

Local Highways Maintenance Challenge Fund



Application Form

The level of information provided should be proportionate to the size and complexity of the scheme proposed. As a guide, for a small scheme we would suggest around 10 to 15 pages including annexes would be appropriate and for a larger scheme, 15 to 30 pages.

A separate application form should be completed for each scheme up to a maximum of one large bid and one small bid for each local highway authority.

Applicant Information

Local authority name(s)*: Lancashire County Council (LCC)

**If the bid is a joint proposal, please enter the names of all participating local authorities and specify the lead authority*

Bid Manager Name and position: P L Mayes Assistant Director Commissioning
Contact telephone number: 01772-535231
Email address: peter.mayes@lancashire.gov.uk

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

Scheme Manager:- Mr Martin Dunwell,
Designation Street Lighting Manager,
Contact telephone number: 01772 539477
Email address: martin.dunwell@lancashire.gov.uk

Postal address: Lancashire County Council
PO Box 78 County Hall
Fishergate
Preston
Lancashire
PR1 8XJ

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:

- <http://www.lancashire.gov.uk/council/transparency.aspx>

SECTION A - Scheme description and funding profile

A1. Scheme name: [Upgrading of Street Lighting](#)

A2. Headline description:

Please enter a brief description of the proposed scheme (in no more than 50 words)

The scheme involves upgrading 67,000 energy inefficient street lighting lanterns with modern LED equivalents, replacing up to 4,000 lighting columns that have reached the end of their service life and the provision of approximately 150 charging points to encourage a greater uptake of Ultra Low Emission Vehicles (ULEV) in Lancashire.

The Benefit/Cost Ratio (BCR) for this scheme is 3.79 and increases to 4.91 if the fear of crime is taken into account. A BCR in excess of 2 is regarded as providing high VfM. Over 4 is regarded as providing a very high VfM.

A3. Geographical area:

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

OS Grid Reference: [362711 438621](#) (centre of Lancashire)

Follow attached link to the LCC MARIO system (Maps & Related Information Online) for a map of Lancashire <http://mario.lancashire.gov.uk/agsmario/default.aspx>

The equipment referred to in this bid is distributed across the whole of the Lancashire County Council area which has a population of approximately 1,171,339 people and will be allocated on the most effective value for money basis in terms of replacement/life expiry. Lanterns and/or columns/ electric vehicle charging points will be replaced/installed in the 12 districts of Burnley, Chorley, Fylde, Hyndburn, Lancaster, Pendle, Preston, Ribble Valley, Rossendale, South Ribble, West Lancashire and Wyre. Actual location of ULEV charging points will determined in conjunction with district council partners.

Postcode: [N/A](#)

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 etc.

[A map of Lancashire is attached at Appendix 1.](#)

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

Small project bids (requiring DfT funding of between £5m and £20m)

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

Upgrade of Street Lighting	<input checked="" type="checkbox"/>
<u>Large project bids</u> (requiring DfT funding of between £20m plus)	
Major maintenance, strengthening or renewal of bridges, tunnels, retaining walls or other structures	<input type="checkbox"/>
Major maintenance or renewal of carriageways (roads)	<input type="checkbox"/>
Major maintenance or renewal of footways or cycleways	<input type="checkbox"/>
Major maintenance or renewal of drainage assets	<input type="checkbox"/>

A5. Equality Analysis

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

A copy of this is attached at Appendix 2 which shows that no groups are disadvantaged.

SECTION B – The Business Case

B1. The Scheme – Summary/History (Maximum 200 words)

Please select what the scheme is trying to achieve (this will need to be supported by short evidence in the Business Case).

The scheme will enable LCC to install approximately 67,000 energy efficient LED lanterns across the Lancashire and complete its energy efficiency programme, which started in 2009 but was terminated in 2012 due to the challenging budgetary conditions. The scheme will also enable LCC to reduce its revenue expenditure annually by £3.1m through:-

- Energy savings (£2.7m),
- Carbon Reduction Commitment Energy Efficiency (CRC) savings (£191,000)
- Reduced maintenance costs (£210,000)

The scheme will also enable LCC to replace up to 4,000 of its columns which are currently greater than 40 years old and install 150 electricity charging points suitable for use by ULEV. The charging points will be installed in strategic locations across Lancashire in consultation with district council partners.

