

BEFORE COMMISSIONERS APPOINTED BY THE CANTERBURY  
REGIONAL COUNCIL

UNDER the Resource Management Act 1991

IN THE MATTER applications for resource consents by Lyttelton Port  
Company for capital and maintenance dredging

TABLED AT HEARING

Application: *Lyttelton Port Co.*

*- channel deepening*

Date: *5 May 2017*

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SUMMARY OF EVIDENCE OF WAYNE STEPHENSON FOR TE HAPŪ O  
NGĀTI WHEKE, TE RŪNANGA O KOUKOURĀRATA, NGĀI TAHU  
SEAFOOD, AND TE RŪNANGA O NGĀI TAHU

5 May 2017

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## SUMMARY OF EVIDENCE

- 1 The overall context for dredging 18 million m<sup>3</sup> of sediment during the capital phase and potentially a further 31.5 million m<sup>3</sup> over the proposed 35 year life of the consent has not been established. The development of a whole of system sediment budget would greatly aid this understanding.
- 2 Based on available information, the proposed dredging will remove more sediment than enters the harbour. This will turn a positive sediment budget into a negative one. The implications of such a change are not considered in the proposal, but they could be significant.
- 3 The wind wave environment within Whakaraupō/Lyttelton Harbour has not been fully examined to determine the role if any such wind and waves may play in the dispersal or resuspension of sediment.
- 4 The modelling of sediment dispersal from both the capital and maintenance dredging is deficient in that it does not adequately assess passive plume dispersion from the overflow component of the dredging process.
- 5 This plume has the potential to disperse far more widely than indicated in any of the reports presented as part of the consent application because local wind and waves have not been included in the plume modelling.
- 6 The fate of sediment leaving the dumping grounds has not clearly been demonstrated. It is not clear if resuspended sediment will be transported back on shore, into Whakaraupō/Lyttelton Harbour or other embayments along the north east coast of Banks Peninsula.
- 7 The cumulative impact of dumping up to 900 000 m<sup>3</sup>.y<sup>-1</sup> over the life of the consent has not been adequately considered. Therefore, it is very difficult to know where sediment might go to and how much will get there if or when it does. This is not just a matter of refinement of LPC's work, but a more fundamental issue which might have implications for the assessment of effects associated with sediment dispersal. If LPC undertook revised modelling as suggested by Mr Oldman and carried out a sediment budget it would greatly assist in reducing uncertainty about the fate of sediment. Without those two

things, though, I believe the issue of sediment dispersal remains too uncertain to provide the basis for a reliable assessment of effects.

**DATE**        5 May 2017

**Wayne Stephenson**

