

**Before the Independent Hearing Panel appointed by
the Canterbury Regional Council**

IN THE MATTER OF The Resource Management Act
1991

AND

IN THE MATTER OF Application CRC242267 to
CRC242269

Addendum to Section 42A Officer's Report

Report of Alice Butler

Introduction

Background

1. This report forms part of the Canterbury Regional Council's (CRC) audit of the assessment of environmental effects (AEE) provided by Christchurch City Council (the applicant) in support of resource consent applications for Southshore and South New Brighton Park erosion protection and inundation protection works.
2. This report will provide the decision-maker with information and advice related to:
 - a. Contaminants of concern on the site
 - b. Recommendations for reducing contaminant mobilisation to soils
 - c. The actual and potential effects of the proposal from a contaminated land perspective
3. While not required for a Council hearing for a resource consent application, I have read the Code of Conduct for Expert Witnesses in giving evidence to the Environment Court. I agree to comply with that code when giving evidence to the Hearing Panel in this matter. All my evidence is within my expertise and I have considered and stated all material facts known to me which might alter or qualify the opinions I express.

Qualifications

4. I, Alice Butler, am a scientist in the Contaminated Land and Waste Team at CRC. I have over five and a half years of experience in the Contaminated Land and Waste Team. Throughout my time at CRC I have provided technical advice on matters relating to the identification, investigation and remediation of contaminated sites in Canterbury. I have provided technical advice on matters relating to contaminated land and waste to Consent Planners on numerous consent applications. I also provide advice to territorial authorities on the implementation of the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (MfE, 2011b).
5. I hold a Bachelor of Science Degree majoring in Geology and Geography from the University of Canterbury.
6. This report has been peer reviewed by Hannah Mirabueno, Senior Scientist on the Contaminated Land and Waste Team at Environment Canterbury.

Scope of Report

7. This report is prepared under the provisions of section 42A of the Resource Management Act 1991 (RMA). This section allows a council officer or consultant to

provide a report to the decision-maker(s) on a resource consent application made to the council and allows the decision-maker(s) to consider the report at the hearing. Section 41(4) of the RMA allows the decision-maker(s) to request and receive from any person who makes a report under Section 42A "any information or advice that is relevant and reasonably necessary to determine the application".

8. This report is supplementary to the Section 42A Report prepared by the CRC for the above resource consent applications. Full details of the consent applications are provided in that report. To carry out this audit of the consent applications I have considered the relevant sections of the assessment of effects on the environment (AEE) submitted by the applicant, including its technical appendices. I also reviewed the s92 response dated 23rd October 2024. I attended a site visit on the 16th July 2025. Finally, I have also taken into account relevant issues raised by submitters in relation to the effects I have considered in this report.

Consideration of Submissions

9. CRC received 301 submissions for CRC242267-9, three of which opposed the application. Concerns raised included the loss of intertidal habitats, coastal squeeze and effects to inanga and lizards. I defer to water and land ecology experts regarding the mitigation of these impacts.

Assessment of Receiving Environment

10. The proposal included two areas of flood protection and erosion works. The areas included the South New Brighton Park (SNBP) and the Southshore bund area. A Preliminary Site Investigation (PSI) (Jacobs, 2022) and Detailed Site Investigation (DSI) (Jacobs, 2023) were completed across both areas to assess if land use activities on the Ministry for the Environment (MfE) Hazardous Activities and Industries List (HAIL) had occurred at the site. The following HAIL activities were discussed in the SNBP area:
 - a. A10 - Persistent pesticide bulk storage or use. This applied to the cricket pitch and tennis courts.
 - b. A17 - Storage tanks or drums for fuel, chemicals or liquid waste. Two underground storage tanks were noted on the property in 1993. In 2005, one of the tanks were removed.
 - c. E1 - Asbestos products manufacture or disposal. Asbestos was noted in the southern portion of the SNBP in September 2024 by Canterbury Regional Council officers. The location did not intersect the area of proposed works.

The location of the HAIL these activities in the SNBP were not considered to be located within the portion of land where the proposal will occur.
11. The PSI identified suspected asbestos containing material (ACM) in nine structures along the shoreline and HAIL activity 'I' (Any other land that has been subject to the intentional or accidental release of a hazardous substance in sufficient quantity that it could be a risk to human health or the environment) may apply, owing to the demolished residential buildings.
12. During the DSI, 54 soil samples were collected along Southshore adjacent to the estuary at varying depths and analysed for trace elements (arsenic, cadmium, chromium, copper, lead, nickel, and zinc) and asbestos in soil (semi-quantitative) analysis. Anthropogenic material (including plastic, nails, glass, wood, ceramic, brick, and clay fragments) were observed in 17 of the 21 test pits. Asbestos was reported as present in eight locations. Trace elements were detected at concentrations above background levels. Relative to the ANZG (2018) default guideline values (DGVs), lead exceeded the

DGV in three test pits (TP4, TP7, and TP18), and mercury exceeded the DGV in TP5. Trace elements were below all MfE Soil Contaminant Standards (SCS) for protection of human health for recreation and commercial/industrial outdoor workers land use criteria and ANZG GV-High.

