Capital Project Business Case
Exceat Bridge Replacement and Improvement to A259 Corridor

This document provides the business case template for projects seeking funding which is made available through the **South East Local Enterprise Partnership**. It is therefore designed to satisfy all SELEP governance processes, approvals by the Strategic Board, the Accountability Board and also the early requirements of the Independent Technical Evaluation process where applied.

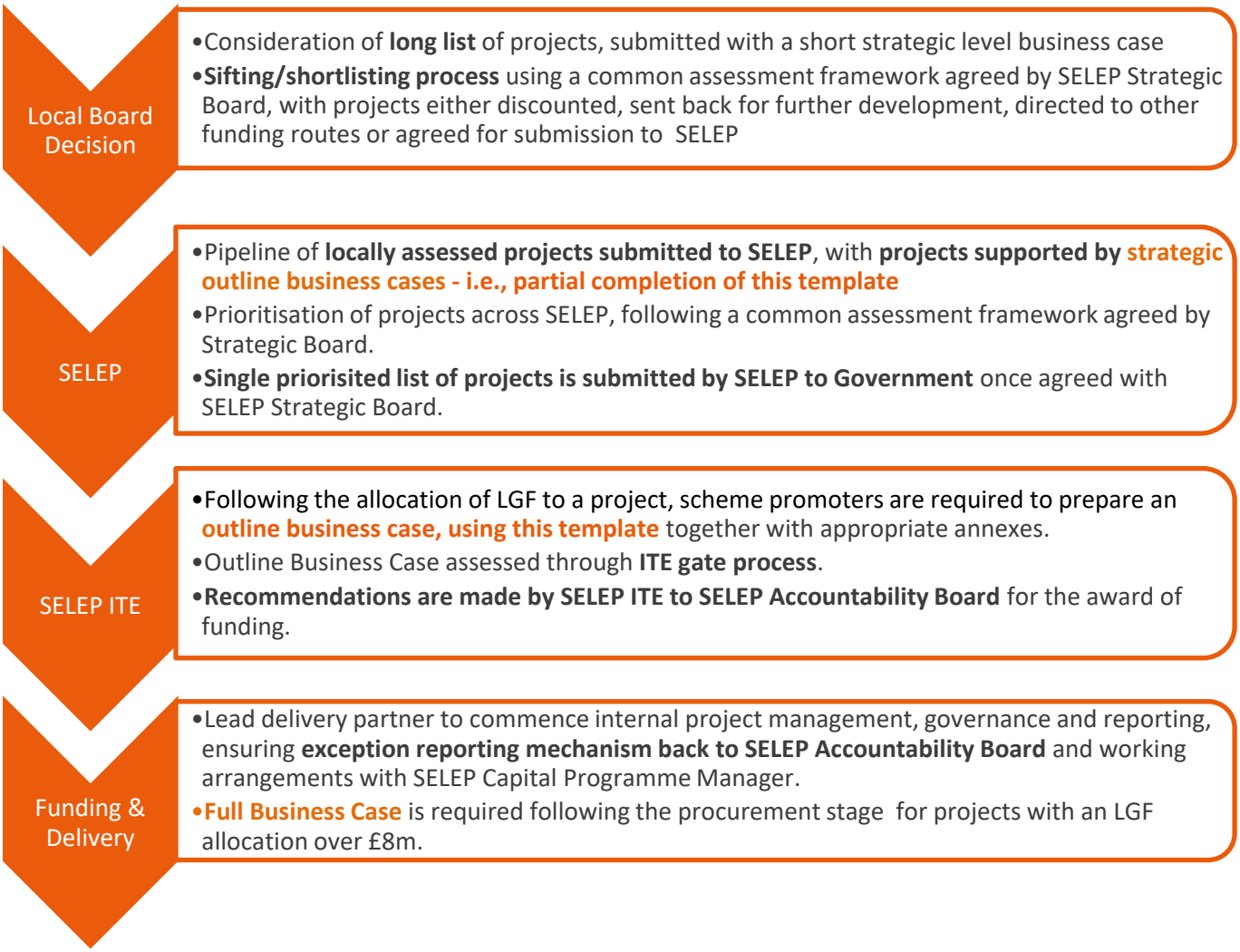
It is also designed to be applicable across all funding streams made available by Government through SELEP. It should be filled in by the scheme promoter – defined as the final beneficiary of funding. In most cases, this is the local authority; but in some cases the local authority acts as Accountable Body for a private sector final beneficiary. In those circumstances, the private sector beneficiary would complete this application and the SELEP team would be on hand, with local partners in the federated boards, to support the promoter.

Please note that this template should be completed in accordance with the guidelines laid down in the HM Treasury's Green Book. https://www.gov.uk/government/publications/the-green-book-appraisal-and-evaluation-in-central-governent

As described below, there are likely to be two phases of completion of this template. The first, an 'outline business case' stage, should see the promoter include as much information as would be appropriate for submission though SELEP to Government calls for projects where the amount awarded to the project is not yet known. If successful, the second stage of filling this template in would be informed by clarity around funding and would therefore require a fully completed business case, inclusive of the economic appraisal which is sought below. At this juncture, the business case would therefore dovetail with SELEP's Independent Technical Evaluation process and be taken forward to funding and delivery.

The process

This document forms the initial SELEP part of a normal project development process. The four steps in the process are defined below in simplified terms as they relate specifically to the



LGF process. Note – this does not illustrate background work undertaken locally, such as evidence base development, baselining and local management of the project pool and reflects the working reality of submitting funding bids to Government. In the form that follows:

Version control	
Document ID	Exceat Project LGF Business Case
Version	V3
Author	Pippa Mabey/Stephanie Everest
Document status	Final
Authorised by	Dale Poore
Date authorised	01.06.2020

1. PROJECT OVERVIEW

1.1. Project name:
Exceat Bridge Replacement and Improvement to A259 Corridor

1.2. Project type:
Structure, road, footway

1.3. Federated Board Area:
East Sussex, Kent & Medway, Essex, and Thames Gateway South Essex

1.4. Lead County Council / Unitary Authority:
East Sussex County Council (ESCC)

1.5. Development location:
Exceat Bridge and Seven Sisters Country Park Visitor Centre, A259, Seaford, East Sussex, BN25 4AB

1.6. Project Summary:
This project seeks to address a long standing and well known bottleneck within the East Sussex network and contribute towards economic growth, specifically economic connectivity, within the area.

The project was initiated to explore options to replace the deteriorating Exceat Road Bridge over the Cuckmere river and unlock the full capacity of the network to support employment and housing growth.

The bridge is coming to the end of its serviceable life and has a number of structural defects and layout issues. Following an options appraisal it was determined that it would be more beneficial to replace the existing bridge with a new one designed to address these issues and meet the needs of its users.

Exceat bridge is part of the A259, one of the principal road networks in East Sussex which serves two of the County's growth areas for housing and employment; Newhaven and Eastbourne/South Wealden. The A259 is a critical route for economic connectivity from the East of the county, along the East Sussex coast to Brighton and through to West Sussex, including linkage to a key port at Newhaven. The A259 was put forward by Transport for South East for inclusion in the Department for Transport's Major Road Network (MRN) of economically important Local Authority A class roads.

As part of this project there is an identified need to improve the footway access from Exceat bridge to the Seven Sisters Country Park visitor centre. This section of the A259 forms part of the National Cycle Network Route 2 and the England Coastal Path so improving access for pedestrian and cyclists will enhance these routes and encourage greater use.

The Seven Sisters National Park is a designated Site of Special Scientific Interest for its chalk grassland and geographical interest, and includes 250 hectares of downland, coast and river estuary. The popular visitor centre is run by volunteers and provides free guides to the park and offers educational trips run by Sussex Wildlife Trust (SWT) volunteers. It is a popular tourist attraction and there has been an increase in tourism to the area; in order to encourage more these improvements are essential. It is envisaged that by making the A259 road layout more efficient, as well as installing a two lane bridge we will be able to tackle a significant bottleneck of the network.

The project will address current constraints including:

- major congestion due to constrained traffic flow/capacity issues, the impact of which is long queues of traffic in both directions from the bridge
- poor access for pedestrians
- increasing pollution and health inequalities
- long-term network resilience

In January 2017, ESCC was awarded £2.13m from the Department for Transport's National Productivity Investment Fund (NPIF) and agreed it to part fund the replacement of the bridge. The project is underway and currently at the preliminary design stages of surveys, investigation, environmental impact studies and stakeholder engagement. However in order to complete and realise the scheme benefits, ESCC are seeking funding from the Local Growth Fund. Without the additional funding a replacement bridge could not be afforded and a less favourable option (see details at 3.1) would have to be deployed meaning that the scheme would not realise its full benefits such as addressing major congestion and removing the bottleneck as well as ensuring long term network resilience.

1.7. Delivery partners:

Partner	**Nature of involvement (financial, operational etc.)**
East Sussex County Council	Financial, Project Management. Lead Applicant
Jacobs	Design, Project Management, Operational
Costain	Operational

1.8. Promoting Body:

East Sussex County Council

1.9. Senior Responsible Owner (SRO):

Rupert Clubb
Director of Communities, Economy and Transport, ESCC
Rupert.clubb@eastsussex.gov.uk
01273 482200

1.10. Total project value and funding sources:

Funding source	Amount (£)	Flexibility of funding scale or profile	Constraints, dependencies or risks and mitigation
LGF	£1,500,000 (possible additional £610,579 in phase 2 of LGF funding)		Spend to be underway by March 2021 (see separate note on slippage). Dependent on South Downs National Park Authority (SDNPA) planning approval – mitigated by Pre Planning Application agreement, justification report and much engagement ahead of planning application submission
National Productivity Investment Fund	£2,133,000		Dependent on planning approval – mitigated by justification report and much engagement ahead of planning application submission
ESCC Capital Programme	£500,000		Dependent on planning approval – mitigated by justification report and much engagement ahead of planning application submission
ESCC - TBC –	£1,419,120		Not yet secured. N.B. The shortfall is likely to decrease if the preferred option for the footway improvements goes ahead as the risk fund allows for the most expensive option within in the option appraisal.
Total project value	**£6,162,699**		Secured funding: £4,743,579 (if including phase 2 funding)

1.11. SELEP funding request, including type (LGF, GPF etc.):

£2,110,579 of Local Growth Fund was originally sought. At the SELEP Investment Panel of 28th June 2019 £1.5m was allocated to the project in phase 1 of the funding, with £610,579 being allocated in phase 2 (second phase would remain on the ranked pipeline to receive LGF should additional underspend become available). The funding will not constitute State Aid. The project has been instructed and work delivered to date through our current contract mechanisms within our Highways and Infrastructure Services Contract 2016-23. This contract was procured following EU rules and legislation and complies with State Aid Regulations.

1.12. Exemptions:

Not Applicable

1.13. Key dates:

Key Milestones	Description	Indicative Date
Scheme Commencement/ commencement of expenditure	Early works packages such as environmental and topographical surveys Development of an EIA scoping report to agree the replacement bridge proposal with the SDNPA	June 2018
Preliminary and detailed design solutions	Design phases involving consultation with discipline lead, exploration of design options and agreed proposal to determine construction details Ongoing engagement with key stakeholders	June 2018 – preliminary design March 2021 – detailed design
Construction start date	Site mobilisation and construction of the replacement bridge and adjoining footway Opening of the new bridge and demolition of the old	December 2021
Scheme completion	Demobilisation and new bridge and pathway fully functional and open for use	End 2022 *LGF funding would be front loaded to ensure some spend ahead of the March 2021 deadline

1.14. Project development stage

Project development stages completed to date			
Task	**Description**	**Outputs achieved**	**Timescale**
Inception	Outline Business case for the bridge replacement	Agreement from key stakeholders for progression of project to replace the bridge	September 2014
Option selection	Possible design solutions were drawn up based on economic, construction, aesthetics and environmental impact	Recommendation of optimal solution for replacement bridge	September 2015
Feasibility	Early design work to identify and assess key 'unknowns' and risks that would significantly affect the overall scheme cost and programme. This includes engagement with key stakeholders, primarily with the South Downs National Park, who are the planning authority.	Once completed a revised estimate was submitted based on the output from the initial study.	May 2018
OBC	Initial Outline Business case for the bridge replacement and SOBC for LFG 3B	Agreement from key stakeholders for progression of project to replace the bridge	September 2014 and October 2018
Project development stages to be completed			
Task	**Description**		**Timescale**
Preliminary design	Preliminary design phase involving consultation with discipline leads and exploration of design options A proposal will be produced to support the planning submission		June 2018
Planning submission	Submission of supporting documentation and proposal to SDNPA		February 2021
Detailed design	Detailed design of the agreed proposal to determine construction details		March 2021
Procurement	Preliminary design Detailed design		June 2018 March 2021
Construction	Site mobilisation and construction of the replacement bridge and adjoining footway		December 2021

	Opening of the new bridge and demolition of the old	End 2022/Early 2023
Current stage	Pre application consultation with SDNPA, including justification for replacement bridge. Scoping studies to establish baseline information for environmental measures that will be required. Options appraisal for replacement bridge and footway improvements	May 2020

1.15. Proposed completion of outputs:

The physical outputs will be a new 2-way fit for purpose bridge and improved footway. This will provide a better provision for walkers with a footpath on the south side of the bridge so pedestrians do not need to cross the busy A259 when travelling between the bridge and Seven Sisters country park.

The completion of these outputs will be September 2022. However, ahead of this date there will be 23 construction worker jobs created through the bridge works and additional jobs created through the footway improvement works (the number of jobs is to be confirmed as the resource plans for this part of the project are currently being determined).

Additionally, civil engineer apprentices currently working within East Sussex Highways design teams will be given the opportunity to work on the project throughout all the development stages.

Social Value will also be coordinated by the Project Manager making sure we engage with local schools and interest groups at key points of the design and construction. Working with East Sussex Highways Performance Team we will capture events and data to demonstrate added value to the local community and area.

Indirectly the project will provide the infrastructure and accessibility to support the delivery of new housing and employment in the area, beyond the LGF period of 2021. On completion, the project would support the delivery of The Lewes Local Plan Core Strategy's proposed 6,900 homes in the district via improving the capacity across the A259. This will provide crucial improvements needed to aid SELEP growth plans such as the Newhaven Clean Tech and Maritime Growth Corridor by addressing congestion issues on the A259 which impose significant costs on businesses.

Improvements to journey time reliability on the A259 corridor will improve business confidence in the connectivity of the Newhaven area and labour market accessibility. The economic appraisal was based on the reduction in future delays across the bridge and indicates that on this basis the scheme represents high Value for Money (even if lower traffic growth assumptions are considered).

2. STRATEGIC CASE

2.1. Scope / Scheme Description:

This project seeks to address a long standing and well known bottleneck within the East Sussex network and contribute towards economic growth, specifically economic connectivity, within the area.

