



## BUSINESS CASE

For

### Queensway Gateway Road

**LOCATION OF PROJECT:** Bexhill/Hastings, East Sussex  
**PROJECT SPONSOR (local authority):** East Sussex County Council  
**PROJECT MANAGER (lead officer):** John Shaw (Seachange Sussex)/Jon Wheeler (East Sussex County Council)

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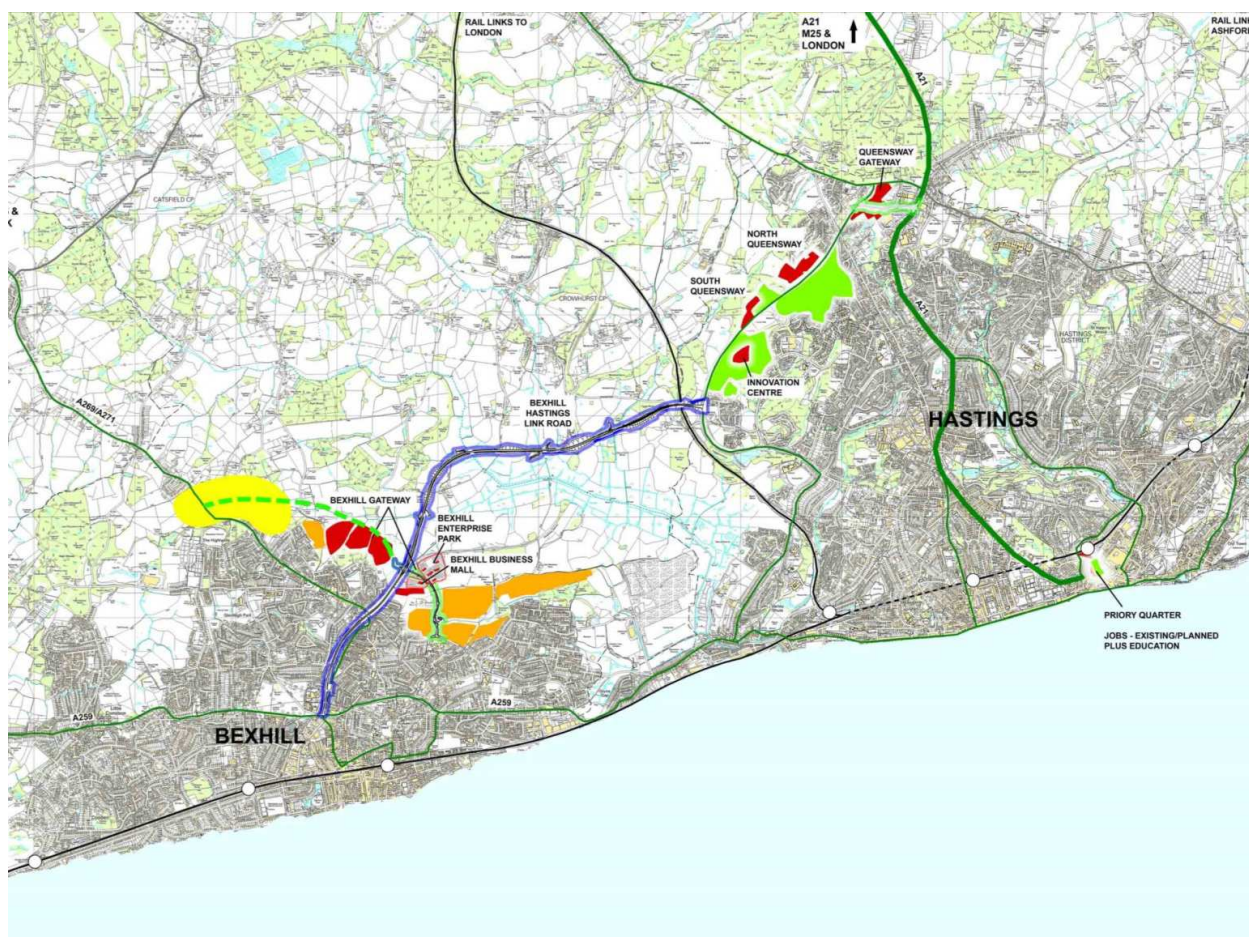
## Strategic Case

## 1 Project overview and rationale

### 1.1 Brief description

Queensway Gateway Road forms a key infrastructure investment in the Hastings - Bexhill Growth Corridor (Figure 1), as defined in the South East Strategic Economic Plan. It comprises a single carriageway road link between the A21 Sedlescombe Road North and Queensway. The road will connect with Queensway running south of its junction with the Ridge West, crossing the Hollington Stream valley on an embankment and then running south of Whitworth Road to join the A21 at a new junction north of the existing Sainsbury's store. It includes signal controlled junctions at either end and a roundabout junction with Whitworth Road facilitating access to employment sites to the north and south.

Figure 1 – A21/A259 Bexhill Hastings Growth Corridor



The road serves a strategic purpose in linking Bexhill in the west and the A21 to the east of the Growth Corridor by relieving congestion on The Ridge and improving traffic flows onto the A21. Critically, Queensway Gateway Road connects the Bexhill Hastings Link Road (BHLR) to the A21, redistributing traffic from the BHLR and The Ridge heading towards the A21. The opening of the BHLR will change the balance of traffic movements in the Hastings/Bexhill area, increasing traffic volumes along The Ridge and Queensway. The link between The Ridge and the A21 already displays signs of capacity



problems. By relieving congestion, the Queensway Gateway Road will improve strategic connectivity in the Growth Corridor, improving employment development potential in Queensway and employment and housing growth potential in North Bexhill.

Importantly, the Queensway Gateway Road provides access to designated employment development sites within the Bexhill Hastings Growth Corridor which would otherwise not be brought forward. The new road allows land to be released around the road for employment development as set out in Policy E1 of the present Hastings Local Plan 2004 and policies LRA 7 and 8 of the Hastings Planning Strategy<sup>1</sup>. Specifically, the road opens up the development potential of key sites south of The Ridge, with capacity for up to 12,000sqm of employment floorspace.

Bexhill and Hastings are recognised spatial priorities for economic development and regeneration in the South East Local Enterprise Partnership's Strategic Economic Plan, given persistent under-performance on a range of socio-economic indicators. However, business growth and associated new employment opportunities are currently constrained by a demonstrable shortage of development land and commercial floorspace capable of meeting identified levels of demand. By unlocking capacity for up to 12,000sqm of new floorspace, Queensway Gateway Road has the potential to have a significant impact on local economic growth prospects and the delivery of new local employment.

The objectives of the project are therefore:

1. To support the development and employment potential of the Bexhill Hastings Growth Corridor;
2. To improve strategic access between the A21 and Queensway / BHLR and thereby strategic access to employment and housing sites in North Bexhill and Hastings;
3. To alleviate congestion at junctions to the A21 enabling the BHLR to perform its full potential as a driver of economic growth.

The road scheme was granted planning permission by Hastings Borough Council on 4<sup>th</sup> February 2015 (HS/14/0832).

## 1.2 Location

The scheme is located on the northern edge of Hastings with the A2100 (The West Ridge) forming a watershed and sharp boundary between a well wooded, rural landscape to the north and typical urban fringe development to the south. To the north west of the A2100/A21 junction is Beauport Park. This is an extensive area of old parkland with a mosaic of habitats including scattered remnants of ancient woodland. It is designated as a Site of Nature Conservation Interest (SNCI). The south east corner of the Park, near to Baldslow, is used as a holiday caravan park, but it is well enclosed and screened by vegetation. Residential property in the immediate area includes two listed cottages, located at the entrance to the Caravan Park.

The southern boundary of the High Weald Area of Outstanding Natural Beauty (AONB) runs along the A2100 to the west of the A21 route and to the north of the properties that front the A28 route. To the north east of the B2093 and A21 routes the land use is dominated by residential housing surrounded by areas of woodland (including a SSSI) and farm land. The West Ridge Industrial Estate dominates the land use to the south west of the A2100 and A21 routes.

<sup>1</sup> Hastings Local Plan 2011 – 2028, February 2014  
[http://www.hastings.gov.uk/environment\\_planning/planning/localplan/adoption/](http://www.hastings.gov.uk/environment_planning/planning/localplan/adoption/)



Figure 2 – Location Plan (extent of scheme)



This area includes commercial buildings, warehouses and depots. The Hollington Valley, a designated SNCI, is an area of woodland and grassland located to the west of the Industrial Estate, which descends southwards from The West Ridge and forms a “green corridor” between residential and the developed part of the industrial areas.

Despite the adjacent large scale industrial and commercial developments (The West Ridge Industrial Estate, Sainsbury’s, etc.) the landscape through this valley retains a relatively intimate character, due largely to its wooded nature and sharply undulating topography, which restricts long distance views and open vistas. The Hastings Local Plan identifies much of this area as an undeveloped part of The West Ridge Industrial Estate.

To the south east of the A21 and B2093 routes there is a mixture of residential and commercial land-use adjacent to the roads with large areas of amenity grassland at Holmhurst St Mary, which is identified in the Hastings Local Plan for major development.



### 1.3 Strategic fit

A solution for what has previously been referred to as the Baldslow junction improvement with the A21 has been at issue for many years. In 2006 the scheme was included in regional funding allocations and retained in the refreshed allocations in 2009. The original intention was to complete the improvement in parallel with the BHLR. Following delays in the project and post the May 2010 election, the previous scheme was cancelled as part of the Coalition Government's Comprehensive Spending Review. A range of alternative options have been subject to review, with the current scheme emerging as the preferred solution on grounds of value for money.

The South East Strategic Economic Plan<sup>2</sup> has identified the area to the north of Bexhill and Hastings as a Growth Corridor, referred to as the 'A21/A259 Hastings-Bexhill Growth Corridor. The area contains some of the most severe deprivation in the SELEP area, but also major opportunity sites to accommodate growth in employment and housing.

The soon to be completed Bexhill Hastings Link Road forms the core infrastructure for the Growth Corridor, with Queensway Gateway Road providing a critical link to the A21 and opening up specific development sites north of Hastings, and the North Bexhill Access Road performing a similar function in opening up development sites in North Bexhill. This corridor has suffered from severe congestion which has inhibited growth. The strategic rationale for Queensway Gateway Road is therefore linked directly to the delivery of the growth objectives of the BHLR and the Growth Corridor.

The SEP highlights the significant development sites north of Hastings, with Queensway Gateway Road identified as having potential to enable delivery of a significant proportion of the employment growth anticipated from the Growth Corridor.

The scheme supports the delivery of a range of spatial planning and economic development priorities promoted by East Sussex County Council, Hastings Borough Council and Rother District Council. The Hastings Planning Strategy promotes an efficient and effective transport system, referring specifically to securing improvements such as the BHLR and improved links to the A21 and A259 in Policy FA1 and T1 / T2. In terms of employment growth, the Hastings Planning Strategy indicates that up to 70,000sqm of new employment floorspace is required up to 2028.

### 1.4 Expected positive impact of the scheme

The now approved Planning Application and accompanying Environmental Impact Assessment for the Queensway Gateway Road included an analysis of potential positive economic impacts arising from the investment, including transport benefits and wider contribution to growth outcomes in the Growth Corridor, particularly in terms of employment growth opportunities. The figures below reflect the net additional employment impacts estimated in that assessment.

