

Annex D (to Appendix A): WLTB Final Business Case Pro-Forma for Major Schemes

Note

Major Local Transport Schemes are those with a cost of £5m or greater.

For these schemes there are three stages of assessment:-

1. Outline Business Case (to determine whether the scheme is a candidate for funding)
2. Conditional Approval Business Case – the key decision to confirm that the business case for the scheme is sound and to confirm the principle that it will be funded.
3. Final Approval – once procedures and procurement have been completed.

This pro-forma is to be used for the Final business case.

The decision in principle to fund the scheme will already have been taken at the Conditional Approval stage. Hence the Final Approval stage is effectively confirming that earlier decision, and at the same time updating the Business Case with the latest information, including the latest cost and a revised Benefit to Cost Ratio.

For some major schemes, which are being delivered in separate phases, the Conditional Approval will deal with the Business Case for the whole scheme, and there will then be separate Final Approval submissions for each phase.

STRATEGIC CASE

Scheme Name

Pershore Infrastructure Improvement Package

Date

June 2019

Introduction

This Full Business Case (FBC) seeks funding for a package of measures for Pershore comprising:

- The construction of the **Pershore Northern Link Road** providing a direct link between the existing A44 / and the B4083.
- Improvements to the **A44 Pinvin crossroads** junction to complement the delivery of the link road by prioritising the A44 link.
- Modifications to the junction of **A4104 (Station Road) and B4083 (Wyre Road)** junction to prioritise the Station Road (south) to Wyre Road movement.
- Provision of a footway/cycleway on the **B4083 Wyre Road**.

A Conditional Approval Business Case (CABC) was approved by Worcestershire LEP in July 2017, and approval to progress to FBC stage was given in February 2018 following resolution of queries. Since this time the scheme package has been further developed.

The various scheme components are currently at different stages of development, as shown in Table 1. Based on discussion with the Independent Transport Assessor it was agreed that this FBC would progress based on the best available information in order to seek confirmation of funding from WLEP in summer 2019. A subsequent addendum will be prepared to confirm scheme costs when further and final details are available for link road, Wyre footway and Wyre Road/Station Road junction (likely autumn/winter 2019).

Table 1 – Stage of development

	Northern Link road	Pinvin crossroads	Station Road/Wyre Road junction	Wyre Road footway/cycleway
Procurement	WCC Infrastructure Engineering Term Contractor (IETC) involved through early contractor involvement (ECI).	WCC IETC engaged and has provided Target Price (but this has not yet been accepted).	WCC IETC will be engaged to deliver.	WCC IETC will be engaged (as part of same package as Station Road/Wyre Road).
Design	IETC has provided a design and this was used as that basis of the planning application. Detailed design work is ongoing by the IETC with a view to reaching an agreement on the Target Price and programme around October 2019.	Detailed design has been completed by WCC professional services term consultant.	Since CABG stage the developers Section 278 scheme was subject to further design work and has been constructed. The project team (via the WCC development control function) were able to guide the design of this scheme to suit the objectives of this Package. Therefore, limited additional works are required.	Feasibility design undertaken by WCC professional services term consultant. Detailed design ongoing by WCC professional services term consultant.
Consenting	Planning permission currently being determined. Decision expected 9th July 2019	Planning consent secured.	Permitted development	Permitted development
Works costing	Estimated target price provided by IETC (based on ECI).	Target price provided by IETC (but this has not yet been accepted).	Scheme cost allowance based on WCC professional services term consultant feasibility design	Scheme costed by design team based on feasibility design
Utilities costing	C3s provided by statutory undertakers. However, no major diversions identified.	Combination of C3s (being progressed to C4s) and C4s provided by statutory undertakers	Estimated by design team	Estimated by design team
Land	Land required to deliver the link road has been secured via a Section 106 agreement on a planning application at Keytec Business Park. In process of agreeing the final legal transfer.	Additional land outside the highway boundary required. Land transfer has been completed.	Scheme is within highway boundary.	Need for land outside highway boundary identified. Discussions not yet progressed. Affected landowner is the same as for the link road S106.
Optimism bias (for economic case only)	6% applied to bridge cost, 3% to other aspects	3% applied	3% applied	15% applied

This FBC proforma is accompanied by the following Appendices, which supersede those previously submitted at CABC stage:

- Appendix A – Scheme layout drawings
- Appendix B – Report on design options for Wyre Road footway/cycleway
- Appendix C – Technical notes on traffic modelling
- Appendix D – Value for Money Report (updated BCR)
- Appendix E – Appraisal Summary Table
- Appendix F – AST supporting documentation
- Appendix G – Scheme cost and funding profile
- Appendix H – Summary of quarterly expenditure
- Appendix I – QRA
- Appendix J – Commercial strategy
- Appendix K - Scheme programme
- Appendix L – Stakeholder Management Plan
- Appendix M – Benefits Realisation Plan

Update of the Strategic Case

The section summarises the Strategic Case. For context it repeats key messages from the CABC Strategic case in relation to:

- Transport problems and issues.
- Scheme objectives.

It also reports on changes and additional work undertaken since CABC stage, specifically in relation to:

- The further development of the preferred schemes between CABC and FBC stage.
- A refreshed assessment of strategic fit with adopted policies and plans.
- A refreshed assessment of the quantum of development supported by the scheme.
- An updated assessment of constraints.

Scheme details

The Pershore Infrastructure Improvement Package will upgrade the links between Pershore town centre and the A44, address issues of congestion on the A44 and improve access to employment and new housing areas.

A Conditional Approval Business Case (CABC) was submitted and endorsed by the Worcestershire Local Enterprise Partnership (WLEP) on 25th July 2017 and, following further discussion on specific elements, approval was given to progress to Full Business Case (FBC) stage in February 2018.

