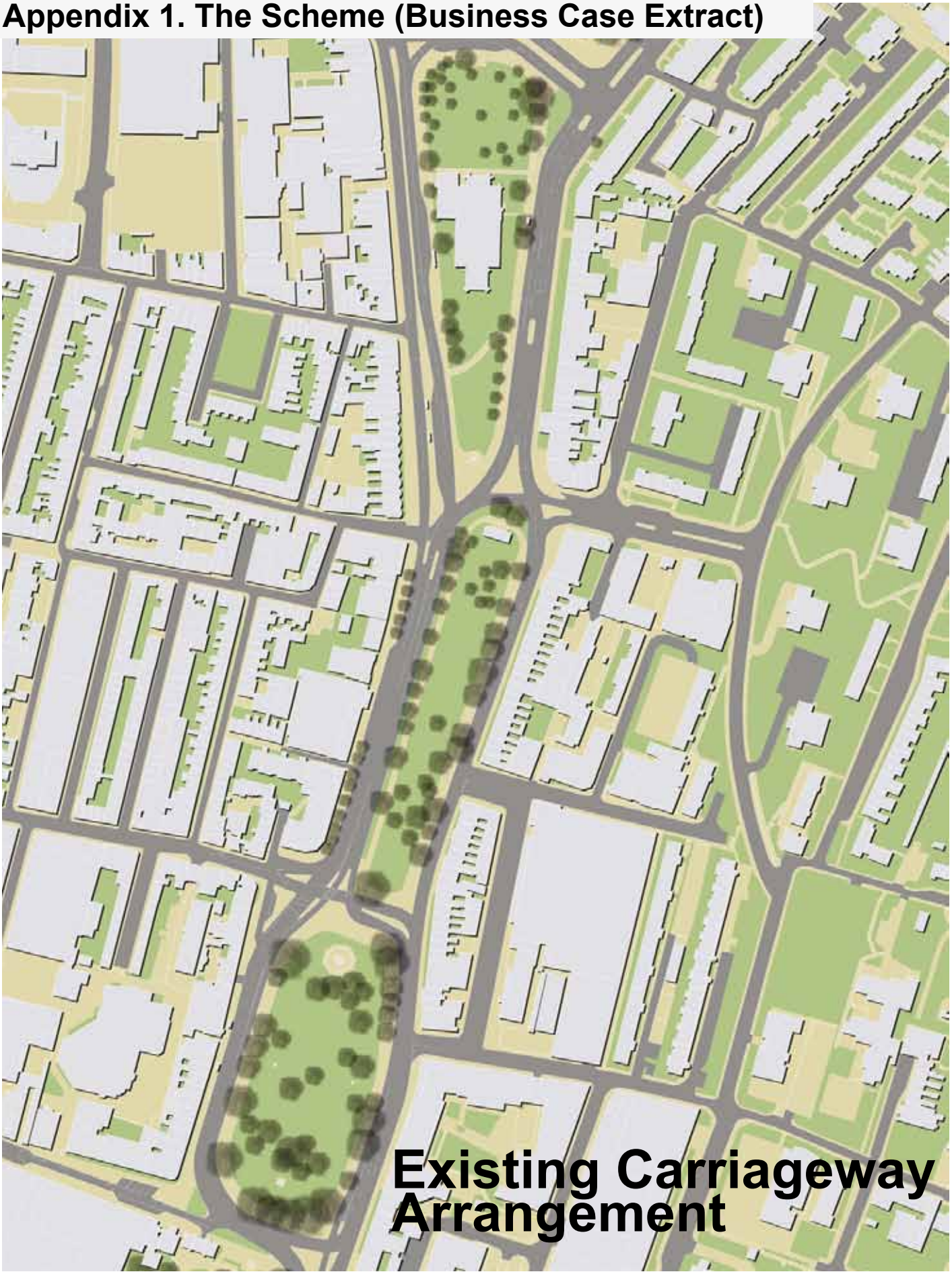
Appendix 1. The Scheme (Business Case Extract)




New Carriageway Arrangement

New Landscaping Arrangement

(general with SUDs & planting - left)

(cultural programming provision - right)

9. The Scheme

Description

Due to its size and location, many key strategic vehicular transport routes pass through Valley Gardens. These include the north-south Lewes (A27) and London (A23) Roads, which intersect with a series of east-west connections until they meet the A259 at the seafront.

