



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: Bristol City Council
- b) Scheme / structure name and LHA bridges number: Cumberland Basin network 5700
- c) Location (OS Grid Reference) of the scheme/structure (to identify location on map):
- Easting: 356764
- Northing: 172212
- d) Name of Project Manager: Jacob Pryor
- e) Email address: jacob.pryor@bristol.gov.uk
- f) Phone number: 07837 006 372
- 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)

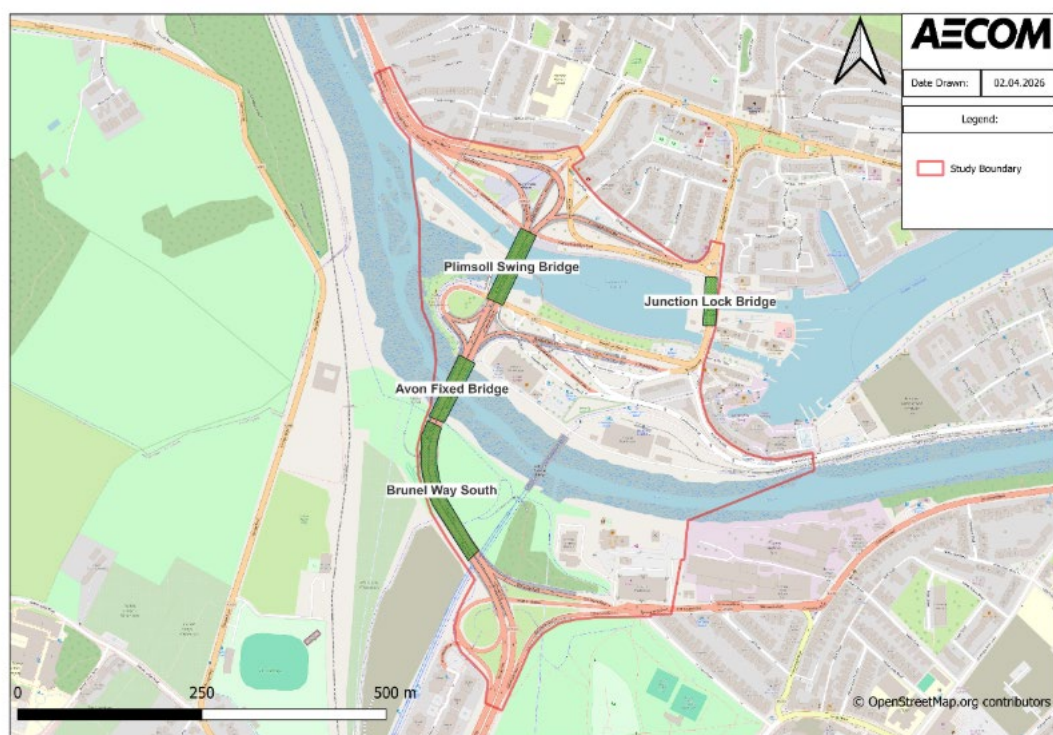
This could include, for example, the age, construction type, feature carried and feature crossed of the relevant structure and if the structure has listed heritage status.

The scheme contains a package of repairs to strengthen bridges that form the Cumberland Basin complex. The scheme includes two fixed bridges and two swing bridges (see section I for structures details). The structures are regarded as a complex due to their closely linked interaction and respective roles in facilitating traffic flows through the Basin. The Cumberland Basin includes the A3029 Brunel Way, the main strategic arterial route into Bristol from the M4, M5 and North

Somerset. The highest trafficked non-motorway road in Bristol with over 50,000 daily vehicles. This elevated route carries traffic over Bristol Harbour and the River Avon New Cut via a series of bridges. The complex provides links to Bristol Airport, the Central Business District and the Temple Quarter Enterprise Zone.

The Cumberland Basin complex opened in 1965 and was designed to cater for traffic levels predicted by 1985, a 250% increase, with a 120-year design life. Traffic growth has significantly exceeded this forecast, and therefore the structures (now in their 61st year) have deteriorated much faster than originally foreseen. Full structural refurbishment is now urgently required to keep them operational. If any single structure fails the entire complex is impacted and will cause significant disruption to the local and regional road network due to the A3029's strategic role.

The map below identifies the structures in the scheme with the three structures along the A3029 and the additional swing bridge (Junction Lock Bridge) which acts as a diversion route when Plimsoll Bridge is open.



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 scheme proposes interventions on three structures supporting the A3029 (Avon Fixed, Brunel Way South, Plimsoll) and an additional swing bridge (Junction Lock Bridge). Constructed as a coherent scheme in the 1960s, the structures now experience a range of maintenance issues detailed below. The package will also include minor network wide improvements such as parapet replacements.

The Avon Fixed Bridge is a 100m long-span post-tensioned concrete bridge featuring a middle span supported on half-joints. There has been considerable deterioration around the half joints, and the proposal is to remove the existing suspended span so the half-joint can be repaired. A new suspended span with improved access for maintenance and inspection would be installed to enable ongoing management of the bridge.

Brunel Way South is an approximately 300m concrete viaduct, which requires concrete repairs, parapet upgrades and waterproofing to maintain its safe function.

Plimsoll Swing Bridge carries the A3029 link over the Cumberland Basin and swings to allow large boats into the harbour. The structure requires maintenance and upgrades to ensure continued function. This year, it became stuck open on two occasions - 5th March and 26th May causing widespread disruption (see 2.1C). The structure requires waterproofing, painting, resolution of drainage issues and M&E upgrades.

Junction Lock Bridge forms part of the entrance to Bristol Harbour, facilitating access to Spike Island and provides a diversionary route to the A3029 when Plimsoll is open. This structure also requires waterproofing, painting, resolution of drainage issues and mechanical and electrical upgrades.

