

Appendix A

**Coventry and Warwickshire Local Enterprise Partnership
Warwickshire County Council
Strategic Economic Plan**

Outline Major Transport Scheme Business Case

**Scheme : A425/A46 Stanks Grade Separated Roundabout and
Corridor Improvements**

March 2014

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Contributors: Alan Law, WCC, Principal Transport Planner and Modeller
James Edwards, ARUP, Principal Transport Modeller
Nick Holland, WCC, Principal Engineer
ATKINS
Faithful and Gould
Prepared By: Alan Law
Authors: Alan Law
Verified By: Adrian Hart
Modelling
Assessments: James Edwards
Contact: Alan Law BSc MCIHT
Principal Transport Planner and Modeller
Transport Planning Group
Transport Planning
Environment and Economy
Warwickshire County Council
Tel: 01926 412773
Email: alanlaw@warwickshire.gov.uk
www.warwickshire.gov.uk

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1 Business Case Development

1.1 Business Case Structure

- 1.1.1 The structure of this business case is based upon the DfT Pinch Point Programme fund application. The document provides a description of the project and details the strategic, financial, economic, commercial and management cases, benefits realisation and monitoring proposals.

2 Project Description

2.1 Headline Description

2.1.1 The proposed scheme is a key element in the A46 Corridor Improvements Package (A46 CIP)

2.1.2 The scheme comprises capacity improvements at A425/A46/A4177 Stanks roundabout, A4177 Budbrooke signals, A425 IBM entrance, A425 Budbrooke Industrial Estate and A425 Wedgenock Lane roundabout.

2.1.3 These improvements are required in order to address a serious congestion issue on the Warwickshire County Council (WCC) highway network which results in significant and regular queue propagation onto the Highways Agency (HA) A46 network, causing a serious safety concern.

2.1.4 The proposed scheme involves the following highway improvements

- Widen approach to A4177 Budbrooke signals to 2 lanes on Old Budbrooke Rd.
- Widen all approaches to Stanks roundabout to 3 lanes, widen circulatory to the west and east of circulatory and signalise.
- Realign and IBM entrance and residential access, signalise junction.
- Signalise and physically restrict movements at Budbrooke Industrial estate.
- Apply MOVA and SCOOT signal control to provide maximum capacity and minimum delay.
- Enlarge Wedgenock Lane roundabout.

2.1.5 The improvements listed form the basis of this business case. Plans showing the proposed network improvements are included in Appendix A. Schemes will be subject to more detailed modelling and Road Safety Audits. Final schemes may therefore differ in layout as the schemes are optimised and refined.

2.2 Geographical Area

2.2.1 The scheme location focuses on A46 Stanks grade separated junction on the A46 corridor, west of Warwick. It serves as Warwick's primary access onto the Strategic Road Network (SRN) and provides access to the M40 in the south and Coventry to the north. The highly patronaged Warwick Parkway station is accessed immediately off the A4177 Budbrooke junction.

OS Grid Reference: 4326550,265900 to 427250,265650
Postcode: CV34 5XW

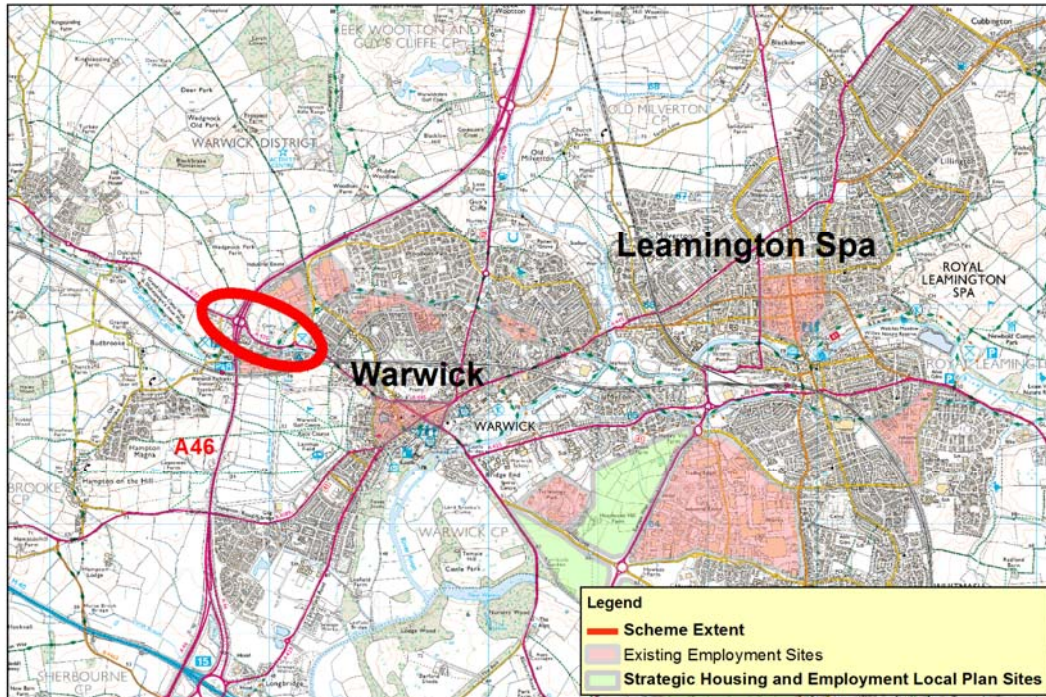


Fig. 1.1 Scheme location, existing employment and potential housing and employment sites

2.2.2 The proposed scheme is marked as scheme 10 in the A46 Corridor Improvement Package (A46 CIP) as highlighted in Fig. 1.2.