This scheme:-

- Contributes towards the authority's wider carbon reduction measures as set out in the various strategic area based Highway and Transport Masterplans (see Appendix 3),
- Supports the 15 year Transport Asset Management Plan (TAMP) (see Appendix 4),
- Enables energy consumption to be reduced by 21,834,000 kWhs per annum,
- Saves in the region of 12,000 tonnes of CO2 per annum,
- Contributes towards the UK target to reduce emissions by at least 80% from 1990 levels by 2050 in line with provisions contained in the 2008 Climate Change Act, so supporting the work of Department of Energy & Climate Change,

- Dovetails with previous energy efficiency works carried out by LCC between 2009-2012 which saw the widespread installation of LEDs, dimming equipment and lanterns controlled by a Central Management System (CMS),
- Complements other energy reduction measures currently being undertaken by LCC, involving the de-illumination of approximately 4,200 roadside warning signs that no longer require illumination as a result of the Traffic Signs (amendment) (No.2) Regulations and General Directions 2011,
- Installing LEDs on traffic signs that still require to be lit,
- Supports the work of the Office for Low Emission Vehicles, as 150 charging points will increase the number of ULEV charging points in the Lancashire County Council area by over 300% (according to www.zap-map.com) and encourage a greater uptake of ULEV in Lancashire,
- Supports LCC's bid to the Office for Low Emission Vehicles 'Go Ultra Low City' initiative,
- Represents excellent value for money with a BCR score of 3.79, which increases to 4.91 if the fear of crime is taken into account.

If successful, this scheme will enable us to develop a two phase approach towards maintaining our street lighting stock over the foreseeable future. Phase 1, which this bid refers, will enable us to complete our energy efficiency measures via the installation of 67,000 LED lanterns and give our column replacement strategy a kick-start as it will enable us to replace a significant number of columns over 40 years old. Phase 2, whilst NOT part of this bid, will run concurrently, with phase 1 and will see us replacing a small number of columns each year in line with our TAMP strategy. Progress in phase 2 will initially be limited and dependent on the level of capital funding made available. The level of spend in phase 2 will reflect what LCC can afford so that DfT monies are used additionally to support lantern/column replacements, rather than be used on existing LCC programmes. This is a key point of additionally to our bid.

B2. The Strategic Case (Maximum 650 words)

This section should set out the rationale for making the investment and evidence of the existing transport problems, set out the history of the asset and why it is needed to be repaired or renewed. It should also include how it fits into the overall asset management strategy for the authority.

In particular please provide evidence on the relevant questions/issues at paragraph 15 onwards of the accompanying Challenge Fund guidance.

Supporting evidence may be provided in annexes – if clearly referenced in the strategic case. This may be used to assist in judging the strength of your strategic case arguments but is unlikely to be reviewed in detail or assessed in its own right. So you should not rely on material included only in annexes being assessed.

What are the current problems to be addressed by your scheme? (Describe any economic, environmental, social problems or opportunities which will be addressed by the scheme.

LCC has 148,000 columns, the largest number of any English authority, which requires a huge financial resource to maintain. In order that columns can be replaced when they reach the end of their assumed 40 year service life, an annual budget of £4m is required just to keep pace with the rate of renewal.

In 2009, a Carbon Reduction Programme was established from revenue to replace existing lamps/lanterns with energy efficiency equivalents. Whilst good progress was made, the programme was terminated early after 3 years due to the challenging budgetary conditions LCC

was facing, leaving a significant number of lanterns 67,000 (46%) still in need of upgrading. Increasing energy costs are now a growing burden on the revenue budget.

The TAMP prioritises those areas of the asset which require urgent funding from a safety perspective which has reduced our capacity to adequately address our street lighting stock. As the level of available finance for street lighting is significantly below the amount required just to keep pace with column replacement works, this scheme is essential if LCC is to make inroads in removing a significant portion of high risk columns as identified via TR22 methodology and simultaneously reduce its street lighting energy bill.

This scheme will contribute towards LCC wider strategy to reduce greenhouse emissions by reducing 12,000 tonnes of CO2 from street lighting activities. Promoting a greater take up of ULEV in Lancashire will further help to reduce emissions. These measures will also make a significant contribution to the UK Government's commitment to reduce greenhouse gas emissions by 80%, 2050.

Why the asset is in need of urgent funding?

The TAMP indicates that in order to maintain the assets of Lancashire in their current condition an annual investment of £35m would be required. The annual allocation for 2015/16 is £23m per annum. As can be seen in page 13 of the attached TAMP (Appendix 4) our average annual spend over the past 4 years has been of the order of £29m per annum. The reality of the asset needs does not allow the allocation of all of the resources in any one year or a very significant proportion of the resources available to solve a particular issue such as energy efficient lighting within an acceptable period. The TAMP strategy is focussed on reducing the annual maintenance requirement of the assets to deliver an improving asset over time.

Addressing the problems of an aging lighting stock has been assessed as requiring approximately £50m investment over the next 20 years and will form the main priority in the third 5-year phase of the current TAMP. The scheme enables LCC to kick-start the column replacement strategy sooner than otherwise would be possible.

LCC's approved TAMP sets the strategic direction for asset maintenance within Lancashire over the next 15 years. The priorities within the TAMP are closely aligned to LCCs corporate objectives and as result the priorities between 2015/6 and 2024/25 are the maintenance of A, B & C road, footways and the unclassified road networks. In accordance with the TAMP we are unable to make any substantial investment in street lighting until 2025/26, hence why DfT funding is required so that benefits will be realised quickly.

