



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: Staffordshire County Council

b) Scheme / structure name and LHA bridges number: Chetwynd Bridge, B0153

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

Easting: 418758

Northing: 313908

d) Name of Project Manager: Chris Plant

e) Email address: Click or tap here to enter text.

f) Phone number: Click or tap here to enter text.

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): High Pressure Gas Main Portal & Slab Crossing		

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.

Chetwynd Bridge supports the A513 to the southeast corner of the National Memorial Arboretum and is now over 200 years old and at risk of immediate closure.

The original 1824 cast iron arches have a structural capacity of 7.5 tonnes which is unsustainable on this route, see Annex 3.

Emergency measures were first installed in 2019 to prevent errant vehicles passing through the heritage parapet given it has zero containment capacity. The parapet has failed numerous times with vehicles either falling to the watercourse, requiring emergency rescue, or causing extensive damage and associated route closure.

Chetwynd Bridge is an early three span iron arch structure, recognised as the largest surviving pre-1830 cast iron bridge in England. It is currently a Grade 2* Listed Building and has been recorded on Historic England's Heritage at Risk Register.

The 18-tonne structural weight limit implemented in September 2022 was further reduced to 7.5 tonnes in December 2022 due to its deteriorating condition. The signed diversion route is approximately 22 km. Weight restrictions were regularly breached such that a 2.3m wide width restriction and 20mph speed limit were implemented in July 2023.

A structural health monitoring system was installed in September 2023 to remotely inform of damaged components. This system has recorded over 5000 separate vehicles passing over the structure, breaching the weight limit. Each of these movements over stress fragile components which may lead to brittle structural failure.

Due to heritage constraints no further strengthening works are appropriate and an alternative structure is required.

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.

A new bypass structure is required to ensure this primary A route is restored to a condition that is safe to use, Annex 2 provides the scheme drawings. The existing heritage structure will be preserved, supporting local pedestrian access.

The new structure will be to current highway standards, upgrading the current reduced carriageway width, lack of footway and poor vertical alignment. This will permit the route to reopen to all 40-tonne loading and support abnormal load vehicles to SV100. It is important to recognise that due to the current weight and width restrictions, full emergency access is not available to the local community, given fire engines and wider ambulances cannot pass. Improved alignment will reinstate access for emergency vehicles and restore this key route for the local community which has been severely impacted by the restrictions since 2019.

Improved vertical alignment over the structure will improve access to A38 for adjacent residential and commercial properties currently restricted by high flood water levels.

The new parapet has been designed to current containment standards.

Removing over-weight vehicles from the existing structure will address the risk of sudden component failure. Failure of a heritage component could be progressive, requiring immediate closure. A new structure addresses this risk whilst also reducing ongoing maintenance costs. New construction will also accommodate climate change.

Annex 3 provides visualisations for the new structure.

This intervention will remove (a) 7.5 tonne weight limit, (b) 2.3m wide width restriction, (c) 20mph speed limit and (d) single way traffic light control.

The highway will be fully opened without any restrictions.

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.

National Highways has confirmed that when restrictions are removed the A513 will not be utilised as a diversion route by them.

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 need for repair is based on the current structural capacity and condition.

An independent structural assessment was undertaken and checked by Amey Consulting in 2022. This demonstrated the structure is only capable of 7.5 tonne traffic loading. The key findings relate to internal differential movement of components, causing accelerated deterioration and over-stressing of original cast iron elements.

This assessment was based on a full dimensional and condition survey to allow the structure to be accurately modelled by finite element analysis. The findings of the finite element modelling were verified on site through load testing the structure with two 32 tonne lorries placed at specific locations. The excessive movement and direct impact of the elements was confirmed. Over 5,000 significant impacts have been recorded in the monitoring system.

A Special Inspection (Annex 1) was undertaken on 17/09/2025 following reports of over-weight vehicles ignoring the weight limit, damaging traffic management and passing over the structure. Additional concrete spalling was identified where impact has continued to occur with the cast iron element. This inspection concluded the structure is in Very Poor condition, and the continued over-stressing of historic cast iron components is not sustainable. The structure is highly likely to require closure before financial year 2029/30, however a serious defect occurrence could close the structure and route with immediate effect, due to the frequency with which the structure is currently overloaded.

The structural assessment also concluded the existing ornamental parapet had zero vehicular containment, with substandard pedestrian capacity.

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.

Yes, restrictions have been implemented since 2019 and remain in place.

Temporary concrete barriers were installed in front of the existing fragile parapet as an emergency measure in January 2019 to prevent vehicular impact. This width restriction required the installation of single way traffic lights.

There is no pedestrian facility. Due to the length of the structure, temporary reduced width for parapet protection and timing of the light sequences, use of this route by cyclists has become increasingly hazardous due to fast vehicles trying to pass.

An 18-tonne structural weight limit was introduced in September 2022, following the initial structural assessment. This was further reduced to 7.5 tonnes in December 2022 upon discovery of additional defects.

It has not been possible to prevent over-weight vehicles crossing this structure. As a further preventative measure a 2.3m width restriction was introduced in July 2023 to deter larger vehicles. In addition to network signage, red and white water-filled barriers were installed as a physical restriction at each set of traffic signals. Additional barriers were installed at the National Memorial Arboretum roundabout to the west, given this is the last opportunity for vehicles to safely turn around. These measures had little effect and have been repeatedly pushed out of alignment with heavy vehicles continuing to pass through.

To limit dynamic movement of the bridge deck, a 20mph speed limit was introduced in July 2023.

The water-filled barriers were upgraded to concrete in May 2025.

The Traffic Regulation Order is contained in Annex 1.

- 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 the time of this submission, the above restrictions currently remain in place.

It is highly probable this structure will be closed to all traffic well before 2029/30 financial year. The current rate of over-loading is not sustainable.

A permanent closure of the bridge and associated A513 could be imposed at any time, without notice. Based on monitoring data from the 60 sensors, contraventions are especially prevalent in April and October each year. Between September 2023 and January 2026, the system recorded 5,210 instances of over-loading more than 7.5 tonnes. Therefore, we forecast that without the scheme, the bridge is likely to be closed in April 2027.

