Local Highways Maintenance Challenge Fund

Application Form: bids for funding in 2019/20

The level of information provided on this form should be proportionate to the size and complexity of the works proposed. An Excel data proforma should also be completed.

Note that DfT funding is a maximum of £5 million per project for bids in 2019-20. An individual local highway authority may apply to bid for only one scheme. Funding will be provided in 2019/20, but it is recognised that construction may go into 2020/21 as well. The closing date for bids is 31 October 2019.

For schemes submitted by a Combined Authority for component authorities a separate application form should be completed for each scheme, then the CA should rank them in order of preference.

Applicant Information

**Local authority name:** Leicestershire County Council (LCC)

**Bid Manager Name and position:** Ann Carruthers, Director of Environment and Transport

**Name and position of officer with day to day responsibility for delivering the proposed scheme.**

**Contact telephone number:** 0116 305 7000  
**Email address:** ann.carruthers@leics.gov.uk

**Postal address:** Leicestershire County Council  
Environment and Transport Department, County Hall  
Glenfield  
Leicester  
**Postcode** LE3 8RJ

**Combined Authorities:** Not Applicable

If the bid is from a local highway authority within a Combined Authority, please specify the contact and ensure that the Combined Authority has submitted a Combined Authority Application Ranking Form.

**Name and position of Combined Authority Bid Co-ordinator:**

**Contact telephone number:**  
**Email address:**

**Postal address:**

When authorities submit a bid for funding to the Department, 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, the local highway authority must also publish a version excluding any commercially sensitive information on their own website within two working days of submitting the final bid to the Department.

**Please specify the weblink where this bid will be published:**

### SECTION A – Description of works

**A1. Project name:** End of Life-Cycle Bypasses

**A2. Headline description:** Carriageway Strengthening to End of Life-Cycle Bypasses

**Proposed start date:** February 2020

**Estimated Completion date:** December 2020

**Brief description:**

We have three bypasses constructed in the 1970’s, 80’s and 90’s that have come to the end of their lifecycles and major maintenance work is now required to bring them back to a condition where we can expect a 20-year design life. The three bypasses are:

1. **A47 Hinckley Northern Perimeter Road (Dodwells Road and Normandy Way), Hinckley**
   This road was designed and constructed by Leicestershire County Council (LCC) in 1982 (37 years ago) and we have maintained it, in line with available budgets, by carrying out small maintenance schemes, surface dressing and patching works. It is now in need of deep carriageway repairs. This work has been prioritised as number one on the list of highway schemes across the county. There is also a canal bridge which needs re-waterproofing, as well as a culvert close to Dodwell’s roundabout which Highways England are looking to widen to accommodate greater traffic flow, along with footway and cycle track renewal works that run alongside the road on both sides. Subject to Highways England works programme these works can be undertaken at the same time.

2. **A6 Market Harborough Bypass**
   This section of road was constructed by the Highways Agency in 1992 (27 years ago) but has been maintained by Leicestershire County Council by carrying out small maintenance schemes and by surface dressing. It is now in need of deep carriageway repairs. These works are priority number five on the list of schemes across the county. Part of the A6 scheme runs through Northamptonshire and this section will also be treated. Northamptonshire County Council have given us their support for this work.

3. **A426 Blaby Bypass**
   This section of road was opened in the early 1970’s and has been maintained by replacing the surface course and by surface dressing. It is now in need of more substantial repairs. Again, these works are of a high priority. Other work to be undertaken in conjunction with this would be re-waterproofing a subway.

These bypasses have been maintained with a combination of localised surface course renewals and multiple surface dressings. They have reached the end of their life-cycles and strengthening works are required to rectify the defects present and to restore a 20-year design life. All three bypasses are “shovel ready” and can start with immediate effect.

There are two significant structures, Dodwell’s Canal Bridge along the A47 and Blaby Bypass Subway along the A426, within the boundaries of the proposed works. Whilst there are proposed re-surfacing works over the structures, the opportunity will be taken to replace the bridge deck waterproofing systems which have also reached the end of their design life.