The package remains, in principle, as per the preferred options detailed at CABC stage. The FBC takes forward scenario 4 from the CABC stage work, albeit that the design details of the three schemes included in the CABC have evolved through the detailed design process. In addition, an extra scheme element has now been added to provide enhanced facilities for pedestrians and cyclists on Wyre Road (this scheme mitigates the potential impact of the link road scheme on this section).

The final Package therefore comprises four scheme elements, as follows. Scheme layout drawings are included in Appendix A.

- 1) The construction of a **northern link road** providing a direct link between the existing A44 / B4083 roundabout (north of the Worcester to Oxford railway line) and the B4083 roundabout (south of the railway line). Importantly, the link road will provide access to Keytec Business Park, which is recognised as an important concentration of higher value and higher skills jobs. The link road requires planning permission from Worcestershire County Council (WCC) as Planning Authority. A planning application (19/000013/REG3) was submitted in March 2019 and it is anticipated that this will be determined at Planning Committee on 9th July 2019. The link road scheme:
 - Provides a single carriageway highway, with a 40mph speed limit.
 - Incorporates a 3 metre wide shared use footway/cyclepath.
 - Incorporates a bridge over the Oxford to Worcester railway line. In doing so the scheme provides an opportunity for pedestrians and cyclists to safely cross the railway.
 - Incorporates street lighting.
 - Requires the translocation of reptiles (in particular slow worms), from the site, as agreed through a reptile mitigation strategy to a WCC owned site at Hampton Closed Landfill Site.
 - Includes a temporary closure of the level crossing/PROW. WCC will (in consultation with Network Rail who have indicated that they would like the level crossing to be removed) endeavour to make this permanent going forward.
 - Has evolved slightly in its design/layout since CABC stage. Topographical survey data received after CABC stage led to a larger scheme footprint than previously identified. This resulted in the need for land acquisition from part of the Keytec Business Park site. This additional land will be transferred to the County Council for the link road scheme via the mechanism of the existing Section 106 agreement.

- 2) Improvements to the **A44 Pinvin crossroads** junction to complement the delivery of the northern link road by prioritising the A44 link. This will reinforce the proposed northern link road as the main north to south route between Pershore and the A44. The scheme has moved on since CABC stage. The scheme has been subject to Stage 2 Road Safety Audit (which identified the need for design changes related to the junction link) and detailed design, including consideration of utilities diversions.

The required works at Pinvin were granted planning consent in March 2019 via application 18/000060/REG3. Specifically, the works involve:

- Moving the alignment of the B4082 (Main Street) approach to allow for future concurrent running of the side roads in the same stage, with opposed right turns. Single straight-ahead lanes on the A44 would be retained on the eastbound carriageway.
- Facilitating the existing right turn onto the B4082 (Main Street) and the corresponding left turn via a short new junction link, meaning that these movements would be taken out of the existing signal-controlled junction. The new junction link would involve the construction of a short section of road, measuring approximately 50 metres, onto adjacent agricultural land, to the east of B4082 (Main Street).
- Optimisation of the method of signal control to provide greater junction capacity.

- The extension of the existing A44 eastbound right turn lane (towards the A4104) increasing the capacity for this movement and facilitating access to the residential properties on the south side of the A44.
- New areas of highway, footway, controlled signals including pedestrian crossings and uncontrolled pedestrian crossings.
- Upgrading and slight extension of street lighting.
- Provision of a new native hedgerow and landscaping to mitigate the required loss of trees and hedgerow/shrubs.
- Land acquisition from a third-party landowner. This land has been acquired and the transfer has been completed.
- The scheme will be made operational in two phases. Phase 1 will be operational by February 2020. The full scheme will be made operational in October 2020 (on completion of the link road).

3) Modifications to the junction of **A4104 (Station Road) and B4083 (Wyre Road)** junction to prioritise the Station Road (south) to Wyre Road movement. This would also reinforce the proposed northern link road as the main north to south route between Pershore and the A44. The scheme for this junction involves minor modifications to improvements which have already been delivered by developers (hence the scheme now required is more limited than that envisaged at CABC stage). Works will be limited to lining, signing and alteration of the signal timings.

4) Provision of enhanced **pedestrian and cycle facilities** along the B4083 Wyre Road. This scheme was not included at CABC stage. The scheme recognises the important role Wyre Road will play in feeding traffic onto/off the new link road and is included in order to provide improved facilities and mitigate any adverse impacts caused by increased traffic flows. It addresses feedback received on the planning application for the link road (and specifically comments made by the Town Council in respect of the need to address Wyre Road). Specifically, it includes:

- Provision of a shared use pedestrian and cycle facility on the western side of Wyre Road.
- Some removal of the existing hedgerow followed by reinstatement to the rear of the new facility.
- Drainage works.

Appendix B provides an overview of the option assessment work undertaken on this element. This identified various potential options. Option 2A is taken forward as a basis for this FBC.

Figure 1 provides an overview of the scheme location and context.

Table 2 – Current planning context

Site	Allocation	Number consented	Number completed
Land to the north of Pershore, SWDP47/1	695 dwellings	620 (a permission for 50 additional units has recently lapsed. 25 units are yet to come forward)	368
Land to the north east of Pershore, SWDP47/2	5 hectares employment	Fully consented	Approx 3 hectares
Interbrook, SWDP3	4.45 hectares employment	Partially consented (White Logistics and WDC waste depot). Around 1 hectare remains unconsented and available for further business development.	Partially developed. WCC waste depot operational (Approx 1 hectare). White Logistics site under construction (approx. 2.45 hectares).

Data above provided by Wychavon District Council in May/June 2016.

There is no planning conditionality which makes this development dependent on delivery of this scheme. In effect, the development can proceed (and has in several cases) prior to delivery of the scheme. Furthermore, because these sites are already consented/completed they are included as committed development within the traffic model (therefore no WebTAG dependent development test has been undertaken).

As a result, this FBC does not claim that the scheme unlocks residential development in Pershore. However, this FBC recognises that the transport investment will **support** housing delivery by providing the conditions that facilitate economic growth and development.

