

# Local Highways Maintenance Challenge Fund



Department  
for Transport

## 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)\*: Norfolk County Council**

*\*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: Nick Tupper – Highways Maintenance Manager**

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

**Postal address: Norfolk County Council  
County Hall  
Martineau Lane  
Norwich  
Norfolk  
NR1 2SG**

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.norfolk.gov.uk/Travel\\_and\\_transport/Roads/Road\\_maintenance/Department\\_of\\_Transport\\_funding/Local\\_highways\\_maintenance\\_challenge\\_fund/index.htm](http://www.norfolk.gov.uk/Travel_and_transport/Roads/Road_maintenance/Department_of_Transport_funding/Local_highways_maintenance_challenge_fund/index.htm)

## **SECTION A - Scheme description and funding profile**

### **A1. Scheme name: Greater Norwich Area Surface Water Drainage scheme**

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

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

The scheme upgrades key drainage infrastructure, addressing long standing flooding issues across a wide residential and growth area. The works will complement and support economic growth proposals for north Norwich as set out in the Greater Norwich Joint Core Strategy & New Anglia LEP Strategic Economic Plan. BCR=6.6.

#### **A3. Geographical area:**

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

The northern suburbs of Norwich, adjacent to the north-east Norwich growth area, encompassing the urban residential areas of Costessey, Hellesdon, Old Catton, Sprowston and Thorpe St Andrew. These areas have experienced substantial housing growth since the 1950s, and the drainage systems are now reaching the end of their useful lives.

OS Grid Reference: 623200,308700

Postcode: NR1 (Norwich); NR7 (Sprowston and Thorpe); NR5/8 (Costessey); NR6 (Hellesdon)

*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.*

Appendix A highlights the areas where the drainage improvements are proposed in relation to the 2014 flood events, the north-eastern growth triangle and the proposed Northern Distributor Road.

#### **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

##### **Large project bids** (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"/>
Upgrade of Street Lighting	<input type="checkbox"/>

**A5. Equality Analysis**

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

Please see Appendix B

## **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 existing surface water drainage systems installed in the second half of the twentieth century are reaching the end of their useful lives and require improving and replacement. The systems cannot cope with surface water flows during heavy rainfall events, with problems occurring typically in the road gullies and catch pits. These take surface water, via small scale pipework, to limited capacity and obsolete systems of soakaways, boreholes and restricted outfalls.

The issues and solutions were identified as major housing schemes were built. Between 1972 and 2001 the recommendations of a surface water drainage study were partly implemented through a series of phased incremental drainage additions. However, fluctuations in capital funding and the need to prioritise Integrated Transport schemes resulted in delay to further implementation of the required improvements.

Over the past ten years, storm events have led to an increasing amount of localised flooding events with existing systems struggling to deal with flows. This has required an increasing amount of routine maintenance, repairs and emergency callouts to deal with flooding issues before they affect properties. This was particularly evident in 2014, with typical locations such as Sidney Road in Costessey, and Furze Road in Thorpe St Andrew flooding on several occasions as highlighted below.



Costessey – Sidney Road June 2014



Thorpe St Andrew – Furze Road July 2014

## **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.*

The Greater Norwich area has seen substantial economic and housing growth in the latter part of last century, and this growth continues today with further business and housing growth plans set out in the Joint Core Strategy, developed between Norfolk County Council, Norwich City Council, Broadland District Council and South Norfolk District Council.

The unusually wet year of 2014 gave rise to a large number of flooding issues, which reinforces why Norwich is ranked 47<sup>th</sup> (out of 4,215) in the DEFRA national ranking of settlements susceptible to surface water flooding, with 6,500 properties at risk. Between May and August 2014, in the area being considered, there were reports of flooding on 33 dates affecting 156 locations. 80 properties flooded internally, 23 of these locations suffered repeat flooding (1 up to 6 times). In total, taking account of repeat flooding, there were 213 incidents of flooding, 115 of which were internal to properties, with the associated environmental, health and wellbeing costs on residents. There were further highway network issues, with many roads being flooded, including part of the Norwich inner ring road at Carrow Road. This had an economic cost to businesses and their employees, in this key regional economic centre. Photos of the area can be found below.



