

A38 BREP

Finance Case
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6.1 Finance Case

6.1.1 Background

The A38 in Bromsgrove is an important corridor on the Major Road Network (MRN). It acts as a key strategic link, providing access to the Strategic Road Network (SRN), as well as offering an important local function as an eastern bypass to Bromsgrove and providing access to housing, services and employment frontages.

This OBC seeks funding to deliver a major upgrade of the A38 corridor, between M5 Junction 4 to the north and the junction of the A38 with Worcester Road to the south which is approximately 7.5 miles (12 km) long. This corridor forms part of the strategic north south spine through Worcestershire, connecting Worcester, Droitwich, Bromsgrove to Birmingham to the North and Gloucester and Bristol to the south as an alternative to the M5 route. The study area is shown in Figure 6.1.

The A38 corridor is a multi-functional route serving a range of users which contributes to the problems and issues discussed later in this chapter. The key characteristics are:

- The route performs a range of different functions, acting as a link to the Strategic Road Network, as a bypass to Bromsgrove town centre, a distributor road for journeys that have an origin and/or destination in Bromsgrove and a local access route for residents and businesses that have direct frontages on to the corridor.
- The corridor comprises sections with differing speed limits, levels of frontage and access points in addition to varying levels of pedestrian and cyclist provision. In addition, the driving experience along the route varies due to the differing land uses along sections of the A38 from residential, open field to employment and retail.
- Congested corridor due to high levels of car dependency across Bromsgrove.

The A38 Bromsgrove Route Enhancement Programme (A38 BREP Package) comprises a package of schemes delivering targeted improvements to junctions and significant enhancement of facilities for active modes.

Figure 6.1 – Scheme location



This situation is projected to worsen in the future as new housing and employment planned for the local area are delivered. The planned growth in housing will increase the demand for travel. The following points summarise the planned developments in the area:

- The Bromsgrove District Plan (adopted in 2017) includes major residential development sites around the edge of Bromsgrove, with Perryfields Road and Whitford Road being particularly relevant to the A38. Smaller residential allocations are also found in surrounding areas. In total the Local Plan identifies a need for 7,000 dwellings and 28 Hectares of employment land in the period 2011-2030. However, the adopted local plan only allocated land for 4,700 dwellings to 2023, noting that the remaining 2,300 would be subject to a Green Belt review and then allocated within a Local Plan Review. Subject to the ongoing Local Plan review, the scheme may further support delivery of additional homes and employment land. This review is intended to be completed by 2023.
- The Local Plan review will also identify development allocations for growth targets beyond 2030 and in its Issues and Options consultation put forward various scenarios. The consultation documents published in September 2019 proposed that the new Plan will have a likely start date of 2023 and an end date of 2040. Over this period the Plan will be required to provide for at least 6,443 dwellings and up to 90 Hectares of employment land.
- Within close proximity of the A38 corridor area there are significant cross-boundary allocations within the adopted Local Plan for Redditch. This includes an additional 3,400 dwellings on the border with Redditch but located within Bromsgrove District, to meet Redditch’s housing need, as identified in their own Local Plan. The allocation at Foxlydiate is particularly relevant to the A38.
- In addition, there are further allocations within the Redditch Local Plan (and sited within Redditch itself).

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Table 2.29 of the Strategic Case shows key development sites in the vicinity of the A38 identified within the adopted 2017 plans. The quantum of proposed development (housing and employment) within the adopted plans requires enhancements to transport infrastructure, including the A38. Whilst no individual development site currently has obligations that restrict development in advance of delivery of the A38 schemes, there are planning linkages between the A38 BREP and the delivery of allocations identified in existing Local Plans and this is reflected in the requirement for S106 contributions to the BREP scheme. Worcestershire County Council has identified that the A38 in its current form is a key constraint to additional future development allocations through the District Plan review process. Therefore, in summary, the A38 BREP supports the delivery of 5310 homes and 13.45 Hectares of employment land based on the current plan. Subject to the ongoing Local Plan review, the scheme may further support delivery of additional homes.

To effectively support the future development of Bromsgrove and to deliver economic growth, significant improvements are required to the corridor itself, supported by targeted improvements for other modes.

