

<b>Report of:</b>	Councillor Dennis McCabe: Executive Member for Environment Geoff Field: Director of Environment and Community Services
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<b>Submitted to:</b>	Executive - 22 December 2020
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<b>Subject:</b>	Transporter Bridge - Future Operation
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**Summary**

<b>Proposed decision(s)</b>
<p>It is recommended that LMT:</p> <ul style="list-style-type: none"> <li>a) Approves the implementation of an initial repair programme and the funding requirements to ensure the ongoing structural integrity of the Transporter Bridge</li> <li>b) Executive agrees to move to consultation proposals for future operating models.</li> </ul>

<b>Report for:</b>	<b>Key decision:</b>	<b>Confidential:</b>	<b>Is the report urgent?<sup>1</sup></b>
This report seeks an Executive decision to approve capital expenditure on the Transporter Bridge and to approve an operating model.	Yes – over the financial threshold and more than 2 wards will be affected.	This report is not confidential.	For the purposes of the call-in procedure, this report is not urgent.

<b>Contribution to delivery of the 2018-22 Strategic Plan</b>		
<b>Business Imperatives</b>	<b>Physical Regeneration</b>	<b>Social Regeneration</b>
<b>Exploring new operating models for the delivery of Council services, to assist</b>	<b>We will improve Middlesbrough’s rail connections, promote</b>	<b>Improving the town’s physical environment to ensure that our roads,</b>

<sup>1</sup> Remove for non-Executive reports

<p><b>the Council in addressing its financial gap.</b> Through the effective deployment of resources to carry out essential works.</p>	<p><b>investment in the Historic Quarter to encourage business growth and continue to improve our road network.</b> Capital investment in the Transporter Bridge will enable us to carry out our statutory inspection duties and improve our bridge and structure assets.</p>	<p><b>streets and open spaces are well-designed, clean and safe.</b> Capital investment in the Transporter Bridge will enable us to carry out our statutory inspection duties and improve our bridge and structure assets.</p>
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<p><b>Ward(s) affected</b></p>
<p>The delivery of the repairs to the Transporter Bridge will be of benefit to all Wards throughout Middlesbrough.</p>

**What is the purpose of this report?**

1. The purpose of the report is to inform Executive of the current status of the Transporter Bridge, highlight what works are initially required following assessment and to seek approval/endorsement to identify funds and to carry out initial repairs to the Transporter Bridge as identified in the Special Inspection carried out by Rapid Consultants and the follow up Principal Inspection carried out by Atkins Global.
2. To agree that consultation takes place with relevant bodies to discuss the future operational model of the Transporter Bridge and determine the level of investment required.

**Report Background**

3. The Transporter Bridge is Grade II\* Listed with Historic England and was opened in 1911. The bridge has 3 spans, 1 No. 174m long main river span crossing the River Tees and 2 No. 42.6m long cantilever spans, both of which are tied into the ground below via tensioned cables and ground anchorages to prevent them from overturning. The supported gondola carried vehicles and pedestrians connecting A178 Port Clarence Road to Ferry Road.
4. Following an inspection of the cord angles undertaken by consultant TIS in the spring of 2019, the bridge has remained closed and cordoned off since the 5<sup>th</sup> August 2019.
5. Atkins (Engineering) attended the bridge in August 2019. The purpose of this inspection would aim to establish both the cause of the angles becoming partially detached, and the effects on the bridge structurally. During the visit, Atkins were directed to several bracing angles which were partly detached from the upper chords. Upon completion of the site visit, Atkins advised that the bridge should remain closed until a Special Inspection of every upper chord bracing angle could be undertaken. Bridge works were carried out to remove all of the chords and angles which were identified as being at possible future risk of failure.