The TAMP recognises that it is not possible to address all issues with its highways assets concurrently. The magnitude of the investment required to allow the creation of an energy efficient lighting stock and simultaneously replace all of those columns in the highest risk category is a significant barrier as the investment required cannot be provided from normal maintenance funding, given the reduced budgets we are now operating within.

As the level of funding for column replacements is not keeping pace with the required rate of renewal, the average age of the street lighting stock rises, increasing the risk and frequency of possible column failures in future. This scheme will therefore enable LCC to replace a significant number of its oldest columns and replace the remaining energy inefficient street lighting lamps with modern energy efficient LED equivalents. It is highly likely that the scheme will cover its costs within 7-8 years.

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

A number of alternatives have been considered previously to tackle this issue as detailed below:-

- **Seek external funding** – LCC has made two unsuccessful bids in 2009 for additional funding via a PFI street lighting scheme and a bid to the former NW Development Agency's (NWDA) Carbon Challenge Fund. The PFI bid proposed to replace a significant number of lanterns and columns over a 5-6 year investment period. The BCR score for the full replacement of the lighting stock was in the order of 1.44. (The BCR score for this scheme, is 3.79 which increases to 4.91 if the fear of crime is taken into account). Due to the PFI scheme being oversubscribed LCC was not shortlisted. The bid to the former NWDA was for the replacement of approximately 11,000 lanterns with energy efficient equivalents. Whilst this bid was highly commended, no additional funding was provided.
- **Do nothing** - rejected as the proportion of the stock over 40 years old will continue to increase making catastrophic failure more likely. In addition energy costs are likely to increase further and become an increasing drain on limited revenue resources.
- **Phased replacement of lanterns only** – As current resources wouldn't fund more than 5% of the lanterns that require replacement, this option has been rejected as progress would be too slow and would entail diverting the small amount of money we have for column replacements away from replacing high-risk columns,
- **Replace at risk columns only** – as the wide scale replacement of lighting columns is not due to commence until 2025/26 in-line with the TAMP, this option is rejected as it would result in a significant delays before work could commence and does nothing to address the increasing numbers of high risk columns in the meantime or tackle the need to reduce our energy liability through the use of energy efficient equipment.
- **Large scale lantern / column replacement** – this is our preferred option as it will enable LCC to achieve economies of scale with regards the purchasing and fitting of lanterns which are estimated to be at least £10 on every lantern purchased and as a % of material costs represents a significant saving. It also enables us to make real progress with the removal of most of our highest risk columns.

This bid allows our TAMP strategy to be implemented and allows a rational and timely strategy to support energy efficient stock and provide a lighting column stock that is safer and has a lower average age than otherwise would be the case. This bid therefore enables two problems to be solved in the most cost effective manner. In the absence of additional funding a piecemeal programme would be highly unlikely to be effective in either increasing energy efficiency or reducing the average age of our lighting stock.

The soundly based principle of replacing older columns prior to failure is recognised but may conflict with the economic benefits of replacing lanterns with energy efficient units. We are seeking to provide a lighting stock that is as energy efficient as possible within three years, while at the same time replacing our oldest columns and preparing for Phase 2 of our lighting strategy based on the TAMP and planned for 2025-26.

What are the expected benefits / outcomes?

The expected benefits are summarised below:-

- A rapid reduction in energy consumption by up to 21.8m kWh's per annum,
- A staged reduction in CRC costs to a maximum of £191,000 per annum by saving 12,000 tonnes of carbon per annum,
- Reduction of maintenance requirement for the lighting stock initially estimated as being at least £210,000 per annum,
- Reduce a significant number of our highest risk columns by 2017/18,
- Installation of 67,000 low energy LED lanterns to make all our lighting stock energy efficient,

- Delivery of a pilot programme to install up to 150 ULEV charging points to form the basis of a Lancashire Net of Charging facilities,
- Expand the network of ULEV charging points in Lancashire by 300%
- Encourage a greater uptake of ULEV in Lancashire,
- A rationalisation of the authority's requirements for spare parts for its lighting stock which will increase efficiency and standardise maintenance procedures.

Please provide information on the geographical areas that will benefit from your scheme. You should indicate those areas that will directly benefit, areas that will indirectly benefit and those areas that will be impacted adversely.

The scheme will replace energy inefficient lanterns and high risk columns across Lancashire with modern LED equivalents. The scheme will enable approximately 4,000 high risk columns to be replaced. The scheme also provides LCC with the opportunity to stimulate the take-up of ULEV in Lancashire through the installation of 150 ULEV charging points. These works will be undertaken in the district areas of Burnley, Chorley, Fylde, Hyndburn, Lancaster, Pendle, Preston, Ribble Valley, Rossendale, South Ribble, West Lancashire and Wyre and includes key Strategic Economic Plan and Growth City Deal Priority areas. We don't expect any areas to be disadvantaged.

