AMENDMENT TO RESPONSE TO DIRECTION TO PROVIDE ADDITIONAL INFORMATION (ATTACHMENT A) DATED 11 AUGUST 2026

18 August 2026

GEMCO | EXCESS WATER DISPOSAL (OCEAN OUTFALL) PROJECT

No.	Additional information required	GEMCO response
1	Provide an assessment of potential changes to sediment deposition for the life of the project (and include assumptions such as the number of years and control measures).	Updated modelling has been carried out, incorporating the following changes: • Refinement of the wave model resolution (previously ~100 m) to match the resolution of the hydrodynamic model (~20 m resolution). This refinement was carried out to address a modelling artefact that was causing unexpectedly high increases in suspended sediment concentration (SSC) in the vicinity of the breakwater at the southern extent of the Alyangula beachfront (as detailed in the Supplementary Environmental Report (SER), Appendix C, section 4.6.1). • The sediment dispersion model (MIKE3 MT) was re-run with the hydrodynamic model and updated wave model as inputs. The concentration of total suspended solids (TSS) in the mine water discharge was reduced from 90 mg/L, as modelled in the SER, to 50 mg/L to align with the proposed discharge limit contained within the Draft Environmental Approval issued by NT EPA. The treated effluent discharge from the existing sewage treatment plant (STP) was maintained within the updated model with a TSS concentration of 66 mg/L. Sediment deposition outputs from the updated model have been processed in the same manner as presented in the previous response to NT EPA (issued on 14 August 2026). The updated results are presented in Appendix A, Figure 1. Similar spatial patterns of deposition are predicted, but with reduced magnitude compared to the previous modelling with discharge TSS at 90 mg/L. The results for the updated 50 mg/L TSS discharge simulation are summarised as follows: • Deposition is primarily predicted to occur at depths greater than 10 m, typically located 500 m or more from the shoreline. • Localised areas of deposition were predicted on the northern side of the GEMCO Port causeway that connects the jetty to the land-side operations, as well as within the deeper dredged areas at the offshore extent of the GEMCO Port Ship Loader jetty. Cumulative 20-year deposition thicknesses within these areas were predicted to be 10-100 mm (1-10 cm) thickness, approximately half of what was predicted for the 90 mg/L modelling. These depositional zones do not overlap with any known areas of cultural significance. • Predicted 20-year deposition thicknesses in other nearshore areas were almost exclusively below 1 mm, and 1-5 mm within an area ~100-200 m offshore of the southern extent of the Alyangula beachfront. This is considered a negligible deposition thickness over a 20-year period.
	Provide an assessment of direct, indirect and cumulative impacts of the proposed action on features of the sacred site (particularly in relation to restricted works area (RWA) 1)	There are no material changes to the assessment of potential impacts to sacred site 6170-25[redacted] or the RWA1 as a result of the updated modelling. Reduced deposition thicknesses are predicted relative to the previous results, and the potential for impact to the sacred site as a result of the Project remains negligible.

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	and whether a significant impact is predicted.	
	Assess whether the changes to water quality from the proposed action will potentially significantly impact known sacred sites.	The assessment of potential impacts to water quality from dissolved parameters (e.g. metals, nutrients, salinity, pH) remains aligned with the previous response issued 14 August 2026. The following additional assessment pertains to the updated modelling of mine water discharged at 50 mg/L TSS: • The 95th percentile of depth-averaged suspended sediment concentrations exceeding 1 mg/L above ambient (denoted ΔSSC) are predicted to be spatially limited to within ~70 m of the diffuser (i.e. within the outer edge of the MEP), and an isolated zone enclosed by the breakwater at the southern extent of the Alyangula beachfront (Appendix A, Figure 2). These areas are contained within RWA 1 and do not overlap with the known [redacted] sacred site • The zone of influence (ZoI), zone of moderate impact (ZoMI) and zone of high impact (ZoHI) have been redefined on the basis of the updated modelling, as presented in Appendix A, Figure 3. The criteria for defining these zones remains aligned with the approach in the SER (Appendix C, Section 3.6), where the ZoMI and ZoHI represent potential impacts to seagrass and corals and the ZoI represents a detectable change in SSC that could be considered an aesthetic impact to sacred sites. In comparison to the SER model (also shown in Figure 3), the updated model predicts a significantly reduced ZoI limited to within ~70 m of the diffuser and an isolated zone within the breakwater at the southern extent of the Alyangula beachfront. Additionally, no ZoMI is predicted. Therefore, potential impacts to water quality and benthic habitats as a result of suspended sediments are predicted to be further reduced in comparison to those assessed in the SER, and the aesthetic quality at known sacred sites is predicted to be maintained. The potential for significant impacts to known sacred sites is deemed negligible.
	Provide a figure showing sediment deposition and the NT EPA recommended LEP and MEP overlain with the RWA1 and sacred site features.	Figure 1 in Appendix A provides the requested figure.
	Describe measures to avoid and mitigate impacts to the greatest extent practicable as required by section 26 of the EP Act.	Please refer to the previous response issued on 14 August 2026.