6. As the last Principal Inspection of the bridge was last carried out in 2011, and recommendations are that Principal Inspections are carried out a minimum of every 6 years to structures of this type, Atkins were commissioned to carry out a Principal Inspection of the bridge. The Principal Inspection by Atkins has been completed and whilst we do not yet have the completed report for circulation Atkins have provided a high level summary of their findings along with significant anticipated costs for repair.
7. Initial repairs to the Bridge will need to be carried out at a total cost against the Investment Strategy of £655,000, incurring revenue cost of borrowing totalling £32,750. For the bridge to remain closed to commuters but be open to visitors the following structural repairs and assessment are required.
  - Replace cable stays and add sheathing, replace perforated angle lattices - £550,000.
  - Cable Anchorage Inspection - £35,000
  - Fabricate and install a permanent support fixed to the bridge to support the parked gondola. – £70,000
8. As a leisure attraction the bridge would continue to incur expenditure associated with maintaining the structure, staff and running costs. The estimated running costs as a leisure venue are £120,000 p.a. within revised income estimated at £71,000.
9. The approximate net operational cost will be £49,000 on the assumption that Stockton will not be liable for a contribution.
10. Subsequently the following 10 year maintenance plan is required.

Year 1 Paint Testing	£40,000
Year 1 Repairs to tower base steelwork	£250,000
Year 2 Re-paint Bridge	£1,300,000
Year 2 Repairs to retaining walls	£25,000
Year 2 Install rock armour to column support	£50,000
Year 2 General Inspection	£10,000
Year 2 Roller Bearing replacement and repairs to Port Clarence Truss bridge	£100,000
Year 4 General Inspection	£10,000
Year 6 Principal Inspection	£200,000
Year 8 Re-paint Bridge	£1,300,000
Year 8 General Inspection	£10,000
Year 10 General Inspection	£10,000
<b>Total</b>	<b>£3,305,000</b>

## Consideration of Future Operating Model

### Future Operating Model

11. Once the initial repairs to the bridge have taken place then the bridge can open as a visitor attraction. However, the bridge will not be able to transport pedestrians or vehicles. This option could be the long term position of the bridge and maintains the structure of the bridge as a visual icon for Teesside. However this will require consultation with, and the subsequent approval of, Historic England as the gondola will no longer be suspended from the bridge and this may affect its status as a Grade 2\* listed structure.

12. It is possible to undertake significantly more investment into the bridge in order for it to be moved back towards its original format. These are outlined below and will be the basis of discussions with partners and the wider public to decide what and if additional investment should take place.
13. Below are the future potential options for the future of the Transporter Bridge. They are in ascending order of structural intervention and depend upon the anticipated use of the bridge. All bridge operating options will still require the implementation of a 10 year maintenance plan which in addition to the costs identified will require a maintenance/repair and inspection regime.

**Option 1. Leisure and Cultural attraction with Gondola Suspended from the Bridge. (Retaining lift and high level access)**

14. In order for the bridge to remain open as a tourist/visitor attraction the following structural repairs and assessments will need to be carried out at a cost against the Investment Strategy between £1,485,000 and £2,585,000, incurring revenue borrowing costs between £74,250 and £129,250.
- Replace cable stays and add sheathing, replace perforated angle lattices - £550,000.
  - Cable Anchorage Inspection - £35,000
  - Replacement of Gondola supporting cables and U-bolts - £500,000
  - Repairs/replacement of the top carriage - £400k to £1,500,000

The 10 year maintenance plan would be as follows:

	<b>Capital</b>
Year 1 Paint Testing	£40,000
Year 1 Repairs to tower base steelwork	£250,000
Year 2 Re-paint Bridge	£1,300,000
Year 2 Repairs to retaining walls	£25,000
Year 2 Install rock armour to column support	£50,000
Year 2 General Inspection	£10,000
Year 2 Roller Bearing replacement and repairs to Port Clarence Truss bridge	£100,000
Year 4 General Inspection	£10,000
Year 6 Principal Inspection to Bridge	£200,000
Year 6 Principal Inspection to Gondola	£50,000
Year 8 Re-paint Bridge	£1,300,000
Year 8 General Inspection	£10,000
Year 10 General Inspection	£10,000
<b>Total</b>	<b>£3,355,000</b>

**Option 2: Continue to use Bridge as an operational Transport Bridge and Leisure and Cultural Attraction.**

15. Use the bridge to transport vehicles and pedestrians at peak hour's operational service. This would also include an annual fare review, cashless transactions, a revitalised commercial/ retail offer, an improved Visitor Experience Package, an enhanced education offer and review of Extreme Sports charges. This option would need to include market research to understand the political view, effect on customers, income, and cost.
16. This would be to changing operating hours to Monday – Friday 7.15am to 09.15am & 15.30am to 15.45am.

