

Hastings Seafront Feasibility Mobility Study: Strategic Outline Business Case



Report

Hastings Borough Council

Our ref: 23612701

Client ref: 208150

November 2019

Steer has prepared this material for Hastings Borough Council. This material may only be used within the context and scope for which Steer has prepared it and may not be relied upon in part or whole by any third party or be used for any other purpose. Any person choosing to use any part of this material without the express and written permission of Steer shall be deemed to confirm their agreement to indemnify Steer for all loss or damage resulting therefrom. Steer has prepared this material using professional practices and procedures using information available to it at the time and as such any new information could alter the validity of the results and conclusions made.

steer

Hastings Seafront Feasibility Mobility Study: Strategic Outline Business Case

Prepared by:

Steer
28-32 Upper Ground
London SE1 9PD

+44 20 7910 5000
www.steergroup.com

Prepared for:

Hastings Borough Council
Muriel Matters House
Breeds Place
Hastings TN34 3UY
Client ref: 208150
Our ref: 23612701



Delivering **E**fficient **S**ustainable **T**ourism with low-carbon transport **I**nnovations:
Sustainable **M**obility, **A**ccessibility and **R**esponsible **T**ravel

Lead Partner



Thessaloniki - Sardinia - Bremerhaven - Madeira - Hastings - Mallorca - Vidzeme - Balaton - Pafos – BU

The DESTI-SMART Interreg Europe project aims at improving transport and tourism policies at tourist destinations, by integrating strategies for sustainable mobility, accessibility and responsible travel in sustainable tourism development, through efficiency, resilience, intermodality, novel low-carbon transport systems, cycling and walking for visitors

www.interregeurope.eu/desti-smart

Acknowledgments

This feasibility study has been carried out in the frame of **Interreg Europe DESTI-SMART** project (Activity 8), co-funded by the European Regional Development Fund (85%).

In the course of the DESTI-SMART project activities, Hastings Borough Council has exchanged experience with other partners on feasibility study methodology, particularly during the Interregional Workshop A held in Hastings, UK in March 2018 and provided assistance to the lead partner MDAT (Greece), through staff exchange visit to Hastings in March 2019.

Disclaimer

This document has been prepared with the financial support of ERDF made possible by the Interreg Europe 2014-2020 interregional cooperation programme. The content of the document is the sole responsibility of the Hastings Borough Council and in no way reflect the views of the DESTI-SMART partnership, the European Union institutions, ERDF, Interreg Europe Joint Secretariat, nor the Managing Authority of the Interreg Europe Programme.

Interreg Europe Programme

Interreg Europe Programme of interregional cooperation helps regional and local governments across Europe to develop and deliver better policy. By creating an environment and opportunities for sharing solutions, the aim is to ensure that government investment, innovation and implementation efforts all lead to integrated and sustainable impact for people and place.

By building on its forerunner, **INTERREG IVC** (2007-2013), Interreg Europe aims to get maximum return from the EUR 359 million financed by the European Regional Development Fund (ERDF) for 2014-2020.

Solutions exist that can help European regions become the best that they can be. Today, the EU's emphasis is very much on paving the way for regions to realise their full potential – by helping them to capitalise on their innate strengths while tapping into opportunities that offer possibilities for economic, social and environmental progress.

To achieve this goal, Interreg Europe offers opportunities for regional and local public authorities across Europe to share ideas and experience on public policy in practice, therefore **improving strategies** for their citizens and communities.

DESTI-SMART Project Summary

Integration of regional/local policies for Sustainable Mobility, Accessibility & low-carbon Responsible Travel, with policies for efficient sustainable tourism towards a low-carbon economy, requires particular attention in the EU. This is a common challenge that public regional/local and transport authorities increasingly face, particularly at busy destinations with high tourism travel flows (inc. in South Europe, coastal, maritime & insular, mass tourism destinations). Immediate action is needed through interregional cooperation to capitalise best practices, improve policy instruments & prepare action plans with implementation monitoring & evaluation.

The DESTI-SMART project, addresses the above towards 'Smart Destinations', for sustainable & responsible tourism development in Europe, with low-carbon, multimodal sustainable mobility & accessibility.

The overall objective is to improve the transport and tourism policies of EU destinations, by integrating strategies for sustainable mobility, accessibility and responsible travel with efficient & sustainable tourism development, for transition to a low-carbon economy, through efficiency, resilience, multimodality, novel low-carbon transport systems, cycling & walking, with implementation innovations, policy learning and capacity building.