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

No

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

The Cumberland Basin complex is a critical part of Bristol's transport network, providing an orbital route around the city and an important diversion for the M5. It supports access between the A370, A4, M5 and M49, while also connecting Bristol to Avonmouth, a key trading port for the South West. Undertaking maintenance of the Cumberland Basin now would help facilitate future maintenance of the Avonmouth Bridge, as restrictions on both routes at the same time would be impractical.

The complex also plays a vital role when the M5 is closed, acting as a high-capacity river crossing that enables traffic, including HGVs, to avoid the city centre. The A3029/Brunel Way forms a key strategic diversion route due to its proximity to the motorway and its ability to accommodate significant traffic volumes.

Alternative options are limited, particularly for HGVs, because of the weight restriction on the Clifton Suspension Bridge. Without essential maintenance, the loss of this diversionary route would force traffic onto lower-capacity roads through urban neighbourhoods and the city centre. This would lead to increased congestion, reduced network resilience, and greater impacts on local communities, including severance and poorer accessibility.

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 structures were subject to Principal Inspections (PI)'s between September 2024 and March 2025 (Appendix A1-7). A cohesive approach is required as failure in any of these bridges will result in traffic restrictions on the whole road complex, severely disrupting this strategic A3029 route. This fund primarily addresses the severely critical elements (Avon Fixed Bridge) and BCC's contributions will support the other critical maintenance on the remaining structures in the package. The BClav scores for the bridges and BCcrit scores for the worst spans were as follows:

- 57011 Avon Fixed Bridge BClav 71.33 BCcrit 22.1.
- 57012 Brunel Way South BClav 78 BCcrit 21.

- 57021 Plimsoll Bridge BClav 73 and BClcrit 55.5.
- 57065 Junction Lock Bridge BClav 76.5 and BClcrit 50.3.

The worst critical elements of Avon Fixed Bridge and Brunel Way South were found to be in a 'Very Poor' condition and Plimsoll and Junction Lock to be in a 'Poor' condition. This signifies that there is a possible failure of critical elements, the capacity may be severely restricted, and the structure may need to be weight restricted or closed to traffic. SAVI have suggested that Avon Fixed Bridge will require replacement or closure within 5 years. The LoBEG Good Practice Guide Risk-based Prioritization and Value for Money suggest that Avon Fixed Bridge has a likelihood of failure of 1 in 12. Predicting deterioration is challenging, but it is undeniable that this structure will need a significant intervention to commence before the end of March 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.

None of the bridges are currently subject to weight limits or restrictions on usage currently.

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.

Without intervention, the A3029 Cumberland Basin complex is expected to become effectively unusable for traffic by 2029/30. Avon Fixed Bridge is likely to require at least a 7.5-tonne weight restriction to protect its deteriorating half-joints, with full closure a realistic possibility. There is also a risk of sudden structural failure. During the same period, Brunel Way South is expected to require lane closures.

Plimsoll Swing Bridge is increasingly prone to failure due to ageing mechanical and electrical components. In 2026 alone, the bridge became stuck open twice, highlighting the network's vulnerability. One incident occurred during routine maintenance, while another was caused by thermal expansion exceeding the capacity of the expansion joints. Rising temperatures associated with climate change are likely to increase the frequency of such events unless upgrades are undertaken. As waterway access has legal priority, a bridge stuck open would effectively close the A3029 to road traffic.

Junction Lock Bridge, another key swing bridge within the complex, is also expected to require weight restrictions by 2030.

Together, these issues pose a significant risk to the resilience and operation of the Cumberland Basin network. Without essential maintenance and upgrades, increasing structural and mechanical failures are likely to result in severe traffic restrictions, closures and disruption to a strategically important transport corridor.

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.

No

- 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.

Avon Fixed Bridge is not suitable for propping due to the presence of the River Avon. Brunel Way South is over a public park and restrictions are expected to be put in place to manage the risk of concrete falling from the bridge onto members of the public.

- 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?

BCI Crit: whole bridge/worse span Avon Fixed Bridge=48.6/22.1, Brunel Way South=59/21, Plimsoll=55.5/55.5, Junction Lock=50.3/50.3

BCI Ave: Avon Fixed Bridge=71.33, Brunel Way South=78, Plimsoll=73, Junction Lock=76.5

- 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.

Concrete deterioration of the primary deck element is the primary issue with Avon Fixed Bridge and Brunel Way South. In particular, there is widespread areas of spalling and exposed reinforcement around the half joints on Avon Fixed Bridge. Drainage, painting and steel corrosion are the issues impacting BCI scores on Plimsoll and Junction Lock. There has only been one PI in the last 5 years for each bridge, so there is no change in recorded scores.

- 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.

The Cumberland Basin complex is vital to the region and city's economy and transport connectivity. The Cumberland Basin road network, notably the A3029, is Bristol's 3rd busiest corridor (behind the M5 and M32) with over 50,000 daily vehicles. The high travel demand is driven by the network's strategic location. The scheme is located between three of the West of England's Growth Zones - areas identified to deliver new homes and employment opportunities in support of the region's ambitious target of a 28% increase in regional GDP over the next decade. The three relevant zones include North Somerset Growth Gateway, Central Bristol and Bath Growth Zone and Severn Estuary Growth Zone.

The complex also serves the A4, a key residential and commercial route running along the north side of the harbour, following the Avon Gorge towards the trading port in Avonmouth. It also provides an important connection between the city centre and both the M5 and M49 motorways. Given its strategic location and function within the wider transport network, the site is pivotal to sustaining economic growth. Failure of one of the A3029 structures would significantly undermine network resilience and investor confidence, and cause major rerouting for residents, freight traffic, car commuters and bus commuters. Due to the limited number of alternative crossings over the River Avon, traffic is forecast to be diverted to the M5 and through the city centre, resulting in increased congestion, longer journey times, and increases in emissions in the city centre Air Quality Management Area.