The project was initiated to explore options to replace the deteriorating Exceat road bridge over the Cuckmere river and unlock the full capacity of the network to support employment and housing growth.

Exceat bridge is part of the A259, one of the principal road networks in East Sussex which serves two of the County's growth areas for housing and employment: Newhaven and Eastbourne/South Wealden. The A259 is a critical route for economic connectivity from the East of the county, along the East Sussex coast to Brighton and through to West Sussex, including linkage to a key port at Newhaven. The A259 was put forward and confirmed by Transport for South East for inclusion in the Department for Transport's Major Road Network (MRN) of economically important Local Authority A class roads.

The MRN seeks to upgrade and enhance the local road network, making it better able to cope with demand by adding capacity to reduce congestion and make journeys more reliable and comfortable for users. Additionally, by tackling the congestion, this can induce environmental and safety improvements.

Additionally, the MRN improvements are expected to meet the needs of all users, including cyclists, pedestrians and disabled people. By providing a footpath on the south side of the bridge and improving the footway along the A259, this objective can also be met. The full list of objectives and criteria to be met by the MRN can be seen at figure 1.

Objective	Criteria
Reduce Congestion	• Alleviate Congestion • Environmental Impacts – Improve air quality and biodiversity – Reduce noise and risk of flooding – Protect water quality, landscape and cultural heritage sites
Support Economic Growth & Rebalancing	• Industrial Strategy: Support regional strategic goals to boost economic growth • Economic Impact: Improve ability to access new or existing employment sites • Trade & Gateways Impact: Improve international connectivity, e.g. access to ports & airports
Support Housing Delivery	• Support the creation of new housing developments by improving access to future development sites and boosting suitable land capacity
Support All Road Users	• Deliver benefits for non-motorised users, including cyclists, pedestrians and disabled people • Safety Benefits: Reduce the risk of deaths/serious injuries for all users of the MRN
Support the SRN	• Improve end to end journey times across both networks • Improve journey time reliability • Improve SRN resilience

Figure 1

The project will address current constraints including:

- major congestion due to constrained traffic flow/capacity issues which results in long queues of traffic in both directions from the bridge;
- poor access for pedestrians;
- increasing pollution and health inequalities; and
- lack of long-term network resilience

The bridge is coming to the end of its serviceable life and has a number of structural defects and layout issues. Following an options appraisal it was determined that it would be more beneficial to replace the existing bridge with a new one designed to address these issues and meet the needs of its users.

As part of this project a need has been identified to improve footway access across the bridge and from Exceat Bridge to the Seven Sisters Country Park visitor centre. This part of the A259 forms part of the National Cycle Network Route 2 and the England Coastal Path so improving access for pedestrian and cyclists will enhance these routes and encourage greater use.

The Seven Sisters National Park is a designated site of Special Scientific interest for its chalk grassland and geographical interest, covering 250 hectares of downland, coast and river estuary. The popular visitor centre is run by volunteers and provides free guides to the park and offers educational trips run by Sussex Wildlife Trust (SWT) volunteers. It is a popular tourist attraction with 700,000 visitors p/a (Wealden DMP Research and Findings, 2016) and in order to encourage more, these improvements are essential.

In January 2017, ESCC was awarded £2.13m from the National Productivity Investment Fund and agreed it to part fund the replacement of the bridge. The project is underway and currently at the stages of surveys, investigation, environmental impact studies and stakeholder engagement but in order to complete and realise the scheme benefits, ESCC are seeking funding from the Local Growth Fund. Without the additional funding a replacement bridge could not be afforded and a less favourable option would have to be deployed meaning that the scheme would not realise its full benefits such as removing the bottleneck and network resilience.

2.2. Location description:

The location is Exceat Bridge and Seven Sisters Country Park Visitor Centre, on the A259, Seaford, East Sussex, BN25 4AB. The A259 is a primary route through the county, linking Eastbourne in the East with towns to the West; Seaford, Newhaven and towns between there and Brighton. It is situated in the South Downs National Park and the country park is one of East Sussex's most popular tourist locations for walkers, cyclists, canoeists and those wanting to explore the visitor centre. It is busy with school and other organisation visits; both independent and organised educational visits through the Country Park. Exceat bridge is situated on the A259, crossing the River Cuckmere, next to the Cuckmere Inn pub and West of the Country Park.

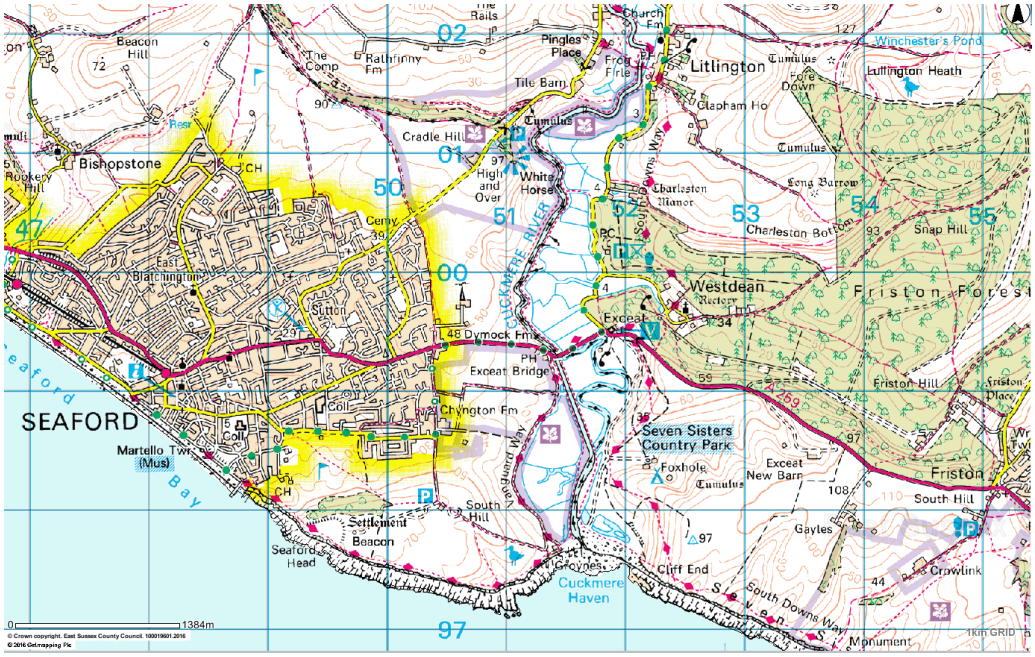


Figure 2

Local stakeholders in the area include:

- South Downs National Park
- Bus companies
- The Cuckmere Inn
- Saltmarsh Café
- Visitor Centre
- Buzz Active water Sports facility
- B & B holiday lets
- Cycling rental shop
- Various volunteer groups that meet here
- West Dene village
- Fox Hole Farm residents

- MBT Bike club
- Sussex Wildlife Trust
- ESCC Countryside Management team.

The main access constraints are those which the project seeks to address; the one way bridge across the Cuckmere River and the lack insufficient footpath provision between the bridge and the Country Park visitor centre. The bridge causes a bottleneck on the A259 creating congestion, capacity and pollution issues. The poor footway provision between the bridge and visitor centre limits the access for pedestrians and cyclists and impedes the Natural England's Coastal Path and National Cycleway Network.

2.3. Policy context:

The intervention aligns with many national/regional and local planning policies and the Exceat enhancement will contribute to the following:

NATIONAL

Industrial Strategy

- 'Providing the right infrastructure in the right places boosts the earning power of people, communities and our businesses'
- Aligns with the National Productivity Investment Fund within the strategy in the investment in transport and upgrade to infrastructure
- It is transport investment to create a more reliable, less congested and better connected network to build a stronger, more balanced economy
- The enhancement of Local Enterprise Partnerships has aided identifying our infrastructure needs and working with central government (via SELEP) to deliver them

Transport Investment Strategy

- Will be working towards creating a more reliable, less congested, and better connected transport network that works for the users who rely upon it
- Helping create journeys that are smooth, fast and comfortable
- Enhancing global competitiveness by making Britain a more attractive place to trade and invest
- Will help support the creation of new housing

Clean Growth Strategy

- The Clean Growth Strategy incorporates the 2030 Pathway which includes benefits of shorter journey times due to lower congestion and less noise pollution

The scheme will address these national policy objectives by providing an essential upgrade to infrastructure with the provision of the new bridge. In turn this will create a less congested network and allow the benefits of this to support economic growth by

ensuring smooth, reliable journeys and making it a more attractive area to live, work and visit.

REGIONAL

SELEP Strategic Economic Plan (SEP)

- Quote in SELEP SEP from Rt. Hon. Greg Clark MP '… encouraged by the direction that the proposal sets out, particularly in addressing transport bottlenecks…' which the project will address
- Will aid the generation of private sector jobs, new housing and investment to accelerate to growth, jobs and home building
- The A259 links the coastal towns of East Sussex and the project will aid the growth plans for the area by improving movement for businesses and residents
- Investment in growth corridors and growth sites – the project sits between the Newhaven Clean Tech and Maritime Growth corridor and A22/A27 Eastbourne to South Wealden, both of which are key drivers of economic prosperity, and will help with the promotion of strategic infrastructure being delivered in growth corridors/areas
- Delays arising from congestion impose direct, significant costs on businesses across the UK as well as in the SELEP area. Many SELEP businesses and communities find that the lack of investment in the national road network means that they carry significant additional costs arising from congestion –the project would help to address these
- Will help in attracting investment for growth in the South East – maximising private, public and community investment
- Help making East Sussex a place where people want to live and work

East Sussex Growth Deal

- The removal of this pinch point will help unlock the ambitious business and housing growth plans and build on East Sussex's current investments in infrastructure
- Help to boost the economic growth of the county by providing the right infrastructure which will offer an opportunity to address growth potential, including, in part, the rural employment issues created by a lack of access
- Will be key in the promotion of growth in coastal areas

Coast 2 Capital (C2C) LEP Strategic Economic Plan

- Although the project site is not within the boundary of this LEP, part of East Sussex is and the project will help achieve their overall economic priorities of: investment in sustainable growth, promotion of better transport and mobility and building a strong national and international identity
- The aim of the Newhaven Enterprise Zone is to address issues of business space, affordability and suitability which are key issues for the Greater Brighton economy. The A259 is one of the

key economic corridors serving Newhaven and as such it is important to delivering the economic priorities for the town including the Enterprise Zone

- The C2C SEP identifies several spatial challenges that need to be addressed in order to deliver growth:
  - Flood defences
  - Port access road
  - Creation of facilities to exploit offshore wind opportunities
  - Clearance/conversion of derelict and shabby employment buildings and land and create new modern employment space
  - Create new sites for investment in housing and employment space
  - Improve transport links and infrastructure
  - Address town centre regeneration

Transport for the South East Economic Connectivity Review

- To grow the South East's economy by facilitating the development of a reliable, high quality, sustainable, integrated transport system that makes the region more productive and competitive, improves access to opportunities for all and protects the environment
- Ensuring the delivery of an accessible, affordable, safe and sustainable transport network across all modes
- Ensuring improved connectivity and journey time reliability for people and goods between major economic hubs within the South East
- The A259 has been identified within the Sussex Coast catchment as one of the broad economic corridors

The scheme will address these regional policy objectives by providing a functional 2-way bridge reducing congestion and allowing for improved access and movement and decreasing costs imposed on businesses by the congestion. This will aid growth plans for the area and help attract investment. Along with the improved foot and cycle way, a safe and sustainable network for all modes of transport will be enabled.

LOCAL

East Sussex Council Plan 2018/19

- Driving sustainable economic growth which includes transport infrastructure to achieve this. Addressing the bottleneck on the key A259 route would be a big improvement for strategic transport infrastructure and enable economic growth by providing a smooth and sustainable route between key towns in the County
- Making best use of resources. Improving the A259 corridor will enable resources such as the road, footway, local cycle ways, country park and visitor centre to be utilised to their full potential

Local Transport Plan 3 (LTP3)

- The LTP3 seeks to make East Sussex a prosperous county where an effective, well managed transport infrastructure and improved travel choices help businesses to thrive and deliver better

access to jobs and services, safer, healthier, sustainable and inclusive communities and a high quality environment. This project would help achieve this by providing better access, improved sustainable transport options and safer, more environmentally friendly infrastructure

- The project objectives align with the high level objectives of the LTP3: Improve economic competitiveness and growth; Improve safety, health and security; Tackle climate change; Improve accessibility and enhance social inclusion; Improve quality of life
- Road safety was highlighted as a key concern of residents. In 2010, 321 people were killed or seriously injured on East Sussex roads. The safer bridge and improved footway provision along the A259 will help address this
- As a road improvement which will tackle congestion at a major bottleneck on the network, improve connectivity within the county and support integrated sustainable travel (walking and cycling) at a key attraction the project will help deliver sustainable economic growth

Emerging ESCC Cycling & Walking Strategy – Long Distance Routes

- ESCC has commissioned Sustrans to carry out a study identifying new and improved walking and cycling routes and infrastructure that aligns with ESCC policies and programmes to support economic growth, improvements to health and well-being and the environment
- Within this National Cycle Network Audit the A259 by Seaford (part of National Route 2) received a very poor score as a very busy rural road and the proposed measure is for a new shared footway. This route, along with others with poor scores, will be considered as part of Sustrans Strategic Improvement Plan for England South
- Should this project progress then the improvement of the footway on the bridge and between the bridge and the Country Park visitor centre would contribute towards the measures for addressing this poor score. It should be noted that this section of footway also makes up part of Natural England's Coast path route between Eastbourne and Brighton

Highway Asset Management Strategy

- The project will help the strategy objectives to; maintain a safe and secure highway environment; promote economic growth; and improve customer satisfaction
- The project will be carried out with sustainability in mind, ensuring resources are used efficiently with due consideration to the environment, carbon emissions are reduced and the local economy is promoted and utilised as appropriate
- Will contribute towards continuous improvement in the safety and serviceability of footways and cycleways as is necessary to encourage alternatives to car

East Sussex Health and Wellbeing Strategy

- Helps towards the ultimate aim of a health and social care economy in East Sussex that promotes health and wellbeing and makes sure people receive proactive, joined up care, supporting them to live as independently as possible.
- Specifically supporting the priority to improve health and wellbeing by promoting healthy living through the improved infrastructure for walking

Seaford Neighbourhood Plan (SNP)

Although the site is outside the SNP area, any improvements at Exceat would impact on the traffic going through Seaford therefore the SNP states that any future developments in Seaford should not inhibit the future potential for widening or re-siting the bridge

The scheme will address these local policy objectives by providing better access and improved sustainable transport options. The addition of the improved footway will address residents' concerns around safety on the network and the removal of a major bottleneck on the network will allow for future developments and economic growth.

