

# National Productivity Investment Fund for the Local Road Network Application Form



Department  
for Transport

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

One application form should be completed per project and will constitute a bid.

## **Applicant Information**

**Local authority name(s)\*:** Transport for Greater Manchester on behalf of Greater Manchester Combined Authority

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

**Bid Manager Name and position:** David Bland, Highway Network Development Manager

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

**Contact telephone number:** 0161 244 1140    **Email address:** david.bland@tfgm.com

**Postal address:**    Transport for Greater Manchester  
                                 2 Piccadilly Place  
                                 Manchester  
                                 M1 3BG

## **Combined Authorities**

*If the bid is from an authority within a Combined Authority, please specify the contact, ensure that the Combined Authority has provided a note ranking multiple applications, and append a copy to this bid.*

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

Nicola Kane  
Head of Strategic Planning and Research  
0161 244 1246

**Contact telephone number:** 0161 244 1246, **Email address:** [Nicola.kane@tfgm.com](mailto:Nicola.kane@tfgm.com)

**Postal address:**    Transport for Greater Manchester  
                                 2 Piccadilly Place  
                                 Manchester  
                                 M1 3BG

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 web link where this bid will be published:**

[www.greatermanchester-ca.gov.uk/npif-bid](http://www.greatermanchester-ca.gov.uk/npif-bid)

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

**A1. Project name:** KRN Traffic Signal Adaptive Control

**A2 :** Please enter a brief description of the proposed project (no more than 50 words)  
**Implementation of adaptive control at approximately 90 traffic signal installations throughout Greater Manchester (GM), upgrading current fixed-time operation to optimised traffic signal control using SCOOT and MOVA. The bid also includes funding for software to develop network management strategies to take full advantage of the extended adaptive control.**

**A3 :** Please provide a short description of area covered by the bid (no more than 50 words)  
**SCOOT or MOVA adaptive traffic control would be introduced at key signal installations across all ten GM Local Authority areas, either directly on, or providing direct benefits to, our Key Route Network. Deployment will be prioritised in locations where the economic and congestion benefits are greatest.**  
OS Grid Reference: **Various**  
Postcode: **Various**

**A4.** How much funding are you bidding for? (Please tick the relevant box):

**Small project bids** (requiring DfT funding of between £2m and £5m)

**Large project bids** (requiring DfT funding of between £5m and £10m)

**A5.** Has any Equality Analysis been undertaken in line with the Equality Duty?

Yes  No

**An initial impact assessment concludes that installation of adaptive control will not affect the equality of any group with protected characteristics. A full analysis and assessment will be carried out as part of the detailed design and project implementation process.**

**A6.** If you are planning to work with partnership bodies on this project (such as Development Corporations, National Parks Authorities, private sector bodies and transport operators) please include a short description below of how they will be involved.

**TfGM is working together with the 10 GM Local Authorities to support Greater Manchester's wider aspirations for growth and prosperity whilst reducing congestion, improving air quality and increasing the use of public transport. TfGM will undertake the detailed design, procurement and construction supervision of the works, scheme appraisal and monitoring in conjunction with the Greater Manchester local highway authorities.**

**A7. Combined Authority (CA) Involvement**

Have you appended a letter from the Combined Authority supporting this bid?  Yes  No

**A8. Local Enterprise Partnership (LEP) Involvement and support for housing delivery**

Have you appended a letter from the LEP supporting this bid?  Yes  No

For proposed projects which encourage the delivery of housing, have you appended supporting evidence from the housebuilder/developer?

Yes  No

## **SECTION B – The Business Case**

### **B1: Project Summary**

Please select what the project is trying to achieve (select all categories that apply)

#### **Essential**

- Ease urban congestion
- Unlock economic growth and job creation opportunities
- Enable the delivery of housing development

#### **Desirable**

- Improve Air Quality and /or Reduce CO2 emissions
- Incentivising skills and apprentices

Other(s), Please specify -

**B2** : Please provide evidence on the following questions (max 100 words for each question):

a) What is the problem that is being addressed?

