6 November 2020

Landpro Reference: 20012
Council Reference: LU 2020/012

Gore District Council
C/- Nigel Bryce, 4Sight Consulting
via email

Dear Nigel,

Re: Request for Further Information under Section 92(1) of the Resource Management Act 1991 – Application for [insert details].

In reference to your request for further information dated 27 September 2020, please find outlined below our response to this request.

1 Cultural Impact Assessment

The Mataura River has Statutory Acknowledgement status and the application is not supported with a detailed Cultural Impact Assessment that addresses the actual and potential effects on cultural values of the Mataura River from the proposed bridge construction, and the ongoing use of the bridge. Please provide a Cultural Impact Assessment that assesses the potential cultural effects arising from the bridge construction and the ongoing use of the bridge. Importantly, it is expected that this Cultural Impact Assessment may need to have regard to any relevant additional information that is set out in this further information request.

I note that a Cultural Impact Assessment (CIA) is generally prepared by, or on behalf of, the iwi/hapū who hold manawhenua in the area of the proposed activity. It is important that the person preparing the CIA has a good understanding of the Māori cultural values and interests in the area affected by the

0800 023 318
13 Pinot Noir Drive
PO Box 302
Cromwell 9342
Central Otago, NZ
info@landpro.co.nz
landpro.co.nz

proposal. Alongside this the writer of the CIA report must have a clear mandate from the tangata whenua they are preparing the assessment for.

Immediately following lodgment of the application, GDC engaged with Hokonui Runanga and sought a Cultural Impact Assessment (CIA) from them. Subsequent discussions with runanga members concluded that a CIA would preferably be prepared earlier in the proposal development phase and as such it was not appropriate to prepare one now.

As a result of this position it is not possible, nor appropriate, to engage someone other than Hokonui Runanga to prepare a CIA for this project. Instead we have engaged with the runanga and addressed the areas of concern that were identified in their submission, along with establishing an ongoing working relationship to involve iwi further in detailed design elements and creating a cultural narrative.

The key points raised by Hokonui Runanga in their submission were:

"1. The inadequate process that has been used to consult and engage with Hokonui, and;

2. The actual and potential adverse effects on the cultural values of Hokonui from the construction of the bridge including the following:

- *the potential impacts of the bridge and associated works on the known archaeological site which is approximately 20 metres downstream of the proposed bridge on the true left bank;*
- *the ecological impacts of the bridge structure on the flight paths of avian taonga species;*
- *the visual impact of the bridge on the Mataura River given the river is identified as an area of Statutory Acknowledgement and an Outstanding Natural Features (ONF) in the Gore District Plan;*
- *Safety of whanau members and the public in general using the bridge and associated cycle path, particularly around Huron Street."*

A hui was held with Riki Parata (Hokonui Runanga representative) on Wednesday 4th November 2020 and a robust discussion followed. As a result of this hui, we acknowledged that consultation would preferably have been undertaken earlier in the process and so going forward an Iwi Engagement Plan

will be developed that will sit alongside this process. We identified that an avifauna assessment had been completed, as well as a full safety audit that should address two of the above concerns. These are attached to this letter in response to Questions 2 and 5.

It was discussed that as well as the inclusion of the already proposed condition to ensure an archeologist is on site at all times during earthworks, a condition will be drafted to ensure the contractor liaises with Hokonui Runanga prior to mobilising to site to agree on the most appropriate location for the yard and crane platforms away from any identified site of significance. In the meantime, a proposed community dig of the currently identified site to the south of the bridge location on the true left bank will be supported by GDC.

The significance of the Mataura River and Hokonui Hills to local iwi was discussed and the possibilities for adding a cultural narrative and having input into design details that reflect the history of Gore and local Māori will be further advanced. This may include for example storyboard panels, detailed carvings on handrail posts, formwork designs on the concrete anchors as well as painted designs onto the bridge deck and laser cut shapes of significance on the bridge mast supports. This design work is being developed alongside the consenting process.

Overall, whilst a CIA cannot be provided, the cultural concerns associated with this proposal are being, or have been, addressed with the local runanga directly. A final set of any agreed proposed conditions will be provided prior to the hearing.

