

# Report

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| Report to:       | <b>Clydesdale Area Committee</b>                               |
| Date of Meeting: | <b>26 February 2019</b>  |
| Report by:       | <b>Executive Director (Community and Enterprise Resources)</b> |

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| Subject: | <b>Ponfeigh and Clyde Bridges - Update</b> |
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## 1. Purpose of Report

1.1. The purpose of the report is to:-

- ◆ provide an update on plans to re-open currently closed bridges at Pettinain and Douglas Water (Section 4)
- ◆ set out the background to the wider management of bridges across the Council area with a focus on those in Clydesdale (Section 5 to 9)

## 2. Recommendation(s)

2.1. The Committee is asked to approve the following recommendation(s):-

- (1) that the report be noted.

## 3. Background

3.1. This paper has been prepared at the request of members of the Clydesdale Area Committee at the Committee on the 25 September 2018.

3.2. Across South Lanarkshire the structures asset owned and maintained by the Council consists of 748 bridges, culverts and underpasses together with a currently unquantifiable number of roadside retaining walls. Within Clydesdale there are 356 bridges and culverts, representing just under 50% of the overall asset base.

3.3. An annual update is provided to the Community and Enterprise Resources Committee on the Roads Asset Management Plan. Detailed commentary is provided within this report in relation to the 'Structures' asset.

## 4. Ponfeigh (Douglas Water) Bridge by Rigside and Clyde Bridge by Pettinain

4.1. Capital funding totalling £6m has recently been confirmed at the Executive Committee (21 November 2018) to facilitate the re-opening of Ponfeigh (Douglas Water) Bridge by Rigside and Clyde Bridge by Pettinain.

4.2. Ponfeigh Bridge crosses the Douglas Water and provides a pedestrian and transportation link between the villages of Rigside and Douglas Water to the east and the Eastertown Road to the west of the watercourse. The original bridge is a two span masonry arch structure. This structure currently remains in position at the location and is in very poor condition.

- 4.3. The original bridge was 'overbridged' in the early 1960s via the installation of a Bailey bridge structure. A 10 tonne vehicular weight restriction was imposed on the Bailey bridge following its installation. The Bailey bridge failed in April 2016 and was thereafter deemed unsafe for use by pedestrians and vehicles. A full road closure has been imposed since this date.
- 4.4. Roads and Transportation Services are currently undertaking preliminary work with a view to providing the optimum solution of replacing the failed Bailey bridge with a modern modular steel structure with the plan to have the bridge open during 2020/2021. In addition to the technical complexities associated with the construction phase of the project, there are numerous environmental and legislative issues which require to be addressed initially.
- 4.5. Clyde Bridge forms an important transportation link over the River Clyde between the villages of Carstairs Junction and Pettinain. It was constructed in 1912 and is an early example of reinforced concrete construction in Scotland.
- 4.6. A 2 ton vehicular weight restriction was imposed on the structure in 1956. The bridge was therefore identified as weak at a relatively early point in its existence. The bridge was subject to a structural assessment in 1991 which confirmed its inability to accommodate heavy vehicles. The Council have since then taken a risk based approach in managing the situation, recognising that the bridge provided an important link between rural communities and for commuters accessing public transport. There have been several inspections and assessments undertaken to monitor the condition of the bridge and extend its life for as long as possible. However the ability of the bridge to service modern day vehicles has continued to be a major concern.
- 4.7. A monitoring inspection undertaken in August 2018 recorded significant further deterioration in the condition of the structure. Fundamental and long standing structural defects had deteriorated to an extent where the bridge was no longer considered manageable or safe for public use. A full road closure has been in place since this date.
- 4.8. The Council thereafter commissioned an appraisal of the various options available with a view to re-establishing the operational status of the river crossing. This exercise has determined that the optimum solution is the construction of a new modular steel bridge located adjacent to the existing bridge.
- 4.9. Roads and Transportation Services are currently undertaking preliminary work relating to the environmental and legal issues which require to be addressed prior to completion of the design activities associated with the selected solution. The programme for delivery of the new Clyde Bridge will be dependent upon the outcome of the currently ongoing ecology study of the locus. Every available opportunity to accelerate completion of the various stages of the project will be taken. It is envisaged that substantial completion of the entire scheme will be achieved during 2020/2021.