- 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.

Yes.

A Structural health monitoring system was installed in September 2023, comprising 60 data sensors linked via telemetry to a cloud platform, including:

9 dynamic uniaxial oscillation sensors recording displacement

15 tiltmeters record angular variation over time

36 accelerometers record three-dimensional vibration

Temperature is also measured within the bridge deck to support trend analysis.

From September 2023 to January 2026 the structural health monitoring system recorded 5,210 over-weight vehicles passing over the structure. Two or three over-weight vehicles pass over the structure each day, any of which could result in structural failure and immediate closure of the route.

The structural health monitoring system is linked to CCTV camera footage for direct contact with offending drivers through the support of Police and Trading Standards.

A regional media campaign, letters drops, contact with local communities and police engagement has not reduced the weight restriction breaches.

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.

We have exhausted all options for temporary measures, except for a reactive full closure of the bridge and A513 primary route.

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: 39.52 VERY POOR (Structure may need closing/possible critical element failure)

BCI Ave: 73.68 FAIR (One or more of the functions may be significantly affected)

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 following scores were recorded during a Special Inspection on 17/09/2025 as contained in Annex 1, which contains BCI scores, current restrictions and interventions with monitoring details..

2025 Element Condition:

Primary Deck Element: 3E (Repeated Impact Damage)

Secondary: 3E (Repeated Impact Damage/Spalling)

Deck Bracing: 3E (Repeated Impact Damage)

Handrail/Parapet/Safety Fences: 5B (Repeated impact damage)

Approach rails/barriers: 5E (Repeated impact damage)

Signs: 5B (Repeated impact damage)

2021 Element Condition:

Primary: 2B (Multiple cast iron element and fixing defects)

Secondary: 2B (Multiple cracks less than 1mm)

Deck Bracing: 3E (Poor condition with corrosion throughout)

Handrail/Parapet/Safety Fences: 3C (very poor condition)

Approach rails/barriers: 2C (poor condition)

Signs: Not scored

- 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 A513 is subject to 7.5T and 2.3m width restrictions. It has a BCI critical 39.52 (very poor). Large and heavy vehicles travelling between Burton or A38 southbound and Tamworth are required to make a 22-kilometre diversion to avoid the bridge. The new structure will significantly reduce travel times and operational costs for businesses. It will enable use of A513 and avoid unnecessary use of National Highways network. Agriculture is a key employer locally and farm vehicles and deliveries must undertake significant diversions. Some farms hold land on both sides of the bridge. The new structure will be particularly beneficial to the rural economy at harvest time when vehicles move around for long hours each day. Regular diversions are significantly impacting productivity and profitability for agricultural businesses and their suppliers.

Based on data received from the bridge sensors, the bridge will have to close soon due to failure of a component. IDBR identifies c250 jobs on the eastern side of the bridge that will benefit from this investment. Catton Park (events venue) will also benefit from reduced operational costs to their business. A complete closure will significantly impact visitors to events as A513 is the only A-road approach. They also employ 100s of events stewards etc on temporary contracts who will benefit from better job security. The new structure will significantly improve employee attraction and retention for National Memorial Arboretum (NMA), Catton Park, Tarmac and agricultural businesses by removing the threat of daily diversions due to a complete closure.

- 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.

Continued contraventions will result in the closure of the existing bridge. The new bridge will remove community severance and improve safety for all users. Emergency services vehicles will be able to use A513. The alternative A38 is more congested, impacting response times and health outcomes. The bus service between Tamworth and NMA currently travels the long way around. When the new structure opens buses can serve the route and electric buses will be an option currently unavailable due to weight. The Arboretum/Catton Park will be able to jointly arrange park and ride on event days. A school bus uses the bridge connecting rural communities to catchment schools. A new bridge will prevent the need for multiple vehicles if student numbers increase and will ensure all journeys are within the maximum 1-hour travel time, so students won't have to attend a different school.

The River Tame floods regularly. The new bridge will be constructed to be resilient to the increased risk of extreme weather and potential increased water levels, building climate resilience.

The existing bridge will remain open for safe pedestrian use. Strava data identifies A513 as a key route for cyclists. These are longer distance cycle journeys for leisure and health that will benefit from the new bridge rather than choosing alternative routes.

The new structure will provide reduced fuel consumption, operating costs and exhaust emissions as well as breaking down barriers to accessing jobs, leisure, education and training opportunities for the local community compared to the bridge being closed.

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.

This scheme is a local priority as it addresses a significant infrastructure safety risk on a key route serving local communities, businesses and major visitor destinations, including the National Memorial Arboretum. The existing Grade II* listed bridge is subject to weight and width restrictions, requires a lengthy HGV diversion, and constrains movement across the local and wider highway network.

The proposed scheme supports the objectives of Staffordshire's Local Transport Plan by improving network resilience and reliability, supporting economic growth, and enabling the safe and efficient movement of people and goods. It aligns with the Council's Highways Roadmap to a Better Network, particularly the "Save Our Structures" priority, which focuses on addressing risks associated with ageing infrastructure, reducing long-term maintenance liabilities and creating a more sustainable highway network.

The scheme is consistent with Staffordshire's Highway Infrastructure Asset Management Plan, which promotes lifecycle planning, risk-based investment, network resilience and best value from limited maintenance funding.

The Council is responsible for maintaining and preserving Chetwynd Bridge. However, its age, structural limitations and listed status, create increasingly complex management challenges and rising costs. In 2021, it was one of only four structures in the county rated as "high risk", and in 2022/23 £3m was spent refurbishing the bridge.

The Council has publicly committed to transferring traffic to a new bridge, allowing Chetwynd Bridge to be repurposed as a pedestrian route. This will reduce long-term maintenance liabilities, improve network resilience and safeguard an important historic structure for future generations.

