

BEFORE THE HAWKE'S BAY REGIONAL COUNCIL

IN THE MATTER of the Resource Management
Act 1991

AND

IN THE MATTER of an application by Port of
Napier Limited for resource
consents to construct a new
wharf, and to undertake dredging
at Napier Port

JOINT WITNESS STATEMENT FOLLOWING CONFERENCING OF COASTAL EXPERTS

20 July 2018

1. This joint witness statement has been prepared as part of expert conferencing on the topic of coastal science, in relation to the application for resource consents made by Port of Napier Limited (**Port**) to Hawke's Bay Regional Council (**HBRC**). The application relates to the Port's proposal to construct a new wharf, and to undertake dredging at Napier Port.
2. The expert conference was held on 20 July 2018 at the Tonkin & Taylor Auckland office (and via conference call).
3. The coastal experts who attended the conference were:
 - (a) Ben Williams on behalf of the Port (by phone);
 - (b) Chris Adamantidis on behalf of the Port (by phone);
 - (c) Martin Single on behalf of the Port;
 - (d) Richard Reinen-Hamill on behalf of HBRC; and
 - (e) Terry Hume on behalf of HBRC.
 - (f) Peter Cowell on behalf of NCC
4. Dr Shane Kelly, who is an ecological expert engaged by HBRC, attended the expert conference in an observer capacity with the agreement of the Port, whose ecological expert was unavailable for the expert conferencing.
5. This joint witness statement is prepared in accordance with section 4.7 of the Environment Court Practice Note 2014.
6. It is confirmed that all attendees have read the Environment Court Practice Note 2014, and agree to abide by the Code of Conduct.
7. This joint witness statement sets out:
 - (a) those matters which are agreed between the experts;

- (b) those matters which need to be addressed prior to the hearing that require further information; and
- (c) those matters which are not agreed and the reasons in each case.

Dated 23 July 2018



Ben Williams



Chris Adamantidis

Martin Single

Richard Reinen-Hamill

Terry Hume

Peter Cowell

- (b) those matters which need to be addressed prior to the hearing that require further information; and
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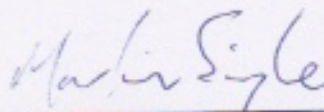
Peter Cowell

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	Issue/question	Matters agreed	Further information required prior to the hearing	Matters not agreed (with each expert's view and reasons)
1.	Was the hydrodynamic model accurately calibrated with the correct wind speed information?	Yes. All agree correct wind speeds were used in the calibration. Unit's error (knots vs m/s) was not carried through to the model for the calibration period. Model behaviour has been consistent with what has been measured (ADCP data).	No.	Nil.
2.	What is the nature and magnitude of the actual and potential effects on coastal processes of the activities for which the Port seeks resource consent:			
	a) In the location of the proposed dredging?	Potential affect, due to sediment removed from the littoral system. Existing dredge volumes likely to be a lower bound of what we would expect in terms of future maintenance dredging volume and would expect proportionally larger maintenance dredging volumes due to increased	No.	Nil.

	Issue/question	Matters agreed	Further information required prior to the hearing	Matters not agreed (with each expert's view and reasons)
		size of channel area.		
	b) At Westshore Beach?	We agree that there is a small change in wave angle that could increase the northerly drift tendency but that this is likely to be difficult to distinguish from existing natural variability. Monitoring is an adequate response.	No.	Nil.
	c) At Pania Reef and the associated Significant Conservation Area?	Scenarios modelled are campaigns 1 and 5 and are larger/ worst case scenarios as they had the longest periods of suction dredging. Modelling shows no deposited sand migrates directly to the reef. Modelling initial silt plus clay dispersal predicts probably 1 mm deposition in conservation zone but not on reef itself. Any material that might settle on the reef would be transient due to bed roughness and wave energy and will end up being deposited in seabed	There appears to be an anomaly in Fig 6-7 (appendix F) with westerly winds showing strong westerly transport). Can this situation be reviewed and what appears to be counter intuitive, explained.	Nil.