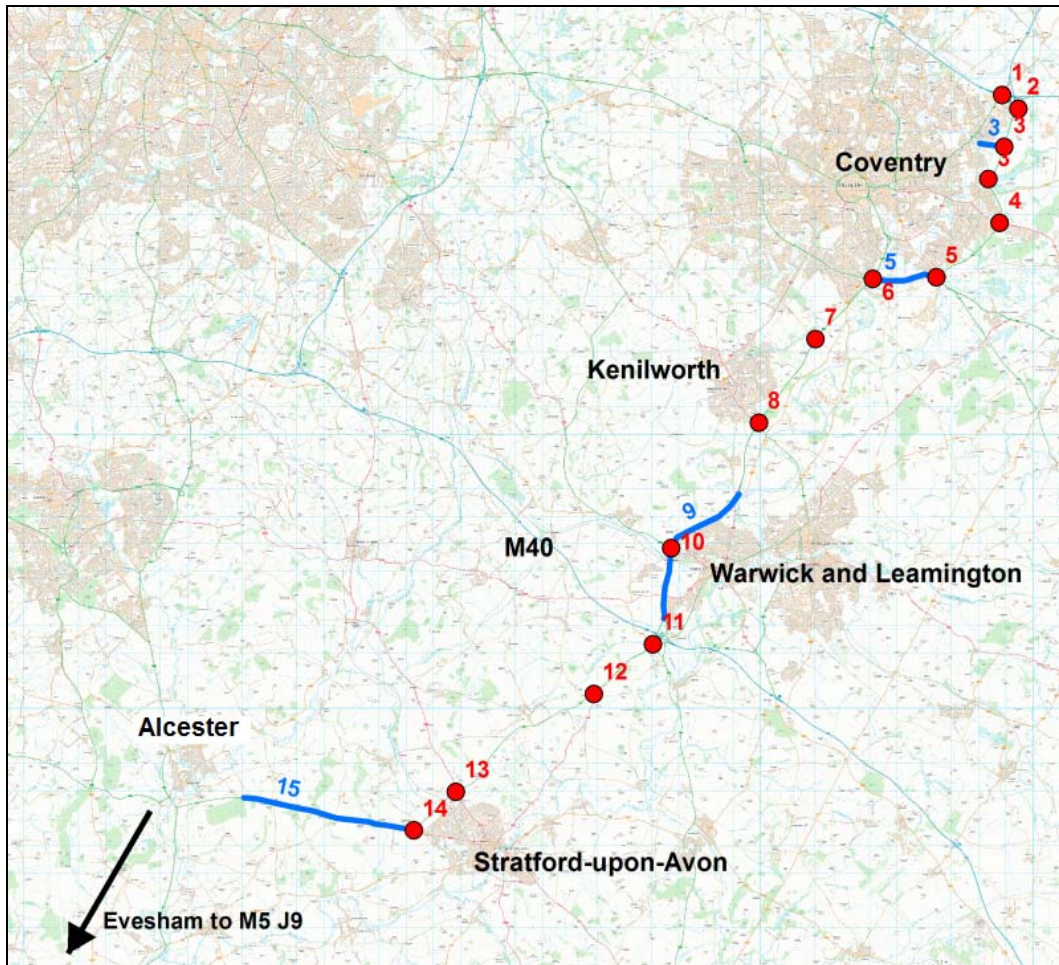


Fig. 1.2 A46 Corridor Improvement Package Schemes

2.3 Type of Bid

Small Project Bid (£1m-£5m)
Large Project Bid (£5m-£20)

2.4 Partnership Bodies

- 2.4.1 Partnership working with the Highways Agency(HA) will be necessary due to the close proximity of construction works to the A46 dual carriageway SRN. WCC has already held discussions with the HA regarding this scheme, a HA letter of support for the scheme is included in Appendix . Collaborating with the HA will build upon the recent close partnership working and good relations experienced during the development of improvements at M40 J12 and J14. A further support letter from the Chief Executive of Warwick District Council is also included in Appendix B.
- 2.4.2 WCC will also work closely with the HA when considering Traffic Management during the construction phase. The scheme will be designed by the County Council's in-house 'Design Services' team. The delivery of the scheme will be undertaken by the County Council and its appointed Principal Contractor.

2.5 Scheme Development Status

- 2.5.1 The scheme is at preliminary design stage. An optioneering stage was undertaken during the development and modelling of the scheme proposals. However, it is likely that further changes to the scheme will be necessary in response to RSA requirements. Further optimisation of the schemes and inclusion of sustainable transport facilities will be required, this will be derived through detailed modelling and design.
- 2.5.2 Modelling assessments have been undertaken using S-Paramics modelling software and Benefit Cost Ratios (BCR) have been derived through the add-on Paramics Economic Assessment of Road Schemes (PEARS) tool, further details are provided in section 3.

3 The Business Case

3.1 The Scheme – Summary

3.1.1 Please select what the scheme is trying to achieve (this will need to be supported by evidence in the Business Case). Please select all categories that apply.

Improve access to a development site that has the potential to create housing

Improve access to a development site that has the potential to create jobs

Improve access to urban employment centres

Maintain accessibility by addressing the condition of structures

Ease congestion / bottlenecks

Other(s), Please specify – address a serious safety concern

3.2 The Strategic Case

A The Issue to be addressed

3.2.1 Delays on the WCC road network at key junctions on A425 Birmingham Rd east of Warwick and limited capacity at A46 Stanks roundabouts are causing queue propagation on to A46 southbound slip road and the A46 mainline. This situation poses a serious safety issue which is exacerbated the limited forward visibility on the A46 southbound to the start of the slip road.

3.2.2 The problems are prevalent in the AM peak (0800-0900). However forecast growth and peak spreading evidence suggest that congestion problems are likely to be experienced over a longer period and in the PM period as workers leave Warwick and travel home.