Assessment of Effects on the Environment

13. From a contaminated land perspective, the greatest risk of a negative impact to ecological receptors is the mobilisation of contaminated soils through runoff or erosion, due to the adjacent estuary. A robust erosion and sediment control plan (ESMP) should be in place through the duration of earthworks. The ESMP shall include, but not be limited to
 - a. detail on the staging of works
 - b. stabilisation and controls for excavations and stockpiles
 - c. measures to prevent surface runoff into the estuary (silt fences, bund armouring)
14. I consider soil re-use an important factor in this project and noted contradictions in the application as to what guideline value would be adopted for soil re-use considering the protection of ecological receptors. I requested further detail on the applicant's planned procedures in the s92 request for information. In their s92 response (CCC, 2024), the applicant proposed to outline a soil re-use plan in the contaminated site management plan (CSMP) outlining where and how material can be used on site. A Contaminated Soil Management Plan (CSMP) (Enviser, 2019) was appended to the DSI report. The CSMP plan was developed for medium risk works under the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health Regulations 2011 ('the NES-CS'). Because the focus of the NES-CS is the protection of human health, the CSMP doesn't include ecological guideline values that will inform soil re-use decisions to protect ecological receptors in the estuarine environment.
15. Section 6.2.5 of the DSI report discussed that soil with heavy metals, PAHs and asbestos concentrations below the soil contaminant standard (SCS) for recreational land use (MfE, 2011) may be re-used on site. However, the recreational land use SCS focuses solely on protecting human health within a recreational context and does not account for broader environmental considerations." As such I recommend the ecological guideline values such as ANZG (2018) is also adopted to inform soil re-use decisions. The DGVs for sediment quality represent the concentrations below which there is considered a low risk of adverse ecological effects. The ANZG (2018) GV-high provides values for concentrations of trace elements at which you might already expect to observe toxicity-related adverse effects. The NES-CS recreational guidelines are less conservative than the ANZG (2018) guidelines. For instance, the NES-CS recreational guideline for lead is 880 mg/kg compared to the ANZG (2018) DGV of 50 mg/kg.
16. CRC received Revised Proposed Conditions on 21st October 2025. Proposed condition 23 said "All material excavated from the land and Coastal Marine Area shall be managed in accordance with the ESDCP and CSMP. Where deemed suitable as cleanfill, material shall be reused on site, or otherwise disposed of off-site at a facility authorised to receive such material in accordance with RMA/2021/2094". I recommend where cleanfill is mentioned in the CSMP, the definition follows the cleanfill definition in the Technical Guidelines for Disposal to Land (WasteMINZ, 2023). The results of soil sampling found trace elements in soil exceeding background concentrations and therefore would not meet the definition of cleanfill.
17. Section 6.2.5 of the DSI report discussed that due to the detections of asbestos containing material (ACM) on the surface and in soil concentrations along the estuary edge, soil from these areas were not suitable for re-use on site and should be taken to

an appropriate landfill. I agree that from a human health perspective, material (including soil) containing, or potentially containing asbestos should not be re-used on site.

18. Asbestos was found to be present in eight seawall structures with another two suspected locations. These structures were in the vicinity of the estuary edge or the proposed bund alignment. Asbestos is predominantly a human health concern as opposed to an environmental risk. It is likely that the human health risks with the disturbance of asbestos contaminated soil and structures will be addressed in the consents under the NES-CS, 2011 regulated by the Christchurch City Council. I recommend the method of encapsulating asbestos contaminated material (if it is to occur) is included in detail in the CSMP and is in accordance with BRANZ 2017 guidelines. An ongoing site management plan would also be required at the completion of works including but not limited to:
 - a. where the encapsulated asbestos material is located
 - b. methods for regular inspection of encapsulated material
 - c. encapsulation methods and design (clean soil capping and geotextile marker)
 - d. surface stabilisation methods
 - e. maintenance and repair procedures

Conclusions and Recommendations

19. The information provided to date had some contradictions relating to soil re-use. The proposed consent conditions stated that only soil meeting the definition of cleanfill will be re-used and the DSI discussed that soil meeting the NES-CS recreational land use criteria may be re-used. My following recommendations seek to clarify how decisions will be made for soil re-use to protect ecological receptors.
20. I recommend an updated CSMP is provided which will address all contaminants present on the site (including trace elements and asbestos) with reference to the guideline values which will inform re-use decisions to protect both human health and ecological receptors. The CSMP should outline the methodology for determining whether soil meets the adopted re-use criteria of cleanfill. If soil which doesn't meet the WasteMINZ (2023) cleanfill definition are proposed for re-use, I recommend an assessment of environmental effects is completed considering the effects the elevated contaminants will pose on the receiving environment. I recommend the ANZG DGV is adopted for the protection of ecological receptors in surface water. The ANZG DGV is less conservative than the cleanfill definition but would be more sustainable in terms of off site disposal whilst being protective of the estuarine environment.
21. I recommend the applicant confirms whether they intend to encapsulate asbestos contaminated material or soils on site. If they do intend to encapsulate, the CSMP shall be updated to include the methods and design for encapsulation and a long term site management plan should be required outlining procedures and maintenance in accordance with BRANZ 2017 guidelines.
22. I recommend as a condition of consent that the updated CSMP and the ESCP are reviewed and approved by Environment Canterbury prior to earthworks commencing.
23. I recommend a condition of consent that only cleanfill materials as defined in the Technical Guidelines for Disposal to Land (WasteMINZ 2023) can be used as imported fill.

References

- Australian and New Zealand Environment and Conservation Council (ANZG). 2018. *Australian and New Zealand Guidelines for fresh and Marine Water Quality Guidelines*
- BRANZ Ltd. 2017. *New Zealand Guidelines for Assessing and Managing Asbestos in Soil*
- Christchurch City Council (CCC). 2024. *s92 Request for information response*
- Jacobs. 2022. *Southshore and South New Brighton Erosion Protection Preliminary Site Investigation*
24. Jacobs. 2023. *Southshore and South New Brighton Erosion Protection Detailed Site Investigation*
- Ministry for the Environment (MfE). (2011). National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (NES-CS).
- Waste Management Institute New Zealand (WasteMINZ). 2023. *Technical Guidelines for Disposal to Land Revision 3.1*