The Valley Gardens transport corridors provide access to a number of key destinations, including the majority of the city's privately owned car parks, the Royal Sussex Hospital, American Express and Churchill Square Shopping Centre. A high proportion of the city's buses run through the area.

At a local level, Valley Gardens connects a host of city destinations and districts for drivers, public transport users, walkers and cyclists.

Unfortunately what should be a relatively straightforward movement arrangement in Valley Gardens has developed inconsistently over a number of years. At all stages vehicular infrastructure has been prioritised with little evident thought for impact on or needs of other users of the space or the wider city. The result is a confusing mixture of gyratories, contraflows and dual carriageways which work poorly for vehicles and turn what should be a major public recreational asset into a barrier that dissects the city. Resolving this barrier is key to unlocking the potential of Valley Gardens and the surrounding city.

The proposal achieves this by effectively 'disentangling' vehicular routes through the area. A tree lined 'Avenue' for private vehicles is created on the eastern side of the Gardens, comprising two northbound and two southbound lanes, separated by a wide, planted median strip to enable easy pedestrian crossing.

The Avenue provides a consistent, direct and legible route for private vehicles throughout the length of the project area. The simplified layout removes the need for complex junctions (ten existing junctions are simplified under the proposals). Along with reductions in associated infrastructure (guardrailing, signage, additional carriageway space) the new arrangement provides an enhanced journey experience for drivers and a fitting welcome to the city.

The avenue effect and reduced traffic infrastructure - along with increased footways, tighter side road corner radii and other measures that achieve a greater balance of spatial priority between different modes and users - will ensure vehicular routes feel integrated with the wider city centre environment, rather than appearing as urban freeways dissecting it. As a result, the physical and perceptual barrier currently created by transport infrastructure will be significantly reduced. Pedestrians will now only need to cross two lanes of traffic at any point within the project area, and will always know which direction that traffic is coming from - increasing both permeability and safety. 34 enhanced pedestrian crossing are provided by the proposal, whilst reduced complexity of crossings on a north-south journey through the project area will reduce pedestrian journey times by at least 15%.

Simplified and consistent routing of private vehicle routes along the eastern side of the study area enables a reduction in the scale and complexity of traffic infrastructure intersecting the study area from east to west, enabling the perceptual and physical impact of traffic within central public spaces to be reduced.

Above: By 'disentangling' the current vehicular transport network, movement through the area becomes more legible for all modes. Consistent bus lanes are provided to the west of Valley Gardens, serving new (north of Church St) and enhanced bus stops (under the new arrangements passengers can embark / disembark from the footway rather than traffic islands). A consistent cycle route can also be accommodated. Reducing the complexity of the traffic infrastructure also reduces the danger and barrier effect created by the existing arrangement.

Below: Roads are redesigned in a manner appropriate to a city centre location, helping calm traffic and reduce the perceived and physical barriers that the current infrastructure creates. Pedestrians will only ever need to cross two lanes of traffic and will always know where traffic is coming from. The image below shows how connections between the Gardens and University will be enhanced. (The image on the left shows the current arrangement, the artist impression on the right shows how the new "Avenue" will look).

The arrangement also lessens the volume of traffic routed in front of the Pavilion Gatehouse, enabling improved connection between the Royal Pavilion Estate and Valley Gardens.

Long stretches of the western side of Valley Gardens currently see 4 lanes of traffic travelling in opposing directions, enclosed by guard-railing. It is along this corridor that the current barrier effect between the east and west of the city is strongest. The proposal replaces the existing arrangement with a two lane 'Park Road' which provides a consistent north-south route for buses travelling through the project area, along with local access.

The Park Road provides similar benefits to the Avenue in terms of reducing complexity and so volume of traffic infrastructure to positively impact on segregation, safety, permeability and allocation of space amongst different modes and users. Integration of the Park Road within the wider environment is enhanced by the use of coloured surface materials to differentiate the carriageway area from traditional, blacktop finishes that are associated with vehicle use. Although the Park Road will not be a shared space, it is expected that low volumes of traffic will enable pedestrians to cross informally as well as at enhanced crossings should they wish, further improving east west connectivity. Bus passengers will also benefit from the simplified arrangement. Access from bus stops at St Peters will be made from the footway rather than isolated traffic islands, and it will be possible to provide a new southbound, adjacent to an upgraded northbound bus stop in the vicinity of Marlborough Place to serve the North Laine.

