

**Laser scanning technology equipment
Match-fund grant initiative
Bidding document**

Introduction

- 1) Motorway closures in England cost the economy an estimated £1 billion a year, which this Government believes is an unacceptable brake on the country's economic recovery. Tackling the causes of congestion and keeping traffic moving is a vital element in securing the UK's prosperity.
- 2) In May 2011, the Roads Minister, Mike Penning announced his intention to make £3.14 million available to police forces as a contribution towards facilitating the wider roll-out of laser scanning technology equipment for surveying motorway incident scenes. This initiative follows the joint review led by the Department for Transport on the investigation and closure procedures for motorway incidents <http://www.dft.gov.uk/publications/investigation-and-closure-procedures-for-motorway-incidents>, which sought to identify what improvements could be made to achieve the shortest timeline possible for managing major incidents.
- 3) The review recognised that technologies such as 3D laser scanning technology could, in certain circumstances, reduce the time taken to survey a major incident thereby enabling roads to be reopened more quickly.
- 4) The laser scanning technology match-fund grant aims to give police authorities in England the opportunity to bid for a contribution in order that they can buy new 3D laser scanning equipment should they wish to do so. This document¹ sets out the conditions for the exercise; explains how bids can be submitted; and gives an indication of how bids will be assessed.

Key Principles of the Laser Scanning Technology Match-Fund Grant

- 5) The Laser Scanning Match-Fund Grant will work according to the following conditions:

Grant provision

- A total fund of £3.14 million is available as a contribution towards the cost of buying the equipment within the remainder of this financial year 2011-12;
- Payment of the grant will be subject to a set of eligibility and assessment criteria as outlined in Annexes A and B;
- The maximum grant that may be awarded is up to 70% of the eligible cost of the whole-life capital package. The package includes: the 3D (high

¹ This document can be found on the Department for Transport's website:
www.dft.gov.uk <http://www.dft.gov.uk/publications/laser-scanning-grant>

definition) laser scanning unit, associated hardware/software and licence, but excludes necessary revenue costs such as training;

- The Department will not pay any higher amount than sought in the bid even if the cost increases after a successful bid; and
- Bids for grants to assist in the purchase of other types of surveying equipment such as GPS units or Total Stations will not be accepted.

Eligibility

- The competition is open to all police authorities in England which have responsibility for policing the Strategic Road Network² (SRN);
- All equipment must conform to or exceed a minimum specification (see Annex C) to ensure that the best equipment, producing the highest time savings is purchased by police authorities;
- Police authorities are required to confirm proof of purchase of the equipment and to provide periodic information on its usage to the Department; and
- The equipment must be used, whenever appropriate, as a tool for primarily surveying motorway incidents in order to collect investigation data and to reduce road closure times.

The following can be considered as eligible costs:

- Laser scanning unit;
- Hardware including battery;
- Software;
- Licence; and
- Labour (installation/setup).

The following are not eligible costs:

- Revenue costs such as training;
- Maintenance; and
- VAT.

Timing

Successful bidders will need to place orders for the equipment with manufacturer or supplier by 23 March 2012 at the latest. No grant will be paid out in respect of orders placed after 30 March 2012.

² The SRN is the network of major national roads (such as the M6 and M1) which are operated by the Highways Agency on behalf of the Secretary of State for Transport.

Data

- Bidders will be required to share with the Department data on the incident savings achieved and other performance data relating to the new equipment as requested (see Annex A for further details); and
 - It is recognised that in submitting bids some commercially sensitive information may be provided. Bidders should clearly identify what information is commercially sensitive.
- 6) Annex A explains in more detail what information bidders are expected to provide; Annex B sets out how bids will be assessed; and Annex C outlines product requirements.

Who can apply?