This linkage between residential development and delivery of the transport infrastructure is reflected in the Section 106 agreements put in place via the planning process, which require each residential parcel to make a contribution towards the cost of delivering the transport infrastructure. Whilst the Section 106 contributions did not specify infrastructure delivery was a pre-requisite for housing delivery, WCC's 'Justification of Planning Obligation for Transport Infrastructure in Accordance with the South Worcestershire Infrastructure Delivery Plan' publication demonstrates that the contributions are required "in order to make development acceptable at this time". Whilst no such financial Section 106 contributions can be identified for the approved employment sites SWDP3 and SWDP47/2, development from both sites will take access from the roundabout access spurs at either end of the proposed Link Road and will therefore benefit from delivery of this proposed infrastructure. In addition, the SWDP47/2 site (Keytec) is linked to the link road through the conditions which require the transfer of land for the scheme.

Further, Wychavon District Council (WDC) believe the situation where development has preceded in advance of infrastructure delivery reflects the fact that some infrastructure components (in particular the link road) have been planned for over 20 years and has the roundabout structure at both ends in place. As a result, there has been wide anticipation that the

scheme would be completed. In effect, planning approvals have been granted and development projects have commenced on the basis this package *will* be implemented.

In light of the above position, it is clear that the residential development in Pershore will be supported by and is therefore closely linked to the scheme. As such, the full Local Plan allocations of residential and employment outputs are included under the ‘supported’ rather than ‘dependent’ category of economic impacts, as per Table 3 below.

Table 3 – Delivery of development

Delivery of Development	Houses	Jobs / Employment Floor Space	Retail Floor Space
Development delivered / unlocked by scheme	N/A	N/A	N/A
Development that scheme would contribute to delivering	695 homes (allocation SWDP47/1)	9.45ha employment (allocation SWDP 47/2 plus Interbrook SWDP3)	N/A

Table 3 above is consistent with the presentation of outputs within the proforma submitted at CABC stage. However, at CABC stage additional work was presented to link these developments to the scheme based on a traffic proportional analysis. This work, included within the CABC at Appendix 6 (Economic Assessment Report), is not supported by current guidance, therefore is not carried forward to FBC stage.

In addition, it should be noted that WDC planning officers have confirmed that any future development within Pershore (over and above that set out above, for example through future Local Plan review) “will very much depend on improving the capacity of the road junctions enhanced through this project. Whilst the scale, location and characteristics of such development are not yet known, it is likely that any further residential or employment proposals will be dependent on the transport intervention from a planning perspective.

Strategic fit

Since the submission of the CABC in July 2017, the following policies have been updated. The Package remains well aligned with adopted policy.

South Worcestershire Development Plan - The South Worcestershire Councils (SWC) i.e. Malvern Hills, Worcester and Wychavon started a review of the SWDP in late 2017. The review will extend the Plan period to 2041. As the plan review is at an early stage there is no change with regards to the objectives and the policies within which this scheme was initially considered in early 2017.

LTP4 2018 – 2030 was fully adopted on 9th November 2017. LTP4 included some minor changes to the LTP objectives however this scheme remains fully aligned with the LTP and continues to be recognised as an important strategic scheme for the South Worcestershire area.

Worcestershire Local Economic Partnership Strategic Economic Plan (WLEP SEP) has not been updated since the CABC. However, the WLEP 2018 Annual Report reiterates commitment

towards transport infrastructure improvements, stating ‘Worcestershire LEP will continue to manage the development of its Growth Deal 3 projects. These include work on the A38 Corridor, Pershore northern link road, Churchfields and a new Engineering Centre of Excellence for the Heart of Worcestershire College.’

Objectives and outputs

At CABC stage detail was provided to explain how the package would address the problems identified. This information is replicated and slightly updated in Table 4, to reflect the evolving detail of the scheme designs. The scheme objectives remain as per CABC stage.

Table 4 – objectives and outputs

Objective	Output	How the package addresses the problems identified	Evidence from models (2030 AM and PM)
Support the growth of Worcestershire’s economy by tackling existing (and predicted future) congestion and journey time reliability	<p>Reduced queue lengths and delays at Pinvin Crossroads.</p> <p>More reliable journey times at Pinvin Crossroads.</p> <p>Transfer of traffic from the B4084 to the A44, helping to reinforce the role of the A44 as the strategic route.</p>	The ability to reprioritise the traffic signal timings at Pinvin Crossroads junction will mean that the A44 better fulfils role as primary route. The reprioritisation of the signal timings is possible as an alternative north-south routes is provided (northern link road) between the A44 and Pershore town centre. This means that at Pinvin junction more capacity can be provided to A44 movements.	<p>Do something vs do minimum: At Pinvin crossroads, delays are reduced by 7.6min (66%) in AM peak and 4.7 min (71%) in PM peak. Average queue length is overall reduced by 149PCU (66%) in AM Peak, 103PCU (54%) in PM Peak.</p> <p>Traffic shift due to new schemes: approximately 517 vehicles (54%) of traffic on B4084 is shifted to A44 in AM peak and approximately 408 vehicles (38%) on B4044 is shifted to A44 in PM Peak</p>
Improve access from Keytec Business Park to the A44	<p>Reduction in numbers of HGVs using the A4104 Terrace Road and Station Road.</p> <p>Reduction in numbers of HGVs using B4084 High Street.</p>	The northern link road provides a new direct access to the Keytec Business Park from the A44.	With the new schemes, the number of HGVs using A4104 Terrace Road is reduced by 83% (63 HGVs) in AM peak and 52% (22 HGVs) in PM peak.
Support the delivery of housing and employment growth as outlined in the SWDP, in particular the Pershore Urban Extension	Support the delivery of 695 homes and 9.45 ha of employment as part of the SWDP Pershore Urban Extension/key Local Plan allocations	<p>The northern link road provides additional capacity to the local road network and linkages to the A44 this enabling growth.</p> <p>Furthermore, the improved access arrangements will improve the perception of Pershore as a location for economic growth.</p>	With new schemes, about 136 trips (48%) and 119 trips (36%) traffic in AM and PM peak respectively generated by the new housing developments will use new link road in 2030 during peak period.
Improve the environment for pedestrians and cyclists of the A4104 Station Road/Terrace Road (north of Wyre Road junction)/Terrace	Provide an alternative route into Pershore from the A44, thereby avoiding Terrace Road and Station Road (north of Wyre Road) thereby improving environment on that section of road.	The northern link road, supported by the junction improvements, provides an alternative route for traffic (including HGV movements) and hence the routes where a reduction in traffic is predicted will see a consequent improvement in	As above, with the schemes in place, the number of HGVs using A4104 Terrace Road is reduced by 83% (63 HGVs) in AM peak and 52% (22 HGVs) in PM peak.

