

# Funding for Local Transport: Safer Roads 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, we would suggest around 10 to 15 pages including annexes would be appropriate.

**A separate application form should be completed for each scheme.**

### **Applicant Information**

**Local authority name(s)\*:** Shropshire Council

**Bid Manager Name and position:**

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Highways, Transport & Environmental Maintenance Commissioning Manager

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When authorities submit a bid for funding to the Department for Transport, 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 for Transport. The Department for Transport 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.shropshire.gov.uk](http://www.shropshire.gov.uk)**

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

### **A1. Scheme name:**

A529 Hinstock to Audlem – Road Safety Improvement Scheme

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

The 20.3km section of the A529 between Hinstock and Audlem was identified by the Road Safety Foundation as one of most dangerous sections of single carriageway 'A' road in mainland UK, with high risk of fatal and serious collisions.

iRAP and VIDA assessments were undertaken along the length of this section of the A529 and the proposed scheme includes countermeasures suggested by the VIDA software and also other measures where these are felt to be more appropriate or practicable.

The intention of the scheme is to reduce risk to road users over an extended future lifespan.

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

This section of the A529 runs north/south between the junction with the A41 near Hinstock and the junction with the A525 in Audlem. It is rural in nature except within Market Drayton. It is predominantly located within Shropshire, although the northernmost 1.7km between Swanbach Bridge and Audlem is in Cheshire.

Length of eligible road section: 20.3km

OS Grid Reference: Hinstock (369391, 325981)  
Audlem (365810, 343443)

Postcode: Hinstock (TF9 2TL); Audlem (CW3 0DX)

Map shown in Appendix A

## **A4. Equality Analysis**

An Equality Analysis has been undertaken in line with the Equality Duty.

We are mindful of national and international policy and legislation, including the Equality Act 2010. This act, together with the Human Rights Act 1998 and the UN Convention on the Rights of the Child, forms a robust framework of protection for equality, diversity, social inclusion and human rights. As per the Equality and Human Rights Commission's Public Sector Equality Duty (PSED) we aim to ensure that no individual or group will be affected in a disproportionately positive or negative way by the scheme proposals and, in particular, no one from the 'Protected characteristics', as described in the following groupings, are considered along with social inclusion when considering the PSED obligations. The nine groups are, in alphabetical order

- Age
- Disability
- Gender reassignment
- Marriage and civil partnership
- Pregnancy and maternity
- Race
- Religion and belief
- Sex
- Sexual orientation

An overview of the Council's policy on Equality can be found at the following link:

<http://new.shropshire.gov.uk/equality-diversity-and-social-inclusion/>

## **SECTION B – The Business Case**

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

The 2016 EuroRAP Risk Ratings Report highlighted that single carriageway 'A' roads in the West Midlands region have the lowest risk of death and serious injury in mainland UK. The A529 between Hinstock and Audlem bucked this trend and was highlighted as one of 50 'A' road sections in mainland UK with the highest risk of fatal or serious collisions.

The aim of this scheme is to reduce the number of people killed or seriously injured along this section of the A529 by building in a higher level of safety for all road users, thereby proactively addressing and reducing the known risks that could result in serious or fatal injuries along the route as a whole.

The proposed scheme comprises a series of countermeasures throughout the 20.3km section that were identified using the VIDA software based on an assessment by iRAP engineers. The chosen countermeasures have each been 'sense-checked' for practicability.

In addition, the proposed scheme includes countermeasures at two additional locations not proposed by the VIDA software (the A41 junction near Hinstock and Mount Pleasant crossroads) where, based on local knowledge and assessment by experienced road safety engineers, it was felt that effective safety enhancements were achievable.

## B2. The Strategic Case (Maximum 350 words)

This 20.3km long section of the A529 has been graded as 1 star reflecting the lack of road safety attributes that are appropriate for the prevailing traffic speeds. Its latest EuroRAP risk rating from 2012-2014 was 185.1 fatal or serious crashes per billion kilometres travelled from Hinstock to the A53 junction and 193.8 fatal or serious crashes per billion kilometres travelled from the A53 junction to Audlem.

