

Cambridge Eastern Access

STRATEGIC OUTLINE BUSINESS CASE

Part 4: FINANCIAL CASE



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PART 4 | Financial Case



1.0 Overview

This section provides an overview of the requirements for the Financial Case.

1.1 Requirements of the Financial Case

- 1.1.1 The purpose of the financial dimension of the business case is to demonstrate the affordability and funding of the recommended option, including the support of stakeholders and customers, as required.
- 1.1.2 Demonstrating the affordability and fundability of the recommended option requires a complete understanding of the capital, revenue and whole life costs of the scheme and of how the Deal will impact upon the balance sheet, income and expenditure and pricing arrangements (if any) of the organisation.
- 1.1.3 The challenge is to identify and resolve any potential funding gaps during the lifespan of the scheme.
- 1.1.4 This Financial Case forms the fourth of the five cases which together comprise the Strategic Outline Business Case for the Cambridge Eastern Access project.

1.2 Structure of the Financial Case

- 1.2.1 The DfT's guidance document, '*The Transport Business Case: Financial Case*', outlines the areas to be covered as part of the Financial Case. At this Strategic Outline Business Case Stage, the following are required to be demonstrated:

- **Chapter 2 | Scheme Costs**
Provides a focus on the high-level indicative scheme costs identified to date.
- **Chapter 3 | Sources of Funding**
Provide analysis of the budget/funding cover for project. Set out if relevant, details of other funding sources (e.g. third-party contributions, fees).

2.0 Scheme Costs

This section provides an overview of the high-level scheme costs identified to date.

2.1 Overview

2.1.1 Network improvements within the east of the city are anticipated to be delivered in three phases:

- **Short Term** | In the short term, the A2 – Hybrid package will deliver benefits to pedestrians and cyclists, together with public transport users.
- **Medium Term** | In the medium term, 'Package B1' will see the delivery of a high-quality public transport link into the city centre via Coldham's Lane and/or Mill Road.
- **Long Term** | In the long term, rail improvements will be secured along the Newmarket to Cambridge Line (albeit outside the scope of this SOBC).

2.1.2 This section details the costs and the assumptions associated with each of the individual schemes in the packages, together with the overall level of investment identified for the eastern access corridor.

2.1.3 A summary of the rationale behind the high-level estimates for the schemes is contained within [Appendix A](#) in relation to the short-term interventions, and in [Appendix B](#) for those to be delivered in the medium term.

2.1.4 Where possible, the costs have been based upon similar schemes delivered elsewhere, such as the busways in Luton and elsewhere in Cambridge, from guidance provided by the Department for Transport in relation to the typical costs of cycling interventions¹, and finally from indicative concept drawings costed-up by experienced engineers within the project team.

2.1.5 Revenue costs have been based upon the monies required to operate the services over a five-year period. They do not take into account any revenue generation which will off-set the additional financial commitment they incur.

2.2 Short Term Scheme Costs

2.2.1 The recommended package of measures to be taken forward in the short term are those contained within the 'A2 – Hybrid Package'. The costs of the individual schemes contained within the package are listed in [Table 2.1](#) and [Table 2.2](#), reflecting works to the west and east of the Newmarket Road Park and Ride respectively. All costs detailed include optimism bias.

Table 2.1: Cost Estimates of Schemes in Package A2 – West of Current Newmarket Road Park and Ride

Ref	Scheme	Capital Costs	Revenue Costs
ITS.01	Reconfiguration of all signals to manage/control flow along Newmarket Road & wider network.	£1,225,000	
JC.02	Reconfiguration of Elizabeth Way Roundabout, including the removal of Subway (lower capacity).	£2,520,000	
JC.03	Reconfiguration of the Newmarket Road & Coldham's Lane junction.	£105,000	
JC.05	Signalisation and reconfiguration of the Newmarket Road & Barnwell Road junction (lower capacity).	£2,910,000	
JC.07	Reconfiguration of the Newmarket Road & Ditton Lane junction (lower capacity).	£55,000	
BS.01	Increase the frequency of existing P&R services.		£3,000,000
BS.03	Provide new service from P&R to Addenbrookes hospital and the Biomedical Campus.		£3,000,000
BL.02	Remove inbound bus lanes.	£200,000	
BL.05	New outbound bus lane between Elizabeth Way and the Leper Chapel.	£3,610,000	
AT.01	Provision of continuous segregated inbound cycle lane along Newmarket Road.	£6,120,000	
AT.02	Provision of continuous segregated outbound cycle lane along Newmarket Road.	£6,120,000	
AT.03	Promotion of Park and Cycle from the P&R site.		£100,000
		£22,865,000	£6,100,000

¹ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/742451/typical-costings-for-ambitious-cycling-schemes.pdf

Table 2.2: Cost Estimates of Schemes in Package A2 – East of Current Newmarket Road Park and Ride

Ref	Scheme	Capital Costs	Revenue Costs
HW.01	Additional lane(s) on Newmarket Road to east of Airport Way junction.	£21,600,000	
JC.09	Signalisation of the junction of Newmarket Road and Airport Way.	£2,100,000	
JC.10	Signalisation and Reconfiguration of Quay Interchange	£3,720,000	
PR.02	Relocation of Park and Ride to south of Newmarket Road and east of Airport Way.	£8,620,000	
		£36,040,000	£0

2.3 Medium Term Scheme Costs

2.3.1 The recommended package of measures to be taken forward in the medium term are those identified within 'B1 – High Quality Public Transport Improvement scheme via Coldham's Lane and Mill Road'. The costs of the individual schemes contained within the package are listed in [Table 2.3](#) and [Table 2.4](#), reflecting works to the west and east of the Newmarket Road Park and Ride respectively. All costs detailed include optimism bias.

Table 2.3: Cost Estimates of Schemes in Package B1 – West of Newmarket Road Park and Ride

Ref	Scheme	Capital Costs	Revenue Costs
BW.11	Offline (south) - between Coldham's Lane and P&R via Marshall's Airport (east of runway).	£34,210,000	
BG.02	Bus Gate on Mill Road (at bridge over rail line) [Note: This was introduced as part of Covid-19 measures during the production of the Business Case].	£0	
BS.02	New bus service between the station, Mill Road, Cambridge East and the Park and Ride.		£3,000,000
AT.04	Provide a new shared use ped/cycle bridge over the rail line and Coldham's Lane to link the existing 'Tins' cycle path with the airport site.	£2,760,000	
AT.06	Provide new cycle lanes along Coldham's Lane between the airport site and the Sainsbury's roundabout and enhance existing cycle provision along Brooks Road.	£2,040,000	
AT.07	Provide a new off-carriageway ped-cycle link from the airport site to connect into the Chisholm Trail via Barnwell Road and Coldham's Common.	£3,470,000	
		£42,480,000	£3,000,000

Table 2.4: Cost Estimates of Schemes in Package B1 – East of Newmarket Road Park and Ride

Ref	Scheme	Capital Costs	Revenue Costs
BW.04	Online - between Park and Ride and A14.	£7,035,000	
		£7,035,000	£0

2.4 Long Term Rail Option

2.4.1 It is difficult to estimate the cost of long-term investment in the Newmarket to Cambridge rail corridor at this stage. The double tracking of the line is essential to provide the capacity for an increase in services to match anticipated future demand but the design requirements of the line are likely to be dependent upon the more strategic requirements for East-West Rail.

2.4.2 Likewise, the design requirements of new stations at Cambridge East and Six Mile Bottom will be subject to as yet unknown levels of demand which could be generated by developments within the corridor.

3.0 Sources of Funding

This section provides a summary of the potential funding sources through which the Cambridge Eastern Access project will be financed and the potential profile of spend in future years.

3.1 Overview

- 3.1.1 Whilst the Cambridge Eastern Access project is to be taken forward by the Greater Cambridge Partnership, a variety of funding sources are available through which to finance its delivery, from both the public and private sectors.
- 3.1.2 In the long term it is envisaged that the improvements will have been funded almost entirely from the private sector through developer contributions, but in the short term, public finances will be required to front-load the funding of the infrastructure which will facilitate the housing and employment growth which is anticipated to follow.

3.2 Public Sector Funding

- 3.2.1 There are several sources of public sector funding which can be utilised to pump-prime the Eastern Access project, stimulating growth in the east of the city.