2.4. Need for intervention:

Exceat Bridge

Figure 3 Photo of bus squeezing around the bend from West side of 1 way bridge.

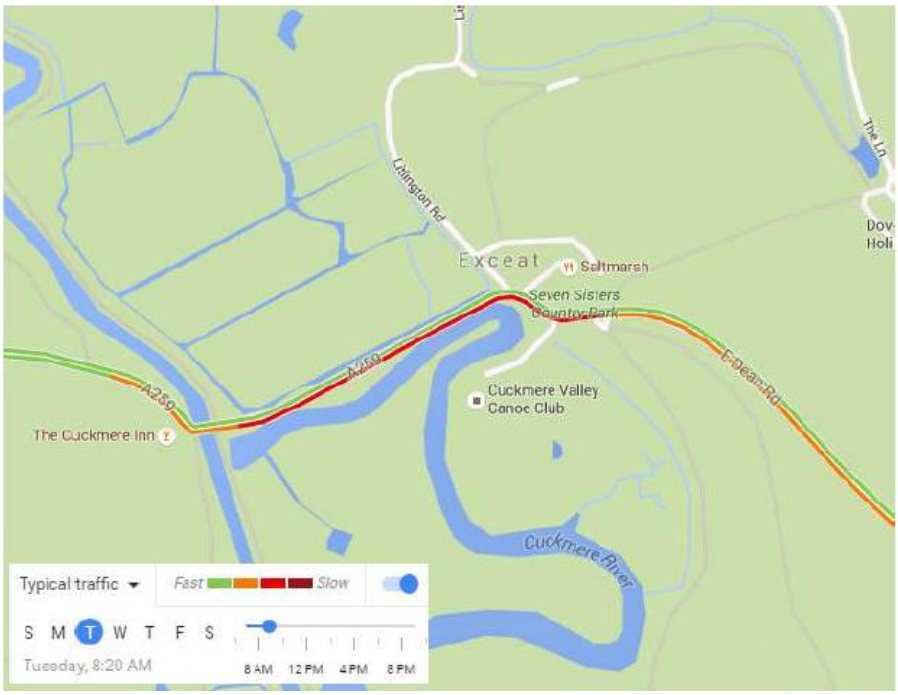


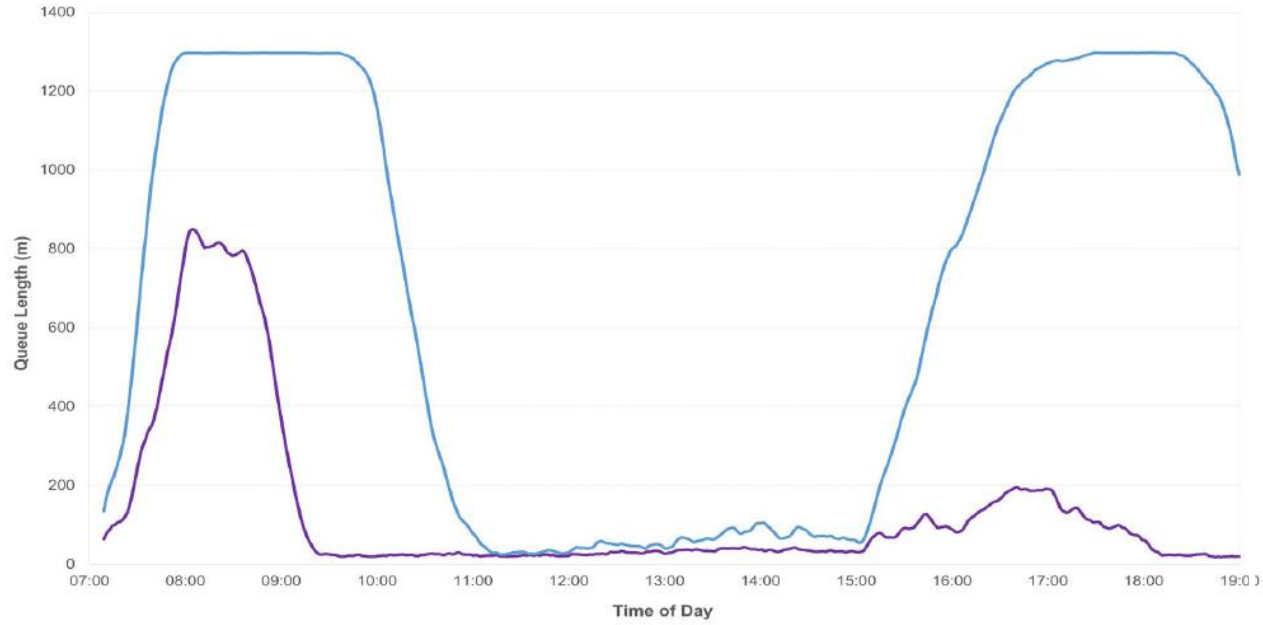
Figure 4 Typical Tuesday (08:20) floating vehicle data on Castle Lane East (Source: Google Maps)

The current bridge has layout issues. substandard road width, the entrance to the Cuckmere Inn is to the South side of the bridge whereas the footway on the bridge is located on the North side presenting safety issues for pedestrians and there is a sharp bend at the Western end of the bridge. These layout issues create the congestion and pedestrian and cyclist safety issues that prevent us meeting the objectives of economic growth in the area. East Sussex Highways has and continues to receive many public enquiries about the issues with the bridge and when a more suitable option will be provided.

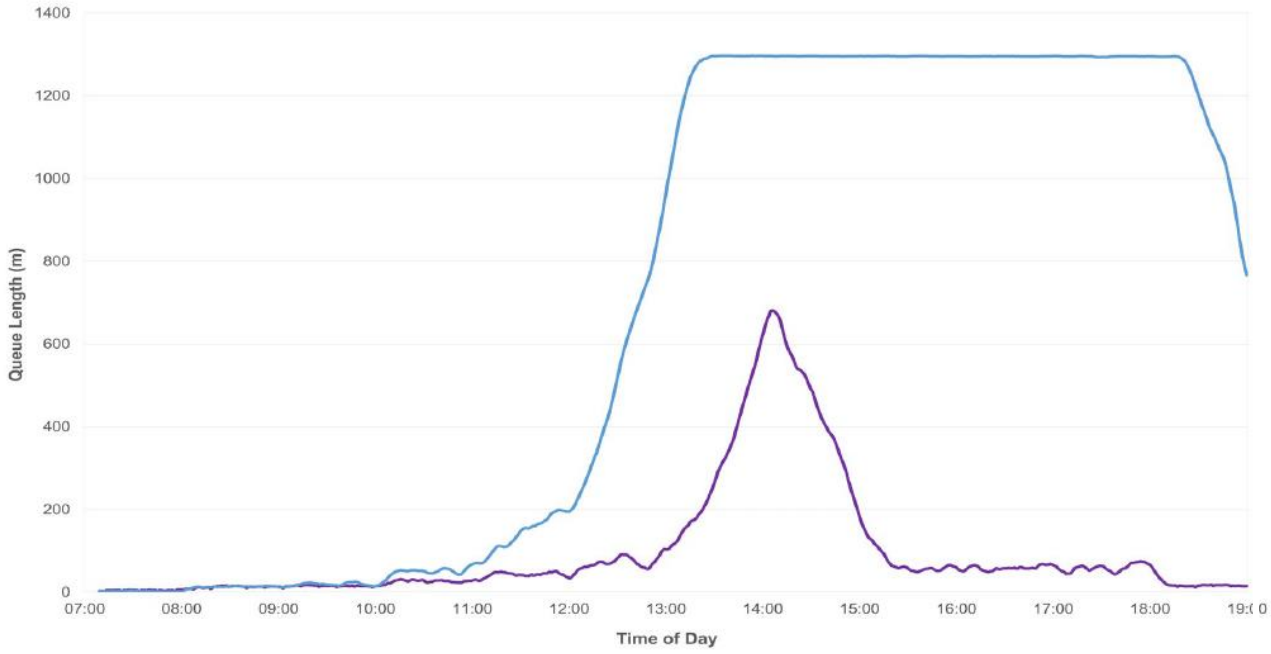
Predicted growth in the area (see section 2.3) and an increase in traffic volumes will exacerbate the existing problems with safety, delays and environmental impact.

Average-maximum queue lengths extracted from the 2028 DN model for the critical westbound A259 approach to the Exceat Bridge can be seen in the figures below. Results for the 2019 Base (purple line) and 2028 DN (blue line) are presented in metres and are based on the average of 10 simulation ‘seed’ runs.

2019/2028 2-Way Traffic Volumes (A259 Exceat Bridge) - Weekday Model



2019/2028 Average-Maximum Queue Lengths - Saturday Model



The bridge comprises a single span composite Corten steel beam and reinforced concrete deck supported by brick abutments with brick wing walls. The steel plate edge girders remain from the original structure built in 1876 and subsequent to re-decking in 1976 they only carry the loads of the parapets and the cantilevered footway located to the north of the bridge. The bridge deck

has an overall length of 19.53m and a span between bearing centres of 18m. The deck is 5 metres wide overall. Inspections have revealed a number of significant structural defects, including:

- The bearings are seized which prevent thermal movement of the deck.
- The cantilevered footway has undetermined strength and shows pronounced movement under live load (bouncy).
- The parapets are substandard in terms of vehicular containment.
- There are a number of cracks in the abutments.
- The bridge has evidence of impact damage to the structure.
- The original girders are corroded

Four options were considered to address the issues (further details of options in 3.1):

- Option 1- Replace bearings and repaint the original girders
- Option 2- Replace bearings, provide vehicular containment parapets
- Option 3- Widen the existing deck, replace bearings and reconstruct existing deck with vehicular containment parapets.
- Option 4- Build new bridge and demolish the existing bridge.

The conclusion of these options was that Option 1 would leave key structural, vehicle containment and road alignment deficiencies outstanding and following the NPIF allocation, further works and options were financially viable. Option 2 would address the key structural issues, but it fails to improve traffic flows or safety over the bridge. Adopting option 3 would address the key structural issues and most of the alignment deficiencies. However, it would result in a structure half of which will be new and half of which is already 140 years old.

Option 4, the preferred option, would satisfy all the issues and with the NPIF allocation, and if the remaining funds can be secured, a dilapidated bridge with a poor road alignment can finally be eliminated and replaced with a structure that meets the latest safety design standards, reduces congestion, improves air quality, provides safer facilities for pedestrians and additionally, reduces future maintenance liabilities. The improvements will also allow for essential growth in the area in terms of housing, business and tourism.

The economic benefits of these outcomes would be creating smooth, reliable transport routes on a principal road network which has been identified as one of East Sussex's broad economic corridors and plays a critical role in the economic connectivity of the county.

Footway

Figure 5. Existing footway from West to East

Figure 6. Existing footway from East to West

The current foot and cycleway provision along the A259 from the bridge to the country park is inadequate and constrains traffic flow, creating queues and a conflict between pedestrians, vehicles and cyclists. The need to address this as part of the project was identified. Unfortunately, the cost of providing a new combined foot and cycle way is prohibitive, however,

options to improve the footway have been explored, along with the addition of a footway on the south side of the new bridge which will mean pedestrians travelling between the bridge (or pub) and the Seven Sisters Country Park will not need to cross the busy A259.

This is a popular tourist destination with 700,000 visitors p/a (Wealden DMP Research and Findings, 2016) and in order to encourage and manage higher numbers, boosting the tourism economy further, these improvements are essential.

Impact of Covid-19 on the need for intervention
An increase or decrease in the number of vehicles, cyclists and pedestrians using the route at different times of day could have an impact on the project benefits, either positive or negative. A reduction in the use of public transport could increase the number of vehicles as well as the numbers of cyclists and pedestrians. Travel restrictions or changes to travelling behaviour could result in less traffic or, conversely, more traffic as greater numbers of tourists travel to local beauty spots.

However, with high levels of growth in the South East and the location and importance of this route, measures to control Covid-19 are not expected to have a long-term impact and it is unlikely to significantly reduce the need for intervention.

The impact on future traffic levels are currently being researched nationally, but no data has yet been released. We will keep the impact of Covid-19 on the project benefits under review.

2.5. Sources of funding:

Other public funding streams have been sourced and committed to the project;

- The East Sussex County Council Capital programme has allocated £500,000 to the replacement of the bridge to invest in the long term improvement of the Council's services. As well as providing services, the Council invests in, and maintains, assets such as roads and buildings. The capital programme supports delivery of the Council's priority outcomes particularly driving economic growth and keeping vulnerable people safe.

- The replacement of the bridge fitted the criteria of the National Productivity Investment Fund for improving local road networks and aiming to reduce congestion at key locations, upgrade or improve the maintenance of local highway assets across England, outside London, to improve access to employment and housing, to develop economic and job creation opportunities. ESCC was allocated £2,133,000 on the understanding it would fund the bridge replacement project.

The proportion of the funding already secured covers approximately 43% of the project costs.

The remaining costs are being sought from:
1) LGF 3B round of funding with £1,500,000 and, if possible, an additional £610,579 in phase 2 of LGF funding (total £2,110,579)

2) East Sussex County Council capital funds including the ESCC allocation of the DfT Challenge Fund, Transport Infrastructure Investment Fund and a reprofiling of the capital programme for the Highways and Structural Maintenance budget. (Total £1,419,120).

If funding is secured from both sources (£2,110,579 from LGF and £1,419,120) from ESCC), then the project will be fully funded.

It has not yet been possible to confirm ESCC funding as there have been delays to information regarding the latest funding from the DfT. However, this is expected soon and the timescale for a decision is set out below:

Early June: Confirmation from DfT regarding proportion of Challenge Fund allocated to ESCC and conditions of spend for both this fund and the Transport Infrastructure Investment Fund.

28 July ESCC Capital Board decision on whether to recommend that the DfT allocations can be spent on the project and/or agree a reprofiled capital programme for the Highways and Structural Maintenance budget to match the funding requirements of the project. Following Capital Board the decision may need to be taken to Cabinet Briefing for final approval (date TBC).

Updates will be provided to the Accountability Board on progress throughout the process.

2.6. Impact of non-intervention (do nothing):

Non-intervention is not an option due to the number of structural defects identified in the bridge inspection and the bridge being substandard in terms of approach geometry, vehicle restraint and road width. The primary structural defects and geometrical difficulties are set out above in section 2.4.

As a minimum, to ensure safety and functionality of the bridge by addressing the key structural issues, the seized bearings would be replaced on the existing structure. The issue of vehicle containment would also need to be addressed

Non-intervention would lead to the bridge failing and becoming unusable. This is not an option as it would cut off part of the key route of the A259, creating long and unsuitable diversions to the busy strategic route. The diversion route would be via the A26, A27 and A2270 totalling 28.7 miles. This would have a highly negative impact on the economy and society, creating issues for those using the route regularly as well as for tourists visiting the area.