## **5. Inspection Regime**

- 5.1 The bridge inspection regime utilised by Roads and Transportation Services is carried out in accordance with best practice as set out in the Code of Practice and the Design Manual for Roads and Bridges and essentially requires each structure to be subject to a visual General Inspection every 2 years. In addition, a Principal Inspection of each structure, consisting of a detailed inspection at touching distance of all accessible components, is undertaken every six years.
- 5.2 Each inspection is used as a method of establishing the condition of the structure and for identifying any repair needs.
- 5.3 The general position with bridge inspections is satisfactory with such inspection programmes being completed within appropriate timescales.

## **6 Bridge Assessment and Management**

- 6.1 The load carrying capabilities of road bridges is identified through design certification for new or recently constructed items or via the bridge assessment programme for older structures. The bridge assessment process was initiated by an EU Directive issued in 1989 and was required to be implemented by all UK roads authorities. The general aim of the directive was to ensure that all UK roads structures were able to accommodate 40 tonne vehicles which would be permitted to travel freely across roads in Europe from 1 January 1999.
- 6.2 The assessment programme for bridges in South Lanarkshire was completed in the 1990's and identified 125 bridges which required to be considered for strengthening. Good progress has been made and at present only 16 of these bridges remain to be upgraded.

## **7. Bridge Maintenance**

- 7.1 Bridge inspection is undertaken as a means of confirming structural condition and identifying defects with a view to planning and implementing the requisite future maintenance or repair operation.
- 7.2 A programme of prioritised maintenance operations is programmed at the commencement of each financial year. The remainder of revenue funding is apportioned to emergency or previously unforeseen urgent repairs arising throughout the year and to the inspection of difficult access structures.

## **8 Vehicle Containment**

- 8.1 The bridge assessment programme completed in the 1990's, as detailed in section 6.0 above, included a risk analysis of vehicle containment characteristics at each bridge location. This assessment considers the assessed strength of the parapet, the risk of the parapet being struck due to road alignment and the likely consequences should the parapet be breached. The results of the analysis revealed that, in terms of risk and containment, parapets on 8% of the Council's bridge stock require to be considered for upgrading.

8.2 A programme to enhance vehicle containment capability at these structures has commenced. As it stands 58 structures have been identified for improvement measures, with 36 of these located in the Clydesdale area. 15 of these 58 bridges are in the ownership of Network Rail and carry publicly maintained roads with 10 of the 15 being in Clydesdale.

8.3 The need for containment upgrading works at the remaining 92% of bridges is currently considered low. It should be recognised that some of these parapets do have containment issues but the level of risk is low given the site characteristics.

## **9 Bridges in Ownership of Other Bodies**

9.1 There are 81 bridges across South Lanarkshire that are owned by other bodies and which carry publicly maintained roads. Network Rail own 43 of these bridges of which 17 of these are in Clydesdale.

9.2 Similar arrangements for inspection, maintenance and assessment apply to those bridges as do for council bridges.

## **10 Employee Implications**

10.1 There are presently no employee implications associated with this report, however, any resulting increased investment will require to be resourced accordingly, including the use of external consultancy support where necessary.

## **11. Financial Implications**

11.1 There are no direct financial implications arising from this report.

## **12 Other Implications**

12.1 There are no implications in terms of sustainability or risk in relation to the information contained within this report.

## **13. Equality Impact Assessment and Consultation Arrangements**

13.1 This report does not introduce a new policy, function or strategy or recommend a change to an existing policy, function or strategy and therefore, no impact assessment is required. At this stage no further consultation is necessary

**Michael McGlynn**  
**Executive Director (Community and Enterprise Resources)**

15 February 2019

**Link(s) to Council Values/Ambitions/Objectives**

- ◆ Improve the road network, influence improvements in public transport and encourage active travel

**Previous References**

- ◆ Executive Committee, 21 November 2018
- ◆ Clydesdale Area Committee, 25 September 2018

**List of Background Papers**

Executive Committee Report

**Contact for Further Information**

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