Collision data for the period from 01 January 2012 to 31 July 2017 shows that there have been 5 fatal, 12 serious and 60 slight collisions resulting in 5 fatalities, 16 serious injuries and 98 slight injuries. Appendix B shows the location of each collision.

| <b>Number of Collisions (01 Jan 2012 - 31 Jul 2017)</b> | <b>Fatal</b> | <b>Serious</b> | <b>Slight</b> | <b>Total</b> |
|---|--------------|----------------|---------------|--------------|
| Motor Vehicles (Excluding 2-Wheels)                     | 4            | 8              | 46            | <b>58</b>    |
| 2-wheeled Motor Vehicles                                | 1            | 3              | 6             | <b>10</b>    |
| Pedal Cycles  | 0            | 1              | 8             | <b>9</b>     |
| <b>Total</b>  | <b>5</b>     | <b>12</b>      | <b>60</b>     | <b>77</b>    |
| <b>Number of Injuries (01 Jan 2012 - 31 Jul 2017)</b>   | <b>Fatal</b> | <b>Serious</b> | <b>Slight</b> | <b>Total</b> |
| Vehicle Driver  | 1            | 6              | 55            | <b>62</b>    |
| Passenger   | 2            | 5              | 17            | <b>24</b>    |
| Motor Cycle Rider                                       | 1            | 2              | 6             | <b>9</b>     |
| Cyclist   | 0            | 1              | 8             | <b>9</b>     |
| Pedestrian  | 1            | 2              | 12            | <b>15</b>    |
| Other   | 0            | 0              | 0             | <b>0</b>     |
| <b>Total</b>  | <b>5</b>     | <b>16</b>      | <b>98</b>     | <b>119</b>   |

Whilst there is an accident cluster at the Mount Pleasant crossroads, the majority of the accidents are dispersed along the whole route. This reinforces the approach of proactively addressing and reducing the known risks that could result in serious or fatal injuries along the route as a whole.

To this end, a package different countermeasures recommended by the iRAP and VIDA assessments are proposed to be implemented enabling a step change in safety to be experienced by all road users throughout the route. These countermeasures include delineation, signing, shoulder rumble strips, shoulder sealing, roadside barriers, skid resistance, clearing roadside hazards, central hatching, traffic calming and a cycle lane. Appendix C contains drawings indicating the proposed countermeasure locations.

Based on local knowledge and assessment by experienced road safety engineers, it was felt that, in addition to the above countermeasures, safety enhancements were achievable at two additional locations not proposed by the VIDA software, namely the A41 junction near Hinstock and Mount Pleasant crossroads.

The A41 junction near Hinstock is located at the start of the three lane Hinstock by-pass and experiences problems with turning maneuvers across the former trunk road due to its higher speeds.

The latest collision data at this junction is as follows:

| <b>A41 Hinstock Turn</b> | <b>March 2012 - March 2017</b> |                |               |              |
|--------------------------|--------------------------------|----------------|---------------|--------------|
|                          | <b>Fatal</b>                   | <b>Serious</b> | <b>Slight</b> | <b>Total</b> |
| Accidents                | 0                              | 3              | 1             | 4            |
| Casualties               | 0                              | 3              | 6             | 9            |

The proposed countermeasures will highlight the junction more clearly and seek to reduce approach speeds on the A41.

The location and proposals are considered to closely replicate a similar junction on the A41 at Chetwynd Church, approximately 7km to the south. In 2003 this junction was redesigned with refuges, illuminated bollards, refuge beacons, red anti-skid and hatching and these countermeasures resulted in a 25% reduction in the total number of accidents and casualties. Therefore, it is reasonable to assume that similar savings will be achievable at the A41 junction near Hinstock.

Mount Pleasant crossroads is typical of crossroads in the region and, as highlighted earlier, it experiences a high number of collisions. To address issues highlighted within the accident reports, countermeasures are proposed that will improve forward visibility on the side road approaches, improve signing to increase road user perception of the crossroads ahead and highlight the presence of emerging traffic to road users more clearly on the A529.

