Department for Transport

Structures Fund template

This template is for local authorities proposing schemes for investment from the Structures Fund. Before completing the template, local authorities should read the Structures Fund guidance and associated documents. Alongside the template, local authorities must also complete the economic toolkit for the proposed scheme.

Part 1 – Details of the Structure Being Promoted

1.1 Scheme Information

This section captures the key information on the scheme that is being proposed to the Structures Fund.

a) Local highway authority (LHA) name: London Borough of Richmond

b) Scheme / structure name and LHA bridges number: Richmond Bridge Identifier: 56

c) Location (OS Grid Reference) of the scheme/structure (to identify location on map):

Easting: 517720

Northing: 174520

[redacted]

g) What type of eligible structure would your scheme address? (select all that apply)

☒	Bridges	☐	Cutting/embankment
☐	Fly-overs	☐	Tunnels
☐	Retaining walls	☐	Local highway repairs due to landslip
☐	Culverts	☐	Local highway repairs due to collapse
☐	Other structure type (please specify): Click or tap here to enter text.		

h) Provide an overview of the structure proposed for intervention and the nature of the problem. (Maximum 250 words)

This could include, for example, the age, construction type, feature carried and feature crossed of the relevant structure and if the structure has listed heritage status.

Richmond Bridge, the oldest structure crossing the River Thames in London, is a Grade 1 listed masonry arch bridge, with five Purbeck stone arches over the river, and 5 brick approach arches on both sides, totalling 15 spans and giving a total length of 173 metres. The bridge's distinctive arched profile and fine Portland stone detailing of the spandrel walls quickly became an important

landmark. Today, the bridge carries Bridge St, part of the Strategic Road Network and two pedestrian footways across the Thames, providing access between Richmond and Twickenham. The structure is experiencing water ingress, from above and also at high tide. As a result, multiple areas of spalling to the stone faces up to 90mm depth and missing stone work, on all river spans. There is evidence to suggest that defects in the deck waterproofing system is the primary cause of the water ingress, with dampness to masonry at the arch crests. This assessment is based on the Principle Inspection undertaken in 2023. The consequence of not undertaking these works now is the continued deterioration of this Grade 1 listed structure. This bridge is in need of repair now. Unless the water ingress is resolved, the load capacity of the bridge can not be improved and the extent of restoration will continue to increase and be more cost prohibitive to resolve. With a current weight restriction of 18t LBR are unable to support in full TfL Buses transition to a heavier all electric fleet.

i) Provide an overview of the proposed intervention and how the works will address the problem.

This should set out the method of resolving the issue that is to be addressed.

The masonry on the structure has deteriorated significantly over time due to long term water ingress, both from surface water above and from the tidal Thames below. To maintain the safe operation of the structure and to remove the current weight restriction it is necessary to waterproof and stregthen the entire structure. The proposed works will entail removal of the existing loose granular fill arch backing and replacement with lightweight concrete fill. A new concrete deck slab will be installed atop of the new fill and the new slab will be waterproofed. The existing movement joints will be replaced and a new drainage system will be provided. These works will address the current water ingress issues as well as improve the structural capacity of the bridge. The works to restore the natural stone masonry will be required, including rake out and repoint defective joints, pin and repair fractured stones, defrass and consolidate loose and friable stone and where required indent stones where the loss of depth is greater than 30mm. The land arches also require significant intervention with water ingress and brick spalling evident in all Richmond approach spans and evidence of ingress through the arch walls at high tide on the Twickenham approach spans. The proposals will mitigate the risk of water ingress to the entire structure whilst providing the opportunity to increase the load capacity of the structure.

j) Is any part of the relevant structure owned by a third-party (e.g. the Canal and River Trust or Network Rail)?

No but there are leaseholders within the arches that need to be consulted on the works. Early engagement with business occupiers highlighted the support for the project to deal with the damp environments created within the arches due to the failed waterproofing system and water ingress.

k) If the structure is on a diversion route for the SRN provide a clear description/commentary.

Richmond Bridge forms part of the Strategic Road Network, connecting Twickenham to Richmond. The 18Tweight restriction on Richmond Bridge prohibits it's use for diversions associated to Twickenham Bridge which is part of the Principal Road Network. Therefore, any diversions from Twickenham Bridge would be via Kew Bridge downstream or Kingston Bridge upstream.

1.2 Understanding the Condition of the Structure

Please set out the current condition of the structure in this section.

a) Provide evidence that the relevant structure is in need of repair either now or by the end of the 2029/30 financial year. (Maximum 250 words)

Provide details of the process used for determining whether this structure is in need of repair and the timescale in which the repair is needed..

The most recent Principal Inspection of Richmond Bridge, undertaken in December 2023, confirms that the structure requires significant repair and restoration works now and well before the programme funding deadline of 31 March 2030. While the bridge has an overall BCI Average score of 86.95 (Good), [redacted] indicating that key structural elements are [redacted] require intervention. The inspection identified widespread deterioration across the bridge, including extensive spalling of stonework and brickwork to arches, piers, abutments and spandrel walls, with stone loss of up to 90mm depth in some river spans. Significant impact damage to Piers 2 and 3 has resulted in loss of masonry and undercutting of voussoir stones, reducing support to parts of the arch structure and requiring replacement of damaged stonework. The report also identifies persistent water ingress, dampness, calcite deposits and waterproofing failures throughout the bridge. Defective waterproofing and drainage are accelerating deterioration of the historic masonry and require renewal to prevent further structural degradation. Transverse cracking is present across carriageway surfacing and above expansion joints throughout the structure. Safety concerns have also been recorded. The north parapet beam on the Twickenham approach spans is suffering from concrete spalling, with reports of falling debris, leading inspectors to recommend six-monthly delamination surveys to protect pedestrians. The inspection concludes that numerous high-priority repairs, including stonework restoration, waterproofing replacement, carriageway resurfacing and repairs to impact-damaged piers, are required to preserve the bridge's structural integrity and avoid further deterioration before 2030.

b) Please indicate if the relevant structure is **currently** subject to traffic restriction as a result of its condition.

Reference should be made to closures, weight limits, width restriction, limits on use.

Richmond Bridge is currently subject to an 18t weight restriction, following a loading assessment dated 1991. This is a significant constraint for diversion routes from adjacent bridges with higher load capacities,particularly as it forms part of the SRN. The most impactful limiting factors of the weight restriction is for the freight logistic servicing Richmond Town Centre but more importantly the weight of TfL's new all electric bus fleet. With fully laden weights of 19.5t we are unable to fully support TfL's ambition to transition their fleet to all electric and still route via Richmond Bridge.

c) Please indicate if the relevant structure is **not currently** but **by the end of the 2029/2030 Financial Year is expected** to be subject to traffic restriction as a result of its condition.

Reference should be made to closures, weight limits, width restriction, limits on use that are anticipated.

At this time, we have no evidence to suggest a further weight restriction will be required before 2029/2030 however, there are some electric buses using the bridge 'at risk' which we may have to consider restricting, subject to a full load assessment on the bridge. The restriction also prevents us from supporting any further electric bus routes.

d) If the answer to c) above is yes, then please estimate the likelihood of this occurring: (select box that applies):

☐ Low confidence in restriction occurring

☐ Medium confidence in restriction occurring

☒ High confidence in restriction occurring

e) Please indicate if the relevant structure is **currently** subject to other temporary measures to manage risk.

Reference should be made to measures such as propping, etc.

Not at this time.

f) Please indicate if the relevant structure is **not currently** but **expected by the end of the 2029/2030 Financial Year** to be subject to temporary measures to manage risk.

Reference should be made to measures such as propping, etc. that is anticipated.

Based on the ongoing issues associated with falling debris, water ingress into tenanted arches, and the findings from the latest engineering inspection review, we consider the rate of deterioration to be accelerating. At this stage, we have medium confidence that temporary measures will be required by the end of the 2029/30 Financial Year to manage emerging risks and maintain safe operation.

These temporary measures may include: increasing inspection and monitoring frequencies to track progressive deterioration, in accordance with ‘monitoring a substandard bridge CS470’, undertaking localised, temporary, and uneconomic patch repairs to defective concrete, installing temporary debris-netting systems to mitigate the risk of falling material and implementing temporary water-management solutions within occupied arches to reduce ingress impacts.

g) If the answer to f) above is yes, then estimate the likelihood of this occurring:

☐ Low confidence in temporary measures being required

☒ Medium confidence in temporary measures being required

☐ High confidence in temporary measures being required

h) If available and applicable, what is the current Bridge Condition Indicator score (average and critical) of the relevant structure?