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 bridge is under significant restrictions, weight, width, speed and traffic signals, it is a very visible issue and a key local concern having appeared in local media. There are no controversial elements. The Council has received 31 letters supporting the construction of a new bridge – key letters are in Annex 4. The structure is close to the administrative boundary with Derbyshire and impacting their environmental weight restrictions therefore they have provided a letter of support. To the west is A38T and National Highways have also provided their support.

Planning consent has been applied for, and all objections have been addressed therefore, consent is imminent. Planning includes a formal consultation process. Historic England approval is key as the structure is Grade II* listed. To mitigate the new bridge, extensive consultation and structural modelling has been undertaken including a three-dimensional visualisation (Annex 3). Agreement

has been secured from Historic England. Detailed design work and the planning process has also included engagement with National Grid about a key gas pipeline through the site. Technical approval has been achieved.

Adjacent property owners include National Memorial Arboretum and Catton Park who are supportive. Both need access restored given they have up to 20,000 visitors during an event weekend.

Lichfield and Tamworth MPs are actively campaigning for the new bridge, in addition to locally elected members within Staffordshire and Derbyshire.

The National Farmers Union has met with Staffordshire's leaders on several occasions as the farming community are severely affected by the current restrictions.

- 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 council manages 1,200 bridge structures, in addition to approximately 200km of retaining wall. Many of these assets are now aged and working beyond their serviceable life.

Risk based asset specific plans look to reduce whole life costs, whilst optimising maintenance intervention to minimise disruption to the highway. Structures maintenance is coordinated with other maintenance and renewal activities within the highway, including, third party developers and Statutory Undertakers, such as utilities, Network Rail and Canal and River Trust.

Bridge structures are regularly inspected as required by CS450 Inspection of Highway Structures, as defined in the Design Manual for Roads and Bridges. Inspections are reviewed and maintenance works prioritised by a chartered civil or structural engineer.

All bridges have individual, asset specific management plans to ensure the highway remains safe and fit for purpose. Several tools are available to support asset management planning, such as SAVI (Structures Asset Valuation and Investment Tool), and LoBEG guidance, to produce a risk-based prioritised programme. Limited funds available are required to support inspection, assessment, preventative and routine maintenance, critical renewal and strengthening works. Prioritisation factors include asset condition, capacity, route supported and route crossed, conservation, cost and benefit. Reactive safety works must also be given priority following traffic accidents and storm events. Our aim is to arrest the accelerating deterioration of the asset.

Recent years have required an increased investment in road over rail structures, with the associated access planning requirements. Current funding must also be allocated to inspection, assessment, and monitoring of substandard structures.

- 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.

Chetwynd Bridge is Staffordshire County Council's highest bridge replacement priority, given its location and risk of structural failure.

This is a large scheme the authority cannot afford from within our existing budget. Given the limited maintenance funding currently available, the authority has only been able to undertake limited localised repairs and preventative treatment.

Heritage constraints to the Grade 2* Listed structure prevent any feasible option to strengthen the existing bridge back to 40 tonne capacity. Given Chetwynd Bridge is recognised as the oldest pre-1830 cast iron structure in England, we have undertaken extensive consultation with Historic England, however we cannot make changes to the remaining original fabric of the heritage arch and parapet or affect its appearance. Listed Building Consent would not be granted.

This route requires a new structure, given all feasible maintenance options have been exhausted.

Since 2019 a series of progressive traffic restrictions have had to be imposed. The structural monitoring system has demonstrated weight and width limits are not effective and the structure continues to be over-loaded. We predict full closure of the route is imminent.

To mitigate the impact of route closure, this scheme has been developed by the council for approximately two years, in anticipation of a fund becoming available. We have undertaken structural design, hydraulic modelling, environmental impact assessment, land acquisition and planning approvals, at our risk, demonstrating our commitment to the scheme.

We now request external funding to deliver the construction phase for completion 12 December 2029.

We are ready to deliver.

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 most significant risk is structural failure.

Without delivering this scheme, the structure will continue to be regularly over-loaded until an incident forces reactive closure of the bridge and route. We continue to monitor condition both remotely and on site, however the continual deterioration and impact is not sustainable. Ongoing inspection, monitoring and repair of the temporary measures is approximately £200k per year to the local authority.

Larger vehicles over 7.5 tonnes and 2.3m wide are already requested to use the alternative 22km diversion route, with the associated significant carbon footprint. Closing the route to all traffic would impact vehicle movements within the region from A38 to Tamworth and sever community connections.

This route fulfils a critical role during severe storms events. If the bridge is closed to traffic, there will be a lack of alternative crossings in the region during heavy rain, stranding local premises.

It is difficult to quantify the full cost and impact of a major bridge failure. Considerations include direct, indirect and societal and environmental effects. There would be the initial emergency response to safeguard the public, but the heritage structure is likely to be lost. In addition to route severance, utilities within the bridge may also be affected.

The new structure will still be required, plus the additional cost to the economy, an environmental emergency, legal penalties and loss of reputation following failure of the existing asset.

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.

Residents of Clifton Campville, Edingale and Croxall travel to John Taylor secondary school at Barton under Needwood. The school bus uses Chetwynd bridge currently. Closure of the bridge will cause significant severance for school children. Students may have to attend a different school when the bridge closes, as the maximum home to school travel time is one hour.

For these residents the nearest facilities are in Alrewas which is the other side of the bridge. Alrewas provides the following services and facilities accessible by car: GP, pharmacy, dental practise, chiroprapist, bakery, fish and chip shop, coffee shop, care home and pub. The next nearest facilities are in Tamworth town centre in the opposite direction. Community cohesion and casual conversations that promote independent living etc will not happen. Access to A38 is also key for longer distance connections to employment.

Bridge closure will cause community severance between Alrewas and Catton Park and Croxall Lakes for leisure and exercise. Small businesses expected to experience severance from customers, volunteers and suppliers include dog boarding kennels, shooting range and garden charity.

Agricultural businesses will be less attractive for employees due to the significant diversions required for access.

Strava data identifies up to 275 cyclists per day use the bridge, for leisure and exercise. They will need to identify an alternative, safe route when the bridge closes.