City Deal

- 3.2.2 The City Deal Grant is a funding framework for Central Government and local partners to agree investment programmes, centred on the promotion of local economic growth and development. City Deal funding is being released by Central Government in tranches.
- 3.2.3 The first tranche of funding for the Greater Cambridge City Deal is worth £100 million (£20 million per year) between 2015/16 and 2019/20, with a further £400m to be made available over the subsequent 10-15 years². Of this, a further £200m will be approved subject to gateway review and released from April 2020 onwards, and a final £200m will be released from April 2025 onwards.
- 3.2.4 Greater Cambridge has developed an assurance framework which establishes the responsibilities, processes and principles that will underpin delivery of the City Deal transport schemes. By adopting this framework, Greater Cambridge will ensure that schemes that offer maximum benefits and value for money are prioritised for investment. The Greater Cambridge authorities will prioritise projects that will deliver against four key strategic objectives:
- To nurture the conditions necessary to enable the potential of Greater Cambridge to create and retain the international high-tech businesses of the future.
 - To better target investment to the needs of the Greater Cambridge economy by ensuring those decisions are informed by the needs of businesses and other key stakeholders such as the universities.
 - To markedly improve connectivity and networks between clusters and labour markets so that the right conditions are in place to drive further growth.
 - To attract and retain more skilled people by investing in transport and housing whilst maintaining a good quality of life, in turn allowing a long-term increase in jobs emerging from the internationally competitive clusters and more university spin-outs.
- 3.2.5 The selected schemes will be assessed to ensure they deliver value for money (where the economic benefits of the scheme exceed the costs of investment and maintenance), contribute to City Deal, Local Plan and Local Enterprise Partnership objectives and can be delivered on time and to budget. Greater Cambridge will use the Department for Transport's Early Assessment and Sifting Tool methodology to support the prioritisation of schemes.

² <https://www.gov.uk/government/publications/city-deals-greater-cambridge>

Housing Infrastructure Fund

- 3.2.6 The Housing Infrastructure Fund (HIF) was set up in 2017 to help facilitate the delivery of new housing across the country³. It targets investment in new infrastructure to ensure that new developments are viable and so that they can come forward sooner than may otherwise have been the case. It also provides an opportunity to 'forward fund' infrastructure in the knowledge that it can be extremely difficult for local authorities to take a strategic approach and plan for infrastructure provision.
- 3.2.7 Some £4billion has been earmarked through the fund to date and will be spent between 2018/19 and 2023/24. Of this Cambridge will benefit from £193m to help unlock the Northern Fringe East site through the relocation of the water recycling centre. As the water recycling centre is proposed to be located in the vicinity of Fen Ditton, improvements to Quy Interchange and the adjacent section of Newmarket Road may be funded in part through associated S106 contributions. There is also scope to consider whether further funding might be made available by Central Government in relation to access arrangements for the Marshall's site.

East-West Rail

- 3.2.8 Discussions have been held with both the East-West Rail Company and East-West Rail Consortium regarding the scope to secure investment in line improvements to the east of Cambridge (i.e. the eastern section of the nationally important rail corridor). Whilst the focus of East-West Rail to date has very much been on the western and central sections of the line, the Cambridge to Newmarket section of rail corridor forms part of their wider aspiration to provide a high quality link between Oxford in the west and Norwich, Ipswich and the Haven ports in the east.
- 3.2.9 It is envisaged that improvements to the existing Cambridge to Newmarket line would need to be incorporated into any wider package of measures be identified as part of the East-West Rail work and costs covered by the associated funding.

Local Transport Plan

- 3.2.10 The Cambridgeshire and Peterborough Local Transport Plan funds a programme of annual improvements to the local transport network through the associated Integrated Transport Budget, awarded to the authorities every five years, with funding released annually⁴. Whilst relatively modest in size, it offers an opportunity to fund smaller scale improvements, or marginal gains, which cumulatively can have significant impacts on travel choice and travel patterns. Some cycle improvements may be made through such sources.

New Stations Fund

- 3.2.11 Funding has been provided by Central Government for the provision of new stations across the county as part of a New Stations Fund. Three rounds of investment, dating back to 2013, have seen five stations opened to date, and a further five under construction. The deadline for the third round of applications was in June 2020 with a total pot of £20m made available to successful schemes⁵. Any further round of funding could therefore provide an opportunity through which to fund the delivery of the new stations identified in the options presented in this Business Case.

3.3 Private Sector Funding

- 3.3.1 To help meet the funding requirements for the Cambridge Eastern Access project, and to address the impacts and transport requirements of future development within the Newmarket Road corridor, the GCP will maximise opportunities to recover appropriate and proportionate scheme costs from local developer contributions. In addition, discussions will be held with transport operators and providers to supplement public sector investment in network enhancements.

³ <https://www.gov.uk/government/publications/housing-infrastructure-fund>

⁴ <https://www.cambridgeshire.gov.uk/residents/travel-roads-and-parking/transport-plans-and-policies/local-transport-plan>

⁵ <https://www.networkrail.co.uk/communities/passengers/station-improvements/new-stations-fund/>

Developers

- 3.3.2 Through a combination of sites with existing outline planning permission, those set to come forward through the emerging Joint Local Plan and windfall sites in the coming years, it is anticipated that housing and economic development in and around the east of the city could provide a major source of funding through which to cover the costs of investment in the Eastern Access scheme.
- 3.3.3 The Government White Paper on 'Planning for the Future' details changes to the planning system and a proposed move away from the use of developer contributions secured through Section 106 Agreements⁶. In its place a new infrastructure levy would be created which would theoretically provide more assurances to developers.
- 3.3.4 Notwithstanding the format and formula to be adopted in the future, sites which come forward through the Local Plan will be expected to fund the mitigation the Cambridge Eastern Access project will help provide. This applied particularly to the development of the Marshall's site, and Marshall's have already indicated the need for a dedicated public transport scheme and associated cycle facilities as a part of their development.

Transport Operators

- 3.3.5 It is in the interests of transport operators within Cambridge that they contribute towards network improvements in order to protect and enhance the profitability of their own operations. Key players in this regard, and the areas within which funding could be secured are summarised in [Table 3.1](#).

Table 3.1: Transport Operators and Areas of Potential Funding

Operator	Areas of Potential Funding
Bus Operators	<ul style="list-style-type: none"> • Bus fleet improvements, including zero carbon engines. • Electronic information provision, including the promotion of mobile apps.
Train Operators	<ul style="list-style-type: none"> • Train rolling stock upgrade. • Station improvements (in collaboration with Network Rail), including car parking and access.

- 3.3.6 Beyond collaborating with operators to deliver comprehensive improvements to all aspects of a particular corridor, there is scope to consider bus franchising across Cambridge under the Bus Services Act 2017⁷.
- 3.3.7 This could see the local authorities stipulate the level of service requirements across the city, and provide network wide improvements to ticketing, information provision, through a competitive tendering process, thereby securing additional investment and the best value for money for local residents.

3.4 Funding Profile

- 3.4.1 The Cambridge Eastern Access project is anticipated to be delivered in two phases to reflect the short term need to address capacity issues on Newmarket Road, and the medium to longer term requirements to open up opportunities for housing and economic development in the east of the city. This is envisaged to see a requirement for a funding profile as illustrated in [Table 3.2](#).
- 3.4.2 Whilst this profile is purely indicative, it helps to provide benchmarks as to when funding will be required by the GCP.
- 3.4.3 The funding profile for Phase B of the Cambridge Eastern Access scheme is heavily rear ended due to the expected capital costs associated with the rail improvements that are anticipated to be brought forward following the improvements set out for bus, cycle and pedestrian infrastructure within the scheme.