[redacted]

i) Which elements of the structure are negatively contributing to the BCI scores and how has this changed in the last 5 years.

Reference should be made to recent inspections and highlight the type and extent of the defects.

The 2023 Principal Inspection indicates that the principal factors negatively affecting Richmond Bridge’s BCI scores are the widespread deterioration of the historic masonry elements, ongoing water ingress, and localised structural damage. The most significant contributors are the extensive spalling of stone and brickwork across the river arches, spandrel walls, piers and abutments. In the river spans, stone loss was recorded at depths of up to 90mm, particularly within the Richmond River Span, resulting in a reduction of arch ring thickness and a corresponding impact on structural capacity. The inspection also identified significant impact damage to Piers 2 and 3, where loss of masonry has caused undercutting of voussoir stones and reduced support to the decorative arch profiles. Further contributors to the low BCI Critical score are persistent waterproofing and drainage deficiencies. Dampness, calcite deposits, seepage and staining were noted throughout most spans, indicating ineffective waterproofing and water management. Cracking within carriageway surfacing above expansion joints and piers is widespread, while parapet deterioration is also affecting condition scores. In particular, the north parapet beam on

the Twickenham Approach spans exhibits extensive concrete spalling, with reports of falling debris creating a public safety. Comparison with the previous Principal Inspection undertaken in 2012 shows that several cracks within the Twickenham River and River Bank spans remain present but have exhibited little measurable progression over the last eleven years. However, masonry spalling, weathering, erosion, water ingress and deterioration of parapets have become more pronounced, resulting in a greater requirement for repairs and ongoing monitoring. Consequently, deterioration is now driven less by crack propagation and more by cumulative material loss, durability issues and localised impact damage.

j) Submit, alongside this submission template, the most recent, dated copy of the structural inspection proforma or a report summarising this.

Part 2 – Understanding the Case for Investment

2.1 Strategic Case

This section of the template captures the wider need for the scheme and how it aligns to the objectives of the Structures Fund.

a) Provide a summary of how this scheme contributes to the Government's economic growth mission (Maximum 250 words)

Describe how the proposal will support economic growth (e.g. by creating jobs, attracting investment, improving productivity, or enabling new business activity) and set out the mechanisms through which these benefits will be delivered.

This scheme directly supports the Government's economic growth mission by protecting and enhancing a critical transport asset that underpins connectivity, productivity and economic activity across Richmond and London. Richmond Bridge is a vital river crossing used by residents, businesses, visitors and service providers, and its continued safe operation is essential to maintaining efficient movement throughout the area. The proposed waterproofing and structural refurbishment works will address long-term deterioration caused by water ingress, extending the bridge's operational life and reducing the risk of future restrictions, emergency/temporary measures or closures. Maintaining a reliable transport network supports economic growth by minimising disruption, improving journey reliability and enabling businesses to operate more efficiently. The project will generate direct economic benefits through the creation of skilled jobs during the design, construction and specialist heritage conservation phases. The works will support engineers, contractors, stonemasons, surveyors and material suppliers, creating opportunities throughout the wider supply chain and contributing to local and regional economic activity. The scheme will improve the bridge's resilience through the replacement of existing fill material, installation of a new deck slab and drainage system, and restoration of the stone masonry. These improvements will reduce long-term maintenance costs and provide the opportunity to increase the bridge's load capacity, subject to detailed assessment and design. Increased capacity could support future transport demands, improve access for commercial and service vehicles, and facilitate the transition of London's bus fleet to zero-emission vehicles. The project will also preserve an important historic landmark, enhancing Richmond's attractiveness as a place to live, visit and invest. Overall, it represents a long-term investment in infrastructure that supports growth, employment, productivity and sustainability.

b) Explain how the scheme supports other Government policy objectives. (Maximum 250 words)

Provide a summary of the scheme's alignment to UK Government policy objectives as represented by the remaining missions.

The proposed Richmond Bridge Restoration and Strengthening Scheme supports a range of UK Government policies beyond its primary transport and infrastructure objectives. By safeguarding a Grade I listed structure while enabling it to accommodate heavier zero-emission buses and other electric vehicles. The scheme directly contributes to the Government's mission to make Britain a clean energy superpower through the decarbonisation of transport networks and the facilitation of cleaner public transport on a strategically important Thames crossing. The project also supports the mission to kickstart economic growth by protecting a critical arterial route linking Richmond and Twickenham, improving network resilience, reducing the risk of disruption, and supporting access to employment, retail and leisure destinations across southwest London. Investment in heritage infrastructure will sustain specialist engineering skills, create supply-chain opportunities and help maintain the area's attractiveness to visitors, benefiting the local economy. In addition, the scheme aligns with the mission to build an NHS fit for the future by encouraging cleaner transport, reducing vehicle emissions and improving local air quality, which can contribute to better public health outcomes and healthier communities. The project also supports the mission to create

safer streets through structural strengthening, ensuring the bridge remains safe and reliable for pedestrians, cyclists, public transport users and general traffic, while enhancing the resilience of a key crossing. Finally, by preserving an important historic asset for future generations while maintaining equitable access to sustainable transport, the scheme helps break down barriers to opportunity, supporting connectivity, accessibility and social inclusion across the communities it serves.

c) Explain why this scheme is a local priority. (Maximum 250 words)

Provide a summary of the scheme's alignment to local priorities and policies.

Refurbishing the Grade I listed Richmond Bridge protects London's oldest surviving Thames bridge, preventing costly future closures. This underpins the Richmond Growth Plan by maintaining vital cross-river connectivity between Richmond Town Centre and East Twickenham. Uninterrupted traffic and pedestrian flows protect current employment by ensuring a reliable workforce can reach local businesses, unlike the severe economic impacts of closures seen at Hammersmith Bridge. Preserving essential infrastructure sends a signal of stability, giving investors the confidence to fund the broader Richmond Growth Coalition, which aims to increase businesses by 10%. Preventing structural decline means avoiding severe future lane or weight-restriction closures. This ensures smooth, reliable logistics for deliveries and faster transit times, improving overall business productivity. The bridge is a vital artery driving high footfall. Supported by supplementary town centre upgrades (like the George Street flexible civic space), increased foot traffic encourages start-ups in retail, hospitality, and the night-time economy to thrive in the area. The restoration work itself sustains construction and engineering jobs, while ongoing enhancements to the town centre aim to boost employment by 20% in the coming decade. Richmond's Transport and Air Quality portfolio promotes the benefits of the transition to all electric fleets for both public service vehicles and freight. These initiatives can only be realised if the transport infrastructure can cope with the increased weight of vehicles. Increasing the load capacity of one of the few Thames River crossings in London would be of huge benefit for logistics and clean air in the town centre location.

d) Summarise engagement with local stakeholders, any joint-owners, levels of support for the scheme and explain any controversial elements. (Maximum 250 words).

Summarise support from relevant stakeholders such as the Local MP, Elected Members relevant combined authorities, National Highways, Network Rail, neighbouring LHAs, or important utility providers.

As the scheme will require listed building consent, we have engaged with Historic England and our internal conservation team. We have also sought input from specialist consultants to understand the requirements around a heritage assessment and statement.
Being a structure over the River Thames, we have also engaged with the Port of London Authority (PLA). Understanding their requirements and navigational considerations has already been used to outline plans for when and how works could be phased. The PLA own half the riverbed here, The Crown Estate own the other. Therefore, consents will be required. We will also require a FRAP from the Environment Agency (EA). We have a good, recent working relationships with all parties due to works at Kew Towpath, Teddington Footbridges, and Wandsworth Bridge.
TfL Buses have offered their support of the project, to support their electric fleet ambitions.
There are various utilities that cross the bridge, these will need to be temporarily diverted during the proposed works. Costs and programme have considered this requirement. Formal C3 and C4 engagement will take place early in the programme.
There are various businesses that trade from the Richmond side, land arches of the bridge. Formal consultation will be necessary, as well as engagement with ongoing engagement with the Richmond BID (Business Improvement District) group, who have also offered their support formally. The scheme has support from the local MP for Richmond Park and the Cabinet Member for Transport & Air Quality. The strategic importance of this river crossing is appreciated by all key

stakeholders and is recognised in various letters of support in Appendix 2 of the supporting information.

e) Provide a summary of the local approach to prioritisation of structural maintenance work. (Maximum 250 words)

Set out any weighting, scoring or other methodology which explains why this scheme has not been subject to work prior to this point.

