



# Coast to Capital LEP Local Transport Board

Sustainability Schemes: Independent  
Business Case Assessment

Brighton & Hove Bike Share Scheme

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*March 2015*

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## SCHEME SUMMARY

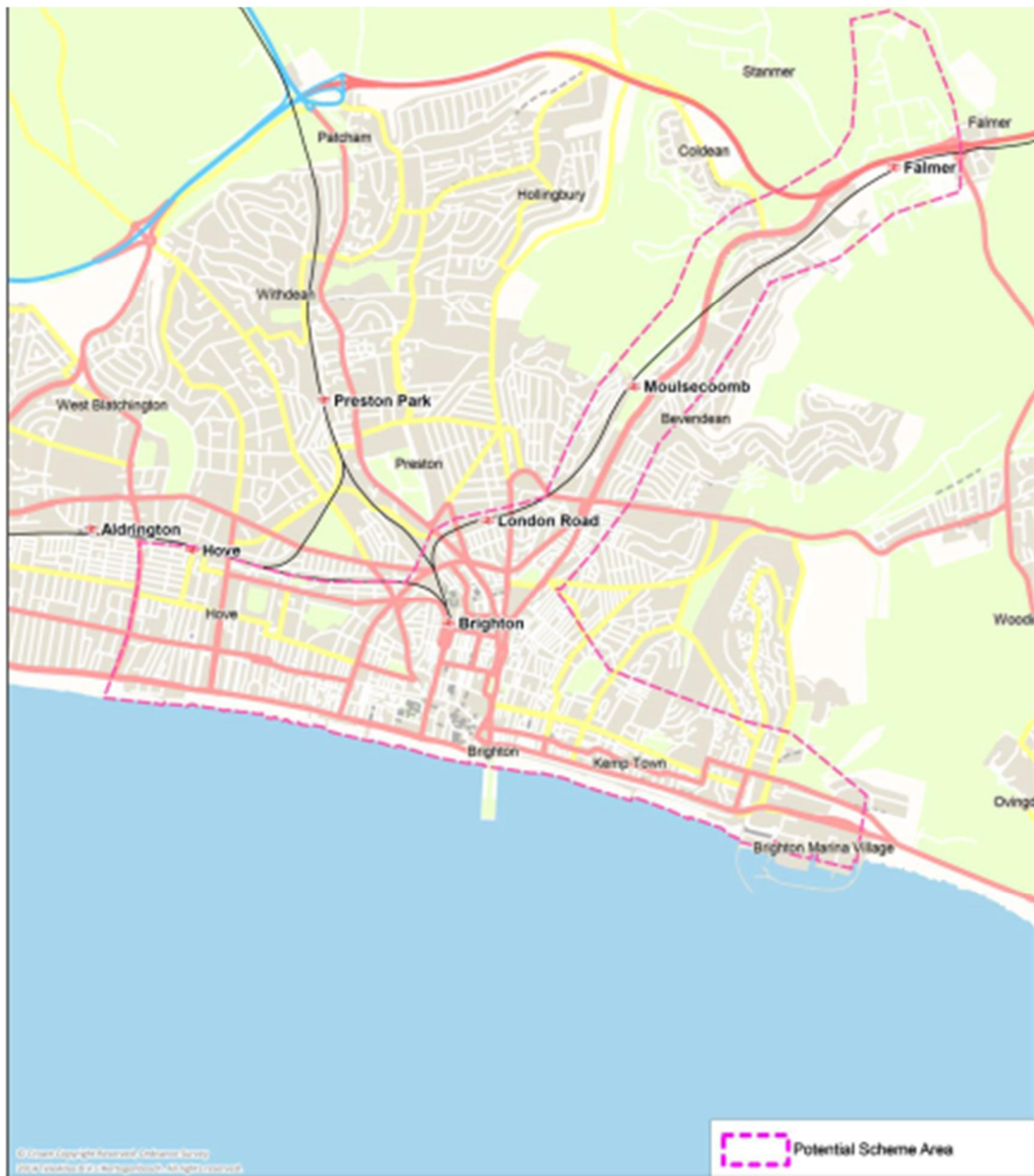
Scheme Name	Brighton & Hove Bike Share	Date	4/3/2015
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### Scheme

#### Scheme Description

According to the Business Case, in 2010 a study was undertaken considering the feasibility of introducing public Bike Share to Brighton and Hove. The lead officer has explained that this included some consultation. This was followed with a 'soft market' test with potential Bike Share providers in 2011. There is evidence of support so far by a range of health and transport organisations, the University and a developer.