- 3.2.3 Accident analysis over the past 5 years highlights a number of incidents involving rear shunts on the A46 slip roads approaching Stanks roundabout circulatory. It is not possible to identify the position on the slip that these accidents occur. Signal control of the roundabout should help to reduce the number of incidents. Although accident analysis does not highlight incidents directly attributable to queuing, damage only incidents are not recorded in this assessment. WCC are aware of incidents not included in the analysis which are directly attributable to queuing on the the A46 mainline. The Highways Agency and Warwickshire Police have expressed concerns relating to queueing back onto the A46 mainline, similar concerns were expressed in relation to M40 queuing at J12 and J14. Letters of support for the scheme are included in Appendix B.
- 3.2.4 Queue propagation on to the A46 mainline was commonly observed pre 2007/8, before the economic downturn. During this period the HA undertook trials at the roundabout to improve the capacity, however these were unsuccessful in achieving this aim. Since then queuing reduced significantly due to the economy slowing down and thus fewer vehicles on the network. However over the past 12 months the local economy has shown signs of improvement and congestion problems in this area have returned. Queueing on the slip lane is noted to now be significantly worse. In the past 6 months regular queuing on the slip road has been observed and with the A46 mainline completely blocked in the morning peak on several occasions. The A46 dual carriageway carries a southbound flow of approximately 2,500 vehicles in the morning peak and provides a key link to the M40.
- 3.2.5 These congestion and safety concerns have created a barrier to growth for major employment sites in this area. Planning permission was granted to Opus 40 developers to expand the IBM site, however this permission has never been implemented due to the costs of mitigation. Mitigation proposals for this development included a paired down version of the Stanks roundabout element of the scheme promoted in this bid.
- 3.2.6 Warwick District Council(WDC) Local Plan growth applies additional pressure on the A46/A425 Stanks junction. The WCC Strategic Transport Assessment evidence base developed on behalf of WDC identifies mitigation requirements at this location which will become part of the Infrastructure Delivery Programme(IDP). The IDP scheme incorporates a paired down version of the improvements at A46/A425 Stanks roundabout only. Discussions with WDC have revealed that the costs associated with schemes in the IDP threaten the economic viability of the Local Plan.
- 3.2.7 Delivery of a scheme in this location will improve transport network links to major existing and planned employment sites at;
- Coventry and Warwickshire Gateway(10,000 B1,B2 and B8 jobs);

- Stoneleigh Park and Fen End (includes 11,590m² of B1 (Office) space, retail, visitor centres, hotel extensions);
 - Ryton (includes a mix of B2 (General Industrial) and B8 (Distribution) land uses)
 - Fen End (major expansion of ProDrive – automotive industry);
 - JLR Whitley; and
 - Warwick University.
- 3.2.8 The congestion issues in this area have not been addressed previously due to the costs involved and the recent reduction in congestion during the economic downturn. There are no outstanding planning obligations with highways mitigation related to this area.

B The Options Considered

Old Budbrooke Road Junction-

- 3.2.9 Options are limited at this junction. Capacity has been maximised through provision of 2 lanes exiting from Old Budbrooke Rd would enable 2 right turners(predominant flow) to turn at the same time, thus achieving requirement for shorter green time and an increase in green time for A4177. Consideration has been given to a dedicated left turn facility into Old Budbrooke Rd, however capacity improvements would be slight, further consideration will be given to whether this facility could be utilised by public transport accessing Warwick Parkway station.

A46/A425 Stanks Roundabout –

- 3.2.10 Without major changes to bridge structures over the A46, capacity improvements are limited to altering entry capacity on all approach arms and signalisation. Consideration has previously been given to the addition of a 5th arm at Stanks to provide access to IBM. However, the costs associated with this are significant and as OPUS 40 land is now being promoted for a housing development with much lower trip rates this could no longer be justified.

IBM junction –

- 3.2.11 Provision of 5th arm link to roundabout has been considered as discussed above.

Budbrooke Industrial Estate Access –

- 3.2.12 This junction already has a right turn ban for vehicles entering the industrial estate, however this is often abused. The proposal physically prevents this movement but also assists vehicles exiting the industrial estate through provision of signals. Limits to road space on the the canal bridge constrain options at this junction. Further investigation which considers all movements at this junction (if proved physically feasible) will be undertaken.

Wedgenock Lane Roundabout –

- 3.2.13 The current proposals enlarge the roundabout and provide a slip to the employment on Wedgenock Lane. Consideration was given to signalising the exiting roundabout, but this could not be achieved due to limited stacking space. A standard signalised T-junction would only be an option if an all movements junction at Budbrooke industrial estate can be achieved.

Capacity issues beyond scheme extent (A425 Wedgenock Lane Roundabout) on approach to Warwick town centre –

- 3.2.14 Modelling evidence suggests that congestion will still exist but are unlikely to become worse. However network capacity in this area is a recognised issue which is addressed in WCC Warwick and Leamington Transport Package. Options considered include trip suppression, improved sustainable transport connectivity and network improvements.

Facilitating Sustainable Travel Options -

- 3.2.15 The scheme creates an opportunity to improve sustainable transport connections. WCC are currently investigating public transport services which could improve links between Warwick Parkway station, Warwick Town Centre and other employment areas. If these studies are developed into a workable proposal it is likely that bus priority/bus gates could be incorporated into the scheme design.
- 3.2.16 Similarly, signalisation of Stanks roundabout may enable the provision of cycle facilities from the Old Budbrooke Rd junction (and Warwick Parkway station) through to IBM. Proposed housing development next to the IBM site could then provide links through to the Wedgnock Lane employment areas.

C The Expected Benefits and Outcomes

- 3.2.17 The proposed scheme is designed to address existing congestion problems and related safety concerns by reducing vehicle delays at key pinch points on the approach to Warwick town centre and to facilitate significant future employment and housing growth as set out in Warwick District's Local Plan.
- 3.2.18 Benefits in terms of congestion relief should be realised immediately upon scheme completion.
- 3.2.19 WDC Local Plan growth equates to approximately 12,000 houses and 18 Ha of employment land. The Joint Housing Market Assessment provides the current best estimate, this suggest these figures could be significantly more. The proposed SEP scheme provides sufficient capacity to accommodate Local Plan growth, but it also has capacity to enable significant further growth.
- 3.2.20 The Coventry and Warwickshire Joint Strategic Housing Market Assessment report produced by G. L. Hearn (November 2013) has since indicated that between 13,200-14,400 houses would need to be provided in Warwick District between 2011 and 2031.