The 2 boroughs of Wandsworth and Richmond Council operate a shared structures maintenance service. This allows for best engineering practice to be shared across both boroughs. We follow a risk-based prioritisation process as per the guidelines of London Bridges Engineering Group (LoBEG), to evaluate and score structures based on risk. This allows the Councils to prioritise the needs for structural maintenance work and allocate the limited capital resources to the highest risk structures. Routine (Principal and General) inspections are carried out every 4 to 10 years (respectively) for a given number of structures, with the small amount of Council funding available for bridges maintenance, in order to identify elements requiring monitoring, testing or repair. Ad-hoc special inspections are also carried out as and when needed. Richmond Bridge is a Grade 1 listed structure. It is the oldest serving stone arch bridge, crossing River Thames, in London, built in 1777. It is a high-profile bridge. Urgent maintenance work is now needed to extend it service life and avoid costly interventions later on. Due to lack of adequate funding needed to service this bridge, and the existing 18 T weight limit, no major works could be undertaken until now.

f) Provide a summary of why this scheme has been selected for this application to the Structures Fund. (Maximum 250 words)

Provide a brief summary of the specific need for this structure is advanced to the Structures Fund.

This scheme has been selected for this application because it meets all of the Structures Fund eligibility criteria. It is a key highway structure and Thame River crossing, it is in urgent need of repair now, as recommended in the 2023 PI. The repair works are unaffordable from existing LBR budgets and the works can be completed before March 2030. To increase and safeguard the infrastructure to support economic growth as this strategic route provides access to the amenities of Richmond Town Centre. There are some construction risks and some consents that need to be obtained but through early stakeholder engagement have the support in principle for the critical elements of the project and the proposed methodology to undertake the works over the tidal Thames. With the structure being Grade 1 listed, to address the water ingress, specialist stone masonry restoration is required with access from river-based plant, which has always proved to be cost prohibitive. The opportunity cost presents through the removal of granular fill to access the arch crests to resolve the water ingress. The reinstatement fill can increase the capacity of the structure with a new deck slab. As this doesn't impact the aesthetics of the listed structure but uses modern techniques to improve the structural stability, we expect the proposals to be acceptable. Through the project management structure, term contract, framework contracts, previous experience and in principle agreement from the PLA, we are confident we have a deliverable scheme that meets the deadline and that benefits all users and communities on either side of the river.

g) Summarise the impacts of not delivering this scheme (Maximum 250 words).

The response should consider the impact of not delivering the scheme, such as community severance, lengthy diversion routes or impacts on other infrastructure.

Without intervention, structurally, deterioration of the bridge fabric will continue, increasing maintenance requirements and the likelihood of future operational restrictions. Delaying investment would reduce opportunities for preventative maintenance and could ultimately necessitate more extensive strengthening or repair works at substantially greater cost and disruption. Transport impacts are already significant, due to the existing 18T weight restriction. This impacts TfL's transition to heavier all electric vehicles. Any further restrictions could impact all

bus routes. Richmond Bridge is a key crossing between Richmond Town Centre and East Twickenham, providing an important link across the Thames for residents, businesses, public transport, cyclists and pedestrians. Any loss of capacity would place additional pressure on neighbouring river crossings, increasing congestion, journey times and network unreliability across southwest London. Economically, increased delays and reduced network resilience would affect local businesses, service providers and freight movements. Reduced accessibility to Richmond Town Centre could impact footfall, productivity and business confidence, while disruption to travel patterns would increase costs for both employers and commuters. Community severance between Richmond and Twickenham, with reduced access to employment, healthcare, education and leisure facilities. Vulnerable residents and those reliant on walking, cycling or public transport would be disproportionately affected. Financially, the cost of inaction would exceed the cost of timely intervention, as deferred maintenance typically results in accelerated deterioration, higher future capital costs and wider economic losses from disruption. In conclusion, non-delivery would jeopardise the long-term resilience of a nationally significant historic bridge, increasing the risk of future restrictions, greater maintenance liabilities, transport disruption, community severance and substantially higher whole-life costs.

h) If applicable, explain how the scheme helps prevent the likelihood of community severance for all transport modes and the impact that this severance would have or already has. (Maximum 250 words)

Answers should explain the impact on connecting local people to facilities, services, employment, education and local communities. The response should also summarise the extent of diversions for communities, which modes are impacted and how. Applicants may wish to use the guidance in TAG A4-4 Social Impact Appraisal.

The scheme will help prevent community severance by maintaining the safe operation and long-term resilience of Richmond Bridge, a vital crossing that connects communities on both sides of the River Thames. Without intervention, continued deterioration could result in weight restrictions, reduced capacity or partial/full closure, significantly affecting access for pedestrians, cyclists, buses, service vehicles and general traffic. Richmond Bridge provides an essential route to employment centres, healthcare facilities, schools, colleges, retail destinations and community services across Richmond, Twickenham and wider southwest London. Any restrictions would increase journey times, reduce accessibility and disproportionately affect those who rely on public transport, walking and cycling. Closure or significant restrictions could require lengthy diversions via alternative Thames crossings, including Twickenham Bridge, resulting in increased travel costs, longer journey times and additional congestion. Bus services would be particularly affected, reducing access to jobs, education and essential services for residents without access to private vehicles. Increased traffic on alternative routes would also place additional pressures on local communities and businesses. The potential severance impacts include reduced access to:

- Employment and economic opportunities.
- Healthcare services, including hospitals, GP surgeries and pharmacies.
- Schools, colleges and other educational facilities.
- Retail centres, supermarkets and essential services.
- Leisure, cultural and recreational facilities.
- Family, social and community networks that rely on convenient cross-river travel.

By waterproofing and strengthening the structure, the scheme will protect a critical transport connection, maintain accessibility across all transport modes and support social inclusion. The project will therefore help preserve community cohesion, economic participation and access to essential services, preventing the long-term severance impacts that would arise from deterioration or loss of this strategically important crossing.

i) Summarise the volumes of traffic by mode that are impacted as a result of any community severance (Maximum 250 words).

Explain the impacts on non-motorised and motorised traffic flow. Describe how diversions may differ by mode.

Without intervention, the condition and operational limitations of Richmond Bridge, a Grade I listed structure, will continue to worsen. The bridge is already subject to an 18-tonne weight restriction, limiting its ability to accommodate the next generation of heavier zero-emission buses and other electric vehicles. This constraint would hinder TfL's bus decarbonisation ambitions on this key corridor and could require route diversions, alternative vehicle deployment, or increased operating costs. As the structure ages, there is a growing risk of further deterioration, potentially leading to stricter weight limits, lane restrictions, temporary traffic management measures, or, in the worst case, prolonged closure. Such outcomes would have significant transport and community impacts. Using the ATC data collated in June 2026, Richmond Bridge currently carries around 15,868 vehicle movements per day, including approximately 935 daily bus movements, and is a vital crossing between Richmond and Twickenham. Any loss of capacity would create substantial severance, reducing connectivity for residents, businesses and public transport users. Traffic would be forced to divert to alternative Thames crossings, increasing congestion, journey times and associated vehicle emissions across the wider road network. While impacts on freight traffic would be less pronounced because larger HGVs are already restricted, local access and servicing movements would still be affected. Non-motorised users would also experience adverse impacts. Pedestrians and cyclists could be required to use more distant crossings, reducing access to employment, education, retail and leisure opportunities on both sides of the river. The bridge's deterioration could also affect river users. Increased structural defects may necessitate unplanned maintenance, emergency works or navigation restrictions beneath the arches, disrupting recreational boating, rowing, passenger vessels and other regular users of the River Thames.

2.2 Economic Case

This section sets out the assessment for Value for Money of the project. Applications must use the provided economic toolkit, but if alternative methods have also been used to support the economic case, this section provides the opportunity for the results to be reported.

a) Set out the key sources for the economic benefits (e.g. journey-time savings, carbon, etc.) of the scheme. (Maximum 250 words)

Describe the main benefits the scheme is expected to deliver.