The project covers central Brighton extending to Hove in the west and Brighton Marina to the east, plus the A270 Lewes Road corridor north to Falmer/ University of Sussex (refer to the figure below). This amounts to the parts of the urban area with the least hilly terrain. The scheme comprises 50 docking stations with 430 durable bikes in operation 24/7.



- The scheme is complementary to the Valley Gardens scheme (concurrent LEP application) and cycling improvements completed in Lewes Road.
- The extent of the scheme covers areas of the city with the least hilly terrain and takes into account population, employment, deprivation, and sites considered a priority such as the station and developments.
- The number of bikes is based on comparison with other bike hire schemes in Glasgow, Bath, London and Dublin and factors and assumptions relating to expected usage. The number of bikes and daily usage are important parameters in economic terms.
- Charges are assumed for assessment purposes to be similar to London (£2 per day or £70 annually). Further charges will apply for uses over 30 minutes. Payments would be collected via appropriate technology. Forecast income relies on each bike being hired 5.6 times per day which is within the range experienced in other countries taken from international guidance, but almost double the current UK experience.
- The docking stations are subject to individual design and planning consents and further public consultation is programmed to take place in late 2015/early 2016.
- The scheme would be run by a Community Interest Company. The lead officer has confirmed that work has begun on setting up the CIC in accordance with the programme.
- The main users for the bike share scheme are identified as residents (45%) and tourists (39%), with rail users and non-resident employees making up the rest. Low cost cycle hire by the term is already available at the University.
- Forecasts indicate that there will be some adverse impact on existing transport businesses. The business case estimates a drop in bus revenue (£2.6m discounted over a 5 year period) as a result of the scheme.
- The application also identifies existing commercial cycle hire businesses that are open during daytime on the sea front and at the railway station offering various types of bike. They operate on different pricing basis which is more favourable than bike share for longer periods of hire but would experience competition for short hires.

#### Scheme Alternatives

None considered in business case.

#### Scheme Objectives

Objectives are not explicitly stated so the following is a brief summary of how the project will contribute to the LEP Growth Strategy from the C2C application pro-forma.

- Direct job creation – 6
- Access to employment – scheme area selected accordingly
- Access to major developments – scheme area selected accordingly
- Productivity gains – standard DfT cycling benefit
- Tourism economy – reduces car use and parking
- Supporting higher density higher value development - reduces car use and parking
- Supporting major employment sites – integrates with Valley Gardens scheme (includes employment floorspace)
- Supporting sustainable housing growth – reduces car trips by 283,000 per annum
- Supporting residential developments – docking stations in developments
- Transport and Health – health benefits and savings
- Bike share resilience – not a primary objective but bike share better than car, bus or taxi in congestion
- Wider network resilience – improved resilience by reducing cars on the network

## FINANCIAL SUMMARY

Main Expenditure Items (£m)	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	Total
System cost						1.16
Promoter costs						0.10
Contingency @ 15%						0.19
<b>TOTAL (excluding optimism bias)</b>	<b>0.85</b>	<b>0.60</b>				<b>1.45</b>

Optimism bias @ 20%						0.28
<b>TOTAL (including optimism bias)</b>						<b>1.63</b>

**Scheme Funding**

Funding Source	Funding Amount (£m)
LEP (Sustainability Schemes)	£1.160m (80%)
Local contribution (BHCC capital)	£0.290m (20%)
<b>TOTAL</b>	<b>£1.450m (excluding optimism bias)</b>