Gross Value Added

Job Creation -Scheme Construction

- 3.2.21 Based on similar, recently completed schemes, during project construction the following FTE jobs would be created,
- Construction: 14 FTE
 - Utility: 9 FTE
 - Architectural design & engineering: 8 FTE
 - Business support: 2 FTE
 - Total: 33 FTE

This would yield a £0.8m increase to GVA.

Job Creation – Local Plan Employment

- 3.2.22 Based on WDC projected growth & development figures in Warwick District, by 2025 the following number of jobs will have been phased in and are enabled by the delivery of the scheme:
- B1 land use related jobs: 85 FTE
 - B2 land use related jobs: 9 FTE
 - B8 land use related jobs: 4 FTE
 - Total: 98 FTE

- 3.2.23 These jobs are dependent on delivery of the WDC Infrastructure Delivery Plan (IDP). The cost of the scheme represents 3.6%% of the total value of highway infrastructure improvements in the IDP and it can therefore be assumed that the scheme enables 3.6%% of Local Plan employment allocation jobs to be delivered (98 FTE). It should be noted that the IDP scheme is a paired down version of the scheme submitted in this bid (without dual carriageway element). Therefore the scheme has capacity to enable further job growth beyond local plan aspirations.
- 3.2.24 The total net GVA increase to Warwick District as a result of economic growth in employment is £148m (discounted). The cumulative 2025 GVA, which assumes that the development is built out after the scheme is finished, with an assumed rate of occupation (linear interpolation) with 100% build out assumed by 2025 is calculated as £563m (discounted) Further GVA calculation details are documented in Appendix E.

D The Scope to Reduce Costs

- 3.2.25 The primary objective of the scheme is to address a serious congestion issue on the County and HA network. Addressing this situation removes a significant barrier to growth. Additionally improving capacity will facilitate further economic growth, beyond Local Plan aspirations. The proposed WCC scheme represents the minimum requirement to meet this objective. However, further modelling and value engineering will be undertaken during the detailed design phase which may potentially reduce costs.

E Related Activities – Scheme Interdependencies

- 3.2.26 The scheme proposals at Wedgenock Lane roundabout require the acquisition of private land. It is understood that this land is under the ownership of WDC and as such, it should be possible to transfer land through negotiation.
- 3.2.27 Improvements at the Budbrooke industrial estate junction requires agreement with British Waterways in order to create an pedestrian bridge crossing to replace the footway removed to provide additional highway capacity.
- 3.2.28 There are alternative scheme layouts which may be adopted should negotiations be unsuccessful, alternatively WCC would be able to use Compulsary Purchase Orders powers.

3.2.29 Scheme modelling outputs have not highlighted issues relating to queue propagation back from Warwick town centre. This is in part due to improved throughput and regularised flow through signalised junctions altering the arrival rates. However congestion through to the town centre is a recognised existing issue which occasionally blocks back to the Wedgenock Lane roundabout for limited periods. Various options are currently being considered to manage traffic within the town centre, these include trip suppression, improved sustainable transport connectivity and network improvements. These schemes are beyond the scope of this business case and their delivery does constrain or is not dependent on the delivery of the A425 Stanks scheme.

F Funding Security

3.2.30 If funding is not secured for this scheme, a lower cost scheme which just provides capacity improvements at Stanks roundabout may be considered. However this would limit the potential life time of the improvements and would also restrict the growth potential in the area.

3.2.31 A scheme at this location will be required to mitigate the impact of the Local Plan growth, however due to the costs of all IDP schemes, WDC has informed WCC that viability may be an issue. It is possible a smaller scheme is secured through developer contributions, however it is also possible improvements cannot be accrued due to the distance between the Local Plan major development sites and the A46/A425 Stanks roundabout,

3.2.32 There are currently no alternative funding streams that can be used to develop this scheme.

G Statutory Environmental Constraints

3.2.33 There are no statutory environmental constraints that would impact on the delivery of the scheme.

3.2.34 Planning consent will be required for the bridge structure, as this is a highways matter, WCC would be the deciding authority. The remaining improvements are contiguous to the existing highway and should therefore not require planning permission

3.3 The Financial Case – Project Costs

3.3.1 Atkins/Faithful & Gould have provided cost estimates for the scheme based on the modelled scheme proposals. A 25% supplement of the construction costs has been included to represent the costs of dealing with utilities, this figure has been derived through analysis of a number scheme final outturn costs and the attributable utilities costs. A 40% contingency has also been included to reflect the uncertainties in this early stage of scheme development. The cost breakdown is provided in Table 2.2, full details are included in Appendix C. A £100,000 allowance has been given for land negotiations, this is not included in the cost estimate in Appendix C.

3.3.2 The forecast spend profile is highlighted in Table 2.1. It is anticipated that the scheme would be completed within 1 financial year.

£000's	2015-16	2016-17	2017-18	2018-19	2019-2020
SEP Funding Sought	£3.2m				
Local Authority Contribution or Third Party Contribution	£0.3m				

Table 2.1: Funding profile (Nominal terms)

3.3.3 Cost Estimates are provided in the cost estimate form below (Table 2.2)

A425 - Birmingham Road						
Stanks Island Capacity Improvements						
Summary						
Section	Total Construction Cost	Indirects			Contingency (40%)	Total Project Cost
		Preliminaries (20%)	Design (10%)	Client Costs (10%)		
1. Temporary/Enabling Works	413,103.98	82,620.80	41,310.40	41,310.40	231,338.23	809,683.80
2. Site Clearance	37,759.87	7,551.97	3,775.99	3,775.99	21,145.53	74,009.35
3. Fencing and Environmental Barriers	6,361.30	1,272.26	636.13	636.13	3,562.33	12,468.15
4. Safety Fences, Barriers and Guardrails	0.00	0.00	0.00	0.00	0.00	0.00
5. Drainage	113,870.29	22,774.06	11,387.03	11,387.03	63,767.36	223,185.77
6. Earthworks	262,578.99	52,515.80	26,257.90	26,257.90	147,044.23	514,654.82
7. Pavements	399,951.28	79,990.26	39,995.13	39,995.13	223,972.72	783,904.51
8. Kerbs and Footways	63,575.36	12,715.07	6,357.54	6,357.54	35,602.20	124,607.70
9. Traffic Signs (Including Signals) and Road Markings	175,409.81	35,081.96	17,540.98	17,540.98	98,229.49	343,803.22
10. Lighting, Electrical Work and Communications	242,909.03	48,581.81	24,290.90	24,290.90	136,029.06	476,101.69
11. Retaining walls/Structures	0.00	0.00	0.00	0.00	0.00	0.00
12. Landscaping	0.00	0.00	0.00	0.00	0.00	0.00
TOTALS	1,715,519.90	343,103.98	171,551.99	171,551.99	960,691.15	3,362,419.01