The objectives of the scheme are to remove the requirement for a piecemeal approach to the maintenance. The scheme proposals maximise the opportunity cost of increasing the capacity of the structure whilst restoration and water management works are undertaken. With this critical Thames River crossing, it's importance to service a vibrant town centre location, with Richmond station providing rail and tube links into central London. Richmond Town Centre is identified as a regionally significant office cluster in the London Growth Plan hosting major employers and HQ's. Negative impacts on connectivity to the town centre has major impacts on this ambition. To avoid introducing the severance between the west and east of the Borough, which would have catastrophic impacts on journey times, connectivity, the local residential and business communities whilst negatively impacting our net zero carbon targets. With the bridge constraining TfL's transition to an all-electric bus fleet by 2034. Evidence of these objectives are outlined in the Economic Toolkit. The travel time savings over the life cycle of the project based on 1239 HGV and PSV movements per day being diverted as a result of a further weight restriction, subject to

load assessment, for 3 years is [redacted]. Vehicle operating cost, based on reduced journey distances of 300m instead of a 4.3km diversion, suggest benefits of [redacted] and accident cost benefits of [redacted] by avoiding accidents on unsuitable, longer diversion routes. The model evidences that the total Present Value Benefits for the project is [redacted]

b) Summarise the estimate of the present value of costs and benefits (in 2023 present values, market prices) and the benefit cost ratio of the scheme from the economic toolkit.

Present Value Costs (PVC)	[redacted]
Present Value Benefits (PVB)	[redacted]
Benefit to Cost Ratio (BCR)	[redacted]

c) Explain assumptions used in the economic toolkit to estimate the present value scheme costs. (Maximum 250 words)

Describe the basis of the costs input to the economic toolkit and provide justification for the risk and optimism bias values that have been used.

A budget cost estimate has been developed using the information currently available, including General Arrangement drawings issued "For Information" (noted as approximate and subject to further development), a 2023 Prinicipal Inspection report, and a preliminary scope of works. The estimate has been prepared by the Quantity Surveying team and informed by early supplier engagement. However, several surveys and key confirmations are still required before the scope and costs can be finalised.
The submission is considered to be at Outline Business Case (OBC) stage. While TAG Unit A1.2 Table 7 recommends a standard optimism bias allowance of 32% for Fixed Links (bridges and tunnels), a reduced allowance of 20% has been applied. This reflects a quantitative risk-based assessment supported by the maturity of the design concept and early market engagement, which provide greater cost certainty than would typically be available at OBC stage.
The reduced optimism bias is also supported by a preliminary quantitative risk register that captures major scheme-specific uncertainties, including design development, PLA access requirements, existing asset condition, and potential contamination risks. The full risk register is included in Appendix 7 of the supporting information.

d) Explain the sources of data and assumptions used to complete the Scheme Details section of the economic toolkit. (Maximum 250 words)

Provide details of the source of all data and associated assumptions (e.g. provenance, data checks, etc).

The sources of data used to complete the Scheme details, is based on ATC data collated in June 2026. The integrity of the traffic volume data can be misleading when traffic is queuing over them or travelling slowly in opposite directions, which is a limitation of the tech. Previous count data was not eligible as it pre-dated 2023. The data does provide a relatively accurate picture of the flows on Richmond Bridge. Some assumptions have had to be applied to the data, in that bus frequencies are higher than the recorded PSV value. This can be as a result of PSV movements being confused with long wheel base LGV's and light HGV's. Relying on accurate bus frequency data, we have adjusted the HGV and LGV numbers to reflect this. Particularly as we don't expect many HGV's on the 18t restricted structure. We have assumed that recorded HGV movements across the bridge are to service the amenities of the town centre, therefore no subject to the environmental weight restriction in the town centre. As Richmond Bridge is a Thames River crossing, diversion routes were dictated by the closest alternative crossing, Twickenham Bridge, to and from Richmond Town Centre. Journey times have been calculated using GIS average journey time data. More detail can be found in the supporting information document.

e) Describe significant non-monetised impacts of the scheme. (Maximum 250 words)

Consider any economic, environmental and social impacts that have not been monetised to fully describe the impacts of delivering the scheme.

The scheme would deliver a range of significant non-monetised economic, social and environmental benefits. Most importantly, it would avoid severance by maintaining and enhancing a vital Thames crossing connecting communities in Twickenham with employment, retail, leisure and public services in Richmond town centre. Without intervention, further deterioration and capacity restrictions would increase journey times for buses, service vehicles and essential traffic, reducing accessibility and placing additional pressure on alternative crossings. This impact is amplified by Richmond town centre's environmental weight restrictions, which limit diversion options and increase the consequences of any loss of capacity. The scheme would also safeguard the operation of public transport and support the transition to heavier zero-emission buses and vehicles. By increasing the bridge's capacity, the project would protect the long-term resilience of this important transport corridor, helping to maintain connectivity for residents, businesses and visitors. A further key benefit relates to townscape and heritage value. Richmond Bridge is the oldest surviving Thames crossing in London and a Grade I listed structure of national significance. It forms a landmark gateway into Richmond and is a defining feature of the town's historic riverside setting. Continued deterioration would detract from the character, appearance and cultural value of the area, while restoration would preserve an iconic heritage asset and support the vibrant riverside environment that attracts thousands of visitors each year. The scheme would benefit river users by reducing the risk of future emergency repairs, navigation restrictions and unplanned maintenance activities. Maintaining the structure will help safeguard recreational boating, rowing, passenger services and other river-based activities that contribute to the social, environmental and economic vitality of the River Thames and Richmond waterfront.

f) Where an alternative economic assessment has been undertaken to support a case for investment, please summarise the data used, the assumptions made and the results obtained (in 2023 present values, market prices). (Maximum 250 words)

Some schemes may have been subject to economic assessment to support previous cases for investment. Summarise the key details of these here, including details of the data, assumptions and results (e.g. present value of costs and benefits and benefit cost ratio).

No alternative assessment available so reliant on Economic Toolkit

Present Value Costs (PVC)	Click or tap here to enter text.
Present Value Benefits (PVB)	Click or tap here to enter text.
Benefit to Cost Ratio (BCR)	Click or tap here to enter text.

To enable the assessment of the economic case, please submit the supporting information listed below to StructuresFundTAB@dft.gov.uk

- Economic Toolkit
- Any supplementary reports which support the economic case

2.3 Commercial Case

This section captures information on the commercial viability and procurement strategy for the planning and delivery of the scheme being promoted.

a) Explain the LHA capacity and experience delivering comparable schemes. (Maximum 250 words)

Where capacity is challenging for local authorities, explain how any capacity gaps may be addressed to ensure delivery of the scheme.

Richmond have an experienced project team at the Council who, in recent years, have built strong partnership working relationships with the PLA. With project management, project officers, engineers and site supervisors, Richmond are confident we have the resource to deliver a successful project, within the funding programme timelines. We have access to design consultants through various frameworks to ensure the professional level of design required to progress such complex works. Richmond have worked closely with WSP to produce the recent PI reports forming the basis of the scheme. Through framework contracts, the permanent works design will be commissioned as funding becomes available. WSP brings significant experience of bridge construction, refurbishment and restoration within river environments. Their involvement provides confidence in managing complex river interfaces, technical expertise and construction phasing. With regard to delivery, we would work closely with our term contractor FM Conway and their supply chain, to ensure the competence and quality assurance, whilst ensuring best value. FM Conway will provide end-to-end project delivery, managing the scheme from development through to completion. Working collaboratively with Richmond Council, the PLA, designers and the supply chain, FM Conway will support detailed design development, approvals, construction planning, navigational risk assessments, stakeholder engagement and programme management. An experienced project team who have partnered with Richmond & Wandsworth on the successful delivery of major bridge refurbishment projects, including Wandsworth Bridge, Teddington footbridges and Kew Towpath. An organisational flowchart is included in Appendix 5 of the supporting information.

b) Explain the delivery plans and procurement strategy for the scheme. (Maximum 250 words).

This section should include explanation of the various stages of the scheme that are required for completion. This may include design, consents and construction processes.

Procurement of the design team and the early appointment of the term contractor under a two-stage approach to enable Early Contractor Involvement (ECI) will be the first milestone. We expect both parties to be in place by April/May 2027, following receipt of funding. The design programme will start in May 2027 and be completed, ready for construction issue by November 2027. ECI will enable and facilitate utility coordination for the diversions required, stakeholder engagement, construction planning, river and road consents, methodology development, programme optimisation and risk reduction prior to construction. Concurrently with the design development and construction planning pre-app advice will be sought for the Listed Building Consent, with a view to making the full application in July 2027. Engagement with the PLA has started and constraints are already set out and considered in the programme. Construction is programmed to commence on the river span arches in January 2028, to respond to the constraints on the navigable channel during the summer months. The works will be phased to complete the works from the river, to address the masonry faces, as phase 1 and then to undertake the strengthening works from above, as phase 2. The construction will be completed in March 2029, well in advance of the DfT funding deadline. The procurement strategy for the project, is to utilise framework contracts to appoint the design team for the required loading assessments and permanent works design, whilst existing term contract will be used to appoint the Principal Contractor (FM Conway). This is the most programme efficient approach to delivery in such a tight timeline.

c) Describe the delivery risks associated to the project delivery. This should include risks which may challenge the end date for the Structures Fund.