Projected Economic Growth Outputs										
	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/25	Post 2025	Total
Jobs					150	150	150	150	600	900
Homes										

<sup>2</sup> South East LEP Strategic Economic Plan, March 2014 - <http://southeastlep.com/about-us/activities/our-growth-deal-and-strategic-economic-plan>



### **1.5 Wider benefits**

The above employment impacts relate specifically to the sites directly accessed by Queensway Gateway Road. At a wider level, the improved connectivity achieved between the BHLR and the A21 will significantly enhance the development potential of other sites in the Growth Corridor, notably the major employment and housing growth sites in North Queensway and at North Bexhill.

These sites are being brought forward as part of a coordinated growth strategy, with the BHLR providing the strategic connectivity between Bexhill and Hastings / A21, and other access roads from the BHLR being brought forward to enable development. Without the Queensway Gateway Road the connectivity of the North Bexhill sites to the strategic road network will be constrained and the wider Growth Corridor objectives set out in the SEP could be compromised.

The Rother District Local Plan<sup>3</sup> has identified capacity in North Bexhill for at least 60,000sqm of new employment floorspace and overall housing growth of 3,100 homes up to 2028. The improved connectivity of North Bexhill to the A21 via the Bexhill Hastings Link Road and the Queensway Gateway Road will contribute directly to supporting the delivery of these major growth outputs, in line with the objectives of the Growth Corridor as set out in the SEP.

### **1.6 Expected negative impact of the scheme**

The scheme has been the subject of a full Environmental Impact Assessment which was submitted as part of the planning application. The scope of the EIA was accepted by the Local Planning Authority in support of the scheme, which received planning permission on 4<sup>th</sup> February 2015. Some moderate impacts were highlighted in relation to ecological factors, landscape and visual impacts are considered to be localised and mitigated in the design. Potential impacts on hydrology and geology have also been mitigated through design measures. Overall, the scheme was assessed as having a beneficial effect on local communities.

A key constraint on the alignment options for a link to the A21 is the High Weald AONB, the southern boundary of which runs close to The Ridge West. This was a key consideration in looking at alternative alignments to the north of The Ride which would have encroached on the AONB. Impacts on ecological and landscape receptors to the south have been effectively mitigated through the design process, which has been fully accepted and planning permission confirmed.

<sup>3</sup> Rother Local Plan 2011 – 2028, September 2014 - <http://www.rother.gov.uk/corestrategy>



## 2. Options

### 2.1 Context – Baldslow scheme<sup>4</sup>

This is a variation on the southern route options which avoids the need to cross the Hollington Stream valley. The eastern half of the new link would be very similar but it would then turn north and link up with The Ridge West at a junction halfway between the Queensway and Junction Road junctions. It would include new accesses to existing and allocated employment land to the east and west of it.

Originally the Baldslow junction improvement formed an integral part of the Bexhill Bypass proposals. The July 2001 decision of the Secretary of State on the Access to Hastings Study, which cancelled the bypasses, also announced that the Highways Agency was being “*asked to prepare a draft programme of work to identify possible measures*” for the A21 as a whole.

The Government’s instruction led to the Highways Agency’s A21 South of Pembury Study and, as part of that, two stakeholder workshops were held in 2002. At the workshops, East Sussex authorities urged that a Baldslow improvement should be included among measures brought forward for the A21.

The Secretary of State’s decision on the South Coast Multi Modal Study in July 2003 had a bearing on the Baldslow issue. His decision not only asked ESCC to develop proposals for the BHLR, it also asked the Highways Agency to “*liaise with the East Sussex County Council in addressing issues of access between the Link Road and the A21*”. Hyder Consulting were commissioned by the Highways Agency to undertake this work.

### 2.2 Option Development and Assessment

In February 2004, the Highways Agency used the County Council’s Link Road route options consultation to display, for public reaction, options for the Baldslow junction improvement. Nearly 80% favoured an improvement, **with option 2A being most popular, a southern route which is comparable to the alignment of the Queensway Gateway Road, currently being promoted by Seachange Sussex.**

In September 2005, a stakeholder workshop was held which looked at three options – a northern route, a southern route with a bridge, and a southern route with an embankment. Two years later, in September 2007 a second workshop was held. This time, six options were considered:

- *Options 1A/1B - two northern variants;*
  - Option 1A - a link from the northern end of Queensway B2092 through Beauport Park to join with the A21 opposite the present A28 Westfield Lane junction and widening of the A21 north of The Ridge West A2100 bridge to create additional approach lanes either side of the improved A21/A28 Westfield Lane junction It would be in cutting and involve extensive earthworks.
  - Option 1B - Same as Option 1A except the A21 improvements would be more extensive.
- *Options 2A/2B - two southern variants;*
  - 2A - Provides a new link from Queensway, to the south of its junction with The Ridge

<sup>4</sup> Source for sections 2.1 & 2.2: Report for East Sussex County Council - Baldslow Improvement Position Statement May 2013 (Paul Adams)



West, to join the A21 at a new junction just north of the Sainsbury's store, crossing the Hollington Stream valley on a viaduct.

- 2B - Same as Option 2A except the road would cross the Hollington Stream valley on an embankment with a short bridge across the stream.
- *Option 3 - a hybrid on-line/off-line route;*  
A variation on the southern route options which avoided the need to cross the Hollington Stream valley. The eastern half of the new link would be very similar but it would then turn north and link up with The Ridge West at a junction halfway between the Queensway and Junction Road junctions. It would include new accesses to existing and allocated employment land to the east and west of it.
- *Option 4 - On-line improvements.*  
Comprised improvements to the A21 between Whitworth Road and north of the A21/A28 Westfield Lane junction and improvements to junctions on the A21 and The Ridge with limited widening of The Ridge West carriageway to allow for turning movements

The aim was, from these options, to arrive at a Preferred Route to recommend to the Minister to be taken forward to publishing Orders. A technical appraisal report was produced by Hyder Consulting in December 2007 which brought together the findings of the workshop with other work on environmental assessment, traffic forecasting and modelling, and economic appraisal which had already been carried out.

The Highways Agency's original consultants, Hyder, were replaced by Mott MacDonald, who were asked to review the work carried out to date on the northern and southern route options (**Options 3 and 4 identified above were sifted out and not reviewed as they were considered to have failed to meet the project objectives**) and undertake further environmental assessment work.

Mott MacDonald reported back in January 2009 and **concluded that the Option 2 routes (southern routes which are comparable to the alignment of the Queensway Gateway Road) scored the most strongly** compared to the Option 1 routes. Taking into account both the Hyder and Mott MacDonald reports, Option 2 was the best route with the least impact for the majority of the specialist environmental topics and therefore the Option 1 routes were sifted from the process.

However, whilst the Option 2 routes were the most preferable they were costed at between £33 - 44m, Mott MacDonald asked to look again at a more cost effective and affordable solution. This work did not progress far enough to allow a Preferred Route announcement to be achieved before the general election in May 2010. Later in that year, in October 2010, as a consequence of the National Spending Review, the Baldslow scheme were formally cancelled because it was unlikely that it would be delivered in that or the next spending review period (no earlier than 2019).

### **2.3 Review of former Baldslow scheme and identification of preferred option for Queensway Gateway Road**

In 2013. Seachange Sussex – a not for profit regeneration company – reviewed the previous Hyder and Mott MacDonald designs and costs for the Baldslow scheme and believed that a southern route, which would open up the 'North Queensway' employment sites allocated in the Hastings Local Plan: Planning Strategy, could be constructed at much lower cost than the previous estimates.

Over the last 18 months, Seachange Sussex have re-examined the previous designs for the Baldslow southern route options in order to develop an alignment for the 'Queensway Gateway Road' which



would open up these allocated employment sites but in doing so, minimised the cost and reduced the impact on the landscape.

In rationalising the design for the Queensway Gateway Road and seeking to deliver a cost effective and affordable solution, the previous option 2A design was seen as an unnecessarily expensive way of crossing the valley as its alignment ran against the contours rather than with them – necessitating a very expensive viaduct.

Therefore by refining the previously developed Option 2B design (which put the road on embankment) to provide a more sweeping alignment from Queensway which uses the contours of the land (as Queensway itself begins to climb steeply towards The Ridge) removed the need for a viaduct and minimised the amount of embankment works required.

## 2.4 Recommended Option

**A refined version of Hyder's/Mott MacDonald's Option 2B for the former Baldslow scheme is the recommended option and the subject of this business case.** This refined design for the now known Queensway Gateway Road was the subject of a planning permission (HS/14/0832) granted by Hastings Borough Council on 4th February 2015.

*Figure 3 – Queensway Gateway Road alignment*

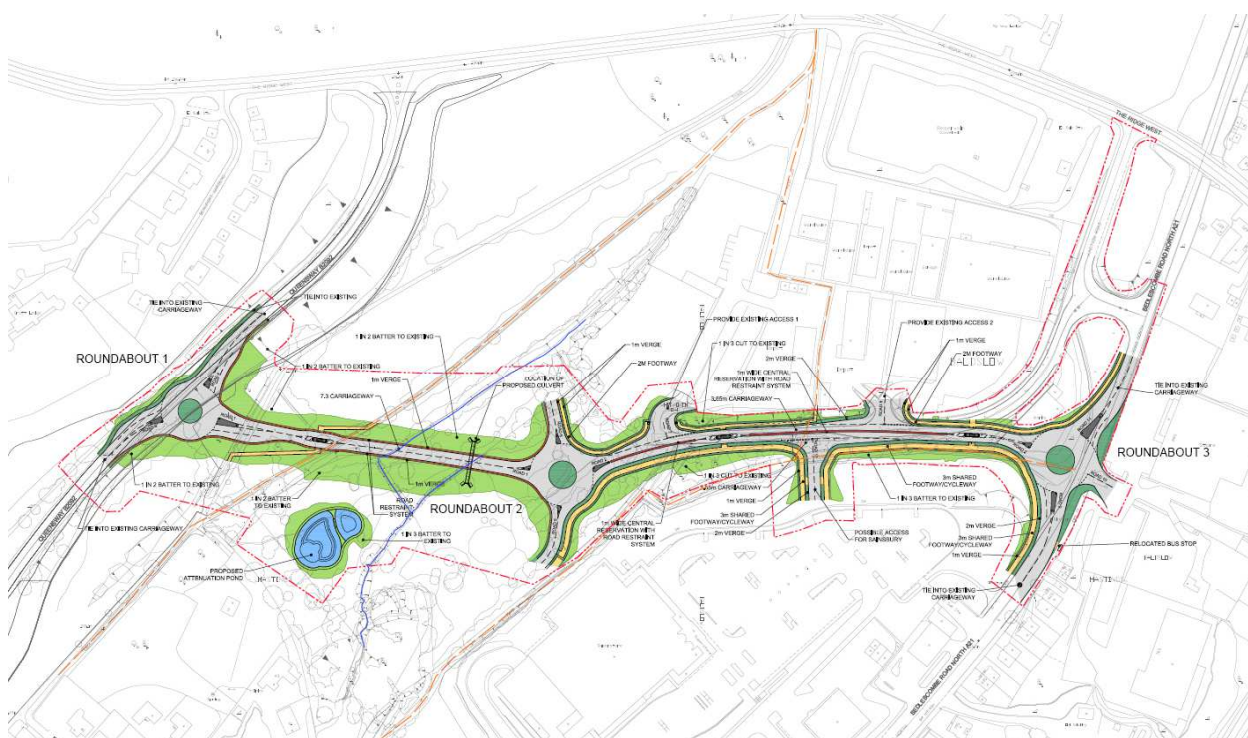




Figure 4 – Queensway Gateway Masterplan



## QUEENSWAY GATEWAY- LANDSCAPE MASTERPLAN

The Hyder and Mott MacDonald option development and assessment work undertaken between 2004 and 2009 concluded that the southern route options scored most strongly in terms of value for money.