Norwich – Carrow Road 27 May 2014



Norwich – Kerrison Road 20 July 2014

This highlights the pressing need for further major works to alleviate flooding, prevent disruption of the highway network and distress to residents, travelling public, transport providers and businesses. Further photos of the flooding in Norwich and its suburbs in 2014 can be found in the local press at this [link](#).

We currently spend around £600,000 on capital drainage improvements across the county each year, which is why this Challenge Fund bid is so critical to residents and businesses in Norfolk. Unfortunately present funding levels are insufficient to prevent deterioration of the overall highway asset in Norfolk, with the maintenance backlog currently of £72.5m to bring the whole highway asset back to its baseline condition in 2008. This challenge fund therefore provides Norfolk with a major opportunity to improve and upgrade its drainage infrastructure in the Greater Norwich area and bring it up to current standards.

As outlined above, although the importance of capital drainage works is recognised by Members (see NCC's Transport Asset Management Plan), with such a large rural road network to maintain which is equally vital to the Norfolk economy, it is just not affordable for these substantial maintenance works to be delivered within existing funding mechanisms.

In line with the 2012 HMEP Guidance on the management of Highway Drainage Assets, we will capture this significant new asset in a drainage record data set which will act as a driver to establish an improved drainage recording process. This will supplement our good drainage asset information, which is already being enhanced through GPS collection of data (location, level of blockages / silt etc) as part of our cyclic gully cleaning programme.

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

Due to funding constraints and the priority given to maintaining road condition in Norfolk, there have been no significant extensions to the surface water drainage system in this area since 2001. Over time the soakage capacity has decreased and the potential for surface water flooding is increasing. This was evidenced by the flooding incidents in the summer of 2014 which initiated a Flood Investigation report for the area by the Lead Local Flood Authority. A copy of the report can be found [here](#). This has been further exacerbated by the effects of global warming and the increased frequency of heavy rainfall events and flash flooding. The proposed scheme would replace these individual systems with limited capacities with an effective, piped surface water system connected to SUDS features and existing outfalls.

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

By the very nature of the urban built up environment, there is very limited scope for retrofitting additional soakaways or underground storage tanks. Where possible, this has already been done but to solve the problem and future proof it, a fully designed system is required. New boreholes have also been considered, but our key partners at the Environment Agency do not favour this option.

Due to foresight and the strategy adopted in the late 1970's and 80's, earlier works have established existing outfalls designed specifically with the capacity for these whole catchments. Therefore, the environmental risks associated with constructing new outfalls are avoided.

There is a do nothing option, but with the expected long term trend to be for more frequent heavy rainfall events, more regular flooding would be expected. Therefore the costs in terms of economic loss and disruption to the highway network would increase, along with the personal costs of property flooding etc.

#### *What are the expected benefits / outcomes?*

The expected benefits would be an effective surface water drainage system. The design starting point will be for the systems to offer 1:30 protection where this is possible. This would offer enhanced resilience and would bring a far improved level of protection to a large number of properties and the highway network. This would also reduce disruption and damage and the health and safety issues associated with flood events. Minimising this disruption and a more resilient system is essential for future proofing this key infrastructure and supporting the adjacent economic and housing growth in the area, especially as many of the routes are key commuter routes, public transport and walking and cycling corridors, which are vital and severely affected during flood events. This is even more essential now due to the significant DfT investment in cycling in Norwich through the Push the Pedalways scheme.

*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 areas affected are highlighted in the plan in Appendix A. They include the City of Norwich and the suburbs of Costessey, Hellesdon, Old Catton, Sprowston and Thorpe St Andrew. The works will inevitably cause some disruption whilst being delivered but this will be short lived and planned in nature (unlike the unplanned impacts of major disruption on the network due to flood events which the works will look to prevent). The detailed proposals can be found on the plans in Appendix C.