Explain what risks have been identified and how might these be mitigated.

The principal delivery risks relate to working on a Grade I listed structure over the River Thames, where heritage approvals, river working constraints and specialist conservation activities present the greatest programme risk. A pro-active approach to project delivery through early engagement provides confidence that the scheme can be delivered safely, efficiently and within the proposed programme.
Key Risks:
Unknown structural condition and hidden defects: Complete intrusive investigations & testing, trial holes and load assessments before detailed design. Adopt Early Contractor Involvement (ECI) to finalise the scope before construction.
Heritage and statutory approvals: Engage early with Historic England, the EA, the PLA and other stakeholders. Submit applications well in advance and allow appropriate programme float for approvals.
River working constraints: Develop detailed construction sequencing around tidal windows, undertake Navigational Risk Assessments, early engagement with EA & PLA and utilise specialist marine access and pontoons to maximise productive working time.
Availability of specialist subcontractors: Procure specialist subcontractors early through FM Conway's established supply chain and secure resources during the ECI stage.
Utility conflicts: Complete utility surveys, trial holes and early engagement with statutory undertakers to agree protection or diversion requirements before construction.
Weather and environmental conditions: Build weather contingency into the programme, sequence weather-sensitive activities appropriately and implement specialist protection measures for masonry and concrete works. Use different materials/objectives depending on month of works.
Construction logistics and maintaining public access: Implement phased construction, robust traffic management, stakeholder communications and careful coordination with the London Borough of Richmond upon Thames Network Assurance teams and affected businesses.
Programme and procurement certainty: ECI appointment, advance procurement of long-lead materials, design freeze milestones and regular programme reviews.

d) Explain whether liaison with any applicable third-party organisations present a particular risk to delivery and whether those organisations have agreed to support the scheme's delivery. (Maximum 250 words)

In this section set out if the scheme requires support from other organisations, and the nature of any engagement undertaken to date.

Early engagement has already commenced to obtain clarity on likely requirements and constraints. These have been considered within the programme, costs and risks. Communications of support from the PLA and Historic England can be found in Appendix 2 of the supporting information.
1.Port of London Authority (PLA) Approval of works over the River Thames, navigation restrictions and marine access requirements could affect construction sequencing. Mitigation - Early engagement with the PLA to agree construction methodologies, navigation and river access arrangements. Marine works will be programmed around agreed tidal windows and navigation constraints.
2. Environment Agency (EA) Environmental consents and requirements relating to works adjacent to and over the River Thames could impact programme. Mitigation - Early consultation to agree environmental mitigation measures, pollution prevention controls and permit requirements. Environmental management plans and will be developed and implemented prior to construction.
3. Statutory Undertakers (UKPN, Thames Water, Cadent, Openreach) Risks Existing utility apparatus may require protection, diversion and temporary isolation, potentially affecting the construction programme. Mitigation Undertake utility surveys and targeted trial holes to verify

asset locations. Engage with utility companies early to agree protection measures or diversion requirements and incorporate these activities within the programme.
4. Historic England approvals for works to the Grade I listed structure may influence the detailed design and construction methodology and delay the Listed Building Consent application. Mitigations Maintain ongoing engagement throughout the design process to ensure conservation proposals are agreed and minimise approval delays.
5. London Borough of Richmond Network Management Coordination of highway management, stakeholder communications and public interface. Mitigation Regular governance meetings, collaborative programme reviews and coordinated communications to ensure timely decision-making and minimise disruption to the travelling public.

2.4 Financial Case

a) Provide estimated outturn costs (£million) for the scheme in the table below. The table should be completed with total costs, requested DfT investment, LHA contribution and third-party contributions. Only capital funding costs should be included in the table.

To note, the prospectus sets out that:

- schemes should be delivered by end-2029/30.
- schemes with early delivery (i.e. in 2026/27) may be prioritised.
- schemes should not be affordable from existing LA budgets.
- local contributions are required for proposed schemes.
- preference will be given to schemes with higher local contributions and/or those where there is a high percentage of local contribution.
- preference will also be given where the local contribution is:
    - not from other central government funding sources.
    - partially funded from other third-party sources.

	2026/27	2027/28	2028/29	2029/30	Total
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

b) Outline how the LHA has sought to manage this scheme from existing budgets and why that has been unsuccessful.

Explain the local approach to managing the existing DfT contribution across its highway assets and what specific challenges have meant that this structure was not repaired earlier.

London Borough of Richmond's highway structures, similar to many other local authorities, has been in a state of managed decline for several years. Highway structures that are aged and beyond their original design life have become increasingly fragile and less resilient to damage caused by heavier vehicles as well as the growing impact of adverse weather conditions. Investment scenario modelling undertaken by Causeway Asset Management Consultant showed significant additional investment is required to improve the highway structures. We have tried piece meal repairs using only limited available funds, which are uneconomic and do not address the underlying issues of the structure. Current DfT grant allocation has all been allocated to highways, not structures. LoBEG have confirmed that the Richmond Bridge scheme has been

identified as 1 of 6 highest priority schemes in London and will be supporting the project financially but the scheme remains demonstrably unaffordable from existing budgets. Without the structures fund support, the intervention cannot proceed and the structure will continue to deteriorate.

c) Describe the whole life costs anticipated without the proposed scheme. Explain how the proposed scheme mitigates costs from a whole life perspective. (Maximum 250 words)

Explain maintenance considerations for maintaining the structure and compare these to the scheme cost to demonstrate the financial benefit of delivering this scheme.

The whole life cost of maintaining the structure without the proposed scheme is substantial, primarily due to the need for repeated PLA consents to access and repair the soffit. The proposed scheme delivers a solution with key interventions designed to provide a 50-100 year design life for the stone restoration works. New waterproofing systems and pavement surfaces with a 15- 20 year design life. Without the scheme, ongoing water ingress will continue to accelerate deterioration, requiring significant reactive maintenance throughout the asset life. Anticipated interventions include repairs to natural stone river spans every 10 years, taking a piece meal and costly approach with multiple access requirements with high costs associated to temporary works and access. Additional maintenance would include annual road surfacing patch repairs and full bridge resurfacing every 10 years. These activities would result in substantial road user delay costs, bus replacement costs, traffic management expenses, and PLA charges associated with stone works. With a failing water management system, this would also require regular site visits to maintain the existing limited function. With evidence that vehicles over 18T using the bridge, continued monitoring costs will be incurred. The estimated whole life cost without the scheme is [redacted] with the scheme. This demonstrates that reactive, piecemeal maintenance is both inefficient and costly, particularly where working over the river introduces such high access costs. Early intervention is forecast to deliver savings of approximately [redacted] over a 60-year period.

d) Summarise how the cost estimate for the scheme has been developed.

Set out the basis for the estimate. For example, is it based on an estimate from similar work, developed by a quantity surveyor or a contractor quotation. Describe the inflation assumptions used and the rationale for these.

Cost Estimate Methodology
The cost estimate has been developed by a QS combining FM Conway's experience of delivering comparable bridge refurbishment projects with input from the design team, specialist subcontractors and current market rates. This collaborative process has enabled construction methodologies, programme requirements and project risks to be considered at an early stage, providing a robust and realistic estimate.

The estimate has been prepared on the following basis:

ECI costs - Allowed for management time, specialist subcontractor input, designers time and inspections & testing. The cost is comparable to other similar schemes and has been market tested. Construction Costs – Developed by FM Conway using a detailed construction programme, current market rates, recent tendered rates from comparable bridge refurbishment and heritage structure projects, and up-to-date quotations obtained from specialist subcontractors and suppliers. The pricing reflects the proposed construction methodology, sequencing and resource requirements, providing a high level of cost certainty.
Design Fees – Developed by WSP based on the anticipated level of design effort required to deliver the scheme from detailed design through to construction support.