All three bypasses are well used and are economically critical, supporting a large number of businesses, as well as large housing developments. Failure to do anything on these important roads will disrupt the local economy and road users. We have received support from many businesses as
well as support from the members of parliament (Neil O’Brien - MP for Harborough, Oadby and Wigston, David Tredinnick – MP for Bosworth and Alberto Costa – MP for South Leicestershire) for these areas. All these roads are strategically important being part of the Department for Transport’s emerging Major Road Network and are all on Leicestershire Resilient Network. Also, the A6 is a Primary Road.

A3. Geographic area:

Please provide a short description of the location referred to in the bid (in no more than 50 words):

There are three separate bypasses located in the south of Leicestershire, around the towns of Hinckley, Market Harborough and Blaby. The bypasses are all principal roads and form part of our Resilient Road Network. Part of the A6 scheme runs through Northamptonshire and this section will also be treated.

OS Grid Reference:

A47 Hinckley Northern Perimeter Road - 440670, 294090
A6 Market Harborough Bypass - 475394, 286698
A426 Blaby Bypass - 456051, 297050

Postcode:

A47 Hinckley Northern Perimeter Road - LE10 3BZ
A6 Market Harborough Bypass - LE16 8HA
A426 Blaby Bypass - LE8 6NT

You might wish to append a map showing the location (and route) of the proposed project, existing transport infrastructure and other points of particular interest to the bid.

A4. Type of works (please tick relevant box):

DfT funding of up to £5 million in 2019/20

Structural maintenance, strengthening or renewal of bridges, viaducts, retaining walls or other key structures, footbridge or cycle bridge renewal

Major maintenance, full depth reconstruction of carriageways, structural maintenance of tunnels ✓

Resurfacing of carriageways including improvements to footways or cycleways that are within the highway boundary

Renewal of gullies and replacement of drainage assets
SECTION B – The Business Case

B1. The Financial Case – Project Costs and Profile

Before preparing a proposal for submission, bid promoters should ensure they understand the financial implications of developing the project (including any implications for future resource spend and ongoing costs relating to maintaining and operating the asset), and the need to secure and underwrite any necessary funding outside the Department’s maximum contribution.

Please complete the table below. Figures should be entered in £000s (i.e. £10,000 = 10).

Funding profile (Nominal terms)

<table>
<thead>
<tr>
<th>£000s</th>
<th>2019-20</th>
<th>2020-21</th>
</tr>
</thead>
<tbody>
<tr>
<td>DfT Funding Sought</td>
<td>£4,968</td>
<td>DfT funding not available in 2020-21</td>
</tr>
<tr>
<td>LA Contribution</td>
<td>£350</td>
<td>£423</td>
</tr>
<tr>
<td>Other Third-Party Funding</td>
<td>£36</td>
<td>£0</td>
</tr>
</tbody>
</table>

Notes:
1) Department for Transport funding will be granted in the 2019-20 financial year, but local highway authorities may carry that funding over to following financial years if necessary.
2) There is no specific amount for a local contribution by the local authority and/or a third party but if this is proposed please state what this is expected to be.

B2. Local Contribution / Third Party Funding:

Please provide information on the following points (where applicable):

a) The non-DfT contribution may include funding from the local authority or a third party. This should include evidence to show how any third-party contributions are being secured, the level of commitment and when they will become available.

Leicestershire County Council will be providing funding of £350,000 out of this year’s (19/20) Capital Budget and £423,000 out of next years (20/21) Capital budget.

There is a current S278 agreement where the developer has agreed to fund a surface course and road markings for an area of 912sqm. The value of this work is estimated at £36,000.

b) Please list any other funding applications you have made for this project or variants of it and the outcome of these applications, including any reasons for rejection (e.g. applications made through any similar competition).

None
B3. Strategic Case (sections (a) to (g) below)

This section should briefly set out the rationale for making the investment and evidence of the existing situation, set out the history of the asset and why it is needs to be repaired or renewed. It should also include how it fits into the overall asset management strategy for the authority and why it cannot be funded through the annual Highways Maintenance Block Funding grant.