The following pressing issues are addressed:

- Investments in low-carbon transport systems for mode shift to sustainable tourism mobility, incl. Electro-Mobility
- Intermodality facilities for visitors, including ICT, Mobile Aps & MaaS
- Accessible tourism for all
- Cycling & Walking facilities & promotion for visitors.

Main outputs:

- policy learning & capacity building for public authorities & their stakeholders
- improved policy instruments & action plans in 9 destinations, with close involvement of stakeholders
- advances in EU2020 objectives
- communication & dissemination learning materials.

Contents

Executive Summary	i
Strategic Case	ii
Financial Case	ii
Economic Case	ii
Conclusions.....	iii
2 Introduction.....	1
Overview.....	1
Study background.....	1
Study approach.....	1
Report structure	2
3 The Strategic Case	3
Overview.....	3
Policy and strategy context	3
Need for Intervention.....	12
Rationale for Intervention	23
Scheme objectives.....	24
Measures for success	24
Constraints	25
Inter-dependencies	25
Stakeholders.....	25
Shortlisted Options.....	26
Summary.....	43
4 The Financial Case	45
Introduction.....	45
On-going Affordability	46
Project funding	57
5 The Economic Case.....	61
Overview.....	61

	Appraisal approach and assumptions	61
	Appraisal Results	64
	Conclusions.....	65
6	The Commercial Case	66
	Overview.....	66
	Approach	66
7	The Management Case.....	68
	Overview.....	68
	Project governance.....	68
	Indicative Delivery Programme	69
	Risk management strategy	69
	Change management and cost control	69
	Communications and stakeholder engagement	70
	Evidence of similar projects.....	71
	Benefits management	71
8	Conclusions.....	72
	Summary.....	72
	Next steps.....	73

Figures

Figure 3-1: Policy framework.....	3
Figure 3-2: National Cycle Network (Source: Ordnance Survey).....	13
Figure 3-3: Hastings Bus Services, without Route 66 (Source: Stagecoach).....	14
Figure 3-4: Map of rail routes in the East Sussex county (Source: East Sussex Rail Strategy) ...	16
Figure 3-5: Opportunity Areas and Public Realm Improvements (Source: Hastings Town Centre and Bohemia AAP)	18
Figure 3-6: White Rock 2040 Masterplan (Source: White Rock Park & Bohemia Strategy).....	19
Figure 3-7: Domestic Overnight Tourism in Hastings – 2006 to 2017 (Source: VisitEngland)....	20
Figure 3-8: Option 1 - Route 66+ Proposed Route	28
Figure 3-9: Option 2 - Narrow Body "Mini" Bus Proposed Route.....	30
Figure 3-10: Option 3 – Bi-directional Bus Proposed Route	32
Figure 3-11: Option 4 – Mini “Tram” Proposed Route	34
Figure 3-12: Option 5 – Autonomous Pods Proposed Routes	36
Figure 3-13: Option 6 – Extending Miniature Railway Proposed Route	38
Figure 4-1: Estimated annual operating costs (2019 prices) based on publicly available data and Steer analysis	48
Figure 4-2: Costs for enhanced operation of Route 66 based on Steer analysis of publicly available data.....	50
Figure 4-3: Breakeven demand for extended Route 66 operation scenarios	51
Figure 4-4: Monthly car parking demand (2018/19) for Rock-a-Nore and Pelham Place Carparks, Hastings	52
Figure 4-5: Annual operational costs for bi-directional bus for three operational scenarios	53
Figure 4-6: Breakeven demand for bi-directional bus operation scenarios	54
Figure 4-7: Annual operational costs for autonomous pods for three operational scenarios ...	55
Figure 4-8: Breakeven demand for autonomous pods operation scenarios.....	56

