

Department for Transport

Local Highways Maintenance Challenge Fund Tranche 2B

Warwickshire County Council

Historic Bridge Maintenance Programme (HBMP) 2020 to 2023

Submission Date: 31st October 2019

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Appendix 1 – Scheme Locations

The following map shows the location of the eight proposed highway structures under HBMP2020.

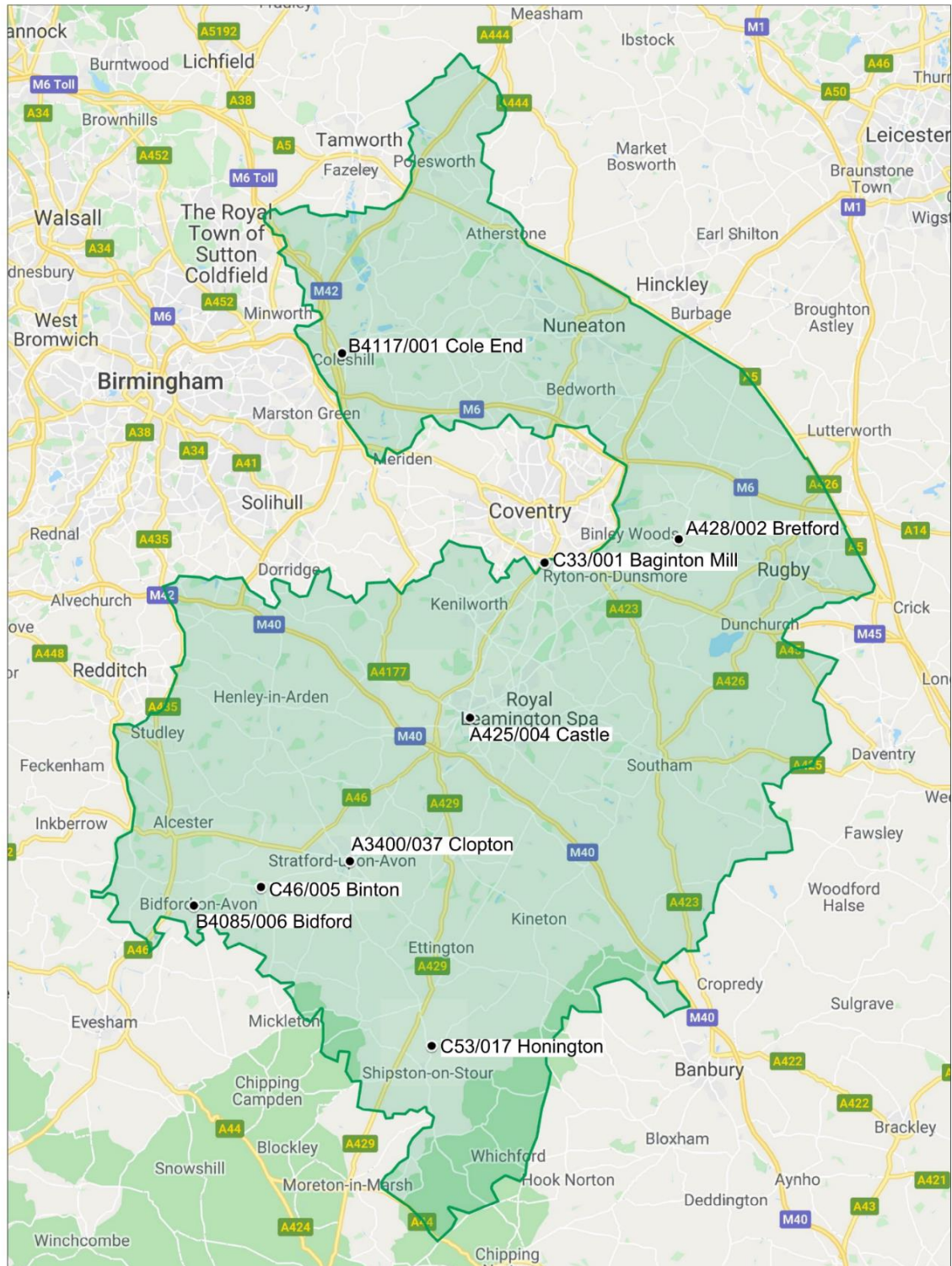










Figure 1 - Site Location Map

Appendix 2 – HBMP Scheme Proposed Works & Commentary

Table 1 - HBMP Scheme Proposed Work

No.	Scheme	Proposed Works	Current Condition	Alternative Options Considered
1	Baginton Mill Bridge 	<ul style="list-style-type: none"> Major stone repairs/replacement to include the concrete-saddling over the arches and address poor waterproofing. Due to the extent of defects, works will need to be undertaken from within the river course and at height. 	<ul style="list-style-type: none"> BCIAv is 76.53 and BCICr is 28.08. Porous/wind stone erosion Stone work elevations are displaying signs of extensive stone erosion, missing stones and it is located within areas of flooding. There is no waterproofing system over the structure. 	<ul style="list-style-type: none"> Minor repair works to replace a few stones; however, this will not be a cost-effective solution.
2	Binton Bridge South 	<ul style="list-style-type: none"> Spandrel and parapet rebuild. Defective elements of stone and brick work repairs under and above water line to be repaired. Due to the extent of defects and the location of them in the highway structure, the works will need to be undertaken from within the river course and at height. 	<ul style="list-style-type: none"> BCIAv is 77.42 and BCICr is 28.08. Bulging spandrel. Leaning parapet The main elements of the structure are suffering from several significant stone fractures. There is undermining to the apron and pier in addition to the retaining wall collapsed. 	<ul style="list-style-type: none"> Apply new weight restrictions or undertake minor repair works as an emergency response.
3	Bidford-on-Avon Bridge 	<ul style="list-style-type: none"> Major stone and brick repairs to the upstream elevation and cutwater elevations. Masonry repair works. Works to be undertaken from within the river course and at height. 	<ul style="list-style-type: none"> BCIAv is 78.47 and BCICr is 55.48. Stone and brick work elevations are displaying extensive signs of stone erosion, missing blocks, missing mortar joints, exposed fill, and located at areas at risk to flooding. 	<ul style="list-style-type: none"> Implement a reactive maintenance service only at point(s) of incident i.e. an emergency response. Due to the extent of defects, an alternative cheaper option is not available to address the identified and extensive surface area requiring immediate repair.
4	Bretford Bridge 	<ul style="list-style-type: none"> Rebuild the eroded stone parapet wall and repair works to the corroded tie rods. Due to the extent of the defects the repair works will be undertaken from a floating platform. 	<ul style="list-style-type: none"> BCIAv is 82.07 and BCICr is 39.52. Major stone parapet erosion and heavy tie rod corrosion Stonework parapet walls are displaying extensive signs of erosion. Heavy corrosion to tie rods. 	<ul style="list-style-type: none"> Implement a reactive maintenance treatment only. An alternative lower cost scheme has not been identified to address the known and extensive surface area requiring immediate repair.
5	Castle Bridge 	<ul style="list-style-type: none"> Stone renovation to repair the deteriorated stonework on the upstream and downstream elevations and at water level. 	<ul style="list-style-type: none"> BCIAv is 87.21 and BCICr is 65.32. Defects at Water Level. Erosion of Stone due to wind scour Stonework elevations are displaying extensive signs of stone erosion, missing blocks, loose stones, missing mortar joints, fractured stones at water level and voids on all elevations. 	<ul style="list-style-type: none"> Undertake the emergency works only. An alternative lower cost scheme has not been identified to address the known and extensive surface area requiring immediate repair.
6	Clopton Bridge 	<ul style="list-style-type: none"> Masonry repair works to address the deterioration of stonework on the elevations and beneath the structure. Works to be undertaken from within the river course and at height. 	<ul style="list-style-type: none"> BCIAv is 75.11 and BCICr is 31.00. Defective stonework Stonework is displaying extensive signs of stone erosion, missing blocks, missing mortar joints located at areas at risk to flooding. 	<ul style="list-style-type: none"> Minor repair works as emergency response. An alternative lower cost scheme has not been identified to address the known a and extensive surface area requiring immediate repair.