The increased journey times and inconvenience of a diverted route would discourage people from visiting the area, moving to the area and doing business in the area, and therefore have a direct negative impact on the economy. Connectivity and accessibility of this strategic route would decrease and be detrimental to the growth plans in the area. The impact to the environment would also be negative due to the long diversions through countryside and the reputational damage to East Sussex County Council would be huge. There is a lot of public interest and expectation in the bridge improvements and ESCC continues to receive many enquiries around this.

2.7. Objectives of intervention:

Project Objectives

- Objective 1: To allow 2 way traffic to pass thereby reducing congestion across network, specifically at this notable pinch point

- Objective 2: To improve and maintain the functionality of the A259 as key corridor between Eastbourne and Brighton. Improved travel for business and residents
- Objective 3: To enable the planned growth of towns (such as Newhaven, Seaford and Peacehaven as set out in the Lewes District Council Local Plan) via improved accessibility and capacity
- Objective 4: To aid a transport network that supports employment and housing growth and makes East Sussex an attractive place to live, work and visit
- Objective 5: To improve facilities for pedestrians and cyclists and public transport. This will help to encourage sustainable travel options and reduce dependency on the car
- Objective 6: To encourage more tourism in the area
- Objective 7: To reduce the impact on the environment
- Objective 8: To replace a key asset which is coming to the end of its serviceable life
- Objective 9 To address concerns raised through petitions and local communities

Problems or opportunities the project is seeking to address

Problem / Opportunity 1: Congestion hotspot
Problem / Opportunity 2: Unusable bridge
Problem / Opportunity 3: Unsafe foot provision on current bridge, pedestrians travelling between the bridge and country park having to cross the A259
Problem / Opportunity 4: Unsuitable footway along A259

	Problems / opportunities identified in Need for Intervention section			
	Problem / Opportunity 1	**Problem / Opportunity 2**	**Problem / Opportunity 3**	**Problem / Opportunity 4**
Objective 1	✓✓✓	✓✓✓	*0*	✓✓✓
Objective 2	✓✓✓	✓✓✓	✓✓✓	✓✓✓
Objective 3	✓✓✓	✓✓✓	✓✓✓	✓✓✓
Objective 4	✓✓✓	✓✓✓	✓✓	✓✓✓
Objective 5	✓✓✓	✓✓✓	✓✓✓	✓✓✓
Objective 6	✓✓✓	✓✓✓	✓✓✓	✓✓✓
Objective 7	✓✓✓	✓✓✓	✓✓	✓✓✓
Objective 8	✓✓✓	✓✓✓	✓✓✓	✓✓
Objective 9	✓✓✓	✓✓✓	✓✓✓	✓✓✓

Table 5

2.8. Constraints:

The main constraint to delivery sits with the requirement for the SDNPA to approve the scheme design and Environment Agency (EA) approval as the bridge would be constructed over a tidal river. This potential constraint is already being managed, with ongoing engagement with the SDNPA and EA and the sharing of a pre application advice report around the options considered and explored for the new bridge. A Pre Planning Application (PPA), to agree timescales, response times and schedules and to allow constant liaison between ESCC and the SDNPA, has been signed between ESCC and the SDNPA which will also aid the planning permission process.

Other constraints that are currently being explored for suitable options include; the area for works site; maintaining traffic flows when construction is underway and other stipulations that the SSSI might have. If this bid is not successful, there will be a financial constraint on the project and realisation of the complete scheme and benefits thereof will be dependent on securing funding from another source.

2.9. Scheme dependencies:

Again the main dependency is the planning approval from the SDNPA. Should this not be granted, a replacement bridge could not be built and none of the benefits would be realised. However, this risk is being mitigated by ongoing engagement with the SDNPA to provide information of all options and considerations for the work to be carried out.

Further engagement has been carried out with the SDNPA during the early part of 2020. A final meeting will be held on 22nd June 2020 to establish a preferred alignment option with the SDNPA – if there is a successful outcome this will give greater assurance of planning approval. We will provide an update on the outcome of this meeting.

2.10. Expected benefits:

- The improved accessibility and capacity in the area enables the planned growth of nearby towns and encourages commerce and tourism
- Better travel options and times for business, residents and tourists along the A259 corridor between Eastbourne and Brighton. This supports the wider strategic development along the A259 Growth corridor for employment and housing growth and helps make East Sussex an attractive place to live, work and visit
- Prior to the completion of the project, 23 construction jobs will be created as part of the installation of the new bridge
- New bridge with design life exceeding 120 years and constructed of materials that can cope better with the severity of the environment in which it sits. Reducing the current maintenance spend on a deteriorating bridge
- The new bridge will have an improved alignment which is safer and offers better access for pedestrians and cyclists
- Increased sustainable travel options and take up via better provision for pedestrians and cyclists and public transport
- 2-way bridge allowing traffic to pass and reducing congestion in the area and across the network
- The reduction in congestion will help to reduce the impact on the environment and improve air quality/decrease C02 emissions
- Issues and concerns currently experienced by local communities and visitors to the area will be addressed and this will help to encourage more tourism to the area
- A full economic appraisal has been carried out by WSP (consultancy service for the built and natural environment) on the Exceat bridge replacement and the present value of scheme benefits and costs (based on £6.3m costs included in OBC), over the 60-year assessment period, discounted to 2010 is set out in table 6 below. **The central scenario indicates that this scheme represents high value for money.**

	COSTS & BENEFITS (2018 prices converted to 2010 and converted to market prices)
Greenhouse Gases	-
Physical Activity (Active Modes Appraisal)	-
Accidents	-
Economic Efficiency: Consumer Users (Commuting)	£2,552,953
Economic Efficiency: Consumer Users (Other)	£4,781,882
Economic Efficiency: Business Users and Providers	£5,321,078

	COSTS & BENEFITS
Wider Public Finances (Indirect Taxation Revenues)	-
Present Value of Benefits (PVB)	**£**12,655,913
Cost to Broad Transport Budget	
Investment cost	£5,522,613
Operating costs	£0
Present Value of Costs (PVC)	£5,522,613
Net Present Value (NPV)	£7,133,300
BCR	**2.3**

Table 6

The outputs from the LinSig model were used for the economic appraisal of the scheme. The Transport Economic Efficiency (TEE) benefits have been calculated manually using SAR. These benefits were evaluated over a 60-year period and discounted to 2010. The following assumptions were considered in the assessment using SAR:

- Only Value of Time (VOT) benefits were captured. Small savings in Vehicle Operating Costs (VOC) due to reduced congestion have been ignored. Average delay per vehicle has been estimated by LinSig as 7.48 minutes in the AM peak and 8.62 minutes in the PM peak in 2020.
- Journey time, VOC and accident benefits and dis-benefits during construction have not been considered as the existing bridge would remain operational during construction.
- Value of time benefits are based on one hour in the AM peak (8:00-9:00) and one hour in the PM peak (17:00-18:00) over a 5 day a week for 52 weeks (260 days) of the year

2.11. Key risks:

The key risks before implementation include the following. Please see the risk register for full details and actions in place to reduce risks

Financial Risks

- At the time of writing, full funding is not yet committed to complete the scheme. See section 2.9 for details on work being carried out to source remaining funding.

Changes to the projects Value for Money assessment

- As with construction projects of this nature, we are aware of the potential risk for an increase in construction costs which could have a knock on effect on the value for money of the project. We are unable to report a completely accurate figure for construction until next year (2021) when designs are finalised. However, for the current project forecast of £6.2m we are at 2.3 benefit cost ratio, which allows for 23% optimism bias and risk contingency. Sensitivity testing within in the latest economic impact assessment allowed us to consider 2 scenarios: Scenario 1 (total project cost of £6.28m) has a BCR of 2.3 and scenario 2 (total project cost of

£8.5m) has a BCR of 1.7. This would indicate that if the total project costs increased to approximately £7.2m the project could still have a BCR above 2. We are not expecting there to be a change to the benefits, only potentially the costs. Close liaison with the planning authority, statutory consultees and key stakeholders will help to mitigate this risk

We are also aware of the change request process and requirement of a review of the business case by SELEP should there be a change to the Value for Money of the project following approval of the business case. .

Planning/ Land Risks

- Statutory and other approvals / agreements leading to delays to programme / Full Approval / submission for Planning. Note: Further engagement has been carried out with the SDNPA during the early part of 2020. A final meeting will be held on 22nd June 2020 to agree an alignment option with the SDNPA – if there is a successful outcome this will give greater assurance of planning approval. We will provide an update on the outcome of this meeting.

- Land acquisition. Not all land obtained via negotiation requiring a CPO with a risk of Public Inquiry resulting in delay to programme. Note: Risks are currently unknown as the exact alignment of the bridge is not yet finalised – different alignments have different land requirements. A decision is expected following consultation with the SDNPA on 22 June. Depending on the level of support from the landowner there could be anything from a very low to very high risk of delay to the project. However, the project has had a high level of local support and problems are not anticipated. Early engagement will take place with the relevant landowners from July 2020 to minimise the risk of disruption.

- Construction within Flood Plain - leads to delays with Environment Agency to agree the nature of the scheme, preventing scheme progressing to programme

Stakeholder Risks

- Scheme does not get full support from Council Members or key stakeholders resulting in delay / abandonment
- Project Sponsor/key stakeholder decisions affect programme delivery (e.g. amendments to scheme scope)
- Loss of stakeholder (including pressure groups and media) and public support resulting in delay to programme and/or reduction in scope of scheme.

Operational Risks

- Environmental surveys identify additional work resulting in delay to programme i.e. archaeology excavation, further surveys

The key risks during construction include:

Operational Risks

- Unmapped utilities encountered during construction leading to delay to construction programme, redesign and extra costs
- Archaeological finds during construction resulting in delay to project

- Impact on biodiversity not fully mitigated resulting in additional cost of mitigation beyond proposed measures. Environmental constraints resulting in prolongation of works
- Adverse (inclement) weather leading to delay to programme of works, increase in construction/supervision costs.
- Delays if Unexplode Ordnance's (UXOs) are identified.

Risks as a result of the Covid-19 Pandemic

Additional risks as a result of the Covid-19 Pandemic have been considered below and given a RAG rating (1 to 5 where 1 is green and 5 is red)

- **Risk to total project cost** – No increase to cost as a direct result of the pandemic has been incurred so far. Without further information on future restrictions it is not possible to say whether there will be an impact on costs in the future. However, the project is still within the design stage and the majority of activities can be largely completed off-site using desk-top data without further resources being necessary. If current restrictions were to continue it is possible that there might be a slight increase in cost to works on site from August 2021 due to the cost of additional safety measures. There is a risk around possible funds for the project being directed elsewhere to service areas impacted by Covid-19. Extra costs have been included in the risk register. Currently RAG 2

- **Risk to project delivery programme -** The impact of the pandemic and restrictions imposed by the Government on the project programme have not caused any significant slippage so far, however future progress is unpredictable. The project is still within the design stage and the majority of activities can be largely completed off-site using desk-top data. Although it is impossible to estimate the degree of slippage with any certainty at this stage, if restrictions are increased again there would likely be delays to any on-site work. Currently RAG 1

- **Risk to project viability** – The project is expected to remain viable despite the impact of Covid 19 subject to costs and benefits remaining within reasonable limits. RAG 1

- **Risk to realisation of project benefits** – An increase or decrease in the number of vehicles using the route could have an impact on the project benefits, although it is not expected to have a long-term impact. Future traffic predictions are currently being discussed and researched, so it is too early for us to know the possible impact. RAG 1

3. ECONOMIC CASE

3.1. Options assessment:

Long list of options considered:

Use of £1.5m allocated in phase 1 and potential £600k in phase 2 of funding, including bridge replacement and improved footway

Please note that due to budget constraints, the previous aspiration to include a pedestrian crossing has been removed from the project. However, the SDNPA have indicated that improvement to the footway between the bridge and Seven Sisters Country Park will form part of the requirement of the planning application of the new bridge. Therefore further options for these works have been carried out, as below.

Exceat Bridge Options

A number of options have been considered, as follows:

- Option 1- Replace bearings, and repaint the original girders
- Option 2- Replace bearings, provide vehicular containment parapets
- Option 3- Widen the existing deck, replace bearings and reconstruct existing deck with vehicular containment parapets.
- Option 4- Build new bridge and demolish the existing bridge.

Option 1

The first option considered was to replace the seized bearings on the existing structure. The works for this option would be as follows:
· Replace bearings.
· Carry out work to the cantilevered footway.
· Adapt existing enclosure to ensure durability of the Corten beams.
· Re-paint the existing wrought iron edge girders.

This option addresses the key structural issues with the bridge and will allow the deck to behave in the manner to which it was designed.

However, this option fails to address the lack of vehicle containment afforded by the bridge, or the poor road alignment on the western approach. The sub-standard carriageway width over the bridge and the severe congestion caused by the priority system will also remain causing a massive public dissatisfaction.

It is envisaged that replacing the existing bearings will require two full road closures of up to 48hours duration each, while the deck is lifted, to facilitate their removal/installation.
The original edge girders will continue to be an ongoing maintenance liability, although they will be painted as part of this project. Additional land is not required, other than that required to provide a temporary site.

Option 2

The second option considered is to use the existing abutments and widen the structure to the maximum possible width. The edge girders would be replaced with a new reinforced concrete parapet edge.

The works for this option would be as follows:
· Carry out work to the cantilevered footway.
· Replace bearings of retained corten beams.
· Remove wrought iron girders.
· Modify existing abutments; add new corten beams, deck extensions and vehicle containment parapets.
· Replace enclosure.

This option addresses the key structural issues with the bridge and will allow the deck to behave in the manner to which it was designed. New parapets will provide vehicle containment. This option also includes the removal of the original girders reducing future maintenance liabilities. However, this option fails to address the poor road alignment on the western approach, or the sub-standard carriageway width over the bridge which, coupled with the continued existence of the priority system, will fail to reduce the severe congestion that exists at peak times. This will cause huge public dissatisfaction.

It is currently envisaged that this option will also require two full road closures, of up to 48hours duration each, while the deck is lifted and the bearings of the existing beams are replaced.

Only a small amount of additional land is required, to improve the road alignment at the eastern end of the deck, beyond that required to provide a temporary site compound.

Option 3

This option would involve extending the abutments to the north of the existing structure and widening the deck to allow two way traffic flow, as well as a mixed used pedestrian/cycleway route on the south side of the road.

The works for this option would be as follows:
· Provide a temporary footbridge using the 1975 ‘bailey bridge’ bank seats.
· Remove cantilevered footway.
· Extend abutments.
· Replace bearings of retained corten beams.
· Add new corten beams and widen deck (to the north), with footway on south side of new deck.
· Add vehicle containment parapets (both sides).