**VALUE FOR MONEY STATEMENT**

	Assessment	Detail
<b>BCR</b>	4.99	10 year assessment period but see comments under Assessment of Scheme Benefits below
<b>Non-Monetised Impacts</b>	<p>Statement of overall non-monetised impact:</p> <ul style="list-style-type: none"> <li>• Regeneration – scheme supports wider redevelopment including Valley Gardens</li> <li>• Deprivation – scheme area serves deprived areas</li> <li>• Severance - neutral</li> <li>• Physical activity –benefits of cycling</li> <li>• Health inequality - scheme area serves of health inequality</li> <li>• Accessibility – enables access to bikes for people in some areas who do not own one</li> </ul>	No AST has been provided
<b>Key Risks, Sensitivities and Uncertainties</b>	Very high but see comments under Assessment of Scheme Benefits below	<p>Sensitivity of the BCR to demand, operating cost, benefits and sponsorship has been tested individually in the business case.</p> <p>The following risks/uncertainties have been additionally identified by the reviewer.</p> <ul style="list-style-type: none"> <li>• System cost based on need for 430 bikes which is uncertain;</li> <li>• Assumed daily usage is high by UK standards;</li> <li>• Reduction in income and increased operating costs (e.g., redistribution of bikes) could coincide;</li> <li>• Potential for harmful competition with existing cycle hire businesses;</li> <li>• Harm to bus operators' income;</li> <li>• Safety benefits are not substantiated and may turn adverse with 24/7 operation;</li> </ul>
<b>Value for Money Category</b>		<b>Very high but see comments under Assessment of Scheme Benefits below</b>

## REVIEW METHODOLOGY

### Independent Business Case Assessor Approach

The review was undertaken as follows:

- The business case documents listed below were provided to the Project Manager (Theo Genis, PB) via email by Iain Reeve on 04/02/2015.
- The review was undertaken by Mike Carter of PB (the reviewer), and a list of queries and clarifications were put via email to the lead officer from BHCC (Abbey Hone) on 20/02/2015.
- Emailed responses were received on 3/3/2015 and a telephone conversation was held between the reviewer and Abbey Hone.
- The reviewer finalised this Assessment Report following the receipt of these responses and the further information provided.

Business Case Documents reviewed:

- Brighton Bike Share - Local Growth Fund Business Case (Coast to Capital LEP), December 2014 by Steer Davies Gleave for Brighton & Hove City Council
- C2C Sustainability and Resilience Schemes Application Form for Brighton Bike Share (lead officer Abbey Hone)

The review was undertaken against the guidance of the Department for Transport in the documents "Transport Analysis Guidance (TAG) - The Transport Appraisal Process", January 2014 and "The Transport Business Cases", January 2013.

## ASSESSMENT OF SCHEME BENEFITS

### Review of Claimed Benefits

The number of cycles for hire is based on a figure of 3 bikes per 1,000 population. The number of bikes is based on guidance and data which applies mainly to large cities outside the UK. The range of this factor is very wide. At one extreme, if very successful the scheme could require three times this number of cycles, while at the level of provision in London it would require only one third. **The assumed number of bikes is the foundation of the assessment but is considered by the reviewer to be a significant uncertainty, the risk and sensitivity of which is not considered by the business case.**

System capital costs have been based on an all-in cost per cycle of £2,700 including bikes, docking, IT systems, control centre and installation. This has been based on an average of £2,400 for large cities, adjusted for smaller locations. Variation of this all-in cost between locations is not large and the reviewer considers this to be an appropriate figure since it is used together with a 15% contingency. However the total infrastructure cost of £1.45m could be exceeded if the supply of bikes and number or location of docking stations were to prove unsuitable early in the scheme.