7	<p>Cole End Bridge</p> 	<ul style="list-style-type: none"> Stone repairs and strengthening <p>As a result, of the extent of defects and the type of works, these will need to be undertaken from within the river course.</p>	<ul style="list-style-type: none"> BCIAv is 78.51 and BCICr is 50.32. Settlement behind abutment, cracking in wingwalls Significant number of stone erosion and missing blocks and settlement issue at the back of the south abutment. 	<ul style="list-style-type: none"> Implement emergency maintenance service only. An alternative lower cost scheme has not been identified to address the identified defects,
8	<p>Honington Bridge</p> 	<ul style="list-style-type: none"> Major renovation to the missing and eroded blocks. Tie rod replacement. Works will need to be undertaken from within the river course and at height. 	<ul style="list-style-type: none"> BCIAv is 90.05 and BCICr is 28.08. Defective stone elevations, weak extension and corroded tie rods Stonework is suffering from extensive stone erosion, missing blocks, missing mortar joints and is located at areas at risk of flooding. 	<ul style="list-style-type: none"> Apply weight restrictions and undertake minor repair works as emergency response. An alternative lower cost scheme has not been identified to address the defects and extensive surface area requiring immediate repair.

Appendix 3 – Structural Management Analysis

Table 2 - Current BCI Average & Critical Scores, including HBMP Target BCI Av. & Crit. Scores

Structure Reference	Structure Name	BCI Average (Sept'19)	HBMP Target BCI Average	BCI Critical (Sept'19)	HBMP Target BCI Critical
A3400/37	Clopton Bridge	75.11	87.03	31	78.88 (av.2c)
A425/004	Castle Bridge	87.21	88.87	65.32	81 (av.2b)
A428/002	Bretford Bridge	82.07	89.17	39.52	81 (av.2b)
B4085/006	Bidford on Avon River Bridge	78.47	84.04	55.48	81 (av.2b)
B4117/001	Cole End River Bridge	78.51	87.2	50.32	81 (av.2b)
C33/001	Baginton Mill Bridge	76.53	84.88	28.08	81 (av.2b)
C46/005	Binton Bridge South	77.42	84.09	28.08	81 (av.2b)
C53/017	Honington Bridge	69.61	90.05	28.08	81 (av.2b)
		78.12	86.92	40.74	80.74
		BCI Average	HBMP Target BCI Av.	BCI Critical	HBMP Target BCI Crit.

Appendix 4 – Structural Defects to be Addressed

Name: Castle Bridge

Location: Warwick, Warwick District

Road/Structural No: A425/004 Banbury Rd

Works: Major stone replacement

Identified year of repair: 2022/23

Estimated Works Duration: upto 12 months



Name: Bretford Bridge

Location: Wolston, Rugby Borough

Road/Structural No: A428/002

Works: Parapet (x2) repair/replace courses

Identified year of repair: 2020/21

Estimated Works Duration: 6 months



Name: Clopton Bridge

Location: Stratford upon Avon, Stratford Dist.

Road/Structural No: A3400/37 Bridgefoot

Works: Stone replacement

Identified year of repair: 2021/22

Estimated Works Duration: 9 months



Name: Bidford River Bridge

Location: Bidford upon Avon, Stratford Dist.

Road/Struct. No: B4085/006 Honeybourne Rd

Works: Major stone replacement

Identified year of repair: 2021/22

Estimated Works Duration: upto 12 months



Structural Defects to be addressed - HBMP Quick Reference

Name: Cole End Bridge

Location: Coleshill, North Warwickshire Bor.

Road/Struct. No: B4117/001

Works: Stone replacement

Identified year of repair: 2020/21

Estimated Works Duration: 3 months



Name: Baginton Mill

Location: Near Coventry, Warwick District

Road/Struct. No: C33/001 Mill Hill

Works: Major stone replacement

Identified year of repair: 2020/21

Estimated Works Duration: upto 12 months



Name: Binton Bridge South

Location: Welford on Avon, Stratford District

Road/Struct. No: C46/005

Works: Rebuild headwall / masonry repairs

Identified year of repair: 2022/23

Estimated Works Duration: 3 months



Name: Honington Bridge

Location: Honington, Stratford District

Road/Struct. No: C53/017

Works: Major stone replacement & strengthen

Identified year of repair: 2018/19

Estimated Works Duration: 9 months



Appendix 5 – ‘Do Nothing’ and ‘Do Something’ Assumptions

The following assumptions have been made for each of the 13no. structures during the development of this proposed scheme.

Table 3 - Do Nothing / Do Something Assumptions & Scenarios

No.	Scheme	Diversion route (km)	Diversion route description	Diversion route if road closure implemented	Road closure diversion route (km)	Traffic management	What are the Do Nothing (DN) traffic impacts?	What are the Do Something (DS) traffic impacts?
1	C33/001 Baginton Mill – Baginton	14	From Mills Hill/Howes Lane to Coventry Road/Rowley Road (by Airport)	A45, Bubbenhall Bridge (Part of diversion route is in CCC).	16	Road closure - this bridge has two lanes.	Full closure in year 5 for 18 months (6months for design and 12 months for construction works).	Full closure in year 2 for 12 months (construction work).
2	C46/005 Binton Bridge South - Welford-on-Avon	16	From Evesham Road/Binton Road to Binton Road (first turning after the Four Alls	A3400, Seven Meadows Rd,	16	Road closure. Single lane.	Full closure in 7 years. Length of closure being 9 months, 3 months for design and 6 months for construction works.	Full closure for 3 months.
3	B4085/006 Bidford-on-Avon River Bridge	23	Salford Road Tower Hill roundabout to Cleve Road/Honeybourne Road	A46, Aldington, Worcestershire, B4035 (Not Welford on Avon - C Road).	24	Road closure - This bridge is single lane packhorse, with signal control at each end. Reduced temporary weight restriction during the construction process, with a series of closures for operations from carriageway - restricted night working.	Full closure of the bridge to all vehicles in 12 years. Length of closure being 18 months, dependent on the number of span arches to be reconstructed.	Weight limit restriction to be enforced for 12 months for works operations. Assumption: no access for vehicles 7.5t and over. Works to be undertaken from a MEWP and pontoon/scaffold to external elevations. Possibility of many short-term closures due to the requirements of the MEWP parked on packhorse bridge during works.
4	A428/002 Bretford Bridge - Wolston	18.7	A428 - Junction A4071 Parkfield Road and Lawford Road to A46 Coventry bypass roundabout with A428 Rugby Road	A428, A4071, A45, A46, A428	30	Road closure. Bridge closure during construction.	Timescale - 1-2 months after Do Something. Likely to occur in year 20.	Road closure for 6-7 months, with 3 months per parapet to be repaired.
5	A425/004 Castle Bridge - Warwick	N/A	N/A	A425 Myton Rd, A452, A445, A425 (Low bridges and canal river trust bridges on route).	9	Lane closure - this road has two lanes going over the bridge, possible use of two-way traffic lights.	Closure of the bridge. Length of closure being 1 year. Timescale between now and closure in 10 years.	Possible use of adjacent lane closure per elevation, use of two-way traffic lights, combination of cantilever scaffold, MEWP, & tower scaffolding systems. Timescale to be up to 12 months duration for whole scheme.
6	A3400/37 Clopton Bridge - Stratford-upon-Avon	0	N/A	A3400, A4390 Severn Meadows, Grove Rd, Arden St. A3400 Birmingham Rd, Bridgeway	5	Minimal, as scale of works are severely restricted. Intend to operate from water course via pontoon and scaffold on stone elevations only.	Risk of closure to river traffic on navigation channel. 7 years long term weight restriction implemented.	9 month works operation from adjacent marina compound. Possible disruption to navigable channels (x2), operations during restricted times of the year.

