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Date:	11 th July 2018	Contact Name:	Andy Symonds
Reference:	WQA17	Telephone:	0458 735 747
Classification:	Project Related	Email:	andy@portandcoastalsolutions.com.au

Dear Paul,

Re: Peer Review of Water Quality Action (WQA) 17 – Sediments and Dredging at Great Barrier Reef World Heritage Area (GBRWHA) Ports

As requested, I have undertaken a technical review of the work and report associated with the WQA17 study which has been undertaken by BMT WBM on behalf of the Queensland Ports Association (QPA). The review process has been undertaken in a number of stages as detailed below:

1. Review of preliminary report: this included a technical examination of the modelling and sediment budget analysis to ensure the assumptions were reasonable, appropriate data had been used and suitable calculations had been made. While on the whole the approach was technically valid it was noted that some aspects of the quantitative sediment budget required improvement. The budget was focused on the net longshore transport of sediment past the ports, but cannot be directly compared to maintenance dredging. As such, it was suggested that the ambient resuspension of sediment from the seabed in the port region should be calculated and used to compare to the resuspension resulting from maintenance dredging;
2. Technical input: based on my experiences at the Ports of Hay Point, Mackay and Abbot Point I was able to provide input to BMT WBM on the review and analysis of measured data and numerical modelling results enabling the development of a more robust and defensible approach for defining the regional scale budgets. These budgets relied primarily on measured water quality data but also used modelled data (when available) as an additional validation check;
3. Review of updated report: a number of iterations of the updated report were reviewed. The updated quantitative sediment budgets were reviewed, and the approach refined to ensure continuity throughout the ports; and
4. Final review: a final review of the BMT WBM report '*GBRWHA Quantitative Sediment Budget Assessment, July 2018*' was undertaken to ensure it was technically sound and the quantitative sediment budgets were robust.

I believe the final analysis, modelling, sediment budgets and version of the report is robust and technically sound and provides a good high-level overview of both the ambient sediment contributions in the GBR and the dredging sediment contributions at the main GRBWHA ports. The improvements to the approach have delivered a product that can be relied upon, noting that there are always uncertainties associated with the development of quantitative sediment budgets. I consider the



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approach of using measured water quality data along with data from numerical models (when available) to inform the budgets to be best practice.

Yours sincerely,

Dr Andy Symonds

Director, Port and Coastal Solutions Pty Ltd