Tables

Table 1: Options assessed with the SOBC.....	i
Table 3-1: Tourism Sector Deal alignment with the Industrial Strategy	9
Table 3-2: Policy Review Matrix.....	11
Table 3-3: SWOT analysis of Hastings seafront and mobility	12
Table 3-4: Hastings Bus Services Frequency (Source: Stagecoach)	14
Table 3-5: Distance from Hastings stations to seafront	16
Table 3-6: Study objectives.....	24
Table 3-7: Stakeholder Groupings	25
Table 3-8: Option Assessment Summary.....	40
Table 3-9: Summary of System Characteristics	41
Table 3-10: Assumed service for each option	41
Table 3-11: Alignment with scheme objectives.....	42
Table 3-12: Key strategic risks for shortlisted options	43
Table 4-1: Cost categories used for operating costs	46
Table 4-2: Operational details of the existing Route 66 service.....	47
Table 4-3: Available bus tickets for existing Route 66 service.....	48
Table 4-4: Breakeven demand for existing Route 66 scenarios	49
Table 4-5: Car parking demand by monthly groups	52
Table 4-6: Autonomous pods option operational scenarios	54
Table 5-1: Bi-directional Bus CapEx	61
Table 5-2: Autonomous Pods CapEx.....	62
Table 5-3: Impact of uplift on visitor days and numbers.....	63
Table 5-4: Total monetised GJT benefit for bi-directional bus over appraisal period.....	64
Table 5-5: Total monetised GJT benefit for autonomous pods over appraisal period.....	64
Table 7-1: Indicative Delivery Programme	69
Table 7-2: Stakeholder Groupings	70
Table 8-1: Strategic Outline Business Case summary.....	72

Executive Summary

This report sets out the work undertaken to evaluate the possibilities for a new transit link along Hastings Seafront. The report outlines the work that has been undertaken to generate a longlist of options; the evaluation of these options to develop a shortlist for detailed consideration; and finally, the strength of the case for each option in a joint Strategic Outline Business Case (SOBC).

The work undertaken does not intend to form a fully prepared business case for any option, but rather it uses the HM Treasury's Five Business Case Model as a framework to evaluate how strong the overall case for investment in a new transit could be.

An SOBC seeks to demonstrate that the transport intervention:

- has a robust case for change and aligns with wider objectives – the '**strategic case**';
- can be funded and is financially affordable – the '**financial case**';
- represents value for money – the '**economic case**';
- is commercially viable – the '**commercial case**'; and
- is achievable – the '**management case**'.

The study has been commissioned by Hastings Borough Council who received funding from the European Union Interreg Europe programme, as part of the DESTI-SMART project. The purpose of this project is to bring together partners in coastal towns and cities within the European Union area, where tourism forms a significant part of the local economy, to develop ideas for sustainable, accessible transport that should improve connectivity in these areas and support local the tourist and visitor economy.

Within Hastings, the rationale for public sector intervention is that, whilst there are options for end-to-end public transport along the seafront, the level of provision is constrained by low frequency of service or the need to interchange, and short operating hours and season. A direct and more frequent service would support new developments in the town, including the White Rock and West Marina Masterplan areas; safeguard and strengthen Hastings' existing tourism industry, by mitigating some of the current impacts of congestion; and help support new businesses in the under-utilised western end of the seafront and adjacent inland areas. Longer operating hours and season would also support policies and efforts to support the evening economy and transition Hastings into a well-known year-round destination.

After developing a longlist of options and assessing these in conjunction with the project stakeholders, three options have been considered at SOBC, shown in Table 1 below.

Table 1: Options assessed with the SOBC

Option	Vehicle Capacity	Engine Type	Size of Fleet	Route	Alignment	Frequency
Route 66	77	Diesel ¹	1	Combe Haven Holiday Park – Hastings Old Town (+ Eastern turning loop)	On-Highway	1 Hour
Bi-directional Bus	90	Electric	1	Grosvenor Gardens – The Stade Hastings Old Town	On-Highway	30 mins
Autonomous Pods	15	Electric	5	Grosvenor Gardens – Pelham Place	Promenade	Up to 12 min

¹ Current vehicle is diesel, however electric vehicles are available.

The strength of the SOBC for the bi-directional bus and autonomous pods has been assessed against the both existing service and also how they perform against an enhanced Route 66 service.

Strategic Case

The bi-directional bus provides marginal improvements against the strategic objectives than the existing Route 66 service due to the improved frequency delivering better connectivity along the seafront.

The autonomous pods would be expected to deliver similar improvements in connectivity to the bi-directional bus, they would also be a significant attractor in bringing new visitors to the town. However, by running them on the promenade, although presenting a material safety concern, could have an impact on those who walk and cycle along it. If this option was to be investigated further alternative alignments utilising some of the A259 highway space and the adjacent footway could be considered. This could be enabled by the completion of the junction between the A2690 Bexhill Link Road and A2100 The Ridge Way.