7	B4117/001 Cole End Bridge – Coleshill	2	Lichfield Road/Station Road to High Street/Birmingham Road	A446, High St. (7.5T Environmental Weight Limit)	2	Road closure during the works.	Full closure after 20+ years. Length of closure being 12 months for works, in 17 years closure would be for 15 months.	Full closure for 3 months in 2020/21, depending on investigation's findings, and scale of works to be undertaken thereafter.
8	C53/017 Honington Bridge	13	From Fellmill Lane/Fellmill Lane to A3400	A3400, A429, B4455.	14	Road closure. Single lane.	Full closure in year 5. Length of closure being 18 months, 6 for design and 12 for construction works.	Full closure for 9 months.

Appendix 6 - Results of Economic Analysis

Key:

BCR - Benefit Cost Ratio
PVB - Present Value of Benefits

PVC - Present Value of Costs
NPV - Net Present Value (difference between PVB and PVC)

Table 4 - Economic Analysis

No.	Scheme	DS disbenefit, PVB - 2010 prices, discounted to 2010	DN disbenefit, PVB - 2010 prices, discounted to 2010	DS - DN, PVB - 2010 prices, discounted to 2010	DS Scheme Cost (PVC, 2010 prices, discounted to 2010)	DN cost (PVC, 2010 prices, discounted to 2010)	DS-DN scheme cost	BCR	NPV
1	Baginton Mill- Baginton	-£ 6,225,094	-£ 9,032,004	£ 2,806,910	£ 966,654	£ 953,167	£ 13,487	100+	£ 2,793,422
2	Binton Bridge South-Welford- on-Avon	-£ 2,340,421	-£ 6,590,503	£ 4,250,082	£ 679,140	£ 659,428	£ 19,712	100+	£ 4,230,369
3	Bidford-on- Avon River Bridge	-£ 1,069,732	-£ 13,785,573	£ 12,715,842	£ 1,134,308	£ 1,056,344	£ 77,964	100+	£ 12,637,877
4	Bretford Bridge-Wolston	-£ 6,868,730	-£ 7,655,610	£ 786,880	£ 517,346	£ 453,132	£ 64,213	10 - 19	£ 722,667
5	Castle Bridge- Warwick	-£ 1,119,568	-£ 27,834,139	£ 26,714,571	£ 1,192,108	£ 1,128,868	£ 63,240	100+	£ 26,651,331
6	Clopton Bridge -Stratford- upon-Avon	£ -	-£ 405,130	£ 405,130	£ 960,911	£ 933,020	£ 27,891	10 - 19	£ 377,239
7	Cole End Bridge- Stoneleigh	-£ 238,302	-£ 1,088,507	£ 850,205	£ 244,302	£ 219,407	£ 24,895	20 - 49	£ 825,311
12	Honington Bridge	-£ 814,529	-£ 1,552,612	£ 738,083	£ 830,863	£ 818,016	£ 12,847	50 - 99	£ 725,237

Appendix 7 – Letters of Support

The support to date for the proposed HBMP and two associated bids has been overwhelming, and includes but is not limited to;

- Miss Vervan Heal FSA MCIfA, Planning Director for Historic England
- Prof Gordon Masterton OBE DEng DTech DREng FRSE FICE FISTructE FIES MCIWEM
Chairman for the ICE Panel for Historical Engineering Works
- Mrs Elisabeth Uggerlose, Clerk to Bidford-on-Avon Parish Council
- Cllr David Reilly, Coleshill North & Water Orton Division
- Cllr Jeff Clarke, Portfolio Holder for Transport & Economy
- Cllr Peter Butlin, Deputy Leader & Portfolio Holder for Finance and Property (former Portfolio for Transport & Economy)
- Mark Pawsey, Member of Parliament for Rugby and Bulkington
- Nadhil Zahawi, Member of Parliament for Stratford on Avon

All signatories welcome the opportunity to protect and safeguard the County's most prestigious and historic bridges', reverse the decline in their condition, and give each a viable future for future generations to use and enjoy.

The letters of support from the following organisation can be found on the following pages:



Bidford-on-Avon Parish Council

Past President
Gordon Masterton OBE FREng FRSE FICE

18 September 2017

To whom it may concern

Institution of Civil Engineers
One Great George Street
Westminster
London SW1P 3AA
United Kingdom

t 07770 851747
e themastertons@btinternet.com

www.ice.org.uk

**Historic Bridge Maintenance Programme Challenge Fund,
Warwickshire County Council Bid**

I write to convey the views of the Panel for Historical Engineering Works (PHEW) on the significance of the plans that Warwickshire County Council has for the refurbishment of various bridges, which may include Warwick's Castle Bridge & Westgate Arch Walkway, Bidford on Avon's River Bridge, Cole End River Bridge in Coleshill, Bretford Bridge towards Rugby, and Clopton Bridge at Stratford upon Avon. The Panel comprises the most active and informed group of expert civil engineering historians and practitioners in the UK. It is attached to the Institution of Civil Engineers, the oldest engineering institution in the world which will celebrate its bicentenary in 2018. The Institution fulfils its role as custodian of all matters relating to civil engineering by setting up specialist interest groups and panels whose remit is to establish the highest evidence-based respect for its knowledge, expertise and authority. PHEW fulfils that role for the field of engineering history, heritage and conservation.