⁶ <https://www.gov.uk/government/publications/planning-for-the-future>

⁷ <https://www.gov.uk/government/publications/bus-services-act-2017-bus-franchising-creation>

Table 3.2: Indicative Capital Funding Profile

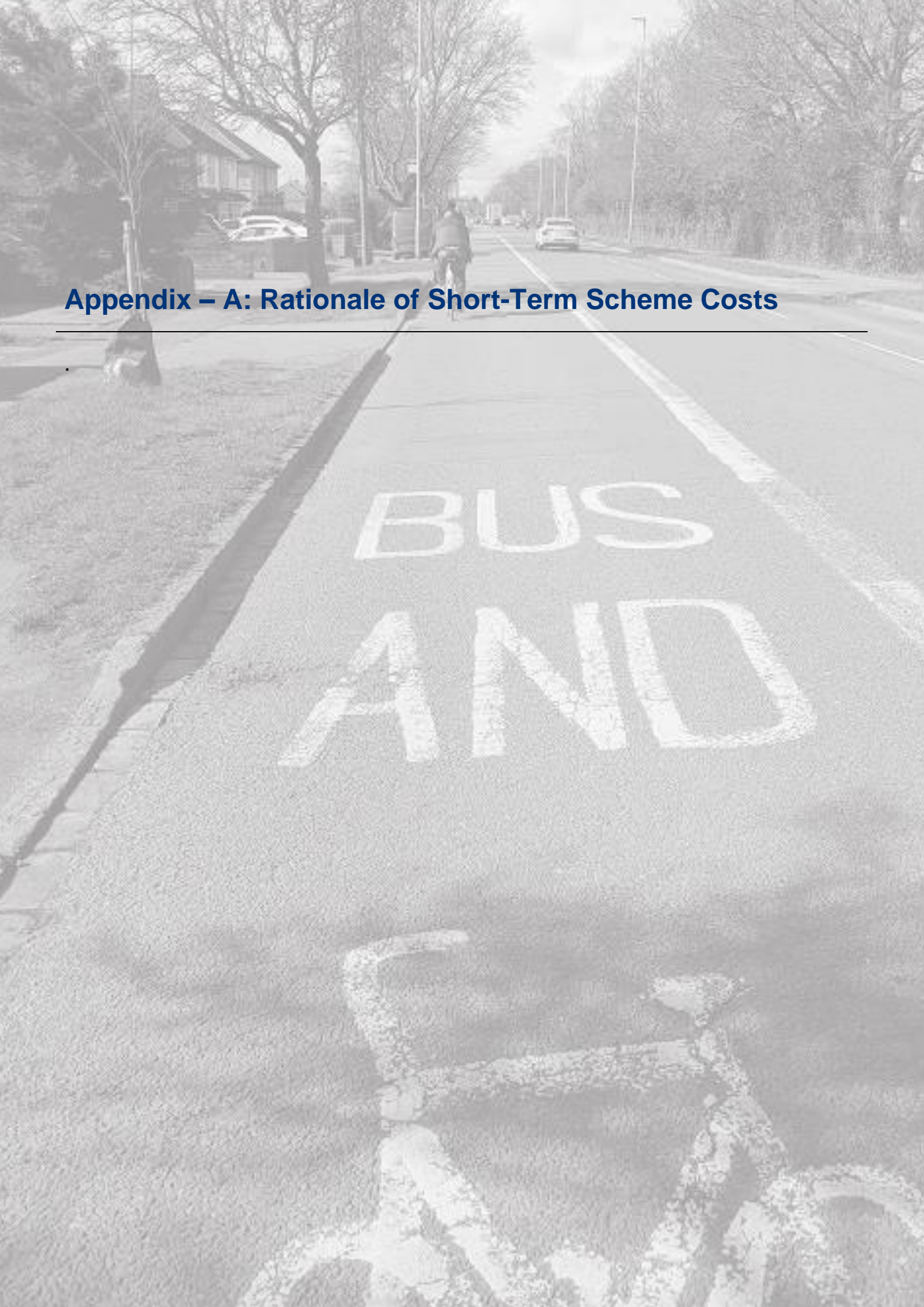
Year	Package					
	A2 – Hybrid Package			B1 – High Quality Public Transport Route via Coldham’s Lane		
	Actual	Percentage	Notes	Actual	Percentage	Notes
2021	£2,945,000	5%	Business Case Development.	£2,475,000	5%	Business Case Development.
2022	£2,945,000	5%	Detailed Design. Procurement.	n/a	n/a	n/a
2023	£23,560,000	40%	Construction.	n/a	n/a	n/a
2024	£20,560,000	40%	Construction.	n/a	n/a	n/a
2025	£5,890,000	10%	Hand Over.	£2,475,000	5%	Detailed Design. Procurement.
2026	n/a	n/a	n/a	£19,800,000	40%	Construction.
2027	n/a	n/a	n/a	£19,800,000	40%	Construction.
2028	n/a	n/a	n/a	£4,950,000	10%	Hand Over.
2029	n/a	n/a	n/a	n/a	n/a	n/a
2030	n/a	n/a	n/a	n/a	n/a	n/a
Total	£58,900,000			£49,500,000		

*Figures have been rounded

3.5 Summary

- 3.5.1 Through a combination of the City Deal agreement in place and the potential contribution from the extensive development opportunities available in the east of the city, it is envisaged that sufficient funding will be available to ensure the delivery of the Cambridge Eastern Access project.
- 3.5.2 The timing of the funding will be critical however, and public sector funding is likely to be required to front-load the design and construction of the scheme to open up development opportunities, which once active, can in turn, reimburse the public pocket through developer contributions.

Appendix – A: Rationale of Short-Term Scheme Costs



ITS.01 Reconfiguration of all signals to manage/control flow along Newmarket Road & wider network.													
Junctions													
Cost Estimates	unit cost	A		C		D		E		F		G	
Poles and sockets	£400	28	£11,200	28	£11,200			10	£4,000	10	£4,000	8	£3,200
Signal heads	£750	12	£9,000	12	£9,000			12	£9,000	12	£9,000	8	£6,000
Pedestrian heads	£450	16	£7,200	16	£7,200			8	£3,600				
Push button Unit	£600	16	£9,600	16	£9,600			8	£4,800				
Controller	£5,000	1	£5,000	1	£5,000			1	£5,000	1	£5,000	1	£5,000
OTU	£3,500	1	£3,500	1	£3,500			1	£3,500	1	£3,500	1	£3,500
SCOOT/Queue Loops	£100	7	£700	4	£400			4	£400	3	£300	3	£300
Kerb side detector	£700	8	£5,600	8	£5,600			8	£5,600				
On crossing detector	£400	8	£3,200	8	£3,200			8	£3,200				
Traffic MVD	£400	8	£3,200	4	£1,600			4	£1,600	3	£1,200	3	£1,200
Installation	£5,000	1	£5,000	1	£5,000	0.2	£1,000	1	£5,000	1	£5,000	1	£5,000
cables	£5,000	1	£5,000	1	£5,000			0.8	£4,000	0.8	£4,000	1	£5,000
large chambers	£500	16	£8,000	16	£8,000	1	£500	8	£4,000	10	£5,000	10	£5,000
draw pits	£400	20	£8,000	20	£8,000	10	£4,000	10	£4,000	8	£3,200	8	£3,200
carriageway ducts	£150	120	£18,000	80	£12,000			80	£12,000	60	£9,000	50	£7,500
Footway Ducts	£50	450	£22,500	120	£6,000	530	£26,500	60	£3,000	120	£6,000	120	£6,000
tactile paving	£50	55	£2,750	55	£2,750			26	£1,300				
power supply	£750	1	£750	1	£750			1	£750	1	£750	1	£750
comms	£1,500	1	£1,500	1	£1,500			1	£1,500	1	£1,500	1	£1,500
CCTV	£30,000	1	£30,000	1	£30,000					1	£30,000		
Bus priority	£2,000	1	£2,000	1	£2,000	1	£2,000	1	£2,000	1	£2,000	1	£2,000
sub-total			£161,700		£137,300		£32,000		£78,250		£89,450		£55,150
Project Management 15%			£24,255.00		£20,595.00		£4,800.00		£11,737.50		£13,417.50		£8,272.50
Design 15%			£24,255.00		£20,595.00		£4,800.00		£11,737.50		£13,417.50		£8,272.50
sub-total			£210,210.00		£178,490.00		£41,600.00		£101,725.00		£116,285.00		£71,695.00
Contingency		15%	£31,531.50		£26,773.50		£6,240.00		£15,258.75		£17,442.75		£10,754.25
Total			£241,741.50		£205,263.50		£47,840.00		£116,983.75		£133,727.75		£82,449.25
Estimated Budget Cost			£240,000		£205,000		£50,000		£115,000		£133,000		£85,000
Notes													
1 Estimates do not include for any civils work or traffic management except for ducting													
2 Quantities are just estimates from existing layout as there is no design -quantities should not be provided to the client at this stage													
3 The estimate for junction D only includes for the queue detectors as it is an existing junction													
4 Communication assumes a fibre connection for SCOOT operation													
5 Bus Priority assumed from bus GPS and server to server													
6 Three CCTV cameras allowed for to monitor traffic assumes fibre connection													
7 Junction A shows on Google Maps as already signalled, but estimates includes for full set of equipment													
£828,000													
TOTAL													
£850,000													
Notes:													
1. Utility costs are unknown and have therefore been excluded.													
2. No 'third-party' land costs have been assumed.													