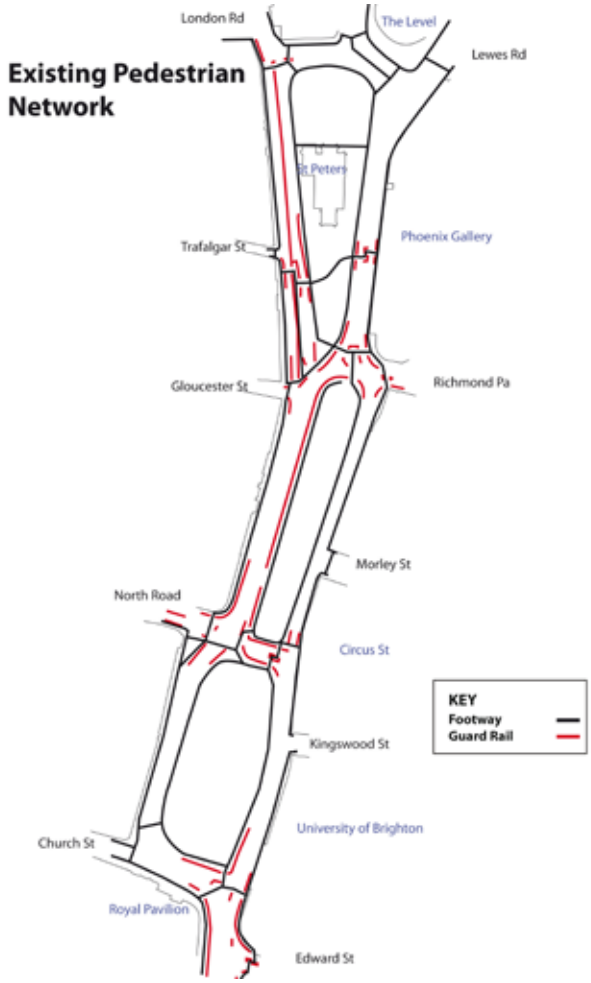
Cycle facilities are enhanced through provision of 26 cycle parking hubs and a consistent dedicated 700m cycle lane which runs north to south along the eastern side of the project area, connecting existing sections of the cycle network to the north, east and west - including the Lewes Road Corridor SEP Development Area. Along the western side of the project area, cyclists can share the Park Road. Like pedestrians, cyclists will benefit from journey savings due to enhanced crossings at simplified junctions - a north south journey is expected to be at least 31% quicker.

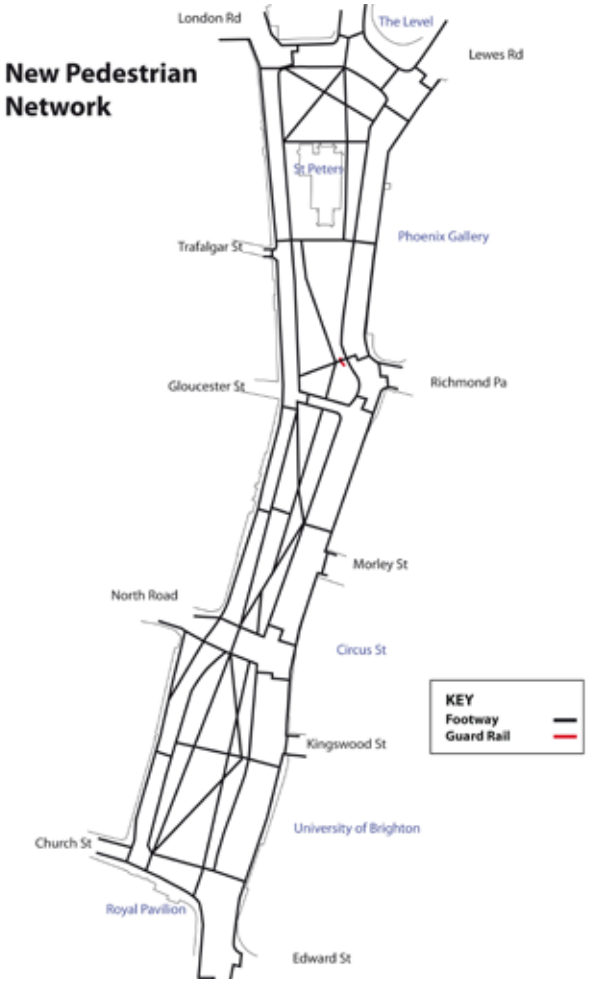
Most of the rearranged vehicular infrastructure is delivered within existing kerb lines. The exceptions are two new sections of two lane carriageway, built within existing green space in Victoria Gardens. The new sections of carriageway enable the consistent alignment of vehicle routes along the length of the project area without impacting on the Gardens' National Elm Collection.