Delivery of a new bridge will maintain existing community connections and enable us to plan public transport and access to National Memorial Arboretum and Catton Park better.

- 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.

June 2026 traffic count shows daily flows of 5837 cars, 827 LGVs, 8 PSV, 86 OGV1 and 4 OGV2. Some of the PSV and OGV1 and all the OGV2 traffic are contraventions to the restrictions. A comparable count on an unrestricted route forecasts daily heavy demand to be 141 OGV1, 139 OGV2 and 13 PSV. See Annex 5 for details. When the bridge closes, heavy and long vehicles will continue to be required to use the A38/ A5 route incurring an additional 9.6km of journey length on average. Light vehicles will be able to travel along A38 then A51 to Tamworth as they can use the humpback bridge at Hopwas, where long vehicles would ground, which is on average an additional 8.6km.

In terms of community severance, the traffic volumes comprise the following community movements: One school bus containing a handful of students, one bus to National Memorial Arboretum, 250 local car trips to work daily, 100s of car trips for temporary employees at Catton Park for events. There are tens of thousands of visitors to each event at Catton Park. When the bridge closes, active travel users will still be able to travel over the bridge. However, cycle usage is expected to significantly reduce as Google will show the road is closed. The maximum number of cyclists impacted by this perceived severance is 275 per day (Strava data). There are few residences within walking distance so with the road closed it is likely that walking volumes will also reduce.

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.

To ensure a robust BCR, the shortest diversion route was utilised in the BCR – the A51 lights diversion. For simplicity all traffic was allocated to this route. This is a hypothetical scenario as it is unsuitable for long and heavy vehicles due to a hump-back canal bridge at Hopwas. It provides a robust assumption because the congestion band is lower for A51 than A38/ A5 and the average speed is also lower, see Annex 5 for details.

The BCR tool provides checks that data has been entered correctly. The check for the without scheme OMR costs is unhappy with spend being included prior to 2030, however, this is very much likely to be the case. Therefore, two version of the BCR tool have been submitted – the core scenario which provides a slightly lower BCR and includes without scheme OMR costs in 2027 to close the bridge and a sensitivity test which passes the checks within the tool only by entering those 2027 OMR costs in 2030 instead. This increases the BCR artificially, but the spreadsheet is compliant. Data is presented for the core scenario. Journey time benefits are the most significant element of the PVB at £300,727,022. The scheme also produces £59,584,234 vehicle operating cost benefits. Decongestion benefits account for £55,539,630. Greenhouse gas and accidents account for £19,305,488 and £10,914,817 respectively. The main benefits arise from retaining an A-road route that is expected to be closed to all vehicular traffic without the scheme. Hence the significant journey time savings.

- 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)	£40,374,539
Present Value Benefits (PVB)	£447,461,087
Benefit to Cost Ratio (BCR)	11.1

- 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.

Costs have been estimated in 2026 prices and baseline inflation of 3.5% per annum has been applied. This provides the nominal costs for the BCR tool. Risk of inflation exceeding this value has been accounted for in the risk workshop process.

Detailed design for the scheme is substantially complete, and planning permission has been submitted. Heads of terms are being drawn up for the land acquisition. Staffordshire's strategic partnership with Amey through the Infrastructure+ contract means that the procurement route is clear and early contractor involvement has occurred. Therefore, the scheme is at full business case stage which for a structure results in optimism bias of 28%. For the operating, maintenance and renewal costs with the scheme in place 55% optimism bias is appropriate for the detail

currently known. Without the scheme, the structure and A road will close which simplifies operating, maintenance and renewal costs. The listed bridge will be maintained as a heritage asset with no weight travelling over it. Staffordshire recently completed a bridge refurbishment and therefore detailed costs are available. Optimism bias of 28% has therefore been applied. A quantified cost risk assessment has been independently undertaken by AtkinsRealis consultants. It has identified a P80 value of £7,114,418 which represents 18% of the total scheme costs. The BCR tool draws on optimism bias as it is the larger value.

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 Scheme Details were completed using scheme-specific traffic surveys, Ordnance Survey mapping data, TomTom statistical datasets, and Department for Transport WebTAG guidance.

Traffic flows for the Chetwynd Bridge/A513 were based on a week-long video-classified Miovision survey undertaken between 24th June and 1st July 2026. As the bridge is currently subject to 7.5 tonne weight restrictions, the survey data was adjusted to estimate unrestricted demand. Using ATC data from the A51 near Upper Longdon, OGV and PSV proportions were applied to normalised A513 results to derive an unrestricted traffic profile. This section of the A51 was judged the most suitable comparator due to its similar rural function.

Diversion route lengths were measured using Ordnance Survey National Street Gazetteer centreline data within GIS software. Average journey times were taken from TomTom Traffic Stats using full-year datasets to provide representative results.

The shortest diversion route via the A38/A51 was used for the toolkit to provide the most conservative and robust assessment, despite being unsuitable for larger vehicles due to the hump-backed bridges and associated weight restrictions at Hopwas. Additional video-classified Miovision surveys on the diversion route were used to determine the appropriate congestion band using the methodology found in TAG Unit A5.4 Marginal External Costs. The diversion route surveys were unsuitable for estimating unrestricted A513 flows, as that section of the A51 is subject to its own weight restrictions.

The appraisal assumes Chetwynd Bridge remains subject to existing restrictions in 2026, before being closed to all traffic from April 2027.

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 BCR tool considers the difference between the new scheme and the road closing without investment. Farmers own land on either side of the river and their diversions far exceed the 22km utilised in the tool – all business value of time. Farms are already leaving land unused due to the weight restriction which is not captured – wider economic impacts. This significantly weakens the competitiveness of farms which could cause long term harm to their financial sustainability. The local tourist sector would also be similarly impacted without the new bridge. Access for large vehicles to Catton Park would only be via Tamworth and car parking at the Memorial Arboretum would be limited to on-site facilities being unable to access additional spaces to the east of the

bridge. Removal of community severance through delivery of the scheme is not monetised – described in Q2.1 h and i above.