With the introduction of incentivised funding, Leicestershire County Council has achieved the highest banding (band 3). Part of that process was the introduction of a new Highway Asset Management Strategy and Policy which formalised a strategic approach to maintaining highway assets which ensures that appropriately informed, cost effective decisions are made about the treatment strategies that we apply. It is this approach that has formed the basis of this bid. The authority has an excellent track record of delivering large scale projects to a realistic timetable (for example A47 Earl Shilton Bypass – DfT funded scheme / MMDR scheme bid to Government / M1 Bridge to Growth Scheme) and we do not foresee any problems with this project.

a) What are the current problems to be addressed by the proposed works? (Describe economic, environmental, social problems or opportunities which will be addressed by the scheme).

The sections of road selected are at the end of their life-cycles. There are defects that regularly need urgent reactive attention (e.g. pothole filling) to maintain the highway in a safe condition. When reactive repairs are undertaken, restrictive traffic management is required causing unnecessary delays to traffic flows, with potentially negative environmental and economic implications. As well as the structural defects (waterproofing systems have also reached the end of their design guide), approximately 25% of the length of the scheme is below the investigatory level (Red) for skid resistance. A further 25% is classed as Amber, and therefore is close to the Investigatory level.

A large housing development (500+ houses) is due to be constructed on land alongside the A47 Normandy Way. Also, a new roundabout is to be constructed on the A47 at this location to service the new housing development, as well as other developer funded improvements to the A47 corridor. We will endeavour to work with the developer to minimize disruption to the public by combining workstreams wherever possible.

Part of the A6 Market Harborough Bypass scheme runs through Northamptonshire (7% of the overall scheme). Rather than stopping the work at the County Boundary we have gained the approval of Northamptonshire County Council to carry the works through their section of road so as to finish the scheme at a suitable point at the A6 / A427 / A4304 roundabout. This removes the need for Northamptonshire County Council to close the same section of road in the near future, thereby reducing the overall amount of disruption to the public and maintaining a consistent standard along the length of the bypass.

The A426 Blaby Bypass is an area of focus for housing growth and is on a key bus route. This scheme will therefore help to minimise disruption to bus services between Leicester and Lutterworth, where significant housing growth is planned.

b) Why the asset is in need of urgent funding?

These sections of road are all at the end of their life-cycles which have significant transport and economic implications. All three bypasses are important roads within Leicestershire’s road network, each carrying traffic flows that meet or exceed the criteria for inclusion in the Major Road Network (Total vehicle AADT for A6 9526 / A47 16846 / A426 8678 NB, 7562 SB), and have important economic links and that serve settlements where housing growth is taking place or is planned. Without an injection of high level funding, Leicestershire County Council cannot afford to fund large...
areas of carriageway strengthening works to the three sections of bypasses, that are all failing at the same time, through the annual Highways Maintenance Block Funding grant.

c) What options have been considered and why have alternatives have been rejected?

**Alternative measures currently rejected**

*Carrying out smaller maintenance schemes over several years (estimated value of works £1 million)* – This is not a preferred option due to the high number of temporary repairs that will be required to maintain failing sections of road for several years until all the works are completed. As well as disrupting business’s and highway users over several years and the increased risk of paying out on insurance claims due to the risk of potholes.

*Accepting that we cannot afford to fund extensive areas of carriageway strengthening and carrying out lesser treatments* – Not a preferred option due to the substantially reduced residual life offered by carrying out reduced depth repairs.

**Alternative measures to be incorporated within Challenge Fund Scheme:**

Leicestershire County Council are keen on promoting the use of materials that reduce carbon emissions and improve efficiency. For the Challenge Fund Scheme, we will use Warm Mix Asphalts (WMA - as recommended by the All-Party Parliamentary Group – APPG - report “Working for better roads” September 2019). This is expected to improve productivity, reduce programme duration and allow earlier opening to traffic. The use of warm mix asphalts will reduce disruption to the public, will have health and safety benefits on site due to the reduction in fumes and the lower fuel usage during manufacture will result in a reduced carbon footprint. A 15% reduction in CO2 emissions is anticipated. This is calculated at almost 22T of CO2 when compared against conventional hot mix materials. 22T of CO2 is equivalent to the emissions generated by travelling over 115,000 miles in a standard car.