The Panel regards Bidford Bridge and Clopton Bridge as of the very highest significance, not just regionally or nationally, but in a worldwide context. In the pantheon of engineering and architectural heritage, there are many structures of interest and value. The nation recognises the most important of those through its listed buildings categories. But a very select number of those are further elevated to the status of scheduled ancient monument under the Ancient Monuments and Archaeological Areas Act 1979. Those are the buildings and structures that the nation values to the highest degree; they constitute the extant equivalent of the artworks held in the National Gallery, to those same standards of national importance as applied to our building and engineering heritage. Bidford Bridge (List Entry Number: 1005766) and Clopton Bridge (List Entry Number: 1003739) are two such Scheduled Ancient Monuments, two of a very small number of bridges still in service that are accorded this status. Just as our national collection of artworks is an important part of the visitor experience for tourists worldwide, so is our national collection of Scheduled Ancient Monuments. These bridges can therefore rightly claim to be amongst our national treasures, of wider value to the nation than simply forming an important part of a road network, a role they have fulfilled continuously and successfully for over 500 years.

Clopton Bridge is listed in our database of Historic Engineering Works (No. 679) and its entry in our published volume "Civil Engineering Heritage: Eastern and Central England" (Thomas Telford Ltd, 1994) notes "Despite the later additions, the bridge, especially from the south, presents an appearance largely unchanged for 500 years."



Registered charity number 210252

Charity registered in Scotland number SC038629

I therefore cannot overstate the importance of maintaining such bridges in fine condition.

Of course, the need for maintenance interventions is not restricted to Scheduled Ancient Monuments, and the other Listed Buildings may well have higher priorities should their condition be such that critical maintenance is required. The bridge engineers in Warwickshire County Council are best placed to prioritise those structures most deserving of attention.

The Panel is also expert in the conservation and maintenance of heritage structures, and encourages best practice in conservation techniques. We were fortunate to be able to visit Clopton Bridge, and others, on 7th September 2017, and we studied the works planned with engineers from Warwickshire County Council. We are very pleased at the way that the bridge refurbishment is being approached. The empathy for, and understanding of, the bridges' historical significance is exemplary, and we are as confident as we can be that the restoration works will be faithful and sympathetic to the bridge and its surroundings. When the proposed works are complete, the aim is for these to be a significant enhancement to the appearance of the historic locations, and to add to the enjoyment of residents and visitors.

In summary, we cannot stress highly enough the significance of Warwickshire County Council's historic bridge stock to engineering heritage, and indeed to tourism, as well as being essential, functional parts of the fabric of the critical infrastructure of the County, and we commend all efforts by Warwickshire County Council's bridge engineers to raise funds for the sympathetic refurbishment of these bridges.

Yours sincerely,


[electronic signature]

**Prof Gordon Masterton, OBE DEng DTech FEng FRSE FICE FStructE FIES MCIWEM
Chairman, ICE Panel for Historical Engineering Works**

11 September 2017

Dear Richard,

Historic bridges in Warwickshire

Warwickshire has a large number of important historic bridge structures designated as listed buildings and / or scheduled monuments. These are all heritage assets of national importance.

The County Council has an excellent record of well-considered maintenance and repair of these structures over which we have had regular contact. As well as requiring regular on-going maintenance, these historic bridges are often narrower, more fragile and less suited to twenty-first century traffic than their modern counterparts. This means they are vulnerable to damage from bridge-strikes and collisions, and they regularly require a range of repair works, often urgently required for health and safety reasons. In the most dramatic recent case there was a serious collapse following a vehicle strike to a scheduled bridge which was the subject of an exemplary conservation repair.

Historic England fully supports the prospect of enhanced funding of a bridge maintenance programme in Warwickshire to keep these historic bridges in good order, to preserve and enhance their significance and ensure they are kept safe for the public to use and enjoy. It is vital that the programme has adequate funds to cover the regular cyclical of inspection, survey and maintenance of the bridges, as well as the larger repairs costs following damage and bridge strikes.

We have discussed with you, and some of your County Council colleagues, the possibility of entering into a Heritage Partnership Agreement (HPA) for bridges, which would establish a definitive agreement for the execution of routine works and cyclical tasks, like-for-like repairs and a range of conservation maintenance works. This would allow a variety of maintenance works and urgent repairs to be undertaken, to pre-agreed specifications and standards, without the delays caused by waiting for consents or time-consuming administration. It would also provide greater confidence and facilitate the more efficient programming of annual planned maintenance. We would be very happy to resume this discussion.

With best wishes

Vernan
Vernan Heal FSA MCIfA
Planning Director West Midlands
Historic England
The Axis, 10 Holliday Street
Birmingham B1 1TG
Direct Dial: 0121 625 6828
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Historic England, 8th Floor, The Axis, 10 Holliday Street, Birmingham B1 1TG

Telephone 0121 625 6870 HistoricEngland.org.uk

Please note that Historic England operates an access to information policy.

Correspondence or information which you send us may therefore become publicly available.



direct line 02475 012731
email cllrclarke@warwickshire.gov.uk
my ref HBMP2018



Warwickshire County Council
Communities
Shire Hall Post Room
WARWICK
CV34 4SP

www.warwickshire.gov.uk

27th September 2017

To whom it may concern,

WCC's Historic Bridge Maintenance Programme 2018 (HBMP)

I am writing to endorse and provide my full support towards the County's Council's proposed plans to apply to the Department for Transport's local highways maintenance Challenge Fund in order to secure additional capital funds. By securing these additional monies the Bridge Maintenance team propose to deliver a bold and extensive works programme to a select number of Historic Bridges throughout the County over the next three years.

A fully functioning and healthy transport network is paramount to the County and its customers; including schools, emergency services, businesses, residents and commuters. This essential structural maintenance programme to both ancient monuments and listed highway retaining structures is vital to safeguarding our prestigious landmarks, our heritage which is 'world renowned', and in turn supporting local economic growth through travel, tourism and the day to day commute for all those concerned.

I look forward to working closely with Mark Ryder, our head of Transport and Economy, with representatives from Historic England, building on the County's excellent record of maintenance and repairs to date and playing an active part in any HBMP board to ensure the County's repair and renovation schemes consider their key stakeholders throughout, minimising disruption where possible.

Yours faithfully,

Councillor Jeff Clarke
Portfolio Holder for Transport & Economy



FS 26655

*Working for
Warwickshire*



Bidford-on-Avon Parish Council

IN THE COUNTY OF WARWICKSHIRE

Postal address only:

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Website: www.bidfordonavon-pc.gov.uk
Mrs. E. Uggerløse – Clerk to the Parish Council
e-mail – info@bidfordonavon-pc.gov.uk



R. Roberts MEng CEng MICE
Bridge Maintenance Team Leader
Warwickshire County Council
Shire Hall
Warwick
CV34

25th September 2017

Dear Richard

Bidford on Avon Parish Council considered your correspondence regarding your proposed application to secure future monies to deliver a Historic Bridge Maintenance Programme, at its Parish Council Meeting yesterday evening.

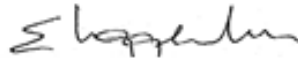
It resolved, unanimously, to support this very worthy enterprise.

Councillors recalled the very effective way you led and managed the repairs to Bidford Bridge when it was so badly damaged, following a motor accident, in June 2015 and enthusiastically endorsed your request to apply for much needed funds to carry out a programme to ensure the good repair of the many historic bridges within our County of Warwickshire, of which Bidford Bridge is a prime example.