Operating costs are given as £700,000 but the business case acknowledges that such data is difficult to obtain and relies on judgment of dissimilar benchmark schemes and the soft market test. This is blamed in part on commercial confidentiality but it ought to be possible to improve on the quality of this key figure. **As such the reviewer considers operating costs to be susceptible to significant uncertainty.**

The reviewer has queried the intentions for redistribution of bikes, which is necessary because one way journeys (e.g. to a station or educational place) creates an imbalance in availability. 'Tidal' use is a common feature of cycle hire in tourist towns. It is the experience of other schemes that fine tuning of docking stations and redistribution is critical to success. **The business case has not included detailed consideration of redistribution and its associated impact on costs.**

The forecast trips equate to 5.6 trips per bike per day, which is medium to high utilisation on an international scale and high for the UK. As such the reviewer has concerns about this figure. In the economic assessment, sensitivity testing includes 20% increase in operating cost and 30% decrease in revenue. The reviewer points out that 20% increase in operating cost would negate any operating surplus and a 30% decrease in revenue would result in an annual operating loss of £200,000.

Making an operating surplus is reliant on sponsorship revenue of £185,000 which, if not realised would result in an annual operating loss of £45,000. The reviewer has asked a question specifically about sponsorship and the response is that sponsorship is very likely and the figure is reasonable but discussions with potential sponsors will follow allocation of the capital funding.

The business case indicates BCR values between 2.47 and 14.42 which are high to very high over various evaluation periods between 5 and 30 years. Webtag advice on appraisal of active mode schemes is cautious about appraisal periods and advises consideration of how long the benefits will last before reinvestment is required. Whilst the operating costs allow for rolling replacement of the bike fleet over 10 years, it is likely that other aspects of the technology and infrastructure will become outdated and investment will be required by then for the scheme to continue. **For this reason the reviewer considers a 10 year appraisal period more appropriate, for which the forecast BCR is 4.99.**

The business case includes sensitivity testing of unfavourable individual differences to a central case from the assumed usage (down 30%), cost (up 30%), user and other benefits (down to zero) and sponsorship (down 50%) in which the BCR remains very high. The impact of a loss of sponsorship has not been tested in combination with other sensitivities (increased costs / decreased revenue). **Hence, the BCR could be lower than tested in the business case if several unfavourable factors occur together, and if the assumption of high utilisation is not met.**

The reviewer points out that the outturn BCR for the London Barclays Cycle Hire Scheme published in October 2014 is 0.7:1 (poor) and furthermore fell short of initial figures. The forecast BCR of 4.99 for Brighton and Hove Bike Share differs sharply from this and looks improbable in the light of concerns about its assumptions. It would be unrealistic to rely on a true outturn BCR exceeding 2.0 (medium) and **a value of under 1.5 (low or poor) would be more typical of a scheme of this nature.**

This is not to say the proposed Bike Share scheme lacks other benefits, but the BCR should not be overstated or the possibility of making an annual loss excluded, and **it is inadvisable to rely on a high or very high BCR in considering this application.**

The reviewer recommends to the C2CLEP board that it would be prudent to:

- (i) Recognise the likelihood of a medium to poor out-turn BCR; and
- (ii) ensure that provision is available for a possible operating loss in year 1 of operation and possibly beyond until the true figures for operating costs (including redistribution of bikes), revenues and sponsorship settle down.

## DELIVERABILITY

### Key Risks to Delivery

- Planning consents for docking stations not achieved
- Construction / cycle purchase costs exceed business case estimates
- Opposition by existing transport providers/businesses adversely impacted
- Sponsorships not secured

### Environmental Impact

Reductions in greenhouse gas emissions and improved air quality are claimed. This is not substantiated by any specific or general evidence. In the experience of the reviewer, **in the absence of any controls on heavy vehicles it is unlikely that overall environmental impacts would be better than neutral.** This is corroborated by low monetary values for these benefits in Table A 5.4.2 in Webtag.