**Congestion costs our economy £1.3 billion per year and has been identified as a priority by the GM Mayor. GM's ambitious growth plans will increase pressure on our roads and we need smarter traffic systems to manage this growth effectively.**

**TfGM has responsibility, on behalf of GMCA, for ensuring that traffic signals operate efficiently. The current mode of operation using 'fixed-time plans' does not allow adaptation to variability in traffic flows, leading to unreliable journey times for all road users. Management of changes in traffic flow from network disruption, are also currently managed by manual adjustments, which is sub-optimal.**

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

**Option 1 – Do Nothing. Rejected as this means that existing levels of congestion remain and there is little resilience available for future growth in traffic flows.**

**Option 2 – All GM signals on SCOOT or MOVA. This has been rejected on cost grounds and because the ability to deliver within the funding timescale would be difficult to achieve.**

**Option 3 – Prioritisation of approximately 90 junctions in terms of value for money, age of current equipment and synergies with existing Scoot traffic management regions. This is the preferred option to be taken forward in this bid.**

c) What are the expected benefits/outcomes? For example, could include easing urban congestion, job creation, enabling a number of new dwellings, facilitating increased GVA.

**Benefits of SCOOT/ MOVA are:**

- **Improved highway network management and journey time reliability - up to 15% reduction in delays at junctions**
- **Ability to respond more effectively to network disruption**

- Ability to optimise use of existing highway capacity to support anticipated increases in traffic levels from the additional 200,000 jobs and 227,000 homes proposed within the draft Greater Manchester Spatial Framework.
- Improved air quality from more smoothly flowing traffic.
- Ability to provide bus priority at signals, whenever possible, to integrate with and leverage additional further benefits from LSTF-funded technology which allows us to track the GPS location of the buses.

d) Are there any related activities that the success of this project relies upon? For example, land acquisition, other transport interventions requiring separate funding or consents?

**None- all works are within highway boundaries and no formal external legal permissions are required. TfGM has extensive experience in the delivery of these types of works which along with strong project management, financial control and risk management will ensure the project is successfully delivered.**

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

**Adaptive control would continue to be introduced on a very piecemeal basis as funding opportunities arise, for example as part of development access proposals, giving Greater Manchester less ability to plan and prioritise delivery effectively. This will undermine our ability to realise the step-change in benefits to road users in Greater Manchester that could be delivered with this funding.**

f) What is the impact of the project – and any associated mitigation works – on any statutory environmental constraints? For example, Local Air Quality Management Zones.

**The project will reduce congestion on elements of the Key Route Network that are currently within the GM AQMA (see Appendix 1). A number of areas have also been identified by Defra as failing to meet EU standards and TfGM is currently working with Defra to better understand the implications and to identify appropriate measures. Stationary traffic at junctions emits an estimated 40% additional pollutants compared to free-flowing traffic. By minimising queuing traffic the scheme will yield significant environmental benefits, through reduced carbon usage and reductions in vehicular emissions.**

(Ref for the 40% stat: <https://www.surrey.ac.uk/mediacentre/press/2017/latest-research-reveals-sitting-traffic-jams-officially-bad-you>)

**B3** : Please complete the following table. **Figures should be entered in £000s** (i.e. £10,000 = 10).

**Table A: Funding profile (Nominal terms)**

£000s	2018-19	2019-20
DfT funding sought	£2,000	£2,900
Local Authority contribution	£1,000	£267
Third Party contribution	£33	£0
<b>TOTAL</b>	<b>£3,033</b>	<b>£3,167</b>

Notes:

- 1) Department for Transport funding must not go beyond 2019-20 financial year.  
2) Bidders are asked to consider making a local contribution to the total cost. It is indicated that this might be around 30%, although this is not mandatory.

**B4 : Local Contribution & Third Party Funding** : Please provide information on the following questions (max 100 words on items a and b):

a) Provide an outline of all non-DfT funding contributions to the project costs, the level of commitment, and when the contributions will become available.

**The overall aim of TfGM is to install SCOOT and MOVA at all junctions in Greater Manchester to ensure maximum highway capacity can be achieved and levels of delay and disruption are minimised for the travelling public. Non-DfT funding contributions have been identified and will continue to be identified during the length of the project to install SCOOT and MOVA at all sites in Greater Manchester. The match funding of £1.3 million currently identified relates to planned, complementary UTC works at 21 of the 90 sites and developer Section 278 contributions. It is anticipated this figure will rise as more developer-led projects are confirmed.**

b) List any other funding applications you have made for this project or variants thereof and the outcome of these applications, including any reasons for rejection.