As highlighted above, Seachange Sussex reviewed the previous Hyder and Mott MacDonald designs and costs and believed that a southern route, which would open up the North Queensway employment sites allocated in the Hastings Local Plan: Planning Strategy, could be constructed at much lower cost than the previous estimates and would offer more potential to manage traffic movements and discourage increased use of The Ridge.

The previous option 2A design required a very expensive viaduct to cross the Hollington Stream valley and was discounted because of this overly expensive and over-engineered solution.

Therefore the preferred and approved design for the Queensway Gateway Road refines the previously developed Option 2B design (which puts the road on embankment) by:

- providing a more sweeping alignment from Queensway which uses the contours of the land (as Queensway itself begins to climb steeply towards The Ridge) and thereby removes the need for a viaduct;
- minimising the amount of embankment works required;
- utilising the existing alignment of Whitworth Road (as opposed to running the road parallel to it) for the eastern section of the road.



Through these amendments to the previously sifted designs developed by the Highways Agency, the recommended option for the Queensway Gateway Road is a cost effective and affordable solution, which has received planning permission, and which will unlock the allocated employment sites at North Queensway in Hastings.

## 2.5 Constraints prior to project commencement

The scheme based on option 2B now has full planning permission. The majority of the land for the scheme is in public ownership and there is ongoing engagement with the principal third party interest (a tenant of the local authority) in order to progress their relocation – this is programmed for the second year of the funding profile and will not restrict commencement of the scheme.

Other studies required as part of predevelopment is for an Archaeological survey and a final ground condition survey together with designing protection for drainage and sewerage infrastructure crossing the site.

## 2.6 Consultations<sup>5</sup>

Throughout the project's development, from the option development undertaken on behalf of the Highways Agency for the former Baldslow scheme through to the planning application submitted for the road now known as the Queensway Gateway Road, there has been extensive consultation with stakeholders. This engagement includes:

### A21 South of Pembury Studies

- March 2002, A21 South of Pembury Study: Value Management Workshop

Attended by representatives from Highways Agency, Hyder, ESCC, Kent CC Hastings BC, Rother DC and Tunbridge Wells BC.

Among aspirations of participants recorded by the workshop was '*more work to look at short and long term schemes*' for Baldslow and '*at Hastings seek optimum improvement to A21 approach to Hastings reflecting prevailing circumstances; if a link to Bexhill is created (Queensway) a compatible solution is required*'

The workshop looked at problems on the route and possible interventions – preferred interventions were then developed by Hyder for consideration at a second workshop.

- April 2002, A21 South of Pembury Study: Second Value Management Workshop

*Attended by same representatives as before; looked at improvement options along the route prepared by consultants.*

### Development of Baldslow Improvement options

- February 2004, Public consultation on Bexhill Hastings Link Road route options

Following the Secretary of State's decision on the South Coast Multi-Modal Study in July 2003 and his invitation for '*the Highways Agency to liaise with ESCC and the SEBs in addressing the issues of access between the Link Road and the A21*', the Highways Agency provided

<sup>5</sup> Sources: Report for East Sussex County Council - Baldslow Improvement Position Statement May 2013 (Paul Adams); Queensway Gateway Road Design and Access Statement, October 2014 (Campbell Reith).



information on preliminary ideas for the Baldslow Link and sought comments from the public.

Three options were displayed:

- Option 1 - Northern route
- Option 2a – southern route with new link to The Ridge midway between Queensway and A21 & dualling of A21 from Westfield Lane to the new link.
- Option 2b - as 2a but without link to The Ridge & simple link into Whitworth Road

Of the 1,100 questionnaires, 78% supported an improvement with Option 2a (49%) being the most popular.

- September 2005, A21 Baldslow to Queensway Link Stakeholder Workshop

Attended by representatives of Hyder, Highways Agency, GOSE, Environment Agency, High Weald AONB unit, Hastings and Rother Councils, Sea Space. Three options were considered:

- Option 1 - Northern route
- Option 2a – southern route with bridge
- Option 2b – southern route without bridge

Detailed comments on pro's and con's of the three routes were collected. Views of the SEBs to be sought and then submission for 'preferred route' announcement.

- September 2007, A21 Baldslow Junction Improvements Submission for PAG Workshop

Attended by representatives from Hyder, Mott MacDonald, Highways Agency, GOSE, Environment Agency, High Weald AONB, ESCC, Hastings BC, Rother DC and Sea Space.

Second Project Advisory Group (following the first held in September 2005) to discuss work carried out since then and seek a consensus view on a preferred route which would then be included in the report to the Minister for a preferred route announcement.

The options considered were:

- Option 1A – northern route with A21 improvements around Westfield Lane junction
- Option 1B – northern route with more extensive A21 improvements south beyond Junction Road
- Option 2A – southern route with bridge; A21 improvements similar to 1B
- Option 2B – southern route on embankment; A21 improvements similar to 1B
- Option 3 – new link from A21 as southern route but then turns north to join The Ridge; A21 improvements same as 1B
- Option 4 – on line improvement; more limited improvements to the A21 between Westfield Lane junction and south of Whitworth Road and limited junction enhancements at Junction Road and The Ridge/Queensway.

## Development of Queensway Gateway Proposals and submission of Planning Application

Ahead of the submission of the planning permission in October 2014, the strategy for community engagement on the Queensway Gateway Road was to:

- explain the purpose of the scheme, and
- receive comments from stakeholders and the community involving representatives from the following groupings:
  - Local residents – especially those living nearest to the site and key community groups;
  - The business community;



- Relevant councillors and council officers;
- Approving authorities including the Local Highway Authority, Local Drainage Authority, the Environment Agency and Natural England.

These messages and the collection of feedback were achieved through both information dissemination and face-to-face consultation:

- A limited consultation event held with residents of Maplehurst Rd on the 15<sup>th</sup> September 2014;
- A public consultation 'Planning Forum' event facilitated by Hastings Borough Council held on the 24<sup>th</sup> September 2014;
- A small number of one to ones held with residents and Councillors who were unable to attend the planning forum event; and
- A briefing held for local councillors in the area of the planning application.

A report detailing the consultation approach and feedback received in relation to the proposed scheme was submitted as part of the planning application. The main themes of the comments related to:

- Approval of the job creation objective that the project would generate by unlocking the employment allocations in the Hastings Local Plan
- The residents of Maplehurst Road strongly agreed that their road is a dangerous rat-run and so they generally welcomed proposals to close it at one end, albeit some opposing views about which end it would be best to close, with roughly equal numbers favouring the north and south ends, and queries about how emergency access to the road would be provided for.
- Whilst most Maplehurst Road residents approved of the idea of closing one end some who regularly use the road as a cut-through were more concerned with the inconvenience it would cause them.
- The new road would benefit small residential roads that currently experience too much traffic.
- If closed to vehicles, keep Junction Road open for pedestrian and cycle access to enable people on Sedlescombe Road North to reach the hospital – and people living on The Ridge to reach Sainsbury's - on foot or by bike without having to use the longer loop of the Queensway Gateway Road
- Concerns about the time gap between the opening of the Link Road and the Queensway Gateway
- Dislike of plans to close Junction Road and the associated longer travel 'loop' needed to head eastwards on The Ridge
- The importance of the landscaping and the retention of as many of the native trees as possible and to ensure good screening of the road and business sites.

All these comments were considered by the Project Team and used to inform the final design development of the scheme submitted as part of the Queensway Gateway Road planning application in October 2014.



## Financial Case

### 3. Project Cost

#### 3.1 Summary and Cost Plan

The estimated capital cost of the project is £15m. This retains a significant allowance for inflation, reflecting the worst potential for pent-up price increases in a resurgent construction market, and optimism bias of 33%. There are no known financial risks that are not covered by the contingencies and optimism bias built into the cost estimate.

The scheme will not require ongoing revenue support, with future maintenance being funded by East Sussex County Council.

A cost plan for the project is at Annex I to the business case.

#### 3.2 Source of funding

Funding Source	14/15 £000	15/16 £000	16/17 £000	17/18 £000	18/19 £000	19/20 £000	20/21 £000	21/25 £000	Post 2025
SE LEP		10,000	5,000						
SE FUND									
Local Contribution Total (leverage)									
Other Funding									
<b>TOTAL FUNDING</b>		<b>10,000</b>	<b>5,000</b>						

#### 3.3 Viability

The partners have access to real-time experience of tendered prices, material costs, utility diversions, sub-contractor availability etc. based on other recent infrastructure projects, including the North Bexhill Gateway Road (being delivered by Seachange Sussex) and the Bexhill Hastings Link Road (being delivered by East Sussex County Council). The budget cost estimates for the Queensway scheme build on the generic cost estimates produced by Mott Macdonald in 2013 and the full scheme design produced by civil engineers Campbell Reith Hill and Dadswells cost consultants. Pre-development costs are now fixed and enabling works including ecological mitigation measures are tendered.

The attached cost forecast has allowances for optimism bias and inflation but do not include ongoing maintenance requirements as the road will be adopted by East Sussex C.C. immediately after the defects period.

#### 3.4 Contribution to alternative funding mechanism

Not applicable



## Economic Case

### 4. Benefit Cost Ratio – assessment of the value for money

#### 4.1 Context

This section outlines the history of, and explains the procedures used in, the economic assessment of the Queensway Gateway Road scheme and summarises the results obtained from the analysis, providing reference points to more detailed reports where this is relevant.

The existing local road network comprises a complex system of roads and junctions set out in a relatively compact area with steep north- and south-facing inclines across a prominent east-west ridge. The speed limit varies from 30mph on the B2093 The Ridge (East), 40mph on the A21 Sedlescombe Road North and National Speed Limit on the B2092 Queensway. In addition to providing site access, the proposed Queensway Gateway Road (QGR) will also function as a new or re-assignment route for traffic travelling between the Link Road, the A28, the A2100 and the A21.

#### 4.2 Options appraised

The options to address the scheme objectives have developed over a number of years, starting initially in 2000 with the Access to Hastings Multi Modal Study (MMS), through different governance arrangements (including the winding up of the Regional Transport Board following the 2010 General Election), using slightly different appraisal guidance, and under different scheme sponsors.

The case for a new link road between Bexhill and Hastings is driven by the need to support economic growth across East Sussex through opening up access to land for housing, business developments and employment opportunities.

The most recent Position Statement produced for ESCC, most clearly sets out the chronology of option development (also referred to in the Options section of the Strategic Case) and the consultation process undertaken (also referred to in the Consultation section of the Strategic Case) throughout the life of the project<sup>6</sup>. In 2004, the Highways Agency used ESCC's consultation on Link Road route options to display, for public reaction, options for the Baldslow junction improvement. Nearly 80% favoured an improvement, with a variation of the southern route being the most popular. In September 2005, a stakeholder workshop was held which looked at three options – a northern route (1), a southern route with a bridge (2A), and a southern route with an embankment (2B).

From 2005 to 2007, Hyder Consulting UK Ltd, on behalf of the Highways Agency (HA)<sup>7</sup>, investigated ways to resolve congestion at the junction of the A21, A28 and the A2100 (The Ridge) in the north of Hastings. The scheme, known as the A21 Baldslow Junction-Queensway Link Road, or Baldslow Link Road (BLR), included a link between the B2092 Queensway and the A21 to facilitate movement of traffic between the BHLR and the A21. This is now referred to as the QGR.

A total of six options were developed and three of them were consulted on with stakeholders. The proposed QGR was to complement the BHLR by accommodating increased traffic flows from the BHLR accessing the town via the B2092 Queensway, the A21, the A28 and the A2100 The Ridge.

