Local Highways Maintenance Challenge Fund

Department for Transport

Application Form (for Tranche 2A)

The level of information provided should be proportionate to the size and complexity of the scheme proposed. Note that DfT funding is a maximum of £5 million per scheme. An individual local authority may apply only for one scheme.

For schemes submitted by components of a Combined Authority 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: Hertfordshire County Council

Bid Manager Name and position: Mike Younghusband – Head of Highways Operations & Strategy

Tom Duckmanton, Group Manager for Highways Operations Sponsor Group *will be the officer with day to day responsibility.*

Contact telephone number: 01992 556366
Email address: tom.duckmanton@hertfordshire.gov.uk

Postal address:
Highways Operations Sponsor Group,
Highways & Operations & Strategy Unit
Environment & Commercial Services Department
Hertfordshire County Council, County Hall, Pegs Lane, Hertford, SG13 8DN

Combined Authorities

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, they 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. The Department reserves the right to deem the business case as non-compliant if this is not adhered to.

Please specify the weblink where this bid will be published:
www.hertfordshire.gov.uk/signalreplacement2017

SECTION A - Scheme description

A1. Scheme name: Primary Route Network Signal Replacement Scheme

A2. Headline description:

Please enter a brief description of the proposed scheme and its timetable including the completion date (in no more than 50 words)

Twelve traffic signal junctions on the primary route network are in urgent need of replacement. These sites are essential to the safe and reliable operation of the highway and provide vital resilience to the strategic road network. A phased implementation programme is planned with works scheduled to commence in June.

A3. Geographical area:

Please provide a short description of area covered by the bid (in no more than 50 words)

The junctions have been strategically selected, based on the age of the equipment, the number of reported faults and their importance to the strategic road network. The junctions are spread across the County and provide vital relief to the motorways.

OS Grid Reference:

Ref	Location	OS Ref
S057	HOLYWELL HILL/PEAHEN	TL 14706 07089
S058	LONDON RD/MILEHOUSE LANE	TL 16316 05890
S138	LONDON RD/HOCKERILL ST	TL 49261 21225
S201	LONDON RD/THORLEY HILL	TL 49123 19971
S246	QUEEN ST/HERMITAGE RD.	TL 18698 29242
S377	BESSEMER RD / BRIDGE RD	TL 24312 13027

Ref	Location	OS Ref
S540	LONDON ROAD/GASCOYNE WAY(BLUE COATS)	TL 32976 12659
S575	LANGLEYBURY LN/BRIDGE RD	TL 08122 00540
S576	M25 JUNC 20/WATFORD RD	TL 07681 01291
S577	LONDON COLNEY R/ABT	TL 17394 04948
S578	BERRYGROVE GYRATORY(M1 JUNC 5)	TQ 12839 98197
S658	GREAT CAMBRIDGE RD / CHURCH RD	TL 35428 02882

Postcode: **SG13 8DN**
These are the details of County Hall as the sites are spread around the County

Please append a map showing the location (and route) of the proposed scheme, existing transport infrastructure and other points of particular interest to the bid e.g. development sites, areas of existing employment, constraints on land use, planning etc.

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

Small project bids (requiring DfT funding of **up to £5 million**

Major maintenance, strengthening or renewal of bridges, tunnels, retaining walls or other structures ☒

Major maintenance or renewal of carriageways (roads)	☐
Major maintenance or renewal of footways or cycleways	☐
Major maintenance or renewal of drainage assets	☐

SECTION B – The Business Case

B1. The Financial Case – Project Costs and Profile

Before preparing a scheme proposal for submission, bid promoters should ensure they understand the financial implications of developing the scheme (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 following tables. **Figures should be entered in £000s** (i.e. £10,000 = 10).

Table A: Funding profile (Nominal terms)

£000s	***2017-18***
DfT Funding Sought	*£990*
LA Contribution	*£200*
Other Third Party Funding	*£0*

Notes:
1) Department for Transport funding is only for the 2017-18 financial year.
2) A minimum local contribution of 10% (by the local authority and/or third party) of the project costs is required.