**A bid for funding of c£17 million to install SCOOT or MOVA at all of the remaining signal installations in Greater Manchester was included as part of GM's Growth Deal 3 bid. Following the final allocation of GD3 funding to GM it is anticipated that an amount in the order of £3 million will be allocated to install SCOOT or MOVA. The programme will therefore need be scaled back from the original bid to match the available funding, resulting in only a limited number of junctions being improved. The local approvals process for this element of the programme has been initiated and a successful NPIF bid will allow us to run the projects within an overall programme, with clear synergies for procurement, governance and delivery.**

### **B5 Economic Case**

This section should set out the range of impacts – both beneficial and adverse – of the project. The scope of information requested (and in the supporting annexes) will vary, including according to whether the application is for a small or large project.

#### **A) Requirements for small project bids (i.e. DfT contribution of less than £5m)**

a) Please provide a description of your assessment of the impact of the project to include:

- Significant positive and negative impacts (quantified where possible) including in relation to air quality and CO<sub>2</sub> emissions.
- A description of the key risks and uncertainties;
- If any modelling has been used to forecast the impact of the project please set out the methods used to determine that it is fit for purpose

*\* Small projects bids are not required to produce a Benefit Cost Ratio (BCR) but may want to include this here if available.*

b) Small project bidders should provide the following in annexes as supporting material:

Has a **Project Impacts Pro Forma** been appended?     Yes     No     N/A

Has a description of data sources / forecasts been appended?  Yes  No  N/A  
Has an **Appraisal Summary Table** been appended?  Yes  No  N/A

Other material supporting your assessment of the project described in this section should be appended to the bid.

*\* This list is not necessarily exhaustive and it is the responsibility of bidders to provide sufficient information to demonstrate the analysis supporting the economic case is fit-for-purpose.*

**B) Additional requirements for large project bids (i.e. DfT contribution of more than £5m)**

c) Please provide a short description (max 500 words) of your assessment of the value for money of the project including your estimate of the Benefit Cost Ratio (BCR) to include:

- Significant monetised and non-monetised costs and benefits
- Description of the key risks and uncertainties and the impact these have on the BCR;
- Key assumptions including: appraisal period, forecast years, optimism bias applied; and
- Description of the modelling approach used to forecast the impact of the project and the checks that have been undertaken to determine that it is fit-for-purpose.

d) Additionally detailed evidence supporting your assessment, including the completed [Appraisal Summary Table](#), should be attached as annexes to this bid. **A checklist of material to be submitted in support of large project bids has been provided.**

Has an Appraisal Summary Table been appended?  Yes  No  N/A

- Please append any additional supporting information (as set out in the Checklist).

*\*It is the responsibility of bidders to provide sufficient information for DfT to undertake a full review of the analysis.*

**B6 Economic Case:** For all bids the following questions relating to **desirable criteria** should be answered.

Please describe the air quality situation in the area where the project will be implemented by answering the three questions below.

i) Has Defra's national air quality assessment, as reported to the EU Commission, identified and/or projected an exceedance in the area where the project will be implemented?

Yes       No

ii) Is there one or more Air Quality Management Areas (AQMAs) in the area where the project will be implemented? AQMAs must have been declared on or before the 31 March 2017

Yes       No

iii) What is the project's impact on local air quality?

Positive       Neutral       Negative

- Please supply further details:

-

**The proposed scheme will have a positive impact on air quality as junctions will operate more efficiently, smoothing vehicle progression between adjacent linked junctions, with reduced vehicle idling and accelerations and decelerations. Improved traffic control has been identified as an action as part of Greater Manchester AQ improvement plan.**

iv) Does the project promoter incentivise skills development through its supply chain?

Yes       No       N/A

- Please supply further details:

**The project will involve civil engineering works through the installation of ducts by civil engineering contractors and installation of traffic signal equipment by our existing supplier, Siemens. These suppliers have included examples of how they are providing skills development through for example apprenticeship schemes.**

### **B7. Management Case - Delivery (Essential)**

Deliverability is one of the essential criteria for this Fund and as such any bid should set out, with a limit of 100 words for each of a) to b), any necessary statutory procedures that are needed before it can be constructed.

a) A project plan (typically summarised in Gantt chart form) with milestones should be included, covering the period from submission of the bid to project completion.