2 Ecological Assessment - Avifauna

Please provide a detailed ecological assessment – avifauna (avifauna assessment) that addresses the proposed bridge's effects on the flight paths of avifauna. It is requested that the avifauna assessment assesses the ecological effects of the bridge on avifauna, and includes:

- *Identifies and describes values of avifauna in the bridge footprint and wider project area;*

- *Describes the potential effects of the bridge on avifauna rising from construction, operation and maintenance; and*
- *Recommends measures to avoid, remedy or mitigate potential adverse effects.*

An avifauna assessment was prepared by Dr Della Bennett, a Senior Avifauna Ecologist at Wildlands Consultants Ltd. Her report is attached as Appendix A and contains an assessment of the construction, maintenance and operational aspects of the bridge and pathway along with an evaluation of bird species in the area and their preferred habitat. There are also a number of mitigation measures identified in Section 5 of this report which will all be adopted by GDC. Dr Bennett's overall conclusion is:

"The construction phase should preferably be implemented outside of the nesting period, to minimise potential disturbance or displacement of bird species. However, construction probably cannot avoid the breeding period, in which case, an ecologist should be commissioned to undertake a survey and advise on nest avoidance, if required. General use and public movement through and around the area upon completion should have only very minor effects on bird species, and any maintenance should follow the protocols identified for bridge construction. Birds will become accustomed to the presence of the bridge, and it is unlikely to have an adverse effects on bird flight paths."

3 Lighting Effects

Your letter dated 5 August 2020 and titled 'Clarification regarding Longford Shared Bridge and Pathway' states that the lighting design for the proposed bridge has not been commenced. However, any lights on the bridge and cycling track will be primarily for public safety and amenity; downward facing pedestrian lighting, plus an aviation signal light on the top of the bridge mast. The application is supported with a condition that any lighting installed shall be downward facing and directed away from residential properties. However, to better understand the effects of lighting on the receiving environment, please provide a detailed lighting assessment that addresses the effects from any proposed lighting. It would be helpful to have an indicative

image of the visual effects at night from viewpoint 3 (the eastern stop bank as set out in the Landscape and Visual Assessment Report submitted with the application).

Overall project lighting design and assessment

An environmental assessment of lighting has been performed by lighting specialist Steve Muir of Essential Lighting Consultancy (ELC). ELC has also developed bridge lighting and pathway lighting schemes as used for the assessment. The report and drawings are attached as Appendix B.

It is noted here that the solar bollard options have been promoted by the wider design team against ELC's recommendations (refer below) for reasons outside of normal lighting practices.

Design approach and assessment for bridge Lighting

ELC have developed a lighting scheme for the bridge that includes:

1. Handrail functional lighting;
2. Mast feature lighting;
3. Bridge beam feature lighting;
4. Stay cable Feature lighting.

This design has the ability to safely light the bridge to a PP4 level and create a nigh-time feature of the bridge. ELC's scheme has the feature lighting turned off after 11pm to limit overall impact of the surrounding environment. The assessment concludes:

> "*Maximum luminous intensity per luminaire is below the maximum permitted 2500cd hence all luminaires pass the A3 Environmental Zone parameter. We achieve a maximum upward waste light ratio 1.7% which is below the maximum permitted value of 2% as recommended within AS/NZS4282 Table 3.2 for Environmental Zone A3.*"

The design team note that although the full lighting design has been considered they reserve the right to adopt portions of the scheme - as budgets permit - selected in the order nominated above.

Design approach and assessment for pathway lighting

Three options have been developed for lighting the pathway:

1. Traditional wired lighting columns;
2. Solar bollards;
3. Solar lighting columns (where possible).

The intention of the design approach is to consent all options so that the design team can determine the most economic outcomes with lighting contractors and also determine the preferred approach with Environment Southland (once raising of the flood banks has been completed). It is assumed that each of these options is interchangeable for optimisation purposes so that for example a "wired column + solar column + solar bollard" configuration could be used if deemed more appropriate.