Despite creation of new carriageway sections, simplifying the vehicular arrangement allows for overall space given over to carriageway infrastructure to be reduced by more than 30% whilst maintaining current access and capacity. As a result footways along building lines can be increased in area by over 70%, and central open spaces by just over 2%. The additional footway space, along with increased legibility, a pleasanter environment, improved crossings and new footpaths across the green spaces to connect key routes and destinations on each side of the city will significantly improve pedestrian permeability.

The elements above improve movement through Valley Gardens for all modes, whilst tackling issues around physical and perceived barriers created by the current vehicular infrastructure. The remaining elements of the proposal encourage people to use the area by creating a vibrant public space that can operate as a new destination, connecting the surrounding city.

Feedback from public consultation saw an almost unanimous desire for Valley Gardens to be re-imagined as a peaceful, city centre park, complementing rather than replicating neighbouring attractions of the beach and shopping districts.


Existing Pedestrian Network
London Rd
The Level
Lewes Rd
St Peters
Phoenix Gallery
Trafalgar St
Gloucester St
Richmond Pa
Morley St
North Road
Circus St
Kingswood St
University of Brighton
Church St
Royal Pavilion
Edward St
KEY
Footway
Guard Rail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Kingswood St
University of Brighton
Church St
Royal Pavilion
Edward St
KEY
Footway
Guard Rail

This is achieved through introduction of 265 new trees - in part performing the function of an arboretum to help protect the city's Elm heritage into the future - planting areas and water features including 3507m² of Sustainable Urban Drainage System (SUDS). The SUDS system, featuring street swales and water gardens, will bring aesthetic and environmental benefit (through performing a bioremedial function) and help the city accommodate the impact of future flash rainfall events associated with climate change.

Landscaping also creates flexible hard and soft-scaped spaces that can be used for educational and cultural programming. Enabling Valley Gardens to operate as an 'urban lab' for the University of Brighton provides opportunities for on-site training in a variety of industries. Extending facilities for Brighton & Hove's already strong creative sector provides local job / economic benefits whilst enhancing the city and region's international renown as a cultural destination. (A Cultural & Events Strategy is attached as Appendix 12).

The proposal also provides enhanced amenities such as seating, lighting and power supplies to enable and encourage a variety of uses, bringing benefits including reduced fear of crime.

As will be explained in following sections, improving the environmental quality of and removing the physical / perceived barriers between the east and west of the city centre creates virtuous circles benefitting the city's wider economy. Enhanced environmental quality is key to attracting and retaining the city's KIBS sector, which also benefits from connectivity to the University.

Enabling the perceived city centre to spread increases the demand for and thereby the value / viability of adjacent development sites, especially those to the east of the city centre. In return, the new developments provide the space for the KIBS, and related sectors, to grow into, overcoming acknowledged spatial constraints on economic growth. It is also anticipated that the dramatic and very visual environmental improvements realized by the Valley Gardens scheme will significantly raise the profile of and investment confidence in central Brighton, acting as a catalyst for a number of planned developments in the wider area. It is expected that this could benefit key strategic projects such as Brighton Centre, the i360 observation tower and the Black Rock site.

Previous page top: Simplified vehicular infrastructure enables pedestrian permeability through and across the area to be significantly improved, reconnecting the east and west of the city, encouraging walking, reducing danger and encouraging positive use of public spaces. The scheme is expected to reduce journey times through the area by 15%.

Previous page bottom: Increased planting helps deliver public aspirations for a peaceful, park like environment within the Gardens. Along with SUDS (Sustainable Urban Drainage System) the planting will also bring ecological benefits. Increased use of public spaces will bring social, safety, health and economic benefit.