JC.02 | Reconfiguration of Elizabeth Way Roundabout, including the removal of Subway (lower capacity).

	TOTAL	COMMENT
SITE CLEARANCE	£ 31,124.88	Abandoned drain items not yet included.
HEDGES	£ -	N/A
SAFETY FENCE, BARRIERS & PEDESTRIAN GUARD RAIL	£ 625.20	N/A
DRAINAGE & SERVICE DUCT	£ 280,241.08	Not known, this has been estimated
EARTHWORKS	£ 268,078.80	Excavation of footways and carriageway including planing out
SUB BASE & ROAD BASE	£ 411,032.00	
FLEXIBLE SURFACING	£ 207,164.00	
CONCRETE CARRIAGEWAY	£ 300.00	N/A
KERBS, FOOTWAYS AND PAVED AREAS	£ 52,550.25	Kerb types unknown, picked K1 for all kerbs.
TRAFFIC SIGNS & ROAD MARKINGS	£ 14,383.13	Alternative rates used for some items.
STRUCTURAL CONCRETE	£ -	N/A
PROTECTION OF STEELWORK	£ -	N/A
WATERPROOFING FOR STRUCTURES	£ -	N/A
BRIDGE DECK EXPANSION JOINTS TO COMPLY WITH SHW SERIES 2300	£ -	N/A
PROVISIONAL SUMS & PRIME COSTS	£ -	N/A
COLUMNS	£ 3,888.90	
LANTERNS	£ -	
LAMPS	£ -	Included in 'LANTERNS' above
CABLING	£ -	
TOTAL	£ 1,269,388.24	
Traffic management	£ 160,000	
prelims	£ 320,000	
Total	£ 1,749,388	
Optimism Bias +44%	£ 769,780	
Total	£ 2,519,119	
ROUNDED		£2,500,000

JC.03 | Reconfiguration of the Newmarket Road & Coldhams Lane junction.

ITEM DESCRIPTION	RATE	ESTIMATE	Rationale for Estimate:
Work costs		£50,000	Pedestrian improvements orientated scheme, introduced dedicated formal crossings.
Accom Works	3%	£1,500	
Landscaping	3%	£1,500	Numbe of signalised crossings required: 2 (one east-west across Coldhams Lane arm of the junction, one north-south across Newmarket Road)
Contract Works Cost		£53,000	
Contingencies	10%	£5,300	Cost per crossing: £25,000
Works sub total		£58,300	
Supervision	10%	£5,830	
Testing	0.5%	£292	
Topographical Survey	0.5%	£292	
Soil & drainage Survey	2.50%	£1,458	
Works Total		£66,171	
Public Inquiry	1.50%	£993	
Land/SRO Plans	1.00%	£662	
Design Fees	9%	£5,955	
Part 1 claims	Estimate	£0	
Fees Total		£7,610	
Land Purchase Cost & Fees	Estimate	£0	
Land Total		£0	
Utilities (Electricity)	Estimate	£0	
Utilities (Gas)	Estimate	£0	
Utilities (Water)	Estimate	£0	
Utilities (Telecomms)	Estimate	£0	
Utilities (Other)	Estimate	£0	
Utilities Total		£0	
Sub-Total		£73,780	
Optimism Bias	44%	£32,463	
		£106,243	
TOTAL	Rounded	£100,000	
Notes:			
1. Utility costs are unknown and have therefore been excluded.			
2. No 'third-party' land costs have been assumed.			

JC.05 | Signalisation and reconfiguration of the Newmarket Road & Barnwell Road junction (lower capacity).

	TOTAL	COMMENT
SITE CLEARANCE	£ 17,388.06	Abandoned drain items not yet included.
HEDGES	£ -	N/A
SAFETY FENCE, BARRIERS & PEDESTRIAN GUARD RAIL	£ 156.30	N/A
DRAINAGE & SERVICE DUCT	£ 595,052.10	Not known, this has been estimated
EARTHWORKS	£ 198,097.52	Excavation of footways and carriageway including planing out
SUB BASE & ROAD BASE	£ 207,136.16	
FLEXIBLE SURFACING	£ 345,561.92	
CONCRETE CARRIAGEWAY	£ 300.00	N/A
KERBS, FOOTWAYS AND PAVED AREAS	£ 89,400.00	Kerb types unknown, picked K1 for all kerbs.
TRAFFIC SIGNS & ROAD MARKINGS	£ 16,984.54	Alternative rates used for some items.
STRUCTURAL CONCRETE	£ -	N/A
PROTECTION OF STEELWORK	£ -	N/A
WATERPROOFING FOR STRUCTURES	£ -	N/A
BRIDGE DECK EXPANSION JOINTS TO COMPLY WITH SHW SERIES 2300	£ -	N/A
PROVISIONAL SUMS & PRIME COSTS	£ -	N/A
COLUMNS	£ 2,592.60	
LANTERNS	£ -	
LAMPS	£ -	Included in 'LANTERNS' above
CABLING	£ -	
TOTAL	£ 1,472,669.20	take total amount, / by 20,000.00 which is the estimated construction
Traffic management	£ 182,500	based on 2,500.00 a week
prelims	£ 365,000	based on £5,000.00 a week
Total	£ 2,020,169	
Optimism Bias +44%	£ 888,874	
Total	£ 2,909,043	
TOTAL		£2,900,000

JC.07 Reconfiguration of the Newmarket Road & Ditton Lane junction (lower capacity).		
ITEM DESCRIPTION	RATE	ESTIMATE
Work costs		£25,000
Accom Works	3%	£750
Landscaping	3%	£750
Contract Works Cost		£26,500
Contingencies	10%	£2,650
Works sub total		£29,150
Supervision	10%	£2,915
Testing	0.5%	£146
Topographical Survey	0.5%	£146
Soil & drainage Survey	2.50%	£729
Works Total		£33,085
Public Inquiry	1.50%	£496
Land/SRO Plans	1.00%	£331
Design Fees	9%	£2,978
Part 1 claims	Estimate	£0
Fees Total		£3,805
Land Purchase Cost & Fees	Estimate	£0
Land Total		£0
Utilities (Electricity)	Estimate	£0
Utilities (Gas)	Estimate	£0
Utilities (Water)	Estimate	£0
Utilities (Telecomms)	Estimate	£0
Utilities (Other)	Estimate	£0
Utilities Total		£0
Sub-Total		£36,890
Optimism Bias	44%	£16,232
		£53,122
TOTAL	Rounded	£50,000
Notes:		
1. Utility costs are unknown and have therefore been excluded.		
2. No 'third-party' land costs have been assumed.		

Rationale for Estimate:

Pedestrian improvements orientated scheme, introduced dedicated formal crossing.

Numbe of signalised crossings required: 1 (one east-west across Ditton Lane)

Cost per crossing: £25,000

BS.01 | Increase the frequency of existing P&R services.

ITEM DESCRIPTION	RATE	ESTIMATE	Rationale for Estimate:
Work costs		£0	Richard Burley - email of 17 March 2021.
Accom Works	3%	£0	
Landscaping	3%	£0	"Based on anticipated journey times they could certainly run the service with 5 vehicles for a 10 minute service.. This gives time to wait at the Newmarket Road site, pick up/drop off in the city centre and some recovery time.
Contract Works Cost		£0	
Contingencies	10%	£0	
Works sub total		£0	In reality, I suspect that they would run the service with 4 vehicles, perhaps adding a fifth in the afternoon. The additional journey time to the new P&R site is unlikely to make a difference to this vehicle requirement. It will, however, marginally increase mileage costs."
Supervision	10%	£0	
Testing	0.5%	£0	
Topographical Survey	0.5%	£0	
Soil & drainage Survey	2.50%	£0	
Works Total		£0	
Public Inquiry	1.50%	£0	
Land/SRO Plans	1.00%	£0	
Design Fees	9%	£0	
Part 1 claims	Estimate	£0	
Fees Total		£0	Therefore to double service frequency, an additional four buses would be required:
Land Purchase Cost & Fees	Estimate	£0	
Land Total		£0	Cost per bus per annum = £150,000 Total cost per annum = £600,000 Costs then capitalised for a 5 year period. Revenue generation to offset these costs not included.
Utilities (Electricity)	Estimate	£0	
Utilities (Gas)	Estimate	£0	
Utilities (Water)	Estimate	£0	
Utilities (Telecomms)	Estimate	£0	
Utilities (Other)	Estimate	£0	
Utilities Total		£0	Equates to total cost of £3m (which would be met by operator if operations remain commercially viable).
Sub-Total		£0	
Optimism Bias	44%	£0	
TOTAL		£3,000,000	

Notes:

1. Utility costs are unknown and have therefore been excluded.
2. No 'third-party' land costs have been assumed.

BS.03 | Provide new service from P&R to Addenbrookes hospital and the Biomedical Campus.