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

If funding is not secured, then there is a real risk that during any repeat heavy rainfall events, then the network disruption, impact on businesses and personal devastation of internal property flooding events will reoccur. Given that with global warming, these events are likely to increase in nature, this key investment is essential. With the limited funding currently available, we can only address these issues with incremental, low cost improvements, rather than an overall strategy to deal with issues across the whole area.

*What is the impact of the scheme?*

Reduced flooding events with associated benefits on the highway network, with the aim of preventing a repeat of the 2014 flooding event and the 213 incidents of recorded flooding.

The scheme has widespread local support across the political spectrum, including local MP's, County & City Councillors, Norwich City Council, Broadland & South Norfolk District Council, from key stakeholders including Anglian Water, the Environment Agency & New Anglia LEP. Letters of support are included within Appendix D.

### **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)**

<b>£000s</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>Total</b>
<i>DfT Funding Sought</i>	<b>2,000</b>	<b>2,930</b>	<b>4,193</b>	<b>9,123</b>
<i>LA Contribution</i>	<b>220</b>	<b>400</b>	<b>580</b>	<b>1,200</b>
<i>Other Third Party Funding</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.

In addition to the above figures, both the City Council and the County Council typically spend around £100,000 of revenue funding each year on routine maintenance of the existing drainage assets and dealing with emergency response in these areas covered by this bid.

**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.*

This bid confirms that Norfolk County Council would be looking to support the bid through the provision of 11.6% funding. In the early years this will be from reserves and latterly an allowance will be made in the Capital Structural Maintenance programme. This will ensure already programmed schemes are unaffected.

We are currently exploring the possibility of a financial contribution from Anglian Water, who would benefit from the proposed scheme. They would also benefit from a reduced number of emergency flood events and the resulting issues with flood clearance works involving sewerage. We will also be investigating any opportunities for water quality improvements and therefore Water Framework Directive funding opportunities.

- 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.*



We are currently reviewing future financing options.

### **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 based contingency of 6% or £585,000 is included in the total scheme cost

*b) How will cost overruns be dealt with?*

As with all highways capital schemes, the standard Norfolk County Council corporate project management guidelines will be followed. This is based on PRINCE2 methodology whereby normal good project management governance will be applied. This includes maintaining a detailed project management plan, risk register and effective financial management. Phasing the works in sections and over different financial years will allow the project scope to be tailored to suit the funding available and the possibility of smaller non-critical elements being deferred or delivered through future works programmes if required.

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

The key risks and potential associated costs are identified on the attached risk register as Appendix E. The total value of risk cost is included in the total scheme cost.

### **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.**

The 2014 Norfolk County Council Norwich Flood Investigation report highlights some of the economic impacts of the flood events in May and July 2014. This initial assessment of economic impacts has been developed further in this bid to provide a robust economic appraisal of the proposed scheme.

The cost effectiveness of the scheme has been derived by measuring the cost of implementing the proposed scheme against the reduction in flood risk to properties, through damages avoided, to obtain a Benefit Cost Ratio (BCR). Both the flood damages (benefits) and scheme costs have been discounted over a 50 year period to reflect the anticipated 50 year design life of the proposed scheme (in accordance with the HM Treasury Green Book); and to represent the benefits and costs of the scheme in Present Value (PV) terms.

In order to quantify the value of flood damages avoided, the Flood Hazard Research Centre's (FHRC) Multi-Coloured Manual (MCM) methodology, developed in collaboration with the Environment Agency and Defra, has been utilised to estimate the annual accrual of flood

damages. The total estimated PV Benefits from a reduction in flood risk to residential and commercial/public buildings is outlined below:

51 residential properties: £4.3 million  
28 commercial/public buildings: £89.2 million  
Total PV Benefits: £93.5 million

Further supporting evidence from the recent flooding in 2014 include disruption to the local economy due to the highway network being flooded. A significant local example of this was Norwich City Football Ground which could not be accessed due to flooding of part of the inner ring road making it unavailable to pedestrians, cyclists, public transport users and other road vehicles. Another example of the impacts from flooding was a local business that incurred costs of over £450,000 due to loss of trade and damage to property.

