

Decision Pathway Report



PURPOSE: Key decision

MEETING: Cabinet

DATE: 01 December 2020

TITLE	Redcliffe Bascule Bridge Refurbishment			
Ward(s)	Central			
Author: Chris Dooley	Job title: Bridges and Highway Structures Team Manager			
Cabinet lead: Cllr Kye Dudd	Executive Director lead: Stephen Peacock, Growth & Regeneration			
Proposal origin: BCC Staff				
Decision maker: Cabinet Member				
Decision forum: Cabinet				

Purpose of Report:

1. To advise that Tenders were returned on 14th August with four valid Tenders for BCC procurement evaluation. Tender evaluation and moderation was completed by the 24th August and the Tender Report was issued for approval on the 10th September and is now waiting Executive Director Signature to allow process to proceed further.
2. To further advise that Notification to Bidders was due to be given on the 18th September with a Standstill period expiration due on the 25th September. Subject to contract award approval being granted, the current programme was proposed to have been awarded of Contract on the 16th October, with the Contract period being programmed from the 19th October to completion on the 18th February 2022. These dates have now slipped and will require updating as soon as Cabinet approval has been received. The Tenders will remain valid for a total of 180 days to the 10 February 2021, thereafter, BCC would need to fully retender the full Contract again potentially increasing ongoing costs and further associated COVID-19 risk etc.
3. The total budget for the Project was £3,000,000.00. However with taking into account capital expenditure on this Project to date, will now leave the Project budget in a deficit of £276,100.00, without any Contingency allowance. A suggested additional 40% would require a further £960,000.00. This was reported in previous Decision Pathway Report on the 30th September. Further QRA clarity was requested on this matter.
4. To further update Cabinet of the findings of the recent instructed updated QRA undertaken which now indicates that the additional contingency allowance for the Project could potentially be reduced to £593K (25%) with the existing £276,100 deficit, making the revised shortfall £869,100 with a reduced contingency allowance of 25% from 40%, which in itself introduces a risk by virtue of the reduction of contingency allowance.
5. To advise that the existing bridge “nose bolt deck locking arrangement”, is now being made obsolete and is being replaced with a new bespoke deck span clamping arrangement, which is a new additional requirement for this Project.
6. To further advise that currently due to current Programme slippage that the new structural requirement as explained in item 5. above (new clamping arrangement), will require the full closure of Redcliffe Bridge to all traffic, including pedestrians/cyclists for a period of 10 week, during September/October 2021, during the proposed clamping installation Works, with resultant full project completion of all refurbishment work now being extended to March 2022. This may be further at continuing ongoing risk due to Procurement/programme slippage. Refer to Appendix B for Current Works Programme.
7. To advise that BCC Strategic City Transport Team have now provided a revised approved Traffic Diversion Route solution during the Redcliffe Bridge closure as well as also accommodating other traffic control measures as mentioned in item 6, above. This proposed diversion route for Redcliffe Bridge works has been approved, whilst also considering and coordinating with the ongoing COVID-19 measures within the City, the Bristol Experimental Traffic Order Project as well as other Capital Transport Projects, and as well as the District Heating Project. The Redcliffe Bridge proposed diversion route is now shown on Appendix C for the approved Diversion Route to facilitate the Works.
8. To advise that there is now a request for two or more vessels to leave their Welsh Back Moorings in January 2021.

- Currently as there is no Contract in place, the lifting of the Bascule span would need to be undertaken on a Risk Based basis as done in previous lifts. This will need traffic to be diverted via Bristol Bridge, which is currently closed to general traffic under an ETRO and both vessels out to dry dock and also the return to Welsh Back mooring.
9. BCC Legal Advice has been sought to determine if the Traffic Management diversion route across Bristol Bridge can be done (January 2021), during the ETRO Consultation period, and what would be the legal implication of this in relation to the existing ETRO. This has now been confirmed by BCC that this will not have an impact on the existing ETRO on Bristol Bridge.

Evidence Base:

Full Council meeting on 20 February 2018 approved £3.00m (PL09) Capital Budget allocation over the following two financial years. Final approval was granted in September 2018 to spend the remainder of the approved allocation to undertake full structural, mechanical and electrical (M&E) refurbishment to Redcliffe Bridge.