The latest collision data at this junction is as follows:

| Mount Pleasant Crossroads | April 2012 - April 2017 |         |        |       |
|---------------------------|-------------------------|---------|--------|-------|
|                           | Fatal                   | Serious | Slight | Total |
| Accidents                 | 1                       | 1       | 6      | 8     |
| Casualties                | 1                       | 5       | 15     | 21    |

The Royal Society for the Prevention of Accidents (RoSPA) suggests that the number of collisions should reduce by 20% when visibility is improved at a rural junction. This is based on from Oxfordshire (RoSPA and TMS Consultancy (2017) 'Road Safety Engineering Manual'). Therefore, it is reasonable to assume that similar savings will be achievable at Mount Pleasant crossroads.

All the countermeasures combined are anticipated to result in a saving in excess of 90 and serious injuries over the 20 year analysis period following implementation.

### B3. The Financial Case – Project Costs

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

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

| £000s                     | 2017-18 | 2018-19 | 2019-20 | 2020-21 | Total |
|---------------------------|---------|---------|---------|---------|-------|
| DfT Funding Sought        |         | 1,336   | 1,380   | 1,172   | 3,888 |
| LA Contribution           |         |         |         |         |       |
| Other Third Party Funding |         |         |         |         |       |

### B4. The Financial Case – Local Contribution / Third Party Funding

There will be no third party funding of or local contribution to the scheme costs as the total cost of the schemes in this bid does not exceed the threshold of £0.2m per km of high risk road section.

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

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

The scheme costs have been adjusted to account for both risk and optimism bias. A risk adjustment has been applied at the 15% level and, in line with the additional September 2017 DfT Safer Roads Fund Guidance, optimism bias has also been applied at the 15% level.

An additional utilities contingency has also been included within the costings.

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

To ensure costs are effectively managed, the Project Manager will provide a monthly report to the Project Board summarising progress against programme. The report will include a schedule of compensation events generated to date and current estimated out-turn construction costs (lower and upper bound values) to allow any such issues to be identified and resolved at the earliest opportunity.

Works will be programmed on an annual bases across the three years to provide a delivery schedule based upon detailed design and any identified constraints such as utilities and determine a priority list with a scoring mechanism to omit any lower priority works that may be excluded.

In line with Shropshire Council's project governance arrangements, the Council will be responsible for any cost overruns. An independent Finance Business Partner will oversee the Council's financial commitments on the scheme, monitor budgets and report back spend to date at each project board to ensure any costs are minimised or eliminated.

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

The Risk Register for the scheme is included in Appendix D. All project risks will be communicated to the Project Board in line with the Governance arrangements the Council use for project delivery.

## **B6. The Economic Case – Value for Money**

Economic assessments have been undertaken for each countermeasure individually using the 'DfT Road Safety Impacts tool for the Safer Roads Fund', making use of data output from the VIDA software. The results of each individual economic assessment were collated together in the 'DfT Safer Roads Fund Economic Case Summary'. This summary also provides an overall BCR for the whole scheme. The individual 'DfT Road Safety Impacts tool for the Safer Roads Fund' workbooks and the 'DfT Safer Roads Fund Economic Case Summary' workbook are contained in Appendix E.

The countermeasures that have been proposed across the whole scheme are predicted to result in a saving of 68 KSIs over a 20 year period.

The whole scheme has an estimated Present Value of Road Safety Benefit (PVB) of £29,122,183 and a Present Value of Cost (PVC) of £4,004,853. Therefore, the estimated Benefit Cost ratio of the whole scheme is **7.27**, indicating that it will deliver a **Very High** Value for Money.

The individual countermeasures can be categorised as follows:

| <b>Very High Value for Money (BCR is greater than 4.0)</b> |  |   |
|--|--|---|
| A41 Junction   | Mount Pleasant Crossroads                  | Improve Curve Delineation & Delineation |
| Wide Centreline  | Shoulder Rumble Strips                     | Shoulder Sealing - Driver Side (>1m)    |
| Roadside Barriers - Passenger Side                         | Skid Resistance (Paved Road)               | Clear Roadside Hazards - Passenger Side |
| Clear Roadside Hazards - Driver Side                       | Sight Distance (Obstruction Removal)       | Central Hatching                        |
| Pedestrian Fencing   | Side Road Unsignalised Pedestrian Crossing | Traffic Calming                         |
| <b>High Value for Money (BCR is between 2.0 and 4.0)</b>   |  |   |
| Street Lighting (Intersection)                             | Shoulder Sealing - Passenger Side (>1m)    |   |
| <b>Low Value for Money (BCR is between 1.0 and 1.5)</b>    |  |   |
| Refuge Island  |  |   |

From the table it can be seen that only one countermeasure (Refuge Island) has a BCR below 1.5. This is still deemed acceptable as this measure is relatively low cost (PVC of £31,739) and a part of a significant package of countermeasures at that location.