- 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 river presents a physical barrier within the transport network. Without the scheme, closure of the complex would require substantial traffic diversions which would make sustainable options less attractive. The eight bus routes using the A3029 would require diversions, increasing bus passenger journey times and reducing service reliability (316 daily bus and coach use on the A3029, DfT count 2023). Closure of the Complex would require active travel users to take longer diversion routes via Prince Street Bridge (approx. +1.0 mile from complex) or Clifton Suspension Bridge (approx. +0.7 mile). Closure would make sustainable modes less attractive undermining DfT's Better Connected Strategy (2026) of promoting healthier travel options as journeys become less direct, less reliable, and more time-consuming. This active travel priority is mirrored locally in the West of England Joint Local Transport Plan (JLTP4) and Bristol One City Climate Strategy, which prioritise a low-carbon transport network through walking, cycling and public transport.

The scheme supports other DfT priorities by aligning transport with developments (Better Connected, 2025). The scheme lays the foundations for the Western Harbour Masterplan with its vision of new housing, employment opportunities and placemaking. Currently, the site is identified as a brownfield/ 'greyfield' area with underused infrastructure. The scheme acts as the first essential step in regeneration. The masterplan aims to unlock 2.5 hectares of land with 1,200 new

homes and 5,500m² of employment space complimenting the existing National Cycle Network (NCN) cycle routes by introducing five miles of new walking and cycling routes.

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.

The West of England Mayoral Combined Authority (WECA) Growth Strategy highlights the region's strong growth rate (WECA 2.4% annually, UK average 0.6%). However, sustaining this growth is dependent on maintaining existing infrastructure to be 'fit for the future', as WECA's strategy recognises transport as the backbone of growth.

The Bristol Infrastructure Plan advocates an asset management strategy to improve network resilience and support economic growth by maintaining reliable infrastructure. BCC faces a £250m funding shortfall and risks economic impact if the complex fails.

The scheme is located between WECA's Growth Zones (Question A). These growth zones will unlock substantial economic potential but place increasing pressure on the transport network. North Somerset is a key area, with the Local Plan identifying 24,010 new homes and 70 hectares of employment land. Bristol's Local Plan proposes 4,448 new dwellings with 1,500 affordable homes in south Bristol. The complex at full capacity is essential for the successful delivery of these new homes (Appendix B).

The complex is critical for enabling connectivity between these growth areas, linking North Somerset developments to Bristol and providing access to jobs and services. The network also facilitates movement to a third growth zone, the Severn Estuary, which includes a strategically important trading port. This includes freight movements, with HGVs relying on the A3029 to connect south Bristol to Portway and onward to the strategic routes. Local MP Karin Smyth recognises the complex as an economic asset, helping constituents access employment and supporting the movement of trade (Appendix LoS).

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.

The project team has engaged with a number of key stakeholders including North Somerset, WECA, National Highways, and the Environment Agency (EA).

The scheme has received support from government representatives including Carla Denyer, MP for Bristol Central, and Karin Smyth, MP for Bristol South. Both recognising the strategic significance of the scheme highlighted its economic value in both the short and longer term. Karin Smyth also outlined her concerns about the consequences of a do-nothing scenario for her constituents, particularly regarding connectivity, congestion, and safety. Letters of support can be found in the (Appendix LoS).

The EA is also a key statutory stakeholder as the works require close EA engagement throughout the design, construction and post-construction stages. EA would review the proposal via a FRAP application to ensure the works such as temporary works do not increase flood risk.

BCC will continue to engage with these parties and ensure their inputs are exercised in the relevant areas. For example, North Somerset will be involved with the traffic management. During the engagement session they raised concerns about the potential traffic disruption highlighting congestion and possible rerouting trips to Bristol Airport and noting its own temporary traffic

management plans including those associated with the M5 Junction 19. Engagement concluded that, should the application be successful, North Somerset would support in designing the traffic diversions to minimise overall network impacts.

- 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 local approach to prioritisation considered asset condition, network criticality, and strategic economic importance. Initial programme-level prioritisation was established through the Bristol City Transport and Harbour Infrastructure Programme Level Strategic Outline Business Case (SOBC), December 2025, which identified a portfolio of structures in different areas across the city requiring intervention (Appendix C). From this long list, structures were prioritised based on structural condition (risk), network significance (proximity to SRN, traffic volumes), economic and strategic value (Growth Zones, local economic activity), and wider transport objectives.

After the SOBC identified the Cumberland Basin area as a key location for investigation, Bristol City Council (BCC) commissioned 16 PIs between July 2024 and June 2025. The PIs helped shape the prioritisation exercises, revealing an urgent need for intervention which the council had previously been unaware of. BCC conducted a structured assessment and ranking exercise based on the following:

Poor and deteriorating structural condition - (PIs)

Critical strategic network, forming part of a key routes with over 50,000 vehicles per day.

Significant economic importance, providing essential connectivity to/ between WECA's Growth Zones and supporting local and regional movements.

Limited resilience, with constrained diversion options increasing the consequence of failure or restriction and impact on the SRN.

- 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 proposed as the primary application for the Structures Fund following the 2024/2025 PIs of the structure, which demonstrate that the level of investment needed is beyond existing council funding allocations. The strategic nature of the scheme (A3029 link with 50,000 daily trips) means that a do-nothing scenario is not acceptable due to the local and regional significance. As a result, BCC has sought alternative funding options. The Programme SOBC, published in December 2025, specifically identified the DfT Structures Fund as a viable opportunity to address these funding challenges as the scheme aligns with the funding requirements.