The scheme for which funding is sought through this MRN bid is an important part of the overall approach to transport in Bromsgrove. It would support ongoing work that is aiming to enhance both the major and local road network, as well as encouraging walking, cycling and the use of public transport.

6.2 Introduction

The A38 BREP Package is being delivered in three parts as described below:

- Part 1 (funded by WLEP, Greater Birmingham and Solihull Local Economic Partnership (GBSLEP) and Highways England's Growth and Housing Fund (GHF)), provided for capacity upgrades at M5 Junction 4, M42 Junction 1 (completed in 2020/21) and the Barley Mow Lane junction with the A38 (completed in 2019). (Historically, this has been referred to as A38 Package 1, for this OBC submission, this will now be referred to as Part 1).
- Part 2 comprises of the early delivery elements of the A38 BREP Package presented at SOBC stage and submitted in November 2020. The early delivery schemes have been delivered using WLEP local contribution funding, and are referred to as Schemes 2a, 2b and 4. These works are an important part of the overall A38 BREP Package, contributing to the improvement of active mode facilities on the corridor. They have been delivered early to take advantage of the local funding availability.
 - Scheme 2a was identified in the SOBC as Scheme 2 and provides an active mode corridor between Harvington Road and Charford Road, the new scheme 2A also includes the connecting bridge to Charford Road that in the SOBC was included in Scheme C. Leading to an enhanced scheme 2a at an earlier stage.
 - Scheme 2b is a shared active mode corridor along the northern side of Charford Road, to connect scheme 2a to South Bromsgrove High School. This scheme was added further to public engagement in early 2020, and after the SOBC submission.
 - Scheme 4 is a new toucan crossing as outlined in the SOBC, over the A448 Stratford Road and localised path improvements to facilitate walking and cycling.

Schemes have been developed as part of the overall strategic active modes upgrade as part of the A38 BREP Package.

- Part 3 includes a number of active modes, local public transport and highways improvement schemes which were originally included in the SOBC submission to DfT in 2019.

Part 2 and Part 3 form the overall BREP package, with Part 2 being delivered using local contribution, and Part 3 to be delivered with local and MRN funding contributions. The scheme comprises interventions which target all modes, including highway, sustainable mode schemes and public transport schemes. In brief the A38 BREP Package includes:

- Highways schemes, notated as Schemes A to G, targeting key junctions.

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- Sustainable/active mode schemes, notated as Schemes 1 to 6.

As indicated above, of these, 3 schemes (schemes 2a, 2b and 4) have been taken forward as early delivery schemes, funded by WLEP which has its own FBC that will be used to inform the economic case. Hence, the early delivery schemes are reflected in the do minimum scenario, and their impacts are therefore not assessed as part of the modelling and economic assessment work carried out as part of this OBC (which is considered to be aligned with the TAG requirements). These schemes still form part of the local contribution towards the overall package.

Construction of these schemes began on site at the end of 2020 and are complete. Schemes 1, 3, 5 and 6 are included within this OBC for MRN funding.

- Local public transport improvements, notated as schemes 7 (Real time information (RTI)) and 8 (the provision of select vehicle detection at New Road and Charford Road junctions to support buses in crossing the A38 corridor, on the primary routes between the Town Centre and Railway station). This scheme is accommodated within the works of the highway interventions hence not discussed separately.

Figure 6.2 provides an overview of the highway and sustainable elements of the A38 scheme while Figure 6.3 presents the locations of the RTI interventions included in scheme 7.

