

Section 42A Officers Report - Supplementary Information on Coastal Processes and Shoreline Monitoring

1. My name is Justin Cope. I am the Natural Hazards and Coastal Team Leader at Environment Canterbury. I provided an audit of the applicants technical Appendix 7 – Effects on Coastal Processes Report as part of the s42A reporting process. I also provided comments on the proposed shoreline monitoring programme in the draft Environmental Monitoring and Management Plan and proposed consent conditions for the Capital Dredging Project (CDP) that made up the application. In addition I provided comments on the applicant's s92 response on the impacts of the dredge spoil grounds on surfing waves.

Addressing the points of concern around coastal processes and shoreline monitoring raised in the s42A report following the applicant's presentation of evidence.

2. A number of issues were raised in the Environment Canterbury Officers' s42A report pertaining to the proposed shoreline monitoring programme in the draft Environmental Monitoring and Management Plan (EMMP) presented in the application.
3. I have read both the evidence in-chief and the summary and response evidence of Jared Pettersson, Thomas Shand and Andrew Purves whom have since addressed a number of issues I raised in the s42A report. I will consider these in the order they appear.
4. In paragraph 299 of the s42A report, I believe that a shoreline monitoring site should be added at Diamond Harbour due to the fact that Diamond Harbour is specifically mentioned in the technical appendices as likely to experience a reduced swell with the accompanying potential for a reduction in sediment transport rates as a result of the channel deepening.
5. In Paragraph 49 of Dr Shand's evidence in-chief he addresses my paragraph 299 concerns around no shoreline monitoring having been proposed in Diamond Harbour. He states that, *"Due to the generally rocky nature of the shoreline beach monitoring is not considered appropriate at Diamond Harbour. However, (sic) but annual seabed profile surveys, including a transect into Diamond Harbour, are proposed and already underway."*
6. My concerns were primarily around the absence of profile or bathymetric surveys in Diamond Harbour rather than the other shoreline monitoring parameters. I acknowledge the inclusion of a survey transect into Diamond Harbour which has resolved my concern on this matter.
7. Mr Pettersson addresses the Diamond Harbour transect in paragraph 95 and as Figure 7 (Appendix 2) of his evidence in-chief.
8. In paragraph 300-301 of the s42A report I raised concerns about the consistency of the EMMP with the Coastal Process Report (Appendix 7 to the Applications), specifically Table 5.1 of that report.
9. In paragraph 96 of Mr Pettersson's evidence in-chief he acknowledges that these discrepancies did exist, that they were a matter of drafting error rather than intention and

that the EMMP has been amended to ensure it aligns with Table 5.1 of the Coastal Processes Report. I have read the amended EMMP and am now satisfied that it is consistent with the Coastal Processes Report. I also note that the table of monitoring and frequency of monitoring in Appendix 1 of the draft consent conditions for capital dredging presented in Mr Purves's evidence in-chief is also consistent with the EMMP and Table 5.1 of the Coastal Processes Report.

10. In paragraph 303 of the s42A report I note that the recommendation in the Coastal Process Report of taking three samples for sediment texture analysis has not been adopted in the EMMP.
11. In paragraph 97 of Mr Pettersson's evidence in-chief he explains that the EMMP had omitted to be clear on this aspect and the intention is to take three samples, one each at high, mid and low tide points. I note that the EMMP has been amended (Section 5.3) to clarify the methodology for the sampling of textural analysis. This has resolved my concern on this matter.
12. In paragraphs 304-305 of the s42A report I raise a concern that the sea-bed surveying recommended in the Coastal Process Report have not been included in the EMMP. Mr Pettersson addresses these concerns in paragraph 98 of his evidence in-chief. This misunderstanding on my behalf was due to a difference in terminology used between the Coastal Processes technical report and the EMMP. I acknowledge that seabed surveys have been included in the EMMP, but under the terminology of "bathymetric surveys."

Comments on additional bathymetric transect monitoring sites - Pre-hearing caucusing meeting

13. In his summary and response evidence Dr Shand mentioned a pre-hearing caucusing meeting between himself Dr Stephenson, Mr Pettersson and myself (on April 27 2017) where there was agreement reached on including an additional three bathymetric survey transects in the EMMP. This was due to some concerns that Dr Stephenson had around a lack of spatial coverage in the proposed bathymetric survey monitoring network along the harbour.
14. As tabled at this hearing by Dr Shand these three additional sites were:
 - 1a - Southeast of Quail Island
 - 4a - between profiles 4 and 5
 - 5a - through the proposed maintenance disposal site and across the channel some 2km off Godley Head
15. I confirm I was present at the above caucusing meeting where this agreement was made. I believe that the additional three bathymetric survey transect sites are appropriate and will provide further rigor into the seabed monitoring programme for assessing and quantifying any changes associated with the CDP.

Comments on effects on surfing

16. In my s42A audit of the applicant's s92 response prepared by Dr Beamsley addressing the impacts of the dredge disposal grounds on surfing waves, I agreed with the conclusion presented that there will not be any significant measurable effect on inshore surfing conditions.
17. I have read the evidence of the Surfbreak Protection Society (SPS) and the relevant paragraphs of Dr Beamsley's summary and response evidence addressing the points of concern raised in the SPS evidence.
18. It is my opinion that Dr Beamsley has adequately addressed the concerns of the SPS and I continue to agree with his overall conclusions.

Maintenance Dredging Shoreline Monitoring – Draft Conditions

19. At the time of the preparation of the s42A report the proposed consent conditions for the maintenance dredging were still under development. I have read the draft proposed shoreline monitoring conditions for the maintenance dredging in Mr Purves's evidence (Condition 8.22, Table 2). The parameters monitored and the frequency with which they monitored are consistent with those recommended in the Coastal Processes Report and I am satisfied that this condition is adequate for the longer term monitoring of shorelines as part of the assurance monitoring programme.



Justin Cope, Team Leader Hazards and Coastal

8 May 2017