Other do-nothing impacts not included are the safety and noise impacts of agricultural vehicles travelling in built-up areas instead of along a rural A-road. Signed northbound diversion along A444 takes heavy vehicles by three schools which will negatively impact pedestrian safety. With the scheme in place journey ambience in terms of driver stress will be improved because drivers can avoid the congested A38 and A5.

- 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).

NA

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.

In 2014 the council entered a strategic partnership with Amey known as Infrastructure plus (I+). Amey is a global infrastructure consultancy and construction partner with proven ability to deliver complex projects through multidisciplinary teams. The I+ partnership has been widely recognised for scheme delivery excellence within the technical community, receiving 59 industry awards since 2014, including refurbishment works to the existing Chetwynd Bridge in 2022/23.

The council and Amey maintain/improve 6,500km of highway, including 1,200 bridges and 200km of retaining wall throughout the asset lifecycle. Services include asset management, highway and structures design, environmental, geotechnical, rail, project management, maintenance and renewals. Each year the partnership delivers approximately 200 bridge maintenance schemes and all inspection and design programmes.

The I+ partnership has been specifically designed to build capacity, add value and ensure highway projects are delivered in the most efficient manner. This is evidenced through the recent delivery of major schemes comparable to the Chetwynd Bridge through the I+ contract, including:

2024 to 2025: £8m A38 Branston Interchange improvement, supporting the 2,500-home Branston Locks development.

2018 to 2022: £63million Stafford Western Access Route, 1.2km strategic link scheme connecting the A34 to A518 containing several new highway structures.

2014 to 2016: £6.5m Branston Locks development, Burton-upon-Trent, west of the A38, included construction of a new road bridge over the Trent and Mersey Canal.

2025: £1m Branston Railway Bridge Strengthening. Responding to the identification of structural defects to design and deliver a complex strengthening scheme over live railway within a compressed 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.

The scheme will be delivered in four stages: pre-construction, mobilisation, construction and opening. Pre-construction includes detailed design, land acquisition, statutory consents, utility agreements, stakeholder engagement, pricing and contract award. Mobilisation covers supply chain engagement, temporary works approvals and site clearance. Main construction is programmed over three years, avoiding winter periods of heightened flood risk, with the scheme opening to traffic in December 2029.

Design and construction will be delivered through Staffordshire County Council's Infrastructure Plus (I+) contract with Amey. This long-term strategic partnership provides integrated design, construction and maintenance services, enabling early contractor involvement, programme certainty, cost transparency and efficient delivery through established governance and supply chain arrangements. Following two years of I+ Early Contractor Involvement (ECI), the project team has developed a value-engineered solution that is well defined and buildable.

The scheme will be delivered under an NEC3 Option C Target Cost Contract, using open-book accounting and a pain/gain share mechanism to encourage collaborative management of risk and cost. Where beneficial, work could also be procured separately through alternative I+ arrangements while maintaining the same governance and value-for-money principles. e.g. advance vegetation clearance could be undertaken in Autumn 2026 to reduce programme risk associated with high-water conditions and nesting restrictions.

Key work packages have been market tested through subcontractor quotations to inform the baseline cost estimate. All elements will be competitively tendered before Contract award. On opening, Staffordshire Wildlife Trust will provide 30-year Biodiversity Net Gain monitoring and highway maintenance will be delivered through the existing I+ contract.

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 Quantified Cost Risk Assessment has identified the most significant risks for the scheme. The top risks are inflation being above 3.5% allowed for, flooding events, planning consent delays, delays to the main gas easement, poor performance of utilities and delays to the discharge of planning conditions. Inflation assumptions being inaccurate and flood events occurring outside the season allowed for are equal top risks – see Annex 8 for the QCRA outputs.

The programme has been developed to take account of seasonal high-water events on river Tame as key bridge construction activities such as the construction of both abutments, the central pier, both beam lifts and flood culvert delivery are only programmed to occur between April and October 2027, 2028 and 2029 – see Annex 7 for the delivery programme. The risk addresses the potential for high water levels to occur outside of those time periods leading to programme delays and additional costs. Careful planning is the main mitigation for this risk, and the programme has been developed based on the sub-contractor tender programme where activities and equipment has been considered in detail. Recent years of weather patterns and flood events have also been considered.

Delays to receiving Environment Agency consent continues to be mitigated by having regular discussions with the EA. They were a key statutory consultee for the planning application, and the consents build on that. The team has developed an excellent working relationship with the EA. Since the risk process commenced, conditional approval for the permanent works has been secured and the conditions attached are very low risk.

For the main gas easement, the mitigation involves de-linking the temporary and permanent works permissions as the permanent works permissions are required 12 months later. This ensures focus on what is required next to keep the programme on track.

Poor performance of utilities refers to the potential risk that utility companies prioritise their daily activities over the new bridge scheme. Mitigation is to ensure contracts are in place early and adequate notifications and notice is given. Time to discharge planning conditions is accounted for in the programme. Additional mitigation is for some work to commence over summer as many of the likely conditions are already known from detailed conversations with statutory consultees and planning officers.

The final key risk is the potential for delay to the delivery of bridge components. Early contractor involvement and timely procurement processes to let contracts when required will help to mitigate this. The delivery team will liaise with suppliers, discussing timescales for casting new components and consider options for over-production to ensure timely delivery.

The three risk workshops supported detailed conversations around potential risks and what is appropriate for inclusion in the risk register. The delivery team has extensive experience in significant bridge construction within Staffordshire, the UK and internationally. The project comprises piled foundations, steel and reinforced concrete bridges, retaining walls, drainage and carriageway construction which are all standard forms of construction in the UK and this design is in accordance with DMRB. The most specialist equipment will be a large crane to lift the beams, but this was also done recently within Staffordshire – at Anker Valley in Tamworth over the west coast main line. The team also has extensive experience in project management of structures and highways schemes. Therefore, following conversations these elements of the scheme were not considered to be significant risks.

- 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.