ITEM DESCRIPTION	RATE	ESTIMATE	Rationale for Estimate:
Work costs			Journey time (round trip) = 45 minutes Service frequency = 15 minutes No. of buses required to operate service = 4 Cost per bus per annum = £150,000 Total cost per annum = £600,000 Costs then capitalised for a 5 year period. Revenue generation to offset these costs not included.
Accom Works	n/a	£0	
Landscaping	n/a	£0	
Contract Works Cost		£0	
Contingencies	n/a	£0	
Works sub total		£0	
Supervision	n/a	£0	
Testing	n/a	£0	
Topographical Survey	n/a	£0	
Soil & drainage Survey	n/a	£0	
Works Total		£0	
Public Inquiry	n/a	£0	
Land/SRO Plans	n/a	£0	
Design Fees	n/a	£0	
Part 1 claims	n/a	£0	
Fees Total		£0	
Land Purchase Cost & Fees	n/a	£0	
Land Total		£0	
Utilities (Electricity)	n/a	£0	
Utilities (Gas)	n/a	£0	
Utilities (Water)	n/a	£0	
Utilities (Telecomms)	n/a	£0	
Utilities (Other)	n/a	£0	
Utilities Total		£0	
Sub-Total		£0	
Optimism Bias	44%	£0	
TOTAL		£3,000,000	
Notes:			
1. Utility costs are unknown and have therefore been excluded.			
2. No 'third-party' land costs have been assumed.			

BL.02 | Remove inbound bus lanes.

ITEM DESCRIPTION	RATE	ESTIMATE	Rationale for Estimate:
Work costs		£100,000	Costs to cover: - Removal of signage and replacement with new - Removal of lining and replacement with new - Traffic management during works - Assumed resurfacing not required.
Accom Works	3%	£3,000	
Landscaping	n/a	£0	
Contract Works Cost		£103,000	
Contingencies	10%	£10,300	
Works sub total		£113,300	
Supervision	10%	£11,330	
Testing	0.5%	£567	
Topographical Survey	n/a	£0	
Soil & drainage Survey	n/a	£0	
Works Total		£125,197	
Public Inquiry	n/a	£0	
Land/SRO Plans	1.00%	£1,252	
Design Fees	9%	£11,268	
Part 1 claims	Estimate	£0	
Fees Total		£12,520	
Land Purchase Cost & Fees	Estimate	£0	
Land Total		£0	
Utilities (Electricity)	Estimate	£0	
Utilities (Gas)	Estimate	£0	
Utilities (Water)	Estimate	£0	
Utilities (Telecomms)	Estimate	£0	
Utilities (Other)	Estimate	£0	
Utilities Total		£0	
Sub-Total		£137,716	
Optimism Bias	44%	£60,595	
		£198,311	
TOTAL	Rounded	£200,000	
Notes:			
1. Utility costs are unknown and have therefore been excluded.			
2. No 'third-party' land costs have been assumed.			

AT.01 | Provision of continuous segregated inbound cycle lane along Newmarket Road.

ITEM DESCRIPTION	RATE	ESTIMATE
Work costs		£2,880,000
Accom Works	3%	£86,400
Landscaping	3%	£86,400
Contract Works Cost		£3,052,800
Contingencies	10%	£305,280
Works sub total		£3,358,080
Supervision	10%	£335,808
Testing	0.5%	£16,790
Topographical Survey	0.5%	£16,790
Soil & drainage Survey	2.50%	£83,952
Works Total		£3,811,421
Public Inquiry	1.50%	£57,171
Land/SRO Plans	1.00%	£38,114
Design Fees	9%	£343,028
Part 1 claims	Estimate	£0
Fees Total		£438,313
Land Purchase Cost & Fees	Estimate	£0
Land Total		£0
Utilities (Electricity)	Estimate	£0
Utilities (Gas)	Estimate	£0
Utilities (Water)	Estimate	£0
Utilities (Telecomms)	Estimate	£0
Utilities (Other)	Estimate	£0
Utilities Total		£0
Sub-Total		£4,249,734
Optimism Bias	44%	£1,869,883
		£6,119,617
TOTAL	Rounded	£6,100,000

Rationale for Estimate:

Estimated length of new cycle lane: 3km (Elizabeth Way to Marleigh development site) / Cost per km: £0.96m (based upon Huntingdon Road scheme costs) / Source: Typical Costs of Cycling Interventions - Interim analysis of Cycle City Ambition schemes; Report to the DfT, Jan 2017.

Notes:

1. Utility costs are unknown and have therefore been excluded.
2. No 'third-party' land costs have been assumed.

AT.02 | Provision of continuous segregated outbound cycle lane along Newmarket Road.

ITEM DESCRIPTION	RATE	ESTIMATE
Work costs		£2,880,000
Accom Works	3%	£86,400
Landscaping	3%	£86,400
Contract Works Cost		£3,052,800
Contingencies	10%	£305,280
Works sub total		£3,358,080
Supervision	10%	£335,808
Testing	0.5%	£16,790
Topographical Survey	0.5%	£16,790
Soil & drainage Survey	2.50%	£83,952
Works Total		£3,811,421
Public Inquiry	1.50%	£57,171
Land/SRO Plans	1.00%	£38,114
Design Fees	9%	£343,028
Part 1 claims	Estimate	£0
Fees Total		£438,313
Land Purchase Cost & Fees	Estimate	£0
Land Total		£0
Utilities (Electricity)	Estimate	£0
Utilities (Gas)	Estimate	£0
Utilities (Water)	Estimate	£0
Utilities (Telecomms)	Estimate	£0
Utilities (Other)	Estimate	£0
Utilities Total		£0
Sub-Total		£4,249,734
Optimism Bias	44%	£1,869,883
		£6,119,617
TOTAL	Rounded	£6,100,000

Rationale for Estimate:

Estimated length of new cycle lane: 3km (Elizabeth Way to Marleigh development site) / Cost per km: £0.96m (based upon Huntingdon Road scheme costs) / Source: Typical Costs of Cycling Interventions - Interim analysis of Cycle City Ambition schemes; Report to the DfT, Jan 2017.

Notes:

1. Utility costs are unknown and have therefore been excluded.
2. No 'third-party' land costs have been assumed.

AT.03 Promotion of Park and Cycle from the P&R site.		
ITEM DESCRIPTION	RATE	ESTIMATE
Work costs		
Accom Works	3%	£0
Landscaping	3%	£0
Contract Works Cost		£0
Contingencies	10%	£0
Works sub total		£0
Supervision	10%	£0
Testing	0.5%	£0
Topographical Survey	0.5%	£0
Soil & drainage Survey	2.50%	£0
Works Total		£0
Public Inquiry	1.50%	£0
Land/SRO Plans	1.00%	£0
Design Fees	9%	£0
Part 1 claims	Estimate	£0
Fees Total		£0
Land Purchase Cost & Fees	Estimate	£0
Land Total		£0
Utilities (Electricity)	Estimate	£0
Utilities (Gas)	Estimate	£0
Utilities (Water)	Estimate	£0
Utilities (Telecomms)	Estimate	£0
Utilities (Other)	Estimate	£0
Utilities Total		£0
Sub-Total		£0
Optimism Bias	44%	£0
TOTAL		£100,000
Notes:		
1. Utility costs are unknown and have therefore been excluded.		
2. No 'third-party' land costs have been assumed.		

Rationale for Estimate:

The extensiveness of a marketing campaign could be as extensive or as limited as desired and would include costs associated with: Signage, media campaign, social media, flyers, mail drop.

It is envisaged however that a fee of £100,000 could comprehensively market cycling opportunities along the corridor.