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 provided, lanterns and high risk columns will be targeted on an individual, ad-hoc basis as far as existing resources will allow. As these works will be scattered throughout Lancashire and will generally involve small numbers, the economies of scale that this scheme offers, will not be realised. At current funding rates this will result in the overall numbers of columns in the highest risk category growing considerably until 2025/26 when column replacements can be accelerated in accordance with the TAMP. Energy consumption will continue at the same high level with the associated increasing energy costs. Predicted revenue savings will not materialise and projected savings in CO2 and CRC credits to local and national government budgets will not be realised. LCC roll-out of ULEV charging points will be much slower.

What is the impact of the scheme?

The scheme will have a significant impact across Lancashire. It will provide a more environmentally friendly street lighting infrastructure enabling annual energy consumption to be reduced by 21.87m kWhs and save 12,000 tonnes of CO2 per year so as to reduce the risk to future government finances on carbon commitments, should it miss its targets to reduce CO2 emissions by 80% by 2050 asset out in the Climate Change Act. It will also enable us to remove up to 4,000 high risk columns from the highway so as to improve the safety of road users. The provision of up to 150 charging points will raise the profile of low emission vehicles and encourage a greater uptake of ULEV. In addition, the scheme will enable LCC to reduce its annual revenue expenditure by £3.1m, through lower energy costs (saving £2.7m), reduced CRC costs (saving £191,000) and reduce maintenance costs (£210,000) which will provide LCC with an opportunity to reinvest some of these savings into other asset related issues.

B3. The Financial Case – Project Costs

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	2015-16	2016-17	2017-18	Total
<i>DfT Funding Sought</i>	<i>5000</i>	<i>5000</i>	<i>4800</i>	<i>14800</i>
<i>LA Contribution</i>	<i>1500</i>	<i>1750</i>	<i>1750</i>	<i>5000</i>
<i>Other Third Party Funding</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>

Notes:

- 1) Department for Transport funding must not go beyond 2017-18 financial year.
- 2) A minimum local contribution of 10% (local authority and/or third party) of the project costs is required.

The project plan delivers the scheme in three phases:-

As can be seen from the above, LCC's contribution equates to just over 25% of the scheme costs and is significantly more than minimum 10% local commitment required. The County Council has yet to formally approve its contribution towards this project. Member approval will be sought during February. Funding is expected to be secured from the County Council's transformation reserve and is largely procedural and so should not be problematic.

- Year 1 (2015-2016) selection of initial area and blanket replacement programme in that area. Strategic plan preparation for the remaining units in subsequent years. Targeted replacement of 15,000 lanterns 2,000 columns. Consultations with district partners regarding the location of ULEV vehicle charging points to commence.
- Year 2 (2016-2017) – targets the replacement of a further 30,000 lanterns and remaining columns. Rollout of the pilot for delivery of ULEV charging columns begins.
- Year 3 (2017/18) – targets the replacement of 22,000 lanterns and the remaining ULEV charging points.

B4. The Financial Case - 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.

The county council has provisionally allocated £5 m to the scheme which is equivalent to 25.3% of the total projected costs. This proposed £5m contribution will not result in a corresponding reduction in funding for other asset types.

- 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.

2009 – PFI bid for countywide replacement of aged columns and inefficient lanterns with modern equivalents. The request for PFI funding was over-subscribed and the county council was not shortlisted. The BCR score for full column replacement PFI was 1.44.

2009 - Application to the former NWDA for the installation approximately 11,000 energy efficient lanterns. BCR score not calculated. Whilst the application was highly praised no funding was provided.

The emphasis of this scheme is significantly different to either of the above as it involves wide scale replacement of lanterns with energy efficient equivalents and the replacement of a smaller number of columns. This scheme is more lantern/energy focused and has a BCR score of 3.79 which increases to 4.91 if the fear of crime is taken into account.

B5. The Financial Case – Affordability and Financial Risk (maximum 300 words)

This section should provide a narrative setting out how you will mitigate any financial risks associated with the scheme (you should refer to the Risk Register – see Section B10).

Please ensure that in the risk register that you have not included any risks associated with ongoing operational costs and have used the P50 value.

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

a) What risk allowance has been applied to the project cost?

A risk allowance of 5% has been applied to the project cost. We anticipate that significant savings will arise from the bulk purchase of equipment. Whilst works would proceed initially using existing suppliers, prices and contracts, it is anticipated that larger savings will be achieved through the issue of new tenders.

b) How will cost overruns be dealt with?