B2 Local Contribution / Third Party Funding

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

a) The non-DfT contribution may include funding from organisations other than the scheme promoter. Please provide details of all non-DfT funding contributions to the scheme costs. This should include evidence to show how any third party contributions are being secured, the level of commitment and when they will become available.
Not applicable.

b) Where the contribution is from external sources, please provide a letter confirming the body's commitment to contribute to the cost of the scheme. The Department is unlikely to fund any scheme where significant financial contributions from other sources have not been secured or appear to be at risk.

Have you appended a letter(s) to support this case? ☐ Yes ☐ No ☒ N/A

c) Please list any other funding applications you have made for this scheme or variants thereof and the outcome of these applications, including any reasons for rejection (e.g. through the Access Fund or similar competition).
Not applicable.

B3. Strategic Case (Maximum 50 words for each section a) to g)

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 the scheme 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 your scheme? (Describe economic, environmental, social problems or opportunities which will be addressed by the scheme).
The safe and reliable operation of these assets is vital to effective performance of the primary route network, which regularly provides essential relief to the local motorways. Junction failures quickly lead to congestion, increased journey times, accidents and environmental impacts. Further, opportunities to unlock new developments are also being constrained.

b) Why the asset is in need of urgent funding?
The traffic signals identified, are operating outside of their recommended life cycle (15 years). The existing equipment has become increasingly unreliable and difficult to maintain. Advanced decay has led to leaning poles, poor detection and connection issues and all of the sites are vulnerable to water ingress and pest infestation.

c) What options have been considered and why have alternatives have been rejected?
Replacing individual traffic signal components can prolong the life of the junction, but this approach is rarely cost effective and doesn't deliver the desired benefits. Compatibility issues, maintaining outmoded spares and negligible energy savings can ultimately lead to increased maintenance costs without significantly reducing the likelihood of failures.

d) What are the expected benefits / outcomes?
The installations provide the means to optimise journey times and are proven to improve safety for vulnerable road users. Each site will be remotely monitored, allowing network operations to be coordinated with Highways England in the event of motorway incidents. Future maintenance regimes will be reviewed and energy consumption reduced.

e) Please provide information on the geographical areas that will benefit from your scheme**.**
The junctions have been selected, based on the vulnerability of the ageing equipment and the relevance to the strategic road network. The sites are located on our primary and A route network which provides relief to the M1, M11, M25 and A1(M) motorways.

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)?
The Council will continue to carry out preventative maintenance. In the event of a total failure temporary traffic signals will be installed until the equipment is replaced from special maintenance budgets. Temporary traffic signals carry their own limitations, reducing capacity and the ability to deal with incidents remotely.

g) What is the impact of the scheme?
Some temporary impacts will be experienced during the implementation of the works, but these will be limited to increased journey times and some local congestion. Careful planning of the works will enable these impacts to be minimised and avoid the need for lengthy diversion routes. No permanent impacts are expected.

B4. Affordability and Financial Risk (maximum 50 words for each of a) to c)

What is your Authority's most recent total outturn annual capital spending on highways maintenance **(Year 2015/16) £38,344k**

What is the DfT contribution sought as a % and that annual total **2.607 %** (to 3 decimal places)

This section should provide a narrative setting out how you will mitigate any financial risks associated with the scheme

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

a) What risk allowance has been applied to the project cost?
5% risk allowance has been applied to the programme of works. This allowance reflects the clearly defined scope of the traffic signal works, the delivery schedule and the contractual arrangements, which allow fixed costs to be secured for specific items, such as the traffic management.

b) How will cost overruns be dealt with?
The works will be implemented in phases. Construction of the first site is scheduled to commence in June and all but one of the sites will be completed by Dec 2017. The Council will be responsible to funding any costs overruns.

c) What are the main risks to project delivery timescales and what impact this will have on cost?
The scope of the traffic signal installations has been established, but the civils works and associated traffic management needs to be defined following a detailed duct survey. This is a small percentage of the overall works and will form part of the pre-installation work.