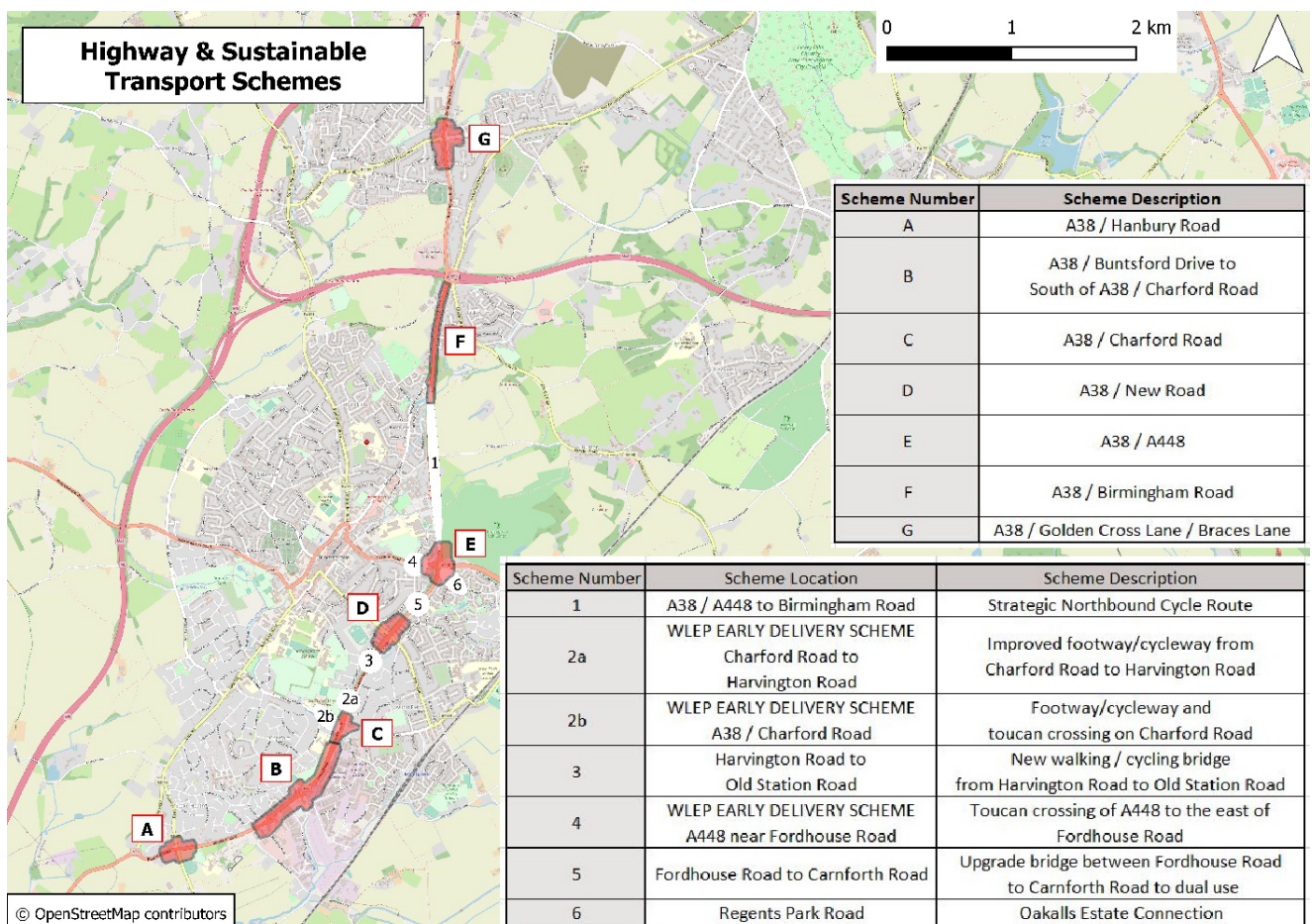
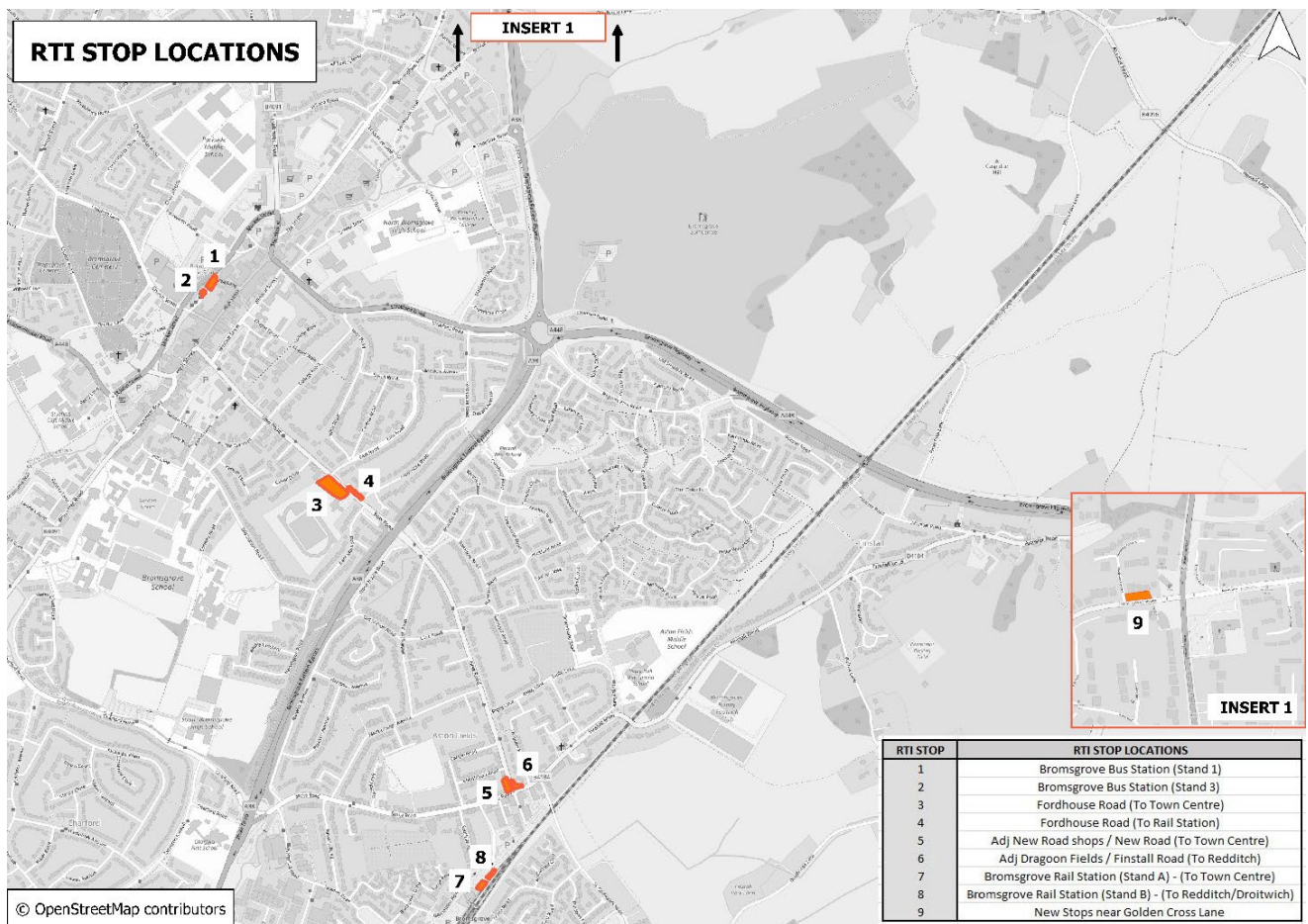