The 2014 Norwich Flood Investigation report also highlights the significant longer term detrimental health and economic effects of flooding. Studies following similar flooding events to those recently suffered in Norwich have shown the incidence of physical and mental health disorders such as depression and post-traumatic stress to be significantly higher in people in the months following flooding incidents. This puts further strain on public health services and a knock-on negative effect on the economy due to higher instances of absence from work.

In addition to the direct financial costs and socio-economic costs of flooding the potential health risks which arise from floodwater affecting the local sewage network and the associated clear-up costs from flood events also should be considered.

The total PV Costs of the proposed scheme are as outlined below:

Dft Funding Sought: £ 9.123 million (split over 3 years)  
LA Contribution: £1.2 million (split over 3 years)  
Ongoing LA Maintenance: £100k per annum  
**Total PV Costs: £12.4 million**

Comparing the PV Benefits with PV Costs, and considering the impacts of residual flooding from over design events, provides a **BCR for the proposed scheme of 6.60**. Therefore, it is considered that there is a strong economic case in support of the proposed scheme.

**b) 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.*

**c) 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).

<p>A description of the do-minimum situation (i.e. what would happen without Challenge Fund investment).</p>	<p>The do minimum solution is to continue with;-</p> <ol style="list-style-type: none"> <li>1. Routine maintenance to ensure the systems are clean (although with limited capacity).</li> <li>2. Reactive maintenance to remove floodwater using tankers, with consequent ongoing revenue costs</li> <li>3. Minor drainage works to install additional soakage capacity within a built environment with limited expectation of significant local improvement</li> <li>4. Increasing intensity/frequency of rainfall events resulting in more intense and frequent flood events, with associated impact on communities, businesses, the local economy, and the availability of the highway network</li> </ol>
<p>Details of significant monetised and non-monetised costs and benefits of the scheme (quantified where possible)</p>	<p>Using the Norwich example in B6, the scheme would help provide estimated flood related benefits of £93.5m and an overall BCR of 6.60.</p>
<p>Length of scheme (km)</p>	<p>Individual drainage schemes</p>
<p>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.</p>	<p>13,592 (on Carrow Road, Norwich section referred to in above text)</p>
<p><b>d) Other VfM information where relevant - depending on type of scheme bid:</b></p>	
<p>Details of required restrictions/closures if funding not provided (e.g. type of restrictions; timing/duration of restrictions; etc.)</p>	<p>Temporary road closures needed a) to address localised flooding and b) to construct any drainage schemes.</p>
<p>Length of any diversion route, if closure is required (over and above existing route) (km)</p>	<p>Three main distributor routes are included for drainage improvements within the project. Any one of these would lead to 1 mile + diversion route if they were blocked on the Norwich urban fringe. However, given the nature of the local road system, suitable local diversions will be available.</p>
<p>Regularity/duration of closures due to flooding: (e.g. number of closures per year; average length of closure (hrs); etc.)</p>	<p>Incidents in 2014 required local diversions during flooding Regularity / duration of closures could increase beyond the 2014 situation, if increased frequency/duration of flooding occurs as predicted</p>
<p>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)</p>	<p>Within the whole of Norfolk, there have only been 12 recorded personal injury accidents which have the road conditions as 'flood', over the last five years.</p> <p>Of these 12, one occurred in Norwich on Sprowston Road during the 20<sup>th</sup> July 2014 flood event, and one occurred in Costessey on West End Road in 2012.</p>

