

Agenda Item	12
Report No	LA/10/21

## HIGHLAND COUNCIL

<b>Committee:</b>	<b>Lochaber Area Committee</b>
<b>Date:</b>	<b>18 January, 2021</b>
<b>Report Title:</b>	<b>Invercoe Bridge Replacement Scheme Update</b>
<b>Report By:</b>	<b>Executive Chief Officer - Infrastructure and Environment</b>

### 1. PURPOSE/EXECUTIVE SUMMARY

- 1.1 This report summarises the progress in the scheme to replace Invercoe Bridge.
- 1.2 The bridge was scored using The Highland Council's bridge replacement prioritisation system (which considers among other things, the condition of the bridge, cost of replacement, and effect of closure). The bridge currently sits at the top of the list of structures for replacement and is therefore The Highland Council's bridge in most need of replacement, and budget provision was allocated by Full Council on the 7 March 2018.
- 1.3 Following progression of the tenders and the associated Marine License requirements, the tender returns and prices identified two significant issues. The Marine License conditions - specifically the very restricted period for in water working, dictated a construction period of some 2 ½ years, the tender price was significantly in excess of the estimate and the budget.
- 1.4 Work is ongoing, including discussions with the tendering contractors, to investigate opportunities to amend the design and construction sequences to both reduce the construction period and the construction costs.
- 1.5 An increase in the scheme budget will be sought at the Full Council meeting on the 17 December 2020.
- 1.6 If budget increase is approved the tenders will be sought in Summer 2021 – with completion of the bridge replacement in March 2023.

## **2. RECOMMENDATIONS**

2.1 Members are asked to note the update.

## **3. IMPLICATIONS**

### **3.1 Resource -**

Tender returns have indicated that the existing budget approved in March 2018 is insufficient. Additional budget allocation will be sought at Full Council on the 17 December 2020, to seek a revised budget of £5.85M from 2021/22 to 2023/24.

### **3.2 Legal -**

Construction consents will be obtained by progression of a Marine License. Land access will be progressed via agreement with the affected landowners – which is well progressed.

### **3.3 Community (Equality, Poverty and Rural) -**

The bridge is on a significant access route, the current bridge has restrictions. The bridge will be replaced online – and to maintain traffic flow a temporary alternative bridge will be provided.

### **3.4 Climate Change/Carbon Clever -**

Construction works will have a carbon impact but replacement of the bridge is deemed essential for sustainability of local communities.

### **3.5 Risk –**

It is anticipated that changes can be made to reduce the construction period and the cost, however additional funding to align with existing tenders have been sought, such that the scheme can progress if such savings prove undeliverable. Standard construction risks exist, but these have been mitigated by surveys and investigations, and by design and construction constraints. Agreement is still to be reached over land access and associated land compensation, but the independent Valuation Office is managing these negotiations – which are progressing constructively.

### **3.6 Gaelic –**

No impact.

## **4. SCHEME APPROVAL**

4.1 The scheme is included in The Highland Council's current Capital Programme which was approved at Full Council on 7<sup>th</sup> March 2018. The total approved budget for the scheme (including design, land acquisition, construction etc.) was £4.145M.

## **5. EXISTING BRIDGE**

5.1 The existing bridge is a four span reinforced concrete structure originally built in 1930. The bridge is showing serious structural deterioration to the main elements of the structure. Whilst there are no signs of structural distress, this deterioration reduces the strength and durability of the supports.

- 5.2 There is undermining of the south support as the low tide river channel currently flows directly up against the support. This undermining is mitigated as the structure is founded on piles, meaning the loads can be transferred through the area of undermining. However, there is some concern that the water will continue to undermine and the soil behind the end wall will wash out and potentially cause a sinkhole behind the abutment, this is mitigated by ongoing monitoring.
- 5.3 The bridge was assessed in 1992 and found to have a capacity of 3 Tonnes Gross Vehicle Weight (GVW), although no weight restriction was applied at the time. A subsequent assessment in 2014 found that restricting traffic on the bridge to single lane working would allow a 40 tonne GVW capacity (i.e. no weight restriction required). Traffic barriers were subsequently installed on the bridge to limit traffic to single lane working. These barriers remain in place.
- 5.4 The bridge is currently inspected every year to monitor the condition of the existing bridge.
- 5.5 The bridge was scored using The Highland Council's bridge replacement prioritisation system (which considers among other things, the condition of the bridge, cost of replacement, and effect of closure). The bridge currently sits at the top of the list of structures for replacement and is therefore The Highland Council's bridge in most need of replacement.

## **6. SCHEME DESIGN**

- 6.1 A flood capacity assessment for the scheme was carried out in 2014. This concluded that the span arrangement of the new bridge was unlikely to decrease the flow capacity underneath the bridge (and thus not increase the risk of flooding upstream of the structure. The worst flooding condition was based on likely future tidal events (including an allowance for climate change).
- 6.2 A preliminary study was carried out examining the various options for the new bridge. It was concluded that an online replacement using two spans was the preferred option. A single span would be significantly less structurally efficient (i.e. requiring significantly more materials and construction depth to cross the same river width) and would either compromise the waterway area or give an excessively high road profile and cost. This has been reviewed but the twin span approach is still deemed the most effective solution.
- 6.3 The bridge was designed based on the preferred option and will comprise two 30m spans with a central support. The bridge will be slightly longer overall, with the south support being positioned slightly further back from the low tide river channel than present. Scour protection will be provided at both supports to prevent washout from occurring in the future.
- 6.4 A temporary bridge (single lane, controlled with traffic lights) will be installed downstream of the existing bridge to allow continued access during construction works.

