Before the Expert Fast-track Panel

FTAA-2511-1150

Under	the Fast-track Approvals Act 2024 (**FTAA**)
And	
In the Matter	of an application for approvals by **MCCALLUM BROTHERS LIMITED** for the Te Ākau Bream Bay Sand Extraction Project located at Te Ākau Bream Bay, Northland

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Memorandum of Counsel on behalf of McCallum Brothers Limited in Response to Request for Information 4 (Minute 11)

Dated 24 August 2026

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Introduction

1. This memorandum on behalf of McCallum Brothers Limited (**MBL**) is filed in relation to the Expert Consenting Panel's (**Panel**) request for further information contained in Appendix One to Minute 11 dated 2 June 2026 (**RFI 4**) on the Te Ākau Bream Bay Sand Extraction Project.[1]

2. RFI 4 relates to MBL's assessment of coastal processes and is a minor request to tabulate information.

3. Attached to this Memorandum is a response from Richard Reinen-Hamill and Dr Edward Beetham which addresses the Panel's request.

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Jeremy Brabant

Counsel for McCallum Brothers Limited

24 August 2026

[1] Minute 13 dated 10 August 2026 extended the timeframe for responding to the request in RFI 4, to adjust for the suspension of processing's effects on timeframes.

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Joint Statement of Evidence from Richard Reinen-Hamill and Edward Beetham on behalf of McCallum Brothers Limited in Response to RFIs in Appendix One of Minute 11 from the panel

Coastal Processes

Dated 24 August 2026

Jeremy Brabant

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Introduction

1. Our names and roles are Richard Anthony Reinen-Hamill and Dr Edward Paul Beetham. Our roles are Technical Director (Richard) and Senior Coastal Geomorphologist (Edward) at Tonkin + Taylor Ltd, based in Auckland. Our experience and expertise are set out in detail in prior statements of evidence.

Scope of Evidence

2. This joint statement of evidence is provided as part of McCallum Brothers Limited's (**MBL**) response to minor request for further information detailed in Appendix One of Minute 11 from the Expert Consenting Panel (**Panel**).

3. We prepared the following material lodged in support of MBL's application:

    a. Report titled Te Ākau Bream Bay Sand Extraction: Coastal Process Effects Assessment dated January 2026 included as Attachment 8 to the MBL Assessment of Environmental Effects.

    b. Responses to Panel requests for information in separate evidence briefs[1] responding to coastal process matters from Minute 4, Minute 6, and in response to comments from invited persons.

Code of Conduct

4. Although this is not a hearing before the Environment Court, we confirm that:

    a. We have read and am familiar with the Environment Court's Code of Conduct for Expert Witnesses as specified in the Environment Court's Practice Note 2023 (**Code**); and

[1] T+T Evidence in response to Minute 4 (14 May 2026), Minute 6 (18 May 2026) and in response to individual submitters (12 August 2026).

b. The reports referred to above authored by us:

   i. Are within our area of expertise (except where we state that we rely upon the technical reports of other expert witnesses provided in support of the application);

   ii. Have been prepared in accordance with the Code; and

   iii. We have not omitted to consider any material facts known to us that might alter or detract from the opinions expressed.

Response to Minute 11 Coastal information requests

5. We have included the **Panel** information request in italics, followed by our response.

   RFI [1] Table 4-9 shows how the DoT is increased in value and correspondingly shifted seawards under combined sea-level rise and increase in wave height, but there is no equivalent information for changes in inner and outer DoC, even though these are calculated. Please provide, for both the inner DoC and the outer DoC, a table that is equivalent to Table 4-9 for the DoT.

6. To assist the panel, Table 4-9 from the Coastal Effects Assessment is re-presented below as Table 1. This table shows the change in DoT position and depth attributed to climate change taking into account larger wave heights and higher sea levels over the next 35-year timeframe. The influence of climate change is represented by increasing extreme and mean wave heights by 5% (factor of 1.05) and by increasing the mean sea level by 0.35 m, representing a conservative but plausible 10 mm/yr rate of sea level rise for a high emission scenario. There is uncertainty in the increase in wave height with climate change, with some research indicating mean conditions

may become less energetic on the northeast coast of New Zealand[2]. Therefore, our treatment of climate change is generally conservative for the application over a 35-year consent duration.

