

# Local Highways Maintenance Challenge Fund



Department  
for Transport

## 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:** Wigan Council

**Bid Manager Name and position:** Keith Benson, Highways and Network Manager

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**Combined Authorities**

**Name and position of Combined Authority Bid Co-ordinator:** Mike Purcell, KRN Asset Manager

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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:**

<http://www.wigan.gov.uk/Resident/Parking-Roads-Travel/Roads/Highway-maintenance.aspx>

## **SECTION A – Description of works**

### **A1. Project name: Highway Drainage Infrastructure Rehabilitation Programme**

#### **A2. Headline description:**

**Proposed start date:** April 2020

**Estimated Completion date:** March 2021

#### **Brief description**

The proposed scheme is to remediate damage to 273 highway gullies and 3 highway culverts that have failed and are now causing delays and damage to the highway carriageway infrastructure through localised flooding; and by undermining the highway foundations. The remediation would also include introducing new sensor and traffic sign technology to allow mitigation measures to be taken to reduce the risk from flooding.

These assets are predominantly located on Wigan Council's sections of the Greater Manchester Key Route Network (KRN), Resilient Network and known Flood Risk 'hot-spots', which provides key transportation corridors both across the Greater Manchester conurbation and into Highways England Strategic Route Network. The KRN and resilient Network also provides essential links to the borough's 9 district town centres, local enterprise parks and supports new development sites including the A49 and M58 growth deal schemes and the Wigan Council and Bolton Council Housing Infrastructure Fund (HIF) bid.

#### **A3. Geographic area:**

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

Areas covered by this bid take a holistic approach and are an opportunity to investigate and carry out repair work on drainage assets that link through Greater Manchester and are predominantly on the KRN road network.

OS Grid Reference: Borough Wide

Postcode: WN1-7; WA3; M29 and M46

See Appendix A - Highway Drainage Flooding Examples

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

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

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)**

<b>£000s</b>	<b>2019-20</b>	<b>2020-21</b>
<i>DfT Funding Sought</i>	884	<i>DfT funding not available in 2020-21</i>
<i>LA Contribution</i>	225 (20.3%)	
<i>Other Third Party Funding</i>		

#### **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.

A contribution from Wigan Council of 20.3% will be provided. This funding will be available from April 2020.

- 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).

No other funding applications have been made for this scheme.

### **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.**

**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).**

During December 2015, Storms Desmond, Eva and Frank brought record breaking levels of rainfall and significant flooding to many parts of the UK. Within Greater Manchester, a total of 65 communities across 8 Local Authority districts were impacted, resulting in the single largest flooding incident to affect Greater Manchester for over a generation. A total of 4,250 properties affected by power loss, as well as many properties, businesses and green spaces suffering significant flood damage.

With reference to Wigan Borough, during Storm Eva, more than a month's rainfall fell in 24 hours on 26th December 2015. This resulted in severe flooding in many areas across the Borough, particularly along the Greater Manchester Key Route Network (KRN). As 11% of the Borough's highways network is designated as KRN, the wider Greater Manchester links are vitally important to Wigan, therefore there is an onus on Wigan Council to maintain the highway and drainage assets along these links. The damage to the borough's highway infrastructure alone was over £2m.

Following on from this (and subsequent severe wet weather events that have since affected the borough) and in compliance with HMEP's guidance on the management of drainage assets, the council has undertaken a full review of its highway drainage infrastructure assets including:

- i) Working with YOTTA, In-Touch and KaarbonTech to create a comprehensive asset record and database of highway gullies and their condition and introduce a digital handheld solution to record future works;
- ii) Carrying our annual surveys to assess the rate of build-up of silt and used this as a part of the development of the risk-based approach for their planned and reactive maintenance service standards;
- iii) Worked in partnership with Sapphire Utilities to carry out condition surveys (using cameras to create a visual record of the underground drainage pipes) and detailed asset mapping of 2,925 gully connections (5%) of the borough's underground drainage network to determine its construction, capacity, condition and current performance. These were primarily located on the borough's KRN, Resilient Network and known Flood Risk Areas;
- iv) Evaluated the use of sensor technology and how this could be used to improve the resilience by better targeting of resources to attend; clean and remediate gullies that are at high risk of flooding from a forecasted severe weather event;

The council's Flood Risk Manager is also working with the Environment Agency and United Utilities to understand and assess the likely impact from surface flood water in terms of risk to the accessibility, availability and structural integrity of the highway network through the impacts of Climate Change. This will lead to the council adopting more SUD's schemes on future highway schemes and developments.

