# CONNECTING SOUTHAMPTON CITY REGION

Transforming Cities Fund Strategic Outline Business Case - Proforma Southampton City Council & Hampshire County Council

November 2019









# **Transforming Cities Fund**

## Tranche 2: Strategic Outline Business Case (SOBC) Submission

All TCF Tranche 2 submissions must be supported by:

- 1) A completed SOBC coversheet pro-forma (Part One)
- 2) A checklist to highlight where key information can be found in the SOBC, including a Section 151 Officer Declaration (Part Two)
- 3) An SOBC as defined in the Department's <u>Transport Business Case Guidance</u> and any supporting annexes as necessary

The checklist details some key items we would expect to be included within the SOBC. In summary the SOBC should be submitted with a high, medium and low scenario, detailed costings and appraisal, and a firm delivery plan in place for construction.

# Part One: Coversheet pro-forma

Promoting Authority	Southampton City Council	
Contact	Bid Manager Name: Iain Steane	
Please provide a contact name	Position: Transport Policy Team Leader	
for enquiries relating to this submission.	Email: iain.steane@southampton.gov.uk	
	Phone: 023 8083 2283	

#### 1. Summary of programme

Southampton City Council and Hampshire County Council have worked together to produce an ambitious programme of transport improvements for the Southampton City Region. The TCF Programme will fund transformative improvements that connect people from where they live to their places of work, education, and leisure by bike and public transport.

Our proposal is formed around three themes consisting of 45 transport schemes that will be delivered on five corridors linking Southampton City Centre with suburbs both within and beyond the city, extending into Hampshire.

The proposal is formed around these scheme areas:

#### Transforming Mobility

**Rapid Bus Corridors** – using priority and partnership to make travelling by bus easy, quick and attractive.



**Park & Ride** – new facility for services to the Hospital and City Centre.



**Local Mobility Hubs** – widening the variety of mobility options for people in Southampton.

**Smart Technology** – using innovative technology to help buses get through traffic congestion and make their journeys more reliable

#### **Transforming Lifestyles**



**Southampton Cycle Network** – delivery of an emerging network of safe and accessible cycle routes.

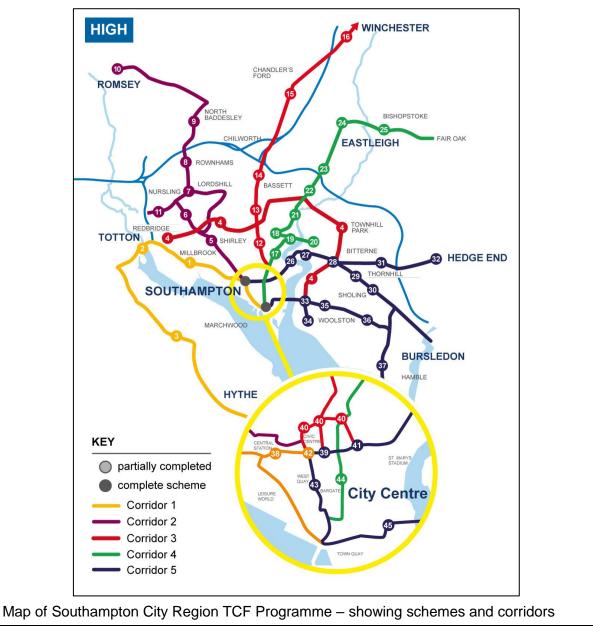
Active Travel Zones – working with local communities to create neighbourhoods where people can walk and cycle easily and safely.

#### **Transforming Gateways**



**City Centre Transformation** – over time the City Centre will become a liveable place for people with new spaces and interchanges with bus and rail.

By doing this we can make it easier and quicker for people to get around the City Region to reduce congestion, improve air quality, and boost productivity.