LCC has previous experience of carrying out a scheme of this nature and extent as a result of the 2009-2012 Carbon Reduction Programme. This scheme will be managed, supervised and carried out by the same staff as the previously successful Carbon Reduction Programme. As consequence cost overruns are not anticipated. Should these occur, they will be managed within the authority's resources and by appropriate carryover of any works unfunded due to cost overruns to year four (2018/19). Should purchasing efficiencies provide greater than anticipated material savings, a greater number of high-risk columns will be replaced to ensure the scheme comes in on budget.

c) What are the main risks to project delivery timescales and what impact this will have on cost?

The main risks to project delivery timescales are:-

- Delays in procurement processes may reduce the ability to realise procurement savings,
- Delays in manufacture of lanterns may reduce the ability to install equipment,
- Delays in manufacture of columns may reduce the ability to install equipment,
- Staff shortages may effect completion/progress of scheme,
- Delays to development of a strategy for deployment of ULEV charging points,

It is anticipated that these risks are mitigated via the following:-

Lancashire has over 5 years' experience in procuring, installing and maintaining LED street lighting equipment utilising Institution of Lighting Professionals guidance where appropriate

LCC has access to a number of framework contracts that are compliant with the Public Procurement Regulations 2006 that are available for immediate call-off for the supply of LED lanterns and columns, these are also compliant in scale and scope with year 1 of the project.

To achieve economies of scale columns are currently procured via the Eastern Shires Purchasing Organisation's (ESPO) framework, which is also used by other local authorities. For year 2 and 3, to ensure maximum value is obtained including economies of scale and falling prices for LED lanterns other compliant frameworks will be considered, such as the All Wales/Association of Greater Manchester Authorities (AWAGMA) 'Highway Lighting Partnership framework' with whom LCC already collaborates, or through a competitive tendering exercise should this be the most advantageous option. This will ensure continuity of supply throughout the project duration.

The council currently employs over 500 staff on highway installation, design and maintenance works including over 100 within the Street Lighting Team. These teams were previously deployed on the Carbon Reduction Programme and would be available to install units in all phases of the contract.

Existing contracts are also in place for specialist and additional support, in particular Traffic Management and a provider of Independent Connections. The Independent Connections Provider AWAGMA Framework has been running for 3 years and has resulted in savings of over £1.5M from the normal charges of the Distribution Network Operator for electrical connections, the contractual basis of the framework contract also offers improvements in deliverability of timely works for projects, also resulting in less disruption to availability of the highway network.

This combination of existing, compliant in scale and scope contractual arrangements and new compliant procurement will allow early implementation of the project utilising existing proven products, technologies and suppliers, but also allow the project to take advantage of economies of scale, new products and technologies for the majority of the project.

The installation of ULEV charging points is to be undertaken in year 3 to enable discussions and consultations with district council partners to take place so that locations can be agreed well in advance of the work being carried out in year 3.

B6. The Economic Case – Value for Money

- a) If available for smaller scheme bids, promoters should provide an estimate of the Benefit Cost Ratio (BCR) of the scheme.**

BCR calculations have been produced by Jacobs for LCC and are attached at Appendix 5 and Appendix 6. These provide the DfT with an independent, technical assurance of the value for money case associated with this scheme. The BCR value has been developed using MOSLAR guidance to provide a suitable robust and locally suitable BCR for street lighting purposes, which demonstrates for the purposes of robustness of the value for money case for the scheme.

The BCR for this scheme is 3.79 which increases to 4.91 if the fear of crime is taken into account.

For larger schemes costing £20 million or more we would expect the bid to include a BCR and this should align with WebTAG - <https://www.gov.uk/transport-analysis-guidance-webtag>

Where a BCR is provided please provide separate reporting in the form of an Annex to the bid to enable scrutiny of the data and assumptions used in deriving that BCR. This should include:

- A description of the key risks and uncertainties in the data and assumptions and the impact these have on the BCR;
- Key assumptions including (but not limited to): detail of the data used to support the analysis, appraisal period, forecast years, level of optimism bias applied; and
- A description of the modelling approach used to forecast the impact of the scheme and evidence to demonstrate that it is fit-for-purpose.

b) Please provide the following data which may form a key part of our assessment:

Note this material should be provided even if a BCR estimate has been supplied (unless already covered in a VfM Annex).

A description of the do-minimum situation (i.e. what would happen without Challenge Fund investment).	Whilst localised urgent repairs would continue, progress in reducing high risk columns and installing energy efficient equipment will be extremely limited until at least 2025/26.
Details of significant monetised and non-monetised costs and benefits of the scheme (quantified where possible)	<ul style="list-style-type: none"> • Reduction in energy costs of £2.7m per annum at 2015 costs. As energy prices rise the amount of savings will increase. • Maintenance costs will reduce by £210,000 per annum • CRC payments will reduce by £191,000 per annum • 12,000 tonnes of CO2 saved, • Promoting increase usage of ULEV across Lancashire by an initial pilot scheme. • Inspection frequencies will be reduced with revenue savings. • Efficiencies from standardisation of spare parts will realise time efficiencies in maintenance (£10,000) • This scheme has a BCR score of 3.79 which increases to 4.91 if the fear of crime is taken into account.
Length of scheme (km)	LCC has approximately 3,879km of lit highway in Lancashire. Work will be undertaken on a significant portion of this.
Number of vehicles on affected section (AADT in vehicles and if possible split by vehicle type) – to include details of data (age etc.) supporting this estimate.	N/A – county wide various locations