Table 2.2 Outturn Costs For A425/A46 Stanks to Wedgenock Lane Scheme

3.4 The Financial Case - Local Contribution / Third Party Funding

3.4.1 It is anticipated that a minimum local contribution of 10% can be achieved. This is likely to increase as development in the area comes forward. Developer contributions are likely to be accrued through a Community Infrastructure Levy. WCC will raise the funding requirements with WDC in order to secure contributions via CIL.

3.5 The Financial Case – Affordability and Financial Risk

3.5.1 A risk register and quantitative risk assessment are included in Appendix D.

A Risk Allowance in Project Costs

3.5.2 Risk allowance is summarised in Table 2.3 below.

Pre Mitigation			
Confidence Levels			
Mean	10%	50%	80%
£137,119	£19,139	£161,065	£211,594

Post Mitigation			
Confidence Levels			
Mean	10%	50%	80%
£62,279	£0	£28,730	£150,000

Table 2.3 Risk Allowance

B Dealing with Cost Overruns

3.5.3 WCC will ultimately be liable for any cost overruns, however value engineering and budget savings on other schemes within the A46 SEP package and other SEP Transport Packages could help to address any cost overruns.

C Main Risks to Project Delivery and Impact on Costs

3.5.4 The main risks associated with the delivery of the scheme are those typical of any major road scheme and will be associated with land requirements and acquisition, costs and lead-in time for diverting utilities, costs of structures (bridges), and environmental works. Other risks are associated with the final housing and employment allocations for WDC Local Plans.

- 3.5.5 All scheme risks are summarised in the Risk Register and QRA included in Appendix D. The

3.6 The Economic Case – Value for Money

- 3.6.1 The scheme has been through a detailed and robust modelling process to derive network benefits and Benefit Cost Ratios (BCR). The S-Paramics base model development uses 2013 data and meets DMRB guidance criteria for model calibration and validation, the models were built in-house and significant local knowledge was drawn upon to match regular observed conditions. A Local Model Validation Report (LMVR) is included in Appendix F.
- 3.6.2 A Model Forecasting and an option testing note are included in Appendix F. The forecasting approach follows recognised methodology for dealing with TEMPRO, NTEM growth factors and committed developments and adheres to WebTAG guidance.
- 3.6.3 The S-Paramics modelling suite contains the PEARS (Program for Economic Assessment of Road Schemes) module. PEARS is an economic assessment package, developed and maintained by Transport Scotland, that has been specifically designed for use with the output from traffic microsimulation models to assess the economic impacts of proposed road schemes. PEARS carries out trip-based assessments of changes in travel time costs and vehicle operating costs. The costs of a trip-based assessment are derived by aggregating the costs of each individually modelled vehicle on the network. This represents the preferred and most suitable model to calculate a BCR.
- 3.6.4 PEARS analysis has been undertaken on the full scheme. A BCR of 14.03 is achieved with a Net Present Value of £23.38. The details of the PEARS BCR analysis are provided in Appendix F.
- 3.6.5 The scheme achieves its primary objective of addressing all queuing and congestion issues relating to queue propagation onto the A46 SRN carriageway, which at times, forms several hundred metres of queuing and blocking both southbound lanes. Additionally, the scheme provides capacity for WDC Local Plan growth over the plan period (up to 2028). The scheme also has sufficient capacity to accommodate significant further growth. This is demonstrated by the fact that the scheme proposals provide significantly more capacity than the LDF mitigation proposals as identified in the WDC Local Plan Strategic Transport Assessment (available on request).
- 3.6.6 Detailed analysis of the modelling outcomes is provided in Appendix F and Pro Forma (Appendix G)

3.6.7 Headline modelling outputs are provided in Fig.2.1 and Fig.2.2 below. It should be noted that these outputs are dampened by the inclusion of A46 northbound and other areas not affected by the scheme where average speeds remain constant, or slow in the case of Warwick town centre. Therefore the complementary Warwick and Leamington Transport Package could potentially improve these figures significantly. Although improvements in speed and delay appear small, the impact of these savings is significant when applied to every vehicle travelling on the modelled network. For example the delay saving of 14 seconds per vehicle by 2021 equates to a saving of approximately 1995 hours per annum just for the PM period.

