

Our reference: A1297342
File: RM19.387

2 December 2019

NZ Transport Agency
PO Box 5245
Dunedin **9058**

Via email to shane.l.roberts@wsp.com

Dear Sir/Madam

Request for further information under section 92(1) of the Resource Management Act 1991 (the Act) – Consent Number RM19.387.

Thank you for your application Resource Consents associated with the construction of the New Beaumont Bridge.

An initial assessment of your application has been made by myself along with various external assessors and it has been identified that further information required. Details of the information that is required is outlined in the sections below.

1.0 Consent application

(i) It is unclear whether a discharge permit has been sought for a discharge to water. Page 5 of your application states that a discharge permit is required for the discharge of sediment laden water. However, in your assessment of applicable rules and the activity statuses, you have indicated that discharges to water will comply with permitted activity rules of the Regional Plan Water for Otago. Please confirm the rule and the activity status of all associated discharges to water, or to land in a manner that may enter water.

(ii) It is unclear whether a land use consent is required for the extract of gravel. Page 5 of your application states that a land use consent is required for the extraction of gravel extraction from the bed of the Clutha River/ Mata-Au. In your assessment of applicable rules and activity statuses, you have not identified the activity status or whether the extraction of gravel requires a land use consent. Please confirm the rule and the activity status for the proposed extraction of gravel.

2.0 Contaminated site

E3Scientific Limited (E3S) are providing a technical review of the application to assist in my consideration of the effects on contaminated land. E3S have provided an initial assessment which is attached as Appendix 1 of this letter. For the reasons provided in their initial assessment, please provide the following:

- i. Provide an updated site plan showing areas of potential HAIL activity and current soil excavation plans.
- ii. Provide 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
- iii. Provide a Contaminated Soil Management Plan or outline how contaminated soil will be managed to avoid adverse effects on the environment.

As suggested by E3S, you may wish to amend your application for a staged approach of further investigations, along with adequate site management as conditions of consent. If so, the following information will also be required:

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

3.0 Ecological assessment

Aquanet Consulting are providing a technical review of the effects on freshwater ecology. Their initial assessment is attached as Appendix 2. For the reasons outlined in this initial assessment, please provide the following:

- i. Fish spawning:
Discuss the potential for native or exotic fish to be spawning in the affected reach, potential impacts of project and mitigations if required.
- ii. Mussel's and crayfish:
Discuss the potential for freshwater mussels or crayfish to be present, potential impacts of the project and mitigation measures if required.
- iii. Concrete discharge:
Provide detail on how the project will ensure complete avoidance of a concrete discharge to the Clutha River/ Mata-Au.
- iv. On-site requirements:
Provide detail on the arrangements to have ready ecological advice / oversight at key points in the project.

4.0 Visual impact assessment

Boffa Miskell are providing a technical review to assist me in my assessment of the visual impact of the bridge. Their initial assessment is attached as Appendix 3. For the reasons provided in their initial assessment, please provide the following:

- i. Provide a clear description of the receiving environment, including any relevant statutory analysis for visual amenity and natural character.

- ii. Provide a thorough natural character assessment including assessment against relevant statutory provisions including Section 6(a) of the Resource Management Act 1991. This assessment should include commentary of, but not be limited to, the existing natural character including abiotic, biotic and experiential aspects of the Clutha River/Mata-Au.
- iii. Provide a thorough landscape assessment and discussion on how the local landscape will change as a result of the proposal.
- iv. Provide a thorough visual amenity assessment, especially from local roads, trails, tracks as well as an estimation of visual effects from private residences.
- v. Outline any proposed avoidance, remediation and/or mitigation of potential landscape, natural character and visual amenity effects.
- vi. Confirm the type of staging and construction effects.
- vii. Confirm whether any visual simulations need to be produced.
- viii. Provide a series of Landscape Plans which illustrate the character and planting styles to be utilised. A conceptual planting palette is also required.

5.0 Engineering/ Natural Hazards assessment

Damwatch Engineering Limited is providing a technical assessment to assist in my consideration of the engineering and natural hazard effects of the application. Their initial assessment is attached as Appendix 4. For the reasons outlined in their initial assessment, please provide the following:

- i. Future Management of Existing bridge:
Provide clarification on future management arrangements for the existing bridge to ensure the potentially adverse effects of a bridge collapse on public safety, the waterway and the new bridge structure are appropriately mitigated.
- ii. Flood levels
Clarify whether the design flood levels given in the main report and in the Appendix 5C report are affected by flow super-elevation and, if so, by how much.
- iii. Backwater profiles and Bridge Afflux Effects
 - a. The piers on both the existing and new bridges act to reduce the effective channel width and thereby cause an afflux effect which is superimposed on each backwater profile. There is no discussion in the Appendix 5C report of this afflux effect. Provide comment on the afflux effect.
 - b. The site is likely to give rise to a large woody debris load conveyed by the river under flood conditions. The potential for debris raft formation on the piers of both the existing and new bridges is

therefore fairly high. While the bridge afflux due to the piers alone may not be significant, the afflux due to debris raft formation on each bridge pier is potentially very significant. Provide an assessment on this.