Construction Supervision – Allowed for based on the detailed programme throughout the construction phase.
Traffic Management – Estimated using FM Conway's in-house traffic management experience, taking account of the phased construction methodology and the requirement to maintain traffic movements where practicable and keeping structure open to pedestrians.
Marine Access and Temporary Works – Developed using current quotations and specialist supplier input for scaffolding, marine access and river-based construction activities.
Utility Costs – Based on available C2 utility information and allowances for protection works and any identified diversions. C3/C4 enquiries to follow.
Statutory Consents and Environmental Requirements – Allowances included for approvals, environmental mitigation and heritage-related requirements.

A project contingency has been included to reflect the current level of design maturity and identified project risks, including unknown structural conditions, heritage conservation requirements, marine working constraints, statutory undertaker interfaces and market uncertainty. The contingency will be reviewed and refined as the design progresses and additional site investigations reduce project uncertainty.

The estimate has been prepared using current market rates and includes an inflation allowance of 5% per annum, applied to the anticipated midpoint of construction to reflect forecast increases in labour, materials, specialist subcontractor costs and plant over the delivery period. This assumption is considered appropriate given current construction market conditions and provides a prudent allowance within the overall project budget.

The estimate has been developed to support the current stage of the scheme. The combination of a detailed construction programme, current subcontractor quotations, specialist supplier engagement, recent market pricing and the Early Contractor Involvement (ECI) process provides a high level of confidence that the estimate is realistic, robust and reflects current market conditions.

As the project progresses through detailed design, further site investigations and stakeholder engagement, the estimate will continue to be refined through ongoing cost planning, value engineering and risk reviews, ensuring increasing cost certainty prior to commencement of construction.

e) Explain the financial risks that have been considered and factored into the estimate and what contingency is allowed for.

Explain the key risks and their impact on the cost and programme, including how these link to the overall contingency allowed for in the estimate.

The project estimate has been developed using current market rates, recent experience from comparable bridge refurbishment schemes and specialist supplier input. A project risk register has been used to identify, assess and quantify the principal financial risks associated with the scheme, with appropriate contingency allowances included to reflect the current stage of design development.

The principal financial risks considered include:

Unknown structural conditions and concealed defects that may only become apparent once intrusive investigations or construction activities commence.
Heritage conservation requirements associated with working on a Grade I listed structure, including specialist masonry repairs and conservation materials.
Marine construction activities and river working constraints, including tidal working windows and specialist access requirements.
Utility protection and diversion works arising from existing statutory undertakers' apparatus.

Inflation and market volatility affecting labour, specialist materials and construction costs.
Procurement risks associated with specialist conservation contractors and long-lead materials.
Environmental mitigation measures and statutory consent requirements.
Programme risks associated with adverse weather, river conditions and stakeholder approvals.

These risks have been considered during cost development and are managed through a combination of design development, Early Contractor Involvement (ECI), early stakeholder engagement and robust procurement planning.

Contingency

A project contingency has been included within the estimate to reflect the current level of design maturity and the identified project risks. As the scheme progresses through detailed design, intrusive investigations and further stakeholder engagement, the project risk register will be reviewed and updated, allowing contingency to be refined in line with increasing design certainty.

FM Conway will undertake ongoing cost planning, value engineering and risk management throughout the design and construction phases to ensure that risks are actively managed and opportunities to reduce costs are identified without compromising quality, durability or programme.

The use of FM Conway's established specialist supply chain and Early Contractor Involvement will further reduce financial risk by improving buildability, identifying efficiencies during design development and providing greater certainty over construction costs before the commencement of the main works.

Overall, the estimate has been developed using a risk-based approach, with appropriate allowances for identified uncertainties, providing confidence that the scheme is both deliverable and financially robust within the proposed funding allocation.

f) Provide details of the local and other contributions, including the relevant funding sources and the certainty of whether these contributions are available. (Maximum 250 words)

Describe the various sources of funding and their availability.

Richmond have allocated [redacted] over the project period from [redacted] budgets. In addition to this, through the recently confirmed LoBEG endorsement of the project, they have confirmed an additional [redacted]. Richmond will continue to make annual capital bids for the project through internal and external opportunities. As stated previously, this is a cost prohibitive project for Richmond at this time, [redacted]

2.5 Management Case

Outlines how the project will be delivered and managed effectively.

a) Select the option which best describes the current stage of the project:

- ☐ No design, benchmarked against other schemes only
- ☒ Design concept only, no supplier yet engaged
- ☐ QS estimate / early supplier engagement, stable design

b) What is the anticipated start date for construction for the scheme?

The anticipated start date for the construction works is January 2028. This is due to a number of pre-construction activities required, including Planning Permission, Listed Building Consent and PLA consents. In order to obtain the relevant consents, a heritage assessment will be required. Extensive stakeholder engagement with the town centre Business Improvement District (BID), TfL buses amongst others will be critical for the successful delivery of the scheme as the project seeks to mitigate disruption on users during the works. PLA through early engagement have also advised that works on the navigable channels will need to be undertaken at night and in winter when the channel is significantly quieter. Assuming budget allocation from April 2027, the project programme, provides 8 months to allow us to complete the above. However, some activities could be brought forward with existing budgets and improve on programme. The proposed procurement strategy to utilise our Term Contractor for the works and to utilise our existing framework contracts to enable the design requirements, provides us confidence in the project programme. Key Milestones include: Listed Building Consent/Planning permission October 2027. EA FRAP October 2027. Detailed design complete by November 2027. PLA consents in place for January 2028. Construction Starts January 2028.

c) What is the anticipated end date for construction for the scheme?

The works are extensive on this large 15 span structure. The works would be split into two phases. Phase 1 would be to undertake the restoration works to the stone arches. Working concurrently on river spans under tight PLA restrictions and the 5 arches to the north and 5 to the south of the river. Working closely with local businesses occupying the northern arches. Once the restoration works are complete, Phase 2, including the strengthening, water management and waterproofing works will start end of May 2028. Key milestones include the completion of the first phase, the removal of river plant and reduced impact on the navigable channel and businesses before the busiest summer months. The diversion of utility services to undertake the strengthening and waterproofing works is the next key milestone. We intend to commence the diversions from April 2028 to allow strengthening works to commence as soon as Phase 1 completes in May 2028. There is some risk in the programme associated to these third party dependencies. The proposed end date for the works is March 2029.

d) Summarise the approach to the management of the delivery of the scheme. This should be from the current point of development to completion.

This should include the management of resources, including the supply chain, to ensure delivery and an explanation of any evidence that provides certainty of delivery within the timescale.

The scheme is considered a 'Major Project' internally. Therefore, our standard Infrastructure Project Policies will determine the level of governance and scrutiny. As a major project, a project board including Cabinet Member and chaired by the Senior Responsible Officer (Director of Service), will be formed. Monthly dashboard reporting and change control measures presented with quorate decision making through the forum. Internally LBR has the experienced resource to manage a project of this nature. With the same team that have recently refurbished a number of Thames River crossings, including Wandsworth Bridge, Putney Bridge and Teddington Footbridge. FM Conway through our existing term contract would be the delivery organisation. FM Conway will self-deliver the core highway and bridge construction activities whilst utilising a specialist supply chain for conservation and specialist structural works. All specialist contractors are long-standing delivery partners and are fully pre-qualified through FM Conway's robust supplier assurance and PQQ process. Their technical competence, financial standing, health and safety performance and