This option addresses all the structural issues present in the existing bridge and most of the deficiencies associated with the sub-standard road alignment. Only the sharp bend on the western approach will persist. The bend will naturally reduce traffic speeds through the site, but this could be considered advantageous.

It is envisaged that the new abutments, deck and a temporary running surface will be completed following which, traffic will be transferred to the new deck, albeit in single file. The original deck (with new bearings and a vehicle containment parapet) will then be reconstructed as phase two. Additional land is required to the north of the bridge, on which the widened abutments, deck and carriageway will be built. It is understood that land north of the bridge, on the west bank, is

owned by Sustrans and may be made available as improvements to the national cycleway have been incorporated into the scheme. Land on the east bank is owned by ESCC (Countryside Management).

Unfortunately, the estimated cost of the scheme exceeds the current budget provision.
The work will also require a long construction phase, throughout which, traffic will be restricted to a single file controlled by temporary signals. However, full road closures of more than a few (night-time) hours are not envisaged other than while traffic lanes are moved and surfacing works executed.

Options 1-3 would only provide a temporary solution to the bridge's structural problems. The bridge has reached the end of its serviceable life and even with these improvements, a weight limit restriction is likely to be necessary within the next 5yrs. This would have a major detrimental impact as the A259 is part of the major road network and heavily used by goods vehicles and buses serving local communities and tourists in the National Park.

Option 4

This option would involve building a totally new independent bridge to the north of the existing. The bridge will have two lanes and a footway/cycleway on the south side.

The works for this option would be as follows:
· Construct new bridge.
· Modify road approaches.
· Divert statutory plant.
· Demolish existing structure.

The final option considered, overcomes all the deficiencies as an entirely new "modern" bridge will be constructed, parallel with the existing bridge. Upon completion of the new bridge, the existing bridge will then be demolished and the banks re-graded. The road alignment will be improved, with a full width carriageway provided, which will eliminate congestion.

The new bridge is far enough away from the existing road to allow construction work to continue uninhibited by traffic and only short (night-time) road closures will be required, when the new road is "tied-in" to the existing surfacing. Land take is greater than that required by option 3, but it is envisaged that environmental concerns will be no more difficult. In fact, queueing traffic will be eliminated by the improved compound.

Improved footway - options

A number of options have been explored to address the issues with the current footway between Exceat bridge and the Seven Sisters County Park:

1) Widen the existing footpath towards the South;
2) Widen the existing footpath towards the North*;
3) Keep the existing kerbs layout;
4) Segregated cycle route across the field to the North of the existing A259;
5) Passing places on existing footpath

Option 1

Option 1 comprises a 360m long earth retaining structure that is to be constructed on the South elevation of the causeway and located at approximately 3.40m South of the existing carriageway kerb line alignment. Two different structural forms have been considered for this Option, a cantilever steel sheet pile retaining wall solution and a reinforced concrete solution that comprises an L– shaped wall.

Option 2a

Option 2a comprises undertaking ground improvement works to the North elevation of the existing A259 causeway. The improvement works would run the full length of the causeway, approximately 360 lin. m and provide a widened portion to the North which will accommodate a northern shift in the carriageway alignment. Relocating the carriageway to the North will enable the construction of the new combined use footway/cycleway to the South of the causeway.

Option 2b

Option 2b considers widening the existing causeway to the North by providing a new earth retaining structure that will run the full length of the causeway. As Option 1, Option 2b has considered both the cantilever steel sheet pile and reinforced concrete solutions and, for the same reason as Option 1, the most economic form of structural solution is the cantilever sheet pile retaining wall solution.

Option 3

Option 3 considers a pedestrian only footway and the diversion of cyclists onto the existing carriageway. The existing footpath will be regraded to the top of kerb level, enabling the minimum width for the footpath of 1m. A timber post and rail pedestrian fence will be required on the existing south verge and an upgrade to the existing carriageway, with cyclist specific markings and traffic signs, will be required. Because this option requires the footpath to be regraded a breach of the existing flood defence level may occur therefore before considering Option 3 as a viable Option it will be necessary to consider the findings of the ongoing flood study for the area.

Option 4

Option 4 features the construction of a segregated, 3m wide, cycle route that will be located in the field immediately North of the current carriageway causeway and keeping the existing pedestrian-only footpath at the existing causeway location. The proposed alignment of the cycle

route crosses 4 No existing field drains therefore there will be a need to construct four culverts to enable the cycleway to cross at these points.

Option 5

Similar to Option 3, Option 5 considers a pedestrian only footway and the diversion of cyclists onto the existing carriageway. A pedestrian parapet will be required on the existing south verge and an upgrade to the existing carriageway, with cyclist specific markings and traffic signs, will be required. Option 5 also considers the construction of three passing places along the footway alignment, with viewing platforms overlooking the river to the south.

Options assessment:

Options for the bridge replacement and the improvements to the footway were all assessed by professional design leads within Jacobs and Costain, the joint venture partners for East Sussex Highways contract. ESCC has commissioned Jacobs and Costain through the Highways and Infrastructure Contract.

Exceat Bridge options

When the option appraisal was carried out there was only an initial budget provision of £500k, which meant only Option 1 was financially viable. However, adoption of this option would leave key structural, vehicle containment and road alignment deficiencies outstanding.

Following the National Productivity Investment Fund (NPIF) allocation of £2.13m, further options became viable. Option 2 would address the key structural issues, but it fails to improve traffic flows (or safety) over the bridge.

Adopting option 3 would address the key structural issues and most of the alignment deficiencies. However, it would result in a structure, half of which will be new and half of which is already 140 years old.

Option 4, the preferred option, would satisfy all the issues, but the total cost of the work is more than that of the current budget provision (including the NPIF allocation). However, if the extra funds could be found, a dilapidated bridge with a poor road alignment could finally be eliminated and barriers to economic growth would be eliminated.

Improved footway options

Option 5 has been selected as the preferred option.

It is likely that this option is the least intrusive on the surrounding landscape and habitat features and recent discussions with the SDNPA would indicate that they are in support of this option. This option results in similar physical conditions for cyclists as at present, albeit with a widened bridge and carriageway and improved vertical and horizontal alignment which will improve road conditions for cyclists. However, it will improve the situation for pedestrians providing a minimum of three safe (14m x 4m) passing places along the existing footway throughout the 360m length.

There will likely be some loss to trees and shrubs, but a minimal change to the existing landscape character of the SDNP, loss of land from the SSSI or LNR, and no additional impact on possible buried archaeological remains. The proposed passing places will provide additional

viewing and seating areas of the SDNP landscape potentially enhancing the visitor experience of the area.

Additionally, option 5 was the most cost-effective solution and would be feasible within the budget of the project.

Additional works for flood resilience of the A259

A further project has been identified to address resilience issues of the A259 across the causeway near to Exceat Bridge which could be run in conjunction or separately to the projects above.

This is not included within our bid but should there be any further funding opportunities through the LGF we would appreciate being considered to further strengthen the project and resilience of this area.

The two options are:

Option 1

To reinforce the southern side of the causeway embankment by constructing a 0.36km cantilever steel sheet pile retaining wall behind the elevated footway.

The wall will improve the stability of the causeway, reduce erosion and prevent flood water from reaching the road. This will significantly increase the life of the causeway, reduce the number of defects and prevent collapse of the causeway and the immediate risk to the footway. It would also allow for a wider footway to be constructed which may be designed to accommodate both foot pedestrians and cyclists.

Option 2

In addition to reinforcing the southern side of the causeway embankment, a further option would be to raise the A259 carriageway that runs along the embankment. This would further improve the resilience of the carriageway to future flooding events, as a result of the changing hydraulic landscape and rising sea levels as a result of climate change.

A flood model, which will be validated by the Environment Agency, is being developed which will demonstrate the future flood levels and will help inform the design of the reconstructed embankment.

3.2. Preferred option:

Option 4 for the bridge replacement is the preferred option. This option would satisfy all the issues and with the NPIF allocation, and if the remaining funds can be secured, a dilapidated bridge with a poor road alignment can finally be eliminated and replaced with a structure that meets the latest safety design standards, reduces congestion, improves air quality, provides safer facilities for pedestrians and cyclists and additionally, reduces future maintenance liabilities. This is the only option that provides significant value for money in terms of economic benefits. The impact this option will have on traffic flow and long-term viability of the bridge are key factors in the economic impact appraisal score.

Option 5 for the improved footway provision is the preferred option. This option will provide a much safer footway with passing points, is the least intrusive on the landscape, is the most cost effective and is provisionally supported by the SDNPA.

The economic benefits of these outcomes would be creating smooth, reliable transport routes on a principal road network which has been identified as one of East Sussex's broad economic corridors and plays a critical role in the economic connectivity of the county. The improvements would allow for essential growth in the area in terms of housing, business and tourism by providing a network road users can rely on and not encounter substantial delays when commuting.

If the remaining funding to complete option A4 and A5 is not available, then option A2 would be chosen. However this would only be a short term solution and a consequent weight restriction would result in major disruption to traffic.

Stakeholder support

There is wide stakeholder support for a realigned 2-way bridge and improved access for pedestrians. Consultation and engagement continues with these stakeholders as the project progresses and a communication plan has been created.

There is significant public support for improvements at Exceat with East Sussex County Council continually receiving numerous complaints and enquiries. On 22nd March 2016 a petition was presented to the County Council Chairman asking for the installation of traffic signals at Exceat bridge to address the traffic congestion and issues crossing the bridge.

The decision at the Lead Member meeting the petition was taken to: 'RESOLVED to advise the petitioners that the request to introduce traffic signals at the Exceat Bridge will not be progressed on the basis that it will not improve traffic conditions, however the County Council is exploring options and the associated funding to deliver an offline two-way bridge.'

Since press releases of the NPIF allocation and of a new 2-way bridge, public interest has continued to grow and East Sussex Highways regularly receives enquiries as to when the work will commence.

Senior Management and County Councillor support

As well as the above resolution agreed by County Councillors, a report was taken to Cabinet in June 2017 as part of the Council's Reconciling, Policy, Performance and Resources report. The Cabinet resolved to approve the updates to the Capital Programme 2017-23, which includes the NPIF spend on Exceat bridge replacement.

3.3. Assessment approach:

The original economic impact assessment was carried out ahead of the business case being submitted so is based on earlier budget forecast of £4.7m and an opening year of 2021. Due to external factors delaying the opening year there has been an increase to the project forecasts, however even with the revised costs and dates, the BCR would still be high, as demonstrated in the revised assessment.

WSP was commissioned to undertake the economic appraisal. The economic assessment follows the guidance in the DfT's WebTAG documents, which sets out how transport schemes should meet the requirements of HM Treasury's Green Book. The scope of the assessment was agreed with ESCC, and is in line with the Assurance Framework set out by SELEP.

Assessment Methodology
All of the impacts of a "do something" scheme are assessed against those of a "do minimum" scenario which represents the conditions considered most likely to occur if the scheme is not delivered. The benefits and costs are all calculated in terms of changes to the "do minimum" scenario. In this way, the assessment takes account of all foreseeable impacts of the proposed scheme. By setting these against the predicted costs of delivering the scheme, an assessment is then made of the value for money. WebTAG version 2019 was utilised, alongside the TAG data book dated May 2019.

In order to quantify and monetise the scheme impacts, Highways England's Scheme Appraisal Report (SAR Version 2018) has been used to input the average journey-time savings per vehicle in the relevant time period and to estimate the monetised transport user benefits over the whole assessment period. SAR is a mandatory requirement for all Highways England improvement schemes costing under £10m. SAR was deemed to be an appropriate tool to appraise the Exceat Bridge replacement scheme since:

- The cost of the scheme under consideration is less than £10m:
- The cost and time required to undertake a detailed and comprehensive economic appraisal is considered disproportionate to the cost of the individual highways schemes within the package.

Assessment Period
An assessment period of 60 years has been considered for appraising the Exceat Bridge Scheme Replacement.

The scheme has been assessed against a 'do minimum' which assumes the status quo, i.e. the bridge will continue to operate as per existing arrangements with periodic maintenance and repairs to help maintain its primary function of safely enabling vehicles, pedestrians and cyclists to cross the River Cuckmere.

3.4. Economic appraisal inputs:

Cost-Benefit Analysis – Overall Approach
Use of a strategic model to assess the scheme has been discounted since the existing Newhaven Transport Model (SATURN) extends only as far as Newhaven and does not include the Exceat Bridge. An alternative appraisal approach has been adopted whereby a LINSIG model was developed to replicate the shuttle working arrangement that is currently in place on the bridge approaches. This essentially represents the 'do minimum' scenario, given that the shuttle working status quo would be maintained if the new bridge was not built.

Under the do–something scenario, the new bridge will be wide enough to accommodate two-way traffic movements simultaneously, thereby eliminating the need for a shuttle working and consequently the delays to the westbound traffic at the give way line would disappear. Delays in the 'do minimum' are therefore assessed against a 'do something' scenario with no delays to traffic movements across the bridge. The following points should be noted in this context:

- The average delay per vehicle to the westbound traffic extracted from the LinSig model has been input into SAR to quantify the savings in delays between the 'do minimum' and do something scenarios.
- Traffic flow data obtained from the permanent count site on the A259 east of Friston has been used to estimate the peak hour flows using the bridge. Given that the count site is approximately 2km east of the bridge location, it has been possible to capture the full demand in westbound movements (and is not affected by the long westbound queues). The robustness of the traffic data is underpinned by the fact that there are no key distributor roads tying into the A259 along this section.
- To reflect a robust assessment, traffic growth between the opening year (2022) and the future assessment years has been assumed as 0%. Should the planned and committed developments identified in ESCC LDF Core Strategy materialise and with the NTM forecast background traffic growth, the traffic flows along the A259 would materially increase over the assessment period, leading to longer queues and delays in the 'do minimum' scenario.
- Whilst the eastbound traffic has right of way over westbound movements, there are periods when the eastbound traffic must wait for the westbound traffic to clear the bridge before proceeding. Although not significant, in practice, this presents a degree of delay to the eastbound movements. In the interest of undertaking a robust economic appraisal, these delays have been ignored.
- For appraisal purposes, it has been assumed that the delays would only occur for an hour between 8:00-9:00 in the morning and 17:00-18:00 in the evening during weekdays. This is considered to be a very conservative estimate since delays, to varying degrees of magnitude, would occur during the hours adjacent to the peaks, during certain hours of the interpeak and during weekend peaks.

The LinSig model has been calibrated by adjusting the modelled queues to approximately match those observed on the westbound approach. Reference has been made to the typical traffic conditions illustrated on Google maps to estimate average queue lengths on the westbound approach in the AM and PM peaks. Floating vehicle data has become a means of establishing live, and typical, traffic speeds on the highway network, based on a collection of anonymous real-time speed, direction of travel and time information data from mobile phones and other GPS enabled devices.