Figure 6.2 – Highway and sustainable transport schemes

Figure 6.3 – Scheme 7/ RTIs stop locations



6.3 Financial Case Overview

The delivery of the scheme entails a three-stage cost lifecycle, as follows:

- Preparation costs from Programme Entry to Full Approval.
- Construction Costs.
- On-going liabilities including highways and bridge maintenance costs, scheme monitoring and evaluation.

The estimated total cost of the scheme is £49.8m. This figure reflects base costs of 2020 Q1 and 2021 Q1 Prices (2021Q1 used for Schemes 3&5) prices, with inflation applied, but excludes Part 1 Claims and Monitoring and Evaluation Costs.

A local contribution allowance of £745,547 is made for Part 1 Claims and Monitoring and Evaluation Costs. This is in line with the DfT advice. In general, the DfT do not fund these costs and requires that these should be part of the local contribution. Part 1 claims is estimated at circa £447k, which is subject to potential claims in the future.

6.4 Approach to scheme costs

The key costs of the project are:

- Construction Costs – These are the estimated construction costs adjusted to allow for inflation up to the start of and during construction. Traffic Management costs are included within the scheme costs.

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- Project Preparation Costs – These costs include project management, design and associated elements, environment, planning and legal costs.
- Land Costs – Based upon estimated costs to acquire the necessary land volume.
- Site Supervision & Contract Management Costs – These are costs to oversee the construction phase.
- Risk – Undertaken via the Quantified Risk Assessment Process as defined in TAG.
- Monitoring and evaluation costs – As defined in the Monitoring and Evaluation Chapter of this business case.
- Whole life costs – Defined in Appendix F.5, for use within the economic case only.
- Part 1 Claims – An estimate of the part 1 claims that could arise as a result of the proposed scheme, subject to an acceptable claim being submitted in accordance with legislation.