	<p>Although not accidents, flood incidents affecting properties are detailed below:  Between May and August 2014 there were reports of flooding on 33 dates affecting 156 locations. 80 properties flooded internally, 23 of these locations suffered repeat flooding (1 up to 6 times). Due to the repeat flooding there were 213 incidents of flooding, 115 of which were internal to properties. The number of flooding incidents by catchment is broken down into the following:</p> <ul style="list-style-type: none"> <li>• Central City Catchments – 16 incidents of internal flooding affecting 13 properties</li> <li>• Dalimond Catchment (Catton Grove and Sewell) - 8 properties flooded with no repeat flooding</li> <li>• Dobb’s Beck Catchment (Sprowston) – 39 incidents of internal flooding affecting 18 properties</li> <li>• Hellesdon Catchment – 11 incidents of internal flooding affecting 6 properties</li> <li>• Riverside Catchments – 34 incidents of internal flooding affecting 18 properties</li> <li>• Thorpe St Andrew Catchments – 13 incidents of internal flooding affecting 5 properties</li> <li>• Other Flooding Locations – 4 incidents of internal flooding affecting 3 properties</li> </ul>
Number of existing cyclists; forecasts of cycling usage with and without the scheme (and if available length of journey)	N/A – along with other road users, when the highway network is flooded, cyclists have to detour to complete their journeys.

**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.*

The scheme can be delivered through an optimum combination of Norfolk County Council’s existing highways contact arrangements (with design consultants Mouchel and contractor Lafarge Tarmac) and the Eastern Highways Alliance framework contract. Both delivery options have been competitively tested in the market to ensure value for money. The current arrangements with Mouchel and Lafarge Tarmac started on 1<sup>st</sup> April 2014 for an initial term of seven years. This arrangement will enable a rapid mobilisation of design and contractor resource to achieve the required delivery timescales set out in the project plan, including the delivery of some schemes on the ground within the first twelve months.

This procurement route has already been tested through both the recent DfT Pothole funding award and delivery on the ground, and the DfT Norwich Cycling Ambition schemes within Norwich. These and other schemes, further help justify Norfolk County Council's reputation for cost effective scheme delivery.

If there are concerns regarding the availability of construction resources for any of the proposals, then NCC can use the Eastern Highways Alliance contract. This is a framework contract agreed by 9 eastern region highway authorities for a four year, £75m contract to deliver highways capital schemes. These vary in size from £50,000 to £10m. The contract is expected to save a combined total of £6m savings to the member authorities over the four years.

*\*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.*

Has a project plan been appended to your bid?

Yes

No

The detailed Project plan can be found in Appendix F.

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.*

Over the years, Norfolk County Council have developed a very good track record in terms of both proactive budget management and effective capital programme management and scheme delivery. Due to the flexible and effective contractual arrangements we have, additional funding opportunities have been maximised to the benefit of the businesses and residents of Norfolk.

A recent example of this includes delivery of the £5.4m DfT pothole funding. To the end of December, some £3.9m had already been spent, repairing and preventing over 32,000 potholes. Implementation continues to ensure 100% budget spend by the end of March 2015 – a significant challenge given the 9 months to plan and deliver this work.

We are also currently delivering the:

- £170,000 Cycle safety fund in Norwich - programme delivered in 2013/14



- £5.5m Great Yarmouth Beacon Park to A143 link road scheme presently being delivered as part of the DfT Pinch Point funding
- £2.9m Better Bus Area funding - programme being delivered up to 2014/15
- £5.6m City Cycle Ambition – Norwich scheme – a programme of cycling improvements being delivered up to 2015/16.

This is in addition to the annual Highways Capital Programme of integrated transport and maintenance schemes. This is currently at around £90m for 2014/15, which includes a significant amount of external funding. This programme is typically delivered to within a £50,000 tolerance.

Previous successes also include delivery of the £7m DfT funded detrunk road reconstruction scheme on the A140 Scole Bypass in 2009

Delivery of all these programmes and schemes relied on effective partnership working, and often rapid mobilisation of both design and contractor resource. Our contractual arrangements provide flexibility to achieve this, with additional flexibility to engage the Eastern Highways Alliance if required.

The key lesson learned in relation to this bid, is to divide the whole programme up into discrete individual drainage schemes to maximise the likelihood of delivery. This will also enable schemes to be fast-tracked if some elements run into delivery difficulties.