Road through reduction in traffic including HGVs	Transfer of traffic away from Terrace Road and Station Road (north of Wyre Road) will also benefit the expected increased numbers of pedestrians and cyclists as a result of SWDP Pershore Urban Extension.	environmental conditions and reduction in the potential for conflict between traffic and vulnerable road users. The addition of works to Wyre Road also recognises that conditions for pedestrian and cyclists are poor and seems to ensure no disbenefits to non motorised users on this route once the link road is in place.	
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Constraints and dependencies

During the detailed design stage work has focussed on addressing potential constraints. The constraints previously identified are therefore being actively managed. Table 5 provides details of the current situation.

Table 5 - Key constraints

Constraint/dependency	Issue	Design Response
Available budget – the Package needs to be delivered within the identified funding envelope	Funds have been identified for the project, reflecting estimated costs in 2017.	Project costs have included robust QRA allocations and an assumption that the Contractor's outturn costs include a 5% overspend vs target. Scheme costs have been updated throughout, to ensure the final scheme remains within the funding identified.
Need for the northern link road to cross the railway	The scheme requires permissions to carry out works adjacent and over the railway, in line with allowable track possessions.	Engagement with Network Rail has been ongoing. WCC is in process of negotiating a two-party over bridge agreement with Network Rail.
Impact of the scheme on the existing level crossing.	During construction sighting to the level crossing could be reduced (resulting in a safety concern)	Level crossing and public right of way will be stopped up during construction.
Construction at night	Construction works are likely to be required at night, to complete final surfacing works and to avoid impact on the railway during bridge construction.	There is a mechanism for agreeing out of hours working with the local planning authority.
Environmental impact	Route of the link road is a habitat for slow worms and grass snakes.	A reptile mitigation strategy has been set out. A site for translocation has been secured. Translocation is required to take place during the reptile active season.
Underground services	Underground services may need to be relocated as a result of the scheme design.	C3 and C4 estimates have been provided by utilities companies. These are factored into the scheme cost.

Land for link road	The final design for the link road required land acquisition from a site which has existing permission as part of the Keytec Business Park.	The S106 agreement requires the land for the link road to be transferred to WCC. The land transfer is underway.
Land for Pinvin Crossroads improvements	The final design requires some land take from land in agricultural use.	The land transfer has been completed

ECONOMIC CASE

Scheme Name

Pershore Infrastructure Improvement Package

Date

June 2019

Assessment is based on use of a VISUM strategic model. At CABG stage a series of comments were made by the ITA on modelling issues. These issues were discussed, addressed and documented in series of notes, which are included as Appendix C.

Subsequently the ITA gave their approval of the modelling approach in February 2018. Their report is also included as Appendix C.

The BCR calculations undertaken to support this FBC are based on slightly updated modelling which:

- Incorporates revised values of time and vehicle operating costs (based on TAG databook, November 2018).
- Adjusts the opening year for the full scheme to 2021 to reflect the current programme.
- Makes minor adjustments to the modelled scheme at Pinvin junction and Station Road/Wyre Road junction, for consistency with the final scheme.

The BCR is based on the base price scheme costs presented in Appendix G and includes an allocation for optimism bias (note that the costs presented in the financial case do not include optimism bias). Varying levels of optimism bias are applied, reflecting the differing stages of scheme development. Appendix D provides further details.

All costs incurred prior to March 2019 have been treated as sunk costs and removed from the economic appraisal in line with section 2.3.3 of TAG unit A 1.2 on Scheme costs.

For full details of the BCR calculations please see Appendix D.

The BCR will be re-run when full and final scheme costs are known (and presented in the addendum FBC planned for autumn 2019).

Table 6: BCR summary

Economic Summary:		Value for Money Category
PV Benefits (£m)	163.75	Very high VfM
PV Costs (£m)	6.676	
BCR	24.5	

BCR Sensitivity

Provide an updated calculation of Benefit to Cost ratio for core scenario and low growth.

The data for this table comes from the Analysis of Monetised Costs and Benefits

For full details of the BCR calculations please see Appendix D.

Table 7 – Core and low growth scenarios

Scenario	Travel Time	VOC	Indirect Tax	Other monetised benefits	Total monetised benefits	BCR
Core Scenario	154.14m	15.55m	-6.41m	0.47m	163.75m	24.5
Low Growth	135,16m	13,55	-5.59	2.89m	146.01m	21.4

Overall assessment - Appraisal Summary Table

Set out any changes in the environmental or social/ distributional impact of the scheme. If there have been no significant changes it will be sufficient to say so.

The overall impact of the proposal should be set out in an updated Appraisal Summary Table which will be an Appendix to the Business Case.

The AST has been updated (see Appendix E), to reflect the findings of environmental work undertaken to support the planning applications for Pinvin and the link road and to reflect the impacts of the additional works now included for Wyre Road. In addition, the social distributional assessment has been refreshed (see Appendix F).