<sup>6</sup> Report for East Sussex County Council - Baldslow Improvement Position Statement May 2013 (Paul Adams)

<sup>7</sup> A21 South of Pembury Study – A21 Baldslow Junction Improvements – TAR December 2007 (Hyder)



In September 2007 a second workshop was held. This time, six options were considered:

- Options 1A/1B - two northern variants (the same link with differing junction arrangements);
- Options 2A/2B - two southern variants (2A with a bridge, 2A without);
- Option 3 – a hybrid on-line/off-line route; and
- Option 4 – On-line improvements.

The aim was, from these, to arrive at a Preferred Route to recommend to the Minister to be taken forward to publishing Orders.

A HA Technical Appraisal Report (TAR) was produced in December 2007<sup>2</sup> which brought together the findings of the workshop with other work on environmental assessment, traffic forecasting and modelling, and economic appraisal which had already been carried out. The report concluded that:

- Option 4 did not offer a positive return on investment nor any strategic improvement;
- Option 3 did not offer a positive return on investment and increased travel distance and had some environmental impact;
- Options 2A and 2B offered positive returns with BCRs of 2.33 and 2.73 respectively. They offered strategic improvements but had environmental impact on the Hollington Valley especially the embankment option (2B) (Each rated adverse for land-use policy and moderately adverse biodiversity; bridge: slight adverse and embankment moderate adverse for landscape); and
- Options 1A and 1B offered best returns of 5.12 and 4.22 BCR respectively. They provided the best strategic improvement but were the only options with significant encroachment into the AONB (rated adverse for land-use policy and moderately adverse for landscape and biodiversity).

Soon after this, the HA's original consultants, Hyder, were replaced by Mott MacDonald. They were asked to review work carried out by Hyder (engineering design, cost estimates and new on line options) and among other things concluded some additional environmental assessment work in January 2009<sup>8</sup> which concluded that the Option 2 routes scored the most strongly and remained the preferred option due to them having the least impact for the majority of the specialist environmental topics.

Even with the Southern Routes (2A/B) performing best consistently through the number of assessments completed, it was concluded they would only be worth pursuing if a way could be found to deliver it at substantially less than previous estimates have indicated (c £20m). The stated priority (in the 2013 Position Statement) was to look for a solution which can be implemented within a realistic timetable taking into account deliverability and affordability.

## 4.2 Base Model Development

Full detail of the appraisal process is incorporated in the Hyder 2007 TAR, including a number of supporting documents produced by Hyder:

- Traffic Forecasting Report – GD00496/RT/100/Rev B1
- Local Model Validation Report – GD00496/RT/098/Rev A2
- Economic Appraisal Report – GD00496/RT/101/Rev D
- Scheme Cost Estimate Report – GD00496/RT/088/Rev D

<sup>8</sup> A21 Bal dslow Link Road – HA Commission 2007-2009 Technical Information – 2009 (Mott Macdonald)



The base year traffic model was developed using a combination of two existing models:

- The East Sussex County Council Model (developed to assess the impact of opening the Bexhill – Hastings Link Road); and
- The A21 South of Pembury Model developed for the Highways Agency

The A21 model and the ESCC model were both developed using SATURN 10.3, which was compatible with the current version (at the time of model development) of 10.6.14. SATURN (version 10.6.14) has been used for the scheme model development as it was a well-established package widely used for this type of study.

The matrices from the two source models also had to be merged. As the matrices from these models had already been established with the traffic flows calibrated and validated, it meant having to update them with the latest survey data after their merger.

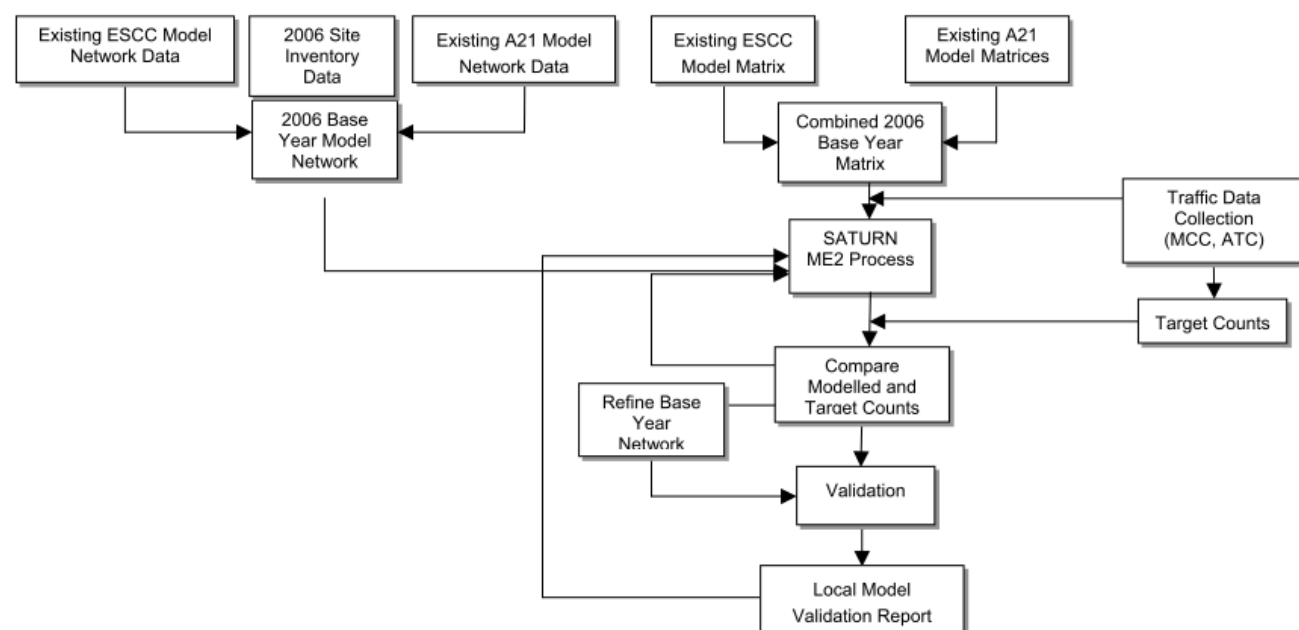
The validation for the model for 2006 traffic flows is described in detail in the LMVR identified above. Traffic data used to form the base year model included:

- Automatic Traffic Counts during 2005 and 2006 at six sites relevant to the scheme;
- Journey Time Surveys over 8 key journey sections; and
- Manual Classified Counts for all turning movements over a 12 hour period (07:00 until 19:00) by vehicle class, at three junctions on the A21 and A2100.

The base year model was developed to provide a traffic forecasting model, with forecast years of 2012 and 2027, incorporating developments expected to be brought forward during those periods. Development trips have been distributed using a gravity model to estimate their likely impact on the A21 Baldslow schemes in the forecast years.

A variable demand approach was taken using DIADEM (Version 2.1), which alters demand response according to varying levels of congestion on the network in accordance with WebTAG 3.10.1. This is due primarily to the opening the Bexhill Hastings Link Road and new development of up to 6,000 dwellings impacting significantly on levels of demand and resultant travel costs.

*Figure 5 – Model Structure and Overall Approach*





The detailed comparisons of modelled and observed flows for the AM, Inter and PM Peak hours are shown in Tables A.1, A.2 and A.3 within the LMVR. They show that the modelled results for AM, Inter and PM Peak hours satisfy the DMRB criteria and are acceptable. Table 1 below summarises the validation results and shows that for all three time periods, more than the minimum 85% of links satisfy the flow criteria as well as the GEH criteria.

*Table 1 – Summary of GEH Statistics*

Time Period	% of target counts passing test	
	GEH	Flows
AM peak	93	93
Inter Peak	100	100
PM peak	93	93

Hyder demonstrated in the LMVR that the validation results for the three time periods showed a statistically good correlation between observed and modelled link flows, turning flows and journey times, meeting the requirements set out in DMRB Volume 12. The validated model was therefore regarded as sufficiently robust to forecast the future traffic growth and evaluate the traffic impacts of proposed improvement schemes.

### 4.3 Future Forecasting

The impacts of the proposed A21 Baldslow Junction Improvements scheme have been assessed for both Do-Minimum and Do-Something networks. The forecast assignments were carried out on the basis of a planned scheme opening of 2012 and a design year 15 years after the scheme opening in 2027.

Do-Minimum networks were also used in the analysis based on the following improvement assumptions that were valid at the time:

- Do-Minimum 2012 – Includes the propose Bexhill to Hastings Link Road to relieve congestion on the A259
- Do-Minimum 2027 – As Do-Min 2012 plus the inclusion of an off line dual carriageway from Kipping's Cross to Lamberhurst and improvements to the A21 between Flimwell and Robertsbridge. (These schemes were both subsequently dropped in the 2010 Comprehensive Spending Review).

The new signalised junctions were initially optimised within SATURN. Following the demand modelling and assignment process, the signal settings were optimised using LINSIG and incorporated in the network coding for the final demand modelling and assignment process.

A total of 108 assignment runs were undertaken, corresponding to the various combinations of forecast years, Time Periods, traffic growth assumptions, and network scenarios. The forecast models were produced in accordance with DMRB Volume 12a and WebTAG Guidance Unit 3.10 valid at the time of model production.

Detailed forecast results for the scenarios are included in section 4.3.1 of the 2007 Hyder Report. Journey times were analysed on the routes between the A21 and Queensway, along the A21, along the A28-A21 at Focus Junction and The Ridge. The analysis indicated that journey times on the routes increases appreciably between the base year and do-minimum adding to the congestion experienced



in the base year.

With the schemes, the journey times drop substantially for routes between the ridge and A21, whilst they increase marginally on the A21 and The Ridge. The increase in journey times is primarily due to the increase in flow drawn in by the scheme as well as signalising junctions on the A21 that cause inherent delays.

#### 4.4 Main Assumptions

The main assumptions are:

- Modelled time periods for the forecast are an AM Peak Hour (08:00 to 09:00), an average Inter-Peak Hour and a PM Peak Hour (17:00-18:00);
- Future year networks were prepared for each of these assessment years:
  - A planned scheme opening year of 2012; and
  - A design year 15 years after the scheme opening year, i.e. 2027
- TEMPRO (version 5.3) was used as the source for the calculation of forecast traffic growth factors for cars;
- The central growth rates from TEMPRO were used to account for the factors of income growth and fuel cost change in the traffic forecasting process;
- New developments were modelled separately but controlled to total trips determined by TEMPRO forecast rates;
- The most likely development scenario, as agreed by ESCC Planning on 6th September 2006, was used as the basis for comparing the development schedule for the forecast model; and
- Goods vehicle forecasts were developed from the National Road Traffic Forecasts (NRTF 1997).

The checks undertaken by Hyder demonstrate the model displays a high degree of convergence, in conformance with DMRB requirements, for over 95% of the runs carried out. This indicates that differences between the Do-Minimum and Do-Something scenarios have not been distorted by oscillations in the model.

#### 4.5 Scheme Parameters

The Scheme parameters are largely determined by the parameters used in the forecasting model, i.e.

- First Year 2012 (scheme opening year)
- Horizon Year 2071 (60-year appraisal period)
- Modelled Years 2012 (scheme opening year); and 2027 (design year)
- Current year 2007 (for appraisal purposes)
- Traffic growth has been accounted for within TUBA up to the year 2027 by automatic interpolation between modelled years. After 2027, no further traffic growth is assumed, and the economic results are based on constant annual traffic figures from this year.

#### 4.6 Sensitivity Tests

Sensitivity tests were carried out on the model with improved convergence parameters to assess the impact on link flows around the scheme area. A comparison in link flows between the models for 2027 AM and PM indicate insignificant variation in flows in both the AM and PM models demonstrating the model is robust in its results; and varying the convergence parameters does not alter the assignment results around the scheme.