#### **B7. The Commercial Case** (Maximum 300 words)

Shropshire Council is one of three members of the Shropshire Highways Alliance formed of Shropshire Council, Shropshire's Term Service Contractor (TSC) and Shropshire's Term Engineering Consultant (TEC).

The proposed works will be designed and supervised by WSP, Shropshire's TEC and WSP/Mouchel/Parkman have been Shropshire's TEC since before 2000. Therefore, their local knowledge and design ability are extremely high, providing a 'right first time' approach on all designs.

The proposed works will be delivered via works packages through the Term Service Contract. The procurement of a new Term Service Contractor for Shropshire's TSC is currently underway, to start mobilisation in January 2018 and for the incoming TSC to commence services 01 April 2018. The procurement exercise is being undertaken by a two-stage OJEU competitive tender to ensure best value for money.

Shropshire has delivered a substantial number of projects on time and within budget using the Term Service Contract method of delivering capital projects including a major roundabout remodelling at Prees Heath and Espley, in addition to a rolling programme of Local Transport Plan (LTP) schemes covering junction realignment, surfacing, signs, lining, street lighting, traffic signals and drainage.

The capability of the incoming TSC will, therefore, be well within the remit of the anticipated works packages along the A529, with any variations to the works or design able to be responded to quickly via the established framework call-off rates agreed at tender stage to ensure best value for money by removing the requirement to offer up further tenders throughout the three year delivery programme.

Shropshire Council's Section 151 Officer confirms the above (see signed declaration in section D2).

## **B8. Management Case – Delivery (Maximum 300 words)**

*Has a project plan been appended to your bid?*      **See Appendix F**

- a) *A statement of intent to deliver the scheme within this programme from a senior political representative and/or senior local authority official.*

A letter from Steve Davenport, Shropshire Council's Cabinet Member and Portfolio Holder for Highways & Transport, is included in Appendix G confirming the above.

## **B9. Management Case – Governance (maximum 300 words)**

The Project Board responsible for overall governance and delivery of the scheme will be made up of a mixture of Shropshire Council, Shropshire's Term Engineering Consultant and Shropshire's Term Service Contractor employees, working as part of the Highways Alliance to supervise the delivery of the three year programme.

The nominated board members are:

Councillor Steve Davenport – Cabinet Member for the Highways & Transport Portfolio; responsible for Key Decisions within the Portfolio in line with Shropshire Council's Constitution

Steve Brown – Highways, Transport & Environment Maintenance Commissioning Manager, Senior Responsible Officer in Shropshire Council and overall project sponsor

Gary Parton – Traffic Manager, Shropshire Council

Andy Wilde – Programme Manager, fulfilling the Client role for Shropshire Council with responsibility for decisions regarding highway maintenance and asset management and with delegated authority to make funding & programme decisions

Hugh Dannatt – Contract Manager, responsible as the nominated Service Manager for Shropshire's TEC and TMC service contracts to ensure efficient delivery and all relevant contractual and legal processes are followed in the management and delivery of the works.

Donna Payne – Financial Business Partner, responsible for managing all Council financial commitments and reporting this information back to the project board to ensure the spend profile is adhered to or modified with agreement and within budget.

Joshua Greenroyd – Project Manager, responsible for supervising the three-year rolling programme of design and supervision in conjunction with the primary Client, and part of Shropshire's TEC, WSP

Paul Field-Williams – Associate, Design Lead, responsible for coordinating the preliminary and detailed design stages and leading the site supervision teams on behalf of the primary Client, and part of Shropshire's TEC, WSP

Name TBC - TSC Operations Manager, responsible for coordinating the construction phase of the works throughout the three year programme

An organogram is provided in Appendix H.