Furthermore, the timing of this funding opportunity aligned with the completion of the Western Harbour Masterplan in December 2025. This masterplan sets out a long-term vision for regeneration, and the proposed scheme is critical not only to address essential structural maintenance needs for continued operation but also to enable future development. Delivering these works will support the next steps in progressing the Western Harbour regeneration, facilitating new homes, jobs, and wider economic benefits. The Masterplan confirms that the

existing alignment of Brunel Way (A3029) will be maintained and will continue to play a critical role. Brunel Way South and Plimsoll are also pivotal in the Masterplan’s proposal.

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.

The potential impacts of failure to invest were demonstrated recently when Plimsoll Bridge became inoperable in the open position on two separate occasions in 2026 during routine maintenance. Bristol Live reported the headline “Bristol traffic chaos as struck Plimsoll Bridge gets hosed down by firefighters”. The bridge fault resulted in the closure of the A3029 in both directions, causing severe congestion, extended journey times, and widespread network disruption. As infrastructure continues to age, the swing bridges will become more frequently stuck and the fixed bridges will experience critical failure, reducing the overall reliability of the transport network. Without intervention, this will lead to a deterioration in network performance, undermining accessibility and increasing the risk of unplanned disruption.

The complex performs a key strategic function, and the lack of alternative River and harbour crossings will weaken the transport networks ability to support sustainable economic growth. Traffic modelling forecasts an increase in route distance for northbound trips of 2.63km and southbound of 4.17km. Journey times would also increase by 13.30 minutes for northbound trips and 14.38 minutes for southbound vehicles (Appendix D1). Closure would lead to HGVs primarily being rerouted significantly to the M5 or Bath Bridge Roundabout, with a smaller proportion using Bedminster Bridge Roundabout. Cars and LGVs are expected to route via the M5, Clifton Suspension Bridge, Bath Bridge Roundabout and to Bedminster Bridge. Planned realignment of Bedminster Bridges for bus and cycle priority may be constrained by increased diversion traffic, potentially affecting performance and delivery.

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 complex links communities across the River Avon supporting access to employment, services and homes. In a ‘do nothing’ scenario, complex closure will force substantial rerouting of general traffic and public transport. The River Avon acts as a barrier between local communities, and the absence of an alternative bridge with comparable capacity would lead to extensive diversions across the wider network.

The West of England Transport Model (WERTM) forecasts that general traffic including HGVs would be rerouted via the M5 and three city centre routes, resulting in congestion and delays as traffic shifts onto lower-capacity roads through neighbourhoods causing severance. Traffic re-allocation is anticipated to impact communities and pedestrians in Hotwells & Harbourside (includes Spike Island), the city centre, Southville and Bedminster. The table below presents some socio-demographic indicators for the wards affected

Ward	Number of jobs located in the ward (2024)	Population (2024)	Number of Houses (2021)	Schools (GIS)	Colleges (GIS)	Community Centre/ Social Club (GIS)
Bedminster	10,000	13,243	5,772	4	0	2
Southville	600	13,338	5,764	6	0	2
Hotwell & Harbourside	17,000	6,648	2,805	3	1	1

Closure would impact eight bus routes, increase passenger journey times and reduce service reliability. Cyclists using the NCN Route 41 or other local routes would also be diverted onto NCN Route 33 around Spike Island or forced to reroute via the Clifton Suspension Bridge.

The scheme also enables the Western Harbour Masterplan which introduces new walking and cycling routes. These improvements aim to enhance the active travel network, reduce physical and perceived barriers between communities. Therefore, the scheme significantly reduces both existing and potential severance for the planned Local Plan developments (see question 2.1 C).

- 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.

Complex closure re-allocates vehicles through the city centre and around Bristol via the SRN. WERTM modelled daily vehicles and identified the different routing patterns influenced by direction and mode type. More information can be requested and found in a technical note in the Appendix D1.

Northbound 25,808 daily trips:

49% of car trips (9,380) are reallocated towards the city centre travelling via Bedminster Bridge Roundabout. The next largest route is to the M5 with 25% of trips (4,847) heading towards the SRN. Similarly, 45% of LGV trips (2,084) travel to the city centre via Bedminster Bridge Roundabout with the next largest proportion (25%, 1,162 LGVs) reallocated via Clifton Suspension Bridge. HGVs, however, are primarily reallocated to the SRN, with 66% (776) going to the M5, followed by 31% of vehicles (361) towards the city centre and Bedminster Bridge Roundabout.

Southbound 30,832 daily trips:

Fewer trips are reallocated to Bedminster Bridges Roundabout and instead to Bath Bridge Roundabout and Clifton while HGVs continue to use the M5. Car trips have three main routes: 35% (7,948) use Clifton Suspension Bridge, 30% (6,925) of cars use the M5 and 29% (6,634) route to the east side of the city centre via Bath Bridge Roundabout. LGV mainly route to Clifton Suspension Bridge (53%, 2,859) while 39% (422) route to Bath Bridge Roundabout and only 11% to the M5. HGV on the other hand primarily use the M5 as 59% (633) using the SRN followed by Bath Bridge Roundabout at 39% (422).

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 Present Value Benefits (PVB) is summarised below. The scheme is forecast to generate a PVB of £4.27bn with the majority of the benefits associated with journey time.

Benefits	(£, 2023, Present Value)
Journey Time	£3,295,357,985.00
Vehicle Operating Costs	£319,782,725.00
External Impacts	
Decongestion	£425,357,001.00
Accidents	£135,595,237.00
Local Air Quality	£5,083,952.00
Noise	£17,480,420.00
Greenhouse Gases	£69,774,926.00
Indirect Taxation	£ 2,028,989.00
Infrastructure Carbon	£ -163,942.00
Private Sector Capital Costs	£0
Private Sector Operating, Maintenance and Renewal Costs	£0
Present Value Benefits (PVB)	£ 4,270,297,293.00

- 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)	£17,751,466
Present Value Benefits (PVB)	£4,270,297,392
Benefit to Cost Ratio (BCR)	240.6

- 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.