It was therefore concluded that the forecast model provided a suitable basis to undertake environmental, economic and operational assessments.



## 5. Economic Appraisal

### 5.1 Introduction

The appraisal of schemes set out in the Forecasting Report was undertaken in line with guidance set out in WebTAG 3, following the principles of the New Approach to Appraisal (NATA) in place at the time of assessment, incorporating a conventional cost-benefit analysis.

Transport Economic Efficiency Analysis was undertaken using the latest version of TUBA (which was version 1.7a at the time). TUBA does not calculate benefits due to changes in accident savings and this element of scheme benefits and costs has been assessed separately, using COBA software.

The trip matrices, along with the corresponding time and distance skim matrices (comprising the weighted averages of times and distances for each route used for trips between origin and destination pairs) are used as traffic data inputs to TUBA. The matrices were output from the traffic models using the software functions designed for this purpose.

The TUBA Standard Economics File was used in the analysis, without alteration. A copy is included in Appendix B of the Hyder EAR<sup>9</sup> for reference. The benefits/dis-benefits calculated by TUBA are converted into an estimate of annual benefits/dis-benefits using annualisation factors.

### 5.2 Scheme Costs

The scheme costs for the A21 Baldslow Junction Improvements Scheme options were obtained from Annex 1 of the Scheme Cost Estimate Report<sup>10</sup> and assembled in the format required for use in TUBA. This involved the inclusion of Risk and Optimism Bias values and allowance for future differential inflation rates (construction and general) in accordance with WebTAG unit 3.5.9 using the forecast inflation profiles specified in the Annex 1. TUBA converts the values to present value year prices (2002 at the time of appraisal) using the appropriate Retail Prices Index (RPI). The scheme costs, including Construction, Land, Preparation and Supervision have been calculated in 2006 second-quarter (Q2) prices for which the RPI was 197.6.

Table 2 - Option 2B: Undiscounted Cost Profile (as per Mott Macdonald review)

Financial Year	Costs in £'000 (cost base year and quarter)			
	Construction (2006/Q2)	Land (2006/Q2)	Preparation (2006/Q2)	Supervision (2006/Q2)
2007	£ -	£ -	£ -	£ -
2008	£ -	£ -	£ 978	£ -
2009	£ 832	£ 1,974	£ -	£ 1,677
2010	£ 11,543	£ 658	£ -	£ 2,206
2011	£ 8,052	£ -	£ -	£ 1,507
2012	£ 1,479	£ 29	£ -	£ 576
2013	£ -	£ 9	£ -	£ 103
2014	£ -	£ -	£ -	£ -
<b>TOTAL</b>	<b>£ 21,906</b>	<b>£ 2,670</b>	<b>£ 978</b>	<b>£ 6,069</b>

<sup>9</sup> Hyder Economic Appraisal Report – GD00496/RT/101/Rev D

<sup>10</sup> Hyder Scheme Cost Estimate Report – GD00496/RT/088/Rev D



TUBA is run separately for each scheme option and for every traffic growth scenario. As a result, 18 TUBA runs were undertaken in this study – six scheme option runs per traffic growth scenario.

### 5.3 TUBA Results and Analysis

A summary of the economic performance of the preferred A21 scheme options in the 'Most Likely' traffic growth scenario is presented in Tables 3-5 below

The TEE table (Table 3) shows the user benefits/dis-benefits expected as a result of constructing the preferred scheme option compared to retaining existing A21 and other associated roads at Baldslow. The total of the items shown in this table constitute the Present Value of Benefits (PVB) of the scheme.

Table 3 – Transport Economic Efficiency (TEE) Table (Most Likely Traffic Growth Scenario)

<b>Consumers</b>		<b>ALL MODES TOTAL</b>
<b>User benefits</b>		
Travel time		£33,900
Vehicle operating costs		£494
User charges		£0
During Construction & Maintenance		£0
<b>NET CONSUMER BENEFITS</b>		£34,394
<b>Business</b>		
<b>User benefits</b>		
Travel time		£30,241
Vehicle operating costs		£1,900
User charges		£0
During Construction & Maintenance		£0
<b>Subtotal</b>		£32,141
<b>Private sector provider impacts</b>		
Revenue		£0
Operating costs		£0
Investments costs		£0
Grant/subsidy		£0
<b>Subtotal</b>		£0
<b>Other business impact</b>		
Developer contributions		£0
<b>NET BUSINESS IMPACT</b>		£32,141
<b>TOTAL</b>		
Present Value of Transport Economic Efficiency Benefits (PVB)		£65,535



The detail of how monetised benefits are calculated are set out in the Hyder EAR<sup>11</sup> as follows:

- Section 2 – User Benefits;
- Section 3 – Accident Benefits;
- Section 4 – Impacts of Construction; and
- Section 5 – Noise Assessment.

Public sector costs and revenues, split between local and central government, are presented in the Public Accounts (Table 4). The total of the items shown in this table constitute the Present Value of Cost (PVC).

The TEE and Public Accounts tables are brought together in the Analysis of Monetised Costs and Benefits (AMCB) table. Other monetised costs and benefits included are those of accident savings, monetised value of carbon emissions analysis, and the result of the noise assessment.

*Table 4 – Public Accounts (PA) Table (Most Likely Traffic Growth Scenario)*

	<b>ALL MODES TOTAL</b>
<b>Local Government Funding</b>	
Revenue	£0
Operating costs	£0
Investment costs	£0
Developer and Other Contributions	£0
Grant/Subsidy Payments	£0
<b>NET IMPACT</b>	<b>£0</b>
<b>Central Government Funding</b>	
Revenue	£0
Operating costs	£0
Investment costs	£25,689
Developer and Other Contributions	£0
Grant/Subsidy Payments	£0
Indirect Tax Revenues	£287
<b>NET IMPACT</b>	<b>£25,976</b>
<b>TOTAL Present Value of Cost</b>	<b>£25,976</b>

The AMCB table (Table 5) presents the results of the calculations of Net Present Value (NPV) and Benefit-Cost Ratio (BCR) for the improvement scheme

<sup>11</sup> Hyder Economic Appraisal Report – GD00496/RT/101/Rev D



Table 5 – Analysis of Monetised Costs (AMCB) and Benefits (Most Likely Traffic Growth Scenario)

**Non-Exchequer Impacts**

Consumer User Benefits	£34,394
Business User Benefits	£32,141
Private Sector Provider Impacts	£0
Other Business Impacts	£0

**Accident Benefits**

£3,801

**Carbon Benefits**

£25

**Noise Benefits**

£315

**Net Present Value of Benefits (PVB)**

£70,361

**Local Government Funding**

£0

**Central Government Funding**

£25,976

**Net Present Value of Costs (PVC)**

£25,976

**OVERALL IMPACTS****Net Present Value (NPV)**

£44,385

**Indicative Benefits to Cost Ratio****2.70****Appraisal Period****2012 to 2071****5.4 Other TAG Sub Objectives****Reliability**

Travellers on highway networks are expected to be aware of the average journey time for their chosen journey, which includes variations such as different traffic conditions at different times of the day. However, it is not always feasible to derive a monetised benefit value for road schemes where the network reliability suffers high level of day to day unpredictability, as in the case of this study, rather than incident occurrence.

In accordance with WebTAG Unit 3.5.7<sup>12</sup>, a measure of such (un)reliability is thus indicated by the “stress” on links, or link saturations (volume/capacity), when reliability of journey times is considered to decline with flows approaching capacity

The assessment was conducted on the A21 south of The Ridge as old route and the new route as provided by the scheme options in the ‘Most Likely’ traffic growth scenario, for year 2012. The overall assessment results show there is a marginally positive effect on reliability from Option 2B. However, the values are very small and the effect on reliability should be considered neutral.

<sup>12</sup> TAG Unit 3.5.7: The Reliability Sub-Objective, DfT, June 2003



## 5.5 Sensitivity Testing

**Low/High Traffic Growth** - Sensitivity Tests have been carried out for the six scheme options using Low and High traffic growth rates. The key figures summarising the economic performance of the six scheme options in the Low traffic growth scenario are presented in the Hyder EAR<sup>7</sup> at Tables 2.11 and 2.12. As the schemes themselves are unchanged in each of the growth sensitivity tests, as could be expected, the corresponding benefits/disbenefits are either lower in the low growth or higher in the high growth scenario. A change in the Present Value of Costs (PVC) is experienced due to the change in indirect taxation revenue (i.e. not a change in scheme cost).

In essence, the impact on the indicative BCR in each of the sensitivity tests is shown below in Table 6. For ease of comparison this displays the non-adjusted BCR (i.e. without wider benefits such as noise and accidents). It demonstrates that should higher levels of traffic growth occur the benefits would improve, providing a higher BCR.

*Table 6 – High and Low Growth Sensitivity Tests (Impact on indicative BCR)*

	<b>PVB</b>	<b>PVC</b>	<b>NPV</b>	<b>Non Adjusted Indicative BCR</b>
Low Growth Scenario	42,775	25,970	16,805	1.65
Likely Growth Scenario	65,535	25,976	39,559	2.52
High Growth Scenario	75,585	25,990	49,595	2.91

**Closure of Maplehurst Road** - Maplehurst Road is currently used as an alternative route to access The Ridge from A21 avoiding Junction Road. To avoid 'rat running' on Maplehurst Road, all proposed 'Do Something' options have Maplehurst Road closed to through traffic. Therefore, for road users who are using Maplehurst Road in the 'Do Minimum' scenario will experience dis-benefits if the road is closed.

Sensitivity tests have been undertaken, using the Most Likely traffic growth scenario, on Option 2B to assess the impact of closing Maplehurst Road. This was done by comparing Option 2B with a revised 'Do Minimum' model where Maplehurst Road is closed to through traffic. The analysis<sup>13</sup> showed that if Maplehurst Road were to be closed in the Do Minimum scenario, the Present Value of TEE Benefits for Option 2B would increase to £114.7m from £66.5m.

## 5.6 User Benefit Profiles

The user benefits, which are summed up in the TEE Tables, are derived throughout the 60 year economic appraisal period. The benefit stream begins with the completion of the A21 improvement in the opening year and continues through to 2071 (in the current appraisal period). The profile of the user benefits for the preferred option is shown in Figure 6.