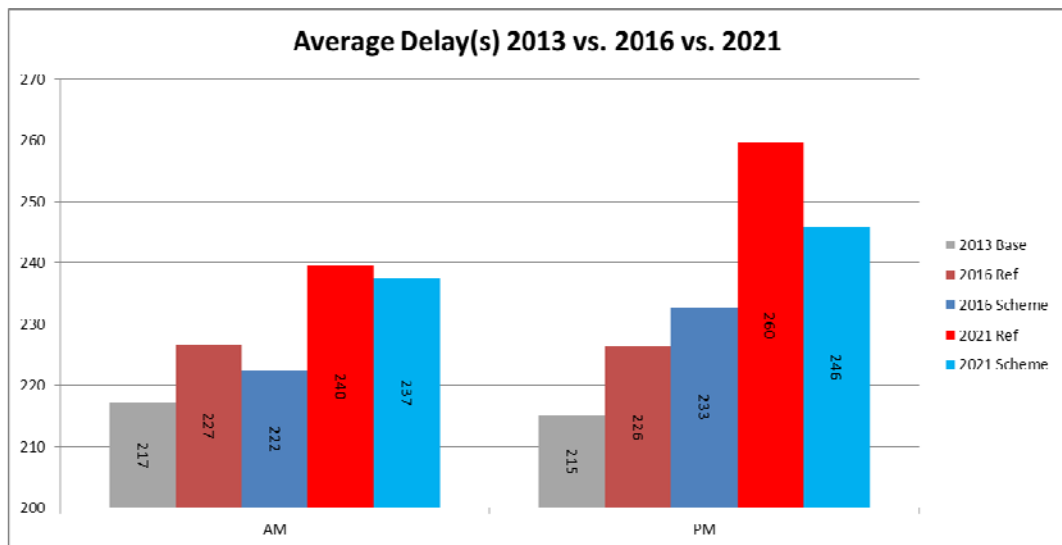


Fig 2.1 Average vehicle delay per vehicle over modelled network

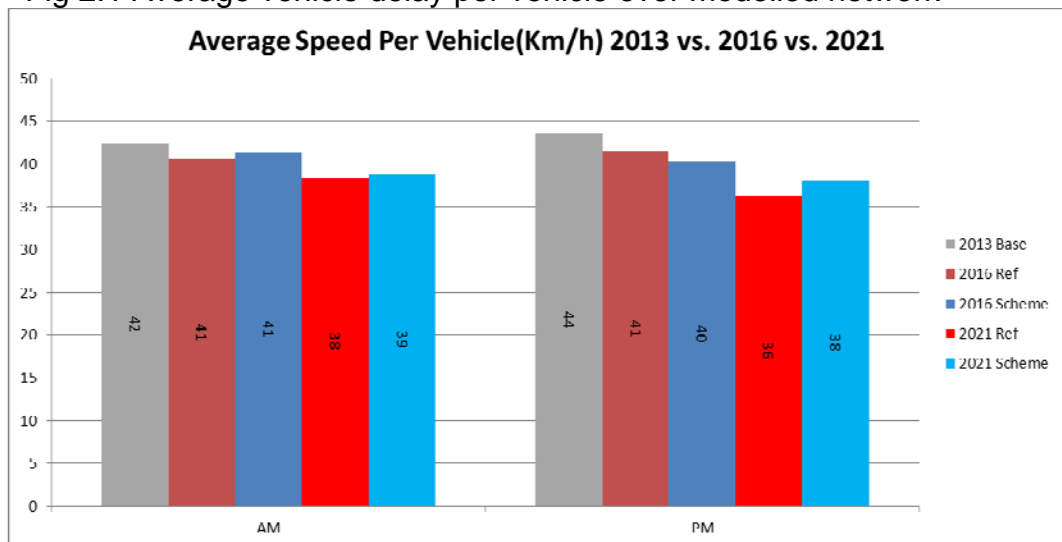


Fig 2.2 Average vehicle speed per vehicle over modelled network

- 3.6.8 Benefits are not only isolated to improvements in congestion conditions related to movements off the A46 and onto Stanks roundabout. Observed and forecast conditions highlight significant queuing eastbound towards Stanks and into Warwick on the A4177/A425 in the AM period. In the PM period queues propagate back into the town centre, exacerbated by the volume of traffic from Wedgenock Lane employment areas blocking traffic destined for the A46 entering the Wedgenock roundabout, additionally the courtesy let in behaviour at Budbrooke industrial estate (due to queuing out of the existing priority junction) creates further congestion of the approach to Stanks. All these issues are addressed by the scheme proposals, with minimal queuing within the modelled network observed within the 2021 test year.
- 3.6.9 Without the scheme in place forecast demands are likely to be substantially affected by the presence of the queuing at Stanks as well as at the junctions along the A425 corridor to Warwick. The issue is further compounded by the fact that each additional trip included on the network is likely to incur a disproportionate increase in the level of delay experienced due to the over-saturation of the network.
- 3.6.10 By targeting a scheme to minimise the impacts of queuing at these junctions the journey times of a large volume of trips are likely to be immediately and substantially improved both in terms of reduced journey times as well as improved journey time reliability.
- 3.6.11 The impact of queue reduction is most obvious when assessing the impact in the AM period along the A46 southbound approach to Stanks. The change in queuing conditions, with and without the scheme, has been presented for the SB movement from the A46 within the following Figure 2.3:

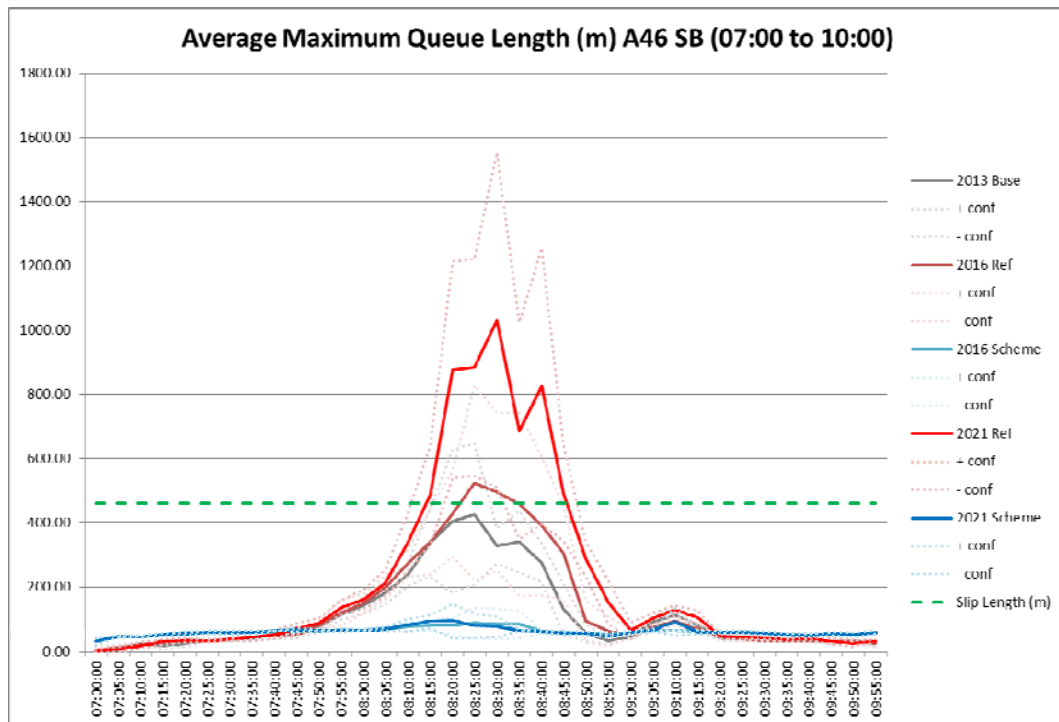


Fig. 2.3 Average maximum queue length (m) on A46 southbound approach to Stanks roundabout