Appendix A: Supporting Figures and Maps



Figure 1 Deposition thickness after 1 year (left) and scaled to 20 years (right) to estimate life-of-project deposition thickness for a constant discharge at 50 mg/L TSS

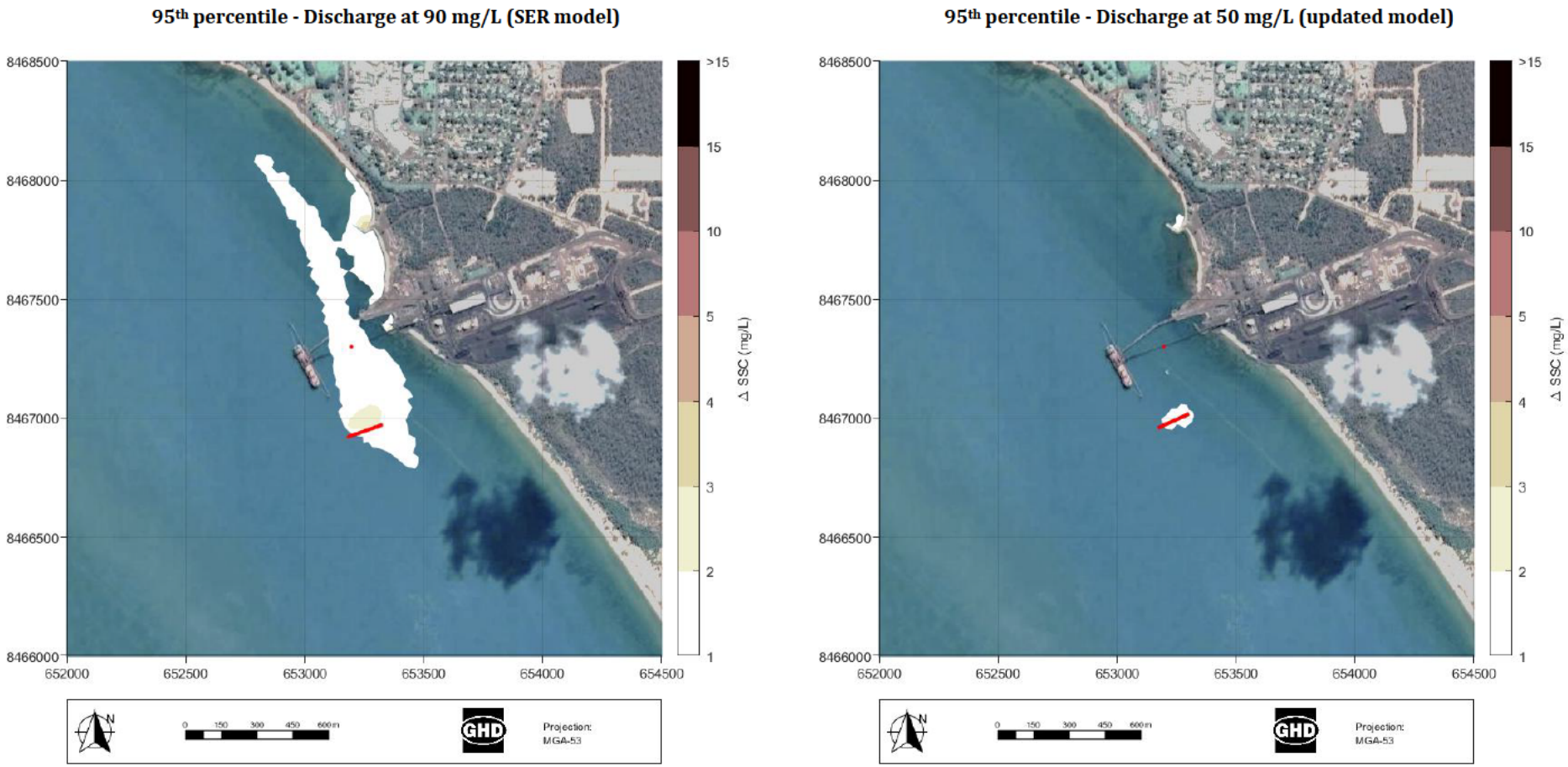


Figure 2 Predicted 95th percentile of depth-averaged ΔSSC as presented in the SER (90 mg/L discharge, left) and from the updated modelling (50 mg/L discharge, right), with the proposed diffuser and existing sewage outlet denoted in red.