The profiles show that benefits rise after opening until the final modelled year of 2027. From 2027 onwards the analysis assumes constant traffic levels. The decline in benefit being solely due to the

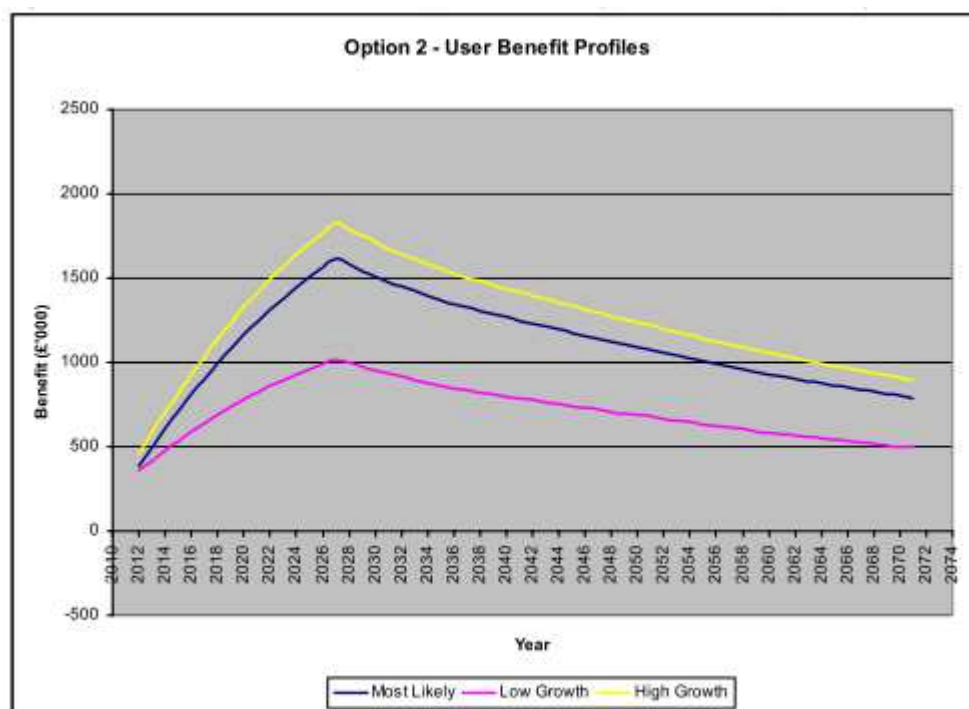
<sup>13</sup> Section 2.5.5: Hyder Economic Appraisal Report – GD00496/RT/101/Rev D



effect of discounting, the effect of which reduces the NPV of the benefits the further into the future that these are assessed. The percentage of benefits arising in the modelled period (2012 to 2027) is around 30%.

The traffic growth after 2027 is assumed to be zero and therefore any benefits (and disbenefits) arising from further growth cannot be captured in this analysis. This would imply an underestimate of benefits for the scheme that shows a positive benefit profile.

Figure 6 – User benefit Profiles (Scheme Option 2B)



## 6. Value for Money / Recommended option

### 6.1 Introduction

The proposed scheme has been selected as the preferred option on the basis of delivery and value for money considerations. Options to the north of The Ridge were rejected on grounds of impact on the AONB while on line improvement options were considered to sub-optimal in terms of transport performance benefits and inability to unlock the employment sites. The BCR in terms of transport benefits was confirmed in the Hyder / Mott MacDonald studies as a ratio of **2.7:1** based on the most likely traffic forecasts.

In 2013 Seachange Sussex reviewed the previous Hyder and Mott MacDonald designs and costs for the Baldslow scheme and believed that a southern route, which would open up the 'North Queensway' employment sites, could be constructed at much lower cost than the previous estimates.

Over the last 18 months, Seachange Sussex has re-examined the previous designs for the Baldslow southern route options in order to develop an alignment for the Queensway Gateway Road which would open up these allocated employment sites but, in doing so, minimised the cost and reduced the impact on the landscape.



In rationalising the design for the Queensway Gateway Road and seeking to deliver a cost effective and affordable solution, the previous option 2A design was seen as an unnecessarily expensive way of crossing the valley as its alignment ran against the contours rather than with them – necessitating a very expensive viaduct.

Therefore, by refining the previously developed Option 2B design (which put the road on embankment) to provide a more sweeping alignment from Queensway which uses the contours of the land (as Queensway itself begins to climb steeply towards The Ridge) removed the need for a viaduct and minimised the amount of embankment works required .

## 6.2 Recommended Option

As identified in section 2.4, a refined version of Hyder's/Mott MacDonald's Option 2B for the former Baldslow scheme is the recommended option. This refined design for the now known Queensway Gateway Road was the subject of a planning permission (HS/14/0832) given by Hastings Borough Council on 4 February 2015. With reduced capital costs for the scheme at £15m and with the prospects for higher traffic growth following the opening of the BHLR, this BCR (which the Hyder / Mott MacDonald studies identified as 2.7:1 based on most likely traffic forecasts and a higher scheme cost) will improve significantly. **This suggests that the scheme offers the potential for good value for money in transport terms alone.**

The preferred option is forecast to bring savings in journey times and vehicle operating costs. In transport economic terms, the proposed scheme would contribute benefits in excess of their costs, and hence provide positive impact to the economic efficiency sub-objectives.

The preferred scheme option is anticipated to deliver net accident savings over the 60-year evaluation period. The preferred scheme option is forecast to generate positive impact on the environmental noise objective.

In conclusion, the transport analysis suggests that the **preferred option would successfully achieve the Government's Economic and Safety objectives.**

## 6.3 Economic growth & regeneration benefits

Given that a key objective of the scheme is to contribute to the Growth Corridor, significant weight should be given to the wider economic impacts associated with the indirect jobs generated on the identified employment sites – these benefits would not be realised without the road on the currently proposed alignment and thus the delivery of the Growth Corridor as part of the SEP would be compromised. While accepting that these indirect employment benefits are dependent on private sector investment coming forward to develop the sites and take up occupation of completed floorspace, it is nevertheless a critical benefit of the scheme and should be factored into the BCR / VfM assessment.

Queensway Gateway Road will provide access into sites allocated for employment development in the Hastings Local Plan Development Management Plan. In combination these sites have an identified capacity for up to 12,000sqm of employment floorspace to be delivered by private investment. Potential employment effects from the road arise in terms of direct construction jobs during the construction contract period, and indirect employment arising from the construction of employment floorspace and the business occupancy of that floorspace delivered through future private sector investment in the identified employment sites.



Based on published BIS statistics for turnover per employee in the construction sector, **the road construction cost of £15m could support an estimated 12 FTE construction jobs** (based on 120 job years and 10 job years per FTE).

The indirect levered private sector investment in the construction of new employment floorspace, based on an estimate of **£40m of construction expenditure, could support a further 30 FTE construction jobs.**

The indirect jobs arising from occupation of the new 12,000sqm of employment floorspace is estimated on the basis of established floorspace per job benchmarks (Homes & Communities Agency, 2010) for the proposed floorspace use class. Based on 12,000sqm of B1a office floorspace, **the estimated employment capacity of the sites unlocked by the Queensway Gateway Road is 860 gross jobs. Allowing for adjustments for leakage, displacement and multiplier effects, the estimated net additional employment effects are 900 jobs.**

The monetisation of the employment benefits has been modelled based on estimates of GVA per job (derived from ONS national GVA estimates) profiled over an assumed floorspace build-out and occupation profile by the private sector. A prudent build-out profile has been assumed, from 2018/19 – 2024/25. This profile reflects market expectations for private sector investment into the sites following public sector investment in the Queensway Gateway Road. It is anticipated that this delivery profile could be accelerated but is adopted for the jobs and GVA impact model at this stage to present a robust assessment of likely economic benefits.

GVA benefits of the estimated 900 net additional job impacts are measured on the basis of a 10 year job persistence factor and discounted to net present value at the Treasury discount rate of 3.5%. This methodology has been applied in a wide range of recent business case submissions and was accepted by DfT in submissions supporting the case for the BHLR. Based on this methodology, the **net present value of GVA generated by the employment benefits unlocked by the Queensway Gateway Road has been estimated at £296m.** Set against a capital cost for the project of £15m, the BCR from an economic development perspective would be **20:1.**

#### 6.4 Strategic Added Value

This project will deliver a critical piece of infrastructure for the Hastings-Bexhill Link Road contributing directly to the delivery of a key objective of the SELEP Strategic Economic Plan. The Strategic Added Value of the project relates to the significant impact of the project in unlocking employment generating development potential in the Growth Corridor at identified sites north of Hastings as well as employment and housing growth sites in North Bexhill. The project is critical to enabling the BHLR to perform its intended function in relieving congestion and improving connectivity across the Growth Corridor to the A21 and thus enabling the intended growth outcomes from the BHLR to be delivered.



## Commercial Case

### 7. Procurement Strategy

#### 7.1 Delivery arrangements

The process of design and procurement for the Queensway Gateway Road is well advanced. A joint delivery team involving East Sussex County Council and Seachange Sussex has been developing this scheme as part of the evolution of the A21/A259 Bexhill Hastings Growth Corridor. Detailed design of the scheme, including the preparation of a complex planning application, including full EIA, has progressed since 2013, leading to the grant of planning permission in February 2015. The planning application / consent has confirmed the definitive scheme.

In terms of procurement, several current infrastructure contracts are being managed by the joint delivery partners and therefore the partners have access to real-time experience of tendered prices, material costs, utility diversions, sub-contractor availability etc. This has informed the budget cost estimates for the scheme, building on the generic cost estimates produced by Mott Macdonald in 2013 and the full scheme design produced by civil engineers Campbell Reith Hill and Dadswells cost consultants. Pre-development costs are now fixed and enabling works including ecological mitigation measures are tendered.

In general all contracts (both for works and consultants) will be subject to a process of competitive tendering unless there is justification for an appointment where specialist or unique knowledge held by the supplier is needed. Tender shortlists will be drawn up using various sources including Construction Line and corporate knowledge of contractors. Possible opportunities will be posted on the Construction Line Notice Board.

Where appointment/services/contract values exceed the relevant European Procurement thresholds, adverts for Expressions of Interest will be placed in the Official Journal of the European Union (OJEU).

In general where an appointment is below the OJEU threshold, the appointment would be expected to be achieved within 8-10 weeks. The activities required would include:

- advertising,
- brief drafting,
- tender selection tender period,
- tender assessment and
- award.

Where contract values exceed the OJEU threshold the appointment programme would be extended by the statutory periods built into the OJEU procurement process:

- Expressions of Interest – 37 days
- Tender Period – 40 days
- Mandatory standstill period – 10 days

Depending on the level of interest received these periods can be expected to add a further 10-12 weeks to the procurement process

Based on the proposed development programme, it is intended to let discrete contract elements such as earthworks to avoid winter working and to secure construction materials in advance of the main



contract award – this manages the effects of the variable availability and quality of materials in the current market. Ongoing engagement with utility providers also reduces procurement risks on these elements.

The majority of the land for the scheme is in public ownership (Hastings Borough Council and East Sussex County Council) and there is ongoing engagement with the principal third party interest (a tenant of the local authority) in order to progress their relocation – this is programmed for the second year of the funding profile.

## 7.2 Key milestones

The milestones of the procurement timetable are:

### Key milestone dates

	Planned	Achieved
Planning Consent	04/02/2015	04/02/2015
Natural England Licence	19/03/2015	
Issue habitat clearance tenders	03/02/2015	03/02/2015
Habitat tender award	25/02/2015	
Completion of habitat clearance/creation & translocation (West)	10/06/2015	
Complete embankment design	06/03/2015	
Select embankment tenderers following EoI period	20/03/2015	
Award embankment tender	08/05/2015	
Complete road construction design	24/04/2015	
Select road construction tenderers following EoI period	01/05/2015	
Award road construction tender	02/10/2015	
Complete embankment works	27/11/2015	
Complete landscape design	31/03/2016	
Select landscape tenderers following EoI period	29/04/2016	
Complete relocation of SEAT garage	27/05/2016	
Completion of habitat clearance/creation & translocation (East)	24/06/2016	
Award landscape tender	29/07/2016	
Complete road construction works	25/11/2016	
Complete landscape works	25/11/2016	

A programme for the delivery of the project is at Annex II of the business case.

## 7.3 Risk share

The procurement concept has been developed on the basis of the tenet that risk is placed with the party best placed to manage or mitigate that risk or manage the consequences should a risk transpire. The contractor will be asked to produce a priced risk register and decisions will be made on the risk share mechanism between the contractor and Seachange Sussex/the County Council to ensure that the proposed allocation provides value for money to the council.

The design risk will be retained by Seachange Sussex/the County Council in principle. The only design risk the contractor will carry is that of his own specialist suppliers or other minor elements of design carried out in support of main client design teams.