17. We would review of the visitors centre experience as part of the town's wider cultural offer could result in an additional income, however this would require a robust business plan to be developed through our Culture and Tourism Strategy.
18. An indicative cost based on the following assumptions would reduce Stockton Council's contribution to £78,400 and Middlesbrough Council's contribution would reduce to £70,000.
19. This is estimated on the assumption that current opening hours and operating model would reduce annual staffing costs by an estimated £100,000 and annual income by £46,000. In addition a fare increase of 5% would generate additional annual income of £10,600 based on the suggested new operational hours. It is expected that the revised total net cost would be £148,400.
20. A review of the service level agreements with the extreme sports operators will result in the Council recovering all costs associated with hosting these events, which will ensure these services are not subsidised through the transport service costs.
21. In order for the bridge to re-open as a means of transport for vehicles and pedestrians the following structural repairs and assessments will need to be carried out at a total cost against the Investment Strategy of between £2,335,000 and £4,335,000, incurring a revenue borrowing cost of £116,750 and £216,750.
  - Replace cable stays and add sheathing, replace perforated angle lattices - £550,000.
  - Repairs to tower base steel work and install new HSFG bolts in place of missing rivets and re-protection of steelwork - £250,000
  - Cable Anchorage Inspection - £35,000
  - Roller Bearing replacement and general repairs to the abutment- £100,000
  - Replacement of Gondola supporting cables and U-bolts - £500,000
  - Structural Assessment of the bridge – £200,000
  - Independent 3<sup>rd</sup> party assessment of structural inspection - £200,000
  - Repairs or replacement of the upper carriage – estimated between £400,000 to £1,500,000 depending upon the report outcome
  - Repairs to upper carriage running rails – estimated between £100,000 and £1,000,000 depending upon report outcome.

The 10 year maintenance plan would be as follows:

Year 1 Paint Testing	£40,000
Year 2 Re-paint Bridge	£1,300,000
Year 2 Repairs to retaining walls	£25,000
Year 2 Install rock armour to column support	£50,000
Year 2 General Inspection	£10,000
Year 4 General Inspection	£10,000
Year 6 Principal Inspection to Bridge	£200,000
Year 6 Principal Inspection to Gondola	£50,000
Year 8 Re-paint Bridge	£1,300,000
Year 8 General Inspection	£10,000
Year 10 General Inspection	£10,000
<b>Total</b>	<b>£3,005,000</b>

### **What decision(s) are being asked for?**

22. It is recommended that Executive approves immediate capital funding outlined in to carry out the essential structural repair works required to ensure the Transporter Bridge remains structurally stable.
23. Executive approves consultation on the proposed future operating models of the bridge.

### **Why is this being recommended?**

24. Completion of the inspections, and carrying out the immediate repair works identified will fulfil out statutory duty to maintain our infrastructure, and also ensure that the Transporter Bridge can either return to use or remain as a tourist attraction and historic landmark for the foreseeable future

### **Other potential decisions and why these have not been recommended**

25. Not approve the capital investment in the Transporter Bridge. This has not been recommended as the bridge in its current condition cannot be used for operational or recreational purposes and not carrying out the necessary inspection or repair works will have a detrimental effect on the ongoing structural stability of the bridge. Further temporary mitigations to maintain the bridge in a safe condition are not designed to be more than short term temporary solutions.

### **Impact(s) of recommended decision(s)**

26. The impact of approving the report will result in the ability to sufficiently forward plan physical and financial resources to ensure that essential repairs to the bridge are carried out.