Detailed design and the associated structural assessment undertaken in 2019 has now shown that the existing locking nose bolt" clamping down arrangement for the bridge deck at the front "nose end" cannot now be successfully refurbished, for structural and "operational performance" reasons and will consequently need to be totally removed and a more robust new "bespoke" clamping down mechanism system installed to lock the bridge deck into position to remove the bouncing and rebounding" characteristics experienced by motorists on this particular bridge.

The removal of the existing nose bolts and the construction and installation of the new "holding down" clamping set up arrangement will now require the bridge deck to be lifted up in the fully open upright position, closing it off to all vehicular traffic and pedestrian/cycling traffic, under a pre-approved TM diversion route (agreed by BCC Network Management).

The original Cabinet decision in 2018 was initially based on the technical advice and knowledge we had at that time, with the original expectation that most of the structural refurbishment work could be undertaken from underneath and from within the inside of the structure, whilst the bridge remained open to vehicular traffic, any only requiring planned programmed lifts for commissioning purposes, minor works minor adjustments etc. This is now not the case for the reasons now given above.

Background

Justification for the use of the newly proposed "holding down" clamping arrangement and the removal of the existing nose bolts can be briefly summarised as follows:

- The bridge currently bounces under traffic loading (especially HGV's and buses), resulting in a noise and vibration nuisance to local residents and businesses and ongoing damage to the front of bridge deck and bearing plate.
- The bridge is currently "driven down" by the BCC Docks Bridge Operator until it hits the landing bearings. The bridge operator alone decides when to stop driving the bridge, based mainly on experience and "feel" alone.
- The new system will automatically lower the bridge until it is almost down and then the hydraulic new clamps will take over and pull the bridge onto the abutment bearing landing shelf. The system will be fully automated removing the risk of operator error and possible structural overloading of mechanism during operation.
- The structural assessment has shown that the bridge is under at least 10 tonnes of uplift reaction force at the nose end under traffic loading which causes the bouncing effect. The assessment has also shown that the bridge girder beams cannot fully resist the local effects of this force. The proposed new clamping arrangement will include stiffening of the bridge girders at the support and will address the structural, rebounding and noise issues.
- The installation of the newly proposed "holding down" clamping arrangement and the removal of the existing nose bolts will require that the bridge span is fully opened in the upright position, with Redcliffe Bridge closed to all, hence the requirement for an approved diversion route as described in items 6 and 7 on previous page.

Known Project Expenditure and Finance and Current Programme Forecast

The current Project Highlight design programme is now forecasting a delayed actual Contract commencement date of November 2020 at the earliest, clearly now missing the road closure May to July 2020 window dates. Summary of October 2020 forecasted expenditure for the full Project is now as follows (See Appendix A for details) :

• Financial Year 2018-2019	£143,484.00	Committed and spent from PL09 Capital Budget allocation.
• Financial Year 2019-2020	£266,094.00	Committed from PL09 Capital Budget allocation.
• Financial Year 2020-2021	£395,976.00	Not yet committed, Awaiting award of Contract in 2020
• Financial Year 2021-2022	£3,469,277.00	Not yet committed, as Contract has yet to be awarded.
Total	£4,234,831.00	Current Forecast Expenditure (£4.235M)
Forecasted Deficit	£3,000,000.00	Full Budget Allocation (PL09)
	£1,234,831.00	As of November 2020 (£1.235M)

Previous Reported Capital Project shortfall prior to QRA assessment was £276,100 from Tender submission without any contingency allowance and **£960,000** if we allow a reasonable sum (**40%**) for contingency/risk. Therefore total additional Capital Funding deficit shortfall was originally reported was **£1.235 million**.

Supplementary Revised Updated QRA Assessment Findings (Undertaken on 22nd October 2020)

- Professional Fees = £633,000 (design fees to date + estimate of future supervision costs)
- Test Lifts during design phase = £26,100
- Additional TM works = £175,000 (Estimate produced by BCC Engineering Practise)
- Hire of Site compound = £44,000
- Tender figure = £2,398,000
- **Sub Total = £3,276,100**
- Updated revised QRA Mean Risk Assessment = **£593,000 (approx. 25% of tender value)**
- **Revised Project Total = £3,869,100, (with 25% Contingency of Tender value)**

Summary:

Still £276,100 over allocated Capital budget without any contingency allowance and an updated QRA Mean Risk contingency allowance of **£593K** (25%) contingency/risk. Total additional Capital Funding deficit is therefore now **£869,100**, which has therefore reduced by £365,900 from the original forecast, although it must be understood the contingency would be reduced from 40% to a Mean Risk Allowance of 25% in line with QRA protocols. Refer to Appendix A for revised Risk Register.