The delivery and programme risk will substantially rest with the contractor. However the following are examples of areas of risk that Seachange Sussex/the County Council will need to take a view on as part of the review of the priced risk register during the process of target setting:

- Unforeseen ground conditions
- Exceptional Weather
- Flooding
- Cost Inflation
- Vandalism/ Theft
- Protestors (delay)
- Environmental (delay)
- Archaeology
- Surveys (adequacy/ suitability) etc

There will be a pain-gain share mechanism negotiated and agreed with the contractor and used to provide incentive for value engineering and robust cost and programme management.

## **7.4 State Aid**

The project comprises the provision of general infrastructure and therefore does not constitute State Aid.



## Management Case

### 8. Governance Arrangements

#### 8.1 Delivery Management

Funding from SELEP will pass via the LEP's Accountable Body, Essex CC, to East Sussex County Council, who will be the accountable body for the project and they will enter into a legal agreement with East Sussex Energy Infrastructure and Development Company (ESEID) trading as Seachange Sussex, who will deliver the project. The Section 151 Officer of ESCC will monitor the legal and financial probity of the contract.

The delivery vehicle for the project is East Sussex Energy, Infrastructure and Development Ltd trading as Seachange Sussex. The company is limited by guarantee (company number 07632595) and is not for profit. The members of the company are:

Hastings, Bexhill and East Sussex Business Association Ltd	50%
East Sussex County Council	)
Rother District Council	) 19.9%
Hastings Borough Council	)
University of Brighton	19.9%
Voluntary Sector	10.2%

Governance of the company is regulated by its Articles of Association which set out, among other matters, the membership, operation and conduct of the Board and its meeting requirements. The Board is currently chaired by Professor Julian Crampton, Vice Chancellor of University of Brighton. Currently, general meetings take place every 2 – 2.5 months with the AGM approving the annual accounts (to 31<sup>st</sup> March 2014) having taken place on 5<sup>th</sup> September 2014.

The financial transactions of the company are regulated by the current Financial Regulations and Scheme of Delegation approved by the Board on 11<sup>th</sup> January 2012. Basically, all significant contractors are selected by competitive tendering and are the subject of Board approval.

Financial payments are made by the tried practice of purchase orders and payments authorised on compliance and financial checks by the appropriate staff. Financial monitoring and management accounts are provided from a computer-based system (Access Dimensions, approved by HMRC and Institute of Chartered Accountants) which allows flexible interrogation. The system is specifically designed for project accounting. Each Board meeting receives an 'income and expenditure' report which also informs bank balances. Separately, 'expenditure commitments' are identified to the Board informing the project and extent of financial commitments relating thereto. These sets of information identify the source of funding and the expenditure incurred on a project by project basis against that funding commitment. From 1<sup>st</sup> April 2015 a further report will be added showing 'all years/project life' expenditure. The accounts are annually audited externally (currently by Reeves & Co) and corporate legal advice is provided to the Board on a regular basis (currently by Pinsent Masons).

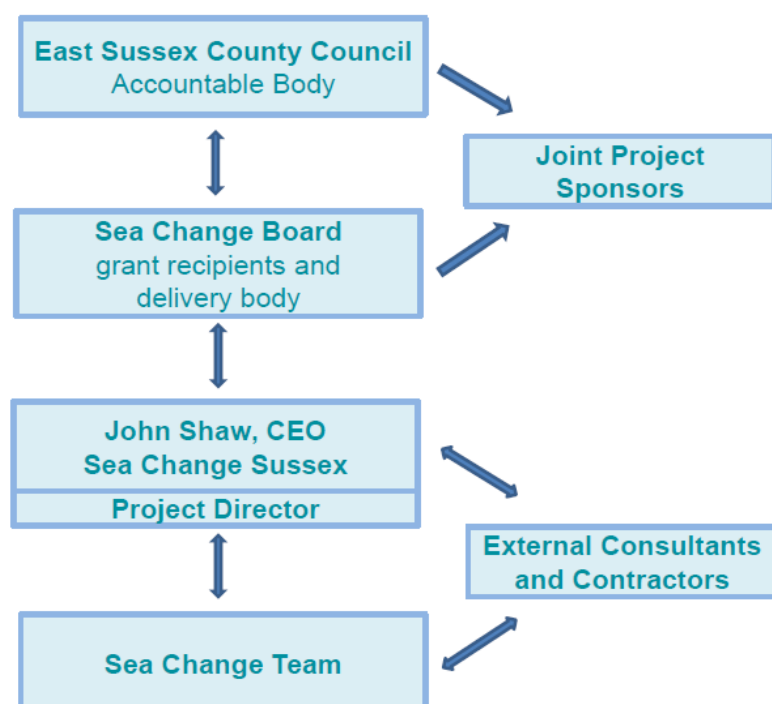
The County Council has also established an internal Seachange Governance Board. This involves senior officers from Legal, Finance and the Economic Development services within the authority to manage the governance between the County Council and Seachange Sussex as a delivery partner.



Seachange Sussex and ESCC therefore believe that the current governance and financial controls are fit for purpose for the requirements of the Local Growth Fund.

The project sponsors will be ESCC and Seachange Sussex, the project director will be John Shaw, CEO of Seachange Sussex, the project will be managed on a daily basis by Clive Taylor at SCS, an experienced project manager in this type of capital development project. SCS has prepared a Project Execution Plan (PEP) which outlines the key project management and delivery arrangements and a high level of review of this has been undertaken in preparation of the implementation stage. SCS has already established a comprehensive team of consultants to promote a successful planning application gaining Council approval on 4th February 2015.

Figure 7: Project Governance Structure



## 8.2 Key Stakeholders

Through the development of the Baldslow scheme by the Highways Agency and their consultants up to 2010, and latterly with the Queensway Gateway Road scheme being promoted by Seachange Sussex, there has been extensive engagement with key stakeholders as set out in the consultation section of the Strategic Case.

This project has received planning approval and as part of this process full consultations have been undertaken with all relevant stakeholders both by Seachange Sussex and by Hastings Borough Council as the planning authority. Many have commented formally in response to the planning authority although there were no objections from consultees that were not overcome during the Planning process. Seachange has been in contact with the statutory undertakings in relation to this and a previous application for the North Bexhill Access Road. The land required is mainly in public ownership and one third party occupier is actively co-operating with Seachange to enable a transfer of his operation to an adjacent site.



### 8.3 Consultation Strategy

As referred to in the consultation section of the Strategic Case, as part of the planning process Seachange Sussex undertook a number of consultation activities with the aid of T.K Associates. These consultations included local residents, key stakeholders and participating in a planning pre application forum organised by Hastings Borough Council. A full report of the consultation process is available.

## 9. Delivery

### 9.1 Introduction

Seachange Sussex, and its predecessor Sea Space, has extensive experience in delivering major projects in Hastings/Bexhill and East Sussex following the Five Point regeneration plan adopted by the Hastings & Bexhill Task Force in 2003. Sea Space was established as the delivery vehicle for the Task Force and has delivered projects in excess of £150 m.

Projects include the provision of major office accommodation, now owned by Saga, giving employment opportunities for up to 800 staff, the development of academic space for 1200 students and the provision of new industrial employment space. More recently Seachange Sussex is undertaking the development of the North Bexhill Gateway Road linking into the Bexhill Hastings Link Road (BHLR), opening up employment and housing space. This project is on time and within budget and will be completed in 2015, at the same time as the BHLR.

Seachange has comprehensive governance and project execution protocols and a wide experience over 11 years in delivering large capital projects.

The majority of the land for the scheme is in public ownership; there is ongoing engagement with the principal third party interest (a tenant of the local authority) in order to progress their relocation – this is programmed for the second year of the funding profile.

### 9.2 Key milestones

The key milestones are set out in section 7.2. A project delivery programme is set out in Annex II of the business case.

## 10. Risk

### 10.1 Introduction

Seachange Sussex has developed the project taking full account of the full range of delivery risks. Seachange Sussex has extensive experience of managing the risks associated with this type of infrastructure scheme and ensuring that delivery and cost management arrangements are robust. An appropriate level of optimism bias (33%) has been included in the cost plan to reflect potential risks. Planning permission is in place and outstanding environmental risks have been fully assessed in the EIA supporting the planning process. Most of the land for the scheme is in public sector control and the outstanding land control is currently being resolved and is not a barrier to delivery. No CPO procedures are required to enable the scheme to proceed.



## 10.2 Risk Register

The risk register below identifies the main risk areas for the project and mitigation measures.

Risk	Likelihood*	Impact**	Likelihood x Impact	Mitigation
Detailed Design impact	1	2	2	Planning approval granted, engineers now working on detailed design
Onerous planning conditions/ agreements	1	2	2	Planning approval granted with conditions. A Section 278 Agreement and stopping up order to be agreed. ESCC and Highways Authority in agreement with scheme.
Ecological Constraints	2	3	6	Planning approval requires Ecological and Biodiversity Strategies to be approved. Work progressing on detailed Environmental and biodiversity strategies
Environmental protestors	2	3	6	The environmental works are fairly small compared to the works undertaken for the BHLR, which attracted protestors nationally. Work will be undertaken shortly and should be completed before any organised protests can be mounted. Liaison meetings with the police are being undertaken
Archaeological Constraints	2	3	6	A programme of archaeological work, in accordance with a Written Scheme of Archaeological Investigation which will be submitted to the Local Planning Authority for approval
Cost estimates unrealistic	1	2	2	Contracts currently being managed by the joint delivery partners, East Sussex County Council and Seachange Sussex in close proximity give real-time experience of tendered prices, material costs, utility diversions, sub-contractor availability and winter weather working including the Bexhill Hastings Link Road by East Sussex County Council and the North East Bexhill Gateway Road by Seachange Sussex.  Optimum bias of 33% included



Risk	Likelihood*	Impact**	Likelihood x Impact	Mitigation
Third party land ownership	2	3	6	With the majority of land already in public ownership there is ongoing engagement with the principal third party business (a tenant of a local authority) in order to progress their relocation which is programmed for the end of the job and in the second funding year
Statutory Undertakers delay	2	3	6	Ongoing engagement with the utility providers gives relaxed procurement programme of these elements until 2016
Unforeseen Ground conditions	1	2	2	Final ground condition survey to be undertaken
Adverse weather conditions	1	2	2	The development programme, commends the letting of discrete contract elements by separate types of contractor, seeks to avoid "winter working" for the earth works
Stage 3 Safety Audit may necessitate some alterations to the works.	2	2	4	Experienced road engineers, any alterations should be of a minor nature at this stage

## \*Likelihood Scale

Likelihood	Score	Meaning
Very high	5	More than 1 chance in 10
High	4	More than 1 chance in 25
Medium	3	More than 1 chance in 50
Low	2	More than 1 chance in 100
Very Low	1	More than 1 chance in 1000

## \*\*Impact Scale

Impact	Score	Meaning
Very high	5	Potential for many months delay
High	4	Potential for a many weeks delay
Medium	3	Potential for significant delay
Low	2	Potential for a few days delay
Very Low	1	Likely that impact could be resolved within 2 days



## 11. Monitoring and Evaluation

### 11.1 Introduction

The Project Execution Plan includes provision for the monitoring and evaluation of the scheme both during construction and operation, and in respect of the key economic outputs from the release of development sites at North Queensway.

ESCC and Seachange Sussex will work collaboratively to monitor progress of scheme delivery based on contractual milestones to be agreed with the appointed contractor. Following completion of the road construction the scheme will be adopted by ESCC and operational performance subject to ongoing monitoring.