The use of low emission vehicles is an objective for DESTI-SMART as well as policy objective at a national, regional and local level. As both options can meet this objective, they strengthen their strategic case against the existing Route 66 service. However, Route 66 could also be run using a low emission vehicle with similar levels of investment to the other options.

Financial Case

There are significant challenges in the financial case for both 'do something' (i.e. the bi-directional bus option and the autonomous pod option) options. Based on the cost to 'breakeven', each of the options considered would need a large uplift in demand, above today's baseline, to not require on-going subsidy. The uplift in passenger for the autonomous pods being up to ten times greater than for that of the bi-directional bus. As a result, commercial operation of either option is unrealistic. If Hastings Borough Council and East Sussex County Council wanted either option to come forward, then they would, most likely, have to assume revenue risk of its operation or rely on 'third-party' funding. Although there are on-going constraints to public finances, this could be acceptable either option was considered strategically significant.

The financial case also considers the capital funding of each of the options. Whilst neither of the options would be likely receive direct funding at national or regional level, they may be able to attract partial funding through grants from schemes aimed at supporting either the roll-out of low emission vehicles or on-going deployment of autonomous trials.

Economic Case

The economic case for both 'do something' options revolves around the benefits to the economy from reduced journey times (i.e. the "transport user benefits") for people using each option or, assuming the scheme is locally funded, the ability to attract more visitors to Hastings and generate additional spending locally. For both options, the transport user benefits, over the 15-year appraisal period, are relatively small, ranging from £0.2m to £1.1m for the bi-directional bus and £0.4m to £2.0m for the autonomous pods. The forecast of the benefits assumes that each option can achieve a sufficient number of fare-paying passengers to cover each option's operating costs – it can breakeven.

Based on capital costs of £1.8m and £8m respectively to cover; civil engineering works to the highway/ promenade; bus priority measures and vehicle purchase for the bi-directional bus the bi-directional bus has a Benefit Cost Ratio of between 0.1:1 and 0.6:1 (i.e. for every one pound of cost, there is between 10 pence and 60 pence of economic benefit) and the autonomous pods a Benefit Cost Ratio of between 0.6:1 and 1:1. The Benefit Cost Ratio for each option is very sensitive to passenger demand. If demand is lower than breakeven level, the Benefit Cost Ratio would not only be lower due to fewer passengers receiving journey time savings, but also due to the service requiring additional subsidy. Further market testing would be beneficial to more accurately estimate demand and willingness to pay different fares.

There are also a number of benefits that have not been quantified. These include; environmental and decongestion benefit; the potential journey time savings for other bus passengers along the promenade not using the bus priority interventions identified for the bi-directional bus option; any journey time disbenefits for other road users (although the option has been designed to minimise disbenefit to other road users); and more marginal disbenefits of a small reduction in the number of parking spaces along the promenade.

Commercial and Management Case

The Commercial and Management Cases have been reviewed at a high-level to establish key commercial viability issues with an alternative seafront bus or pod-based service and how a service could be delivered if progressed. It is too early in the project to define a firm procurement strategy; however, it is likely that East Sussex County Council would need to develop and deliver the infrastructure elements. This would be similar to the Bexhill and Hastings Movement and Access Package and be subject to funding being secured and their own scheme approval processes.

There are several procurement key issues relating to each option:

- **Bi-directional bus:** local government support is expected to be required to make this option commercially viable, which raises potential issues relating to State Aid, unless the service is operated commercially by an existing operator along the seafront with public sector subsidy.
- **Autonomous pods:** there is currently no service available that is progressed to commercial operation, both from a hardware (vehicle) and software (on-demand digital platform) perspective. There is, therefore, a high procurement risk for the autonomous pod option with an unclear timeline for delivery.

With no clear scheme to progress, the Management Case is indicative of how a new seafront service could be delivered and would require to be updated in 'lockstep' with scheme development.

Conclusions

There is significant uncertainty and risks for both options. Therefore, at present, it could be difficult to bring either option forward for a formal SOBC without a clear funding route identified for both options or a clear regulatory and legal framework and technological advancement for the autonomous pod option. Despite this, the strategic case for an enhanced level of public transport service along the entire length of the promenaded seafront remains very strong. An incremental approach to enhancing the Route 66, working closely with Stagecoach, could deliver greater benefits and better value for money with a lower level of commercial and financial risk. Complementary investment in improved public realm, signage

and wayfinding, and hire schemes and infrastructure for bike, electric bike and micro-transit could support the integration of the railway stations, town centres, seafront and other visitor attractions; as well as enhance the visitor economy and improve the accessibility of the beautiful seafront and travel along its attractive and special promenade.

