Ref: 19038 (18)
9 January 2020

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RE: NZTA – Beaumont Bridge Contaminated Land Technical Review – S92 Response

1 Introduction

The New Zealand Transport Agency (NZTA) has applied for a suite of consents to authorise the construction of a new bridge over the Clutha / Mata-au at Beaumont.

As part of the application, land use consents are being sought from the Otago Regional Council for disturbance of a contaminated site under the Regional Plan: Waste and from the Clutha District Council for disturbance of land under the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (NES).

Under the Regional Plan: Waste, the disturbance of land at a contaminated site is discretionary and as such the applicant has submitted an Assessment of Environmental Effects (AEE) prepared by WSP-Opus 'New Beaumont Bridge – Notice of Requirement for an Alteration to a Designation and Resource Consent Applications' dated October 2019.

Following an initial review of the application, e3Scientific recommended that the applicant provide under Section 92 of the Resource Management Act (1991), either;

- An updated site plan showing areas of potential HAIL activity and current soil excavation plans.
- A Detailed Site Investigation, prepared in accordance with Contaminated Land Management Guidelines No 1 and No 5, for potentially contaminated land which will be disturbed during development, and
- A Contaminated Soil Management Plan, or outline of how contaminated soil will be managed to avoid adverse effects on the environment.

or;

- An updated site plan showing areas of potential HAIL activity and current soil excavation plans.
- Details of how contaminants in soil will be investigated and managed to avoid adverse effects on the environment.

e3Scientific Limited (e3s) have been commissioned by Otago Regional Council to provide a technical review of the contaminated land related aspects of the consent application, following receipt of the Section 92 response from the applicant.

1.1 Scope of Work

The scope of this technical assessment includes:

- Reviewing the Section 92 response provided by the applicant.
- Assessing the effects associated with disturbance of soil at the site.
- Recommending consent conditions to help ensure adverse effects of disturbing contaminated land are appropriately managed.

The scope of this technical assessment does not include:

- An assessment of the effects associated with other aspects of the application not related to contaminated land.
- An assessment of the activity's status under the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (2011) (NESCS).

This assessment is focussed on the information provided in the Section 92 response letter by WSP-Opus (2019).

2 Section 92 Response

As part of the Section 92 Response, the applicant has provided a site plan showing areas of potential soil contamination within the project area and confirmed that controls within a proposed Construction Environment Management Plan will address how potentially contaminated sites will be managed. The applicant is not proposing to conduct any soil sampling or analysis.

2.1 Site Plan

The site plan provided in the Section 92 response adequately outlines the areas where activities listed on the Hazardous Activities and Industries List (HAIL) are likely to have occurred, with the exceptions of the sheep dip and the parking area.

The HAIL area associated with the sheep dip is represented in the plan as a circle of approximately 17m in diameter. The possible sheep dip location in the plan differs from that of the Appendix D of the Preliminary Site Investigation, and it is located adjacent to proposed earthworks. It also appears that a cycle track passes through the sheep dip area, but no earthworks are required here. As discussed in section 2.3 of our November letter, the distribution of contaminants at sheep dip sites is variable and dependant on the site-specific layout of the yard. It is not uncommon for contaminants in soil to be present a greater distance than represented in the site plan. An additional 20 m buffer is considered an appropriate distance.

The site history associated with the parking area does not include any definitive hazardous activities. The parking area is considered in the PSI to be a HAIL activity under *category 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*. However, the PSI confirms that there was no visual or olfactory evidence of contamination and it was highly unlikely this activity has contaminated the surrounding area. As such, it is unlikely that hazardous substances have been released 'in sufficient quantity' to pose a risk to human health or the environment. It would be overly onerous to implement contaminated land controls in this area.

The plan also outlines the extent of proposed earthworks, which differs from construction plans and cross sections provided with the application. For example, outline plans in the application include fill batters which require topsoil stripping to a depth of 200 mm. As the construction plans have not been changed, it appears the earthworks may be more extensive than indicated on the plan.

2.2 Construction Environment Management Plan

In the Section 92 response, the application reiterates that any risks from contaminants in soil at the site have been assessed as being low.

I note that the risks associated with the railway yard, orchard and sheep dip were considered low on the basis that all soil disturbance work was to occur outside of these areas. Having shown that this not the case, the potential risk associated with these sites is somewhat higher.

Notwithstanding this point, e3Scientific maintains that undertaking earthworks in accordance with specified controls outlined a specific Contaminated Soils Management Plan would be appropriate.