Remaining Risks to Project

Budget Overspend:

Tender value exceeds Capital Budget Allocation (PL09). Painting of main span has already been removed from the scope. Further opportunity to reduce the scope of the works is limited. A contingency/risk allowance of 40% is therefore recommended, although a reduced contingency of 25% in line with the updated and revised QRA would also be acceptable, but increased risk.

Harbour Cable

BCC have attempted to get a quote to install a duct under the Floating Harbour in advance of the works. Initial discussions were held with Select Electrics before staff were furloughed. Responsibility for the cable was transferred to tenderers, but they have advised that there was insufficient time to price this item. Tenders include a Provisional Sum of £20,000 but could be significantly more. Select Electrics advised that a recent duct only cost £5,000, but Jacobs are concerned that this is not to current standards. A specialist item that needs external input to provide a better estimate. Further justification for 40% contingency/risk allowance.

Traffic Diversion Route

Tender prices include for the temporary diversion of traffic over Bristol Bridge. Following the closure of Bristol Bridge, the diversion route is now more complicated and requires some advance junction improvements and enabling works. These items were not included in the original budget. These will need to be implemented to a tight programme in order to meet the programmed September/October 2021 bridge closure dates. Note – September/October closure was advised by BCC Network Management prior to COVID-19 restrictions and changes to Bristol Bridge etc. These dates may not be still applicable/fixed given changes to traffic flows post COVID-19 traffic changes. BCC Network Management to advise.

Redcliffe Wharf & District Heating

Works will be on site at the same time as Redcliffe Wharf development. BCC is also planning to utilise Redcliffe Bridge TM to install District Heating. Programme and interface issues to be efficiently managed.

Thruster Brakes

Tender price includes for testing of existing thruster brakes. Principal Designer has assumed that these are okay, but if repairs or replacement are required there will be a cost implication. Early engagement with contractor is advised.

COVID-19

Programme required to meet agreed road closure period is very tight. Delays due to COVID-19 restrictions will increase the risk if works over run. A significant portion of the works are inside the bridge. Social distancing may be difficult and could slow works progress. However, the lead content in the existing paint may require site personnel to wear a higher level of PPE reducing the risk of COVID transmission. This level of risk is yet to be determined.

Docks Resources

The bridge will need to be operated by Docks staff during the works. Availability of Docks staff could affect the Works programme. Docks have made some arrangements for a recently retired member of staff to assist, but this remains a risk.

Technical Approval

Contractor designed elements will require approval from BCC and Jacobs (Principal Designer). Temporary works and Harbour Cable will require approval by the Environment Agency and the Harbour Master. Programme delivery is dependent on prompt responses and ultimately gaining the required approvals.

Electrical Testing

The Principal Designer has advised that an Electrical Test Certificate should be provided by the building owner (BCC) prior to the works commencing. Docks do not have a current valid test certificate. BCC attempted to arrange for testing during the tender period, but Select Electrics staffs were unfortunately furloughed. It is probably easier for the Principal Contractor to arrange this during the Contractor design period, but this can't be discussed until the Principal Contractor is appointed.

Cabinet Member / Officer Recommendations:

That Cabinet:

1. Approve the contract award to enable the Contract Programme dates to be implemented in relation to Redcliffe Bridge closure and to implement the approved Traffic Management Diversion Route in late summer 2021.
2. Note the new structural requirement to install the new holding down clamping system to replace the older existing nose bolt locking system due to structural and operational reasons
3. Note the requirement to fully close Redcliffe Bridge for 10 weeks during Sept - November 2021 timeframe window.
4. Note the delayed design Programme and actual on site commencement date to April 2021 and consequent delayed completion date for the full refurbishment Scheme to March 2022.
5. Note the new consequential Traffic Management diversion, whilst the works are being undertaken for the times it will be required. i.e. 10 weeks during September - November 2021 timeframe window.
6. Approve the additional estimated Capital Budget expenditure of £1,235 million (40%), to complete the full Project and to cover all identified risks listed within the report.
7. Authorise the Executive Director: Growth and Regeneration in consultation with the Cabinet Member for Transport and Energy, the Green New Deal, Clean Air Zone planning to take all steps required to allocate the additional Capital budget expenditure of £1,235 million to complete the full Project.