As a way of illustrating congestion and therefore, slower journey times during peak hours (which acts as a proxy for congestion), floating vehicle data, sourced from Google maps, has been presented in Figure 7. The red line represents the queuing traffic and it translates to approximately 60-70 vehicles. The length of queues and the scale of magnitude of delays have also been confirmed by officers at the ESCC.

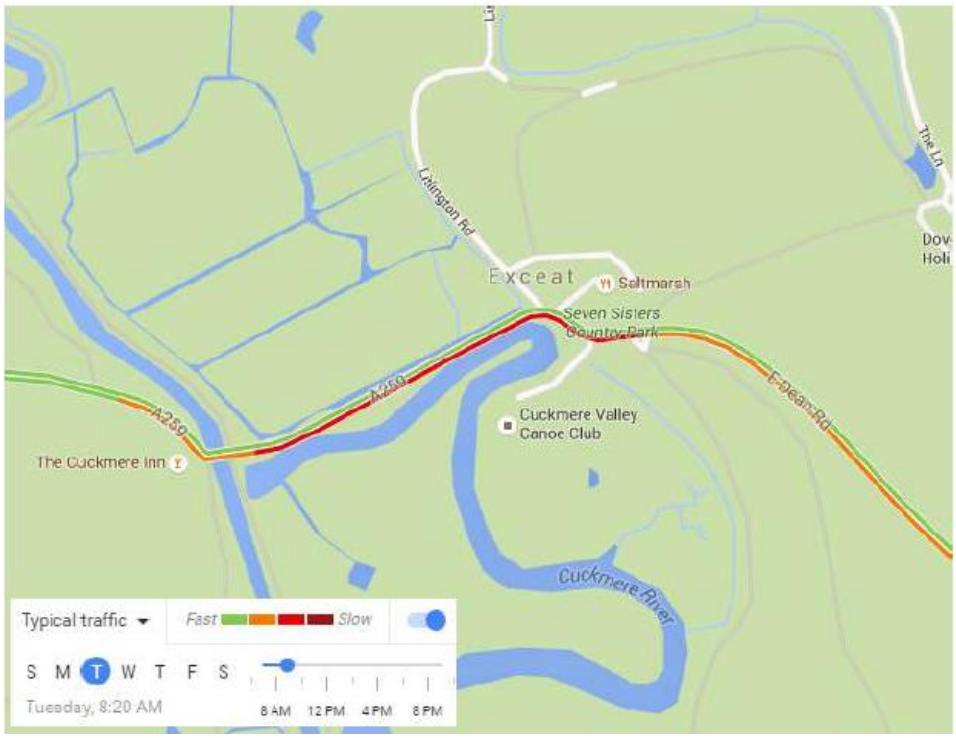

Exceat
Saltmarsh
Seven Sisters
Country Park
Cuckmere Valley
Canoe Club
The Cuckmere Inn
A259
A259
Cuckmere River
Typical traffic
Fast
Slow
S M T W T F S
Tuesday, 8:20 AM
8 AM
12 PM
4 PM
8 PM

Figure 7

3.5. Economic appraisal assumptions and results

It should be noted that the benefits have come down since submitting the outline business case. This is partly due to the use of the current Version of SAR 2018. Using the previous version of SAR the benefit to cost ratio would be 3.182.

Appraisal Assumptions	**Details**
WebTAG version	WebTAG version 2019 was utilised, alongside the TAG data book dated May 2019.
Opening Year, Final Modelled Year and Appraisal Duration	Opening year – 2022 Final modelling year - 2081 60 year assessment period
Price Base/GDP Deflator	In accordance with WebTAG guidance (TAG Databook, May 2019), the 2019 prices were deflated to 2010 prices and converted to market prices prior to calculating Present Value of Costs (PVC).
Real Growth (i.e. above CPI or below)	
Discounting	Discounting was applied at a rate of 3.5% per year for 30 years and 3.0% thereafter

Table 7

	£ PV (2010)
Costs*	
Capital Costs	£6, 280,000
Renewal Costs	
Operating Costs	£0
Benefits	
Economic Efficiency: Consumer Users (Commuting)	£2,552,953
Economic Efficiency: Consumer Users (Other)	£4,781,482
Economic Efficiency: Business Users and Providers	£5,321,078
Journey Time Benefits	
Highway Externalities	
Revenue	
Indirect Tax	
Appraisal	
Present Value of Costs (PVC)	£5,522,613
Present Value of Benefits (PVB)	£12,655,913
Net Present Value (NPV)	£7,133,300
Benefit Cost Ratio (BCR)	**2.3**

** Costs represent total Capital Costs, Renewal Costs and Operating Costs of the specific intervention seeking funding under LGF.*
Table 8

3.6. Sensitivity tests:

	£m PV (2010)
Sensitivity Test 1	Low scenario
Present Value of Costs (PVC)	£5,522,613
Present Value of Benefits (PVB)	£7,710,816
Net Present Value (NPV)	£2,188,203
Benefit Cost Ratio (BCR)	**1.4**
Sensitivity Test 2	High scenario
Present Value of Costs (PVC)	£5,522,613
Present Value of Benefits (PVB)	£14,030,711
Net Present Value (NPV)	£8,508,098
Benefit Cost Ratio (BCR)	**2.5**

Table 9
Smaller schemes (less than £2 million) are not required to complete this section.]

3.7. Environmental impacts:

Environmental Impact	**Assessment**
Noise	**Moderate** – There will be a slight improvement in noise levels as a result of a reduction in traffic congestion.
Air Quality	**Moderate** - There will be a slight improvement in air quality as a result of a reduction in traffic congestion.
Greenhouse Gases	**Moderate** - There will be a slight improvement in greenhouse gases as a result of a reduction in traffic congestion.
Landscape	**Neutral** - There will be no adverse effects on the landscape. Any impacts during construction will be mitigated through the planning and consultation with stakeholders.
Townscape	**Neutral** – The scheme is unlikely to have an impact on townscape. Any impacts during construction will be mitigated through the delivery of the mitigation package as determined through planning and consultation with stakeholders.
Heritage	**Neutral** – Any impacts during construction will be mitigated through the delivery of the mitigation package as determined through planning and consultation with stakeholders.
Biodiversity	**Neutral** - Any impacts during construction will be mitigated through the delivery of the mitigation package as determined through planning and consultation with stakeholders.

Environmental Impact	Assessment
Water Environment	**Neutral** - Any impacts during construction will be mitigated through the delivery of the mitigation package as determined through planning and consultation with stakeholders.

3.8. Social impacts:

Social Impact	Assessment
Accidents	**Moderate** – Improved visibility for road users due to realignment of carriageway and bridge.
Physical Activity	**Moderate** – Physical activity and health will be improved through the promotion of walking and cycling.
Security	**Neutral**
Severance	**Neutral**
Journey Quality	**Moderate** – Journey quality will be improved due to the reduction in congestion.
Option values and non-use values	**Neutral**
Accessibility	**Moderate** – Benefits through the national park linking to the downland and coastal strip through improved crossing options.
Personal Affordability	**Slight** – Improved journey time resulting in lower fuel costs, less time lost in congestion and opportunities to access other sustainable forms of transport methods.

3.9. Distributional impacts:

This scheme will have a positive impact on improving the transport network between Eastbourne and Seaford and providing improved and reliable access to the city of Brighton.

3.10. Wider impacts:

This scheme itself will create in the region of 23 local jobs and offer opportunities for local apprentices and work experience. The wider economic benefits cannot be quantified in terms of commercial floor space, residential units etc. However, although it will not directly open up new sites for development in this location it will do so indirectly through an improved transport network and reduced journey times this will support growth in the local areas of Eastbourne, Seaford and Newhaven.

3.11. Value for money:

Value For Money Statement

The economic appraisal of the Exceat Bridge Replacement demonstrates that the proposed scheme offers **high value for money.**

- The present value of benefits PVB is £12,655,913
- The present value of costs PVC is £5,522,613
- The benefit cost ratio **BCR is therefore 2.3**;
- The calculation of benefits includes the value of savings in time only;

- The costs include an allowance for risk, and an optimism bias of 23% (As per the guidance provided in TAG Unit A1.2 for fixed link (Bridges and Tunnels) schemes that are at stage 2 (conditional approval); and
- Sensitivity tests demonstrate that the scheme offers high value for money for a 'low' scenario and very high value for money for a 'high' scenario, with a range of different assumptions.

In addition to the monetised benefits, the scheme will:

- Improve journey time reliability for vehicular traffic including bus services that serve the A259 corridor
- Reduce the likelihood of severance
- Offer a net benefit to the environment through less pollution from queuing vehicles
- Improve network resilience
- Support the delivery of planned housing growth.

Please see appendix F for;

- Economic Appraisal Calculations table
- Discounting table
- Economic Efficiency of the Transport System tables (for each scenario)
- Public Accounts tables (for each scenario)

4. COMMERCIAL CASE

4.1. Procurement options:

A new assessment of contracting and procurement has not been required as we can utilise the total highways delivery contract which was put in place following the significant reprocurement project in 2012-2016.

A Highway Contract Re-procurement project was initiated in November 2012 to deliver the following key objectives:

- Improved customer satisfaction
- Improved network asset condition
- Maintain a safe and secure highway environment
- Value for money
- Local engagement

The project followed the County Council's strategic commissioning approach processes; review and development of an outline business case; preparation of a detailed business case and procurement strategy; delivery of the procurement strategy; transformational change; mobilisation support; and performance and contract management support. Analysed and researched 3 contract models; Executive Client led contract, Strategic client led contract and Staged Executive/Strategic Client led contract. Lessons were learnt from visiting with client organisations such as Portsmouth City Council, Bedfordshire and Hertfordshire County Councils, as well as engagement with suppliers to explore service delivery areas identified as of interest from market testing

This contract was procured following EU rules and legislation, and followed the restricted procurement route. The decision was made to go with an Executive Client led contract and the contract was awarded to Costain in a joint venture with CH2M (now Jacobs) and the contract commenced on 1st May 2016.

Given that the highways contract was awarded in 2016, the benefit for this project of procuring through the contract is that significant time and money can be saved as there is no need to assess other options as the market testing has been carried out in recent years and we can be confident that current market rates are represented.

Using our highways contract joint venture means that officers can ensure that the procurement strategy:

- Enables full project mobilisation within the funding period; the scheme has already been programmed into the contractor's overall work programme for the financial year as set out in the Employers Service Requirement Plan which is signed off by the County Council;
- Has clearly defined financial implications;
- Has clearly defined risk allocations;
- Specific project timescales including implementation timeframes

As part of the Costain/Jacobs Quality Management System, there is ongoing dialogue between the professional services element and construction element of the joint venture.

This process enables the discussion of issues such as construction methodology, traffic management, value engineering approaches, and communications with stakeholders before and during construction.

Therefore, the project has been instructed and work delivered to date through our ECC strategy and current contract mechanisms within our Highways and Infrastructure Services Contract 2016-23

4.2. Preferred procurement and contracting strategy*:*

See section 4.1 for procurement strategy decision.

There are a number of improvements and savings that have been realised as a result of the procurement strategy and service delivery model. These are identified and categorised in Table 12 below.

Table 12 – Cost Savings:

Saving Category	Savings	Comment
Transfer of staff	£3.9m	Transferred staff has resulted in a salary reduction to ESCC, however the cost of the staff is met as part of the service cost.
Tender Savings	£3.7m (one-off saving)	Saving generated as part of changing the commercial approach to service delivery and commercial tension generated through the tendering process (these are one-off savings available only at award of contract)
Efficiency savings	£4.2m (£0.6m per annum)	Year-on-year efficiency savings generated by the contractor

Making use of the Highways contract has meant that no lengthy procurement process has been required and the project has been able to start and continue with preliminary works, already saving the contract time and money.

The Highways Contract is a Design and build contract and there has been early contractor involvement (also with ESCC Highways Structure teams prior to the new highways contract and with Jacobs and Costain since the new contract was implemented) designers have been engaged in the project from conception.

4.3. Procurement experience:

See section 4.1 - The ESCC Client team have extensive experience of procuring major construction projects and they carried out the reprocurement of the highway contract. During the Outline Business Case for the contract reprocurement consideration was given to how services might be provided including options for a new highways contract model based on past experience and lessons learnt both in East Sussex and from other local authorities visited by the procurement team and scrutiny committee.

Additionally the Client team are able to access advice and experience from internal procurement teams within in Orbis. Orbis is a Public Sector Partnership created between East Sussex County Council and Surrey County Council in April 2015 with Brighton & Hove City Council joining as the final founding partner in May 2017. The Partnership operates with a Joint Committee Structure which means that governance of the Partnership has sovereign authority representation. This ensures that Orbis focuses on delivering against sovereign priorities using an integrated partnership approach. ESCC receives procurement support from Orbis which is made up of category specialists who are experts in their particular area and aware of all the procurement rules around it.

The team also has internal legal support from the ESCC Legal Services team, who have a Commercial and Environment team that specialise in Highways law amongst other areas.

4.4. Competition issues:

Our highways services contractor has developed a supply chain strategy to assist with the creation of a robust local supply chain. This ensures that the correct balance of competition and risk of operational delivery is achieved. This is accomplished through the development of strategic supplier relationships or competitive market testing where appropriate. Our contractual requirements provide surety of value due to the obligations placed upon the contractor to seek acceptance of members of their supply chain.

4.5. Human resources issues:

Making use of the existing, well established highways contract provides substantial mitigation of the risk of human resource issues. The Costain/Jacobs partnership has been involved in the project from the start providing design, project management and specialist services.

Costain and Jacobs are well established and experienced organisations with a high level of resilience. Jacobs is a global engineering company that provides consulting, design, construction, and operations services for corporations, as well as federal, state, and local governments. Costain has 4,000+ employees working in the rail, highways, power, water, nuclear, oil & gas industries.

At East Sussex County Council there are dedicated Asset Management and Service Development Teams with long term capacity for the management of the project. Time and expertise has been assessed and built into team work plans to ensure sufficient resource is available and is resilient to risks.