The Parish Office is situated in Bramley Way, Bidford-on-Avon, B50 4QG
and is open to members of the public 10.00 am – 3.00 pm Mondays, Tuesdays, Wednesdays and Fridays
and from 1.30-4.30 pm on Thursdays
If you are unable to attend during these times, please call for an appointment.

With the increase in traffic and pollution, it is becoming ever more apparent that a good maintenance regime is essential and the Parish Council trusts you will be successful in your application that will enable you to deliver this much needed programme to ensure these historic bridges remain in use, are safe to use and continue to enhance the Warwickshire landscape.

Yours sincerely



Elisabeth Uggerløse
Clerk to the Parish Council

The Parish Office is situated in Bramley Way, Bidford-on-Avon, B50 4QG
and is open to members of the public 10.00 am – 3.00 pm Mondays, Tuesdays, Wednesdays and Fridays
and from 1.30-4.30 pm on Thursdays
If you are unable to attend during these times, please call for an appointment.



Richard Roberts MEng CEng MICE
Bridge Maintenance Team Leader
Warwickshire County Council,
Communities Group,
Design Service
Sent by email – richardroberts@warwickshire.gov.uk

Councillor Dave Reilly
Coleshill North & Water Orton Division
Warwickshire County Council
Shire Hall,
Warwick.
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davereilly@warwickshire.gov.uk
www.warwickshire.gov.uk

27th September 2017

Dear Mr Roberts,

This is a letter of support for Warwickshire County Council Bridge Maintenance Programme 2018-2021. Warwickshire County Council has sixty historic bridges, eighteen of which are historic monuments. Two of these bridges are situated in the communities I represent, in Coleshill and Water Orton. Cole End Bridge and Vesey Bridge are both 15th century bridges that are much valued heritage assets for the community, which even now after 500 years of daily use still provide invaluable road transport links between local communities.

Warwickshire County Council has an excellent record of ongoing maintenance for historic bridge structures. I fully support the submission of Warwickshire County Council's bid to the Department for Transport Local Highways Maintenance Challenge Fund. The provision of enhanced funding for bridge maintenance will preserve all of our historic assets amid significant residential and commercial pressures over the next 15 years.

It is vital that the Historic Bridge Maintenance Programme has sufficient funds to ensure regular cyclical inspections, surveys and maintenance works, as well as frequent repairs that are needed for damage caused by daily 21st century road traffic use.

I find it incredible that structures built 500 years ago continue, on a daily basis, to provide the only direct routes of access between neighbouring communities. These historic bridges are a back bone of daily life in our communities and as a County Council it is fundamental that we do everything we can to properly conserve and enhance these structures.

Yours sincerely,

Councillor David Reilly

Coleshill North and Water Orton Division

*Working for
Warwickshire*

18 September 2017

Richard,

Warwickshire has many bridges and of which many are listed. It is important that we keep these structures well maintained, as recent events with bridges across the country collapsing or in need of substantial maintenance resulting in the isolation of various communities. There are obvious effects on economic development across the county.

For these reasons, I support this bid.

Councillor Peter Butlin

Deputy Leader

Portfolio Holder for Finance and Property





HOUSE OF COMMONS
LONDON
SW1A 0AA

Nadhim Zahawi MP

Member of Parliament for Stratford on Avon

Our Ref: ZA23836

30 October 2017

To whom it may concern,

Re: Warwickshire County Council's bid to Tranche 2 of the Department for Transport's Local Highways Maintenance Challenge Fund

Please consider this letter as written evidence of my support for Warwickshire County Council (WCC) Bridge Maintenance's application for funding from Tranche 2 of the Department for Transport's Local Highways Maintenance Challenge Fund.

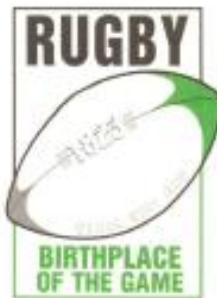
WCC has responsibility for over 1150 highway retaining structures with around 60 of these holding a listed status and 18 being ancient monuments. Many of these historic structures have not been prioritised for maintenance in the past and now, given the intensification of traffic on Warwickshire's highways in recent times, are in need of structural attention. There is also the very critical issue of variable water course levels that are causing underwater defects to many structures.

The principle reason that the maintenance of these threatened highway retaining structures in Warwickshire has not been prioritised in the past is due to constraints imposed by existing capital funding allocations to WCC. Funding from this Challenge Fund would therefore be of great instrumental benefit to WCC and the people of Warwickshire to ensure that their highway network remains operationally sound.

I hope that you are able to consider closely WCC's bid and allocate the funding it needs for urgent infrastructural investment.

Yours faithfully

Nadhim Zahawi



Mark Pawsey MP
Member of Parliament for Rugby



HOUSE OF COMMONS
LONDON SW1A 0AA

T: 020 7219 7136

E: mark.pawsey.mp@parliament.uk



3rd November 2017
RE: YD/WCC/31117

To Whom It May Concern,

I wish to express my support for Warwickshire County Council's bid to Tranche 2 of the Department for Transport's Local Highways Maintenance Challenge Fund.

Warwickshire County Council has responsibility for over 1150 highway retaining structures of various forms across the county including structures within my own constituency of Rugby. I am informed that approximately 60 of these structures are of listed status and 18 are ancient monuments. The very nature of these structures, their age and historic value for example, makes them expensive to maintain and as such it is essential that Warwickshire is successful in its funding bid.

Over recent years the volume of traffic on our county's highway network has increased substantially bringing with it increased pollution and a significant increase in the number of collisions and accidents on our roads. As a result many of our most historic and treasured structures are in urgent need of repair.

Regrettably over the years due to funding pressures it has not been possible for the County Council to carry out necessary (now urgent) repair work. As such it is essential that Warwickshire is successful with this funding bid which will ensure the future of our local highways network.

I do hope that you will view Warwickshire County Council's bid for funding favourably.

Yours sincerely,

Mark Pawsey MP

CONSTITUENCY OFFICE

Albert Buildings, 2 Castle Mews, Rugby, Warwickshire CV21 2XL T: (01788) 579499
Follow Mark @MarkPawsey Mark4Rugby or visit www.markpawsey.org.uk

Appendix 8 - Communication Plan

The HBMP proposes to develop an overarching Communication Plan to engage key stakeholders, local communities, residents and the travelling public affected by the scheme.

Key to its success is ensuring all stakeholders are identified and the most appropriate form of communication is used. The Communication Plan, as the Quality Plan, will be document controlled and regularly reviewed by the Strategic HBMP Board. The Programme Manager, is responsible for updating as required.

A dedicated web page will be developed and act as the 'front page' for the programme of planned work. Individual links will then provide relevant information to each bridge regarding essential information.