Overall the environmental and social impacts of the scheme remain broadly as per the CABG. Notable beneficial impacts, not otherwise captured in the BCR, include:

- Improved facilities for pedestrians and cyclists (through direct provision of facilities on Wyre Road, an improved crossing of the railway and indirect benefits from lower traffic volumes on Station Road, north of Wyre Road) leading to reduced severance and increased physical fitness.
- Improved access to the Keytec employment site.
- Improved journey quality, in particular for strategic traffic on the A44.

The AST reports a slight disbenefit in terms of biodiversity, landscape impact and accidents.

Value for Money Statement

Conclusion from value-for-money assessment and VfM category.

A full value for money assessment is provided in Appendix D.

In summary the scheme presented **very high** value for money with a BCR of 24.5.

FINANCIAL CASE

Scheme Name:	Pershore Infrastructure Improvement Package	Date:	June 2019
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Summary Financials

Overall Cost of Scheme	£11,945,717 (outturn price, including inflation)
LTB Contribution	£5,000,000 is sought from WLEP
Available Budget	WCC cabinet papers identify a budget of £11,953,000 for the Package (which includes an assumption of £5,000,000 funding from WLEP)
Contingent Liabilities	-

Table 8 – Scheme costs

For a full breakdown of scheme costs, please see Appendix G. All costs quoted below are outturn costs, including inflation. Appendix G provides details of the base costs and inflation assumptions used. Note that optimism bias is not included below (and is used only in the economic case).

Main Expenditure Items	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	Total
Works cost	£0	£0	£0	£0	£3,369,244	£3,936,927	£375,174	£7,681,345
Works cost – 5% allowance for risk share on target price	£0	£0	£0	£0	£168,462	£180,796	£18,759	£368,017
Utilities	£0	£0	£0	£0	£313,584	£199,929	£0	£513,514
Preparation	£132,000	£178,192	£338,390	£669,456	£480,484	£34,676	£0	£1,833,198
Land and legal	£0	£0	£0	£0	£45,500	£0	£0	£45,500
Supervision (5% of works cost)	£0	£0	£0	£0	£192,565	£215,883	£19,697	£428,144
Supervision (Network Rail BAPA)	£0	£0	£0	£0	£10,158	£31,521	£0	£41,679
Receptor site survey and management	£0	£0	£0	£0	£0	£0	£16,861	£16,861
QRA	£0	£0	£0	£0	£332,705	£390,681	£37,308	£760,693
Monitoring	£0	£0	£0	£0	£0	£0	£46,747	£46,747
Part 1 Claims	£0	£0	£0	£0	£0	£0	£210,020	£210,020
TOTAL COST	£132,000	£178,192	£338,390	£669,456	£4,912,702	£4,990,413	£724,565	£11,945,717

Table 9 - Budgetary Impact Summary

For further details, please see Appendix G and the section below on funding arrangements.

Forecast Net Budget profile (£m)	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	Total
Total Required Budget	£132,000	£178,192	£338,390	£669,456	£4,912,702	£4,990,413	£724,565	£11,945,717
Total Local Contribution (S106 - secured and received)	£0	£0	£0	£33,000	£0	£396,741	£0	£429,741
Total Local Contribution (S106 - agreed but not yet received)	£0	£0	£0	£0	£0	£314,291	£0	£314,291
Total Local Contribution (S106 – unsecured/assumed future contributions)	£0	£0	£0	£0	£0	£206,968	£0	£206,968
WLEP	£0	£0	£0	£500,000	£700,000	£3,800,000	£0	£5,000,000
Wychavon District Council	£0	£0	£0	£205,000	£0	£0	£0	£205,000
WCC Cabinet approved funding	£0	£0	£0	£606,000	£2,971,000	£1,494,717	£0	£5,071,717
WCC LTP integrated block funding	£132,000	£178,000	£338,000	£70,000	£0	£0	£0	£718,000
FUNDING TOTAL	£132,000	£178,000	£338,000	£1,414,000	£3,671,000	£6,212,717	£0	£11,945,717
<i>WCC management of funding in year</i>	<i>£0</i>	<i>-£192</i>	<i>-£390</i>	<i>£744,544</i>	<i>-£1,241,702</i>	<i>£1,222,304</i>	<i>-£724,565</i>	<i>£0</i>

Anticipated Funding & Financing Arrangements

Summarise the funding arrangements for the scheme. Indicate the situation with regard to third party funding and/ or borrowing. Outline risks associated with delivery of external funding and repayment of borrowing.

£5,000,000 of funding is sought from WLEP.

In addition, funding has been secured is sought from the following sources:

- **WCC LTP integrated block funding** – a total of £718,000 has been used to fund preparation costs over the period 2015/16 to 2018/19.
- **Wychavon District Council contribution** – a total of £205,000 was allocated in 2018/19. £55,000 for preparation works and £150,000 for construction costs.
- **S106 contributions** - £951,000 of S106 costs are included in the funding profile. Of this:
 - £33,000 was secured and used to fund preparation costs in 2018/19.
 - A further £396,741 of S106 contributions is secure and has been paid to WCC. These funds will be used to cover costs in 2020/21.
 - A sum of £314,290 has been secured (but not yet paid to WCC) for works to the Wyre Road footway. It is anticipated that these funds will be in place, to be spent in 2020/21.
 - The remaining £206,968 of S106 identified is an unsecure contribution, based on an estimate of likely future S106 contributions
- **WCC funding** – a total of £5,071,717 is secured. WCC Cabinet approved the provision of up to £5.6M of Council funding to address the forecast funding gap for the scheme at their meeting in January 2017. (See Item 7 <http://worcestershire.moderngov.co.uk/ieListDocuments.aspx?CId=131&MIId=1666&Ver=4>)

Scheme Cost Estimate and Key Financial Risks

Cost estimate

A detailed cost estimate is included within Appendix G, together with a quarterly profile of spend in Appendix H. The cost estimate:

- Is based on May 2019 baseline costs. Inflation is then applied to appropriate elements. All costs quoted within this proforma are outturn costs.
- Is based on a contractor target price for Pinvin crossroads, a contractor's estimate for the link road and designers estimates for the Station Road/Wyre Road and Wyre road footway schemes.
- Does not add inflation to the contractors target price, in line with the contract.
- Includes a 5% allocation for uplift on the contractors target prices. This reflects the risk share element of the IETC contract and reflects the maximum liability for WCC.
- Includes utilities costs. These are based on either C3 or C4 estimates provided by statutory undertakers.
- Includes preparation costs incurred to date and estimated remaining preparation costs. Preparation cost include design, planning and environmental works as well as project management and traffic modelling costs.
- Includes for supervision costs (including those associated with working with Network Rail).
- Includes land and legal cost incurred to date and estimates of future remaining costs.
- Includes an estimate for potential Part 1 claims. This is based on the level of similar claims on other schemes.
- Includes an allowance for monitoring.