B5. Equality Analysis

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

Whilst a 'like for like' replacement of the traffic signal equipment is proposed, the pedestrian crossing facilities will include puffin crossing technology which improves the facilities for vulnerable road users.

B6. Value for Money

a) For all scheme bids, promoters should provide, where available, an estimate of the Benefit Cost Ratio (BCR) of the scheme. This has been attached

Where a BCR is provided please be aware that DfT may wish to scrutinise the data and assumptions used in deriving that BCR.

b) Please provide the following data will form a key part of our assessment:
Note this material should be provided even if a BCR estimate has been supplied **and** has also to be entered and returned as an MS Excel file in the VfM Annex MS Excel file).

A description of the do-minimum situation (i.e. what would happen without Challenge Fund investment).	**The Council will continue to carry out preventative maintenance.**
Details of significant monetised and non-monetised costs and benefits of the scheme (quantified where possible)	**The new installations enable the Council to review future maintenance regimes and costs. The sites identified have an average fault rate of 17.5 faults / site / year compared to the County average of 5 faults / site / year. This creates the potential to reduce future maintenance costs by £225,000 over the 15 year lifespan.** **On average the Council currently spends 11p/kWh on energy consumption. The annual energy consumption per site per year is approx.**

	£1741. Replacement of the signal equipment will cut energy consumption by 78%. Without factoring in rising energy costs this generates a total saving over the 15 year lifespan of project of £245,325. **The scheme also provides the opportunity to reduce the number of injury accidents. Adopting national accidents savings, the predicted savings over the 15 year lifespan of the project are £7,336,912.** **Finally the installations will enable the authority to optimise journeys times and 'take control' of the network to coordinate network operations.**
Length of scheme (km)	**12 individual sites have been identified, which equates to approx. 12 km.**
Number of vehicles on affected section (Average Annual Daily Traffic in vehicles and if possible split by vehicle type) – to include details of data (age etc.) supporting this estimate.	**Please refer to the Summary Workbook for details of number of vehicles affected. The table below shows the lowest and highest traffic volume sites.**

Type	Lowest	Highest
PedalCycles	7	183
Motorcycles	52	500
CarsTaxis	7430	37422
BusesCoaches	79	864
LightGoodsVehicles	1411	7411
V2AxleRigidHGV	140	1004
V3AxleRigidHGV	28	219
V4or5AxleRigidHGV	13	353
V3or4AxleArticHGV	3	237
V5AxleArticHGV	3	655
V6orMoreAxleArticHGV	5	543
AllHGVs	209	2915
AllMotorVehicles	10016	47838

c) Other VfM information where relevant - depending on type of scheme bid:	
Details of required restrictions/closures if funding not provided (e.g. type of restrictions; timing/duration of restrictions; etc.)	**Temporary traffic signals will be installed, until funds become available to design and implement a permanent solution. Road closures will be avoided, but the junction operation will be constrained by the functionality of the temporary traffic signals. Durations will vary from site to site but temporary traffic signals would typically be in place between two and six weeks.**
Length of any diversion route, if closure is required (over and above existing route) (km)	**Not applicable.**
Regularity/duration of closures due to flooding: (e.g. number of closures per year; average length of closure	**Not applicable.**

(hrs); etc.)

Number and severity of accidents: both for the do minimum and the forecast impact of the scheme (e.g. existing number of accidents and/or accident rate; forecast number of accidents and or accident rate with and without the scheme)

The DfT guidance demonstrates that new Puffin signals decrease accidents rates by 19%. The table below shows the predicted number of accidents per site over the 15 year lifespan of the scheme.