In accordance with TAG Unit A1-2, an optimism bias of 44% has been applied in the Structures Fund appraisal tool. A capital cost risk of 30% has been calculated and is also stated in the appraisal tool. However, only the capital cost optimism bias of 44% is included in the calculation of Present Value Costs (PVC). Operating, maintenance and renewal costs have also been calculated for the scheme. These have been included in the calculation of the PVC alongside an optimism bias of 44% for both with and without scheme costs. See Appendix D2 for details.

Operating, Maintenance and Renewal Costs (exclusive of optimism bias)	2026 to 2092 Total
Without scheme £, nominal prices – with inflation	£84,719,221
With Scheme £, nominal prices – with inflation	£60,919,875

A carbon assessment was undertaken inline with PAS2080 lifecycle stages. The assessment accounts for carbon during operation, scheme's embodied carbon, the emissions associated with transportation, construction, maintenance and replacement of assets over the 60-year assessment period. Given the high-level nature of the data in the calculation, a contingency uplift factor of 15% has been applied to the emissions calculated to account for uncertainties in the data. This is in line with the WICS whole life carbon assessment (WLCA) standard. The toolkit assumes the average congestion band of the key strategic diversion routes has been applied derived from the volume over capacity ratios obtained from the WERTM modelling.

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 Toolkit has been populated using outputs from the West of England Regional Transport Model (WERTM). WERTM is a strategic transport model that has been developed in accordance with DfT's TAG for the purpose of assessing transport schemes in the region. The model consists of a highway assignment model, public transport assignment model and variable demand model. To align with the limitations of the Economic Tool, set out in the User Guide, the highway assignment model has been used in isolation.

WERTM's 2029 forecast year has been used for this study as this is the closest year to the scheme opening year of 2030 and is the closest year to the range specified in the traffic flow year requirement of the Economic Tool.

The impacts of a full closure have been forecast without a formal, sign posted diversion route. The WERTM assigns origin-destination demand to the lowest-cost path, which assumes users have full knowledge of the network conditions and associated journey times. The estimated cost/benefits are based on four alternative bridge crossings: M5 Avonmouth Bridge, Clifton Suspension Bridge, Bedminster Bridge Roundabout, Bath Bridge Roundabout.

The number of vehicles has been extracted from a 2029 forecast run of WERTM. The Avon Fixed Bridge has then been banned to all vehicles in both directions and another assignment run using the same demand. As the appraisal tool requires journey time and route length inputs, origin–destination data for both scenarios have been extracted and demand-weighted to better represent the overall strategic impact.

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.

- Severance: The scheme ensures the continued operation of this high-capacity river crossing. Without it, failure of the complex would turn the River Avon into a significant natural barrier, increasing severance and reducing connectivity between communities and access to jobs, homes, and services.

- **Regeneration:** The scheme will lay the foundations for the Western Harbour Masterplan allowing this site to be progressed and developed for regeneration.
- **Investment confidence:** The complex is essential to the local and regional economy and without this scheme there is a real threat of a network failure. If a key asset, such as this complex fails, it would substantially reduce investment confidence in the area, limiting growth and economic security.
- **Historic environment:** Historically, the harbour played a key role in global trade routes and early exploration, shaping the city's economic and social development. This scheme ensures that access to the Harbourside remains available via walking, cycling, driving, and public transport. Without the scheme, communities north of the River Avon would have reduced connectivity to Spike Island, requiring substantial detours via Clifton Suspension Bridge, Prince Street Bridge. This highlights the importance of infrastructure investment in sustaining both the cultural value and accessibility of the harbour.
- **Landscape:** The scheme investment in two swing bridges which are critical for enabling boats to access Bristol Harbourside. The scheme is located at the Gateway to the Harbour, failure to maintain these structures would close the harbour to boats, resulting in the loss of its navigable waterway character and sense of place.

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 economic assessment was undertaken.

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.

Bristol City Council (BCC) has a dedicated bridge engineering team, led by Chris Dooley, with extensive experience delivering bridge maintenance programmes through funding mechanisms such as the CRSTS Maintenance Challenge Fund. Recent projects have focused on maintaining critical highway infrastructure and addressing assets that are difficult to fund through existing budgets. BCC has successfully refurbished ten bridges along the River Avon, demonstrating its capability to manage and deliver complex maintenance schemes.

Where additional capacity is required, BCC will draw on established consultancy frameworks and strong relationships with delivery partners to access specialist technical expertise and resources.

BCC intends to appoint Walters to deliver the works, drawing on its proven experience in bridge maintenance and span replacement. Relevant projects include the Mountain Ash Cross Valley Bridge, a 70m structure on a strategic highway requiring heavy lifting in a high-risk environment, and Bath New Bridge on the River Avon, where £1.1m of repairs, waterproofing and traffic management works were completed three weeks ahead of schedule. Further examples are provided in Appendix E1.

BCC will also apply lessons learned from previous CRSTS-funded projects, particularly in relation to network management, stakeholder engagement and coordination with external agencies such as the Environment Agency. This experience, combined with established delivery arrangements and access to specialist expertise, provides confidence in BCC's ability to successfully deliver the proposed maintenance programme.

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.

Walters and AECOM have developed a programme of delivery that ensures the package of structural interventions are complete within the DfT's funding deadline while minimising disruption to road users through a phased programme. BCC will procure the works contract through NEC Option E Lot 8: Structural and Steel Maintenance, Repairs and Reconstruction Works to Bridges & Highway Retaining Walls Structures over £500,000 of BCC's Highways Asset Management and Civils Framework 2025-2029. Walters has engaged with third-party specialists to create a pragmatic programme ensuring delivery by March 2030. A detailed report and programme for Avon Fixed Bridge has been prepared covering pre-start activities, procurement of third parties, material supply, design, construction, and health, safety and environmental considerations (see Appendix E1-2).