2 Introduction

Overview

- 2.1 Steer has been commissioned by Hastings Borough Council (HBC) to undertake a feasibility study of potential options for a new sustainable, zero or low emission transport service for visitors and residents that links the eastern and western ends of the Hastings seafront.
- 2.2 The purpose of this report is to explore the shortlisted options against the five business cases in line with HM Treasury's Green Book guidance. This will provide the Council and key stakeholders with an overview of the shortlisted options in comparison to the reference case, highlighting key risks and opportunities.

Study background

- 2.3 Funding for the study has come from the European Union Interreg Europe programme to deliver activities as part of a project called DESTI-SMART (Delivering Efficient Sustainable Tourism with low-carbon transport innovations: Sustainable Mobility, Accessibility and Responsible Travel). The project brings together ten European partners to work together on developing solutions for sustainable transport, focussing on low-carbon, multimodal sustainable mobility & accessibility for areas where tourism is important to the economy. The key themes for this study are therefore:
 - Theme 1: Sustainability;
 - Theme 2: Tourism and transport;
 - Theme 3: Accessibility; and
 - Theme 4: Connectivity.

Study approach

- 2.4 The study has aligned with the Department for Transport (DfT) Transport Analysis Guidance (TAG) for identifying the need for intervention and developing options through an objective-led and evidence-based approach. Following a review of the current and future context and conditions in the study area, the need for intervention has been established and intervention-specific objectives have been developed in collaboration with the Council. The team then identified and developed options and assumptions through a route walk, liaison with key stakeholders, desk-based research and client workshops.
- 2.5 A long list of sustainable options has then been identified to improve east to west connectivity for visitors and residents, with the options then assessed against a multi-criteria assessment framework. The assessment seeks to identify the comparative performance of each of the options across objective fit, expected monetised benefits, expected qualitative benefits, costs, revenues, funding and deliverability. The different options have then been assessed against the criteria with two preferred options selected to progress to Strategic Outline Business Case (SOBC).

- 2.6 The final stage is formalising the analysis into a SOBC, with focus on the strategic and economic case, as well as identifying what permissions and consents will be necessary for delivering the scheme. While the DfT guidance has been used as a framework for the assessment of the shortlisted options, it is important to note that this is not considered a formal SOBC as there is currently not a preferred option. Further consultation with stakeholders is expected to identify a preferred option for the Council to progress.

Report structure

- 2.7 This report contains the following sections:
- Section 2 – Strategic Case: outlines whether a seafront service is supported by a robust case for change that fits with wider public policy objectives;
 - Section 3 – Financial Case: investigates whether a seafront service is financially affordable;
 - Section 4 – Economic Case: establishes whether a seafront service demonstrates value for money;
 - Section 5 – Commercial Case: sets out commercial viability issues with a seafront service;
 - Section 6 – Management Case: outlines how a seafront service could be delivered; and
 - Section 7 – Conclusions: summarises the Strategic Outline Business Case and proposes next steps for the Hastings seafront service.