4.6. Risks and mitigation:

The contract has been let on a NEC target cost basis, whereby the strategy is to share the risks with the contractor. Therefore the risk allocation throughout the scheme will be costed partially

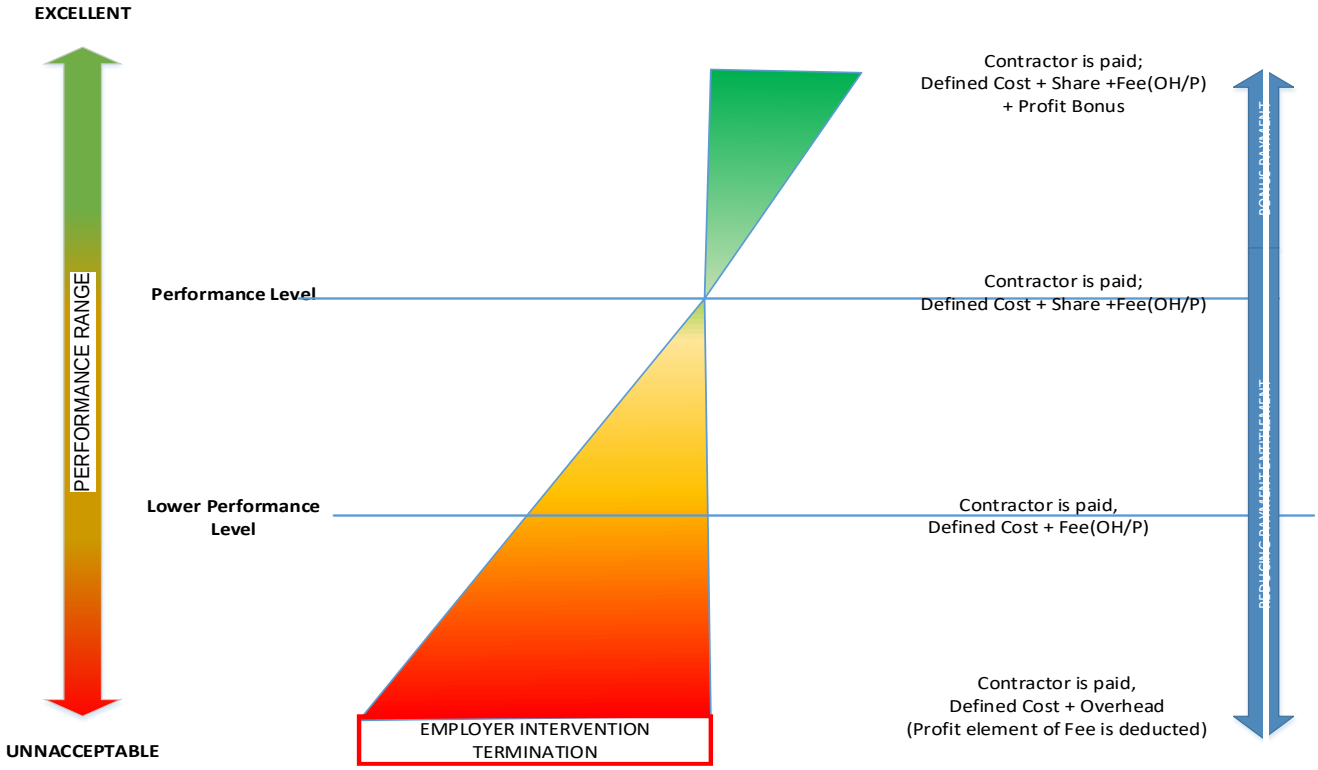
upfront based on the potential risks and then as part of the detailed design process before the target cost is agreed.

In addition to the project's Risk Management Strategy, including risk registers and risk ownership, performance management plays a vital role in establishing successful management and delivery of the maintenance service. Highway activities are assessed using a range of Service Performance Indicators (SPIs) that cover expenditure, service quality and public satisfaction. A Performance Management Framework which is outlined in the Highways contract also includes an incentive model which is linked to performance, as can be seen in the below diagram.

Employer's Incentive Scheme

Extract from Contract Data Part 1 (Pain/Gain Mechanism).

Share range percentage	*Contractor's share percentage*
Less than 85%	*0%*
From 85% to 115%	*50%*
Greater than 115%	*100%*



4.7. Maximising social value*:*

Delivering social value is a contractual requirement (through the wider NEC contract of which this scheme is being procured and delivered) in order to support and improve the economic, social and environmental well-being of East Sussex.

Employment and skills remain central to improving the health, wellbeing and life opportunities for individuals; the social cohesion of communities and the economic competitiveness of East Sussex. A skilled workforce helps boost the productivity of our local businesses and provide more jobs for residents in our county.

This scheme will create an additional 23 local jobs (and more to be confirmed), provide opportunities for local civil engineering apprenticeships, opportunities for work experience and engagement with schools. As part of the delivery of this scheme our contractors will be required to submit an employment and skills plan detailing how they plan to meet the objectives and outcomes (set out in table 12) to deliver social value and improve the employment and skills development opportunities available locally for our residents and proactively address potential skills and labour shortages in the County. Targets will be agreed and this will be measured and monitored at the Project Board meetings.

Table 13

Theme	Objectives	Outcomes
Economy (Develop a strong and competitive local economy)	• Increase local spend with suppliers • Develop local supply chains • Proactively address skills shortages by measuring and improving employment and skills commitments • Promote local recruitment to support growth and sustainability	• Thriving local businesses • People have the skills for work & Businesses have access to a local skilled workforce • More local people in work
Social (Support the health, wellbeing and independence of local residents)	• Secure apprenticeships, training and other work opportunities for priority groups	• Businesses are more socially responsible and engaged with local communities
Environment (Protect and preserve the local environment and natural resources in the area)	• Encourage the use of environmentally friendly products/services and ethical sourcing processes • Raise awareness of local environmental and sustainability requirements	• Businesses operate sustainably and take greater responsibility for their environmental impact on local communities

5. FINANCIAL CASE

5.1. Total project value and funding sources:

The total project value is **£6,162,699** as split out in section 1.10 above.

Other sources of funding include the ESCC Capital Programme and the NPIF allocation from the Department for Transport.

There is a condition associated with the ESCC Capital Programme allocation is that is spent on Exceat Bridge. The NPIF allocation must be spent on local transport improvements that aim to remove congestion at key locations, upgrade or improve the maintenance of local highway assets across England, outside London, to improve access to employment and housing, to develop economic and job creation opportunities. A discussion was had with DfT at the time of the allocation to ascertain the Exceat bridge replacement project as an acceptable project for the funding allocation.

The LGF fund would be partially spent by March 2021. Please see additional letter on slippage which evidences how the conditions for slippage of spend will be met.

The remainder of the funding is being sought from ESCC budgets. A paper is currently being prepared for the ESCC Capital Board to request that the remaining funds come from the ESCC allocation of the DfT Challenge Fund and a reprofiling of the capital programme for the Highways and Structural Maintenance budget. A decision is expected in July 2020.

5.2. SELEP funding request, including type (LGF, GPF, etc.,):

£2,110,579 of Local Growth Fund is sought, broken down in to phase 1: £1,500,000 and phase 2: £610,579. The funding will not constitute State Aid. The project has been instructed and work delivered to date through our current contract mechanisms within our Highways and Infrastructure Services Contract 2016-23. This contract was procured following EU rules and legislation, and complies with State Aid Regulations.

Costs by type:

Costs are set out in table 14 below.

N.B.

- Optimism bias has not been applied in the Financial Case. (Optimism bias was included in the Economic Impact Appraisal at 23% as per the guidance provided in TAG Unit A1.2 for fixed link (Bridges and Tunnels) schemes that are at stage 2 (conditional approval);
- Inflation has been included in the figures below as part of the cost calculation based on the Consumer Price Index of 1.5%.
- The Fee (Overhead and Profit) is contractually limited to 5.04%, and the Design and Construct estimates include this.
- Contingency has been included in the economic case. Please see attached complete QRA.
- Where a cost type is all or part funded by the LGF, this has been included in brackets next to the figure in table 14. For details of how much funding is coming from each source, see table 15 below.

Table 14

Cost type	2016-17 Actual £'000 (NPIF)	2017-18 Actual £'000 (NPIF)	2018-19 Actual £'000 (NPIF)	2019-20 Actual £'000 (NPIF)	2020-21 Forecast £'000 (LGF + ESCC TBC)	2021-22 Forecast £'000 (ESCC Capital Programme, LGF, NPIF + ESCC TBC)	2022-23 Forecast £'000 (LGF, NPIF, ESCC TBC)	2023-25 Forecast £'000	2025-26 Forecast £'000 (ESCC non capital source)	Total Forecast £'000
Design Investigations, Surveys, Procurement, Supervision	4	53	226	665	496 (LGF)	248				**1,692**
Detailed Design						351 (LGF)				**351**
Construction Contracts						607 (LGF)	1,821 (LGF)			**2,428**
Quantified Risk					238 (LGF)	579	874			**1,691**
Non-capital [For example revenue liabilities for scheme development and operation]										**-**
Monitoring and Evaluation (Benefits realisation)							10		10	**20**
Total capital funding requirement	4	53	226	665	734	1,785	2,705	-	10	6,182

5.3. Funding profile (capital and non-capital):

Table 15

Funding source	2016-17 Actual £'000	2017-18 Actual £'000	2018-19 Actual £'000	2019-20 Actual £'000	2020-21 Forecast £'000	2021-22 Forecast £'000	2022-23 Forecast £'000	2023-24 Forecast £'000	2024-25 Forecast £'000	Total Forecast £'000
ESCC Capital Programme						500				500
NPIF Allocation	4	53	226	665	-	543	642			2,133
LGF Allocation (£1.5m) plus Ph2 allocation					734	742	635			2,111
Non-capital source (for monitoring and evaluation)							10		10	20
ESCC TBC	-	-	-	-	-	-	1,418	-	-	1,418
Total funding	4	53	226	665	734	1,785	2,705	-	10	6,182

External factors

External factors which could influence or determine the Capital programme allocation are social and political inference which could cause delay. There are no external factors affecting the NPIF allocation.

Flexibility

ESCC may be able to be flexible with the capital allocation within the highways budgets.

Non- capital liabilities

There will be ongoing maintenance non- capital liabilities generated by the scheme, as once the project is complete the new infrastructure will be adopted by ESCC, added to the Asset Register and maintained by East Sussex Highways.

5.4. Funding commitment:

Please see completed sign off from Section 151 officer at appendix A.

The funding has been assured through the County Council formal processes and committed to the project. A decision on the commitment of remaining funds for the project is expected shortly.

5.5. Risk and constraints:

A key financial risk to the project is that full funding is not committed to complete the scheme. A paper is currently being prepared for the ESCC Capital Board and Cabinet to request that the remaining funds come from the ESCC allocation of the DfT Challenge Fund and a reprofiling of the capital programme for the Highways and Structural Maintenance budget. A decision is expected in July 2020. However it will not be possible to make a decision until the DfT releases details of the ESCC allocation of the Challenge Fund and any criteria for spend of the recently announced Transport Infrastructure Investment Fund. This was due w/c 18 May, but no information has been received as of 29 May and this has delayed the decision making.

The Covid-19 pandemic has increased the risk to funding from the LGF and from the capital budgets mentioned above as it may be necessary to divert funds elsewhere to support essential services. However, the Capital Board and Cabinet decisions in June/July will provide assurance. The NPIF and £500,000 ESCC Capital Board contributions are already committed and not at risk.

There are no time constraints on the ESCC Capital Programme allocation or the NPIF allocation, although both are to be spent on Exceat improvements and this would be expected to be spent by c. 2021. There is the time constraint on the LGF allocation, should it be awarded, to be spent by March 2021. This funding can be brought forward in the funding profile to ensure the spend has started by that date and evidence of meeting the conditions for slippage is provided.

There is a risk of the SDNPA delaying the planning permission which would impact on the project progress, timeline and funding. This risk is being mitigated by early engagement with the SDNPA and the signing of the PPA. Further engagement has been carried out with the SDNPA during the

early part of 2020. A final meeting will be held on 22nd June 2020 to agree an alignment option with the SDNPA – if there is a successful outcome this will give greater assurance of planning approval. We will provide an update on the outcome of this meeting.

The risks have been quantified as set out in table 16 below.

Activity	Estimated Costs	Risk Fund	Total including Risk
Stage 1- Feasibility/Preliminary Design	£1,692,026.13	£581,529	£2,273,555.13
Stage 2- Detailed Design	£351,177	£19,167	£370,344
Stage 3- Construction Phase	£2,428,500	£1,090,300	£3,518,800
Estimated Total Cost	£4,471,703.13	£1,690,996	**£6,162,699.13**

Table 16

Experienced designers, constructors and representatives of ESCC carried out the risk quantification using the Monte Carlo technique. A Monte Carlo simulation is a computerised mathematical technique that allows projects to account for risk in quantitative analysis and decision making. The Monte Carlo simulation provided the team with a range of possible outcomes and the probabilities they will occur for any choice of action. It showed the extreme possibilities—the outcomes of going for broke and for the most conservative decision—along with all possible consequences for middle-of-the-road decisions.

6. MANAGEMENT CASE

6.1. Governance:

Project Sponsor: Dale Poore, Contracts Manager
Senior Responsible Officer (SRO): Rupert Clubb, Director of Communities, Economy and Transport

The Governance structure is set out in figure 8 below. There will be lead officers for the various sections of work across the project. Project team meetings will take place monthly, reporting to a project board who will meet bi-monthly or more often if required. The project board will be made up of members from ESCC, Jacobs and Costain. The project board will be responsible for approving decisions taken to them from the project team. Ultimate accountability for the project will sit the SRO, who is a Director within ESCC. See table 18 below for more details on roles and responsibilities.

Figure 8 - ***Redacted***

Roles & Responsibilities

Responsible group or officer	Responsibility
Cabinet	Member group that manages council business including high value/high risk procurement and projects including LGF projects. Cabinet meets approximately every month.
Lead Members for Transport and Economy	Lead Cabinet Member's whose portfolios of responsibility include transport and the County Council's representation on the South East Local Enterprise Partnership and delivery of the Local Growth Fund schemes.
Project Sponsor	Independent of the project and provides challenge to ensure project is delivered on time, within budget and achieving the anticipated benefits.
Project Manager	Responsible for delivering the project on behalf of the project board. Leads and manages the Project Team within the Authority and responsibility to run the project on a day-to-day basis. Delivers the right outputs, to the required level of quality and within the specified constraints of time, cost, resources and risk. Prepare project information, including PID, Project Plan and Business Case. Identify and evaluate risks, determine and manage actions, and maintain the risk log. Manage and control changes to scope, requirements, personnel etc. Ensure project's resource plans and costs include sufficient, properly skilled support. Monitor and report progress against plans, quality and costs. Ensures governance arrangements and the County Council's project management principles are adhered to.
Costain/Jacobs	The Costain/Jacobs joint venture is the term contractor for the East Sussex Highways contract. The Jacobs part of the JV provide professional design and project management services as part of the 7 year contract whilst Costain provide scheme construction services.
Section 151 Officer	Responsible for signing acceptance of the grant and its attached conditions, overviewing financial transactions and challenging where necessary, sign off of financial statements requested from SELEP.

Senior Category Specialist - Environment, Transport & Waste	Responsible for providing contract and procurement advice and assistance including matters relating to Contract Standing Orders, contract frameworks and other local, national or European legislation in relation to procurement.

