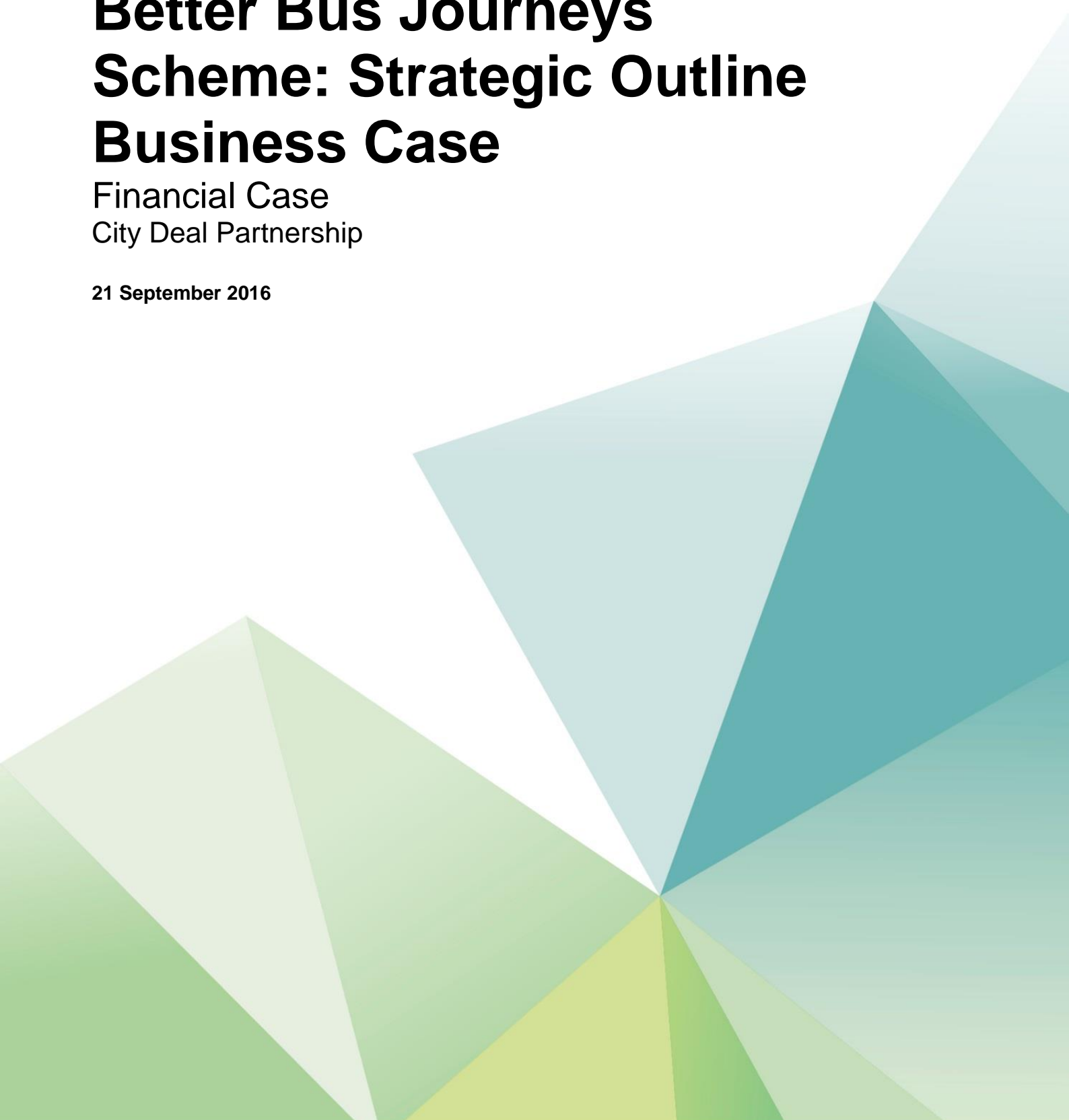


Cambourne to Cambridge Better Bus Journeys Scheme: Strategic Outline Business Case

Financial Case
City Deal Partnership

21 September 2016



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This document has 12 pages including the cover.

