

## Submission on additional information in relation to the SER

### Department of Infrastructure, Planning and Logistics – Mandorah Marine Facilities

This submission is made under regulation 126 of the Environment Protection Regulations 2020

NT EPA reference number: EP2022/014

#### Government authority: Aboriginal Areas Protection Authority (AAPA)

AAPA considers that our concerns have not been adequately addressed and therefore our concern for sacred sites remains.

The proponent's response does not explain the apparent poor calibration of the shoreline evolution model, or provide justification for proceeding without a well-calibrated model, stating:

*'It is widely acknowledged in the industry that shoreline evolution modelling over long time periods is difficult/inaccurate, due the number and complexity of physical processes that cause it. This has been demonstrated by shoreline monitoring after installation of multiple structures throughout the world. The best available model systems/approaches have been applied but this shortfall has been acknowledged in the reporting and accounted for by preparing the CMMP to actively monitor and manage shoreline changes.'*

The project should not be approved to proceed when the design predicts significant impacts to sacred sites based on a model that, from the information provided, does not demonstrate confidence in its predictive ability. Proceeding on the basis of preparing a CMMP is considered to be a high risk strategy when significant change is predicted.

The proponent's response to clarifying whether the change in the sea floor profile created by dredging and dredge spoil disposal activities have been incorporated, considers construction dredging only and not post construction potential changes to sediment transport, stating:

*'Post-construction layout/bathymetry is obviously not applied when modelling construction effects.'*

AAPA's comment is whether wave, tidal levels and littoral drift might change due to the changed sea floor bathymetry, and therefore affect coastal erosion/deposition. The response indicates that the future sea floor bathymetry has not been incorporated into the models and therefore it is unknown whether sediment transport may change due to changed bathymetry as a result of dredging.

These responses and the shoreline evolution modelling report (Appendix L) would benefit from an external expert review, with a response to AAPA's comments (and other relevant agencies) and recommendations to NTEPA and DIPL.

If a shoreline evolution model can be calibrated to historic conditions it could then be used to optimise the breakwater design to minimise coastal erosion.

The excavation of sand from another location and distribution south of the harbour in perpetuity is not considered to be a sustainable mitigation strategy. A sustainable solution to littoral drift needs to be developed. Bypassing is mentioned in the response but details are not known.

The proponent states that they consider the triggers to be conservative. Appendix D describes the trigger for a management response:

*'Average shoreline position recedes by 5m compared to baseline'*

AAPA does not consider this trigger to be conservative. In principle, triggers should pre-empt change to the environment at sensitive receptors and apply mitigation rather than allow the change to occur.