HW.01 Additional lane(s) on Newmarket Road to east of Airport Way junction.			
ITEM DESCRIPTION	RATE	ESTIMATE	Rationale for Estimate:
Work costs		£15,000,000	<p>The road widening itself is more difficult and further work should be undertaken concerning feasibility before progressing. The calculations represent length x width x depth in a raw form and makes no consideration for feasibility of any type or detailed design matters. It is based on a programme of 75weeks and assumes restricted working which is reflected in the preliminaries. Looking at the street view my eyes were taken to the topography which leads me to believe it will not be possible to simply haunch one side with much of the length showing raised embankments. For this reason I believe that a balanced increase in overall width would be necessary to achieve the ambition which may impact heavily on construction costs and elongate programme. Other major considerations would be any requirements for geotechnical build up given the difference in levels as well as boundary issues.</p> <p>We have given consideration to widening 1 bridge but no other structures such as culverts. Given the limited information I anticipate there will be other crossings which are impacted.</p> <p>In its worst case scenario I believe the starting point for the corridor widening of this length could be as high as £15m nearly double to what we have shown to date and so careful management of the early stages is of paramount importance.</p>
Accom Works	3%		
Landscaping	3%		
Contract Works Cost			
Contingencies	10%		
Works sub total			
Supervision	10%	£0	
Testing	0.5%	£0	
Topographical Survey	0.5%	£0	
Soil & drainage Survey	2.50%	£0	
Works Total		£0	
Public Inquiry	1.50%	£0	
Land/SRO Plans	1.00%	£0	
Design Fees	9%	£0	
Part 1 claims	Estimate	£0	
Fees Total		£0	
Land Purchase Cost & Fees	Estimate	£0	
Land Total		£0	
Utilities (Electricity)	Estimate	£0	
Utilities (Gas)	Estimate	£0	
Utilities (Water)	Estimate	£0	
Utilities (Telecomms)	Estimate	£0	
Utilities (Other)	Estimate	£0	
Utilities Total		£0	
Sub-Total		£0	
Optimism Bias	44%	£0	
TOTAL		£15,000,000	
Notes:			
1. Utility costs are unknown and have therefore been excluded.			
2. No 'third-party' land costs have been assumed.			

JC.09 | Signalisation of the junction of Newmarket Road and Airport Way.

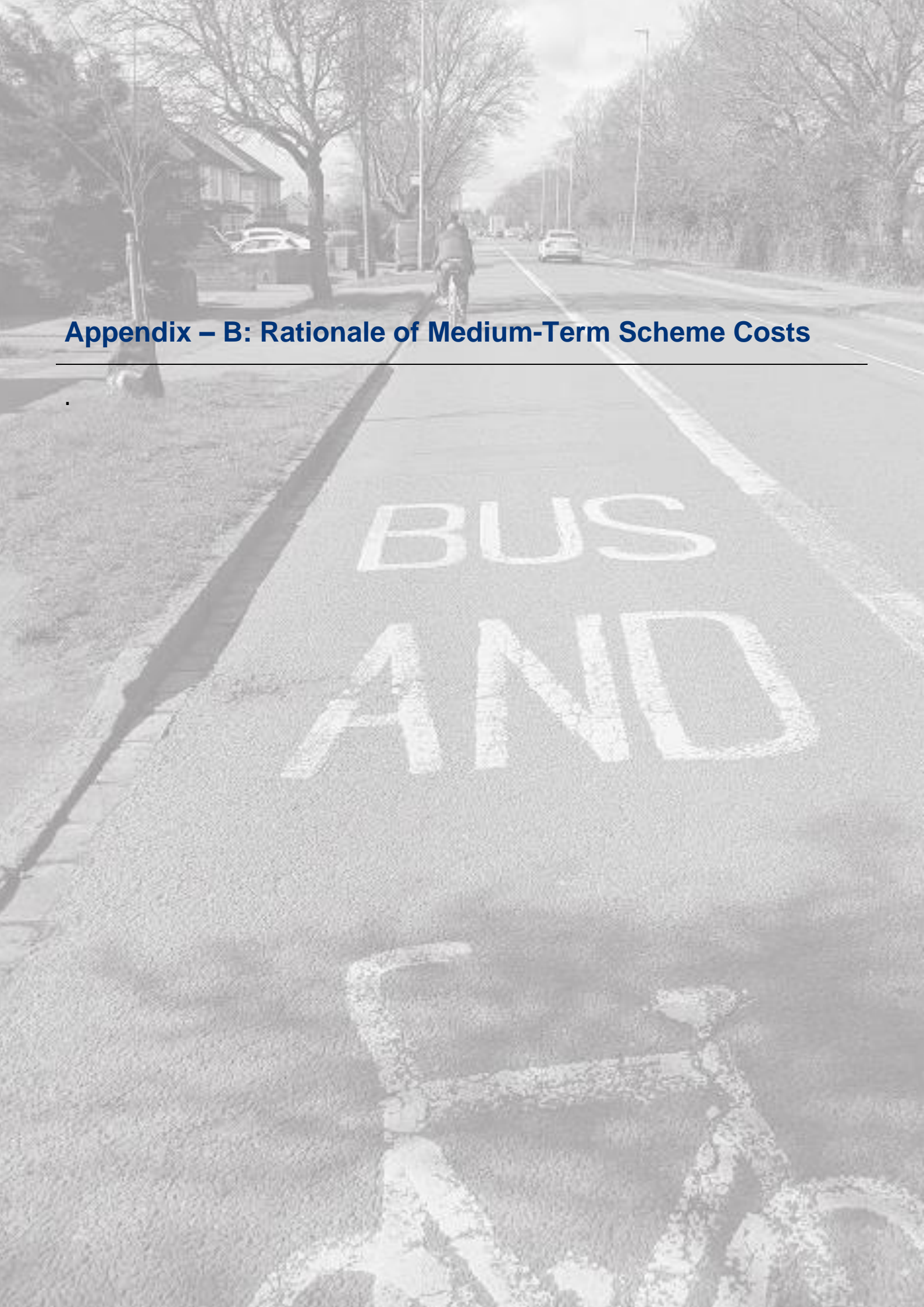
ITEM DESCRIPTION	TOTAL	COMMENT
SITE CLEARANCE	£ 21,224.17	Abandoned drain items not yet included.
HEDGES	£ -	N/A
SAFETY FENCE, BARRIERS & PEDESTRIAN GUARD RAIL	£ 1,042.00	N/A
DRAINAGE & SERVICE DUCT	£ 299,695.55	Not known, this has been estimated
EARTHWORKS	£ 156,134.40	Excavation of footways and carriageway including planing out
SUB BASE & ROAD BASE	£ 135,348.40	
FLEXIBLE SURFACING	£ 315,384.00	
CONCRETE CARRIAGEWAY	£ 300.00	N/A
KERBS, FOOTWAYS AND PAVED AREAS	£ 107,686.50	Kerb types unknown, picked K1 for all kerbs.
TRAFFIC SIGNS & ROAD MARKINGS	£ 19,203.80	Alternative rates used for some items.
STRUCTURAL CONCRETE	£ -	N/A
PROTECTION OF STEELWORK	£ -	N/A
WATERPROOFING FOR STRUCTURES	£ -	N/A
BRIDGE DECK EXPANSION JOINTS TO COMPLY WITH SHW SERIES 2300	£ -	N/A
PROVISIONAL SUMS & PRIME COSTS	£ -	N/A
COLUMNS	£ 7,561.75	
LANTERNS	£ -	
LAMPS	£ -	Included in 'LANTERNS' above
CABLING	£ -	
TOTAL	£ 1,063,580.57	
Traffic management	£ 132,500	
prelims	£ 265,000	
Total	£ 1,461,081	
Optimism Bias +44%	£ 642,875	
Total	£ 2,103,956	
no membrane included		
Rounded	£2,100,000	