Avon Fixed Bridge is the disruptive intervention. As part of the pre-construction works, Walters delivered an options assessment for the drop-in span removal (see Appendix E1 for assessment) and concluded that the cut and lift methodology was the preferred option, improving construction efficiency. The delivery will see a sequential replacement of the west and east structures to allow contra-flow while the other side is replaced. The remaining structures are less complex and invasive interventions, and the programme has been developed based on AECOM's technical and previous project experience. The combined package of proposed interventions and associated delivery programme is presented in Appendix F1, F2.

BCC procurement strategy has been considered in the programme of works and will start before the end of 2026 to onboard the contractors in January 2027.

- 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.

A risk review workshop highlighted the following delivery risks (see full risk register in Appendix G):

- Existing structure condition: Whilst known defects have been identified and included into the programme, there remains a risk associated with the pending outcome of the Avon Fixed Bridge assessment, as well as the unknown condition of concealed elements within the half-joint.
- Programme assumption: The programme involves intervening on a number of structures in the Basin and starts early to ensure completion by March 2030. Scheme delivery assumes the contractor's work will commence January 2027. If this application is successful, there is a risk that funding approval could be delayed impacting the programme.
- Site access: The scheme is located on the Cumberland Basin, a developed area with existing commercial premises, transport links and allotments. A key constraint is suitable areas for crane operations and material storage. Walters has identified the eastern parkland as the preferred site location but this is subject to confirmation.
- Tidal environment introduces constraints associated with access beneath the bridge, installation of temporary works, lifting operations and other constructions operations.
- Environmental constraints: River Avon is an ecological corridor to a number of sensitive habitats. Previous project experience has identified ecological receptors including otters, badgers, bats, nesting birds and aquatic species. These environmental considerations may affect the construction programme in relation to seasonal working restrictions and licensing requirements.
- Cost escalation: Inflationary pressures due to geopolitical factors or material shortages could impact project delivery. This is mitigated through a sufficient contingency.

- 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.

BCC has started communication with third parties and will continue to liaise with them throughout the project. The Environment Agency (EA) and Marine Management Organisations (MMO), are key stakeholders for engagement given the scheme's proximity to the River Avon and the permits that will be required. BCC has experience of working with these organisations through recent delivery of sections of the New Cut Walls. National Highways have also been engaged due to the role the complex plays as a diversionary route for the SRN. Bus operators, including Stagecoach and First Bus, have been highlighted as additional key stakeholders due to the number of bus services that use the A3029.

The proposed contractor, Walters, will assist with managing stakeholders. BCC and Walters have experience in managing stakeholders on similar infrastructure projects using a proactive approach to target

communications around milestones and potential disruptions ahead of time, rather than reactively once work commences.

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
Requested DfT investment	£996,271.40	£11,457,121.07	£23,412,377.83	£13,947,799.56	£49,813,569.85
LA contribution	£200,000.00	£2,300,000.00	£4,700,000.00	£2,800,000.00	£10,000,000.00
Other contribution	£	£	£	£	£
Total costs	£1,196,271.40	£13,757,121.07	£28,112,377.83	£16,747,799.56	£59,813,569.85

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.

BCC Bridges and Highway Structures receives an annual budget of around £800k to conduct structural maintenance across the city's asset portfolio. The estimated cost of this scheme far exceeds this allocation, making delivery through existing budgets unviable. Funding the scheme locally would require diverting resources from safety-critical maintenance elsewhere in the asset portfolio and/or creating unsustainable pressure on the Council's capital programme

BCC has sought to manage its assets through prioritisation of available funding, focusing on essential and safety-critical works. Within the Programme Level SOBC, approximately 90% of the available budget is committed to health and safety-related interventions. This has limited the Council's ability to address preventative maintenance requirements and wider structural renewal. The Programme Level SOBC identified a funding gap of over £200m across the Harbour Area to deliver the desired asset management approach. This demonstrates that existing budgets are insufficient to address the scale of maintenance and regeneration works required in the city.

As a result, BCC has adopted a reactive approach, addressing issues as they arise rather than undertaking comprehensive interventions. The scheme's location on the strategic A3029 corridor further constrains delivery, as the required traffic management increases costs and operational complexity, deterring proactive interventions. However, as the asset continues to deteriorate, the

risks associated with deferring works have increased, making intervention unavoidable and highlighting the limitations of managing the scheme within existing budgets. Deterioration is unlikely to be linear and programmed inspections cannot provide notice of a catastrophic failure, further complicating BCC's ability to manage budgets.

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.

Previously, BCC adopted a reactive maintenance approach, repairing the infrastructure after issues arose and restoring operations as quickly as possible. This approach is more disruptive and financially inefficient and is forecast to be more costly in the long term (evidenced in the Programme Level SOBC). The SAVI analysis highlighted that while the initial cost is more, over a 30-year period the capital cost to BCC will be similar between a transformation renewal option and a reactive option. Failure to address the deterioration of Avon Fixed Bridge could result in the need for full structural replacement, currently estimated at £55m. This proposal provides a lower-cost solution, replacing the drop-in span, improving half-joint access, and completing concrete repairs. The network-wide improvements (waterproofing, parapet works) will reduce future deterioration risk across the asset package and improve whole-life performance.

As the complex continues to deteriorate, complex closure becomes inevitable but due to the scheme's strategic significance, locally and regionally, BCC is expected to keep inspecting the structures to stop them failing completely with the ambition of identifying alternative funding sources and ultimately complete this scheme.