7. The requested tables are presented below in the same format, for the inner DoC (Table 2) and outer DoC (Table 3).

Table 1: Potential effect of climate change on DoT (Table 4.9 of the Coastal Effects Report)

Profile	Distance from MHWS-line of DoT [m]		Mean annual DoT [m]	
	Present day	With Climate Change	Present day	With climate change
P1	664	694 (30)	-10.3	-10.6 (-0.3)
P2	724	764 (40)	-12.6	-13.1 (-0.5)
P3	807	837 (30)	-13.6	-14.2 (-0.6)
P4	917	977 (60)	-14.7	-15.5 (-0.8)
P5	968	1,048 (80)	-14.0	-14.6 (-0.6)

Table 2: Potential effect of climate change on Inner DoC (new information requested)

Profile	Distance from MHWS-line to Inner DoC [m]		Inner DoC [mRL]	
	Present day	With climate change	Present day	With climate change
P1	720	724 (4)	-11.1	-11.1 (0)
P2	682	668 (-14)	-12.1	-11.8 (0.4)
P3	736	719 (-17)	-12.4	-12.1 (0.4)
P4	766	745 (-21)	-12.6	-12.3 (0.4)
P5	851	802 (-49)	-12.7	-12.3 (0.4)

[2] Albuquerque, J., Antolínez, J. A., Méndez, F. J., & Coco, G. (2024). On the projected changes in New Zealand's wave climate and its main drivers. *New Zealand Journal of Marine and Freshwater Research*, *58*(1), 89-126.

Table 3: Potential effect of climate change on Outer DoC (new information requested)

Profile	Distance from MHWS to Outer DoC [m]		Outer DoC [mRL]	
	Present day	With climate change	Present day	With climate change
P1	1,490	1,584 (94)	-15.9	-16.3 (-0.5)
P2	2,275	3,151 (876)	-17.9	-18.7 (-0.7)
P3	1,995	2,003 (8)	-19.2	-20 (-0.8)
P4	4,657	5,361 (704)	-22.2	-23.2 (-0.9)
P5	3,398	3,553 (155)	-20.8	-21.7 (-0.9)

8. The results show a small landward shift of the inner DoC and seaward movement of the outer DoC. The landward movement in the inner DoC indicates that the increasing submergence from sea level rise is more influential than the increase in wave height.

9. The seaward movement of the outer DoC emphasises the relatively simplistic empirical equation's technical sensitivity to its few variables, with a seaward movement in the order of 700 m attributed to a small increase in wave height, even with the higher base water level due to sea level rise. Despite the highly sensitive formula, the seaward shift in the outer DoC with a conservative climate change scenario is still landward of the proposed sand extraction area. We reiterate that the technical sensitivities of the DoC equation is a reason we give more weight to the DoT method.

RFI [2] To accompany the reading of Figure 4.8, please tabulate, for each profile: (i) the distance offshore (from MHWS) of each of the inner DoC, outer DoC and DoT, and (ii) the distance between the landward edge of the SEA and each of the inner DoC, outer DoC and DoT.

10. Table 4 shows the distance from MHWS to the following metrics for each profile and points marked in as Figure 4.8[3]:

    a. The inner DoC;

    b. The DoT;

    c. The Outer DoC;

    d. The sand extraction area (SEA) or in the context of P1 the control area.

Table 4: Distance (m) from MHWS to DoC/DoT markers and the sand extraction area (SEA)

Profile	Inner DoC	DoT	Outer DoC	SEA
P1	720	1,136	1,490	6,699
P2	682	1,273	2,275	5,726
P3	736	1,758	1,995	5,648
P4	766	3,219	4,657	5,499
P5	851	2,448	3,398	4,876

11. Table 5 shows the distance between the landward edge of the SEA and each DoC/DoT point on each profile as presented in Figure 4.8.

Table 5: Distance (m) between DoC/DoT markers and the SEA

Profile	Inner DoC	DoT	Outer DoC
P1	5,979	5,563	5,209
P2	5,044	4,453	3,451
P3	4,912	3,890	3,653
P4	4,733	2,280	842
P5	4,025	2,428	1,478

[3] Figure is appended to the end of this statement

RFI [3] To accompany the reading of Figure 4.9, please tabulate, for each profile: the distance between the landward edge of the SEA and the base of the shoreface as interpreted. (It is presumed that the inner DoC, outer DoC and DoT in Figure 4.8 plot exactly onto the map shown in Figure 4.9).