3 Assessment of Environmental Effects and Management of the Proposed Activity

Due to the limitations of the Preliminary Site Investigation, it is not known whether contaminants are present in soil at concentrations which could pose a hazard to human health or the environment.

In the absence of soil quality data, precautionary controls could be implemented to mitigate potential effects, i.e. managing soil as if it were contaminated in the absence of evidence to the contrary.

In this case, the applicant has proposed to undertake works in accordance with a Construction and Environmental Management Plan (CEMP) to provide the overall environmental management framework and approach. The plan will contain a series of sub-plans to address activity specific matters, such as erosion, sediment and dust control, noise and vibration, and bridge construction. Through their Section 92 response, the applicant has agreed to include controls on ground disturbance to manage the potential effects of contaminants in soil. Developing a specific Contaminated Soils Management Plan (CSMP) to sit as a sub-plan of

the Construction Environment Management Plan would be an appropriate format for this.

Managing soil disturbance via a CSMP is a typical approach to controlling potential adverse effects, and provided a suitable CSMP is developed and implemented, effects from the disturbance of land are expected to be less than minor. Discharges of hazardous substances to water, land and air can also be prevented through appropriate controls. The Section 92 response did not include a draft CSMP, suggested condition of consent, or outline of controls proposed. As such, appropriate conditions of consent will be required to ensure an adequate CSMP is developed prior to works.

4 Recommended Conditions of Consent

WSP-Opus have proposed several generic conditions for ORC consents. In addition to these conditions and the standard ORC consent conditions, e3s recommends the following conditions form part of the consent to disturb potentially contaminated land.

1) The CEMP shall contain as a minimum the following information:
   a) An Erosion, Sediment and Dust Control Management Plan;
   b) A Hazardous Substances/Spill Contingency Procedure;
   c) Bridge Construction Management Plan;
   d) A Contaminated Soils Management Plan.

2) At least 10 working days prior to the disturbance of potentially contaminated land, the consent holder shall submit to the Consent Authority a Contaminated Soils Management Plan (CSMP). The CSMP shall contain sufficient detail to address the following matters:
   a) a brief summary of the works to be undertaken with references to other relevant documents.
   b) A description of the known or suspected contamination present;
   c) Relevant contact information of those onsite and managing the construction or earthwork activities.
   d) Allocation of responsibilities, including who is responsible for implementing and monitoring the controls detailed within the CSMP.
   e) A description of relevant regulatory requirements and conditions of consent;

f) Soil management procedures during the works, including siting and management of soil stockpiles, and erosion, sediment and dust control procedures;
g) Handling and disposal procedures for any contaminated material encountered during the activity including recommended personal protective equipment (PPE);
h) Soil, air quality, groundwater and/or surface water monitoring requirements;
i) Contingency measures to address any unexpected or accidental discoveries of contamination or discharges identified at the site.

3) All works within the areas of potential contamination (identified as 'Old Railway Station,' and 'Historic Orchard,' and within 20 m of the area identified as 'Possible Sheep Dip' in Sheet X1001 of the Response to Request for Further Information dated 20 December 2019) shall be undertaken in accordance with the CSMP.

4) Excavated material from the areas of potential contamination shall be taken to a facility authorised to receive material of that kind.

5) Within two months of the completion of the soil disturbance works within the potentially contaminated areas the following shall be provided to Council's environmental compliance team via compliance@orc.govt.nz:
a) The location and dimensions of the excavations carried out, including a relevant site plan.
b) Records of contamination encountered during the works including soil validation results, if applicable.
c) Copies of the disposal dockets for the material removed from the site.

5 Summary and Conclusions

Overall, the effects associated with the disturbance of potentially contaminated land will be less than minor, provided a suitable CSMP is developed and implemented. The suggested consent conditions follow the recommendations outlined in the post-consultation draft of Contaminated Land Management Guideline No 1. Reporting on Contaminated Sites in New Zealand (Ministry for the Environment, 2016).

If you have any questions regarding the information provided in this letter, please contact Simon Beardmore on 03 409 8664 or via email at simon.beardmore@e3scientific.co.nz

Yours sincerely,

Simon Beardmore
Senior Environmental Scientist

References

Ministry for the Environment. (2003a). *Contaminated Land Management Guidelines No. 1: Reporting on Contaminated Sites in New Zealand (revised 2011)*. Wellington: Ministry for the Environment.

Ministry for the Environment. (2016). *Contaminated Land Management Guideline No 1: Reporting on Contaminated Sites in New Zealand (post-consultation draft)*.