Table 17

6.2. Approvals and escalation procedures:

A project team will be in place that will meet monthly and report to the project board on a bi-monthly basis (or more often if required). The role of the project board will be to advise on developments of the project, monitor and review the delivery and performance against the project plan, aiding the management and mitigation of risks and to approve any decisions needed to take the project forward.

This scheme will be procured through the NEC contract and approvals and escalations will be managed in accordance with the contractual mechanisms within this, such as the use of Early Warning Notices and Compensation Events.

6.3. Contract management:

Overarching project management is carried out by the Project board (as per section 6.1 above) and day to day project management by the Project Manager. Change management is strictly controlled through the use of Compensation Events. Monthly team meetings with key team design members are held and Project Board meetings are held approximately once every 2 months to ensure outputs are being delivered as planned. Finances are reviewed monthly.

Day to day contract management is carried out through the Client group (ESCC) who administer the contract through its contract management and commercial group. The contract is a NEC3 form and is administered through our contract management system Cemar.

6.4. Key stakeholders:

Please see attached Communications plan.

Stakeholders include:

Chairman of Jevington and Filching Residents Association.
Councillor- (Seaford North)
Councillor- (Willingdon and South Downs)
Cuckmere Valley Canoe Club
East Sussex Fire and Recuse
Eastbourne Borough Council
Environment Agency (EA)
ESCC Legal
ESCC- Rights of Way & Countryside Management
Exceat Bridge Project Board
Flood Risk Management
Freight Transport Association

Highways England
Land Advice
Lead Member for Transport and Environment
Lewes District Council
Marine Management Organisation (MMO)
MP(Eastbourne and Willingdon)
MP(Eastbourne)
MP(Lewes)
National Trust
Natural England (NE)
NHS
Public Transport Providers and Liaison
Road Haulage Association
Road Safety
South Downs National Park Planning Authority (SDNP)
Sussex Police
Sustrans
The Cuckmere Inn
Water Level Management Board
Wealden District Council

6.5. Equality Impact:

An Equality Impact Assessment (EqIA) has been undertaken. The findings of the EqIA will be reported to the project team to be considered against the project's implementation and mitigations put in place where necessary to ensure the project promotes equality, doesn't discriminate and meets the terms of the Equality Act 2010.

The outcome of the assessment was that there was no major change needed to the project. There will be no negative impact made upon those with protected characteristics. Instead positive improvements are to be made through this project making it more accessible to reach the Seven Sisters County Park, walkway and information centre, where before there was poor pedestrian provision. Additionally, for those who live in rural areas and/or rely on a vehicle to get to work, the creation of a 2 way bridge will reduce congestion, making travel times quicker and reducing the environmental impact of the congestion.

6.6. Risk management strategy:

Please see appendix B.

The risk register is monitored and maintained by the Scheme Project Manager in accordance with the project team. It is a live document and is constantly updated at monthly team meetings and reviewed at the board meetings.

6.7. Work programme:

Please see Appendix C for project programme. The critical path for the preliminary design work is the environmental surveys and collection of data as these can only be carried out within specific timeframes.

A key team are already working on the project and ESCC will be able to procure the remaining necessary resources through the Highways contract joint venture companies of Jacobs and Costain. Appropriate resources are available and ready to work on the project as soon as it reaches the detailed design stage. See above organisation chart for resources that are and will be procured and below table that sets out each position's suitability and experience for the role.

Grade	Title	Typical Roles and Definitions
	Director Associate Project Director Operational Manager Chief Technical Manager Service Lead	Professionally Qualified to Chartered Level or equivalent for specialists. Member of a relevant Institution. Responsible for resource and financial management Evidence of significant project experience with comparable complexity and responsibility. Management of teams of multiple disciplines. Industry leading expert in their field, typically for specialists.
	Principal Engineer Technical Manager Contract Manager Senior Project Manager Team Leader Environmental Lead Principal Specialist	Professionally Qualified to Chartered or Incorporated Level or equivalent for specialists. Member of a relevant Institution. Responsible for planning, resource and financial management Evidence of significant project experience with comparable complexity and responsibility. Management of teams of multiple disciplines. Principal in a specialist field with 10 years' experience (Structures, Geotechnics, Environmental, Transport Planning, ITS, Planning, Landscape, Construction Management, H&S, Asset Management etc)

	Senior Engineer Project Manager Senior Specialist	• Senior Engineer HND or Degree and Incorporated status 10 years' Experience • Project Manager 5 years' experience on managing projects, working towards or with an appropriate Project Management qualification APMP or Prince 2. • Senior in a specialist field with 5 years' experience (Structures, Geotechnics, Environmental, Transport Planning, ITS, Planning, Landscape, Construction Management, H&S, Asset Management etc)
	Engineer Transport Planner Specialist	• Engineer HND or Degree, 5 to 10 years relevant experience • Transport Planner Degree and 5 years relevant experience • Specialist field with 2-5 years' experience (Structures, Geotechnics, Environmental, Transport Planning, ITS, Planning, Landscape, Construction Management, H&S, Asset Management etc)
	Assistant Engineer Experienced Graduate Senior Technician Senior Administrator	• Assistant Engineer HND or Degree and 5 years' experience • Experienced Graduate with relevant degree qualification following graduate programme with up to 2 to 5 years' experience. • Senior Technician with HND and 5 years' experience • Senior Administrator over 5 years' experience
	Graduate Technician Project Administrator	• Graduate with relevant degree qualification following graduate programme with up to 2 years' experience. • Technician typically OND/ONC qualified with 3years experience in their specialist field. • Project Administrator with 2 to 5 years' experience.
	Junior Technician Assistant Administrator	• Junior Technician, 1 to 2 years relevant experience with NVQ3 qualification. • Assistant Administrator, with 1 to 2 years' experience. • Interns
	Trainee Apprentice	• Minimal experience, 3 GCSE's on an apprenticeship scheme studying for NVQ3.

Table 18

6.8. Previous project experience:

East Sussex County Council has effective project management and governance arrangements in place to ensure effective delivery of projects.

Project management

East Sussex County Council has an established project management toolkit based on PRINCE2 methodology. Information on the County Council's project management toolkit is published on the council's staff Intranet site which has six clear aims:

- To standardise our approach to managing a project with specific additional requirements for certain projects (e.g. building or ICT projects); this equally can be applied to all projects.
- To set out some of the key responsibilities of managers who are sponsors of a project or are project board members.
- To provide practical guidance for anyone who needs to manage a project.
- To provide examples and templates of documents used in the process.
- To provide helpful checklists for managers and sponsors/board members at key stages of a project.
- Enable these processes to be applied to big or small projects and use them in a way that is most appropriate for the project

Contractor experience

This project will be delivered and designed through Jacobs's Infrastructure Design team within East Sussex and expertise from further afield in Jacobs will be drawn on. The team comprises scheme project managers, who lead the community engagement for the projects, and scheme designers, who undertake the design and engagement with the contractor; all the team have had extensive experience in delivering these types of schemes (see the management case for more details).

Jacobs cover a broad and diverse range of engineering services, from Aerospace Engineering to Zoological Engineering and every sort of engineering between, they have the expertise that clients need when they're looking for technical solutions to help them meet their business objectives.

Jacobs partners with their clients to produce designs that achieve their requirements in terms of function, schedule, budget, constructability, safety, and sustainability. Their project delivery systems benefit from best practices learned from our 60+ years of delivering successful projects of all sizes for clients around the world.

Evidence of Jacob's previous track record of project delivery can be seen in the project with Transport Scotland on the Forth replacement crossing, which provided an upgrade to the important cross-Forth transport corridor in the east of Scotland between Edinburgh and Fife. The project set out to dramatically enhance user experience – improving traffic flow, traffic safety, air quality and accessibility in the region.

6.9. Monitoring and evaluation:

Inputs

- *Describe what is being invested in terms of resources, equipment, skills and activities undertaken to deliver the scheme*
- Staff time and skills
    - A significant amount of staff time is being invested throughout the project stages. Different areas of expertise will be required at the various stages, e.g. The Ecology and Environmental lead, whereas others will be instrumental throughout the project, e.g. the Scheme Project Manager.
    - Tables 17 and 18 set out the responsibilities, experience and skills for the various roles
- Funding
    - Funding from ESCC, NPIF and potentially LGF will be invested. See breakdown at section 5.5
- Operational – equipment/activities
    - Preliminary works – PPA, justification report
    - Preliminary design – topographical surveys, tripod, ground investigations – bore holes, soil testing
    - Planning submission – meeting time, exhibitions, stakeholder consultations
    - Detailed design – mainly staff time and skills utilised
    - Construction phase – piling rigs, cranes, scaffolding, form work, pavers, excavators, plant machinery, traffic management and much more to be confirmed

Outputs (delivering the scheme/project)

- *Identify what will be delivered and how it will be used*
- The physical outputs will be;
    - a new 2-way fit for purpose bridge;
    - improved and safe pedestrian path.
- It will also provide the infrastructure to support the delivery of new housing and employment in the area.
- The new bridge will be accessible to all commuters, allowing for reliable and smooth running journeys within the area. Residents, tourists and businesses alike will benefit from the removed congestion point of a key economic route within the county.
- The improved footway will enable pedestrians to access the area in a more pleasant and safe environment and hopefully will encourage more walkers.
- This project is not expected to directly deliver specific housing or jobs BUT will provide the infrastructure that will support the delivery of homes, employment space and jobs in the area

Outcomes (monitoring)

Outcomes include:

- The improved accessibility and capacity in the area enables the planned growth of nearby towns and encourages commerce and tourism
- Better travel options and times for business, residents and tourists along the A259 corridor between Eastbourne and Brighton. This supports the wider strategic development along the A259 Growth corridor for employment and housing growth and helps make East Sussex an attractive place to live, work and visit

- Prior to the completion of the project, 23 construction jobs will be created as part of the installation of the new bridge
- New bridge with design life exceeding 120 years and constructed of materials that can cope better with the severity of the environment in which it sits. Reducing the current maintenance spend on a deteriorating bridge
- The new bridge will have an improved alignment which is safer and offers better access for pedestrians and cyclists
- Increased sustainable travel options and take up via better provision for pedestrians and cyclists and public transport
- 2-way bridge allowing traffic to pass and reducing congestion in the area and across the network
- The reduction in congestion will help to reduce the impact on the environment and improve air quality/decrease C02 emissions
- Issues and concerns currently experienced by local communities and visitors to the area will be addressed and this will help to encourage more tourism to the area
- A full economic appraisal has been carried out by WSP on the Exceat bridge replacement and the present value of scheme benefits and costs, over the 60-year assessment period, discounted to 2010 is set out in table 6 below. **The central scenario indicates that this scheme represents high value for money.**

See completed table at Appendix D

Impacts (evaluation)

As outlined in the social value section the number of new jobs created, new learners assisted and apprenticeships delivered during the scheme will be captured and measured through an Employment and Skills Plan.

6.10. Benefits realisation plan:

Proposal for developing a Benefits Realisation Plan (BRP):

Benefit Overview	Current Problem	Enablers Required	Baseline Measure	Target Performance and realisation dates
Improved accessibility and capacity in the area enabling the planned growth of nearby towns and encourages commerce and tourism	*Bottleneck causing delays.*	*New2-lane bridge and improvement of foot and cycle way*	*Current traffic data including traffic flow and delay time information.* *Housing and job growth reviewed in internally by ESCC Research and Information team*	*Targets set from baseline data and measured and monitored on completion*
Better travel options and reduced journey times for business, residents and tourists along the A259 corridor	*If used as a diversion route from the strategic network this causes long delays*	*New 2-lane bridge*	*Current traffic data including traffic flow and delay time information.*	*Targets set from baseline data and measured and monitored on completion*
Improved alignment which is safer and offers better access for pedestrians and cyclists	*Current alignment puts crossing pedestrians and cyclists at risk*	*New 2-lane bridge with enhanced pedestrian and cycle access*	*Current road safety traffic accidents and near miss reports (reviewed internally with ESCC Road Safety team)*	*Targets set from baseline data and measured and monitored on completion*
Increased sustainable travel options and take up via better provision for pedestrians and cyclists and public transport	*Restricted foot and cycleway and no crossing*	*improvement of footway and installation of footway on south side of the bridge*	*Current road safety traffic accidents and near miss reports (reviewed internally with ESCC Road Safety team)*	*Targets set from baseline data and measured and monitored on completion*

A reduction in congestion will help to reduce the impact on the environment and improve air quality/decrease C02 emissions	*Bottleneck causing congestion and increased C02 emissions*	*New2-lane bridge to tackle congestion and improvement of foot and cycle way to encourage sustainable travel options*	*Current air quality information.*	*Targets set from baseline data and measured and monitored on completion*
Increase in local tourism and visitors to the area	*May be limited by access issues*	*New2-lane bridge and improvement of footway and installation of footpath on south side of bridge*	*Current tourist numbers from the South Downs National Park.*	*Targets set from baseline data and measured and monitored on completion*

Table 19

7. DECLARATIONS

Has any director/partner ever been disqualified from being a company director under the Company Directors Disqualification Act (1986) or ever been the proprietor, partner or director of a business that has been subject to an investigation (completed, current or pending) undertaken under the Companies, Financial Services or Banking Acts?	*Yes / No*
Has any director/partner ever been bankrupt or subject to an arrangement with creditors or ever been the proprietor, partner or director of a business subject to any formal insolvency procedure such as receivership, liquidation, or administration, or subject to an arrangement with its creditors	*Yes /No*
Has any director/partner ever been the proprietor, partner or director of a business that has been requested to repay a grant under any government scheme?	*Yes / No*

If the answer is "yes" to any of these questions please give details on a separate sheet of paper of the person(s) and business(es) and details of the circumstances. This does not necessarily affect your chances of being awarded SELEP funding.

I am content for information supplied here to be stored electronically, shared with the South East Local Enterprise Partnerships Independent Technical Evaluator, Steer, and other public sector bodies who may be involved in considering the business case.

I understand that a copy of the main Business Case document will be made available on the South East Local Enterprise Partnership website one month in advance of the funding decision by SELEP Accountability Board. The Business Case supporting appendices will not be uploaded onto the website. Redactions to the main Business Case document will only be acceptable where they fall within a category for exemption, as stated in Appendix E.

Where scheme promoters consider information to fall within the categories for exemption (stated in Appendix E) they should provide a separate version of the main Business Case document to SELEP 6 weeks in advance of the SELEP Accountability Board meeting at which the funding decision is being taken, which highlights the proposed Business Case redactions.

I understand that if I give information that is incorrect or incomplete, funding may be withheld or reclaimed and action taken against me. I declare that the information I have given on this form is correct and complete. Any expenditure defrayed in advance of project approval is at risk of not being reimbursed and all spend of Local Growth Fund must be compliant with the Grant Conditions.

I understand that any offer may be publicised by means of a press release giving brief details of the project and the grant amount.

Signature of applicant	
Print full name	
Designation	