- 7) Bids can be submitted by all police authorities in England which have responsibility for policing sections of the SRN.
- 8) Joint bids may be submitted e.g. two or more police authorities. However, it will need to be made clear how those authorities would work together if their bid was accepted. The Department will consider the applicant to be the lead bidder. A separate bidding proforma will need to be completed for each partner, though where the information is the same as for the lead bidder, simply cross refer to the lead proforma section.
- 9) The grant is not open to bids from police authorities outside England, private companies, laser scanning manufacturers or suppliers. However, bidders will need to have discussed their proposals with the manufacturer or supplier in order to complete their bids (see Annex A).

What can the grant funding be used for?

- 10) Funding can only be used to help meet the upfront cost of buying one or more 3D laser scanning equipment. It cannot be used to meet outstanding payments for equipment already ordered or bought. But it can be used to turn an existing order for incident surveying equipment such as GPS units into an order for 3D laser scanning equipment.
- 11) Authorities can bid for more than one piece of equipment although there may a restriction on the size of the grant awarded to any one authority. Given the limited resources available, this will ensure that as many eligible bids as possible receive funding; and benefits are spread across as wide a geographical area as possible.

How can bids be made?

- 12) Bids must be made on the bidding proforma and should also include the required supporting material as set out in Annex A which explains what should be included to enable the Department to assess bids.
- 13) The proforma together with all relevant supporting material, where possible, should be emailed to: laserscanningfund@dft.gsi.gov.uk. For assessment purposes, bidders should also send two hard copies of the details including the supporting material to the following address:

Laser Scanning Match Fund Grant Initiative
Roads Policy Division
Department for Transport
Zone 3/29
Great Minster House
33 Horseferry Road
London
SW1P 4DR

- 14) Bids and supporting material must reach the Department by **close of play (17:00hrs) on Friday 2 March 2012**.

What happens next?

- 15) The Department will assess the bids as set out in Annex B, and it is expected that successful bidders will be confirmed w/c 12 March 2012. Feedback on unsuccessful bids will be made available on request.
- 16) The Department is keen to identify and disseminate the benefits of using the laser scanning technology as a tool for managing the investigation of incidents and road closures, which is why bidders have been asked to provide a commitment to share performance information with the Department. We intend to gather this data from all successful bidders and may publish a summary of the results. We might also ask those bidders to participate in promotional work relating to the grant and the efforts to reduce incident closure times, but this is not one of the assessment criteria for acceptance.

When will grants be paid?

- 17) The Department intends to pay the grant at the point at which the order is placed. The order must be placed by 23 March 2012, and the request for grant must be received by the Department no later than 30 March 2012.
- 18) The Department may require all grants to be repaid if the equipment is subsequently not bought or, if it is bought, there is evidence that it is used more for other purposes than that for which it was originally purchased.

- 19) The Department may also require a repayment of all or part of the grant if the laser scanning equipment supported by the fund is sold within three years of its purchase.
- 20) The Department will consider allowing grants to be retained in cases where the equipment is to be shared between the collision investigation team and the crime investigation team, but would expect that priority usage will be given to the collision investigation unit. The Department will consider each case on its merits.

Enquiries

- 21) If you have any questions about how to bid for a grant from the laser scanning fund, please email: laserscanningfund@dft.gsi.gov.uk or telephone: Maxine Burke or Claire Gibbs on 020 7944 8380/5540.

Completing a bidding proforma

1. Bidders should complete all sections of the bidding proforma, providing as much information as possible to allow the Department for Transport (DfT) to assess the bid, ensuring that responses answer fully the specific questions.
2. Each partner in a joint bid should complete a separate proforma. Where the information in response to a particular assessment criteria is the same for all partners, it need only be included in the lead bidder's proforma. The other proforma should simply cross refer to this.
3. This Annex sets out what DfT expects to see in each section of the bidding proforma.