Third-party organisations support the scheme and there is no requirement for third-party funding. Potential risks are recognised in the quantified risk assessment in terms of the size of the risk and the proposed mitigation.

Environment Agency support the scheme, and technical officers accept the structural design and hydraulic modelling. Conditions required by the EA have been identified through the planning process and sufficient time has been allowed in the programme for the discharge of consents.

Land Purchase: Main land purchase was completed in 2025, and remaining titles are agreed with anticipated acquisition in October 2026. There is support from landowners for the scheme.

Land Access: Requirements for land access and compound areas have been minimised, however where it is required, there has been early engagement and agreement. 50% of legal agreements are already in place and the remaining are anticipated to be completed by October 2026.

National Grid Gas has given technical approval for the oversailing of their apparatus by the construction of a load relieving structure. Gas Main Easement could cause programme delays however this is being mitigated through regular engagement.

Historic England was consulted at an early stage given the adjacent Grade 2* Listed structure, with multiple visualisations ensuring the scheme met their requirements.

Staffordshire Wildlife Trust own the adjacent Croxall Lakes. In addition to their support for the scheme, they will manage the biodiversity improvements for the next 30 years through a biodiversity agreement.

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	£1,454,274	£18,113,853	£13,514,069	£7,276,034	£40,358,230
LA contribution	£200,000	£	£	£5,800,000	£6,000,000

Other contribution	£	£	£	£	£
Total costs	£1,654,274	£18,113,853	£13,514,069	£13,076,034	£46,358,230

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.

The typical annual budget available for structures maintenance work is £0.7m revenue plus £4m capital. This combined £4.7m does not including design and inspection costs. Excluding retaining walls, this funding amounts to less than £4k per structure each year.

The cost of the proposed scheme at £46m (see Annexes 8 and 9), is a level of magnitude greater than the annual budget for all other structures; such that all other maintenance would cease for around ten years.

Historically, repeated accidental damage to the parapet has been repaired, with costs being recharged to third parties where possible. The existing structure has received protective treatment to slow deterioration, including approximately £3m investment in 22/23; however, the ongoing over-stressing is not sustainable and further localised repair failure is likely.

In 25/26 maintenance of the existing restrictions and the associated damage to the traffic management cost approximately £200k.

In anticipation of DfT funding becoming available, the council opted to invest at risk in scheme development, so that we are shovel ready for delivery. This proactive approach has cost £670k to May 2026 in design and ECI, which will increase to an estimated £1 million to include advanced purchase of land and utility modifications.

The construction cost of delivering a new structure is beyond the limited funding available.

This clearly demonstrates the council have done everything possible to manage this structure, but without external funding, the only option remaining is to close the bridge.

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.

Whole life costs for a highway structure are typically evaluated over a 120-year period. Chetwynd bridge has now been in service for 202 years, hence beyond its expected working life. The structure has been operating in conditions never anticipated during its original design.

It is difficult to predict ongoing maintenance costs, given the structure is not constructed from modern, readily available materials. The cast iron arches are brittle, prone to sudden failure and have been repaired on multiple occasions. In 2023 the council delivered a significant conservation scheme costing approximately £3m. Maintenance of the current 7.5 tonne restriction, associated signage and monitoring system cost approximately £200k in financial year 25/26. Cast iron components have now moved out of alignment due to overloading, and the rate of deterioration is accelerating.

It is not reasonable to consider the existing structure remaining open, even to restricted traffic beyond the next 12 months given the frequency of overloading. Beyond this

we anticipate the initial cost of £420k to physically close the route with the installation of concrete barriers and appropriate signage to ensure public safety. There will be a period of enhanced monitoring and maintenance of the closure whilst traffic adjusts to these measures.

The new bridge will support all highway traffic, enabling the existing heritage structure to be repurposed for active travel. Importantly, the removal of heavy traffic loading will eliminate dynamic movement of internal deck components within the existing structure, preventing overstressing and continuous repair of cast iron elements.

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.

We have confidence in our cost estimate following extensive stakeholder engagement and market testing.

Initial design estimates were based on industry rates, for example SPONS price book, utilising 2024 rates and allowing for 3% inflation. At this stage we had included for the main structure, flood spans, BNG, land, and fees. Including a 20% risk allowance we estimated the scheme at £42.5m. A key difficulty had been trying to model inflation given recent price volatility.

Given the design is now substantially complete, the council has engaged closely with our framework supply chain partners to obtain market-tested input on construction methodologies, programme durations and cost build-ups.

Supported by an experienced delivery and estimating team with the appropriate technical, commercial and construction expertise, this has enabled us to identify key risks and opportunities.

The current 2026 baseline cost estimate now identifies key construction activities including preliminaries, temporary works, highway, biodiversity net gain, bridge construction, flood culverts, retaining structures, accommodation works, site supervision and land acquisition. Each component is further itemised by highway specification series, for example, drainage, earthworks, pavement, steelwork, waterproofing, structural concrete, bearings and joints. Detailed cost information is provided in Annex 9.

Inflation of 3.5% has been applied annually. The risk register takes account of the potential inaccuracy of this assumption.

We have commissioned an independent Quantified Cost Risk Analysis, including three workshops to evaluate and mitigate risk. The QCRA took the base cost estimate, to include risk and inflation to recommend a P80 value of £46.36 million. Throughout the QCRA process the risk uplift has reduced from 14.1% to 12.1% above the base cost estimate following appropriate mitigation. The output from the QCRA process is provided in Annex 8.

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 quantified cost risk assessment process considers both uncertainty and discrete risks. Uncertainty around inflation is the most significant uncertainty risk. Inflation is a joint equal top discrete risk. Other key discrete risks such as flooding events, delays to obtaining approval from

Environment Agency and securing the easement for the gas pipe relate to delays to the programme which are likely to have financial impacts as later spend will attract more inflation.

Any risks that occur once the site has been mobilised such as flood events are likely to incur costs if machinery and personnel are on site but not able to make progress. The QCRA process (Annex 8) estimates uncertainty separately from discrete risks allowing the model to distinguish between estimate range and event-based risk exposure. The model uses 10,000 Monte Carlo iterations, providing a stable probabilistic distribution of outcomes.