- Includes an allocation for QRA. This figure reflects the risk register included as Appendix I which was reviewed in June 2019 at a risk workshop. The P(Mean) figure is used.
- Does not included for maintenance. Ongoing maintenance costs will be covered by regular WCC budgets.

QRA

An updated Quantified Risk Assessment is included within Appendix I.

The main risks to cost forecasts or budget are summarised in Table 9. Overall a figure of £760, 693 is included within the financial case for QRA. This represent the calculated P(mean) of £731,000 as a base price, with inflation added.

The cost and risk register will be updated when full and final scheme cost are known and will be presented in the addendum FBC planned for autumn 2019.

Table 9 – Key financial risks

Risk	Mitigation status	Calculated Risk Value
The scheme costs, including statutory diversions, are higher than estimated.	The contractor has been engaged on an early contractor involvement and has been incentivised under the target price contract. Costs provided for Pinvin are a target price, and for link road an estimated, based on good understanding of the detailed design. QRA addresses potential sources of additional cost increases.	See Appendix I - QRA
Inflation rises above assumed rate	Inflation indicators based on Bank of England rates are used in the financial case. Allowance made in QRA for inflation rising above assumed rate.	See Appendix I - QRA
Redistribution of traffic generates larger number of valid Part 1 claims than anticipated	Place Partnership have reviewed potential Part 1 claims. Realistic estimate included in financial case and risk of higher costs accounted for in QRA.	See Appendix I - QRA
Ecological translocation – if not completed this summer construction would be delayed resulting in delay and additional cost.	Reptile mitigation strategy agreed. Site will be subdivided to allow release of partial sections.	See Appendix I - QRA

Local contribution/ Third Party Funding

See section above.

COMMERCIAL CASE

Scheme Name: Pershore Infrastructure Improvement Package

Date: June 2019

Capability and Skills

There is no change to the project team from the CABC. WCC remains well placed to deliver this project with extensive in-house strategic and technical procurement expertise and a wealth of knowledge and experience, with a proven track record of delivery of similar schemes.

Procurement Strategy & Sourcing Options

Since submission of the CABC, work has been undertaken to develop, assess and finalise the Procurement Strategy. At CABC stage, use of the IETC was identified as the preferred route. However, at that stage the preferred procurement approach was to retain all works within a single package. However, post CABC this decision was revisited (in light of the evolving project programme). The final strategy is therefore based on the delivery of packages via slightly different procurement routes.

A supporting Procurement Strategy analysis and SWOT is contained in Appendix J; this includes analysis of alternative procurement options as well as an options analysis. A summary of the proposed strategy is provided below and includes evidence to justify the approach.

The project features physically (and partly operationally) discrete elements which could be packaged. Consideration was given to the separation of elements rather than packaging together. It was concluded to split the project into packages, as follows:

- Pinvin Junction – design by WCC professional services term consultant, build by WCC Infrastructure Engineering Term Contractor.
- Wyre Road/Station Road junction and footway/cycleway on Wyre Road – design by WCC professional services term consultant, build by WCC Infrastructure Engineering Term Contractor.
- Northern link road – design and build by WCC Infrastructure Engineering Term Contractor with Early Contractor Involvement (ECI).

The scheme has been split into distinct packages for delivery to align with the approach to planning and to recognise the relative engineering and delivery complexity of each element.

The **Pinvin junction** improvement is substantially defined by the traffic modelling and existing layout constraints and there is therefore limited scope for variance from the design or construction approach. The scheme will be delivered using a traditional contract approach with the contractor providing build only inputs. This enables the scheme to be implemented (in an interim form) substantially earlier than the link road could be opened. This will enable earlier realisation of benefits from the Pinvin junction improvement than would otherwise have been the case.

As the **link road** development is subject to EIA regulations, the planning timescales are longer than those required for the Pinvin junction element of the scheme. In addition to this, known environmental constraints (the presence of a significant reptile population) will further extend

the time until the construction start date. The implied timescales have facilitated the opportunity to engage the contractor on an ECI basis, with the aim of ensuring the proposals submitted for planning are deliverable and that the engineering design and complexity of construction are fully understood before construction commences.

Use of the Council's newly-awarded Infrastructure Engineering Term Contract is the preferred route because it provides the best result in the options to outcomes analysis and facilitates a healthy environment to maximise opportunities for cost down initiatives. Additionally, it complements the Council's strategic approach to commissioning. The design of Pinvin Junction will be undertaken by the Council's Professional Services Term Contractor as it provides WCC with influence over the design as outlined in the options to outcomes analysis.

The term contractor is engaged for a number of years to deliver small to medium-sized projects for the Council and has been engaged following an Open procurement under OJEU and the Public Procurement Regulations.

Tendered rates and prices agreed at the outset of the contract are benchmarked against inflation indices to ensure they remain competitive and maintain cost-effective pricing. Incentives are included to ensure the contractor is engaged in delivering ECI solutions that not only reduce project costs, but also optimise programmes and resources. In a long-term contract, the contractor works with the Council to find ways to provide the works inside the funding profile and the budget constraints.