iv. Freeboard

- a. The estimated freeboard for the Serviceability Limit State (SLS) flood at the critical location on the soffit of the new bridge (on the downstream side of the deck at the left abutment) appears to be less than the minimum freeboard allowance of 1.2 m recommended in the NZTA Bridge Manual where there is a possibility of large trees being conveyed down the waterway by flood flows. There is no indication in the supporting technical reports that the bridge designer has sought a departure from the design freeboard standard from NZTA and that this non-compliance is acceptable. Provide discussion on this.
- b. It is noted that a permanent maintenance/ inspection platform has been constructed on the underside of the deck on the existing bridge (Figure 21 and 28 in Appendix 5E). It is also not clear in the Appendix 5C report whether the freeboard value for the SLS flood given in Section 3.5 is to the soffit of the actual bridge deck or to the soffit of the maintenance/ inspection platform. Provide clarification of this and an assessment on the effects on the new bridge.

v. Floodplain effects

- a. Provide discussion on whether the river banks confine the flood flows upstream of the new and existing bridges or whether the flood flows spill over the top of the banks and onto the floodplains. Extending the figure illustrating the backwater profiles for the SLS and Upper Limit State (ULS) floods to show the line of the top of the bank on each side of the river may assist with this.
- b. Provide details on the extent of overbank flows and their likely flow path for the SLS and ULS flood with and without the new bridge. Provide a statement on whether the new bridge exacerbates the extent of overbank flows.
- c. Clarify the potential effects of the proposed approach embankments on any overbank flows resulting from the SLS and ULS floods.
- d. Confirm if the approach abutments to the new bridge are likely to be overtopped by overbank flow resulting from the SLS and ULS floods. If so, detail whether any erosion protection measures are proposed for the approach embankments.

vi. Turbulent Wake from Piers on Existing Bridge

Provide comment on the potential for wake vortices shed off the piers on the existing bridge to impact the new bridge piers and exacerbate the scour risk to them.

vii. Bridge Stability in Flood Events

- a. Provide a statement noting that the formation of debris rafts round the piers on the new bridge will increase the lateral hydrodynamic load on the bridge has been considered.
- b. Provide comment that the structure is stable under a ULS flood with a debris raft on each pier in accordance with the requirements of Section 3.4.8 of the NZTA Bridge Manual (3rd edition, 2018).
- c. Provide comment on whether the stability of the new bridge under the hydrodynamic loads imposed on the bridge by floodwaters and debris raft formation at this level is affected.

viii. Effects on River Morphology

Provide comment on how the proposed new bridge will impact on the morphology of the river.

ix. Construction issues

- a. Confirm the effects of any temporary work platforms on the flood capacity of the waterway and the upstream backwater influence these platforms.
- b. Describe how the temporary work platforms will be founded on the river bed.
- c. Confirm the proposed source of the gravel material for the construction of the gravel bund work platforms including the methodology of extraction and the approximate quantity of material required.
- d. Confirm the potential impact on the downstream river channel in the event that the temporary gravel work platforms are washed away in a flood event.
- e. Confirm how the risk of flood transported woody debris snagging on any temporary steel platforms will be managed during construction.
- f. Provide a statement about how safety on the construction site is proposed to be managed with respect to flood risk.
- g. Provide a statement about how fine sediment plumes which could be released by construction activities into the Clutha River/ Mata-Au are proposed to be managed and mitigated.

This information is required in accordance with Section 92(1) of the Act. Please note your application will be placed on hold until the requested information has been received in accordance with Section 88C of the Act.

In accordance with Section 92A of the Act, please respond within 15 working days from the date of this letter (**i.e. by Monday 13th January 2020**) with one of the following:

1. The information requested above; or

2. Written advice that you agree to provide the information, and the date by which you intend to provide it; or
3. Written advice that you refuse to provide the requested information.

Please note that the Act requires the Council to publicly notify your application if you do not provide the requested information before the date mentioned above (or an agreed alternative date), or if you refuse to provide the information. It is therefore important that you contact us promptly to discuss an alternative timeframe if you are unable to provide the information within 15 working days of the date of this letter.

Please note that if the provision of the information requested above arises any additional areas of uncertainty or matters requiring further clarification, your application will remain on hold until sufficient information has been provided to enable processing to continue.

If you have any further queries, please contact me on (03) 474 0827 or 0800 474 082.

Yours sincerely



Rebecca Jackson
Consents Officer

cc Shane Roberts, C/- WSP-Opus, Private Bag 1913, Dunedin 9054