JC.10 | Signalisation and Reconfiguration of Quay Interchange

ITEM DESCRIPTION	TOTAL	COMMENT
SITE CLEARANCE	£ 18,347.21	Abandoned drain items not yet included.
HEDGES	£ -	N/A
SAFETY FENCE, BARRIERS & PEDESTRIAN GUARD RAIL	£ 208.40	N/A
DRAINAGE & SERVICE DUCT	£ 800,569.12	Not known, this has been estimated
EARTHWORKS	£ 143,692.44	Excavation of footways and carriageway including planing out
SUB BASE & ROAD BASE	£ 81,209.04	
FLEXIBLE SURFACING	£ 728,722.56	
CONCRETE CARRIAGEWAY	£ 600.00	N/A
KERBS, FOOTWAYS AND PAVED AREAS	£ 89,400.00	Kerb types unknown, picked K1 for all kerbs.
TRAFFIC SIGNS & ROAD MARKINGS	£ 16,181.37	Alternative rates used for some items.
STRUCTURAL CONCRETE	£ -	N/A
PROTECTION OF STEELWORK	£ -	N/A
WATERPROOFING FOR STRUCTURES	£ -	N/A
BRIDGE DECK EXPANSION JOINTS TO COMPLY WITH SHW SERIES 2300	£ -	N/A
PROVISIONAL SUMS & PRIME COSTS	£ -	N/A
COLUMNS	£ -	
LANTERNS	£ -	
LAMPS	£ -	Included in 'LANTERNS' above
CABLING	£ -	
TOTAL	£ 1,878,930.14	
Traffic management	£ 235,000	
prelims	£ 470,000	
Total	£ 2,583,930	
Optimism Bias +44%	£ 1,136,929	
Total	£ 3,720,859	
Rounded		£3,700,000

PR.02 Relocation of Park and Ride to south of Newmarket Road and east of Airport Way.		
	TOTAL	COMMENT
SITE CLEARANCE	£ 18,996.25	Abandoned drain items not yet included.
HEDGES	£ -	N/A
SAFETY FENCE, BARRIERS & PEDESTRIAN GUARD RAIL	£ 1,598.50	N/A
DRAINAGE & SERVICE DUCT	£ 1,040,235.60	Not known, this has been estimated
EARTHWORKS	£ 440,601.76	Excavation of footways and carriageway including planing out
SUB BASE & ROAD BASE	£ 264,660.05	
FLEXIBLE SURFACING	£ 655,898.80	
CONCRETE CARRIAGEWAY	£ 2,250.00	N/A
KERBS, FOOTWAYS AND PAVED AREAS	£ 103,806.50	Kerb types unknown, picked K1 for all kerbs.
TRAFFIC SIGNS & ROAD MARKINGS	£ 6,619.74	Alternative rates used for some items.
STRUCTURAL CONCRETE	£ -	N/A
PROTECTION OF STEELWORK	£ -	N/A
WATERPROOFING FOR STRUCTURES	£ -	N/A
BRIDGE DECK EXPANSION JOINTS TO COMPLY WITH SHW SERIES 2300	£ -	N/A
PROVISIONAL SUMS & PRIME COSTS	£ -	N/A
COLUMNS	£ -	
LANTERNS	£ -	
LAMPS	£ -	Included in 'LANTERNS' above
CABLING	£ 116,870.00	
TOTAL	£ 2,651,537.20	
Proposed modification of existing bridge 7m increase in width by 6m span	£ 370,000	
Professional Fees and Geotechnical site investigation	£ 150,000	
TOTAL	£ 3,171,537	
Traffic management	£ 1,312,500	17,500.00 X 75 weeks
prelims	£ 1,500,000	20,000 per week
TOTAL	£ 5,984,037	
Optimism Bias +44%	£ 2,632,976	
TOTAL	£ 8,617,014	

Appendix – B: Rationale of Medium-Term Scheme Costs



BL.05 | New outbound bus lane between Elizabeth Way and the Leper Chapel.

ITEM DESCRIPTION	RATE	ESTIMATE	Rationale for Estimate:
Work costs		£1,700,000	Estimated length of new bus lane = 1.5km Estimated width of bus lane = 3.75m Cost per square metre = £300 Cost based upon all works being undertaken within the existing highway boundary / kerb lines.
Accom Works	3%	£51,000	
Landscaping	3%	£51,000	
Contract Works Cost		£1,802,000	
Contingencies	10%	£180,200	
Works sub total		£1,982,200	
Supervision	10%	£198,220	
Testing	0.5%	£9,911	
Topographical Survey	0.5%	£9,911	
Soil & drainage Survey	2.50%	£49,555	
Works Total		£2,249,797	
Public Inquiry	1.50%	£33,747	
Land/SRO Plans	1.00%	£22,498	
Design Fees	9%	£202,482	
Part 1 claims	Estimate	£0	
Fees Total		£258,727	
Land Purchase Cost & Fees	Estimate	£0	
Land Total		£0	
Utilities (Electricity)	Estimate	£0	
Utilities (Gas)	Estimate	£0	
Utilities (Water)	Estimate	£0	
Utilities (Telecomms)	Estimate	£0	
Utilities (Other)	Estimate	£0	
Utilities Total		£0	
Sub-Total		£2,508,524	
Optimism Bias	44%	£1,103,750	
		£3,612,274	
TOTAL	Rounded	£3,600,000	
Notes:			
1. Utility costs are unknown and have therefore been excluded.			
2. No 'third-party' land costs have been assumed.			

BW.04 | Online - between Park and Ride and A14.

ITEM DESCRIPTION	RATE	ESTIMATE	Rationale for Estimate:
Work costs		£3,500,000	<p>Estimated length of busway = 0.5km Average cost per km of other busways (Cambridge/Luton) = £7m</p> <p>Based upon: Cambridge busway = 25km @ £181m = £7.2km per km Luton busway = 13.4km @ £91m = £6.8m per km</p>
Accom Works	3%	£105,000	
Landscaping	n/a	£0	
Contract Works Cost		£3,605,000	
Contingencies	10%	£360,500	
Works sub total		£3,965,500	
Supervision	10%	£396,550	
Testing	0.5%	£19,828	
Topographical Survey	n/a	£0	
Soil & drainage Survey	n/a	£0	
Works Total		£4,381,878	
Public Inquiry	1.50%	£65,728	
Land/SRO Plans	1.00%	£43,819	
Design Fees	9%	£394,369	
Part 1 claims	Estimate	£0	
Fees Total		£503,916	
Land Purchase Cost & Fees	Estimate	£0	
Land Total		£0	
Utilities (Electricity)	Estimate	£0	
Utilities (Gas)	Estimate	£0	
Utilities (Water)	Estimate	£0	
Utilities (Telecomms)	Estimate	£0	
Utilities (Other)	Estimate	£0	
Utilities Total		£0	
Sub-Total		£4,885,793	
Optimism Bias	44%	£2,149,749	
		£7,035,543	
TOTAL	Rounded	£7,000,000	
Notes:			
1. Utility costs are unknown and have therefore been excluded.			
2. No 'third-party' land costs have been assumed.			

BW.11 Offline (south) - between Coldhams Lane and P&R via Marshall's Airport (east of runway).		
ITEM DESCRIPTION	RATE	ESTIMATE
Work costs		£16,100,000
Accom Works	3%	£483,000
Landscaping	3%	£483,000
Contract Works Cost		£17,066,000
Contingencies	10%	£1,706,600
Works sub total		£18,772,600
Supervision	10%	£1,877,260
Testing	0.5%	£93,863
Topographical Survey	0.5%	£93,863
Soil & drainage Survey	2.50%	£469,315
Works Total		£21,306,901
Public Inquiry	1.50%	£319,604
Land/SRO Plans	1.00%	£213,069
Design Fees	9%	£1,917,621
Part 1 claims	Estimate	£0
Fees Total		£2,450,294
Land Purchase Cost & Fees	Estimate	£0
Land Total		£0
Utilities (Electricity)	Estimate	£0
Utilities (Gas)	Estimate	£0
Utilities (Water)	Estimate	£0
Utilities (Telecomms)	Estimate	£0
Utilities (Other)	Estimate	£0
Utilities Total		£0
Sub-Total		£23,757,195
Optimism Bias	44%	£10,453,166
		£34,210,360
TOTAL	Rounded	£34,200,000
Notes:		
1. Utility costs are unknown and have therefore been excluded.		
2. No 'third-party' land costs have been assumed.		