2. Funding request and profiling (£000s)						
HIGH SCENARIO	2019/20	2020/21	2021/22	2022/23	Total (£)	% total
Requested DfT funding	740	35,453	50,338	39,380	125,911	87.9
LA contribution	394	5,281	4,945	4,943	15,563	10.9
Third Party contribution	9	269	1	1,568	1,847	1.3
Total	1,143	41,003	55,284	45,891	143,321	

MEDIUM SCENARIO	2019/20	2020/21	2021/22	2022/23	Total (£)	% total
Requested DfT funding	638	30,472	44,794	18,010	93,914	85.6
LA contribution	394	4,408	4,304	4,886	13,992	12.7
Third Party contribution	9	269	1	1,568	1,847	1.7
Total	1,041	35,149	49,099	24,464	109,753	

LOW SCENARIO	2019/20	2020/21	2021/22	2022/23	Total (£)	% total
Requested DfT funding	1,017	21,931	29,206	4,829	56,983	83.2
LA contribution	394	2,848	2,945	3,476	9,663	14.1
Third Party contribution	9	269	1	1,568	1,847	2.7
Total	1,420	25,047	32,152	9,873	68,493	

#### 3. Value for Money

Please provide a short description of your assessment of the value for money of the programme including your estimate of the Benefit Cost Ratio. Please do so for each of your Low, Medium and High packages.

This should cover both monetised and non-monetised costs and benefits. The full assessment, as set out in the TCF Tranche 2 Guidance should be provided in the SOBC. Valuation of any dependent development, should be reported here, separately from the central value for money evidence and supporting evidence, and a full description of the approach taken should be included in the SOBC.

#### Low Scenario:

Analysis of Level 1 impacts puts the Low Scenario in the **Medium** Value for Money category with an **initial BCR of 1.79**.

With the addition of Level 2 impacts, this places the Low Scenario in the **High** Value for Money category with an **adjusted BCR of 2.34**.

The Present Value Costs (PVC) for the Low Scenario is £70.9m.

Present Value Benefits (PVB) for Level 1 impacts for the Low Scenario amount to £126.7m. This covers the full range of impacts to highway, public transport, active modes, bus operator income, air quality, noise and greenhouse gases.

The Level 2 impacts generate a further £39m of PVB in the Low Scenario.

The Low Scenario has a Net Present Value (NPV) of £55.8m

Whilst there are disbenefits to highway users of £162m, these are more than offset by the benefits to public transport and active mode users that are valued at £234m.

Environmental and social assessments have been completed for the Low Scenario at the programme level. This has found a positive or impact neutral impact against all categories. Assessment of all Social Impacts found a beneficial impact for all categories, except Severance and Option Values which scored neutral.

Non Monetised impacts include: Disruption Impacts During Construction and Maintenance; Improved Network Resilience, Labour Supply Impacts and Dependent Development.

#### Medium Scenario:

Analysis of Level 1 impacts puts the Medium Scenario in the **High** Value for Money category with an **initial BCR of 2.22**.

With the addition of Level 2 impacts, this places the Medium Scenario in the **High** Value for Money category with an **adjusted BCR of 2.75**.

The PVC for the Medium Scenario is £111.4m.

PVB for Level 1 impacts for the Medium Scenario amount to £247.4m. This covers the full range of impacts to highway, public transport, active modes, bus operator income, air quality, noise and greenhouse gases.

The Level 2 impacts generate a further £58m of PVB in the Medium Scenario.

The Medium Scenario has a Net Present Value (NPV) of £136m

Whilst there are disbenefits to highway users of £137m, these are more than offset by the benefits to public transport and active mode users that are valued at £319m.

Environmental and social assessments have been completed for the Medium Scenario at the programme level. This has found a positive or impact neutral impact against all categories. Assessment of all Social Impacts found a beneficial impact for all categories.

Non Monetised impacts include: Disruption Impacts During Construction and Maintenance; Improved Network Resilience, Labour Supply Impacts and Dependent Development.

#### **High Scenario:**

Analysis of Level 1 impacts puts the High Scenario in the Medium Value for Money

category with an initial BCR of 1.82.

With the addition of Level 2 impacts, this places the High Scenario in the **High** Value for Money category with an **adjusted BCR of 2.26**.

The PVC for the High Scenario is £141.3m.

PVB for Level 1 Impacts for the High Scenario amount to £257.1m. This covers the full range of impacts to highway, public transport, active modes, bus operator income, air quality, noise and greenhouse gases.

The Level 2 impacts generate a further £62m of PVB in the High Scenario.

The High Scenario has a Net Present Value (NPV) of £115.8m

Whilst there are disbenefits to highway users of £183m, these are more than offset by the benefits to public transport and active mode users that are valued at £359m.

Environmental and social assessments have been completed for the High Scenario at the programme level. This has found a positive or impact neutral impact against all categories. Assessment of all Social Impacts found a beneficial impact for all categories.