6.5 Construction costs

The construction costs used as the basis of this Financial Case are based upon the scheme design drawings included in Appendix S.4. The construction costs comprise highway, geotechnical and structure costs, and have been developed using Quarter 1 2020 and Quarter 1 2021 rates, 2021 rates have been used for Schemes 3 and 5, with the remainder of the scheme being priced using 2020 Q1 rates. The costs also include for traffic management, site preliminaries, and Statutory Undertaker diversion costs.

The scheme costings have been prepared by a Quantity Surveyor based upon construction rates of projects currently under construction within the Worcestershire County Council area by the term consultant for all schemes except Schemes 3 and 5. Schemes 3 and 5 have been costed by Worcestershire County Councils Term Contractor, as such they are expected to represent a good estimate of scheme costs at this stage of scheme development.

The full costing and Bill of Quantities are outlined in Appendix F.1. These costs have then been independently verified by external cost consultants (see Appendix F.3).

6.6 Preparation costs

Preparation Costs include project management, detailed design, development of the Full Business Case, environmental design works, planning and legal costs.

6.6.1 Land costs

Land costs are based upon the MCHLG report Land Values Estimates for Policy Appraisal 2017, this utilised values for farmland (£21,250/Ha) and commercial (£700,000/Ha), at a price base of April 2017, which was then factored up to April 2020 prices in line with OBC submission common price based. A review of the updated MCHLG Report for 2019 was reviewed in line with the latest data. This figure will be updated at FBC stage, once land negotiations are completed.

6.6.2 Site supervision

Site supervision and contract management costs are included to cover costs required to oversee the construction phase. These costs have been estimated based on WCC's previous experience of overseeing similar contracts.

6.6.3 Risk cost

As noted in the Management Case a Quantified Risk Assessment (QRA) has been undertaken and a QRA value is included within the Financial Case. Appendix F.4 provides full details of the QRA process and value.

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6.6.4 Monitoring and evaluation costs

Monitoring for -1/+1/+5 years is specified in the Monitoring and Evaluation Plan which is appended to the Management Case as Appendix M.7. The plan costs each monitoring requirement and the overall cost is used to inform the Financial Case.

6.6.5 Whole life costs

Maintenance and whole life costs associated with the structure, carriageway and footway/cycleway elements of the proposed scheme have been estimated. Assumptions have been made based on the frequency of required maintenance for each element and a base cost per cycle. Appendix F.5 sets out the basis of the whole life costs used in the economic appraisal.

6.6.6 Inflation

The outturn cost has been developed using inflation metrics as defined in Table 6.1, three metrics have been used, in addition to Consumer Price Index figures. Further detail on the derivation of the compounded inflation used in the calculation of the financial case outturn cost is set out in Appendix F.2.

- Construction output inflation;
- Professional services; and
- Land values

For construction inflation, the data obtained is from the Office for National Statistics (ONS) Construction Price Output index (COPI). Based on the data available at the time of producing the parameter, data for the period March 2020 to March 2021 was adopted.

No data specific to land value inflation was available, thus land value inflation was assumed to be the same as construction inflation.

For professional services, data from the ONS for Average Weekly Earnings (AWE) for the whole economy was adopted. The time series data that was available was from April 2020 until April 2021 at the time of deriving the metrics. The data obtained was used to proxy the impact of inflation on professional services.

6.6.7 Inflation Indices 2020/21 Q1 Price Base

To forecast the inflation rates across the construction period for the scheme, it has been assumed that the Land Values, Professional services and Construction Output inflation values move in line with the Bank of England's forecasted¹ changes in Consumer Price Index (CPI) from 2021/2022 to 2024/2025. After this period, inflation is assumed to remain at the 2024/25 values, as there is no further data available on CPI from the Bank of England's forecast. The detailed derivation of the inflation indices is presented within the accompanying inflation forecast note.

The compounded inflation metrics applicable to costs in a Q1 2020/21 price base are presented in Table 6.1 below.