	Issue/question	Matters agreed	Further information required prior to the hearing	Matters not agreed (with each expert's view and reasons)
		areas of similar sediment characteristics.		
	d) In the location of the proposed deposition site?	While there is a small effect on wave height there is no likely effect on coastal process or on Town Reef. Agreed with the information provided.	No.	Nil
	e) In any other location?	Due to changes in wave angle and direction along Hardinge Road and Pandora Reserve there may be increases in alongshore transport affecting beach plan form. Monitoring as proposed is an adequate response.	No	Nil
3.	Is there any link between the activities for which the Port seeks resource consent and the sediment deficit at Westshore? If so: (a) What is that link? (b) How strong is that link?	There will be increased (unquantified but likely to be small) loss of fine sands from the Westshore Beach nearshore system due to the increased trapping efficiency of the larger channel. It is likely to be a subordinate factor with regard to the sediment deficit	No	Nil

	Issue/question	Matters agreed	Further information required prior to the hearing	Matters not agreed (with each expert's view and reasons)
		<p>and the disequilibrium at Westshore compared with:</p> <p>1) the seabed adjustment in response to the 1931 uplift, and</p> <p>2) the gravel nourishment programme.</p>		
4.	<p>Would nearshore nourishment adjacent to Westshore have any impact (positive or negative) on any effects of the activities for which the Port seeks resource consent?</p>	<p>Larger nourishment volumes have a greater potential for adding to maintenance dredging requirement, but maintenance dredging still required.</p>	No.	
5.	<p>Would adjusting the deposition location or the nature of the material deposited impact (positive or negative) any effects of the activities for which the Port seeks resource consent?</p>	<p>a) Southerly extension of R has potential benefits regarding nearshore sand placed closer to the southern end of Westshore, but also negative potential effects regarding inundation of reef, impacts on the surf quality and increased sedimentation of Ahuriri Lagoon. None of these effects</p>	No.	<p>Ben Williams, Chris Adamantidis and Martin Single believes that whilst they agrees that dredged sand deposited within southerly extension of R will add volume to nearshore beach system, there remains considerable uncertainty on the longevity (and therefore potential benefit) of any</p>

	Issue/question	Matters agreed	Further information required prior to the hearing	Matters not agreed (with each expert's view and reasons)
		<p>have been considered or quantified. Previous studies conclude that coastline and associated seabed probably retain residual disequilibrium effects of 1931 uplift. Previous applications of fine to very fine sand within Dump zone R are generally thought to have had a stabilising effect on beachface in the vicinity of this disposal site. However, the placed material is expected to move from the placed location over time.</p> <p>b) Further seaward locations haven't been assessed, would be more costly and takes sand out of the system.</p>		<p>nourishment placed at Westshore due to the measured incompatibility of sediment grain size distributions of the dredged and native material. Calculated overfill ratio suggests uncertain but limited longevity.</p> <p>Peter Cowell, Terry Hume and Richard Reinen-Hamill believe that nourishment overfill principles are of diminished applicability under these circumstances because the sub tidal nearshore will continue to deflate, with negative consequences for the beachface even if nourishment is not applied to the fine-sand nearshore region.</p>
6.	Could nourishment at Westshore	Placement of fine sand in Area R is	No.	Nil

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	have an impact (positive or negative) on the nature or magnitude of effects on the Pania Reef Significant Conservation Area?	unlikely to have an effect on Pania Reef SCA.		
7.	Could sand of a certain grain size (likely sourced from maintenance dredging only) be deposited at Westshore Beach without having adverse effects on coastal ecology?	Not a question for coastal experts, but the concept would be to largely place like on like regarding grain size.	No.	Nil
8.	Is it fair to conclude that finer material deposited near Westshore Beach from previous capital dredging campaigns was more likely to affect coastal ecology (migration of material to Pania and Town Reefs) as opposed to sandy material.	We agree that placement of material with significant fines is not desirable at R due to potential adverse effects (unquantified).	No.	Nil
9.	How do the interpreted model results fit within the framework of previous studies.	Broad agreement. Modelling and results fit the observations of the past studies.	No.	