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

b) If delivery of the project is dependent on land acquisition, please include a letter from the respective land owner(s) to demonstrate that arrangements are in place to secure the land to enable the authority to meet its construction milestones.

Has a letter relating to land acquisition been appended?  Yes  No  N/A

c) Please provide in Table C summary details of your construction milestones (at least one but no more than 6) between start and completion of works:

**Table C: Construction milestones**

	<b>Estimated Date</b>
Start of works	April 2018
Design process	April 2018
Construction and Installation	Commence July 2018
SCOOT and MOVA validation	Commence November 2018
Opening date	From November 2018 to March 2020
Completion of works (if different)	

d) Please list any major transport projects costing over £5m in the last 5 years which the authority has delivered, including details of whether these were completed to time and budget (and if not, whether there were any mitigating circumstances)

GM has delivered a significant number of major transport projects over the last five years including those which have been delivered as part of the Greater Manchester Transport Fund. Total expenditure on transport schemes over the 5 years has exceeded £1 billion with a number of major schemes delivered including the Cross City Bus Priority scheme; Metrolink Second City Crossing; Metrolink extension to Manchester Airport; Wythenshawe Interchange; and Altrincham Interchange. All schemes have been delivered within programme and in line with budget. The Metrolink extension to Manchester Airport was delivered over a year ahead of schedule

**B8. Management Case – Statutory Powers and Consents (Essential)**

a) Please list if applicable, each power / consent etc. already obtained, details of date acquired, challenge period (if applicable), date of expiry of powers and conditions attached to them. Any key dates should be referenced in your project plan.

**All work will be within local authority’s highway boundaries with no need for any land take. TfGM have the permission to install traffic signal ducting in the footways and traffic signal detection in the carriageway using existing Powers. All associated roadworks will be using the existing powers through the Greater Manchester Road Activity Permit scheme (GMRAPS)**

b) Please list if applicable any outstanding statutory powers / consents etc. including the timetable for obtaining them.

**N/A**

**B9. Management Case – Governance (Essential)**

Please name those who will be responsible for delivering the project, their roles (Project Manager, SRO etc.) and responsibilities, and how key decisions are/will be made. An organogram may be useful here.

**The project will be managed in full accordance with TfGM’s project governance and assurance plan (applied to all capital investment projects). This has been used in the successful delivery of the capital programme including in the Greater Manchester Transport Fund. The SRO will be the TfGM Head of Highways Brian Thompson and the**

**Project Sponsor will be David Bland, Highway Network Development Manager, both of whom are very experienced in this type of project**

### **B10. Management Case - Risk Management (Essential)**

All projects will be expected to undertake a Quantified Risk Assessment (QRA) and a risk register should be included. Both should be proportionate to the nature and complexity of the project. A Risk Management Strategy should be developed that outlines how risks will be managed.

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

Has a QRA been appended to your bid?  Yes  No

Has a Risk Management Strategy been appended to your bid?  Yes  No

Please provide evidence on the following points (where applicable) with a limit of 50 words for each:

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

**£400,000**

**The risk allowance is based on TfGM's extensive experience from the delivery of many similar works packages including the DfT LTP2. Significant further knowledge and experience is being gained from the delivery of the current Growth Deal 3 scheme for SCOOT/MOVA.**

b) How will cost overruns be dealt with?

**Strong financial and project management processes, combined with a proven knowledge and experience of managing these type of works will ensure that cost overruns will not occur. TfGM (GMUTC) has extensive knowledge and experience of delivering these type of works within restricted financial allocations ensuring design and implementation is completed in a highly efficient and cost effective manner. Should additional unavoidable costs be encountered, the number of sites to be improved would be limited to ensure budgetary allocations are not exceeded.**

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

**The main risks to delivery are related to the condition of the existing traffic signal asset being worse than predicted. In the event of the traffic signal ducting asset being much worse than predicted fewer sites will be put onto SCOOT/MOVA to ensure the costs are managed within the budget allocation.**

### **B11. Management Case - Stakeholder Management (Essential)**

The bid should demonstrate that the key stakeholders and their interests have been identified and considered as appropriate. These could include other local authorities, the Highways England, statutory consultees, landowners, transport operators, local residents, utilities companies etc. This is particularly important in respect of any bids related to structures that may require support of Network Rail and, possibly, train operating company(ies).