Ref	Current No of Accidents (3 Yrs)	Do-min Option predicted	Preferred Option predicted	Predicted Difference
S057	4	20	16	-4
S058	5	25	20	-5
S138	2	10	8	-2
S201	11	55	45	-10
S246	1	5	4	-1
S377	0	0	0	0
S540	17	85	69	-16
S575	9	45	36	-9
S576	8	40	32	-8
S577	11	55	45	-10
S578	29	145	117	-28
S658	4	20	16	-4

Number of existing cyclists; forecasts of cycling usage with and without the scheme (and if available length of journey)

The following table below shows the current AADT figures for cyclists for each site.

Ref	Pedal Cycles
S658	51
S377	150
S058	123
S057	183
S201	Not Listed
S138	87
S578	7
S575	Not Listed
S576	41
S577	49
S540	17
S246	Not Listed
Total	**708**

B7. The Commercial Case

This section categorizes 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 ☐

Council Contractor ☒

Competitive Tender ☐

The Council will deliver the works through its Council contractor. This approach brings a number of financial and delivery benefits and significantly reduces the delivery risks. Working in collaboration with our traffic signal contractor, the Council are able to deliver the works at competitive rates, using our supplier to design, plan, implement and ultimately maintain the works. This approach enables us to rapidly deploy resources, phase the implementation of the works and effectively manage the implementation across the network.

**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.*

B8. Delivery (maximum 50 words for a) and 100 words for b)

a) Are any statutory procedures required to deliver the project, if yes please provide details below;

☐ Yes ☒ No

Details of statutory procedure (50 words maximum)

No statutory procedures are required to implement these works.

b) Please summarise any lessons your authority has learned from the experience of delivering other DfT funded programmes (such as Challenge Fund tranche 1, pinch point schemes, local majors, Local Sustainable Transport Fund, Better Bus Areas) and what would be different on this project as a result. **The following lessons have been learnt from previous projects:**

- **Engage early and get key stakeholders/partners on board at the start**
- **We are already engaged in planning work 'at risk' to ensure these projects are deliverable**
- **Adopt an holistic approach to the scheme**
- **In promoting the renewal of these critical junctions we will both improve signals operation for all modes and aim to include complementary works such as maintenance and decluttering**
- **Target strategic sites for the greatest impact**
- **We have selected these sites as key to the operation and resilience of our primary & A road network**

B9. Stakeholder Support (maximum 50 words for a) and 100 words for b)

c) Does this proposal have the support of the Local MP(s);

☐ Yes ☒

The following MP's have been contacted, seeking their support for the proposals:
Name of MP(s) and Constituency

1 Charles Walker - Broxbourne
2 Michael Penning – Hemel Hempstead
3 Mark Prisk – Hertford & Stortford
4 Oliver Dowden – Hertsmere
5 Peter Lilley – Hitchen & Harpenden
6 Oliver Heald – NE Herts
7 David Gauke – SW Herts
8 Anne Maine – St. Albans
9 Richard Harrington – Watford
10 Grant Shapps – Welwyn Hatfield

SECTION C: Declarations

C1. Senior Responsible Owner Declaration	
As Senior Responsible Owner for the Primary Route Network Signal Replacement Scheme. I hereby submit this request for approval to DfT on behalf of Hertfordshire County Council and confirm that I have the necessary authority to do so. I confirm that Tom Duckmanton will have all the necessary powers in place to ensure the planned timescales in the application can be realised.	
Name: Mike Younghusband	Signed:
Position: Head of Highways Operations & Strategy	

C2. Section 151 Officer Declaration	
As Section 151 Officer for Hertfordshire County Council I declare that the scheme cost estimates quoted in this bid are accurate to the best of my knowledge and that Hertfordshire County 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: Claire Cook	Signed:

Submission of bids:

The deadline for bid submission is 5pm on:
31 March 2017 for Challenge Fund Tranche 2A (2017/18 funding)
An electronic copy only of the bid including any supporting material should be submitted to:

roadmaintenance@dft.gsi.gov.uk copying in Paul.O'Hara@dft.gsi.gov.uk