to develop with natural processes. However, MC comments that, because the site was formerly developed, the SMP strategy of natural recession for this location does not apply. I would question whether this is the case (particularly as the prior development has been removed) and note that this is a matter for the local authority owners of the SMP to decide (further, I am not certain that offering to pay the costs of protection works affects that – and see also paragraph 10 of this advice minute, concerning liability). However, I am satisfied that the response has addressed the position of the development with respect to the existing SMP, as requested.

13. The applicant also questions whether the ‘end of life impacts’ are relevant when the proposed engineering is more robust than the natural site. This response is instructive since it indicates that end of life impacts could indeed be significant, in the context of the SMP, since it recognises that the likely condition of the site after a century or so is of a defended cliff face, largely comprising a deteriorating concrete face, isolated within a more naturally and extensively eroded setting, therefore becoming increasingly ‘non-natural’ and increasingly difficult to maintain, or requiring decommissioning and mitigation to restore to a natural state.
14. This was the intention of the original comment – end of life conditions were not addressed. This response also raises the matter of the long-term liability for beach impacts – degradation of the concrete and potential erosion, repair (pinning) and upkeep in the face of natural erosion of the existing rock face around the concrete over time. This is recognised in Section 10 of the new report, but this section also serves to highlight that this has not been considered in depth i.e., *“additional works may be required to prevent outflanking in the future”* – but no discussion of whether this is affected by the works. It is unclear to what extent the developer is offering to pay for necessary works over the site lifetime, including end of site life, when the development will threaten to deposit eroded concrete and other non-natural materials onto the shoreline without specific measures being taken to prevent it.
15. On the matter of sea level rise (SLR; Question 1 of the response document)) the applicant indicates that they have used a ‘common practice’ approach and that the design would be effective even with 2m of SLR. Accepting this approach to be adequate to demonstrate engineering effectiveness, again the question of SLR was raised rather to understand the impacts of the site on future coastal process. As per the above suggestion re: wave reflection, increased water levels would potentially lead to higher wave energies within the embayment (and climate change impacts on storm wave heights also need to be considered) – the efficient reflection of more highly energetic waves in future could exacerbate the consequential impacts of the defended site on the adjacent undefended cliffs and the degree to which this could occur is not discussed qualitatively or quantitatively.
16. The report provided also noted that works had not been carried out in the 8 years since the previous site visit (2006) and that the cliff condition had (by 2014) deteriorated further. An additional 8 years has now passed since this 2014 report and so this deterioration is likely to have continued. This highlights both that (1) the cliff is highly dynamic in its natural state, and therefore that (2) works to defend the cliff will significantly alter local coastal processes,

Additional comments

17. The description of the proposals, to include sprayed reflective concrete defences infilling sea caves, steel-pinned cliff face works including reprofiling, netting, drainage onto the beach and venting, plus a possible rock-covered beach, highlights the localised but complete departure from natural processes of cliff erosion and shoreline development implied by the proposed development on this site.

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18. The applicant responses have not directly quantified the degree of this impact on coastal processes but they have indicated the tacit awareness that these effects will occur, and that the development works are therefore potentially contrary to the existing SMP. However, this judgement may not be entirely a matter for the MMO.
19. As the effects are not quantified it is not possible at this time to indicate the scale and significance of the possible consequences. The site is actively eroding, but is a confined and relatively small embayment, so impacts to coastal processes are not likely to have consequences beyond the embayment itself for as long as it exists as an embayment (which is likely over the site lifetime, even if the worst-case consequence of the scheme is to accelerate the rate of change on the adjacent bay cliffs). The report provided also indicates that the beach is a thin veneer and that a rock platform exists close to the surface, already regularly exposed, so the likely natural consequence is that this beach will be largely lost and the impacts of the development may be minimal.
20. Therefore, I believe that it may be considered that the coastal process impacts are sufficiently contained to make a licensing decision in respect of a minor impact on wider coastal processes, while allowing that other aspects of the localised coastal impact, including aesthetics, regional coastal plans and liability and mitigation for potentially significant end of life impacts, are matters for arrangement with other local planning process regulators.

Senior Coastal Process Scientist

Quality Check	Date
	17/06/2022

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