The contractor, being a long-term supplier, is familiar with the Council's aims and objectives, the Local Transport Plan and the Worcestershire Economic Plan and works collaboratively to achieve those goals. This can be evidenced in schemes currently in delivery with the contractor, for example Southern Link Road Phase 3, and schemes they are contributing to the development of, such as Churchfields in Kidderminster and Upton-upon-Severn flood alleviation. Their understanding of our corporate aims ensures they consider these when compiling their working methods. Additionally, they are invested in an ongoing relationship with the Council, delivering multiple projects, and are incentivised to meet their goals as this encourages procurement of more projects via this contract.

Design finalisation and asset management including whole life costs are optimised because the contractor is able to comment and influence designs at the earliest opportunity.

Having the contractor engaged early broadens the project team, which in turn helps to identify and manage risks in the project resulting in improved cost certainty for the latter construction phases.

Financing Arrangements and Payment Mechanisms

A method of payment allowing for monthly assessments of the costs accrued is likely to be adopted as this allows for optimal cash flow for the supplier, the supply chain and The Council.

The contract is under NEC4 Engineering and Construction Contract, Option C target cost with activity schedule. Under this arrangement the contractor prepares forecasts on the cost of the works in consultation with the Worcestershire County Council appointed project manager. Forecasts are prepared at the intervals stated in the contract until completion, along with an explanation of any changes made since the previous forecast.

Assessing the amount due is in accordance with Clause 50 of the contract. The contractor notifies the project manager when part of the cost has been finalised, usually on a monthly basis, and makes available for inspection the records necessary to demonstrate that it has been correctly assessed. The project manager reviews the records and either accepts the payment request or notifies the contractor of needing further records or of errors in the assessment.

Similarly, quality and standard of final construction will be managed through retention clauses and performance management.

Clauses requiring fair payment terms throughout the supply chain, along with measures to audit this in contract, form an integral part of the terms and conditions.

Risk Allocation and Transfer

The process for risk allocation and transferred was described in the CABR and has not changed. It is repeated below for information.

An initial assessment has been undertaken on how the types of risk might be apportioned or shared, with risks allocated to the party best placed to manage them, subject to achieving value for money. The contract will include clauses to facilitate the transfer of appropriate risks from The Council to the contractor.

The risk of costs being higher than currently predicted remains until the pricing process is complete, which is the point that this risk can be transferred to the contractor (on project award). The indicative allocation of risks resulting from the contractual and procurement arrangements is summarised in Table X. At this stage, ticks have been provided to indicate where each risk type rests or whether these risks are shared between the two.

Table 10 Risk allocation

Risk Category	The Council	Supplier	Shared
Design		✓	
Construction		✓	
Implementation			✓
Operations	✓		
Termination			✓
Financing	✓		
Legislative			✓

MANAGEMENT CASE

Scheme name:

Pershore Infrastructure Improvement Package

Date:

June 2019

Project delivery

A revised project programme is included as Appendix J. Table 11 provides a summary of key dates.

Based on this programme a revised profile of expenditure on a quarterly basis is presented as Appendix H.

Table 11 - Project Programme

Milestone	Target date
Full Approval	July 2019
Planning consent (link road)	July 2019
Contract Award – Pinvin	August 2019
Commencement of works on site – Pinvin Crossroads	September 2019
Completion of works on site - Pinvin Crossroads	March 2020
Scheme opening (Pinvin phase 1)	March 2020
Contract Award – link road (construction contract)	October 2019
Early entry land agreement (link road)	July 2019
Completion of land delivery by negotiation – link road	November 2019
Ecological clearance and translocation – link road	July to October 2019
Commencement of works on site – link road	November 2019
Completion of works on site – link road	March 2021
Contract Award – Station Road/Wyre Road and Wyre Road footway	November 2019
Commencement of works on site – Station Road/Wyre Road	January 2021
Completion of works on site - Station Road/Wyre Road	March 2021
Commencement of works on site – Wyre Road footway/cycleway	January 2021
Completion of works on site - Wyre Road footway/cycleway	March 2021
Scheme opening (full scheme)	March 2021
Monitoring and evaluation	March 2022 to October 2026

Governance, Organisational Structure & Roles

Set out any revisions to the governance and organisational structures which have occurred since the Conditional Approval Business Case submission.

If there have been no changes it will be sufficient to say so.

The governance and organisational arrangements remain as per at CABC stage, although there have been some changes to individual personnel. An up to date structure is set out below. Rachel Hill is SRO. Rachel will lead the project through the delivery stage, drawing on her experience of similar roles on other projects.

Table 12 - Project Members

Member	Key Roles and Responsibilities	Resourced
Cabinet	Overall responsibility	Yes
Project Board	Design and financial approval	Yes
WCC	Project Management	Yes
Jacobs - WCC professional services term consultant	Design and scheme development partner including CDM Principal Designer	Yes
Place Partnership	Land Agent	Yes
Alun Griffiths - Infrastructure Engineering Term Contractor (IETC)	Design and construction	Yes

Table 13 - Project Board Membership

Member	Organisation/Position	Role
Rachel Hill	WCC/ Strategic Infrastructure and Commissioning	Chair/Senior Responsible Officer
Nigel Hudson	WCC/ Head of Strategic Infrastructure and Commissioning	Member/Responsible Officer
Andy Baker	WCC/Transport Planning and Commissioning Manager	Member
Karen Hanchett	WCC/ Development Control Manager	Member
Sally Everest	Network Control Manager	Member
Abhi Bhasin	WCC/Senior Transport Planner	Member /Work Package Owner
Max Wiltshire	WCC/Infrastructure Procurement Manager	Member/Work Package Owner
Phil Merrick	Wychavon District Council/Head of Economy	Member
Mark Mills	WCC/Contracts Project Manager	Member/ Project Commissioner
Chris Beattie	Jacobs/Project Manager	Member/ Project Manager

Risk Management Strategy

Include a summary of the main risks derived from scheme risk register, together with an assessment of the effectiveness of any mitigating actions.