Non Monetised impacts include: Disruption Impacts During Construction and Maintenance; Improved Network Resilience, Labour Supply Impacts and Dependent Development.

	Low	Medium	High
Benefit to Cost Ratio	1.79	2.22	1.82
Adjusted BCR	2.34	2.75	2.26
Value for money category	Medium	High	Medium

#### 4. Section 151 Officer Declaration

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

- has allocated sufficient budget to deliver this scheme on the basis of its proposed funding contribution;
- accepts responsibility for meeting any costs over and above the DfT contribution requested, including potential cost overruns and the underwriting of any funding contributions expected from third parties;
- accepts responsibility for meeting any ongoing revenue and capital requirements in relation to the scheme;
- accepts that no further increase in DfT funding will be considered beyond the maximum contribution requested and that no DfT funding will be provided after 2022/23;
- Confirms that the authority has the necessary governance and assurance arrangements in place and the authority can provide, if required, evidence of a stakeholder analysis and communications plan in place.

Name: John Harrison, Executive Director of Finance and Commercialisation, Southampton City Council



#### **Submission requirements**

#### Submission deadline: 6pm on 28 November 2019

Please email this coversheet and checklist together with a copy of the SOBC (including supporting material) to:

#### tcfproprosals@dft.gov.uk

Please note that the size limit for attachments to a single incoming email to DfT is 20MB. If your submission is larger than this please either submit separate emails, use a zip folder, or convert large files to an alternative format. We would prefer it if annexes are separated out into individual pdf documents and clearly labelled.

#### Please provide three hardcopies to:

Charles Small Head of English Devolution Team Transforming Cities Fund Business Cases Department for Transport 2/18, Great Minster House 33 Horseferry Road London SW1P 4DR Hardcopies do not need to be sent by 28 November 2019 but can arrive shortly after.

# Part Two: Checklist

Please complete this checklist by referencing locations where the relevant material can be found in the SOBC document.

### **Strategic Case**

Item	Section/Page
A detailed description of the physical scope of the programme	1.1.1 p2 & 4.7.2- 4.7.4 (p98-120)
The objectives of the programme	3.6.1 p80
A description of the process by which the programme came to be identified as the preferred option for meeting those objectives including why alternative options were discarded	4.4, 4.5 & 4.6 (p92-97)
The impact the programme would have on other transport works i.e. rail networks and SRN	4.10.1 (p138-140)
Details of public consultation activities on the programme to date, and key findings including how any key questions/concerns have been addressed	4.9 (p135-136)
Evidence of stakeholder support (e.g. letters from bus/train companies, businesses, public bodies, MPs, or positive/negative press, etc.)	Appendix 8

# **Economic Case**

#### Modelling

Where modelling has been used to appraise the TCF schemes, the following supporting documentation is required as part of the SOBC submission. It is noted that not all of the documents listed will apply to all cities. For some schemes, we recognise that these documents and the items listed below have been provided and reviewed in advance of the submission, as part of our co-development process. Please can you indicate where this is the case by referencing when the report was sent). Where changes have been requested, please ensure that the reporting is updated. Please refer to the latest <u>TAG</u> unit for general reporting guidance, and units <u>M1.2</u>, <u>M3.1/M3.2</u>, and <u>M2</u> for detailed guidance.

Item	Section/Page
An Existing Data and Traffic Surveys Report to	
include:	
Details of the sources, locations (illustrated on	2015 RTM Development and Validation
a map), methods of collection, dates, days of	Report - Section 5 (2015 surveys)
week, durations, sample factors, estimation of	2010 Report on Surveys (2010 surveys)
accuracy, etc.	2015 PTM Calibration & Validation report
	- Section 3 (this report was shared with DfT on
	03/09/2019 as part of co-development)