Our plans are also keen on promoting the use of products that incorporate waste materials within the asphalt mix. We are in talks with local material manufacturers regarding the use of Rubber Modified Asphalts that incorporate recycled tyres within warm mix asphalts.

We are anticipating using Rubber Modified Asphalts on the A426 Blaby Bypass element of the Challenge Fund Scheme. As well as an anticipated 8% reduction in CO2 emissions (when compared with conventional SMA materials) the works are expected to incorporate over 4,000 used tyres within the surface course materials. Quarry plants within Leicestershire have already been modified to incorporate recycled rubber within the asphalt mix. The Rubber Modified Asphalt is also a Warm Mix Asphalt and is expected to save over 10T of CO2 when compared against conventional hot mix materials. 10T of CO2 is equivalent to the emissions generated by travelling over 52,000 miles in a standard car.

The rubber from the waste tyres will be used within the surface course material. The reinforcing steel from truck tyres will be used to make new steel and the fibres and dust from the recycling process will be used as a fuel in cement kilns.

Asphalt Reinforcement will also be extensively used both to reduce the depths of construction and to slow down the formation of reflective cracking.

d) What are the expected benefits / outcomes?

The residual life of the carriageway will be restored to 20 years. By surface dressing at appropriate times further resurfacing or strengthening should not be required for 35 – 40 years after completion of the works.
The works to the footways and cycle tracks on the A47, Hinckley will restore the residual life to 30 years. By slurry sealing at appropriate times, further resurfacing will not be required for 45 - 50 years after completion of the works. This will help people to travel by encouraging walking and cycling along these routes.

The re-waterproofing of the two structures will provide increased protection to the structures and reduce the potential for deterioration of the reinforced concrete elements through chloride attack. The development in technology of waterproofing systems, since these structures were constructed, will enhance the life span of the structures in excess of 40 years. This will reduce the frequency, if not negate the need for expensive future maintenance works to the critical structural elements.

Also see section (g) below.

f) What will happen if funding for this scheme is not secured? Would an alternative (lower cost) solution be implemented (if yes, please describe this alternative and how it differs from the proposed scheme)?

If funding is not secured, then smaller scale maintenance schemes (reduced areas and shallower treatment depths) will be undertaken over several years. The result will be an increased risk of potholes causing vehicle damage, more accident claims, more reactive repairs and more delays to the public. There will also be a reduced residual life and the risk of premature failure of the carriageway (due to lack of strengthening / reconstruction).

Smaller scale schemes are less suitable for use of Warm Mix Asphalts and Rubber Modified Asphalts, so the reductions in carbon emissions will not be achieved.

g) What are the economic, environmental and social impacts of completing this project?

By incorporating Warm Mix Asphalts for the base and binder layers, a 15% reduction in carbon emissions is anticipated. This is calculated at almost 22T of CO2 which is equivalent to the emissions generated by travelling over 115,000 miles in a standard car.

By incorporating Rubber Modified Asphalts for the surface course on the A426 Blaby Bypass an 8% reduction in carbon emissions is anticipated, as well as incorporating over 4000 vehicle tyres within the mix. This is predicted to save approximately 10T of CO2 which is equivalent to the emissions generated by travelling over 52,000 miles in a standard car.

By carrying out the works there will be a substantial reduction in reactive repairs, saving money and reducing unnecessary traffic delays.

The works to the footways and cycle tracks will bring these sections up to an acceptable standard and will help to encourage the public to use walking and cycling as viable options to the car. This is particularly important on the A47 as a large-scale housing development is being constructed adjacent to the works area and high-quality footways and cycle tracks will encourage the new users to use these facilities.

Combining the carriageway resurfacing works with the structural waterproofing will be an efficient method of working and reduce the impact to the travelling public. Financial savings will also be achieved by sharing traffic management and prevent duplication of surfacing works.