3.6.12 Figure 2.3 demonstrates that the 2013 base queue reflects current queuing conditions with average maximum queue length covering the whole length of the A46 southbound off slip. 95% confidence intervals show a propensity for these queues to block back beyond the length of the slip onto the A46 mainline on a regular basis. By 2021 the average maximum queue length should no scheme by implemented would be 1km queue from the Stanks roundabout stopline, with 550m of queuing daily on the mainline. This level of queuing would effectively completely block the A46.

Scheme Impacts Pro Forma

3.6.13 A scheme impacts pro forma is included in the Appendix G. This summarises the impact of proposals against a number of metrics relevant to the scheme objectives. It is based on the Proforma used by the DfT.

3.6.14 Headline statistics from the Pro Forma highlight that by 2021 there will be:

- A significant reduction in vehicle travel times (85 hours AM and 92 hours PM)
- A significant reduction in total network delays (80 hours AM and 90 hours PM)
- Overall increase in average network speed (1.1kph AM and 0.3kph reduction in PM)

Appraisal Summary Table

- 3.6.15 A completed Appraisal Summary Table (AST) is provided in Appendix H. The AST provides an assessment of all the impacts included within the table and highlight any significant Social or Distributional Impacts (SDIs). Quantitative and monetary estimates where. The level of detail provided in the table is proportionate to the scale of expected impact with particular emphasis placed on the assessment of carbon, air quality, bus usage, sustainable modes, accessibility and road safety. The source of evidence used to assess impacts is clearly stated within the table.

3.7 The Commercial Case

- 3.7.1 The preferred balance of risk between the promoter and the contractor is set out between the Employer and Contractor in the NEC3 Engineering and Construction Contract (ECC) Option A Priced Contract with Activity Schedule (October 2013). The standard conditions of contract (the core clauses) have been amended as outlined in Appendix I.
- 3.7.2 It is expected that the works will be procured through the County Council's new Construction Framework Contract. Under this Framework Contract, all works with a total pre-quotation construction estimate of greater value can be 'called-off' without need for further tendering / procurement exercises. This Framework will be in place by late spring 2014. If, for any reason the Framework cannot be used then the EU Restricted Procedure for a one-off scheme procurement will be followed.

3.8 The Management Case - Delivery

Project Plan and Key Milestones

- 3.8.1 A project plan is provided in Appendix J. This is a high level overview of timescales with detail proportionate to the current level of scheme development.
- 3.8.2 Key Milestones are highlighted below, dates will be informed through the development of the project plan:
- Secure Funding
 - Complete Detailed Design (incl. bus and cycle facilities)
 - Secure Land
 - Environmental Works
 - Advanced Utilities Works
 - Tender Period
 - Award Contract
 - Commence construction
 - Scheme Opening

Land Acquisition

- 3.8.3 The scheme is dependent on land acquisition. The County will contact respective land owners with the intention of securing the land required by agreement, in parallel to this Compulsory Purchase Orders will be processed.

3.9 The Management Case – Statutory Powers and Consents

- 3.9.1 Planning consent will be required for the bridge structure, as this is a highways matter, WCC would be the deciding authority. The remaining improvements are contiguous to the existing highway and should therefore not require planning permission.
- 3.9.2 Compulsory Purchase Orders may be necessary to secure land required. This process will run in parallel to negotiations with landowners seeking to exchange land by agreement.
- 3.9.3 Section 85 notices will be placed on the area affected by the scheme in order that public utilities companies would have to pay for diversions should they install equipment new equipment prior to construction

3.10 The Management Case – Governance

- 3.10.1 Warwickshire County Council (WCC) will assume full responsibility for delivery of the scheme. The scheme will be managed as a project using PRINCE2. Scheme design will be carried out in house by WCC and tenders will be invited from civil engineering contractors for construction.
- 3.10.2 The senior responsible officer will be the County Transport Planner and he/she (replacement due May 2014) will also be the Executive on the project board. The project manager will be Alan Law, Principal Transport Planner. The project will be managed in accordance with WCC standard governance procedures which determine delegations for decision making, reporting and monitoring requirements.

3.10.3 A Project Board will be established which will meet as frequently as required (but at least monthly) to oversee delivery of the project. The Board will comprise a project executive officer, a senior user (probably the local county councillor) and a senior supplier (a senior officer from the WCC in house design group). The project manager will report to this Board. The Board will derive its authority to deliver the scheme through WCC Cabinet and the Portfolio Holder for Transport and Highways as appropriate under the WCC governance structure.