The total risk allowance is £7,114,418 which comprises £4,810,000 of discrete risks. The P80 value has been added to the base costs (including inflation) in the financial case. This represents 18% of the scheme base costs. The BCR tool utilises the optimism bias value of 28% as it is higher.

- 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.

Staffordshire is committing to allocate **£6m** of Local Transport Grant (£200k in 26/27 and £5,800,000 in 2029) to the total scheme costs.

The four-year funding allocation provided by government ensures that these contributions are available. The 2026/27 combined highways and transport capital programme is reviewed mid-year and now includes £200k for Chetwynd bridge. Mid-year changes are always agreed with the Assistant Director for Highways and the Built County in consultation with Cabinet Member for Strategic Highways.

S151 sign off for this bid provides the commitment for the remaining £5.8m.

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?

5 April 2027

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

12 December 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 council has chosen to front fund the design and consents of the scheme using existing grants to ensure that we are in a strong position to bid for the funding required to deliver the scheme. We know the risks and we are dealing with them, in readiness to start delivery early in the funding period. This has all been possible due to our established Infrastructure+ partnership described in the Commercial Case. An established governance structure is in place (Annex 10) to manage resources, and the council has already appointed a dedicated NEC Project Manager. This will continue when delivering the programme from this current point provided in Annex 7. To ensure delivery within timescales, the Principal Contractor has already established the site managerial team, including Temporary Works Coordinator and identified available resources within the supply chain. Pre-start environmental surveys have been commissioned to reduce any risk to newly identified species. Planning approval is anticipated to be received on 6 August 2026, and land acquisition is expected to be completed by October 2026. Category 3 structural check is due for completion in October 2026 without any significant issues given the robustness of the approval in principle process. This was accepted by designer, independent checker and technical approval authority. Detailed temporary works designs are in progress. For significant operations such as beam lifting and piling, site meetings have already been held with technical specialist. Diversion of the 11kVA overhead line to underground is to be completed in the coming months.

- 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?).

Staffordshire will adopt the recommendations made in the quantified cost risk assessment report prioritising mitigation measures and ownership of the leading risk drivers particularly inflation outside of assumptions, major flooding events, Environment Agency consent delay, gas main easement risks, poor utilities performance, the discharge of planning conditions and bridge component delay. The project team will also ensure that inflation risks are regularly reviewed taking a view of the wider market. A live mitigation tracker with named owners, due dates and evidence of mitigation effectiveness will be developed. This information will then support the refresh of the QCRA, if required, once material mitigation actions have been implemented or at the next project gateway, whichever is most appropriate. Risk information will be clearly presented to the Strategic Partnership Board, highlighting that mitigation improves the overall risk position but does not remove the need for a realistic contingency allowance. Annex 10 provides the governance structure for the project. Risk management will be a standing agenda item at the project delivery team weekly meetings and be fed back to the monthly meetings of the contract management team for major projects which will manage the budget. Unavoidable cost overruns that increase the overall cost of the scheme will be covered by the council's local contribution.

- 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.

Key project controls will be employed through the established Infrastructure+ governance structure provided in Annex 10. There will be a clear decision-making line to the Strategic Partnership Board that has responsibility for authorising key decisions, consisting of the Deputy Leader, Cabinet Members, the Director of Economy Infrastructure and Skills (Darryl Eyers) and Director of Finance (Peter Shakespear). The Staffordshire Highways Operations Board, chaired by Assistant Director for Highways and Built County (James Bailey), meets monthly, reporting to the Strategic

Partnership Board, and is responsible for programme and budget management, risk mitigation and ensuring quality controls are adopted. The Contract Management Team for Major Projects has oversight of the project and reports monthly to the Operations Board. Day to day delivery of the programme (Annex 7) is managed by the Project Team of specialists meeting weekly and liaising with third parties and stakeholders. The Project Controls to be monitored through the governance structure include: key milestones; finances; early warning notices; compensation events; change control; the live risk register; management of subcontractors/suppliers; quality management; key dependencies; independent auditing to ensure expenditure is in accordance with grant conditions; health and safety and communications. The bid has received delegated authority approval from Cllr Peter Mason, Cabinet Member for Strategic Highways. The management of the council's financial affairs are conducted in accordance with Section 13 (Financial Regulations) of the Constitution. Contracts made by the Council comply with the Council's Contract Standing Orders (referred to as Procurement Regulations) in Section 14 of the Constitution.

- 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.

Lichfield District Council requested a Heritage Impact Assessment in 2023 and confirmed that Listed Building Consent is not required. A two span bridge is preferable to three spans, and planning permission is required. Historic England confirmed in November 2023 that Listed Building Consent is not required given we are not affecting the existing bridge. A Heritage Impact Assessment and Planning Permission are required. Specific design criteria have been met including for the new construction to be understated such that the heritage structure remains the focus and is not visible from key locations within the grounds of the National Memorial Arboretum. These constraints have been met. The Environment Agency has been extensively consulted. We have reached agreement in principle on permanent works. The Principal Contractor has been appointed early to expedite temporary Flood Risk Activity Permits. Natural England requirements have been satisfied through submission of a full set of ecological surveys and reports. Main land purchase was completed in 2025, and remaining titles are agreed with anticipated acquisition in Autumn. The National Memorial Arboretum land dedication agreed in principle. Staffordshire Wildlife Trust land dedication agreed in principle. National Grid Gas technical approval received, and deed of easement is progressing. Following a series of formal pre-applications consultations with the above stakeholders, planning permission was first applied for in January 2025. Environment Agency required minor modifications to flood culverts, and National Grid Gas required further information. These matters have been resolved, and planning approval is anticipated to be received on 6 August 2026.

- 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.