Table 6.1- Annual forecast of construction price, professional services and land value inflation

Year	Construction price inflation	Land value inflation	CPI Inflation	Professional services inflation
2020/21	100.00%	100.00%	100.00%	100.00%

¹ (from the Bank of England's May 2021 inflation report)

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2021/22	102.1%	102.1%	101.7%	102.7%
2022/23	104.9%	104.9%	104.0%	106.4%
2023/24	107.4%	107.4%	106.0%	109.7%
2024/25	110.0%	110.0%	108.1%	113.1%
2025/26	112.6%	112.6%	110.2%	116.6%
2026/27	115.3%	115.3%	112.3%	120.3%

6.6.8 Inflation Indices 2019/20 Q1 Price Base

As some of the costs items are in a Q1 2019/20 price base, a further set of inflation indices have been generated. The difference in CPI between Q1 2019/20 and Q1 2020/21 was used to uplift costs during this period. The inflation metrics have therefore been re-profiled to take into inflation between 2019/20 and 2020/21.

The compounded inflation metrics applicable to costs in a Q1 2019/20 price base are summarised in Table 6.2.

Table 6.2 - Annual forecast of construction price, professional services and land value inflation

Year	Construction price inflation	Land value inflation	CPI Inflation	Professional services inflation
2019/20	100.0%	100.0%	100.0%	100.0%
2020/21	101.0%	101.0%	101.0%	101.0%
2021/22	103.1%	103.1%	102.7%	103.8%
2022/23	105.9%	105.9%	105.0%	107.5%
2023/24	108.5%	108.5%	107.1%	110.8%
2024/25	111.1%	111.1%	109.1%	114.3%
2025/26	113.7%	113.7%	111.2%	117.8%
2026/27	116.4%	116.4%	113.4%	121.5%

Within the scheme costs, inflation is applied in the following way to the baseline costs, as defined in Table 6.3.

Table 6.3 - Application of Inflation to scheme cost

Cost Item	Relevant Annual Inflation Metric
Works Cost / QRA / Contingency	Construction Price Inflation
Land Acquisition Cost	Land Value Inflation
Preparation / Supervision / Monitoring and Evaluation	Professional Services Inflation

6.6.9 Optimism bias

Optimism Bias has not been included in the costs reported in this Financial Case, optimism bias is accounted for in the Economic Case only in line with TAG.

6.7 Estimated scheme costs

The inflation rates set out above have been applied to the various elements of the scheme costs breakdown as set out in Table 6.4, which are shown in more detail in Appendix F.1.

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Table 6.4 – Scheme Costs

Cost type	Baseline costs	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	Total
Early FBCWork	£1,605,282	£1,317,293	£309,959	£0	£0	£0	£0	£1,627,252
Preparation	£2,151,400	£0	£1,816,825	£406,603	£0	£0	£0	£2,223,428
Construction	£32,417,227	£0	£0	£2,966,541	£13,992,992	£9,099,128	£9,607,968	£35,666,629
Land	£21,900	£0	£0	£0	£23,447	£0	£0	£23,447
Site Supervision	£3,064,760	£0	£134,223	£260,787	£1,228,521	£860,993	£882,491	£3,367,015
Total cost without Risk	£39,260,569	£1,317,293	£2,261,007	£3,633,932	£15,244,960	£9,960,121	£10,490,458	£42,907,771
Risk	£6,335,359	£0	£264,557	£697,828	£2,618,506	£1,894,568	£1,459,703	£6,935,163
Total cost including Risk	£45,595,928	£1,317,293	£2,525,564	£4,331,760	£17,863,466	£11,854,690	£11,950,162	£49,842,934

Notes:

- 1) Preliminaries not included as a separate item in Table, but included in construction cost
- 2) Early FBC Work– Refers to Detailed Design Costs
- 3) 2020/21 cost has already been spent
- 4) 2021/22 costs are part spent and part forecast
- 5) Monitoring and Evaluation excluded from this table, but £298, 477 being contributed by WCC for this item
- 6) Part 1 claims excluded, WCC contributing £447,070 for this item
- 7) Risk figure is based upon QRA
- 8) Baseline Cost is a combined 2020Q1 and 2021Q1 figure, that is individually calculated with appropriate levels of inflation in a spreadsheet for each individual scheme before being combined together.