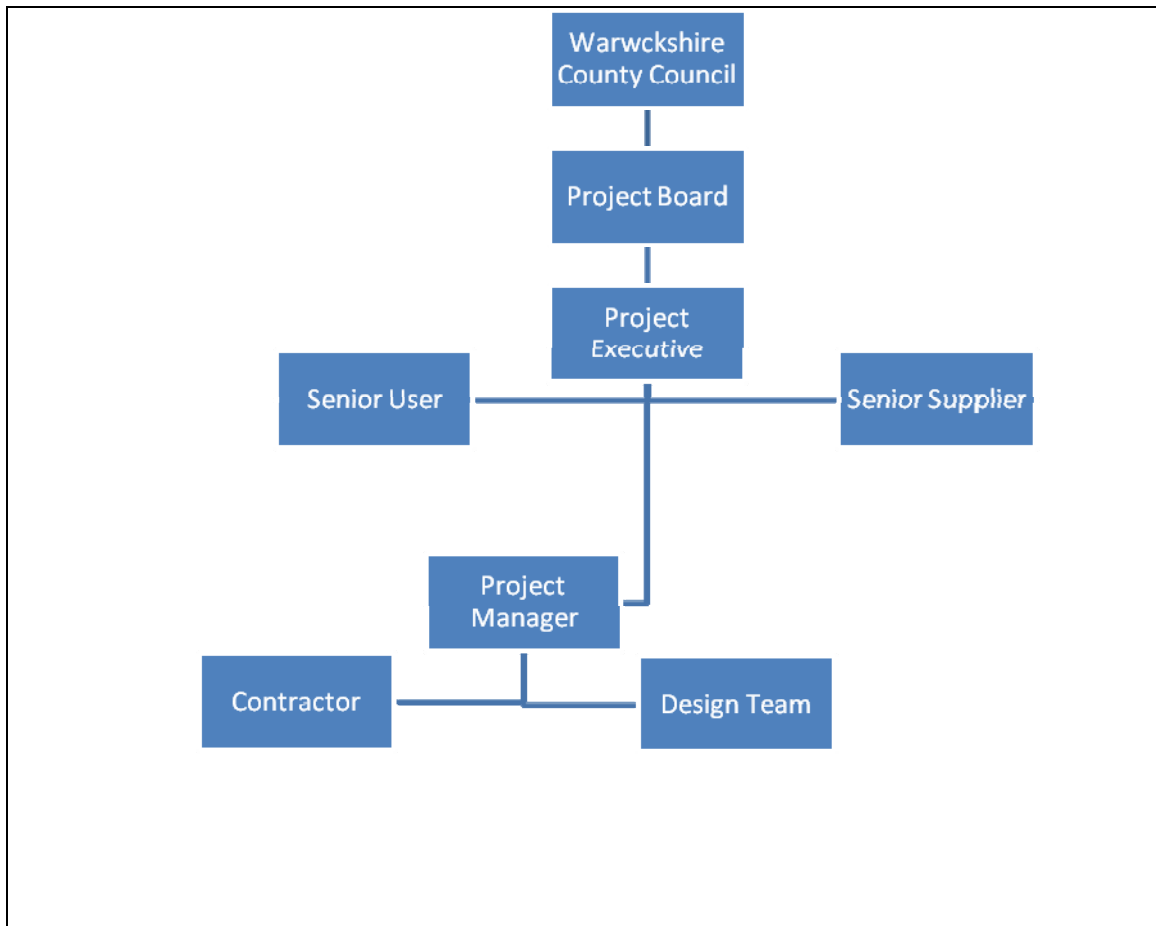


Fig. 2.4 Project Delivery Structure

3.11 Management Case - Risk Management

3.11.1 A high level risk register and QRA report are included in Appendix D.

3.12 Management Case - Stakeholder Management

Key Stake Holders

3.12.1 Key stakeholders include the following:

- Highways Agency
- Warwickshire Police
- Local Businesses
- Parish Councils
- Warwick District Council
- The Canal and River Trust
- Local residents
- Guide Dogs for the Blind
- Warwickshire Blind Association
- Road Haulage Association
- Freight Transport Association
- SUSTRANS

3.12.2 The HA and Warwickshire Police have been involved throughout the scheme development process and are fully supportive of the proposals. Warwickshire Police and the Highways Agency interest relates to managing the existing congestion and road safety issues which will be addressed by the scheme. Local businesses interest relates to the safety of staff commuting to the site and bringing forward future growth aspirations. Letters of Support from Warwickshire Police and the Highways Agency are provided in Appendix B.

3.12.3 Local businesses and other stakeholders will be consulted at appropriate stages throughout the scheme development process.

Stakeholder Perceptions

3.12.4 There are currently no external campaigns against this specific proposal. A paired down version of the scheme already gained planning permission (through private sector development at IBM), a paired down version also appears in the WDC STA which is a public document.

3.12.5 There is a possibility of opposition from Warwick interest groups due to the increase in traffic leaving the A46 and arriving in Warwick. However we have a responsibility as a highway authority to ensure the network operates in a safe manner. It is clear that by 2021 the queue extent on the A46 is unacceptable. Furthermore the proposed Warwick and Leamington Package will consider options for Warwick town centre. Options considered include trip suppression, improved sustainable transport connectivity and network improvements.

4 Monitoring Evaluation and Benefits Realisation

4.1 Benefits Realisation

Benefits realised upon completion of the scheme

- 4.1.1 The scheme fully addresses significant safety and congestion issue on HA and County road network, the daily total network delay in the study area is reduced by approximately 80 hours AM peak and 90 hours PM peak.

Forecast benefits realised 5+ years post completion

- 4.1.2 The Scheme performs well up to and beyond 2021
- 4.1.3 The scheme opens up the area for housing and employment growth in line with WDC Local Plan and provides significant capacity beyond this identified growth.

4.2 Monitoring and Evaluation

- 4.2.1 Planned outcomes in terms of reduced congestion and safety improvements will be realised immediately upon completion of the scheme
- 4.2.2 Extensive surveys were undertaken as part of the modelling process. Key surveys will be repeated at regular intervals and Automatic Traffic Count (ATC) loop sites will be included as part of the scheme. All monitoring will be undertaken at the annual peak. Scheme performance will then be compared against model forecast performance.
- 4.2.3 WCC will continue to monitor access to sustainable modes of travel to local employment sites and will help support and encourage mode shift.
- 4.2.4 The scheme will be assessed in terms of the following measures:
- Scheme build;
 - Delivered scheme;
 - Costs;
 - Scheme objectives;
 - Travel demand;
 - Travel times and the reliability of travel times;
 - Impacts on the economy; and
 - Carbon Impacts