



25 March 2024

SARA Wide Burnett Bay
Level 1, 7 Takalvan Street, Bundaberg
PO Box 979,
Bundaberg QLD 4670
WBBSARA@dsdilgp.qld.gov.au

RE: Erosion Prone Area, Lot 51 MCH567

To whom it may concern,

This letter is to provide a response to the information requested by SARA in January 2022 regarding the Erosion Prone Area at the site, Lot 51 MCH567 in Tuan on the Fraser Coast, Queensland.

ICM are Coastal Specialists, with over three decades of coastal management experience in Queensland. We have reviewed the available information at this site to assess its vulnerability to short-term erosion, long-term erosion, and inundation due to sea level rise.

The site is located approximately 350m landward of HAT of the adjacent water body, The Great Sandy Strait. The site is on the leeward side of K'gari / Fraser Island and therefore not exposed to ocean waves, with the largest fetch being approximately 10km from the SE. Short term erosion due to storm events is not expected to be significant due to the relatively low energy that can be generated across this fetch. DES have categorised the erosion prone area landward extent (*due storm impact and long-term trends*) of this region as HAT + 40m; this is considered adequate given the relatively low energy environment and does not require re-classification. The subject site is located 310m landward of this extent line.

The site is mapped as *Erosion Prone Area* (and therefore within the *Coastal Management District*) only due to partial low lying surface area and therefore vulnerability to tidal inundation under future sea level rise conditions (i.e. HAT + 0.8m; planning scenario for 2100). This future HAT tidal inundation covers approximately 20% of the site and can be mitigated with minor earthworks and raising of this land by up to approximately 0.5m. These earthworks are proposed as part of the associated development works and in doing so, would effectively remove the *Erosion Prone Area / Coastal Management District* designation from the site.

HAT at the site has been determined from MSQ Tide Tables 2024, at Boonooroo / Big Tuan Boat Ramp, showing a level of RL 1.53m AHD. **The 2100 sea level rise inundation contour is therefore RL 2.33m AHD.** The existing surface at the site is as low as RL 1.8m AHD, with proposed finish levels approximately RL 3.0 – 3.7m AHD.



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While the detailed design for the proposed earthworks (including a perimeter retaining wall) has not yet been completed, this letter is to provide clarification of the proposed design intent and that an alternative solution to SDAP 8, PO1, that satisfies the purpose of the code and performance objective, can reasonably be achieved.

Kind regards,

Martin Mulcahy
Principal Coastal Engineer

International Coastal Management PTY LTD (ICM)

POST PO Box 306, Main Beach LPO, Main Beach, Qld. 4217, Australia

TELEPHONE +61 7 5564 0564

WEBSITE www.coastalmanagement.com.au



Appendix 1. Site Photographs



Figure 1. Turton Street foreshore.



Figure 2. Subject site, Lot 51 MCH567, (northern boundary with low surface level)



Figure 3. Subject site, Lot 51 MCH567



Appendix 2. Erosion Prone Area Mapping

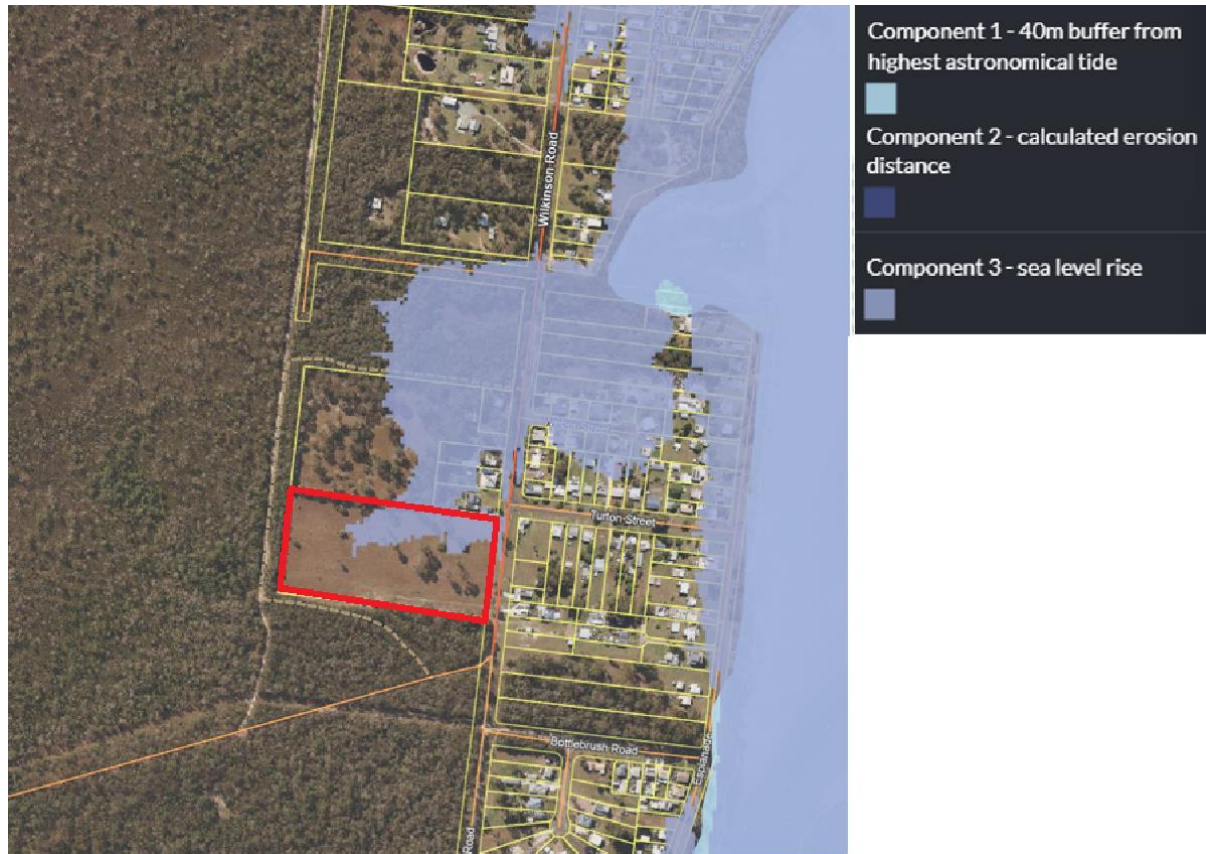


Figure 4. Erosion Prone Mapping (Qld Globe)