12. We have tabulated the distance between the mapped lower shoreface and the sand extraction area (SEA) in Table 6 below to assist with interpretation of Figure 4.9[4]. We have included the distance to the points marked on the map (same as on the profile in Figure 4.8) for context. Negative distances are landward of the mapped shoreface. Positive distances are seaward of the mapped shoreface in Figure 4.9. This highlights how conservative the mapped lower shoreface boundary is for profile 2 and 3.

13. **Table 6: Distance (m) from the mapped lower shoreface in Figure 4.9 to the SEA (seaward measure) and DoC/DoT points (landward measure)**

Profile	Inner DoC	DoT	Outer DoC	Seaward edge of mapped lower shoreface	SEA
P2	-3,469	-2,884	-1,756	0	1,443
P3	-3,538	-2,519	-2,282	0	1,283
P4	-3,828	-1,435	0	0	842
P5	-3,254	-1,649	-650	0	734

[4] Figure is appended to the end of this statement.

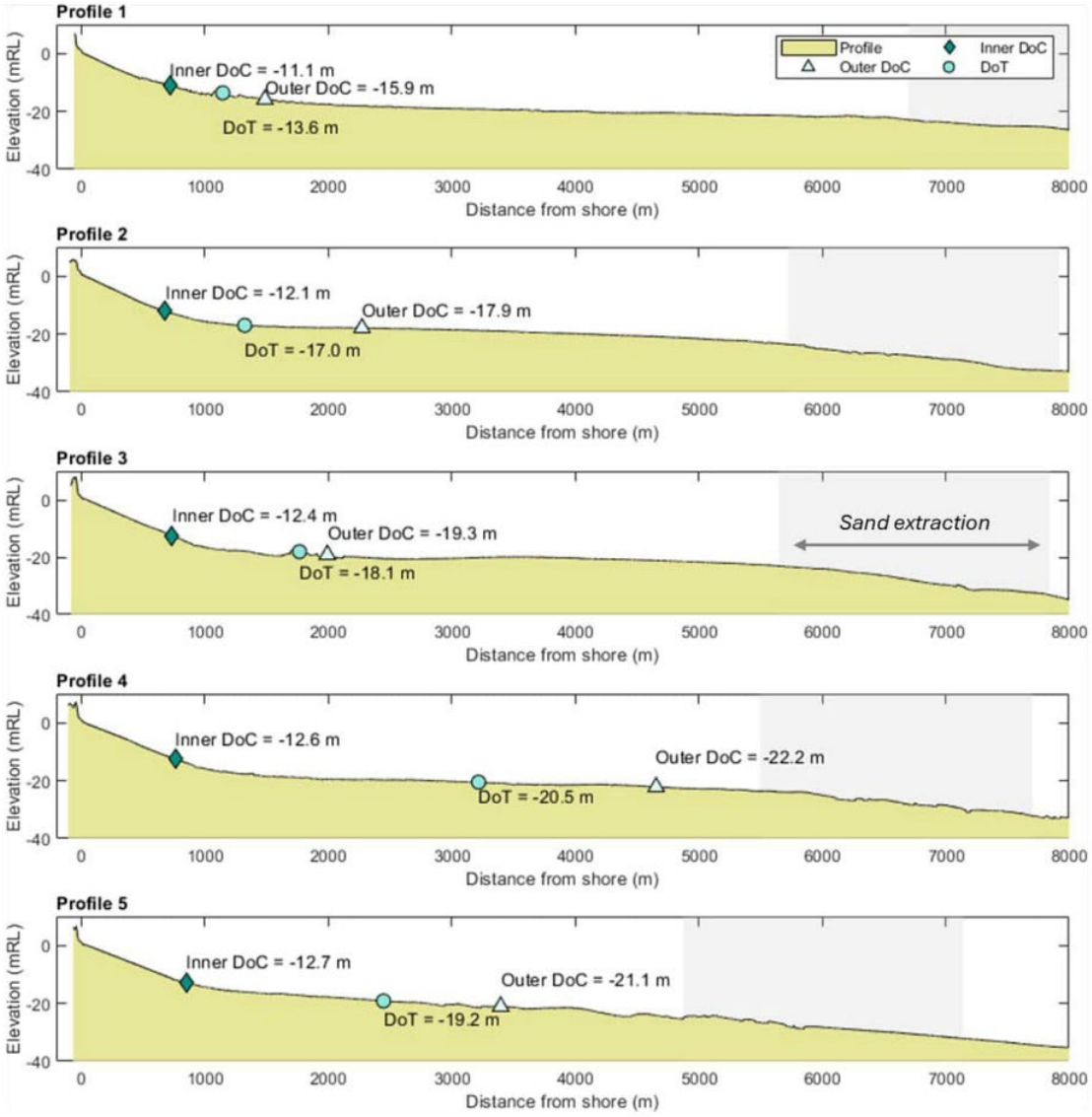

Figure 4.8: Summary of the inner and outer DoC and the DoT at all profiles.