Document history

Job number: 5134058			Document ref:			
Revision	Purpose description	Originated	Checked	Reviewed	Authorised	Date
Rev 1.0	Draft for comment	CW	NS/EN	NS/EN/NC	EM	
Rev 2.0	Draft for comment with revised costs and client comment	CW	EN	NS	EM	06/09/2016
Rev 3.0	Draft checked for consistency	CW	AL	EN	NC	15/09/2016
Rev 4.0	Updated in response to client comment	CW	EN	EN	NC	21/09/2016

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5. The Financial Case

5.1. Introduction

5.1.1. Overview

This chapter presents the Financial Case for the Cambourne to Cambridge Better Bus Journeys Scheme, and provides a high level assessment of the five core options. The total outturn costs and expenditure profiles of each of the options are presented, along with an assessment of the impact of construction of each option on the City Deal budgets and accounts. Full option descriptions are presented in the Strategic Case.

On-going maintenance and renewals that will be generated over the lifecycle of the scheme considered within the economic appraisal, as the Financial Case only considers up-front costs.

5.1.2. Guidance and Compliance

The DfT guidance document '*The Transport Business Case: Financial Case*' summarises the areas of a Financial Case that should be considered within an SOBC. It states that the contents of the Financial Case should include:

- Introduction – outline the approach taken to assess affordability;
- Costs – provide details of:
 - the expected whole life costs (covered in detail in the Economic Case section 6);
 - when they will occur;
 - breakdown and profile of costs by those parties on whom they fall; and
 - any risk allowance that may be needed
- Budgets/ funding cover – provide analysis of the budget/ funding cover for the project; and
- Describe the expected impact on the sponsor organisation's balance sheet. For an OBC this is considered 'optional' where evidence should be provided if relevant.

5.1.3. Outline Approach

The investment and whole life costs of each of the options have been estimated, and internally reviewed by a number of technical specialists and are based on high level information on the potential alignment of the options, taking account of the potential infrastructure requirements. The relevant cost items have been estimated by the following:

- Capital construction (including spend profile) – Faithful+Gould;
- Capital renewal (including spend profile) – Faithful+Gould;
- Annual maintenance – Skanska;
- Property cost estimates – Ardent;
- Bus service operation – Atkins (operational costs, including fleet investment are fully discussed in the Economic Case); and
- Park & Ride site operation – Atkins/ CCC.

The costs estimates are based on scheme opening year of 2021. It should be recognised that any delay to scheme opening is likely to result in an increase in costs from those forecast here.

On-going maintenance and renewals that will be generated over the lifecycle of the scheme are considered within the economic appraisal, as the Financial Case only considers up-front costs.

5.2. Capital costs by option

5.2.1. Derivation of base costs

The base costs include capital construction costs, including preparatory and land cost estimates. :

Construction cost estimates for each of the options are derived from high level preliminary designs of each option alignment. For further details on the specific infrastructure proposed for each option, refer to the option descriptions presented in the Strategic Case. As the construction costs were provided by Faithful+Gould with a 2010 price base, historic inflation based on the GDP deflator values obtained from the WebTAG databook has been applied to bring values up to current prices. Each option includes a cost for the new Park & Ride site. The base costs exclude allowances for VAT, inflation, risk and optimism bias.

The capital cost estimates include the following key assumptions:

- Ground conditions are generally good with no soft spots;
- No piling is required along the length of any guideway (i.e. shallow foundations);
- Stabilising of soils not required over and above risk allowance;
- Services are not generally diverted but protected;
- No major environmental impacts.
- An allowance for construction preparatory costs, including professional fees;

Land costs are presented as part of the overall preliminaries costs estimate. It is pertinent to note that the land cost estimates could reduce if the busway is able to make use of higher proportions of highway owned land.

The options that include an off-line facility allow for the cost of implementing a guided busway for the off-line sections.

Fleet investment has been estimated with reference to the Peak Vehicle Requirement forecasts, derived using the CSR. For further details on the proposed number of public transport services for each option refer to the Economic Case.

Table 5-1 presents the capital construction costs for each of the options.