quality systems have been independently verified, providing confidence in their ability to deliver the works. The proposed specialist supply chain includes: PAYE Stone Mason Specialists – specialist conservation stonemasons experienced in the repair and restoration of historic masonry bridges and structures. MST Marine – marine construction specialists with extensive experience delivering works over and adjacent to tidal rivers, including marine access, pontoons and river-based construction activities. Alltask – specialist scaffolding contractor with significant experience designing and erecting complex access scaffolding for bridge refurbishment projects over water. TechJoint – bridge waterproofing and expansion joint specialists with extensive experience in the installation and replacement of bridge waterproofing systems and movement joints. These organisations have worked collaboratively with FM Conway on numerous infrastructure projects over many years and have proven experience operating within constrained environments, including structures over water, enabling efficient mobilisation and integrated project delivery. Effective stakeholder engagement is fundamental to the successful delivery of the scheme. FM Conway will work collaboratively with the London Borough of Richmond, WSP, statutory undertakers, the Environment Agency, the Port of London Authority, emergency services, local businesses, residents and public transport operators throughout the project. Regular stakeholder meetings coordinated communications and advance planning of traffic management and river operations will ensure disruption is minimised and interfaces are effectively managed.FM Conway operates an established contract management framework that provides clear performance monitoring across all suppliers and subcontractors. Regular progress meetings, programme reviews, quality inspections and commercial reporting will ensure that delivery remains aligned with the overall programme. Early Contractor Involvement and advance procurement of specialist resources and long-lead materials will reduce programme risk and provide certainty of delivery. Through existing framework contracts, Richmond can appoint a design team. We have worked with WSP to produce the PI in 2023 through the framework and will to move quickly with an appointment to undertake loading assessments and permanent works design. The team has an established record of delivering complex bridge refurbishment and highway infrastructure schemes in constrained urban and river environments. The early appointment of the Principal Contractor, combined with the use of a proven specialist supply chain, enables detailed construction planning, early procurement of specialist materials and effective resource allocation well in advance of construction. The proposed programme provides approximately 14 months for construction (January 2028 to March 2029), allowing completion around 12 months ahead of the DfT funding deadline of March 2030. This programme resilience provides contingency for unforeseen events while maintaining confidence that the scheme will be delivered safely to the required quality standards and within the funding timescales. With clear access available to all required resource to aid successful delivery, there is confidence that all works can be completed well in advance of the March 2030 deadline. We have appended an organisational flow chart and proposed programme for the project in Appendix 5 of the supporting information.

e) Explain the key delivery risks and challenges and how the local authority intends to address them. Answers should also explain any financial risks and how any cost overruns will be addressed by the local authority. (Maximum 250 words)

Explain how key financial risks are being managed and mitigated. Explain how other risks are being managed (e.g. are there any points of complexity or requirements regarding planning or land ownership?).

The project estimate has been prepared using current market rates, experience from comparable bridge refurbishment schemes and specialist supplier input. A comprehensive quantitative risk

register (QRA) has identified and quantified the key delivery and financial risks, with appropriate 20% contingency allowances included to reflect the current stage of design development. Key risks include unknown structural conditions, heritage conservation requirements associated with a Grade I listed structure, marine construction constraints, utility protection or diversion works, inflation and market volatility, procurement challenges linked to specialist contractors and long-lead materials, environmental mitigation requirements, and programme impacts arising from weather, river conditions and third-party approvals. These risks will be managed through detailed design development, intrusive investigations, Early Contractor Involvement (ECI), proactive stakeholder engagement, early procurement of specialist resources, and robust programme and commercial management. Contingency has been incorporated within the estimate to address current uncertainties and will be reviewed regularly as design progresses and investigations are completed. We will undertake ongoing cost planning, value engineering and commercial reviews throughout design and construction to identify efficiencies without compromising safety, quality, heritage requirements or programme. Regular cost reporting, risk reviews and formal change control procedures will ensure emerging issues are identified and managed promptly. Richmond will retain responsibility for governance, budget control and financial management, ensuring any cost pressures are managed proactively and the scheme remains deliverable within the approved funding allocation.

f) Describe the key project controls that will be employed by the local authority to ensure that schemes are delivered on time and in budget. (Maximum 250 words)

Provide details of the methods that the authority uses to ensure timely delivery within budget.

LBR will adopt project controls to the 5 core areas. 1.Schedule Controls - Gantt Charts to roadmap the tasks, to track milestones and to identify any task interdependencies, to ensure timely completion. The use of a critical path method and milestone checkpoints. 2.Cost Controls - Earned Value Management to integrate scope, schedule and cost to measure performance and calculate variances. Budget forecasting utilizing performance data to predict final project costs and vendor & financial approvals with structures payment and authorisation processes to keep expenditure within budget limits. 3.Scope Controls - Change Controls Board to process, review, evaluate and approve/reject requested changes to the scope, mitigating scope creep. 4.Risk Controls - Risk Register used to identify, log, assess and develop mitigation strategies for potential project risks. Issue Logs tracking mechanisms used to address and resolve active 'roadblocks' that currently impede project progress. 5. Quality & Performance Controls - Quality Assurance Checklists, inspection and test plans to verify deliverables consistently meet stakeholder expectations and technical standards. Performance dashboards to monitor project KPI's in real time, enabling quick, informed decision-making by project managers.

g) Set out if the scheme requires permission from other bodies, and how this permission can be obtained to ensure delivery.

Provide details of the permission required, the likely timescale for obtaining permission and any potential barriers to obtaining that permission.

The scheme will require the following consents: Planning Permission and Listed Building Consent (LBC), Flood Risk Activity Permit (FRAP), Port of London Authority(PLA) consent, Crown Estate consent. LBC - this consent is issued by the planning department at the London Borough of Richmond. The application will involve Historic England due to the structure's Grade 1 listing. We

have had early engagement with both the planners and Historic England and have also obtained a scope for the required heritage assessment and statement. Flood Risk Activity Permit - issued by the Environment Agency. The team have recent relevant experience (Kew towpath reinstatement and Teddington Footbridge refurbishment). PLA Consent - early engagement with relevant PLA staff to understand requirements and inform works programming/planning (recent project experience from Wandsworth Bridge refurbishment). Crown Estate - landowner consent as part owner of the riverbed here. Recent and relevant coordination with Crown Estate legal team during Kew Towpath reinstatement. Each consent will be subject to the usual process and timescales. Due to the early engagement already carried out, and the ability to consider any requirements through detailed design, it is not envisaged that securing the required consents poses a significant risk to delivering the scheme. Copies of communications evidencing the early engagement carried out to date can be viewed in the Appendix 2 of the supporting information.

j) If applicable, explain how the scheme development has included consideration of climate adaptation and ensures the future resilience of the highway network (Maximum 250 words).

Describe how climate related risks (e.g., flooding, heat, extreme weather) have been assessed and incorporated into design measures to improve the long term resilience of the highway network. This may include evidence of risk assessments, adaptive design features, and how the scheme will maintain network performance under future climate conditions.

Richmond Bridge, a strategically important Grade 1 listed River Thames crossing that is increasingly vulnerable to climate change impacts. The proposed refurbishment will address existing deterioration while improving resilience to future climate conditions, ensuring the bridge remains safe, reliable and operational. Current vulnerabilities include deterioration of waterproofing, expansion joints, drainage systems, masonry and structural elements caused by weathering, water ingress, temperature fluctuations and exposure to the tidal river environment. Freeze-thaw cycles, river traffic impacts and prolonged wetting and drying have accelerated stone and mortar deterioration, increased maintenance requirements and reducing long-term durability. Future climate projections for Southeast England indicate more intense rainfall, higher temperatures, greater thermal movement, more frequent extreme weather events and continued fluctuations in river levels. Without intervention, these factors are likely to accelerate structural deterioration, increase maintenance costs and reduce network reliability. The refurbishment will improve resilience through replacement of the bridge waterproofing system, installation of new expansion joints, repair and repointing of historic masonry, targeted stonework repairs, drainage improvements and structural strengthening works. Durable materials and conservation techniques will be used to enhance performance while preserving the bridge's heritage significance. The strengthening works will also enable TfL's new electric buses to operate over the bridge, supporting wider carbon reduction objectives. The proposed measures have been developed to achieve a minimum 60-year design life and accommodate future climate conditions, including increased rainfall intensity and temperature extremes. By reducing weather-related deterioration and future maintenance requirements, the scheme will improve the resilience of Richmond Bridge and the wider highway network, maintain a reliable crossing and reduce disruption for all users while safeguarding a nationally important heritage asset for future generations.

h) Explain the considerations have been made or will be developed to account for the management of carbon for the development of the scheme.

This may include development of a carbon management plan dealing with whole life carbon (e.g. using low carbon construction measures to deliver the scheme or reducing emissions though reducing vehicle miles).