n	Section/Page
Details of any specialist surveys (e.g. stated preference).	2010 Report on Surveys - RSIs (Section 2); Port & Airport (Section 10) 2015 PTM Calibration & Validation report- Section 3- details on specialist PT data including ETM data etc ( <i>this report was shared with</i> DfT on 03/09/2019 as part of co-development)
Traffic and passenger flows; including daily, hourly and seasonal profiles, including details by vehicle class where appropriate.	2015 RTM Development and Validation Report - Section 5 plus Appendices A & B 2010 Report on Surveys (2010 surveys) 2015 Forecasting Summary Report - Sections 7 & 8 2015 PTM Calibration & Validation report- Section 6.5 Tables 6,7,9 (PT Passenger counts) and Section 6.6 (P+R) (this report was shared with DfT on 03/09/2019 as part of co-development)
Journey times by mode, including variability if appropriate.	2015 RTM Development and Validation Report - Section 5 plus Appendices C & D. 2015 PTM Calibration & Validation report- Sectior 6.5 table 8 (PT journey times). (this report was shared with DfT on 03/09/2019 as part of co- development)
Details of the pattern and scale of traffic delays and queues.	Appendix 5 (Economic Appraisal & Impacts Report – within Appendix B)
Desire line diagrams for important parts of the network.	Appendix 5 (Economic Appraisal & Impacts Report – within Appendix B)
Diagrams of existing traffic flows, both in the immediate corridor and other relevant corridors.	Appendix 5 (Economic Appraisal & Impacts Report – within Appendix B)
Assignment Model Validation Report to ude:	
Description of the road traffic and public transport passenger assignment model development, including model network and zone plans, details of treatment of congestion on the road system and crowding on the public transport system.	2015 RTM Development and Validation Report - Section 4 2015 PTM Calibration & Validation report- Section 3 & 4 (this report was shared with DfT on 03/09/2019 as part of co-development)
Description of the data used in model building and validation with a clear distinction made for any independent validation data.	2015 RTM Development and Validation Report Section 5 2015 PTM Calibration & Validation report- Section 3 (this report was shared with DfT on 03/09/2019 a part of co-development)
Evidence of the validity of the networks employed, including range checks, link length checks, and route choice evidence.	2015 RTM Development and Validation Report - Section 6.4 2015 PTM Calibration & Validation report- Section 4.2 (this report was shared with DfT on 03/09/2019 as part of co-development)
Details of the segmentation used, including the rationale for that chosen.	2015 RTM Development and Validation Report - Section 7.2.7 2010 MDM Development Report - Section 2.2
Validation of the trip matrices, including estimation of measurement and sample errors.	2015 RTM Development and Validation <u>Report</u> - Section 8.4
	2015 PTM Calibration & Validation report- Section 5 (this report was shared with DfT on 03/09/2019 a part of co-development)

em	Section/Page
Details of any 'matrix estimation' techniques	2015 RTM Development and Validation
used and evidence of the effect of the	Report - Sections 8.2 & 8.3
estimation process on the scale and pattern of	2015 PTM Calibration & Validation report- Section
the base travel matrices.	5 (this report was shared with DfT on 03/09/2019 as
	part of co-development)
Validation of the trip assignment, including	2015 RTM Development and Validation Report
comparisons of flows (on links and across	- Section 9.2
screenlines/cordons) and, for road traffic	2015 PTM Calibration & Validation report- Section
models, turning movements at key junctions.	6.4, 6.5, 6.6 (this report was shared with DfT on
	03/09/2019 as part of co-development)
Journey time validation, including, for road	2015 RTM Development and Validation
traffic models, checks on queue pattern and	Report - Section 9.3
magnitudes of delays/queues.	2015 PTM Calibration & Validation report- Section
	6.5 (this report was shared with DfT on 03/09/2019
	as part of co-development)
Detail of the assignment convergence.	2015 RTM Development and Validation
	Report - Section 9.4
Present year validation if the model is more	N/A as model is <5 years old
than 5 years old.	
A diagram of modelled traffic flows, both in the	Appendix 5 (Economic Appraisal & Impacts Report
immediate corridor and other relevant	– within Appendix B [in Appendices B3 – B6])
corridors.	
Demand Model Report (if applicable) to	
clude:	
Where no Variable Demand Model has been	N/A
developed evidence should be provided to	
support this decision (e.g. follow guidance in	
WebTAG M2 Variable Demand Modelling –	
section 2.2).	
Description of the demand model.	See 2015 RTM Development and Validation
	Report - Section 2.2 (overview)
	2015 MDM Report - Section 2 (full details)
Description of the data used in the model	2015 RTM Development and Validation Report
building and validation.	- Section 7
	2010 MDM Development Report - Section 2.5
Details of the segmentation used, including the	2015 RTM Development and Validation Report
rationale for that chosen. This should include	- Section 7.2.7
justification for any segments remaining fixed.	2010 MDM Development Report - Section 2.2
Evidence of model calibration and validation	2015 RTM Development and Validation Report
and details of any sensitivity tests.	Section 8
	2010 MDM Development Report - Section 2.8,
	2.9; Section 5
Details of any imported model components and	N/A
rationale for their use.	
	N/A - the RTM & PTM assignment models do run
Validation of the subbly model sensitivity in	
Validation of the supply model sensitivity in cases where the detailed assignment models	I literatively with the Main Demand Model
cases where the detailed assignment models	iteratively with the Main Demand Model
cases where the detailed assignment models do not iterate directly with the demand model.	
cases where the detailed assignment models do not iterate directly with the demand model. Details of the realism testing, including outturn	2010 MDM Development Report - Section 2.10
cases where the detailed assignment models do not iterate directly with the demand model. Details of the realism testing, including outturn elasticities of demand with respect to fuel cost	
cases where the detailed assignment models do not iterate directly with the demand model. Details of the realism testing, including outturn elasticities of demand with respect to fuel cost and public transport fares.	2010 MDM Development Report - Section 2.10
cases where the detailed assignment models do not iterate directly with the demand model. Details of the realism testing, including outturn elasticities of demand with respect to fuel cost and public transport fares. Details of the demand/supply convergence.	
cases where the detailed assignment models do not iterate directly with the demand model. Details of the realism testing, including outturn elasticities of demand with respect to fuel cost and public transport fares.	2010 MDM Development Report - Section 2.10