ELC do not support the bollard approach based on the experience with lighting solutions. The design team agree 100% with their opinion that conventional lighting columns would be more economic, have less environmental impact, and would be easier to maintain. However, this project poses a particular constraint specific to this site that is outside of normal lighting design considerations. These issues relate specifically to adding light fixtures inside the flood plain and over stop-banks (which applies to the full length of the path). To minimise the vertical height of obstructions through the flood plain and to minimise foundation requirements through stop-banks (a preference indicated by Environment Southland) solar bollards have thus been considered. Although bollards are not "recommended" by ELC the design team note that the lights would still be deemed environmentally complaint provided they can demonstrate vertical loss less than 2%. It is noted that in order for the solar lighting bollards to be deemed environmentally compliant they must be of the forthcoming Feb 2021 edition that will have upward loss limited to <2% in order to be environmentally complaint. Any decision to use bollards will be on this basis.

To minimise the net cost and flood impact of installing bollards, the design team have elected to light only 33% of the path (1m width of the 3m available) to a PP5 standard. The net effect of this decision

is to create industry standard lighting for a designated usable width of path that would enable commuters to safely navigate the path at night (noting the need for a full 3m wide recreational path is significantly reduced at night). The rest of the path width would still be lit but this would be to a level below the 0.85 lumen average of the PP5 level (the minimum level noted in the standard). This approach is considered a design mitigation that:

1. Creates a usable width of path to an industry standard.
2. Permits the use of low-height lighting fixtures in the flood plain;
3. Reduces the number of bollards in the flood plain;
4. Reduces the capital cost and ongoing maintenance cost to Council;

Overall, the design team feel this is a suitable compromise for functional purposes where other options might be deemed unfeasible and would result in "no lighting" being the only available default option. The argument in this case is that 1m of path to PP5 is better than no lighting. The reduced width approach has been discussed and accepted by Gore District Council.

4 Noise Assessment

Please provide a tonal noise assessment of any actual and potential effects associated with wind on the proposed bridge structure.

An Acoustic and Aeroelastic Assessment was prepared by Peter Coysh or Aero Consultancy UK who is regarded as an international expert on aerodynamics. His report is attached as Appendix C. A brief summary is provided below.

The rough surface and spiral form of the cables minimises potential noise created by the cables attached to the proposed bridge. Out of all the bridge components, the two main-span cables closest to the mast have the potential to create the most perceptible noise. As a worst case scenario, these cables are estimated to cause a peak noise level of 28.2 dB(A) at the nearest residential properties (at the eastern end of the bridge) during 76km/hr winds, equivalent to a soft whisper. Winds at this speed

are estimated to occur during 14 days in any given year, and this noise level is well below the most restrictive noise limits in rural and residential zones as set out in the Gore District Plan (40 dB(A) Leq from 10:00pm-7:00am). It is likely that any noise from these cables would be overwhelmed from the noise of the wind itself. For further information, please see the attached Aeroelastic Assessment, attached as Appendix C.

5 Additional Information

Whilst not specifically requested in the s92 letter, we have undertaken some further work to address the safety concerns raised in submissions around the Huron St connection.

Three options for cycleway alignment north of the bridge have been considered that connect the bridge to both Huron Street and Woolwich Street. Principally these three options are:

1. Connect to Huron St along the top of the flood bank and connect to Woolwich St via the existing river path;
2. Connect to Huron St and Woolwich St along the top of the flood banks;
3. Connect to Huron St along the top of the flood bank and connect to Woolwich St via a pathway alongside the southern edge of Huron Street.

These options (and the overall configuration of the full pathway) were independently assessed by WSP Opus as part of the normal NZTA Road Safety Audit (RSA) process. The RSA team endorsed the overall design and agreed with our designer's preference for Option 1 being the safest option for connection. The RSA summarised its review of the three options as follows:

"From the details provided we have assessed the proposed design option 1 to be the safest path from a traffic safety perspective as follows:

- *Path Width, exceeds the minimum requirement*
- *Path alignments ease to navigate.*
- *The perceived minor effect on the existing traffic and neighbouring properties*."

On this basis the alignment put forward for consenting is Option 1 alongside the existing river as shown in Appendix D on attached plans GDC_2019/11_C110 to C112 Rev B.

I trust that the information set out above satisfies the request for further information. However, if you have any further queries, please do not hesitate to contact me.

Kind Regards,



Claire Perkins

Senior Planner / Planning Team Leader