Table 5-1 Capital construction investment costs, (current year price base¹)

Work element	Option 1 cost (000's)	Option 2 cost (000's)	Option 3 cost (000's)	Option 4 cost (000's)	Option 5 cost (000's)
Civil engineering works	£4,900	£17,700	£39,000	£21,200	£25,600
Utilities diversions	£400	£600	£700	£600	£700
Traffic management	£1,400	£3,100	£7,700	£4,000	£6,800
Unmeasured works and design development	£500	£1,800	£3,900	£2,100	£2,600
Overhead & Profit	£700	£2,200	£4,900	£2,700	£3,400
Preliminaries and Land Costs	£3,300	£7,600	£17,800	£8,600	£9,800
Park & Ride site	£6,900	£6,900	£6,900	£6,900	£6,900
Total	£18,200	£39,900	£80,900	£46,000	£55,800

It should be noted that option 3 includes for a new bridge to cross the M11, which has an approximate cost of £10.8 million. This provides a more defined estimate than the initial cost estimate of up to £45 million, presented during the Phase 1 consultation.

Option 3 has been modelled as following a completely segregated offline route to the south of the A428. However, there is an opportunity to explore the provision of a segregated route adjacent to St Neots Road. The cost implications of this alignment could vary from those presented in Table 5.1.

¹ For presentation purposes monetised values in this report rounded to the nearest £100,000

Investment costs

Table 5-2 provides a summarised breakdown of the base cost estimate for each of the options.

Table 5-2 Breakdown of base investment costs for each option (current year price base)

Cost item	Option 1 cost (000's)	Option 2 cost (000's)	Option 3 cost (000's)	Option 4 cost (000's)	Option 5 cost (000's)
Preparatory costs	£2,000	£4,500	£8,900	£5,200	£6,400
Construction costs	£18,200	£39,900	£80,900	£46,000	£55,800
Total	£20,100	£44,300	£89,800	£51,200	£62,100

5.2.2. Allowance for Risk

A risk register has been prepared by Faithful+Gould for each of the options, which has been used to inform an assumed risk allowance for the construction costs. Due to the number of options being considered at this stage of the project, and the early conception stage of the scheme design, a percentage based approach to determining a weighted risk allowance has been taken in quantifying the risks to the potential schemes.

The risk register summary indicates that an overall weighted risk allowance of 20% on the capital construction costs is appropriate at this stage.

In addition to the construction cost risk allowance, a 10% contingency cost has been assumed by Ardent within the land costs used in this SOBC.

Table 5-3 presents the risk allowance for each of the options.

Table 5-3 Risk allowance breakdown per option (current year price base)

Option	Risk allowance (000's)
Option 1	£3,700
Option 2	£8,400
Option 3	£16,900
Option 4	£9,700
Option 5	£11,900

Note, the risk allowance only includes land costs for the elements of the scheme excluding the Park & Ride site.

5.2.3. Derivation of inflation/ deflation

Construction, capital renewal and infrastructure maintenance costs have all been estimated with a 2010 price base, and inflated to the point of expenditure based on either the All-in Tender Price Index (TPI) or the Retail Price Index (RPI), depending on the cost item.

For the purposes of economic appraisal only real inflation (i.e. the rate of inflation costs above the rate of background inflation) has been considered. However for the Financial Case, the full rate of inflation has been included within the cost forecasts, so the results are provided in cash prices at the time of expenditure.

The rates used in the assessment indicate that construction related costs over the course of the construction period will rise by 5.10% up to 2018. Beyond 2018, there are no forecasts available and therefore the forecast rate of inflation between 2017 and 2018 has been assumed to continue year on year up until completion of construction in 2021.

5.2.4. Out-turn capital costs

Table 5-4 provides a summarised breakdown of the out-turn cost estimate (i.e. the costs which will actually be incurred at the time of expenditure, taking into account the full impacts of construction inflation, with no discounting, market price adjustment or removal of background inflation as has been applied in the Economic Case) for each of the options, excluding VAT. The risk allowance is also included within the out-turn cost totals.

Table 5-4 Breakdown of out-turn costs for each option

Cost item	Option 1 cost (000's)	Option 2 cost (000's)	Option 3 cost (000's)	Option 4 cost (000's)	Option 5 cost (000's)
Preparatory costs	£2,200	£5,100	£10,100	£5,900	£7,300
Construction costs	£25,200	£55,500	£112,500	£64,100	£77,700
Risk	£5,200	£11,700	£19,100	£13,600	£16,700
Total	£32,600	£72,300	£141,800	£83,700	£101,700

5.3. Funding sources

5.3.1. Funding package

Funding for the Cambourne to Cambridge Better Bus Journeys Scheme is intended to be sourced through the GCCD. City Deals provide a funding framework for central government and local partners to agree investment programmes, centred on the promotion of local economic growth and development. The Greater Cambridge City Deal has created an investment fund for the five year period 2015/16 to 2019/20 - which consists of £100 million from the government (£20 million per year). In addition, Greater Cambridge partners have pledged to invest over £500 million from a range of sources. Achieving City Deal funding is dependent upon the satisfactory completion of a Strategic Outline Business Case, which will inform the funding decision to be taken by the GCCD Project Board.