## **B10. Management Case – Risk Management**

Appendix D contains the Risk Register for the scheme, identifying the main risks to the project.

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

### **C1. Benefits Realisation** (maximum 250 words)

The benefit of this scheme will be to reduce the number of people killed or seriously injured along this section of the A529 by building in a higher level of safety for all road users, thereby proactively addressing and reducing the known risks that can result in serious or fatal injuries along the route as a whole.

Reducing the number and severity of collisions improves route resilience thereby reducing delays experienced by the travelling public. Costs borne by the Council for infrastructure repairs arising as a consequence of the collisions will also be reduced, as will the costs borne by the emergency services and hospitals when responding to and dealing with casualties from the collisions.

It is anticipated that the proposed measures will lead to an improvement in the EuroRAP rating of the road from 'High Risk' to 'Medium Risk'.

The countermeasures that have been proposed are predicted to result in a saving of 68 KSIs over a 20 year period.

The estimated Benefit Cost ratio of the whole scheme is 7.27 indicating that it offers a Very High Value for Money.

The benefits will start to be realised on completion of the scheme, but the full realisation of the benefits will occur over the lifetime of the scheme.

A table showing the proposed countermeasures and their expected benefits is shown in Appendix I.

The proposed methods for the evaluation and monitoring of these benefits are detailed in Section C2.

### **C2. Monitoring and Evaluation** (maximum 250 words)

Monitoring and evaluation of the road safety impacts of this scheme will be undertaken as follows:

Casualties recorded after the scheme is implemented will be compared with baseline data. As well as the absolute number of accidents, the annual rate will be compared if the traffic flow (AADT) changes significantly during the monitoring period.

Traffic counts (ATCs) will be taken at specific locations annually. Statistical analysis will be used to identify the significance of any changes although, as annual sample sizes will be small,

definitive results may not be clear for several years.

After completion, road accidents and casualties will be monitored on a quarterly basis, utilising police accident reports accessed by the local authority. Any problems/unexpected results will be identified, reported and addressed as necessary. In addition to the assessment of overall accident figures, any new cluster sites will be investigated. After three years, monitoring will be reduced to an annual review.

Baseline speed surveys will be undertaken at strategic points before work commences to monitor the effectiveness of the measures. These will be repeated shortly after completion of the works, and again approximately a year afterwards to evaluate habituation. This information may be taken from ATC data.

Shropshire Council will supply data and other information to DfT or other appropriate parties on request, or to accord with schedules deemed necessary. Shropshire will also participate in, and contribute to, relevant platforms and forums aimed at sharing knowledge, results and lessons learnt from the project, as requested by DfT.

## **SECTION D: Declarations**

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

As Senior Responsible Owner for the A529 Hinstock to Audlem scheme I hereby submit this request for approval to DfT on behalf of Shropshire Council and confirm that I have the necessary authority to do so.

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

Name:  
Steven Brown

Position:  
Highways, Transport & Environmental Maintenance  
Commissioning Manager



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

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

- has allocated sufficient budget to deliver this scheme on the basis of its proposed funding contribution
- will allocate sufficient staff and other necessary resources to deliver this scheme on time and on budget
- accepts responsibility for meeting any costs over and above the DfT contribution requested, including potential cost overruns and the underwriting of any funding contributions expected from third parties
- accepts responsibility for meeting any ongoing revenue requirements in relation to the scheme
- accepts that no further increase in DfT funding will be considered beyond the maximum contribution requested
- has the necessary governance / assurance arrangements in place
- has identified a procurement strategy that is legally compliant and is likely to achieve the best value for money outcome

- will ensure that a robust and effective stakeholder and communications plan is put in place.

Name:  
James Walton



**Submission of bids:**

An electronic copy only of the bid including any supporting material should be submitted to:  
[saferoadsfund@dft.gsi.gov.uk](mailto:saferoadsfund@dft.gsi.gov.uk)

## APPENDIX A

## APPENDIX B

## APPENDIX C

## APPENDIX D

## APPENDIX E

## APPENDIX F

## APPENDIX H

# APPENDIX I