## **7. ENVIRONMENTAL CONSTRAINTS**

- 7.1 An ecology survey was carried out in 2019. This identified the species most likely to be affected by the scheme were otter and migrating salmon.
- 7.2 Whilst there were signs of otter activity, there were no signs of holts or regular resting places, therefore suitable mitigation measures to avoid disturbing or accidentally trapping otters were included in the contract requirements for the works.
- 7.3 Initial enquiries with the Lochaber District Salmon Board indicated that construction in the river should only take place between January and May (inclusive) to avoid disturbing the migrating salmon. However, it was recommended that a fish survey was carried out to confirm the period.
- 7.4 A fish survey was undertaken by the Lochaber District Fisheries Trust in summer 2020 (slightly delayed by the pandemic). The result of this was that work in the water should only take place between January and March (inclusive), a very short construction window.

## **8. MARINE LICENCE**

- 8.1 The bridge crosses the tidal reach of the River Coe, therefore a Marine Licence is required to construct the bridge.
- 8.2 A pre application consultation was held between November 2019 and January 2020. The licence application was sent to Marine Scotland in February 2020.
- 8.3 The Marine Licence application must include detailed construction methodology of how the bridge will be built and the quantities of materials to be removed or deposited in the river. The application included these details based on the original working in water period (January to May).
- 8.4 The licence application was due to be determined in early September 2020, when the results from the fish survey were received changing the working in water period to January to March.

## **9. WORKS TENDER**

- 9.1 The scheme was put out to tender in August 2020 following a contractor selection exercise. The scheme was put out to five contractors. Two contractors pulled out early in the process. The estimated construction value was £3.25M, based on a cost estimate calculated following completion of the design process.
- 9.2 Following receipt of the fish survey results (which reduced the working in water period), the designer liaised with Marine Scotland and the fisheries board to determine how the sequencing of the works could be altered to fit the new water working periods.

- 9.3 When informed of the change to the water working period, some of the tendering contractors expressed concerns that due to the shortened period, they may require up to 3 working in water periods to complete the construction (i.e. up to 2 ½ years). This would also result in a lot of downtime in the construction – i.e. periods when the contractor is on site but not carrying out work as construction could not proceed until the next water working period.
- 9.4 The Highland Council tried to facilitate the requests of both Marine Scotland and the contractors, but this had to be balanced against the need to run a fair tender process.
- 9.5 Tenders were returned in late October 2020. The lowest tenderer was £1.25M higher than the pre-tender estimate and in excess of the available budget for the scheme. The reasons for the higher costs were tied to the restricted working in water period and the need for an extended programme with downtime.
- 9.6 For this reason, and issues over conclusion of the Marine License, it was determined that the best course of action was to not award the contract and retender the project to start in a years' time. This would allow time to resolve the issues with the Marine Licence and the construction sequencing and detailing to allow an award in 2021.

## **10. AFFECTED LANDOWNERS**

- 10.1 A number of landowners will be affected on both sides of the river by the works, either by the need to purchase additional land for the new bridge or requiring temporary occupation to allow the construction to take place.
- 10.2 The main landowner affected is the nearby caravan park. Part of the caravan park on the riverside will be required to accommodate the temporary diversion. The owner has been very accommodating in facilitating progress on the scheme.
- 10.3 Land negotiations are being progressed by the independent Valuation Office.
- 10.4 Following the decision to delay the scheme, The Highland Council has met with local Members, the community council and with the caravan park owners to discuss the reasons and implications in postponing the scheme.

## **11. FUTURE OF THE SCHEME**

- 11.1 An increase in budget as identified above is included in the Capital Programme review taking place on 17<sup>th</sup> December 2020. Whilst it is hoped to make changes to the scheme to decrease the costs, the additional budget will allow the scheme to go ahead if no significant reduction in the costs are achieved.

- 11.2 The Highland Council is currently in discussion with Marine Scotland and the tendering contractors to identify parts of the scheme that can be altered with a view to reducing the cost of the scheme and the construction duration, without impacting on the design life or durability. This will likely include a more detailed list of activities and construction methodologies that can be used out with the working in water period and ensuring that these are identified in the Marine Licence. This will look to ensure that the scheme can be built within two water working periods (1 ½ years).
- 11.3 The tender will also be issued earlier in the year – this will allow the contractor to start on site before the water working period – this will allow land based preparatory works to take place before the contractor can access the watercourse.
- 11.4 The current programme for the works is as follows:
- Contractor selection May – June 2021
  - Tender Period July – September 2021
  - Contract Award End of September 2021
  - Construction Start November 2021
  - Construction Completion March 2023
- 11.5 Land negotiations will continue with a view to resolving them well in advance of the contract award date.

Designation: Chief Executive Officer - Infrastructure & Environment

Date: 09 December 2020

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Background Papers: Council Capital Programme 7 March 2018.