Funding for the Cambridge Better Bus Journeys Scheme is intended to be delivered through this investment fund. To meet the funding requirements, CaCC will be seeking to recover a proportion of the cost from local developer contributions, secured through the planning process.

The local developer contributions are dependent upon on-going negotiations, and may vary between options. However at the time of this appraisal being undertaken the recovery values are unknown and therefore, for the purposes of the appraisal only, the recovery value has been set as zero.

5.3.2. Phasing of total capital

Table 5-5 shows the estimated phasing of the funding requirements for the Cambourne to Cambridge Better Bus Journeys Scheme, based on the estimated construction programme provided by Faithful+Gould.

Table 5-5 Phasing of investment costs (out-turn costs)

Option	Cost Element	2016 cost (000's)	2017 cost (000's)	2018 cost (000's)	2019 cost (000's)	2020 cost (000's)	2021 cost (000's)	Total (000's)
Option 1	Preparatory		£1,300	£900				£2,200
	Capital construction			£4,000	£13,900	£7,000	£400	£25,200
	Risk			£400	£3,100	£1,600	£100	£5,200
	Total		£1,300	£5,200	£17,000	£8,600	£500	£32,600
Option 2	Preparatory		£3,000	£2,100				£5,100
	Capital construction			£7,000	£31,600	£16,100	£900	£55,500
	Risk			£800	£7,100	£3,600	£200	£11,700
	Total		£3,000	£9,900	£38,700	£19,700	£1,000	£72,300
Option 3	Preparatory		£6,000	£4,100				£10,100
	Capital construction			£16,200	£62,800	£31,900	£1,700	£112,500
	Risk			£1,400	£11,800	£5,700	£300	£19,100
	Total		£6,000	£21,700	£74,600	£37,600	£2,000	£141,800
Option 4	Preparatory		£3,500	£2,400				£5,900
	Capital construction			£7,600	£36,800	£18,700	£1,000	£64,100
	Risk			£900	£8,300	£4,200	£200	£13,600
	Total		£3,500	£11,000	£45,100	£22,900	£1,200	£83,700
Option 5	Preparatory		£4,300	£2,900				£7,300
	Capital construction			£8,500	£45,100	£22,900	£1,200	£77,700
	Risk			£1,100	£10,100	£5,100	£300	£16,700
	Total		£4,300	£12,600	£55,200	£28,100	£1,500	£101,700

*The cost of land acquisition may take a number of years depending on the necessary process and permissions. However for appraisal purposes it has been assumed that all necessary land would be required in 2018.

It should be noted that in addition to the scheme costs presented in this chapter, there may be a requirement to add a subsidy/ grant to the overall costs due to a deficit in private sector revenue generated compared to bus operating and investment costs incurred. This is fully detailed in the Economic Case.

5.4. Summary

The chapter has present the Financial Case for the Cambourne to Cambridge Better Bus Journeys Scheme, presenting the high level assessment of the five core options. The Financial Case has considered the up-front costs of the scheme, with reference to capital expenditure including construction infrastructure costs and land costs.

The chapter has presented how there is a range of between £32 million and £142 million in out-turn costs (including risk) between the options. This variation can be attributed to the proportion of each option which requires off-line infrastructure, and the differences in route alignment (i.e. the resultant land acquisition requirements). Option 1 is shown to be the lowest cost option, with an out-turn cost of approximately £32 million. The highest-cost option is indicated as option 3, with an out-turn cost of approximately £142 million.

In addition to the scheme costs presented, it is likely that there would be an additional investment cost to the project sponsor in the form of a grant/ subsidy to account for a deficit between bus operating costs and revenue. It is clearly not the expectation to set up commercially unviable services for the lifetime of the scheme, a more detailed review of the service provision along the A428 corridor (including the Park & Ride) could inform a revised service provision strategy that could allow a more commercially viable provision. This, along with whole life costs (maintenance and capital renewal) was discussed within the Economic Case.

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