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.)	N/A
Length of any diversion route, if closure is required (over and above existing route) (km)	N/A
Regularity/duration of closures due to flooding: (e.g. number of closures per year; average length of closure (hrs); etc.)	N/A
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)	See Appendix 8
Number of existing cyclists; forecasts of cycling usage with and without the scheme (and if available length of journey)	N/A

B7. The Commercial Case (maximum 300 words)

This section should set out the procurement strategy that will be used to select 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.

Existing framework contracts which are compliant with the Public Procurement Regulations 2006 are available to LCC for immediate call-off for the supply of LED lanterns and columns, these are also compliant in scale and scope with year 1 of the project. Lancashire has over 5 years' experience in procuring, installing and maintaining LED street lighting equipment utilising Institution of Lighting Professionals guidance where appropriate.

Lanterns will initially be procured (year 1) via LCC's current framework agreement to allow the early start of installation works. To achieve economies of scale columns are currently procured via the Eastern Shires Purchasing Organisation's (ESPO) framework, which is also used by other local authorities. For year 2 and 3, to ensure maximum value is obtained including economies of scale and falling prices for LED lanterns other compliant frameworks will be considered, such as the All Wales/Association of Greater Manchester Authorities (AWAGMA) 'Highway Lighting Partnership framework' with whom LCC already collaborates, or through a competitive tendering exercise should this be the most advantageous option. This will ensure continuity of supply throughout the project duration.

The Council currently employs over 500 staff on highway installation, design and maintenance works including over 100 within the Street Lighting Team. These teams would be available to install units in all phases of the contract. Existing contracts are also in place for specialist and additional support, in particular Traffic Management and a provider of Independent Connections. The Independent Connections Provider AWAGMA Framework has been running for 3 years and has resulted in savings of over £1.5M from the normal charges of the Distribution Network Operator for electrical connections, the contractual basis of the framework

contract also offers improvements in deliverability of timely works for projects, also resulting in less disruption to availability of the highway network.

This combination of existing compliant in scale and scope contractual arrangements and new compliant procurement will allow early implementation of the project utilising existing proven products, technologies and suppliers, but also allow the project to take advantage of economies of scale, new products and technologies for the majority of the project.

**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 is likely to achieve the best value for money outcomes is required from your Section 151 Officer below.*

B8. Management Case - Delivery (maximum 300 words – for b)

Deliverability is one of the essential criteria for this Fund and as such any bid should set out any necessary statutory procedures that are needed before it can be constructed.

- a) An outline project plan (typically in Gantt chart form) with milestones should be included as an annex, covering the period from submission of the bid to scheme completion. The definition of the key milestones should be clear and explained. The critical path should be identifiable and any contingency periods, key dependencies (internal or external) should be explained.

The attached project plan (see Appendix 10) clearly sets out the key milestones and dates associated with this scheme. From this it can be seen that the main critical elements of this scheme relate to the DfT submission date and assessment by DfT.

Following on from this, the other critical elements of the scheme relate to the procurement of equipment using tenders that are relevant in terms of size and scope of this scheme. Sufficient time has been allowed to enable this task to be completed. However, should delays be encountered, then LCC does have access to framework tenders through which appropriate equipment can be purchased so this will not affect scheme progress. Scheme design is classed as critical, but as LCC has a very good street lighting inventory, problems are not anticipated in identifying which lanterns need to be replaced. Lanterns will be replaced on an area by area basis, using the routine maintenance areas that operatives are familiar with, so as to cut down travelling and assist productivity.

Has a project plan been appended to your bid? Yes No

- b) Please summarise any lessons your authority has learned from the experience of delivering other DfT funded programmes (such as pinch point schemes, local majors, Local Sustainable Transport Fund, and Better Bus Areas) and what would be different on this project as a result.

The County Council is currently delivering the £130m Heysham to M6 Link Road scheme, one of the largest local authority road projects in the country, due for completion in summer 2016. In addition, through the successful Preston, South Ribble and Lancashire City Deal and the Lancashire Growth Deal, the County Council has embarked on delivery of a transport investment programme worth a further £250m over the five year period to 2020/21.

LCC has also learned of the benefits of collaboration with other authorities, relevant association and institutions in order to not only share best practice but also to achieve greater economies of scale through greater purchasing power. As a result of this we are able to call upon several framework contracts for the supply of lanterns, columns and services which will be used service this bid, should this submission be successful.