Quantifiable Enhancements

Pedestrian	
Number of upgraded pedestrian / cycle crossings	34
Length of new / upgraded footway	3016m
Area of new footway	2586m²
Area of upgraded footway	15628m²
Length of new park footway	1333m
Area of new park footway	4700m²
Number of seating areas	13
Cycling	
Length of new cycle lane	699m
Area of new cycle lane	1901m²
Number of new cycle parking hubs	26
Driving	
Number of upgraded (simplified) junctions	10
Length of new carriageway	377m
Area of new carriageway (excluding SUDS features located on footway)	2212m²
Area of upgraded carriageway	10970m²
Area of reallocated redundant carriageway	10865m²
Change in private vehicle capacity	-
Number of public parking / delivery / taxi bays	TBC
Number of private (St Peters) parking spaces	-12
Buses	
Length of new bus / shared lane (shared with taxi, cycles, access)	703m
Area of new bus / shared lane	5289m²
Number of improved bus interchanges	4
Number of new bus interchanges	2
Environment	
Area of enhanced public open space (space within carriageways)	28405m²
Area of new public open space	670m²
Area of SUDS features	3507m²
Number of character lighting schemes	1
Number of trees	265
Area of new civic square	3120m²
Number of new event spaces	13+ (see p.22)

- *Pedestrian / Cycle Crossing facilities including a central reservation are counted as a single crossing. Precise detail and location, and possibly number of crossings to be refined as design process progresses.*
- *Precise number of seating spaces to be determined, figure provided assumes minimum target of seating every 100m on both sides of gardens. Assumption excludes secondary seating opportunities such as low walls.*
- *Precise number of cycle parking spaces to be determined, figure provided assumes minimum requirement of a cycle parking hub every 50m on both sides of gardens.*
- *Numbers and arrangement of loading, taxi and parking bays is to be determined as design progresses. As a general principle, existing provision will be at least maintained and enhanced.*

Expected Measurable Scheme Outcomes

Transport
Encourage growth in Walking numbers, with a Health benefit valued at £3.27m over 20 years.
Encourage growth in Cycling numbers, with a Health benefit valued at £1.05m over 20 years.
Reduce likelihood of collisions, resulting in a KSI benefit valued at £1.72m over 20 years.
Improve journey times for drivers, with a financial benefit of £2.893m over 20 years.
Improve northbound peak hour journey times for buses by at least 30 seconds.
Improve journey times for pedestrians by 15%.
Improve journey times for cyclists by 31%.
Enhance quality of bus provision
Improved journey experience for all modes
Improve perceived safety in the area
Environment
Provide Quality of Life benefits for Valley Gardens users valued at £4.917m over 20 years.
Improve NO_2 and Particulate Air Quality to a value of £1.294m over 5 years.
Improve Noise Quality with a value of £0.143m over 20 years
Enable the city to manage water more sustainably
Plant 265 new trees
Reduce levels of real and perceived crime and anti-social behaviour
Increase numbers of people spending time in Valley Gardens
Increase potential retail rateable value from adjacent frontagers by £0.97m over 20 years.
Training & Jobs
Enable training of 295 people
Contribute towards growth of the KIBS sector, creating a minimum of at least 141 FTE jobs over ten years.
Contribute towards a minimum of 87 FTE (or 118 actual) additional jobs in Tourism Services.
Support Creation of 16.5 FTE wider Jobs
Development & Housing
Directly support delivery of 66,822m² office space
Directly support delivery of 3,800m² new education space
Indirectly support delivery of 23,299m² office space
Indirectly support delivery of 25,424m² retail space
Indirectly support delivery of 7333m²+ new strategic sites
Indirectly support delivery of 4,234m² leisure space
Directly support delivery of 309 new dwellings
Indirectly support delivery of 2264 new dwellings
Increased value of existing local housing/business stock by £108.427m over 20 years.
Building City / Regional Competitiveness
Attract an additional £3.9m p/a visitor income to the city
Contribute towards growth of the KIBS sector, to a value of at least £10.1m over ten years.

Appendix 2. Financial Case (Business Case Extract)

Cost Profile

Physical Scheme (£9.351m)

Contribution	2012-14	2014/15	2015/16	2016/17
LGF			£4.000m	£4.000m
BHCC			£0.560m	£0.500m
Other Local			£0.141m	£0.150m
Total			£4.701m	£4.650m

Preparatory Costs (£0.775m)

Contribution	2012-14	2014/15	2015/16	2016/17
BHCC	£0.240m	£0.250m	£0.250m	£0.035m
Total	£0.240m	£0.250m	£0.250m	£0.035m

Total (£10.126m)

Contribution	2012-14	2014/15	2015/16	2016/17
LGF			£4.000m	£4.000m
BHCC	£0.240m	£0.250m	£0.810m	£0.535m
Other Local			£0.141m	£0.150m
Total	£0.240m	£0.250m	£4.951m	£4.685m

Base Cost = £8.989m (Physical) and £0.775m (Preparatory)
Adjustment for Risk applied to Physical = 1% (£8.989m x 101% = £9.079m)
Adjustment for Optimism Bias applied to Physical = 3% (£9.079m x 103% = £9.351m)

Optimism Bias

An Optimism Bias of 3% has been applied to the project cost, in line with DfT recommended levels for a road scheme at stage 3 (seeking Full Approval) of development.