Seachange Sussex will promote the development of the employment sites that the Queensway Gateway Road will unlock in conjunction with private sector developers and will monitor development delivery and job outcomes. This will focus on identifying potential development partners and business occupiers, with development enquiries and delivery progress being monitored as schemes come forward.

## Annex I Cost Plan

QUEENSWAY GATEWAY						
FORECAST SUMMARY					Date:	Feb-15
			Expenditure Forecast			
	Total	2013/14	2014/15	2015/16	2016/17	2017/18
	£	£	£	£	£	£
A. Acquisitions/Relocations	£725,000	£0	£0	£445,000	£280,000	
B. Feasibilty costs (Ex contingencies)						
Studies etc	£19,306	£19,306	£0			
C. To planning (ex PM, Marketing/PR & contingencies)						
EIA preparation	£117,093	£4,071	£113,021	£0		
Road design	£67,542	£11,174	£56,367	£0		
Site investigation etc	£129,230	£11,895	£57,335	£60,000		
Public Consultation	£7,044	£0	£7,044	£0		
Sundries incldg Planning fee	£3,754	£197	£3,557	£0		
D. To tender (Ex PM, Marketing/PR, Utilities & contingencies)						
Road design	£292,500	£0	£103,076	£169,424	£20,000	
Associated surveys and investigations	£40,000	£0	£10,000	£30,000		
Highway consents	£500,000	£0	£0	£500,000		
Sundries	£8,000	£0	£4,000	£4,000		
E. Construction (Ex PM, Marketing, Utilities and contingencies)						
Works	£5,150,000	£0	£3,864	£2,875,000	£2,271,136	£0
Fees	£180,000	£0	£0	£83,000	£97,000	£0
F. Utilities Works						
Diversions	£935,000	£0	£0	£935,000	£0	
New (Lighting supply)	£225,000	£0	£0	£225,000	£0	
G. Contingency	£500,000	£0	£0	£305,000	£195,000	£0
H. Development Management	£347,311	£0	£67,084	£156,000	£124,227	£0
I. Marketing	£52,000	£0	£5,310	£28,000	£18,690	
J. Inflation	£1,979,197	£0	£64,599	£1,163,085	£751,513	£0
K. Optimism bias	£3,721,732	£15,392	£163,435	£2,302,908	£1,239,997	£0
TOTALS	£14,999,709	£62,035	£658,692	£9,281,417	£4,997,563	£0
Excludes:						
1 Blight or any other related compensation cost arising from the Works						
2 Design and modifications to Maplehurst Rd						
Inflation			15.0%	20.0%	25.0%	30.0%
		£0	£64,599	£1,163,085	£751,513	£0
Optimism bias	33%	£15,392	£163,434.76	£2,302,907.90	£1,239,996.86	£0.00

## Annex II – Delivery Programme

Queensway Gateway: Programme																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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## Annex III Appraisal Summary Table

Appraisal Summary Table: Queensway Gateway Scheme				
Option 2B South of the Ridge	Date: September 2009      Version : 1      Milestone: 2 Option Selection			
OBJECTIVE	SUB-OBJECTIVE	QUALITATIVE IMPACTS	QUANTITATIVE ASSESSMENT	ASSESSMENT
ENVIRONMENT	Noise	Increases in noise level are primarily caused by the introduction of a new noise source, such as traffic using the link in Option 2B. Changes in traffic flow and speed result in changes in noise levels at sensitive properties adjacent to the local road network. Properties experiencing increases in noise level over 1dB are mainly located close to the new and altered sections (the north end of Beauport Home Farm Close and Beauharrow Road, properties on Maplehurst Road and properties south of The Ridge West adjacent to the A21). A smaller number of properties in the Beauport Park site experience a decrease in noise level over 1 dB. Increases in noise level due to new or altered roads may be overestimated since no benefit from thin surface course is assumed. There are potential acoustic benefits from using a thin surface course, however at speeds below 75kmph this cannot be quantified.	Estimated population annoyed (without the scheme): 93  Estimated population annoyed (with the scheme): 85	Net change in population annoyed in the 15 <sup>th</sup> year after opening: -8  NPV £315,006
	Local Air Quality	The change to air quality will vary depending on the location, congestion, time of day and speed of the traffic. The scores indicate that there will be an overall improvement in air quality with the Scheme in place, however the overall population exposure to the surrounding sensitive receptors is predicted to increase by a very small amount. The overall impact of Option	Change in population exposure ( $\mu\text{gm}^{-3}$ )  NO <sub>2</sub> 2012: 0.07	NO <sub>2</sub> 2012: -904 NO <sub>2</sub> 2025: -864 PM <sub>10</sub> 2012: -1068 PM <sub>10</sub> 2025: -1052

Appraisal Summary Table: Queensway Gateway Scheme				
Option 2B South of the Ridge	Date: September 2009      Version : 1      Milestone: 2 Option Selection			
OBJECTIVE	SUB- OBJECTIVE	QUALITATIVE IMPACTS	QUANTITATIVE ASSESSMENT	ASSESSMENT
		2B is therefore predicted to be of negligible significance.	NO <sub>2</sub> 2025: 0.09  PM <sub>10</sub> 2012: - 0.01      PM <sub>10</sub> 2025: 0.02	
	Greenhouse Gases	There is expected to be an increase in carbon emissions between with and without Scheme scenarios over the 60 year appraisal period. This is the result of the increase in vehicle-kilometres travelled across the study area	2,293 tonnes of Carbon over a 60 year period	Net Present Value of Carbon Emissions of Proposal: -£91,493 (60 Year Period)
	Landscape	Improvements would result in a very minor incursion into the High Weald AONB boundary, however this would not have any appreciable effect, resulting in a neutral impact on Character area A. There would be Large Adverse effects in Character Area B, unless Hollington Valley is developed for retail use. This would reduce the impact to Moderate Adverse. Area C would be slightly adversely affected. For character area D the route options would be within the context of the built-up area, resulting in a neutral impact. Character areas are identified on Figure 2.1 in the Enhanced Stage 2 Assessment Report.	N/A	Moderate Adverse (dependant on the development of Hollington Valley)
	Townscape	Not appraised – see landscape section	N/A	N/A

Appraisal Summary Table: Queensway Gateway Scheme				
Option 2B South of the Ridge	Date: September 2009      Version : 1      Milestone: 2 Option Selection			
OBJECTIVE	SUB- OBJECTIVE	QUALITATIVE IMPACTS	QUANTITATIVE ASSESSMENT	ASSESSMENT
	Heritage of Historic Resources	The following cultural heritage features are affected by the option: listed buildings (Beauport and Hollington Lodge), potential buried archaeological remains, former routeways, historic landscape character of enclosure.	N/A	Slight Adverse
	Biodiversity	The most significant of the habitats affected by the proposals are areas of ancient semi-natural broad-leaved woodland and mature broad-leaved plantation. The remaining habitats are of local importance. The proposals affect a significant proportion of the northern end of the Hollington Valley SNCI, with the proposed road severing the wildlife corridor. There are potentially large adverse affects on protected species, which can only be assessed after appropriate survey work.	N/A	Moderate Adverse (with mitigation).
	Water Environment	Construction and operation of the proposed Scheme is unlikely to affect groundwater quality, quantity or flow. The Scheme may have a minor adverse affect on surface water quality of Hollington Stream and Hollington Valley Pond, potentially affecting the biodiversity of the SNCI. It is estimated that the proposal would have a neutral impact on the water environment following detailed assessments, design adjustments and the implementation of essential	N/A	Neutral

Appraisal Summary Table: Queensway Gateway Scheme				
Option 2B South of the Ridge	Date: September 2009      Version : 1      Milestone: 2 Option Selection			
OBJECTIVE	SUB- OBJECTIVE	QUALITATIVE IMPACTS	QUANTITATIVE ASSESSMENT	ASSESSMENT
		environmental mitigation measures.		
	Physical Fitness	Improvements to the trunk road system would incorporate footpaths and therefore the physical fitness for pedestrians would be unaffected.	N/A	Neutral
	Journey Ambience	Travellers Views would be better on the embankment, but worse in the cutting, resulting in an overall neutral change. The embankment would be an intrusive element in the valley, worsening views from the A2100 and the B2092. Traveller stress is expected to be better as the route is more direct, and the sub objectives would improve accordingly. A full assessment of Traveller Care could not be undertaken, although some information on lodging facilities is available.	N/A	Beneficial
SAFETY	Accidents	The accident data from 2001 to 2005 was used for input into COBA.  The proposed scheme is forecast to reduce the overall accident levels.	Savings:-  Fatal – 3  Serious – 23  Slight - 16	PVB £3.801m

Appraisal Summary Table: Queensway Gateway Scheme				
Option 2B South of the Ridge	Date: September 2009      Version : 1      Milestone: 2 Option Selection			
OBJECTIVE	SUB-OBJECTIVE	QUALITATIVE IMPACTS	QUANTITATIVE ASSESSMENT	ASSESSMENT
	Security	The reduction in congestion leads to reduced stop time at junctions making users less vulnerable to crime.  There are no new areas where users will leave their vehicles.	N/A	Neutral
ECONOMY	Public Accounts			PVC £25.97m
	Transport Economic Efficiency: Business Users & Transport Providers	The proposed scheme is expected to deliver travel time and vehicle operating cost benefits to the business users.		PVB £32.14m
	Transport Economic Efficiency: Consumers	The proposed scheme is anticipated to bring travel time and vehicle operating cost benefits to the consumers.		PVB £34.39m
	Reliability	The removal of traffic from the road closure leads to localised improvements for residents  The removal of traffic, particularly HGV's, from congested junctions leads to improvements.	N/A	Beneficial

Appraisal Summary Table: Queensway Gateway Scheme				
Option 2B South of the Ridge	Date: September 2009      Version : 1      Milestone: 2 Option Selection			
OBJECTIVE	SUB- OBJECTIVE	QUALITATIVE IMPACTS	QUANTITATIVE ASSESSMENT	ASSESSMENT
	Wider Economic Impacts	The scheme will not hinder the economic growth of the area, but given its relatively modest size, it is unlikely to lead to sufficiently large benefits in travel times or increases in network capacity. The scheme will not increase direct access to jobs, or lead to significant changes in inward investment.	Net change in employment = 0	Neutral
ACCESSIBILITY	Option Values	Although some users may change propensity to travel as a result of the scheme, a parallel highway alternative is already available, and the effects will be insignificant.	N/A	N/A
	Severance	The route option will involve closing vehicular access to/from Maplehurst Road at its northern end by Westfield Lane. This will prevent "rat-running" and therefore improve the ease for pedestrians on this road.	N/A	Slight
	Access to the Transport System	The scheme does not pass directly through a population zone and will not improve the local accessibility index.	0%	Neutral
INTERGRATION	Transport Interchange	The scheme does not include the improvement or introduction of new passenger or freight interchanges.	N/A	Neutral

Appraisal Summary Table: Queensway Gateway Scheme				
Option 2B South of the Ridge	Date: September 2009      Version : 1      Milestone: 2 Option Selection			
OBJECTIVE	SUB- OBJECTIVE	QUALITATIVE IMPACTS	QUANTITATIVE ASSESSMENT	ASSESSMENT
	Land-Use Policy	<p>This option is in accordance with National policy to improve the trunk road network, but is contrary to a number of policies to protect the natural and historic environment, recreation and tourism.</p> <p>This option is in accordance with regional strategies to promote economic regeneration. It is contrary to some policies protecting landscape, ecology and archaeology.</p> <p>Locally, this option is considered to hinder a number of the environmental protection policies</p>	N/A	Adverse
	Other Government Policies	The proposals are considered to be broadly in accordance with Government Policies	N/A	Neutral