### ***Legal***

27. Any legal issues associated with the bridge repairs will be dealt with and managed through the Council's established procedures.
28. Legal implications for all options relating to the operating model may be subject to consultation with Stockton Council, the Department for Transport, and Heritage Lottery Fund.

### ***Financial***

29. The council have already committed £377k to make the bridge safe, park the Gondola and carry out special and principal inspections to date as per the table below. Further spend profile will be determined by the decision on the future operating model and agreed forward maintenance plans. The options are set out in the tables below.
30. In accordance with the memorandum of understanding and the shared responsibility of both the Transporter Bridge and Newport Bridge between Middlesbrough Council and Stockton Council it will be expected that Stockton Council will contribute 50% of the costs however this require ratification at both the Strategic Bridge Group and at Executive level within Stockton Council.

## Work Completed

Principal Inspection	£136,000
Removal of Defective Angles/Chords	£14,000
Removal of the Gondola and Structural Inspection of the Gondola/Upper Carriage/Rails	£173,000
Critical Audit	£14,000
Motor Cables	£40,000
<b>Total</b>	<b>£377,000</b>

## Proposed Options Summary:

### Revenue Expenditure:

	<b>Option Leisure &amp; Cultural Attraction (gondola not suspended from the bridge)</b>	<b>Future Option 1 Leisure &amp; Cultural Attraction (gondola suspended from the bridge)</b>	<b>Future Option 2 Continue to as Transport Bridge</b>
Net Operating Cost	£49,000	£49,000	£148,400
Cost of Borrowing - Structural Repairs & Assessments	£32,750	£74,250 to £129,250	£116,750 to £216,750
Average Annual cost of borrowing-Maintenance Plan	£16,525	£16,775	£15,025
<b>Total Revenue Costs</b>	<b>£98,275</b>	<b>£140,025 to £195,025</b>	<b>£280,175 to £380,175</b>
<b>Total Revenue Cost to Middlesbrough (excluding Stockton Council contribution)</b>	<b>£98,275</b>	<b>£140,025 to £195,025</b>	<b>£135,088 to £185,088</b>

### Capital Expenditure:

	<b>Leisure &amp; Cultural Attraction (gondola not suspended from the bridge)</b>	<b>Future Option 1 Leisure &amp; Cultural Attraction (gondola suspended from the bridge)</b>	<b>Future Option 2 Continue to as Transport Bridge</b>
Structural Repairs & Assessments	£655,000	£1,485,000 to £2,585,000	£2,335,000 to £4,335,000

10 Year Maintenance Plan	£3,305,000	£3,355,000	£3,005,000
<b>Total</b>	<b>£3,960,000</b>	<b>£4,840,000 to £5,940,000</b>	<b>£5,340,000 to £7,340,000</b>
<b>Total Capital Cost to Middlesbrough (excluding Stockton Council contribution)</b>	<b>£1,980,000</b>	<b>£2,420,000 to £2,970,000</b>	<b>£2,670,000 to £3,670,000</b>

### ***Policy Framework***

31. The Approval of the recommendations will not affect any part of the Council's Policy Framework.

### ***Equality and Diversity***

32. There will be no negative, differential impact on diverse groups and communities associated with this report.

### ***Risk***

33. If the works are not carried out the following risks may apply:-

- Deterioration of the bridge structure
- Financial risk – increased costs if condition is left to deteriorate further
- Potential loss of an iconic structure and part of Middlesbrough Heritage
- Adverse effect on the Council and Town reputation in respect of loss to the Community, Education, Tourist and Cultural offer provided by the bridge and visitor centre.

### **Actions to be taken to implement the decision(s)**

34. To deliver the programme of repairs and inspections Highways Infrastructure will review internal project arrangements, carry out the necessary tender/procurement exercise through appropriate channels, allocate appropriate financial resource, and manage the works programme.

35. Undertake consultation with regard to potential future operating models.

### **Appendices**

36. There are no appendices to this report.

### **Background papers**

37. There are no background papers to this report.

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