6.8 Budgets and funding cover

The scheme has identified local contributions from developers equating to a total of £5,360,659 (10.8% of total scheme costs) with a further local contribution of £1,317,293 (2.60% of total scheme costs) from WLEP, but the majority of funding is sought from the DfT. Table 6.5 shows the breakdown of funding by source.

It should be noted that an additional £2,273,142 of local contribution (WLEP) was used to deliver “Early Delivery Schemes” of the A38 BREP Package. This was done because the time period for using the grant funding from the Local Growth Fund Deal 3 was ending in March 2021. WCC made the DfT aware of this outcome in November 2020. The DfT’s preferred option was that the local contribution that is spent to deliver early delivery schemes is taken out of the scheme and the remaining scheme is submitted with a 15% local contribution. However, if that was not possible then the OBC should present the full scheme (including the early delivery elements) and explain the process for delivering the early works. It should demonstrate the Value for Money (VfM) of the full scheme, the early delivery schemes and the VfM of the remaining BREP elements separately. The economic case demonstrates high VfM for the full scheme, Early Delivery Schemes and the remaining BREP elements separately. Thus, in total this means that a local contribution

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total of £8,951,094 has been secured for this project amounting to circa 1.8% of the total scheme cost, including work that has been delivered between SOBC and OBC stage. Additionally, £298,477 for Monitoring and Evaluation and a further £447,070 for Part 1 Claims is contributed by WCC.

Table 6.5 – Funding Sources

Cost	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	Total
Department for Transport	£0	£0	£6,857,324	£16,863,466	£7,494,030	£11,950,162	£43,164,981
WCCForward Fund	£0	£2,525,564	-£2,525,564				
Local Contribution (S106/WLEP)	£1,317,293	£0	£0	£1,000,000	£4,360,659	£0	£6,677,952
Totals	£1,317,293	£2,525,564	£4,331,760	£17,863,466	£11,854,690	£11,950,162	£49,842,934
Early Local Contribution ¹	£0		-	-	-	-	£2,273,142
WCC Contribution (Part 1 & Monitoring & Evaluation) ²	£0	£13,527	£52,922	£28,245	£80,605	£570,248	£745,547

Note 1 – Early Local Contribution is shown in the table above to set out spend in advance and this expenditure undertaken using local funding (WLEP contribution)

Note 2 – WCC Contribution shown to indicate local contribution being provided by WCC and is excluded from Total row.

6.9 Contributions strategy

Worcestershire County Council's adopted local policy provides for a transport contributions strategy - effectively a framework for the calculation of contributions from development to transport schemes. Similarly Policy BDP6 Infrastructure Contributions within the Bromsgrove District Plan and Policy 20 - Transport Requirements for New Development within the Redditch Borough Local Plan contain the appropriate mechanisms for seeking contributions from development proposals to mitigate their impact on the transport network.

Worcestershire County Council have requested local contributions from developers allocated to the A38 Bromsgrove Route Enhancement Programme as follows:

- Whitford Road - £1,312,706
- Perryfields - £1,577,435
- Foxlydiate - £1,965,674
- Brockhill - £469,429
- Burcot Garden Centre - £35,413

Total - £5,360,659

Of the above figures this can be set out as:

- S106 Already Received - £35,413 (Burcot Garden Centre)
- S106 Secured via signed legal agreement - £2,890,142 (Whitford Road / Perryfields Road)
- S106 Expected and negotiated - £2,435,103 (Foxlydiate / Brockhill)

Where S106 has not been received, Worcestershire County Council Cabinet have agreed to forward fund this expenditure, as set out in the cabinet reports appended to Appendix F.6.

The forward funding of developer contributions was agreed at the WCC Cabinet meeting on Thursday 22nd October 2020².

6.10 Section 151 officer sign off

This Outline Business Case (OBC) submission has been reviewed by, and a declaration received from, Worcestershire County Council's Section 151 Officer in the form of the signed Outline Business Case proforma.

6.11 Summary of financial case

The Financial Case has set out the steps undertaken in developing the A38 BREP financials with a total scheme cost of £49.8m (excluding Part 1 and Monitoring/Evaluation costs).

² Cabinet meeting notes: <https://worcestershire.moderngov.co.uk/mgAi.aspx?ID=12865>