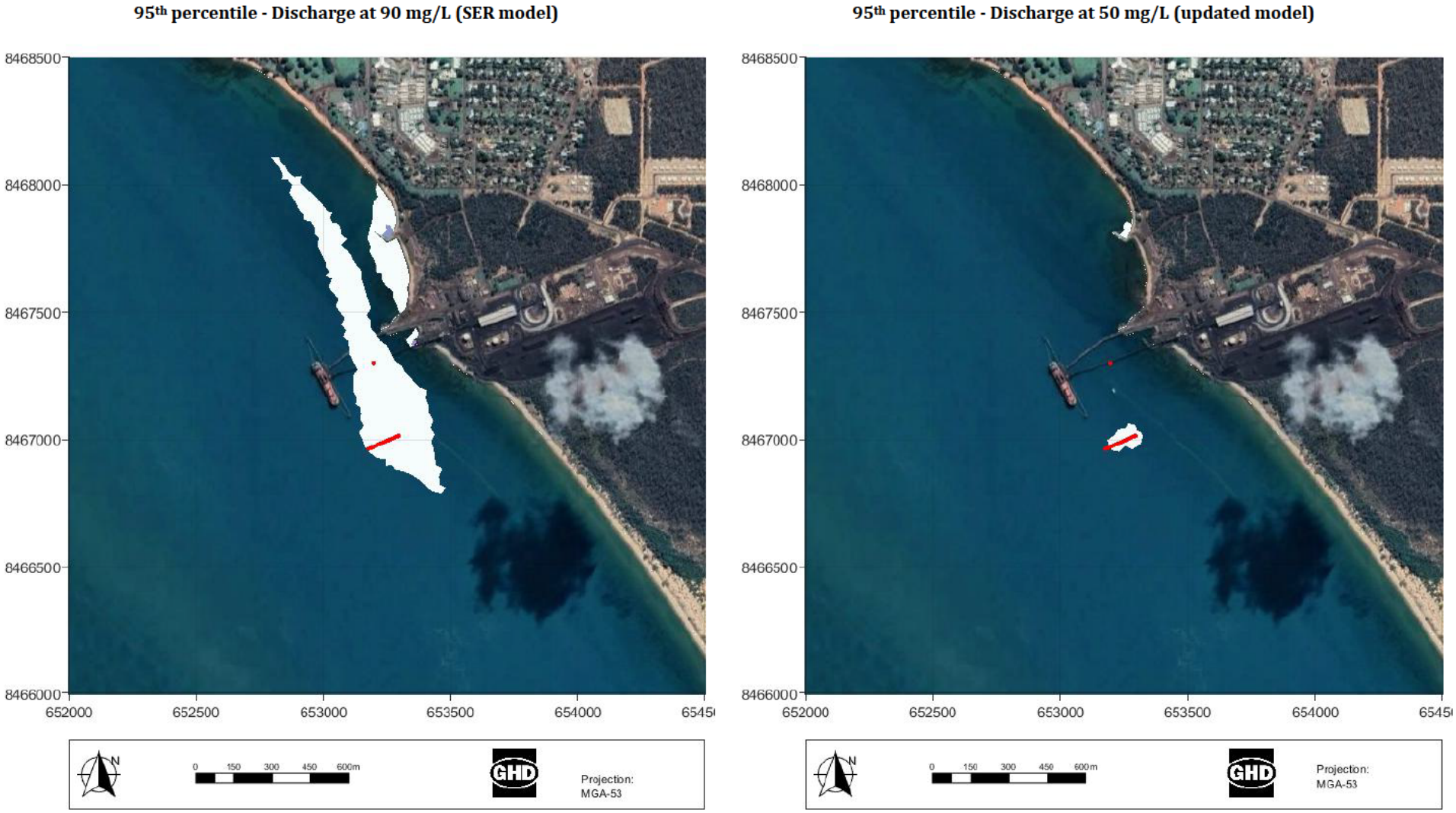


Figure 3 **Predicted extents of ZoI, ZoMI and ZoHI related to SSC as modelled in the SER (90 mg/L discharge, left) and from the updated model (50 mg/L discharge, right), with the proposed diffuser and existing sewage outlet denoted in red and the ZoI denoted in white.**