We have learned a number of lessons from our experience of preparing DfT funded bids for projects and the delivery of those projects. Principally, the importance of a clear project plan clearly stated, properly costed with a sound delivery plan, which is now part of this bid. We have learned that preparation work to support the scope and delivery of projects is invaluable to ensure schemes are, wherever possible, shovel ready when submitted to DfT. A crucial lesson has been to ensure the phasing of project delivery is appropriate and sufficient time is allowed for any detailed planning phase following a successful bid. The attached bid for lantern replacement and associated column replacement weights the major delivery of replacement lanterns into years two and three for that reason. An important lesson has been to ensure that local support for a scheme is reflected in an appropriate local financial investment in the scheme and in most cases our contribution exceeds a level of 20%, as such an enhanced local financial commitment ensures ownership of the project resides where it belongs with the authority. We have learned the value of a strong TAMP to drive investment and to identify future needs even when, as is the case with street lighting, it initially appears they cannot be funded in the short term.

Perhaps the most important lesson we have learned is that we require an ongoing rolling programme identifying exception maintenance and replacement projects within the framework of the TAMP which ensures a clear strategic plan for up to 10 years in advance.

This project builds on our experience over the last decade of delivering a major programme of energy reduction measures for up to 4,000 units per annum coupled with a proactive column replacement strategy. We believe we understand and have practical experience of the problems we are likely to encounter and have a realistic deliverable project plan to make sure the allocated resources are used on time and with the projected outcomes.

The importance of good project management has been recognised and our senior management team will be heavily involved in the management, governance and delivery of the project on time and on budget and with the minimisation of any project financial risks.

B9. Management Case – Governance (maximum 300 words)

Please name who is responsible for delivering the scheme, the roles (Project Manager, SRO etc.) and set out the responsibilities of those involved and how key decisions are/will be made. An organogram may be useful here. This may be attached as an Annex.

LCC is proposing to install a strong Project Board to ensure that works are delivered on time and within budget.

The Project Board will be headed by the Director of Community Services and will include a number of lead professionals. The board will review progress on a regular basis and will prepare regular reports to the Deputy Chief Executive (DCE) showing delivery performance, financial performance and any risks to the project.

The DCE will receive regular updates from the Project Board and will have overall responsibility for project. He will provide the links to the Cabinet Member and any reports to Overview and

Scrutiny Committee. The DCE will also provide strategic direction and be responsible for major management decisions regarding project delivery and any changes to the project delivery plan.

The lead lighting professional for this scheme will be the County Councils current Street Lighting Manager Martin Dunwell, who is:-

- A Chartered Lighting Engineer,
- A member of the Institute of Lighting Professionals,
- Chairman of the Midland Service Improvement Group (Street Lighting)
- Member of the ADEPT Street Lighting Group.

Martin leads a team of lighting professionals who have previous experience of undertaking a large scale energy efficiency programme, having successfully managed the LCC's Carbon Reduction Programme which ran from 2009 until 2012 and resulted in over 80,000 energy efficiency lanterns being installed.

Full details of governance arrangements and organogram the LCC are proposing to put in place, are attached at Appendix 7

LCC has a good history with regards street lighting energy management. In November 1999 the county council became the first highway authority to achieve the prestigious Energy Efficiency Accreditation status. This award was conferred by the Institute of Energy and recognised as the national benchmark in energy management. Accreditation lasted for 3 years and LCC was re-accredited in 2002, 2005 & 2008. Accreditation expired in 2011 once the scheme changed to the organisation wide Carbon Mark, run by the Carbon Trust.

In 2000, LCC won the 'Best Energy Strategy' at the Major Energy Users Councils' Annual Energy Awards Ceremony, which was open to all sectors. In 2000, LCC was recognised for demonstrating its commitment to the environment and reducing energy consumption through dimming street lighting when it was included in the UK governments publication 'Climate Change – The UK Programme' as an example of good practice.

B10. Management Case - Risk Management

A risk register covering the top 5 (maximum) specific risks to this scheme should be attached as an annex including, if relevant and in the top 5, financial, delivery, commercial and stakeholder issues.

A copy of the Risk Register is attached at Appendix 9, which shows 'gross risk' and mitigation actions to produce lower 'net risks'. From this it can be seen that the impacts associated with this scheme are relatively low and shouldn't threaten the county councils ability to carry out this scheme on-time and on budget.

Please ensure that in the risk register cost that you have not included any risks associated with ongoing operational costs and have used the P50 value.

Has a risk register been appended to your bid?

Yes

No

SECTION C – Monitoring, Evaluation and Benefits Realisation

C1. Benefits Realisation (maximum 250 words)

Please provide details on the profile of benefits, and of baseline benefits and benefit ownership. This should be proportionate to the size of the proposed scheme.