The life cost without the scheme is £37.5m (ex. Inflation), predominantly due to the consequences of traffic management, continued inspections and maintenance after closure (See OMR cost breakdown in Appendix H). The traffic management will see long-term carriageway closures forcing BCC to re-sign a substantial number of roads. This is expected to be highly disruptive and costly considering the central location of the scheme.

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.

BCC have commissioned Walters and AECOM to estimate the cost of the scheme. Walters have derived cost estimates based on engagement with third party suppliers to reflect current market rates. A detailed table of costs for Avon Fixed Bridge can be found in the Walters document and report in Appendix E1,E3.

AECOM have estimated the remaining structures and wider network interventions (Appendix E4). Repairs to defects had been estimated as part of the Principal Inspections carried out in the last few years. These prices had been based, where possible, on rates taken from the Structures Asset Management and Planning Toolkit (SAMPt) adjusted by CPI to current rates. For item renewals, such as waterproofing and parapets, prices were taken from SPONS. Where access costs, such as scaffolding, were considered to be significant elements of the cost, these were added based on experience.

The total price for each structure was then factored to include Design (10%), Preliminaries including Traffic Management (40%) and Supervision (10%), Where appropriate additional factors were included to account for working above water (20%), limited access (20%) and unusual engineering complexity (30%). A higher than usual value has been applied to Traffic Management due to the complexity of the scheme and the volumes of traffic involved.

These resultant costs for the scheme were then 'sense checked' by a cost consultancy against schemes that were currently or recently in 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.

BCC has reviewed project risks and further engaged with their S151 officer to derive a risk contingency of 30%. Historically, BCC typically uses a 40% contingency for the initial cost estimate at the concept design stage, however the work to date, ECI support and knowledge of the structures has increased the confidence of the cost estimates and so a factor of 30% is proposed. This level of risk is considered appropriate given the fact that detailed design has not been completed on any of the scheme elements. In addition, the highway network in this area is complex and interdependent. As a result, the phasing of planned work to keep traffic flowing in Bristol may require what would be otherwise inefficient methods of work to be adopted.

The contingency is also informed by the existing knowledge of the scheme with IPs, outputs from the risk workshop, including the scheme risk register, known tidal and environmental risks (within which the contractor has experience of working), potential unknown defects, statutory undertaker assumptions, inflation (market volatility), traffic management, and the current stage of scheme design.

As stated in the DfT funding criteria, any costs exceeding the approved funding will be met by BCC through its own funding arrangements and governance processes.

- 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.

BCC will contribute to scheme costs and the project team have received internal confirmation that it will receive funding through the Prudential Borrowing Framework in line with BCC Treasury Management Strategy.

BCC will contribute £10m.

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?

04/01/2027

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

28/02/2030

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 will be delivered by BCC via a procured contractor. From the current stage, BCC will complete detailed design, secure approvals and progress procurement. Management of the scheme is overseen by the BCC Bridges and Highway Structures team, led by Chris Dooley with a dedicated NEC Project Manager, Supervisor, Quantity Surveyor and an assistant engineer full-time to deliver the project. The project team will be supported by the Transport PMO and a series of monthly programme and portfolio boards that provide oversight, escalation routes and decision-making. Progress, risks, and programme are monitored through regular meetings and monthly dashboard reporting, with a formal change control process in place for scope, cost and programme adjustments.

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?).

A risk review workshop highlighted the following delivery risks/ challenges and actions to address them:

Risk: A key delivery risk and constraint is the nature of the A3029, which forms part of the strategic highway network. Minimising disruption to road users and maintaining network operations throughout the works is critical to successful project delivery. Action: Early engagement with key stakeholders such as North Somerset (already expressed interest in support design) a traffic management plan to ensure traffic disruptions are minimised. Walters, along with their third party, advises a temporary cross over arrangement under a contraflow arrangement. See Walters Avon Fixed Bridge Report for the full traffic. If this application is rewarded, this detailed delivery plan will be shared with the relevant parties. Risk: The scheme has a package of four structures and network improvements. The different elements of the package all need completion before March 2030. A risk is that delays and slippage of the programme to one structure will impact the rest of the programme. Action: Avon Fixed Bridge is the largest intervention and it posed the greatest risk of delays. Walters were used to deliver a conservative realistic approach. Along with their technical knowledge and experience, they engaged with a number of third parties and designed measured and pragmatic programme to avoid an ambitious delivery plan.

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.

A detailed risk register has been developed for this submission and will continue to evolve as the project matures. The risk register will be updated by the PM with inputs from the project team, including the ECI and the construction contractors. The register will be regularly reviewed and updated throughout the project lifecycle. Risks are categorised, assigned owners, and supported by defined mitigation measures. Each risk is assessed using probability and impact to generate an initial rating, with residual risk scores applied following mitigation. BCC's risk management strategy adopts a proactive and systematic approach, seeking to avoid, mitigate, transfer or accept risks as appropriate. Mitigation measures will include additional surveys, technical investigations and early stakeholder engagement to reduce uncertainty. Risk controls are implemented through preventive, corrective, directive and detective actions, with delivery teams responsible for

managing and escalating risks to the PM. A separate Designers' Risk Register focuses specifically on design-related hazards, their potential impacts, and the measures taken to eliminate or mitigate them during the design process. It ensures compliance with CDM Regulations 2015, captures residual design risks, supports multidisciplinary coordination, and provides a clear audit trail of design decisions. Together, these processes ensure risks are actively managed to support safe, efficient delivery.

- 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.