The proposed bridge crossing lies within Flood Zones 2 and 3. Met Office Local Authority climate projections indicate that under a 4°C warming scenario, median winter precipitation could increase by 20% and summer temperatures by 7.5°C. The bridge has been designed to remain resilient to increased rainfall intensity; river flows and extreme temperatures through the following measures: Flooding and Hydrological Risks: The Environment Agency-approved design accommodates a 51% increase in river flow above the 1-in-100-year event, with the bridge soffit providing 600mm freeboard above the main channel, equivalent to approximately a 1-in-1000-year event. Hydraulic modelling has informed scour protection requirements. A

wider structure, additional flood culverts and deck drainage designed for the 1-in-100-year rainfall event with a 51% climate change allowance improve floodplain conveyance, while the design minimises debris accumulation during flood events. Drainage, Structural and Temperature Risks: Deep-piled foundations mitigate foundation instability. Temperature-resistant surfacing, durable concrete and appropriately designed expansion joints accommodate future temperature extremes. High-specification surfacing reduces skidding risk in adverse weather. Nature-Based Adaptation: The scheme will deliver 10% Biodiversity Net Gain through wetland, riverside and hedgerow enhancements managed over 30 years. These measures improve habitat resilience, increase surface water absorption during extreme rainfall events and provide carbon sequestration benefits. Network Resilience: The replacement bridge removes existing weight, width and speed restrictions, ensuring a reliable River Tame crossing and preventing future severance of this key route. Retention of the historic bridge preserves active travel connectivity. The scheme exceeds minimum climate resilience requirements set out in LA114 and GG103.

- 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).

As part of our Carbon Management Plan, a PAS 2080 Carbon Assessment Report has been developed, and we have evaluated emissions using DfT's Carbon Bench Marking Tool, as contained in Annex 6. The BCR tool estimates £19,305,488 net present value benefits for greenhouse gas emissions in 2023 prices and values (construction and user carbon combined). The route without diversion is 12.4km long whereas the shortest diversion route along A51 is 21km which is significantly longer for every single vehicle over a 60-year appraisal period. Following PAS2080 guidance, a 347 tCO₂e saving has been obtained from reducing the number of deck spans from three to two, also eliminating the need to construct a second pier adjacent to the river. The steel deck is constructed from weathering steel, eliminating the need for protective painting and the associated maintenance. This saves carbon emission for the delivery and installation of significant temporary works, and associated flood risk. Offsite pre-assembly will optimise quality, efficiency and minimise temporary works access. Approach walls are formed from reinforced earth as opposed to conventional reinforced concrete. Site accommodation is predominantly solar powered, optimising the use of battery powered tools and equipment. As a PAS 2080 certified organisation, Amey will continue to apply its established carbon management approach throughout the scheme. Whole-life carbon has been quantified, and will be monitored and reported, with carbon reduction opportunities identified throughout project delivery. As part of our contract governance structure, carbon emission reduction is a standard item on the progress meeting agenda, reported monthly to the Major Project Contract Management Team. At every stage we strive to reduce carbon through design and delivery.

- 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.

A full utilities search has been undertaken, supplemented with site investigation and extensive knowledge from previous maintenance schemes. National Grid Gas have a 900mm steel high-pressure gas main running east to west, south of the proposed road. Following discussions with National Grid Gas, an assessment of piling vibration was undertaken and deemed satisfactory for the main bridge construction. The proposed road avoids the gas main except for two short crossing points. An assessment of the pipe loadings from temporary and permanent earthworks and vehicle loading has been undertaken and technical approval has been granted to install oversailing protection structures. South Staffordshire Water have a private water supply to the residential property North Cottage, requiring localised diversion. National Grid Electric Distribution have apparatus both underground and overhead. At Chainage 410m the existing

overhead cable running perpendicular to the proposed road will be diverted underground along the regraded residential access. The overhead cable between Chainage 400m and 515m will be diverted underground into the southern verge. BT Openreach have underground apparatus that is affected by the project. Overhead and underground cables will be diverted into the proposed road southern verge between Chainage 40m and 520m to allow access for future maintenance. Traffic Signs maintained by the council will be removed. The design team have requested budget estimates (C3's) from all utility companies affected and we are progressing with advanced site alterations where appropriate at this stage.

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)

Working with partners, including the Walk, Wheel, Cycle Trust, an Equality Impact Assessment has been completed. The new bridge will accommodate all vehicular traffic, allowing the existing bridge to be prioritised for pedestrians and cyclists.

The groups most likely to be positively affected by this, include:

Business Community – The new bridge will remove the need for agricultural and freight vehicles to make the 22km diversion, reducing journey times and costs, while supporting productivity and the local rural economy.

Age (older and younger people) – The scheme will improve safety and support independent travel, particularly for young people. Any uncertainty arising from changes to familiar routes will be addressed through clear communication and engagement with local communities.

Disability – Removing vehicle traffic from the existing bridge will improve accessibility, reduce conflicts between users, and lower noise and air pollution. These benefits will be particularly significant for disabled people, older users and children. We will continue to work with local disability groups to ensure inclusive access.

Sex and Gender – Reduced traffic and improved passive surveillance will enhance perceptions of personal safety, particularly for women and girls. Safety considerations will be embedded in the design of both bridges.

Pregnancy and Maternity – Improved walking and wheeling routes will provide a safer and more convenient environment for people with prams and those with additional mobility needs.

Sexual Orientation and Gender Reassignment – Inclusive, welcoming and well-designed active travel facilities will support all users.

The scheme will be monitored and supported by ongoing engagement, ensuring positive outcomes for all.

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.staffordshire.gov.uk/roads-parking-and-transport/transport-planning>

3.3 Declarations

Senior Responsible Owner declaration

As Senior Responsible Owner for [Chetwynd Bridge], I hereby submit this request for approval to DfT on behalf of [Staffordshire County Council] and confirm that I have the necessary authority to do so.

I confirm that [Staffordshire County 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: James Bailey

b) Signed: 

c) Date: 03/08/2026

d) Email:

Section 151 Officer declaration

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

f) Signed: 

g) Date: 03/08/2026

h) Email: [Click or tap here to enter text.](#)