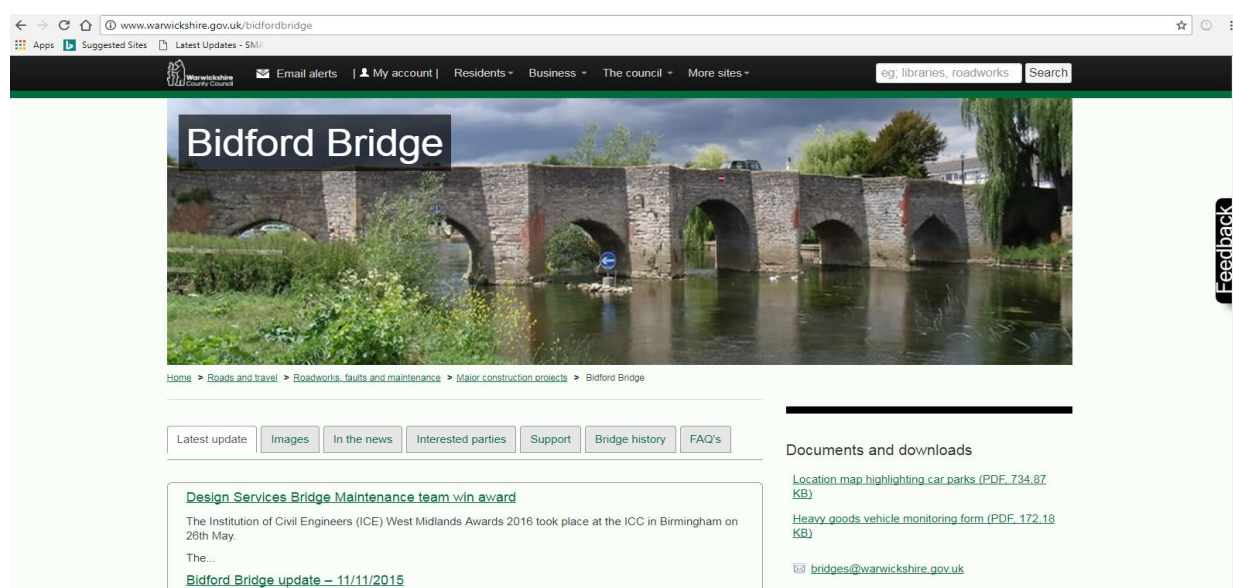


Figure 2 – Dedicated Scheme Information Websites

Frequently asked questions will be developed, and relevant supporting documents made available to the public. For example: complimentary car parks were provided near the works' sites and available on downloadable maps for the duration of the Emergency Repairs to Bidford on Avon River Bridge in June 2015.

Furthermore, members of the public will also be able to:

- Send feedback on each site locations;
- Encouraged to identify any problems arising; and
- Receive regular updates through local newspapers and social media.

Appendix 9 - Procurement

Professional Services

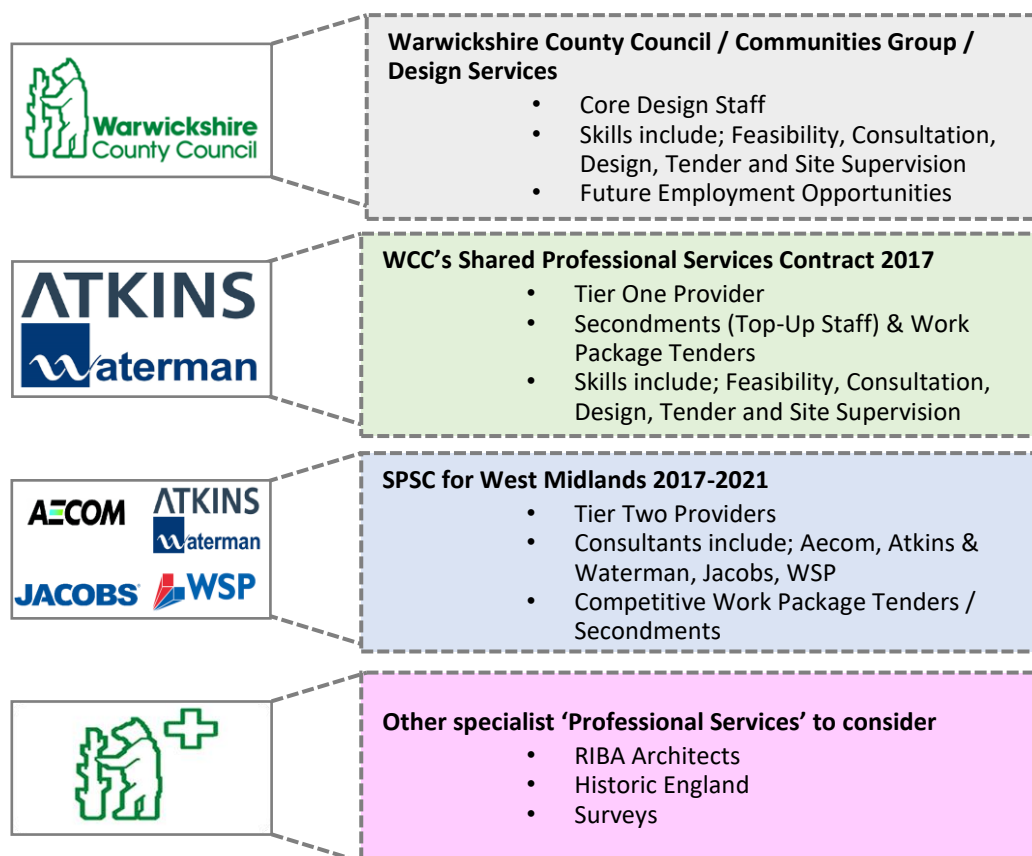


Figure 3 - Procurement Governance Process

The HBMP represents a significant programme of work to be delivered in a small window of operation. The extensive list of highway structures to be repaired will require qualified and professionally skilled individuals to both manage, design and supervise complex operations from commission review, through the design and review stages, competitive tendering and the procurement of construction works, and the supervision of works on site.

WCC are well placed to deliver this bold and extensive programme of work under the HBMP, thanks to the skills set within Communities Group and Design Services. As a Service, they have a good working knowledge of the historic bridge stock, coupled with an excellent working relationship with Historic England. Warwickshire's core design staff will share the proposed scheme design and site supervision amongst its existing Bridge Maintenance team, and where necessary, will seek the support of its current tier one professional services consultant 'Atkins and Waterman'.

Alternatively, the Bridge Maintenance staff will develop Work Packages to be offered to professional service consultants to provide competitive bids for the design and supervision, these include Aecom, Atkins/Waterman, Jacobs and WSP.

Construction Services



Figure 4 - HMC 2016

Warwickshire will utilise both their term highways maintenance contract and an Engineering and Construction Framework (Figure 5), as this provides access to competitively tendered solutions from over 25 Contractors. It is based upon a framework format of specialist lots for Highways, Bridges and Structures work, having different contract values e.g. £0-£250k, £250k - £1M, £1M +. This provides access to competitive tenders leading to the appointment of contractors best placed to deliver the works.

WCC's Highways Maintenance Contract 2016	WCC's Engineering & Construction Contract 2018	Other Available Options
<ul style="list-style-type: none"> • Readily accessible • Access to dedicated 'annual maintenance team' to support structural investigations • Access to Traffic Management, Temporary Works & Qualified Stone Mason Sub-Contractors. 	<ul style="list-style-type: none"> • No. 4 Lots Format, varying in scope and value. • Typically No. 7 Principal Contractors per Lot. • Competitive Invitation To Tender. • Tailored to works type and magnitude of project costs 	<ul style="list-style-type: none"> • Specialist Works • Competitive Invitation To Tender, must invite. • Requires procurement exercise to secure more than three prices.