#### **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.*

As with all highways capital schemes, the tried and tested standard Norfolk County Council corporate project management guidelines will be followed. This is based on PRINCE2 methodology whereby normal good project management and governance arrangements will be applied. This includes maintaining a detailed project management plan, risk register and effective financial management.

This tried and tested arrangement has successfully delivered thousands of schemes over the years, including many DfT funded projects.

A Project Lead has already been identified in this document. In addition, the Highways Capital Programme Manager will be the Project Sponsor. A dedicated Project Manager and Project Team, comprising suitable experienced and qualified staff, will be established to design and deliver the works. These will be appointed from within the County Council's existing resources, which are further supplemented by Mouchel team members and expertise.

This project team will report to both the Project Sponsor and to an established Project Delivery Team (PDT) board which oversees major scheme delivery throughout the County.

In line with national best practice and corporate project management guidelines, projects will follow the standard delivery processes which will include monthly financial reviews, gateway review meetings at key milestones, and early contractor involvement meetings.

Phasing the works in sections and over different financial years will allow the project scope to be tailored as required and ensure full budget spend combined with flexibility with on the ground delivery.

### **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.

*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

The risk register for this project is included as part of the spreadsheet in Appendix C – second worksheet.

It covers mobilisation, securing design and construction resources, drainage network outfall capacity, streetworks / permit issues and the impact on commuter routes, underground utility apparatus and the potential need for diversion, and financial aspects.

It should be noted that in terms of buildability, risks have been reduced by avoiding land purchase. Environmental impact has also been reduced by utilising existing outfalls.

## **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.*

The scheme will have a high benefit to local residents, business and commuters whose life is regularly affected by flooding events in this area. It will also provide relief to those affected by high intensity rainfall events. The scheme could help prevent a repeat of the 2014 event in Norwich and reduce the probability of flooding incidents to both residential and commercial property. This is in addition to the benefits provided by preventing flooding to the highway network.

We have already seen an increase in both intensity and frequency of flash flooding, and the proposed scheme will provide mitigation for future events and substantially improve the resilience of the network, which is fundamental in supporting both the local growth agenda and developing the Norfolk economy.

As well as securing a significant improvement in storm flood capacity, the scheme will provide benefits to Anglian Water and the resilience of their sewage system. There will be an overall improved surface water run-off capacity for larger return periods as the storm water system will be considerably more resilient.

This is all defined in further in the 2014 Norwich Flood Investigation report which quantifies in detail tangible benefits for a high volume population, residential area, commercial properties

and highway network and associate disruption in a major City. Using the Norwich example in B6, the scheme would help provide estimated flood related benefits of £93.5m and an overall BCR of 6.60.

A further benefit will be the reduced pressure on the County Council, emergency services and Anglian Water budgets, through the reduction in emergency call outs and reactive maintenance works. This will in turn result in water quality and environmental improvements.

## **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*

A variety of methods will be used to monitor and evaluate the effects of the scheme. Being a drainage scheme the most obvious monitoring will be during storm events and how the system deals with surface water. For comparable flood events, the amount of property flooding and highway network flooding can be measured. We are confident that the proposed systems will dramatically improve how surface water is dealt with in these residential areas, and result in both greater availability of the highway network during these events and also reduced property flooding.

The amount of funding spent on emergency drainage works can also be compared. Information is available for the past ten years and this can be directly compared with the spend within these areas in future years.

*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 the Greater Norwich Area Surface Water Drainage scheme, I hereby submit this request for approval to DfT on behalf of Norfolk County Council and confirm that I have the necessary authority to do so.

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

Name: Nick Tupper

Signed:

Position: Highways Maintenance Manager




### **D2. Section 151 Officer Declaration**

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

Please also see the letter in Appendix G.

<p>Name: Peter Timmins Interim Executive Director of Finance</p>	<p>Signed: </p>
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**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](mailto:roadmaintenance@dft.gsi.gov.uk) copying in [steve.berry@dft.gsi.gov.uk](mailto:steve.berry@dft.gsi.gov.uk)