Evaluation of the severe weather events that the borough has faced over the last 3 years has shown the following can significantly affect the performance of the highway drainage infrastructure:

- i) Intense and unpredicted rainfall occurring over a short period exacerbated by poor infiltration due to high levels of groundwater coupled with the underlying geology of the borough being predominantly clay.
- ii) There is a high-level of run-off surface water falling onto the KRN and Resilient highway network due to the built-up urban environment which these roads pass through. This results in the surface water drainage systems quickly reaching capacity.
- ii) Surcharging of water from drainage assets such as highway gullies and surface water manholes owned by both Wigan Council and United Utilities can cause flooding of the road and longer-term damage to the carriageway surface, particularly when followed by cold-spells.
- iv) The failure of a number of drainage assets due to age and deterioration causes pressures and over capacity issues on other parts of the highway drainage infrastructure.

The proposed investment would include the installation of remote sensor technology and real time weather data to identify and monitor problem gullies to create a targeted cleaning programme in advance of severe rainfall weather events. This smart data, coupled with real time weather data, could allow a prediction of when and where flooding may occur in hotspot areas within the borough during severe rainfall events which would also be linked to advance traffic flood warning signs and other early media notification systems to advise highway users of the flooding events on the network, so that they can avoid the affected areas and better plan their journey's. Additionally, the sensors could be further enhanced to be able to mitigate the risk of unnecessary cleaning of every gully, every year by measuring variables such as water, flood and silt levels.

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

The UK has become significantly warmer during the last few decades, largely due to anthropogenic activity and the impact of greenhouse gas emissions. This warming effect is having a drastic influence on the number and intensity of rainfall events. According to climate modelling carried out by the Met Office UK Climate Projections (UKCP) research programme, during the summer months it will "rain less often in the future, but the rain will be heavier" and "average winter precipitation will increase in the future".

As with all Local Authorities, Wigan Council needs to prepare and plan strategically in order to ensure the management of the overall asset network evolves with the changing climate. This will enable Wigan Council, as a Risk Management Authority, to prepare for future flood events and to prevent, as far as reasonably practicable, the impacts of events such as the December 2015 floods. The Local Highways Maintenance Challenge Fund would provide Wigan Council with the opportunity to fulfil this evolution.

Therefore, in order to mitigate the impacts of these events on the availability, accessibility and resilience of the KRN and Resilient Network and known Flood Risk area we need to take actions to arrest the deterioration of the existing highway drainage infrastructure and remediate the assets that have been identified as already having failed, which has been ascertained from the detailed asset condition surveys and follow-up investigations.

As such, this funding is required to address the urgent repair and replacement of 273 highway gullies, their underground connecting drainage pipes and 3 highway culverts that have failed and are now causing further damage to the highway carriageway infrastructure through localised flooding; and by undermining the highway foundations. The highway network has already experienced a number of

highway 'collapses' from similar highway drainage failures and on the occasions of severe weather, lane or road closures have been implemented, generally for short durations until the surface water can be drained or pumped away.

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

The council has already invested over £1.5m into its highway drainage infrastructure since Storm Eva in 2015 but has no other available funding to support further investment in this asset.

A do-nothing approach has been considered but rejected, as this would not meet the council's statutory duty nor be in the best interest of the public or management of the asset.

A programme of planned repairs to the drainage infrastructure funded from revenue budgets has been considered and rejected because of the length of time (over 10 years) that this would take and the risk of accelerated rate of deterioration or causing failure to other parts of the highway infrastructure and carriageway.

There has also been consideration towards stronger partnership cooperation with stakeholders such as United Utilities (UU) and the Environment Agency (EA). Wigan Council have proposed a collaborative approach to create a data sharing system in which both the council and utility company are able to view gully cleaning works programmes so that planned works can be carried out more efficiently and an overall view of the borough's drainage system is gathered. However, neither the EA nor UU have funding available to invest into repairing or maintaining the council's highway drainage network.