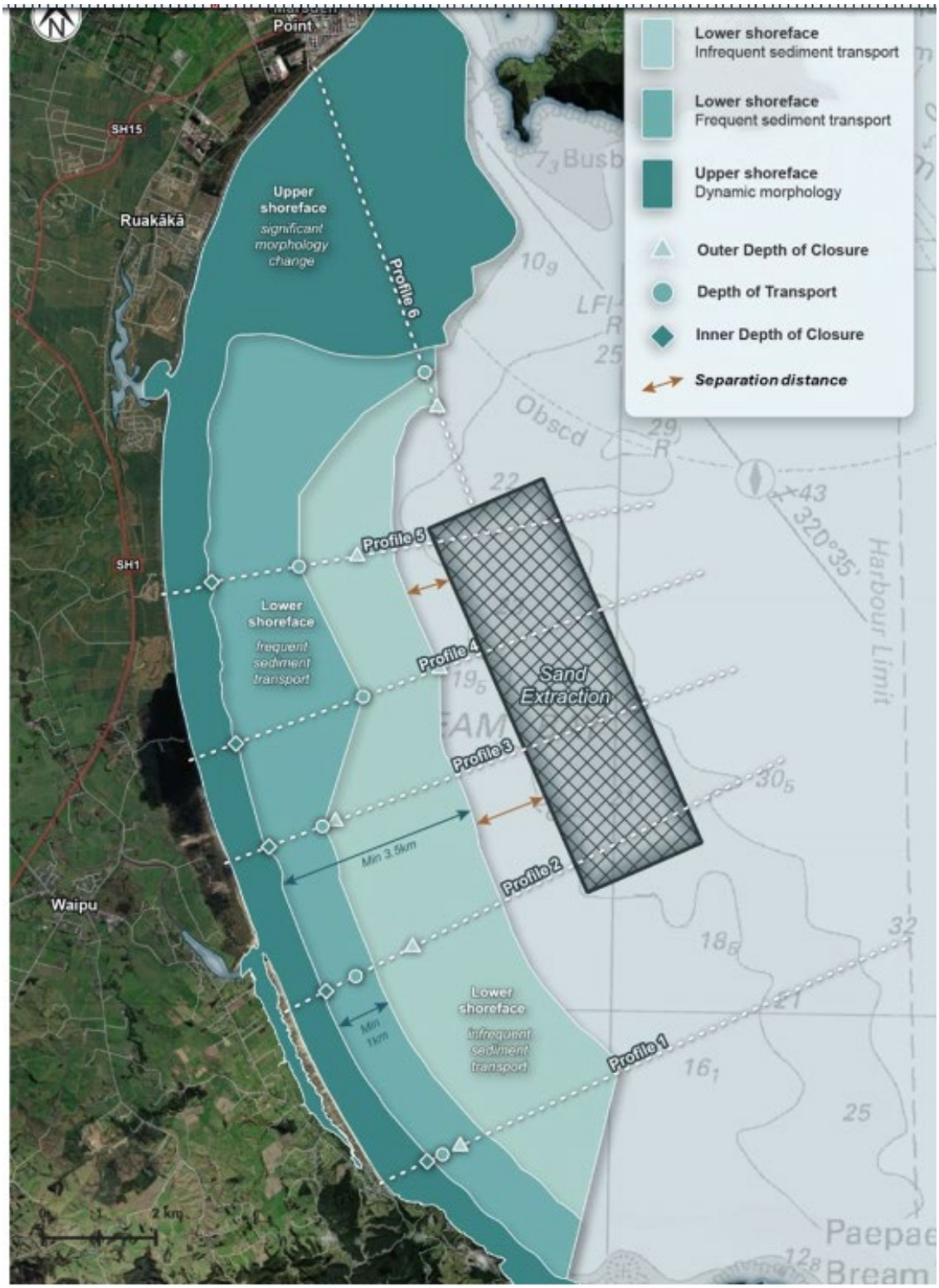

Figure 4.9: Site plan showing the shoreface zones in relation to the sand proposed extraction area.