Item	Section/Page
Description of the future year demand assumptions (e.g. land use and economic	2015 Forecasting Summary Report - Section 3.3
growth - for the do minimum, core and variant scenarios).	Appendix 5 (Economic Appraisal & Impacts Report) within Appendix B – Sections 2.2 and 2.3
An uncertainty log providing a clear description	2015 Forecasting Summary Report - Section 3.3
of the planning status of local developments	Appendix 5 (Economic Appraisal & Impacts Report) within Appendix B – Table 2.
Description of the future year transport supply	2015 Forecasting Summary Report - Section 3.2
assumptions (i.e. networks examined for the do minimum, core scenario and variant scenarios).	Appendix 5 (Economic Appraisal & Impacts Report) within Appendix B (see Appendix B2 'Reference Case Infrastructure' within this appendix).
Description of the travel cost assumptions (e.g. fuel costs, PT fares, parking).	2015 Forecasting Summary Report - Sections 4.6, 4.7
Comparison of the local forecast results to national forecasts, at an overall and sectoral level.	Not included in the 2015 SRTM forecasting report
Presentation of the forecast travel demand and conditions for the core scenario and variant scenarios including a diagram of forecast flows for the do-minimum and the scheme options for affected corridors.	Appendix 5 (Economic Appraisal & Impacts Report) within Appendix B (Section 4.4 & Appendices B3- B6)
If the model includes very slow speeds or high junction delays evidence of their plausibility.	Appendix 5 (Economic Appraisal & Impacts Report) within Appendix B (Section 4.4)
An explanation of any forecasts of flows above capacity, especially for the do-minimum, and an explanation of how these are accounted for in the modelling/appraisal.	Appendix 5 (Economic Appraisal & Impacts Report) within Appendix B (Section 4.4)
Presentation of the sensitivity tests carried out (to include high and low demand tests).	Appendix 5 (Economic Appraisal & Impacts Report – section 6.7 & Table 6-19)
A Junction Modelling Report (if available) to include:	
Description of the model software, data used,	N/A
network coding and scenarios generated	
Description of matrix generation and validation of model	N/A
Presentation of results	N/A

Where traditional transport models have not been used to appraise the TCF schemes, the following supporting information and documentation is required.