**d) What are the expected benefits / outcomes?**

- a. The proposal is to carry out the repairs to the highway gully's, underground connecting drains and culverts within 12 months, with minimum risks and giving maximum benefit to highway users in a short space of time and avoid further damage to the drainage infrastructure/remove the risk to the fabric of highway and carriageway.
- b. New drainage assets, sensor technology and information systems will improve the availability, accessibility and resilience of the highway network and its future performance.
- c. Road users will benefit from a smooth uninterrupted and safe journey through the borough and Greater Manchester conurbation.
- d. Local and regional economy and opportunity for developments and growth will be sustained or improved by reduced journey times.
- e. Remove the risk of injury and claims for compensation from personal injury.
- f. Reduced number of minor repairs, reduced impact of street works and congestion; and reduced risk of lane and road closures caused by surface water flooding events.
- g. Cost efficiencies from single procurement exercise for scheme.
- h. A reduced depreciated replacement cost (DRC).
- i. Improved customer satisfaction with the highways and enhanced reputation of Government and the council from promoting the investment.
- j. Reduce the number of pot-holes forming from water ingress.
- k. Reduce further financial pressure on the council's revenue budget.

**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 the funding is not secured, then it is likely that there would be accelerated deterioration and failure of the highway drainage infrastructure resulting in their full length failing; which in turn will increase the

risk of road closures. The continued failure of the drainage assets will result in the increased cost of repairing the drainage infrastructure and associated damage to the fabric of the highway and carriageway surface, in particular through the generation of more 'pot-holes'. There is also a risk that the underground drainage pipework or culvert will catastrophically fail which will substantially damage the highway infrastructure and cause road closures.

Unfortunately, there are no lower cost alternatives (such as preventative treatments) available to address this situation.

The council's statutory duty to maintain the highway in a safe condition for highway users, would result in carrying out more reactive maintenance. This would result in higher maintenance cost, increased disruption to highway users, increased claims and reduced customer satisfaction.

The cost of these schemes would be added to our current annual programme of works which will further increase the council's current backlog of highway maintenance works.

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

The project will address the outstanding backlog of repairs to 273 highway gullies and 3 highway culverts that have failed and are now causing damage to the highway carriageway infrastructure through localised flooding; and by undermining the highway foundations.

Many of these repairs are located on the borough's KRN and Resilient Network routes and their repair would significantly improve the resilience of the borough and its highway network, reduce or prevent the build-up of minor repairs (such as pot-holes) and minimise the opportunity for claims for vehicle damage and personal injury.

These routes traverse the borough through many key district centers used by local and regional businesses and communities going about their daily business. As such, a fully operational and improved drainage infrastructure would encourage the use of more sustainable modes of transport whilst supporting commerce to the area.

The outcomes would also have positive social benefits in terms of improved customer experience and satisfaction due to the reduction in highway flooding incidences, lane and road closures and improved information available to highway users for route planning in severe rainfall weather events; along with improved condition and aesthetics of the highway; and support the delivery of one of the council's key priorities of providing *A Well-Connected Place*.

Economically, businesses, homeowners and landlords will be provided with a greater level of protection from highway related flood events and there will be fewer flood related claims. By ensuring that Wigan Council can remotely monitor the condition of the drainage assets, proactive planning can be implemented when the condition of the assets becomes poor, therefore preventing total failure. From an environmental standpoint, by updating the drainage network across the borough ecosystems and habitats located adjacent to the highway network would also suffer less from the significant impacts of high intensity rainfall events.

**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**

### **C1. Senior Responsible Owner Declaration**

As Senior Responsible Owner for **Highway Drainage Infrastructure Rehabilitation Programme** I hereby submit this request for approval to DfT on behalf of **Wigan Council** and confirm that I have the necessary authority to do so.

I confirm that **Wigan Council** will have all the necessary powers in place to ensure the planned timescales in the application can be realised.

Name:

Paul Barton

Position:

Director of Environment

Signed:



### **C2. Section 151 Officer Declaration**

As Section 151 Officer for **Wigan Council** I declare that the scheme cost estimates quoted in this bid are accurate to the best of my knowledge and that **Wigan Council**

- has allocated sufficient budget to deliver this scheme on the basis of its proposed funding contribution
- will allocate sufficient staff and other necessary resources to deliver this scheme on time and on budget
- 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
- has the necessary governance / assurance arrangements in place
- has identified a procurement strategy that is legally compliant and is likely to achieve the best value for money outcome
- will ensure that a robust and effective stakeholder and communications plan is put in place

Name:

Paul McKeivitt

Signed:



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