Figure 5 - Engineering Construction Framework 2018

Appendix 10 – Environmental Impact Assessment

This Risk Assessment must be completed for all contracts above the EU financial thresholds, and is recommended good practice for all other contracts. All suppliers must comply with legislation relevant to the contract requirements; there are questions in the Corporate Standard Pre Qualification Questionnaire that cover this and ask other high level information. Completing this template will help identify where specific environmental impacts could occur, and how they will be managed in the contract specification. For advice contact Julie Burton, Environmental Management Systems Officer, Tel: 01926 418056

Environmental Risk Assessment.		Insert Contract Title and Contract Number:			Historic Bridge Maintenance Programme 2020 (which includes various Site Locations, all of which are to be considered independently as part of the relevant design stages)	
Brief description of contract requirements						
Environmental Risk	Potential cause of damage	Category of Risk			How will you reduce the risk of environmental damage?	
		High	Medium	Low		
Q.1 What environmental legal requirements relate to this contract (if any)?						
Application for EA/Flood Risk Management Flood Consent	Temporary Works during Major Repair phase only (Emergency works exempt)	X			Appropriate systems of work to undertake renovation of the bridge elements. Application to be managed by both Principal Contractor, as dependent on temp. works design.	
Application for EA/Flood Risk Management Flood Consent	Permanent Works features / hard engineering solutions		X		Permanent works to scour defects will be subject to consent application. Application to be managed by Project Supervisor and Principal Designer well in advance of site.	
Those associated with road closures and TMA	In-appropriate diversion routes and signage etc.	X			Consideration for lengthy diversion route(s) (8+miles), including attention to signage, adverse effects on other vulnerable structures on the diversion, watercourses e.g. Binton Bridge & Bidford Bridge.	
Q.2 Could contamination of water occur eg through product usage, spillage or disposal; or service delivery?						
Contamination of water course stemming from plant	Vessels/working platform(s) on the river avon.	X			Risks to be managed by Principal Contractor, in partnership with other Consent authorising bodies such as ANT to undertake works.	
Contamination of water course stemming from works	Loose brick work and mortar.		X		Installation of silt trap downstream of works area. Scheduled before works are undertaken on dismantling precarious stonework on parapets, arches, elevations and/or cut-waters	
Contamination of water course stemming from works	Loose brick work and mortar.		X		Installation of scaffolding system with debris nets	
Q.3 Could contamination of land occur through product usage, spillage or disposal; or service delivery?						
Contamination of greenland in bank site compounds	Generators, vehicles, deliveries		X		Drip trays for generators. Parking boards where required.	
Contaminated land	Failed storage of hazardous materials		X		Appropriate lock-ups and storage systems in line with preliminary site set up and Principal Contractor provision.	
Q.4 What emissions to air could arise eg from product usage, spillage, disposal; or service delivery?						
Plant exhausts	Site logistics, transport, deliveries.		X		Minimise emissions through well controlled site plant logistics, considering existing structural weight limit on bridge for deliveries.	
Noise	Plant / Hand tools		X		Consideration for the adjacent land owners, built environments, traffic and pedestrian routing. Response to vary and address site requirements	
Q.5 Are there are impacts on wildlife/biodiversity?						
Water course	Re-profiling of river bed / dredging works to gain appropriate access to adjacent working area	X			Directly addresses scour and undermining defects relayed via specialist diving contractor's inspection report	
Site Setup	Inappropriate site compound on adjacent land to river course			X	Well planned site compound considering site parking on existing hard surfaces where possible, location of crane to import stone and take deliveries on site, storage cabins and welfare facilities.	
Ecology	Bats / Moles / Voles / Badgers / Birds / Fish / Newts etc.		X		Ecology Surveys / Bespoke works programmes / netting	
Q.6 Is there potential for waste production?						
Hydraulic Lime repair mortars.	Excessive volume mixed onsite			X	Controlled batching of repair mortars to suit insitu requirements.	
Imported Stone / Brick	Post assessment of the existing stone to be replaced, excessive volume of imported stone prescribed under repairs		X		Commission the services of a historic buildings RIBA qualified architect to help identify what stone can/can't be replaced, consider structural implications. Work closely with regional conservation officers and HE.	
Q.7 Is there potential for use of hazardous substances?						
Concrete / Waterproofing Systems / Typical site materials	Mishandling, spillage, inadequate storage facilities			X	Strcit methods of control and application in line with construction plan and method statements / risk assessments.	
Q.8 What energy use is required?						
Construction related levels	Crane, plant, site welfare facilities etc.			X		
Transport / Water course vessels	Vessels used to secure works area, retrieve stone, compliment scaffold instalaltion	X			Considerate number of vessels utilised during operations from 9th June through to mid July. Remit controlled by Avon Navigation Trust as this is their domain of works.	
Q.9 Is there potential for use of non-sustainable resources?						
Stone	Quarried stone to be approved by Historic England as aprt of Consent application		X		Provide material samples, insitu testing, exercises of compare and contrasty, insitu sampling, colour matching etc.	
Q.10 Will there be any effect on community environmental initiatives ?						
Road Closures	Diversion Routes	X			Stakeholder analysis, identifiy those affected, implement effective communications plan, regularly update, minimise windows of closure, consider remote working operations where possible.	
Any additional comments regarding Environmental Risk?						
Site specific	Refer to scheme specific assessments and action plans					
Completed by:					Richard Roberts (Bridge Maintenance Team Leader)	
Date:					05/09/2019	

Appendix 11 – Equality Impact Assessment

EQUALITY IMPACT ASSESSMENT/ ANALYSIS (EqIA)
FOR THE (PROPOSED)
HISTORIC BRIDGE MAINTENANCE
PROGRAMME 2020

Version V01.
September 2019

Equality Impact Assessment/ Analysis (EqIA)

Group	Communities
Business Units/Service Area	Engineering Design Services
Plan/ Strategy/ Policy/ Service being assessed	Historic Bridge Maintenance Programme 2020
Is this is a new or existing policy/service? If existing policy/service please state date of last assessment	New / Proposed; Subject to funding
EqIA Review team – List of members	Bridges (Design & Maintenance) Manager, Bridge Maint. Team Leader(s), Project Supervisors
Date of this assessment	September 2019
Signature of completing officer (to be signed after the EqIA has been completed)	Richard Roberts (Team Leader)
Are any of the outcomes from this assessment likely to result in complaints from existing services users and/ or members of the public? If yes please flag this with your Head of Service and the Customer Relations Team as soon as possible.	Management Arrangements to be implemented as part of project/scheme delivery on a site by site basis



*Working for
Warwickshire*

Form A1

INITIAL SCREENING FOR STRATEGIES/POLICIES/FUNCTIONS FOR EQUALITIES RELEVANCE TO ELIMINATE DISCRIMINATION, PROMOTE EQUALITY AND FOSTER GOOD RELATIONS



High relevance/priority



Medium relevance/priority



Low or no relevance/ priority

Note:

1. Tick coloured boxes appropriately, and depending on degree of relevance to each of the equality strands
2. Summaries of the legislation/guidance should be used to assist this screening process

Business Unit/Services:	Relevance/Risk to Equalities																										
	Gender			Race			Disability			Sexual Orientation			Religion/Belief			Age			Gender Reassignment			Pregnancy/ Maternity			Marriage/ Civil Partnership (only for staff)		
State the Function/Policy /Service/Strategy being assessed:																											
HBMP 2020	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
			X			X	X					X			X	X				X	X					X	
Are your proposals likely to impact on social inequalities e.g. child poverty for example or our most geographically disadvantaged communities? If yes please explain how.																											
NO																											
Are your proposals likely to impact on a carer who looks after older people or people with disabilities? If yes please explain how.																											
NO																											

Form A2 – Details of Plan/ Strategy/ Service/ Policy

<u>Stage 1 – Scoping and Defining</u>	
(1) What are the aims and objectives of Plan/Strategy/Service/Policy?	To deliver and undertake a three year essential maintenance programme to a select list of historic bridge structures (of ancient monument and/or listed status) that support the County Council's transport network.
(2) How does it fit with Warwickshire County Council's wider objectives?	The proposal is in line with current objectives and its obligations as the local highway authority. A long term maintenance programme is a key feature and function of successful asset management.
(3) What are the expected outcomes?	<ol style="list-style-type: none"> 1) Secure funding from two identified sources; DfT's local highway maintenance challenge fund, and WCC's Capital Investment Fund. 2) Plan, design, procure and supervise capital maintenance repair and renovation schemes to historic bridge structure within a three year window. 3) Ensure public safety throughout the construction phase and safeguard the highway retaining structures in the longterm which support the transport network. 4) Obtain value for money by planning the programme and seeking befits based on 'economies of scale'.
(4) Which of the groups with protected characteristics is this intended to benefit? (see form A1 for list of protected groups)	Planning constructions works and giving consideration to protect disabled members of the public in advance, as well as the elderly and parents with pushchairs i.e. temporarily restricted spaces.
<u>Stage 2 - Information Gathering</u>	
(1) What type and range of evidence or information have you used to help you make a judgement about the plan/ strategy/ service/ policy?	Drawn on experience of managing public sector construction works located on the highways network including a variety of footbridges, footpaths, pedestrian routes, live carriageways and watercourses.

(2) Have you consulted on the plan/ strategy/ service/policy and if so with whom?	No. The intended programme proposes no permanent alterations to the historic bridge locations at present. Historic England are unlikely to support significant changes to these protected sites, and therefore we are planning restoration and repair of existing assets only at this time. Temporary works and site footprints in the making may have impact on the various audiences identified /listed. Sufficient planning should however minimise temporary disruption and safeguard all members of the public from construction works however.		
(3) Which of the groups with protected characteristics have you consulted with?	None; however, present codes of practice and guidelines available to design site features will be utilised in advance, such as; The Disability Discrimination Act 1995 & the design guide 'Inclusive Mobility', this includes levels of lighting required to safe guard the 'elderly' within a public space.		
<u>Stage 3 – Analysis of impact</u>			
(1) From your data and consultations is there any adverse or negative impact identified for any particular group which could amount to discrimination? If yes, identify the groups and how they are affected.	RACE NO	DISABILITY YES	GENDER NO
	MARRIAGE/CIVIL PARTNERSHIP NO	AGE YES (Elderly)	GENDER REASSIGNMENT NO

	RELIGION/BELIEF	PREGNANCY MATERNITY	SEXUAL ORIENTATION
	NO	YES	NO
(2) If there is an adverse impact, can this be justified?	<p>An adverse impact should be the very last resort considering the advanced planning and level of consideration given as part of the construction works design stages.</p> <p>Features of the works programme may include; road closures, lengthy diversion routes, closed footpaths, closed footbridges, public lighting temporarily turned off, restricted traffic management, restricted spaces (site dimensions on footpaths).</p>		
(3) What actions are going to be taken to reduce or eliminate negative or adverse impact? (this should form part of your action plan under Stage 4.)	<p>Implementing effective traffic management scheme designs in advance. Adopt a successful communications plan which raises awareness of the disruption to the transport network at these site locations in advance of the envisaged start dates. Continually update stakeholders and members of the public on progress whilst on site. Safeguard pedestrian routes where possible, including cycleways, and access across these river bridges for all. The maternity class has been identified as those with buggies and pushchairs, as catered for in previous construction works and routing of pedestrians/ramps/walkways etc.</p>		
(4) How does the plan/strategy/service/policy contribute to promotion of equality? If not what can be done?	<p>By implementing a 'Considerate Contractor' policy as part of its tender process, by rewarding those who can demonstrate promotion of equality through the County's pending 'quality' assessment of tenderers likely to enter competition. Refer to the Engineering Construction Framework and procurement options available.</p>		
(5) How does the plan/strategy/service/policy promote good relations between groups? If not what can be done?	<p>As above, as a feature and 'quality assessment criteria of the tender process for construction works.</p>		
(6) Are there any obvious barriers to accessing the service? If yes how can they be overcome?	<p>No</p>		

(7) What are the likely positive and negative consequences for health and wellbeing as a result of this plan/strategy/service/policy?	The HBMP is essential to the health and wellbeing of local residents who live within the proximity of these site locations, and for commuters who cross the structures on a daily basis. Without these works the highway retaining structures are likely to fall into decay, and require subsequent road closures and/or diversion routes to deliver complicated lengthy unplanned repair schemes i.e. reactive rather than proactive repair.
(8) What actions are going to be taken to reduce or eliminate negative or adverse impact on population health? (This should form part of your action plan under Stage 4.)	Through effective project management the County will undertake its mandatory functions to deliver appropriate levels of control on risks to both the work force, commuters and members of the public whilst delivering major construction works on the transport network. Key tools and features per scheme will include construction health and safety plans, traffic management, the use of advance signage, communication plans, stakeholder meetings, and means to safeguard the public either through the site during the programme, or along the preferred diversion route.
(9) Will the plan/strategy/service/policy increase the number of people needing to access health services? If so, what steps can be put in place to mitigate this?	No
(10) Will the plan/strategy/service/policy reduce health inequalities? If so, how, what is the evidence?	No

<u>Stage 4 – Action Planning, Review & Monitoring</u>					
If No Further Action is required then go to – Review & Monitoring	N/A				
(1)Action Planning – Specify any changes or improvements which can be made to the service or policy to mitigate or eradicate negative or adverse impact on specific groups, including resource implications.	EqIA Action Plan				
	Action	Lead Officer	Date for completion	Resource requirements	Comments
(2) Review and Monitoring State how and when you will monitor policy and Action Plan	At the key milestones of the envisaged programmes per site location, i.e. design stage, procurement, pre-construction, during site supervision and at monthly progress meetings, post construction review (lessons learnt).				

Please annotate your policy with the following statement:

‘An Equality Impact Assessment/ Analysis on this policy was undertaken on 5th September 2019 and will be reviewed on securing the necessary funds to deliver the Historic Bridges Maintenance Programme 2020, and as part of the scheme management per site, at the key milestone dates.