100% of the bituminous material removed from the carriageway construction will be reused in new bituminous materials elsewhere. The base and binder material used to repair the carriageway will contain up to 25% recycled asphalt and the surface course is expected to contain 10% of recycled
asphalt. The generation and use of recycled material will reduce the amount of virgin material used in asphalt mixes. This scheme will generate over 21,000T of material available for recycling and the new materials used on the scheme will incorporate 3,700T of recycled material. The appropriate use of Asphalt Reinforcement also helps to reduce the depth of new construction required on the scheme. Over 44,000sqm of Asphalt Reinforcement is envisaged and this is expected to save over 20,000T of new material being used.

B4. Equality Analysis

Has any Equality Analysis been undertaken in line with the Equality Duty? ✓ Yes  ☐ No

B5. The Commercial Case:

This section categorises the procurement strategy that will be used to appoint a contractor and, importantly for this fund, set out the timescales involved in the procurement process to show that delivery can proceed quickly.

What is the preferred procurement route for the scheme? For example, if it is proposed to use existing framework agreements or contracts, the contract must be appropriate in terms of scale and scope.

Framework contract ✓
Direct labour ☐
Competitive tender ☐

*It is the promoting authority’s responsibility to decide whether or not their scheme proposal is lawful; and the extent of any new legal powers that need to be sought. Scheme promoters should ensure that any project complies with the Public Contracts Regulations as well as European Union State Aid rules and should be prepared to provide the Department with confirmation of this, if required. An assurance that a strategy is in place that is legally compliant and is likely to achieve the best value for money outcomes is required from your Section 151 Officer below.

B6. Delivery of project

Are any statutory procedures, such as planning permission, required to deliver the project? If yes, please provide details below;

☐ Yes  ☑ No

Details of statutory procedures before works can commence
**SECTION C: Declarations**

<table>
<thead>
<tr>
<th><strong>C1. Senior Responsible Owner Declaration</strong></th>
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<tbody>
<tr>
<td>As Senior Responsible Owner for <strong>End of Life-Cycle Bypasses</strong> I hereby submit this request for approval to DfT on behalf of Leicestershire County Council and confirm that I have the necessary authority to do so.</td>
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<tr>
<td>I confirm that <strong>Leicestershire County Council</strong> will have all the necessary powers in place to ensure the planned timescales in the application can be realised.</td>
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<tr>
<td>Name: Ann Carruthers</td>
<td>Signed:</td>
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<tr>
<td>Position: Director of Environment and Transport</td>
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<thead>
<tr>
<th><strong>C2. Section 151 Officer Declaration</strong></th>
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<tbody>
<tr>
<td>As Section 151 Officer for <strong>Leicestershire County Council</strong> I declare that the scheme cost estimates quoted in this bid are accurate to the best of my knowledge and that <strong>Leicestershire County Council</strong></td>
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<tr>
<td>- has allocated sufficient budget to deliver this scheme on the basis of its proposed funding contribution</td>
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<td>- will allocate sufficient staff and other necessary resources to deliver this scheme on time and on budget</td>
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<td>- 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</td>
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<td>- accepts responsibility for meeting any ongoing revenue requirements in relation to the scheme</td>
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<td>- accepts that no further increase in DfT funding will be considered beyond the maximum contribution requested</td>
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<td>- has the necessary governance/assurance arrangements in place</td>
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<td>- has identified a procurement strategy that is legally compliant and is likely to achieve the best value for money outcome</td>
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<td>- will ensure that a robust and effective stakeholder and communications plan is put in place</td>
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<tr>
<td>Name: Chris Tambini</td>
<td>Signed:</td>
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</table>

**Submission of bids:**

The deadline for bid submission is 5pm on **31 October 2019**

Successful bids for Challenge Fund Tranche 2B are to be funded in 2019/20.

An electronic copy only of the bid including any supporting material should be submitted to:

[roadmaintenance@dft.gov.uk](mailto:roadmaintenance@dft.gov.uk) copying in Paul.O'Hara@dft.gov.uk