Spreadsheet-based (or any other form) Report/Technical Note (if allable) to include:	N/A
Description of the model, including the design of it and the rationale for its use and how the model is fit for assessing TCF schemes	N/A
Details of all assumption used and data sources	N/A
Details of the calibration and validation of the model	N/A
Details of model testing (if applicable)	N/A

## Appraisal

# Cost Benefit Analysis

Item	Section/Page
A clear explanation of the underlying assumptions used in the Cost Benefit Analysis.	Appendix 5 (Economic Appraisal & Impact Report – section 4)
Information on local factors used. For example the derivation of growth factors and annualisation factors in TUBA (to include full details of any calculations).	Appendix 5 (Economic Appraisal & Impact Report – within Appendix B)
A diagram of the network (if COBALT used).	Appendix 5 (Economic Appraisal & Impact Report – within the Accidents Technical Note [Appendix E5])
Information on the number of junctions modelled (if COBALT used), for both the do-minimum and the do-something.	Appendix 5 (Economic Appraisal & Impact Report – within the Accidents Technical Note [Appendix E5])
Details of assumptions about operating costs and commercial viability (e.g. public transport, park and ride, etc.).	Appendix 5 (Economic Appraisal & Impact Report – section 4)
Full appraisal inputs/outputs (when used, COBALT and/or TUBA input and output files in text format should be supplied).	Appendix 6d (TUBA files) & 6e (COBALT files)
Evidence that TUBA/COBALT warning messages have been checked and found to be acceptable.	Appendix 5 (Economic Appraisal & Impact Report – within Appendix B)
Spatial (sectoral) analysis of TEE benefits.	Appendix 5 (Economic Appraisal & Impact Report – within the Accidents Technical Note [Appendix E5])
Details of the maintenance delay costs/savings.	Appendix 5 (Economic Appraisal & Impact Report – within – section 6.3
Details of the delays during construction.	Appendix 5 (Economic Appraisal & Impact Report – section 6.6)
Appraisal tables (AMCB, PA, TEE) in excel format.	Appendix 6b

#### **Economic Case Assessment**

Item	Section/Page
A comprehensive Appraisal Summary Table in excel format	Appendix 6a
Assessment of economic impacts	Chapter 5 – 5.4 & 5.5
Economic impacts worksheets, including supplementary evidence such as Active Mode Appraisal Toolkit worksheets or Greenhouse Gases worksheets etc	Appendix 5 (Economic Appraisal & Impact Report – within Appendix D Technical Notes cover these)
Assessment of environmental impacts, to include an environmental constraints map	5.7 & Appendix 5 (Economic Appraisal & Impact Report – section & constraints map in Appendix E)
Environmental impacts worksheets	Appendix 5 (Economic Appraisal & Impact Report – section 7)
Assessment of safety impacts and the assumed accident rates presented (when used, COBALT output should be provided)	Will be in the Accidents Technical Note (Appendix E5 of the Economic Appraisal & Impact Report)
Assessment of social impacts	Included within Appendix 5 (Economic Appraisal & Impact Report – section 7)
Assessment of distributional impacts	Included within Appendix 5 (Economic Appraisal & Impact Report – section 7)
Social and distributional impacts worksheets (including	Included within Appendix 5 (Economic
DI screening pro forma)	Appraisal & Impact Report – section 7)
Cost pro forma	Appendix 6c.

Data and assumptions log	This is included within Appendix 5	
	(Economic Appraisal & Impact Report –	
	section 4 & within Appendix B to this report)	

# Management Case

Item		Section/Page
Governance structure including SRO, Project Boar levels	d, Project Manager, and other key roles, and resourcing	8.3 p198 & Appendix 10
Detailed programme pla	an	Appendix 9
Risk management	Detailed risk register	Appendix 7b
	Narrative to explain the most significant risks, how they are being managed and their potential impact on time and budget	8.4 p201-203
	Risk management strategy	8.4 p201-203
Local assurance framework		8.8 p205-206 Appendix 12
Monitoring and evaluation Outline evaluation plan inclu	ion ding a statement of core evaluation objectives	8.11 p208-212 Appendix 15

# **Commercial Case**

Item	Section/Page
Description of the preferred procurement strategy	7.3 p189
Rationale for the selection of preferred procurement route against possible alternatives	7.3 p189
Explanation of how costs and risks will be shared throughout the contract	7.6 p191-192

# **Financial Case**

Item	Section/Page
Detailed cost breakdown	6.2 p182-183 Appendix 7c
Independent surveyor's report verifying cost estimates	
Details of and justification for inflation assumption used	6.2.1 p183

Quantified Risk Assessment	6.2.3 p183-184
All scheme costings should include an amount for risk, based on the results of a Quantified Risk Assessment (QRA) which should be proportionate to the nature and complexity of the project.	Appendix 7a
Evidence of commitment for any third-party contributions	Appendix 8