Number of laser scanning units

4. Bidders must state how many units they intend to buy and the contribution they would like from the DfT grant.

Grant requirement per laser scanning unit

5. Bidders must provide (separately for each different scanning unit) details such as:
 - the cost of each unit/package they intend to buy (see page 2 eligible costs);
 - make/model; and
 - the amount of grant sought.
6. Bidders must provide written confirmation from the relevant manufacturer or supplier as to the cost of the scanning equipment they intend to buy. This must be the actual price including any discount offered.

Calculation of grant required per laser scanning unit

7. In addition to considering the upfront capital costs of the laser scanning equipment, bidders will also need to make an assessment of the operating and maintenance costs and anticipated savings in deciding the amount of grant to seek per unit.

Timing of laser scanning unit orders

8. Bidders must say when they intend to place their orders. This need not be the same for all, for example, a bid for three units might have an order for two proposed for March 2012, and the order for the remaining unit proposed for April 2012.
9. Bidders must include written confirmation from the relevant manufacturer or supplier that they can accept orders by the dates given.

Timing of entry into service

10. Bidders must indicate when they intend to start to use the scanning equipment bought under the grant, which must be no later than 4 June 2012. They must include written confirmation from the manufacturer or supplier that the equipment can be delivered ready to enter into operation on the dates set out.

Replacement of existing laser scanning units

11. Bidders must say whether or not each unit purchased under the grant will be used to replace existing scanning equipment already in use. Where there is the intention to replace an existing unit, bidders should specify details.

Details of any manufacturer or supplier's commitments

12. Bidders should include details of any additional commitments made by manufacturers or suppliers e.g. this might include a commitment to guarantee the replacement of batteries or an extended guarantee period. Where additional commitments are given, these should be confirmed in writing by the relevant manufacturer or supplier.

Data sharing

13. Bidders must include a commitment to share performance data information with the Highways Agency³ on a quarterly basis for at least three years after the equipment is in operation. This should include:

- Details of the type of incidents that the equipment was used at, including road location;
- The actual scene data capture time achieved by using the new equipment; and
- An estimation of the time saving achieved.

Additionality

14. Bidders must confirm that the equipment is additional to any existing procurement programmes. This confirmation must be signed by the Chair or other senior Board member (e.g. finance director) of the bidding authority. Where a joint bid is submitted, separate confirmations, signed at the appropriate level, must be included by each partner organisation. Bidders must also provide details of how the new equipment complements any existing programme. Where there is no existing programme, bidders should make this clear.

15. Bidders will need to make their own arrangements for purchasing the equipment and to do so in line with public sector procurement guidelines. As the

³ The Highways Agency is an executive agency of the DfT and has responsibility for the SRN.

equipment will be owned by the successful bidding authority, it may be disposed of or replaced as deemed appropriate after the three year period.

Supporting information

16. The Department is keen to identify and disseminate the benefits of using the laser scanning technology as a tool for managing the investigation of incidents and road closures, which is why bidders have been asked to provide a commitment to share performance information with the Department. We intend to gather the material from all successful bidders for monitoring and evaluation purposes and may publish a summary of the results, although this will not be one of the assessment criteria for acceptance.

Assessment of bids

Introduction

1. This Annex describes how the Department for Transport (DfT) will assess bids for grants toward the purchase of laser scanning packages under the laser scanning technology match-fund grant.

Non-compliant bids

2. Bids will be considered non-compliant and may not be assessed if they:
- Are not returned on the official proforma;
 - Are received after the advertised deadline: 17:00hrs on 2 March 2012;
 - Do not comply with any of the eligibility requirements set out in this bidding document (and summarised in the key principles section starting on page one);
 - Do not include all the information needed to assess the bid (as set out in Annex A); or
 - Do not meet the technical specification requirements.

Assessment criteria

3. The main purpose of the Grant is for the Department to provide support to the wider roll-out of laser scanning technology to police forces. In order to do this an equally-weighted assessment criteria will be applied provided the bid is compliant.

