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Dear Ms Bakopanos

**Subject:** West Culburra Concept Plan – NSW Land & Environment Court Revised Application (SSD 3846)

Thank you for your letter of 14 January 2021 advising us of the abovementioned revised concept plan application, noting that the initial proposal was refused by the Independent Planning Commission in October 2018 and subsequently appealed to the NSW Land & Environment Court. In response, we have provided comments for your consideration at Attachment A which are summarised below:

- We are satisfied that the proposal has been adequately assessed in accordance with the NSW Framework for Biodiversity Assessment. We note that the broader Halloran Trust Lands Planning Proposals at Culburra and Callala, which includes the Concept Plan area, is also proposed for biocertification. Should approval be granted, we request the flexibility to require offsets to be delivered in accordance with the biocertification if the land is certified prior to commencement of the Concept Plan development.
- The reduced development footprint together with revised stormwater quality and quantity management approach is a significant improvement on the previous proposal in terms of limiting any water quality, and associated estuary health impacts on the Crookhaven River and Lake Wollumboola.
- However, we recommend amendments are made to the groundwater modelling primarily to incorporate the findings of the recent 'West Culburra Groundwater Assessment' by HGEO (2020), which comprehensively assesses groundwater in the locality.
- While we see relative merits with the revised development, we note that DPIE (Planning & Assessment Group) terminated the Halloran Trust's Culburra Planning Proposal in late 2020 (while the Callala Planning Proposal remains active. As such, the future land use to the west and south of the revised development remains uncertain. In the absence of understanding the future Planning Proposal outcome, we reserve the right to revisit this position should the final adopted zoning generally depart from where the Culburra Planning Proposal left off.

If you have any questions about this advice, please do not hesitate to contact Mr Calvin Houlison, Senior Conservation Planning Officer, via [calvin.houlison@environment.nsw.gov.au](mailto:calvin.houlison@environment.nsw.gov.au) or 4224 4179.

Yours sincerely

Chris Page

25 February 2021

**Senior Team Leader, Planning (Illawarra)  
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Attachment A – EES Detailed Comments – West Culburra Revised Concept Plan NSWLEC Application

**ATTACHMENT A - EES DETAILED COMMENTS – WEST CULBURRA REVISED CONCEPT PLAN NSWLEC APPLICATION****Biodiversity & offsets**

- Our office has been extensively involved with discussions with the proponent and Planning & Assessment regarding proposed biocertification for the broader Halloran Lands Planning Proposal, which includes the West Culburra Concept Plan area. In accordance with these discussions, we are satisfied the project has also been adequately assessed in accordance with the NSW Framework for Biodiversity Assessment (FBA) for the purposes of the concept plan application (the “FBA scenario”), as well as the two transitional biocertification proposals at Callala and Culburra under the NSW Threatened Species Conservation Act 1995 (the “biocertification scenario”).
- Our previous comments to Planning & Assessment on the supplementary Response To Submissions for the previous Concept Plan (dated 9/8/17) indicated a preference for biodiversity offsets to be sourced from the Lake Wollumboola catchment, in accordance with the recommendations of previous NSW Government investigations. The applicant has since established four biobank sites for the broader Halloran Lands Planning Proposal area, with all credits required for the revised concept plan to be sourced from the nearby Lake Wollumboola biobank site, subject to a variation to include Southern Myotis species credits.
- We suggest that if approved, conditions be imposed requiring retirement of the requisite biodiversity credits prior to development occurring. This should require retirement under the FBA scenario by default, unless it can be demonstrated that the development has been biodiversity certified by the NSW Minister for the Environment. In this instance, the requisite conditions required to be retired would be those generated under the biocertification scenario. Given the nuances associated with this suggested approach, we remain available to assist regarding draft conditions of consent upon request.
- We note that updated threatened species surveys in accordance with the NSW Biodiversity Certification Methodology (BCAM) have now been completed. The proposal has otherwise adequately assessed the offset implications of the proposal in accordance with the relevant methodologies, as discussed above.

**Stormwater management**

- The Integrated Water Cycle Management Strategy (IWCMS) outlines how the development will achieve Neutral or Beneficial Effect (NorBE) outcomes for both the Crookhaven and Wollumboola estuaries. While the MUSIC modelling files have not been scrutinised, the treatment train proposed to manage both stormwater quality and quantity appear to provide a high level of stormwater treatment and retention that should minimise the impacts to the Crookhaven River and Lake Wollumboola.
- However, given previous MUSIC modelling issues for development proposals in this area and the site’s sensitive location, we recommend that an independent external review of the MUSIC modelling is undertaken. Such a review would determine if all MUSIC input parameters are appropriate, whether there are any errors or biases in parameters and input data sets (eg. calibrating using rainfall data from Nowra RAN Air Station between 1965 and 1973, compared to rainfall from Culburra stations using more recent and longer period of data), and to advise on whether NorBE is realistic for the stormwater treatment train proposed.
- Achieving NorBe outcomes over the longer term for this development, as with any development, will rely on both the proposed construction of the stormwater treatment train meeting design specification, and regular monitoring and maintenance to ensure the

treatment train continues to perform as intended. If adequate and ongoing maintenance on the stormwater treatment train is not carried out, pollutant reduction performance of the stormwater treatment train will be compromised over time and stormwater impacts particularly to the Crookhaven River will be likely.

- Should the proposal proceed, we therefore recommend that conditions are imposed to ensure the completed stormwater treatment train, inclusive of gross pollutant traps (GPTs), detention ponds, bioretention basins and the stormwater dispersal system, are audited after construction and monitored for performance during the staged development and for a minimum period of 2 years post completion of all stages, before handover to council for ongoing management. In addition, there will need to be a resourcing commitment from council for the ongoing monitoring and maintenance of the stormwater treatment train to ensure performance over the longer term. This monitoring and maintenance should be subject to auditing by the NSW Government a part of any consent conditions.

### Groundwater modelling

- We note deficiencies in the groundwater assessment component of the IWCMS that will need to be addressed to enable certainty on any groundwater impacts to the Crookhaven River and Lake Wollumboola. In particular, the findings of the most recent and comprehensive assessment of groundwater for this locality, 'West Culburra Groundwater Assessment' by HGEO 2020, have not been referred to or relied upon to inform the groundwater modelling assessment. This report is publicly available at <https://doc.shoalhaven.nsw.gov.au/displaydoc.aspx?record=D20/482983>.
- Boreholes MB410A and MB410B that were installed for the HGEO study are both within the eastern portion of the proposed development footprint. The hydraulic conductivity values found by HGEO of 2.8m/day at borehole MB401A are substantially higher than the values used in the groundwater calibration model parameters outlined in Table 36 (p89) ranging from 0.002 – 0.1m/day and final calibrated values reported in Table 38 (p90) of 0.035m/day for Wandrawandian siltstone.
- A key finding of the HGEO groundwater assessment was the presence of highly permeable fractures and/or faults within the siltstone that significantly increase substrate permeability. There is potential for relatively rapid migration of contaminants to the Crookhaven and Wollumboola via fracture zones, should contamination reach the water table as a result of the development and inadequate performance of the stormwater treatment train proposed.
- We recommend that the groundwater modelling component be rerun with a range of hydraulic conductivity values in line with HGEO's findings, and the groundwater assessment within the IWCMS be updated, including comment on how this may affect results for proposed recharge of stormwater.