The Richmond Bridge scheme will be developed in accordance with whole life carbon principles, seeking to minimise carbon emissions throughout the design, construction, operation and maintenance of the asset. A project-specific Carbon Management Plan will be developed during detailed design, aligning with FM Conway's Carbon Strategy and the London Borough of Richmond's climate objectives. FM Conway has an established Carbon Strategy and Net Zero roadmap which will be implemented throughout the project, embedding carbon reduction into design development, procurement, construction activities and supply chain management. The Carbon Management Plan will identify opportunities to reduce embodied carbon, operational emissions and user-related carbon whilst maintaining the bridge's structural integrity and heritage significance. The project has prioritised refurbishment and life extension of the existing Grade I listed bridge rather than replacement, significantly reducing embodied carbon by retaining the existing structure and minimising the need for new construction materials. Capital carbon will be further reduced through: • Value engineering to optimise the design and minimise material quantities without compromising performance or durability. • Reuse and repair of existing structural elements and historic masonry wherever feasible, reducing the demand for new materials. • Use of low-carbon concrete mixes and lower embodied carbon construction materials where compatible with heritage and engineering requirements. • Local sourcing of construction materials and specialist suppliers to reduce transportation emissions and support the local supply chain. • Efficient construction sequencing and modern construction techniques to reduce plant usage, waste generation and site energy consumption. • Maximising the reuse and recycling of construction and demolition materials in accordance with circular economy principles. The refurbishment has been designed to reduce future operational carbon by extending the bridge's service life by at least 60 years, reducing the frequency of future maintenance interventions and associated carbon emissions. The replacement waterproofing system, new bridge expansion joints, improved drainage and durable conservation repairs will reduce deterioration caused by water ingress and weathering, minimising the need for reactive maintenance and associated traffic management over the life of the structure. FM Conway will implement its Carbon Strategy throughout the delivery of the project, ensuring carbon performance is monitored and managed at every stage of construction. Through the project-specific Carbon Management Plan, carbon emissions associated with materials, transport, construction activities and waste will be monitored, with opportunities for continual improvement identified throughout delivery. The contractor will also seek to reduce construction emissions by:• Using fuel-efficient and low-emission plant where practicable. • Optimising logistics and deliveries to minimise vehicle movements. • Reducing site waste through efficient material management and recycling. • Procuring materials from local suppliers wherever possible. • Employing digital construction techniques to improve efficiency and reduce rework. • Working collaboratively with its established specialist supply chain to identify and implement further carbon reduction opportunities throughout the construction programme. Whole Life Carbon Benefits by prioritising refurbishment over replacement, extending the bridge's operational life, reducing future maintenance requirements and minimising disruption to the travelling public, the Richmond Bridge scheme will deliver significant whole life carbon benefits. The combination of lower embodied carbon reduced operational maintenance and minimised user delays provides a sustainable solution that supports both the Department for Transport's decarbonisation objectives and Richmond’s commitment to achieving net zero emissions. The implementation of FM Conway's Carbon Strategy will provide a structured approach to measuring, managing and continually reducing carbon emissions throughout the lifecycle of the scheme. The

strengthening of the structure will allow TFL's new electric buses to operate over the bridge which will assist with TFL's carbon reduction scheme.

i) What statutory undertakers affect the proposed scheme? Has any engagement been undertaken and how has this been accounted for within the delivery approach?

Set out the relevant statutory undertakers, the impacts they may have on the programme – including planning – and how this part of the programme will be managed. If applicable, describe how deterioration of the structure has or may impact utilities services and the extent of this disruption.

The Richmond Bridge scheme interfaces with several statutory undertakers and third-party asset owners due to the bridge's age, heritage significance and strategic role within the highway network. Key stakeholders include Thames Water (water and sewer infrastructure), UK Power Networks (electricity cables), Cadent Gas, Openreach and Virgin Media (communications infrastructure), Transport for London (strategic highway and traffic systems), the Environment Agency, the Port of London Authority (PLA), and the London Borough of Richmond as highway authority. Early engagement has already commenced to identify affected assets and understand specific requirements. Utility record searches, desktop assessments, coordination meetings, utility surveys and trial holes will be undertaken during detailed design to confirm the location and extent of existing apparatus. The delivery strategy includes early consultation with asset owners to agree protection measures, access arrangements, approvals and any diversion requirements. These activities have been incorporated into the programme to allow sufficient time for design reviews, legal agreements, technical approvals and any necessary diversion works before construction begins. A live utility coordination register will be maintained throughout Early Contractor Involvement (ECI), supported by regular meetings between FM Conway, the Designer, Richmond Council and utility providers. This proactive approach will help identify potential conflicts early, minimise programme risk and control costs while ensuring the safety of the workforce and protection of critical infrastructure. Where works are undertaken near utility assets, approved protection measures and safe systems of work will be implemented in accordance with asset owner requirements. Utility representatives will be consulted throughout construction where inspections, isolations or supervision are required, minimising disruption to essential services and road users. The deterioration of the bridge waterproofing, joints and drainage has resulted in water ingress that could, if left untreated, increase the risk of damage to utility apparatus within or adjacent to the structure. The proposed refurbishment will renew these elements, reducing water ingress, protecting both the bridge and associated utilities, improving long-term resilience and reducing the likelihood of future maintenance interventions or service disruptions. This collaborative approach provides programme certainty, reduces construction risk and ensures continued protection of essential services throughout the life of the asset.

Part 3 – Governance and Declarations

3.1 Equality Analysis

a) Has analysis of the equality impacts of the scheme been undertaken by the LHA in line with the Public Sector Equality Duty? Select below:

☐ Yes

☒ No

b) Explain how the equality impacts of the scheme have been considered or will be considered. Identify the relevant affected groups with protected characteristics, and any planned measures to mitigate these impacts. (Maximum 250 words)

The London Borough of Richmond has an established process for undertaking Equality Impact Assessments (EqIAs) on major transport and infrastructure schemes to ensure that the needs of protected characteristic groups are considered throughout scheme development. This approach has been successfully applied on previous bridge, highway and public realm improvement projects across the borough, helping to identify potential impacts and embed mitigation measures within both design and construction planning.
An EqIA will be undertaken as part of the development of the Richmond Bridge scheme to inform the detailed design, construction methodology and stakeholder engagement strategy. The assessment will consider the potential impacts on groups protected under the Equality Act 2010, including older people, disabled people, children and young people, people with caring responsibilities, pregnant women, and those from different ethnic, religious and socio-economic backgrounds.
Given the bridge's strategic role in providing access across the River Thames and to Richmond Town Centre, particular consideration will be given to the needs of mobility-impaired users, wheelchair users, people with visual impairments, and those who may be disproportionately affected by temporary changes to access arrangements during construction.
Drawing on findings from previous EqIAs undertaken by the borough, potential mitigation measures are likely to include maintaining step-free access wherever practicable, providing clear wayfinding and signage, ensuring adequate lighting and personal safety measures, minimising construction-related disruption, preserving pedestrian and cycle connectivity, and undertaking targeted engagement with affected communities and accessibility groups.
By integrating EqIA findings into scheme development, the project will seek to ensure that the benefits of protecting Richmond Bridge from reduced capacity or closure are realised equitably, while minimising adverse impacts on those groups most reliant on accessible and reliable transport connections.

3.2 Public Sector Transparency

When LHAs submit proposals for funding to DfT, as part of the Government’s commitment to greater openness in the public sector under the Freedom of Information Act 2000 and the Environmental Information Regulations 2004, they must also publish a version excluding any commercially sensitive information on their own website within two working days of submitting the final proposal to DfT.

a) Please specify the weblink where this proposal will be published.

https://www.richmond.gov.uk/richmond_bridge_project

3.3 Declarations

Senior Responsible Owner declaration

As Senior Responsible Owner for [Richmond Bridge Restoration and Strengthening], I hereby submit this request for approval to DfT on behalf of [London Borough of Richmond Upon Thames] and confirm that I have the necessary authority to do so.

I confirm that [London Borough of Richmond Upon Thames] will have all the necessary statutory powers and other relevant consents in place to ensure the planned timescales in this proposal can be realised.

a) Name: [redacted]

b) Signed:
c) Date: [redacted]
d) Email: [redacted]

Section 151 Officer declaration

As Section 151 Officer for [London Borough of Richmond Upon Thames], I declare that the scheme cost estimates quoted in this proposal are accurate to the best of my knowledge and that [London Borough of Richmond Upon Thames]:

- has allocated sufficient budget to deliver this scheme on the basis of its proposed funding contribution.
- accepts responsibility for meeting any costs over and above the DfT contribution requested, including potential cost overruns and the underwriting of any funding contributions expected from third parties.
- accepts responsibility for meeting any ongoing revenue requirements in relation to the scheme.
- accepts that no further increase in DfT funding will be considered beyond the maximum contribution requested and that no DfT funding will be provided after 2029/30.
- confirms that the authority has the necessary governance and assurance arrangements in place and that all legal and other statutory obligations and consents will be adhered to.

e) Name: [redacted]

f) Signed:
g) Date: [redacted]
h) Email: [redacted]