Corporate Strategy alignment:

Redcliffe Bascule Bridge Refurbishments

The corporate strategy objectives of this specific project would be fulfilment of some of the corporate strategic themes with regard to Wellbeing, well connected and business as usual. The scheme will also fulfil the Council's main statutory duties, as Local Highway Authority and as the Harbour Authority, in both cases.

City Benefits:

Refurbishment works will allow the bridge to continue to operate in an effective manner, meeting the Council's statutory duty, obligations. It would also address the concerns of Corporate Council Insurers, in regard to providing related corporate insurance cover for the operational aspect of the bridge.

It will reduce the risk of lifting failure when the bridge is opened, which could affect the operation of the surrounding highway network, including Metrobus. It will reduce risk of any financial claims from owners of vessels in the Floating Harbour, who require constant notifiable maritime access in accordance with the legalisation. It will reduce risk of increased repair costs and operational costs due to attendance and additional mitigation measures, should there be significant delay in undertaking refurbishment work. Significant investment in updating the operational aspects of the bridge will produce overall future operational savings and performance reliability, as well as a reduction in staff resources currently needed to ensure bridge lift. It also makes the waterfront upstream more marketable for BCC.

Consultation Details:

The Cabinet Member for Transport, Executive Director for (G&R) and Ward councillors have been briefed

The Harbourmaster will be consulted and involved in the scheme developments.

The EA will require details of the proposed activities, and will require to approve the appropriate Consents.

Frontagers and local businesses will be informed of any significant traffic management that affects the local network.

MetroBus, First Bus and relevant Emergency Services and relevant Stakeholders will also be kept up-to-date.

Revenue Cost	n/a	Source of Revenue Funding	n/a
Redcliffe Bridge Capital Costs (PL09)	£3.00m (from a £3.35m allocation under the approved capital programme)		The scheme is funded by prudential borrowing under the Approved Capital Programme (PL09).
One off cost <input checked="" type="checkbox"/> Ongoing cost <input type="checkbox"/>		Saving Proposal <input type="checkbox"/> Income generation proposal <input type="checkbox"/>	

Required information to be completed by Financial/Legal/ICT/ HR partners:

1. Finance Advice: The latest capital requirement estimate is that the project will cost £4,235,300 when applying a 40% contingency to the base cost. This is an increase of £1,235,300 to the approved budget. Although a lower contingency of 25% can be applied, it would not be prudent to estimate 25%. Therefore finance consider that there is a capital funding shortfall of £1.235m. Finance recommend that this is funded by:

£436k redirection of underspend on PL22 - 'Strategic Property - Investment in existing waste facilities'
£799k redirection of PL10 - 'Highways & Traffic Infrastructure - General'

PL22 is forecast to underspend over the project lifetime, so it is recommended the underspend is redirected.

PL10 is for infrastructure maintenance. This will create a potential future funding pressure, but the future spend is not committed. Therefore , G&R must undertake a capital prioritisation exercise in the immediate future to identify any further funding priorities for highways infrastructure.

Finance Business Partner: George Palmer	Date: 20/11/2020
2. Legal Advice: All procurement activities associated with the works will need to comply with the Public Contracts Regulations 2015 (so far as necessary) and the Councils own procurement rules. Legal Services will provide support on the appropriate contract documentation.	
Legal Team Leader: Eric Andrews,	Date: 23/11/2020
3. Implications on ICT: There are no identifiable IT implications in these initiatives."	
ICT Team Leader: Simon Oliver ,	Date: 23/11/2020
4. HR Advice: "No HR implications"	
HR Partner: James Brereton	Date: 23/11/2020
EDM Sign-off	Stephen Peacock
Cabinet Member sign-off	23 November 2020
Mayor's Office	23 November 2020

Appendix A – Updated QRA Risk Register	YES
Appendix B – Revised proposed Works Programme	NO
Appendix C - Approved Diversion Route	NO
Appendix D – Risk assessment	NO
Appendix E – Equalities screening / impact assessment and Checklist of PR	NO
Appendix F – Eco-impact screening/ impact assessment of proposal	NO
Appendix G – Financial Advice	NO
Appendix H – Legal Advice	NO
Appendix I – Combined Background paper	NO
Appendix J – Exempt Information	NO
Appendix K – HR advice	NO
Appendix L – ICT	NO
Appendix M – Redcliffe Bascule Bridge Location Plan and condition photographs	NO
Appendix N - Redcliffe Bridge M & E Assessment Report by CH2M 2017	NO