- a) Please provide a summary in no more than 100 words of your strategy for managing stakeholders, with details of the key stakeholders together with a brief analysis of their influences and interests.

**The Stakeholder Management strategy followed will be that used by TfGM Project Management Services for all projects.**

**The key stakeholders are: Freight Operators, Bus Companies, Greater Manchester Local Authorities and Highways England, as well as Elected Members and the travelling public.**

**The stakeholder management strategy will utilise all the well-established existing TfGM stakeholder relationships and use existing processes for project delivery. These have a proven record of ensuring projects are successfully delivered.**

- b) Can the project be considered as controversial in any way?  Yes  No  
If yes, please provide a brief summary in no more than 100 words

- c) Have there been any external campaigns either supporting or opposing the project?

Yes  No

If yes, please provide a brief summary (in no more than 100 words)

- d) For large projects only please also provide a Stakeholder Analysis and append this to your application.

Has a Stakeholder Analysis been appended?  Yes  No  N/A

- e) For large projects only please provide a Communications Plan with details of the level of engagement required (depending on their interests and influence), and a description of how and by what means they will be engaged with.

Has a Communications Plan been appended?  Yes  No  N/A

### **B12. Management Case – Local MP support (Desirable)**

- e) Does this proposal have the support of the local MP(s); At this stage, formal confirmation of approval from local MP's has not be sought due to the potential to undertake works within every constituency within Greater Manchester. However experience from undertaking similar works indicates that this type of works is strongly supported due to reductions in congestion it brings.

The Greater Manchester Mayor, Andy Burnham, also has a very strong manifesto pledge to reducing congestion in Greater Manchester. He has signed a letter of support in his capacity of Chair of GMCA.

Name of MP(s) and Constituency

- |   |                              |                             |
|---|------------------------------|-----------------------------|
| 1 | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 2 | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 3 | <input type="checkbox"/> Yes | <input type="checkbox"/> No |

### **B13. Management Case - Assurance (Essential)**

We will require Section 151 Officer confirmation (Section D) that adequate assurance systems are in place.

Additionally, for large projects please provide evidence of an integrated assurance and approval plan. This should include details of planned health checks or gateway reviews.

## **SECTION C – Monitoring, Evaluation and Benefits Realisation**

**C2.** Please set out, in no more than 100 words, how you plan to measure and report on the benefits of this project, alongside any other outcomes and impacts of the project.

**The DfT LTP2 scheme provided funding for the introduction of SCOOT/MOVA in 2009-2013. The same evaluation framework will be used as for this project, thereby ensuring continuity and the ability to monitor longer term trends. Direct impacts of interventions will also be monitored via the use of DfT Traffic Master Data and TfGM's bluetooth journey time sensors. These will provide direct comparisons of before and after journey times.**

**The direct measure of the impact on Air Quality will be developed by close engagement with the TfGM AQ team resulting in effective means of measuring the impact on AQ.**

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

## **SECTION D: Declarations**

### **D1. Senior Responsible Owner Declaration**

As Senior Responsible Owner for the KRN Traffic Signal Adaptive Control project I hereby submit this request for approval to DfT on behalf of GMCA and confirm that I have the necessary authority to do so.

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

Name:

Signed:

[See separate file]

Position:

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

As Section 151 Officer for GMCA I declare that the project cost estimates quoted in this bid are accurate to the best of my knowledge and that GMCA

- has allocated sufficient budget to deliver this project on the basis of its proposed funding contribution
- 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 project
- accepts that no further increase in DfT funding will be considered beyond the maximum contribution requested and that no DfT funding will be provided for this bid in 2020/21.
- confirms that the authority has the necessary governance / assurance arrangements in place and, for smaller project bids, the authority can provide, if required, evidence of a stakeholder analysis and communications plan in place
- confirms that if required a procurement strategy for the project is in place, is legally compliant and is likely to achieve the best value for money outcome

Name:

Signed:

[See separate file]

### **HAVE YOU INCLUDED THE FOLLOWING WITH YOUR BID?**

Combined Authority multiple bid ranking note (if applicable)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Map showing location of the project and its wider context	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Combined Authority support letter (if applicable)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
LEP support letter (if applicable)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Housebuilder / developer evidence letter (if applicable)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Land acquisition letter (if applicable)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Projects impact pro forma (must be a separate MS Excel)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Appraisal summary table	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Project plan/Gantt chart	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A