The updated risk register is included alongside the QRA in Appendix I. The key risks that have been identified are included in Table 14. Risks related to finance and budget are included within the financial case.

Table 14 – Summary of risks

Risk	Mitigation status	Calculated Risk Value
Link road - Network Rail possession over-runs during deck lift/construction	Robust planning for possession activities, spare plant/resources made available. Cancel planned works and re-mobilise at later date.	See Appendix I - QRA
Link road - Unexpected settlement (geotechnical) of ground underlying strengthened earthworks causes delay	Geotechnical design to recognise the potential issue, to be demonstrated via Approval in Principle and Strengthened Earthwork Appraisal Form.	See Appendix I - QRA
Link road - Network Rail technical approval results in more onerous requirements	Discussions are ongoing with Network Rail to complete clearance process.	See Appendix I - QRA
Link road - Ecological clearance activities not completed before reptiles hibernate for winter 2019/20	Subdivide the sites with reptile fencing such that programme critical works areas can be secured and released for construction. Potential to construct the piled abutments in stages (pile cap at ground level not bridge soffit level) if sufficient access cannot be secured over bund.	See Appendix I - QRA
Link road - Damages claim arising from physical damage or disturbance to adjacent business premises adjacent to the planned retained earth wall	Engage with business owners, conduct condition survey	See Appendix I - QRA
Land - Network Rail negotiation of oversailing rights results in unexpected requirements	Negotiate two-party overbridge agreement with Network Rail.	See Appendix I - QRA
Wyre Road/Station Road - Additional scope on Footways identified during construction detailing (culvert, pavement, drainage, land, stats).	Complete construction detailing	See Appendix I - QRA

Communications and Stakeholder Management

Since CABC stage the scheme has been the subject of various consultations and these have demonstrated support for the scheme. It should be noted that the consultation listed below did not include the Wyre Road footway/cycleway as this was added to the package more recently as a mitigation measure in response to comments raised.

- A pre-application consultation exercise was facilitated in November and December 2017. A consultation brochure was prepared, information was posted online and four public exhibitions were held. Details of the consultation are available on https://www.worcestershire.gov.uk/info/20625/pershore_infrastructure_improvement_scheme/1462/pershore_infrastructure_improvement_scheme. Attendance was relatively low, with 13 respondents' providing feedback. However, the feedback provided shows that there was overall support for the scheme. Various comments about facilities for pedestrians and cyclists on Wyre Road were made, and these are addressed with the addition of the additional scheme to provide a footway/cycleway here.
- Statutory consultation was undertaken in association with the planning application for works to Pinvin Crossroads. Comments submitted during the planning process showed that the scheme was supported by local councillors, the Parish Councils and the District Council.
- Statutory consultation was undertaken in association with the planning application for the link road. Pershore Town Council stated they have no objection to the link road provided that a footway is installed along Wyre Road (this is now addressed by the updated FBC package of schemes). In addition, Worcestershire Wildlife Trust stated they have no objection. Natural England were engaged pre-application, but had no comment on the final application (meaning they identified no significant impact on designated nature conservation or landscape).
- There has been ongoing engagement with Network Rail regarding the interaction between the link road and the railway line.

Appendix L provides an overview of all the consultation undertaken. It also sets out a programme for further future engagement to support the delivery stages of this project. This will focus on ensuring key stakeholders receive adequate advance notification of works.

Statutory Powers and Acquisitions

Table 15 provides an update on the main processes and procedures.

Table 15 – Consents, licenses and approvals required.

Description	Act or Legislation	Comments/status
Full Planning consent for Pinvin Crossroads	Planning Act 2008	Approved April 2019.
Full Planning consent for the link road	Planning Act 2008	Determination expected 9 th July 2019.
Land drainage consent (outfall consent)		Not required for link road or Pinvin. Will be required for the Wyre Road footway scheme. Required to discharge drainage network to adjacent ditch watercourse.
Designation of new highway	Highways Act 1980	The new link road will need to be designated as the A4104 highway and Terrace Road (leading to Pinvin) will be downgraded.

		Land designations are to also be reviewed at Pinvin in respect of the defined extent of the highway.
Temporary stopping up or diversion of public footpath	Highways Act 1980	The proposed southern abutment of the link road bridge is to be located directly adjacent the existing footway, a temporary stopping up order or diversion will be required to enable working space during construction. Network Rail have also confirmed that the level crossing will be subject to a temporary stopping up.
Traffic Regulation Orders	Road Traffic Regulation Act 1984	Required for changes to/designation of speed limits. WCC team has been involved.
Traffic signal amendments		It will be a legal requirement to advertise amendments to pedestrian crossings at the Pinvin traffic signals

Contract Management

Mark Mills has been the WCC project manager through the design and procurement stage and will continue to guide the project through to design and implementation. Mark has led liaison with the contractor, working alongside Chris Beattie as Jacobs project manager, and will continue to do so.

Benefits Realisation and Monitoring and Evaluation Plan

An updated Benefits Realisation Plan is included as Appendix M.

Contingency Plan

Not applicable.

Senior Responsible Owner DECLARATION

As Senior Responsible Owner for [[Pershore Infrastructure Improvement Scheme](#)] I hereby submit this request for funding consideration to the Worcestershire Local Transport Body.

Name:

[Rachel Hill](#)

Signed:

Position:

[Head of Strategic Infrastructure and Commissioning](#)

Section 151 Officer DECLARATION

As Section 151 Officer for [[Worcestershire County Council](#)] I declare that the scheme cost estimates quoted in this bid are accurate to the best of my knowledge and that [name of authority] has allocated sufficient budget to develop and deliver this scheme on the basis of its proposed funding contribution

Name:

[Steph Simcox](#)

Signed:

Position:

[Head of Strategic Infrastructure and Financial Resources](#)

CONTACT DETAILS FOR FURTHER ENQUIRIES

Lead Contact: [Andy Baker](#)

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