There will be many benefits to LCC and the residents of Lancashire. The scheme will remove 4,000 of the highest risk columns from the highway. This will improve public safety and reduce the risk of a fatal accident arising from a failed column. The installation of up to 150 charging points in Lancashire will significantly raise the profile of ULEV and will hopefully stimulate a greater uptake of these vehicles, as this scheme will increase current provision in Lancashire by over 300%. The use of ULEV in and around our towns will help to improve air quality which will help to bring about health improvements for those groups of people who suffer with asthma etc. The installation of 67,000 lanterns will have a big impact on the County Councils finances as this will enable the authority to save in the region of £3m from its revenue budget once the works have finished, through a combination of reduced energy charges, reduced CRC tax and reduced maintenance, which offers the LCC the opportunity to re-invest some of these savings into other highway assets. The lantern and ULEV elements of this scheme will provide enormous environmental benefits not just the residents of Lancashire but also the UK, as these projects will contribute to a reduction in greenhouse gasses and other noxious emissions. Whilst emissions for ULEV cannot be quantified at this moment in time, the lantern replacement work is expected to save 12,000 tonnes of CO2 per year. This will assist the UK government to meet its obligations under the Climate Change Act to reduce CO2 emissions by 80%, by 2050. As the BCR score for this scheme is 3.79 which increases to 4.91 if the fear of crime is taken into account, this scheme offers LCC and DfT excellent value for money.

C2. Monitoring and Evaluation (maximum 250 words)

Evaluation is an essential part of scheme development and should be considered and built into the planning of a scheme from the earliest stages. Evaluating the outcomes and impacts of schemes is important to show if a scheme has been successful.

Please set out how you plan to measure and report on the benefits identified in Section C1, alongside any other outcomes and impacts of the scheme

The authority will evaluate measure and report the benefits outcomes and impacts of the scheme during its progress within the following framework:-

Outcome Monitoring - will measure the progress of the scheme and that the expected outcomes are realised the responsible person in the first instance is the project manager who will report outcomes to the project board at monthly intervals. Key measures of success will be:-

- Numbers of lanterns replaced,
- Numbers of columns replaced and the age profile of replaced columns,
- The predicted energy saving accrued from the replaced lanterns,
- The production of a clear forward plan identifying the locations of lantern replacement activities for the next quarter,

The targets applied will be initially the target year one lantern replacement target, column replacement target and the predicted energy saving accrued in year one. Dashboards will be prepared and submitted to the project senior responsible officer.

Outcomes will be reported to the DfT on a regular basis. LCC will share details of working practices and methodologies etc. with DfT, HMEP and any other organisation that requests information so that the industry can benefit from LCC experiences.

Process Monitoring - will measure the efficiency of the replacement program and ensure that the expected outputs from replacement gangs is achieved and that any issues are raised and resolved in a clear and unambiguous manner. Key measures of success will be:-

- Increasing productivity of replacement gangs
- A constant supply of replacement lanterns and columns.
- An efficient just in time ordering system for lanterns and columns

The lighting installation lead is responsible for monitoring and delivering the above measures of success and ensuring the project manager is aware and able to action any required adjustments.

Benefits Realisation Monitoring will ensure that the project delivers the anticipated benefits over the life of the project. The project board is responsible for ensuring the project benefits are realised and if possible enhanced during the life of the project. Key measures of success will be:-

- Replacement of lanterns at the predicted rate, which progressively reduces our energy consumption, saves carbon credit payments and reduces maintenance requirements.
- Replacement of columns will progressively reduce the risk of failure of columns provided the right columns are replaced, monitoring the age of columns replaced will reduce risks.
- Energy consumption is expected to reduce as the lantern replacement programme progresses we will monitor the ongoing energy consumption to ensure savings are realised.

Benefits will be reported to the DfT on a regular basis and any other organisation that requests information such as HA, HMEP and so that industry can benefit from LCC experiences

Opportunities

The project manager is responsible for the identification of any opportunities which may arise from improved technology over the life of the project.

A fuller evaluation for large schemes may also be required depending on their size and type.

SECTION D: Declarations

D1. Senior Responsible Owner Declaration

As Senior Responsible Owner for [*scheme name*] I hereby submit this request for approval to DfT on behalf of [*name of authority*] and confirm that I have the necessary authority to do so.

I confirm that [*name of authority*] will have all the necessary powers in place to ensure the planned timescales in the application can be realised.

Name:

Signed:

Position:



D2. Section 151 Officer Declaration

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

- has allocated sufficient budget to deliver this scheme on the basis of its proposed funding contribution (subject to County Council Member approval to the funding)

- will allocate sufficient staff and other necessary resources to deliver this scheme on time and on budget (subject to County Council Member approval to the funding)
- 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: Gill Kilpatrick



Signed:

(subject to County Council Member approval to the funding)

Submission of bids:

The deadline for bid submission is 5pm, **9 February 2015**

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

roadmaintenance@dft.gsi.gov.uk copying in steve.berry@dft.gsi.gov.uk