4. Each bid will be assessed in line with the following criteria – listed in no particular order:

- The likely total delay savings on the SRN within each police region and the extent to which such savings offer high or very high value for money (based on DfT/HA data);
- The extent to which a particular police authority has the busiest roads within it (on the basis of traffic count e.g. M25, M1, M6) and whether these form part of the Olympic route network;
- The level of contribution from applicants, the minimum being 30% of the whole-life capital package. The package includes: the laser scanning technology unit; associated hardware and software; and licence, but excludes necessary revenue costs such as training;
- The speed at which police authorities can commit to getting the equipment into full operational use;
- Details of any additional manufacturer or supplier's commitments e.g. level of technical support to be provided; and
- The number of collision investigations undertaken on the SRN and separately on the rest of the network during the following periods:
 - 1 April 2008 to 31 March 2009;

- 1 April 2009 to 31 March 2010; and
- 1 April 2010 to 31 March 2011.

Scoring

5. Bids will be assessed under each of the criteria at paragraph 4 in accordance with the following scoring system:

- Very strong
- Strong
- Acceptable
- Weak
- Not acceptable

6. An overall score will be assigned using the same scoring system. Bids which are assessed as 'not acceptable' will not proceed. Bids which are assessed as acceptable or higher will then be ranked according to the amount of grant they are seeking.

Laser scanning technology statement of requirements

Criteria	Definition
Speed	<p>The number of points that the laser scanner can survey per second.</p> <p>Speed of data capture is an important factor as faster instruments respond efficiently to time pressure operations and operational effectiveness, as the time taken to scan each scene is kept to a minimum. This allows other service providers at the incident to undertake their roles, reduces the time staff are exposed to potential health and safety risks, and benefits the travelling public by improving restoration of the road to normality quicker.</p>
Range	<p>The maximum distance at which the instrument can survey.</p> <p>Collision Investigation Units (CIU) survey considerable lengths of motorway and laser scanners with a longer range can reduce the number of individual scan positions required, which in turn reduces time on-site. CIU are deployed to assist with other police departments with related surveying investigations.</p>
Laser wavelength/class	<p>Whether the laser is visible or non-visible. It must be 'eye-safe'.</p> <p>Manufacturers use different laser technology with their survey instruments, either a visible or non-visible class laser. The visibility of a laser is an important consideration when scanning where other service providers are working in parallel with the CIU or where members of the public are nearby as in urban situations.</p>
Accuracy	<p>How close the laser can measure to the real world. For operational and evidential purposes, instrument accuracy is important. Confidence in data accuracy is important when measuring and securing evidence at a scene in support of the forensic reconstruction of the post collision evidence for court. It is equally of importance for supplementary roles the instrument may be used for by the police force in the investigation, (i.e. measuring crush damage in post recovery examination or in proving or disproving witness lines of sight.)</p>
Angular Measurement	<p>How small the rotational increments are throughout a 360 degree rotation of the instrument. The angular measurement identifies how many increments can be provided throughout a 360 degree rotational survey. Laser scanners with very small incremental movements can produce much greater point density data, especially when scanning at a longer range. This is important when deploying to incidents occurring on the motorway.</p>

Instrument Criteria	Mandatory Requirements
Speed	Survey at 50,000 points per second or greater.
Range	Survey at a range up to 300 m or greater.
Laser wavelength / class	An “Eye Safe” laser. Laser Class 1 – 3R. No protective eyewear required by the operator or risk to member of the public from incidental contact of beam whilst in use.
Accuracy	Survey at accuracy better than 10mm.
Angular Measurement	Angular measurement of 0.0025 degree or less or capable of encoding the machine to measure 1mm spacing at 100 metres.
Utility*	IP54 (IEC 60529) or better; Operation 0° C to 40° C / 32° F to 104° F or better; Tripod mountable with battery & mains operation.
Data Compatibility	Capable of inter-operability and data exchange with existing survey equipment's software.

* Utility includes operating dust humidity, operating temperatures etc