## SCORING EVALUATION

Criteria (refer to Appendix A)	Application Score	Recommended Score*
<b>Expected economic benefits [transport and scheme related]:</b> <ul style="list-style-type: none"> <li>- Value for money, including BCR (if known) or similar measure.</li> <li>- Expected impact on journey times, reliability and resilience</li> <li>- Encouraging sustainable travel</li> <li>- Expected impact on road safety casualties</li> <li>- Valuing public realm</li> <li>- Other transport benefits</li> </ul>	<b>5</b>	<b>2</b>

<b>Expected economic benefits [economic growth]:</b> <ul style="list-style-type: none"> <li>- Retention of existing jobs or creation of new jobs</li> <li>- Unlocking or improving access to new dwellings</li> <li>- Encouragement of new businesses, or 5protection of existing businesses.</li> <li>- Other economic benefits</li> </ul>	<b>4</b>	<b>4</b>
<b>Social Distributional Impact:</b> <ul style="list-style-type: none"> <li>- Expected regeneration &amp; deprivation impact</li> <li>- Expected impact on severance, physical activity, accessibility</li> </ul>	<b>5</b>	<b>5</b>
<b>Environmental impact:</b> <ul style="list-style-type: none"> <li>- Expected impact on carbon emissions</li> <li>- Expected impact on air quality</li> <li>- Expected impact on noise/natural and urban environment</li> </ul>	<b>5</b>	<b>3</b>
<b>Contribution to the Strategic Economic Plan</b> <ul style="list-style-type: none"> <li>- How does the scheme contribute to the objectives and priorities of the SEP.</li> <li>- The five transport objectives</li> <li>- Contribution to other objectives</li> </ul>	<b>5</b>	<b>5</b>
<b>Local Indicators:</b> Local indicators and circumstances that help to explain the need for the scheme.	<b>Not scored</b>	<b>Not scored</b>

*\*Score recommended by independent business case assessor based on evidence provided in business case and in response to queries during the review process.*

### Commentary on Scoring

The total score in the application is 24 out of 25. Following concerns of the reviewer about the economic (transport) benefits and the claimed environmental benefits as outlined in this report, it is recommended that the total is reduced to 19 out of 25.

## RECOMMENDATION

### Independent Business Case Assessor Recommendations

The reviewer recommends that the scoring is reduced to 19 out of 25 as noted in this report. Environmental benefits are not substantiated and the business case is not considered to be sufficiently robust or fit for purpose in its current form. The benefits claimed for economic growth, socio-distributional impact and contribution to the Strategic Economic Plan included in the business case are acceptable.

It cannot be readily judged from the business case what the BCR should be without the application of more robust assumptions. In the circumstances a conservative conclusion at present would be that the BCR will be low or poor, in keeping with experience of the London Bike Hire scheme.

This application should be considered on that basis but – in the event that the project is not funded in 2015/16 - the business case should be resubmitted in a more robust form as a future application.

## Appendix A: Scoring criteria

Scores	Expected Economic benefits (transport and scheme related)	Expected Economic benefits (economic growth)	Socio-distributional Impact	Environmental Impact	Strategic Economic Plan
<b>Score: 5</b> <b>[Green]</b>	Expected BCR of 2+ (if known)  Significant beneficial impact on transport indicators.	Support for delivery of new jobs, housing & employment floor space in area clearly expected.	Significant positive benefits expected, such as supporting regeneration, improving accessibility, reducing severance and/or promoting physical activity.	Likely to lead to a reduction in carbon emissions and have limited impact on the natural environment and/or air quality and noise standards.	Clear linkage to one or more SEP policies and priorities
<b>Score:3</b> <b>[Amber]</b>	Expected BCR of 1.5 to 2 (if known)  Some, but limited beneficial impact on transport indicators.	Expected to support retention of existing jobs & help deliver some housing.	Some socio-distributional and well-being impacts expected.	Limited or neutral impact on carbon emissions, natural environment and/or air quality shown.	Some linkage to SEP policies and priorities.
<b>Score 1:</b> <b>[Red]</b>	Expected BCR of under 1.5 (if known)  Very limited or negative impact on transport indicators.	Very limited linkage with delivery of employment and/or housing expected.	Very limited or negative impact on distributional and well-being impacts expected.	Likely to have a negative impact on carbon emissions, local air quality and/or the natural environment.	Weak link to the SEP.