Rationale for Estimate:

Estimated length of busway = 2.3km
Average cost per km of other busways (Cambridge/Luton) = £7m

Based upon:
Cambridge busway = 25km @ £181m = £7.2km per km
Luton busway = 13.4km @ £91m = £6.8m per km

BS.02 New bus service between the station, Mill Road, Cambridge East and the Park and Ride.		
ITEM DESCRIPTION	RATE	ESTIMATE
Work costs		
Accom Works	n/a	£0
Landscaping	n/a	£0
Contract Works Cost		£0
Contingencies	n/a	£0
Works sub total		£0
Supervision	n/a	£0
Testing	n/a	£0
Topographical Survey	n/a	£0
Soil & drainage Survey	n/a	£0
Works Total		£0
Public Inquiry	n/a	£0
Land/SRO Plans	n/a	£0
Design Fees	n/a	£0
Part 1 claims	n/a	£0
Fees Total		£0
Land Purchase Cost & Fees	n/a	£0
Land Total		£0
Utilities (Electricity)	n/a	£0
Utilities (Gas)	n/a	£0
Utilities (Water)	n/a	£0
Utilities (Telecomms)	n/a	£0
Utilities (Other)	n/a	£0
Utilities Total		£0
Sub-Total		£0
Optimism Bias	44%	£0
TOTAL		£3,000,000
Notes:		
1. Utility costs are unknown and have therefore been excluded.		
2. No 'third-party' land costs have been assumed.		

Rationale for Estimate:

Journey time (round trip) = 45 minutes
 Service frequency = 15 minutes
 No. of buses required to operate service = 4
 Cost per bus per annum = £150,000
 Total cost per annum = £600,000
 Costs then capitalised for a 5 year period.
 Revenue generation to offset these costs not included.

BG.02 Bus Gate on Mill Road (at bridge over rail line).			
ITEM DESCRIPTION	RATE	ESTIMATE	Rationale for Estimate:
Work costs		£0	Bus Gate on Mill Road to be permanently implemented as part of the City Access strategy. Therefore, no costs incurred to the GCP to deliver this scheme.
Accom Works	3%	£0	
Landscaping	3%	£0	
Contract Works Cost		£0	
Contingencies	10%	£0	
Works sub total		£0	
Supervision	10%	£0	
Testing	0.5%	£0	
Topographical Survey	0.5%	£0	
Soil & drainage Survey	2.50%	£0	
Works Total		£0	
Public Inquiry	1.50%	£0	
Land/SRO Plans	1.00%	£0	
Design Fees	9%	£0	
Part 1 claims	Estimate	£0	
Fees Total		£0	
Land Purchase Cost & Fees	Estimate	£0	
Land Total		£0	
Utilities (Electricity)	Estimate	£0	
Utilities (Gas)	Estimate	£0	
Utilities (Water)	Estimate	£0	
Utilities (Telecomms)	Estimate	£0	
Utilities (Other)	Estimate	£0	
Utilities Total		£0	
Sub-Total		£0	
Optimism Bias	44%	£0	
TOTAL		£0	
Notes:			
1. Utility costs are unknown and have therefore been excluded.			
2. No 'third-party' land costs have been assumed.			

AT.04 | Provide a new shared use ped/cycle bridge over the rail line and Coldham's Lane to link the existing 'Tins' cycle path with the airport site.

ITEM DESCRIPTION	RATE	ESTIMATE	Rationale for Estimate:
Work costs		£0	<p>New cycle link costs based upon:</p> <p>Length of link = 0.3km Cost per km = £0.96m = £288,000</p> <p>The cost per km relates to that incurred associated with the implementation of the Huntingdon Road segregated cycle scheme in Cmabridge, as detailed within "Typical Costs of Cycling Interventions: Interim analysis of Cycle City Ambition schemes" produced by the DfT in 2017.</p> <p>Source: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/742451/typical-costings-for-ambitious-cycling-schemes.pdf</p> <p>Cycle bridge costs based upon:</p> <p>Cost of improved bridge likely to be reduced by retention of existing piers. However line closure during construction likely to be required. Cost of fully accessible bridge with ramps deemed to be around £1m by Rail Futures.</p> <p>Source: https://www.railfuture.org.uk/east/docs/Railfuture-East-Anglia-Railway-Costs-Analysis.pdf</p>
Accom Works	3%	£0	
Landscaping	3%	£0	
Contract Works Cost		£0	
Contingencies	10%	£0	
Works sub total		£0	
Supervision	10%	£0	
Testing	0.5%	£0	
Topographical Survey	0.5%	£0	
Soil & drainage Survey	2.50%	£0	
Works Total		£0	
Public Inquiry	1.50%	£0	
Land/SRO Plans	1.00%	£0	
Design Fees	9%	£0	
Part 1 claims	Estimate	£0	
Fees Total		£0	
Land Purchase Cost & Fees	Estimate	£0	
Land Total		£0	
Utilities (Electricity)	Estimate	£0	
Utilities (Gas)	Estimate	£0	
Utilities (Water)	Estimate	£0	
Utilities (Telecomms)	Estimate	£0	
Utilities (Other)	Estimate	£0	
Utilities Total		£0	
Sub-Total		£0	
Optimism Bias	44%	£0	
TOTAL		£1,300,000	
Notes:			
1. Utility costs are unknown and have therefore been excluded.			
2. No 'third-party' land costs have been assumed.			

AT.06 | Provide new cycle lanes along Coldham's Lane between the airport site and the Sainsbury's roundabout and enhance existing cycle provision along Brooks Road

ITEM DESCRIPTION	RATE	ESTIMATE
Work costs		£960,000
Accom Works	3%	£28,800
Landscaping	3%	£28,800
Contract Works Cost		£1,017,600
Contingencies	10%	£101,760
Works sub total		£1,119,360
Supervision	10%	£111,936
Testing	0.5%	£5,597
Topographical Survey	0.5%	£5,597
Soil & drainage Survey	2.50%	£27,984
Works Total		£1,270,474
Public Inquiry	1.50%	£19,057
Land/SRO Plans	1.00%	£12,705
Design Fees	9%	£114,343
Part 1 claims	Estimate	£0
Fees Total		£146,104
Land Purchase Cost & Fees	Estimate	£0
Land Total		£0
Utilities (Electricity)	Estimate	£0
Utilities (Gas)	Estimate	£0
Utilities (Water)	Estimate	£0
Utilities (Telecomms)	Estimate	£0
Utilities (Other)	Estimate	£0
Utilities Total		£0
Sub-Total		£1,416,578
Optimism Bias	44%	£623,294
		£2,039,872
TOTAL	rounded	£2,000,000

Rationale for Estimate:

Estimated length of new/improved cycle lane: 1km
 Cost per km: £0.96m (based upon Huntingdon Road scheme costs)
 Source: Typical Costs of Cycling Interventions - Interim analysis of Cycle City Ambition schemes; Report to the DfT, Jan 2017.

Notes:

1. Utility costs are unknown and have therefore been excluded.
2. No 'third-party' land costs have been assumed.

AT.07 | Provide a new off-carriageway ped-cycle link from the airport site to connect into the Chisholm Trail via Barnwell Road and Coldham's Common.

ITEM DESCRIPTION	RATE	ESTIMATE	Rationale for Estimate:
Work costs		£0	<p>Length of link = 1.7km Cost per km = £0.96m</p> <p>The cost per km relates to that incurred associated with the implementation of the Huntingdon Road segregated cycle scheme in Cambridge, as detailed within "Typical Costs of Cycling Interventions: Interim analysis of Cycle City Ambition schemes" produced by the DfT in 2017.</p> <p>Source: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/742451/typical-costings-for-ambitious-cycling-schemes.pdf</p>
Accom Works	3%	£0	
Landscaping	3%	£0	
Contract Works Cost		£0	
Contingencies	10%	£0	
Works sub total		£0	
Supervision	10%	£0	
Testing	0.5%	£0	
Topographical Survey	0.5%	£0	
Soil & drainage Survey	2.50%	£0	
Works Total		£0	
Public Inquiry	1.50%	£0	
Land/SRO Plans	1.00%	£0	
Design Fees	9%	£0	
Part 1 claims	Estimate	£0	
Fees Total		£0	
Land Purchase Cost & Fees	Estimate	£0	
Land Total		£0	
Utilities (Electricity)	Estimate	£0	
Utilities (Gas)	Estimate	£0	
Utilities (Water)	Estimate	£0	
Utilities (Telecomms)	Estimate	£0	
Utilities (Other)	Estimate	£0	
Utilities Total		£0	
Sub-Total		£0	
Optimism Bias	44%	£0	
		£1,632,000	
TOTAL	Rounded	£1,600,000	
Notes:			
1. Utility costs are unknown and have therefore been excluded.			
2. No 'third-party' land costs have been assumed.			

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