While the structures are owned by the Council and do not require third-party consent for intervention, the complexity of the site will require the following permissions for delivery. To facilitate delivery on the highway, BCC will secure a Temporary Traffic Regulation Order (TTRO). In accordance with the relevant legislation, BCC will undertake consultation with the police, emergency services, and other key stakeholders, and will notify the public through advertisements in the local press to provide advance warning of disruption to the A3029 and Merchants Road. The scheme is in close proximity to the River Avon, recognised by the EA as a 'main river' and will therefore require their permission. BCC is currently working closely with the EA and the MMO on the ongoing New Cut River Walls along the River Avon. Continued engagement and collaboration with the EA will be done in line with the Environmental Permitting Regulations, as temporary works will be required during construction, including the installation of temporary structures. BCC also plans to engage with the Harbour Authority to minimise disruption to the waterway and its associated activity, such as the annual Bristol Harbour Festival during the summer period.

- 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.

Improvement to the Plimsoll Swing Bridge will help to ensure this structure is climate-resilient and continues to swing in all weathers and is resilient to extremes of temperature which have recently led the bridge to become stuck open. The project team will use the Capital Portfolio Sustainability Framework to ensure that climate adaptation considerations are made throughout the development of the scheme. The BCC corporate strategy and sustainable policy is ENV4, Climate resilience, investing in infrastructure that helps the city adapt to the effects of climate change. The framework defines climate resilience as the ability to adapt and maintain essential functions in response to climate change. The scheme will make a positive contribution to Bristol's climate resilience objectives as it repairs essential assets on the Cumberland Basin. The scheme will provide essential infrastructure resilience, helping to safeguard the transport network and support the long-term adaptation of the city to future climate conditions.

- 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).

In line with Bristol City Council (BCC) guidance, the scheme will follow a Carbon Management Plan (CMP) process, supported by BCC's Sustainability Officer at key stages. The CMP will be developed in accordance with BCC's Capital Portfolio Sustainability Framework (Appendix I), which sets sustainability objectives throughout the project lifecycle, from Stage 0 (pre-start) to Stage 5 (operation). A core objective

is the reduction of embodied carbon, supporting the One City Climate Strategy target for Bristol to achieve carbon neutrality by 2030. Embodied carbon will be a key focus of the scheme, as it can account for 40-70% of whole-life emissions associated with new infrastructure. A baseline embodied carbon assessment has estimated total emissions from the Avon Fixed Bridge repair at 539 tCO₂e, including emissions from material production, transportation and construction activities. The assessment also considers maintenance and replacement activities over a 60-year operational period. A significant carbon-saving measure has already been incorporated through the decision to replace only the drop-in span of Avon Fixed Bridge rather than undertake a full bridge replacement, substantially reducing embodied carbon impacts. During detailed design, a carbon management workshop will identify further opportunities to reduce emissions from the wider project. Areas for consideration will include minimising the use of carbon-intensive materials, sourcing materials locally where feasible, and improving the efficiency of construction plant and equipment.

- 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.

In September 2022, BCC engaged with the statutory undertakers in the area through a New Roads and Street Works Act (NRSWA) C2 Enquiry. It can be confirmed that no additional statutory undertakers have been identified since this enquiry was made. The NRSWA C2 includes a series of correspondences between BCC and utilities in close proximity to the scheme, including Bristol Water (water), Wales & West Utilities (gas), Western Power Distribution (electricity), Virgin Media (telecommunications), and Wessex Water (wastewater and drainage). For those structures that will receive maintenance rather than full transformational change the impact from statutory undertakers is expected to be limited. For example, Western Power Distribution have an underground low voltage line by Plimsoll Swing Bridge, but as there will be no excavation as part of the scheme, this asset will not be impacted. Wales and West Utilities have highlighted a low-pressure gas network (21mbar – 75mbar) in close proximity to Plimsoll Bridge; however, the works are not expected to impact this infrastructure. Avon Fixed Bridge supports a watermain on each of its two decks. These will require diversionary works to allow the drop-in spans to be replaced. Additional engagement with the statutory undertakers will be conducted through the design stages, with any resulting risks to captured within a BCC risk register.

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)

An initial Equality Impact Assessment was undertaken for the scheme which commits the council to develop a full Equality Impact Report should the bid be successful. This has been signed off by our Equalities Team and Director. The full assessment will need to be responsive to the final scheme design and any temporary measures during the construction phase. Of the nine groups with protected characteristics Disabled people are most at risk from disproportionate impacts. Specifically this around the management of temporary traffic arrangements during the construction phase. The team will ensure that mitigations are in place so that diversionary routes for disabled people who walk, wheel or cycle are fully accessible and Equality Act compliant. Circuitous diversionary routes can also create challenges for older people, pregnant people and those in maternity for whom longer distances can create barriers to essential services. We will ensure we effectively communicate the details and duration of any diversionary routes via different media and channels so that our residents can prepare in advance.

Disproportionate impacts to groups with protected characteristics are more likely to occur under a reactive maintenance scenario as design options, time and funding are likely to be more pressured than if the works were planned. In this way receiving investment from the Structures Fund will help the council meet its statutory obligations around Equalities more effectively.

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.bristol.gov.uk/residents/streets-travel/transport-plans-and-projects>

3.3 Declarations

Senior Responsible Owner declaration

As Senior Responsible Owner for [The Cumberland Basin], I hereby submit this request for approval to DfT on behalf of [Bristol City Council] and confirm that I have the necessary authority to do so.

I confirm that [Bristol City Council] 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: Shaun Taylor



b) Signed:

c) Date: 31/07/26

d) Email: shaun.taylor@bristol.gov.uk

Section 151 Officer declaration

As Section 151 Officer for [Bristol City Council], I declare that the scheme cost estimates quoted in this proposal are accurate to the best of my knowledge and that [Bristol City Council]:

- 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: Andy Rothery

f) Signed: 

g) Date: 31/07/26

h) Email: andy.rothery@bristol.gov.uk