Risk and Management of Cost Over-Runs

Although large in scale, the scheme is considered to be low in risk as it comprises relatively straightforward elements. As such, only a nominal 1% adjustment for risk has been applied over and above the 20% contingency already accommodated in the scheme cost profile. More detail on risk is provided in Section 20: Management Case - Risk Management.

The scheme has been costed and will be delivered in distinct sections, enabling any areas of cost over-run to be identified and managed at an early opportunity.

Should any likely cost over-runs be identified, in the first instance efforts will be made to identify

ways in which overspend can be clawed back during future stages of scheme implementation. Should overall cost over-run become unavoidable, additional funding will be sought from within the council, or from external sources, to fill the resource gap.

Main Risks to Project Delivery Timescales

Although the scheme is large in scale, its component parts are relatively straightforward and most take place within existing kerblines. As such risks associated with construction are limited.

The most bespoke elements of construction relate to SUDS features and working around any tree roots exposed during construction. Trial SUDS will be tested ahead of work commencing to reduce risks associated with this element. It is impossible to be certain as to the extent of work, and so time and cost, required to protect tree roots until excavations begin (to date only best estimates can be used based on standard allowances for root protection areas).

Construction works will be tendered and delivered in phases, partly to provide increased flexibility in managing the overall scheme timetable in the event of potential delays (if one phase suffers delays, another could be brought forward to compensate). This, along with appropriate contingencies and planning construction stages around major city centre events (such as the Brighton Marathon), will enable any unexpected delays associated with additional tree root works (or any other aspect of construction) to be accommodated within the project timescale.

A full risk register is provided in Appendix 6.

Funding of Ongoing Revenue Requirements

Due to the nature of the scheme, the only ongoing revenue considerations relate to management and maintenance. The council is working with partners including the University of Brighton to identify new ways of working that can reduce pressures on traditional park management services by pooling resources to mutual benefit. It is hoped that many of these approaches can be tested and refined ahead of physical works commencing (see Section 13 Specific Benefits - Benefit Area 1: Job Creation, Training & Protection - Managing the Gardens).

Loan Repayments

N/A (the application is not for a loan)

Appendix 3. Economic Case (Business Case Extract)

Although WebTAG guidance would ordinarily expect scheme benefits to be considered over a 50 year period, it is not possible (or meaningful) for certain benefits - such as health benefits associated with increased walking and cycling, to be assessed over such a long period of time.

For consistency, this Business Case bases its calculation of the scheme's Benefit to Cost Ratio on a reduced period of 20 years - a period that can be applied consistently to all types of benefits anticipated.

Good practice states that ideally a scheme should be able to demonstrate a Benefit to Cost Ratio of at least 2:1 to justify funding.

Even with the reduced timescale over which benefits can be counted, and excluding any financial benefits associated with increases in value of existing private housing and business stock or increased tourism revenue, the Valley Gardens scheme delivers a conservative Benefit to Cost Ratio of **4.148:1.**

Headline financial benefits are:

Element	**20 Year Value**
HEAT Assessment (Walking)	£3.271m
HEAT Assessment (Cycling)	£1.045m
Growth of the KIBS sector (Economic Growth)	£20.200m
TUBA Economic Analysis	£2.893m
COBALT Accident Benefits	£1.720m
Noise Assessment Benefits	£2.477m
Air Quality Benefits *(Air Quality Benefits Calculated over a 5 year period)*	£1.294m
Sustainable Urban Drainage System (SUDS)	no monetary value available
Accessibility - Visiography TRACC	no monetary value available
Tourism	not included
Valuing Urban Realm	£5.887m
Development	not included as within KIBS
Total Benefit Value	**£38.787m**

Total Benefit Value (Excluding Tourism Income) (£38.787m) / Scheme Cost (£9.351m) = BCR 4.148

(Including the additional Tourism Income of £3.9m p.a discussed in Section 12 - Overall Strategic Benefits - Strategic Benefit 7: Building on the city's role as a Visitor Destination would increase the scheme BCR to 12.489:1).

Full details of the methodologies used to calculate the scheme BCR are contained in Appendix 7: Full Economic Case.

Appendix 4. Project Plan (Business Case Extract)