3 The Strategic Case

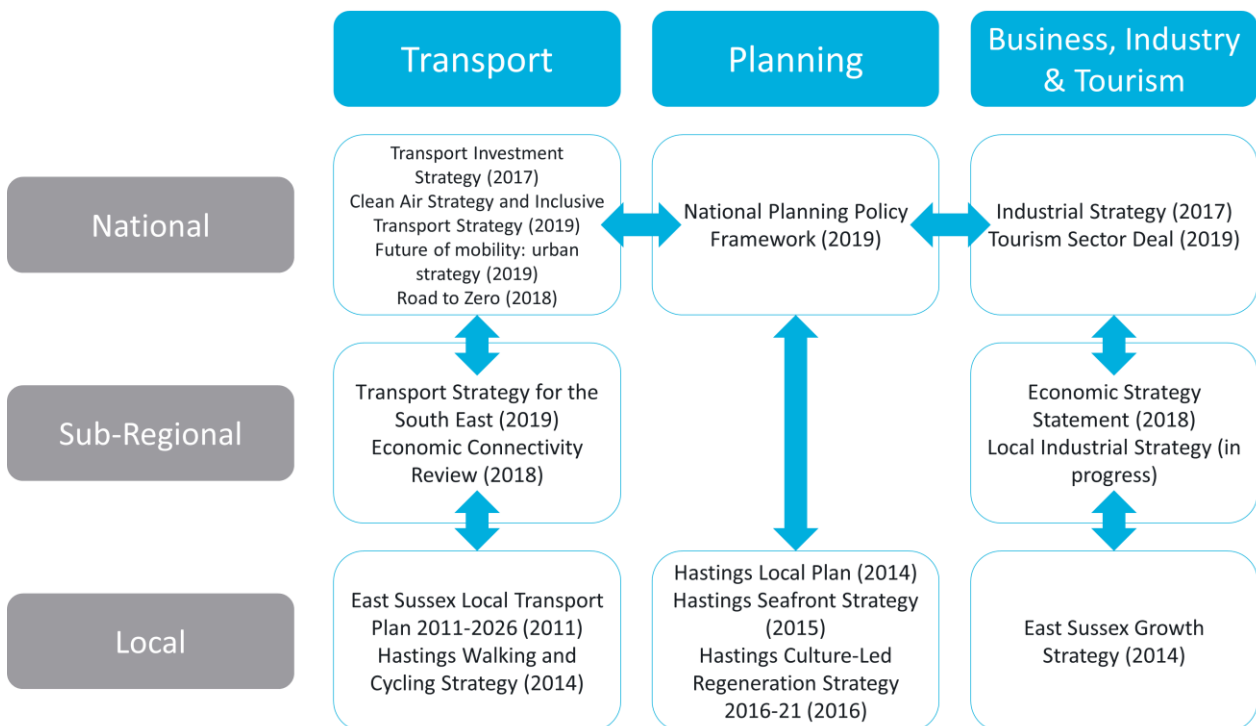
Overview

- 3.1 Hastings is a seaside resort on the south coast of England; it is known internationally for its heritage, coastline and connection to the Battle of Hastings. In recent years, Hastings has revitalised itself, in part due to ongoing regeneration initiatives, including those focussed on the seafront such as the Stade Open Space, White Rock Baths and the Hastings Pier.
- 3.2 The Strategic Case sets out the rationale for investment and is informed by a robust evidence base covering the existing and future transport related problems and economic challenges within the study area, which the scheme aims to address.

Policy and strategy context

- 3.3 The themes of the DESTI-SMART project have been considered within the context of the local, sub-regional and national policy; specifically relating to transport, planning and business, industry and tourism policies. A policy matrix has been developed to highlight how these policies align with the themes of DESTI-SMART, inform the analysis of a need for intervention, establish scheme specific objectives and guide the option generation and assessment.

Figure 3-1: Policy framework



Transport

Transport Investment Strategy (2017)

- 3.4 The Transport Investment Strategy sets out the Department for Transport's priorities and approach for future transport investment decisions. The strategy is a vital part of the government's industrial strategy and plan for Britain, and it builds on the progress made in recent years to upgrade the national road and rail network. The following strategy objectives are relevant to this study:

- Create a more reliable, less congested, and better-connected transport network that works for the users who rely on it;
- Build a stronger, more balanced economy by enhancing productivity and responding to local growth priorities; and
- Enhance our global competitiveness by making Britain a more attractive place to trade and invest.

Road to Zero (2018)

- 3.5 The Road to Zero strategy outlines how the government will support the transition to zero emission road transport and reduce emissions from conventional vehicles during the transition. The focus of the strategy is on what the UK will do now to lay the foundations for the transition, and includes the following policies that are applicable to this study:

- Reduce remissions from the vehicles already on our roads; and
- Drive uptake of the cleanest new vehicles.

- 3.6 The strategy is clear that Government cannot deliver on their ambitions alone and stressed their commitment to work in partnership with industry, businesses, academia, environmental groups, devolved administrations, local government, consumers and international partners.

Future of mobility: urban strategy (2019)

- 3.7 The Future of mobility: urban strategy outlines the government's approach to maximising the benefits from transport innovation in cities and towns. The strategy sets out the principles-based approach Government will take to seize the opportunities from the changes happening in urban transport, with key principles listed below:

- New modes of transport and new mobility services must be safe and secure by design;
- The benefits of innovation in mobility must be available to all parts of the UK and all segments of society;
- Walking, cycling and active travel must remain the best options for short urban journeys;
- Mass transit must remain fundamental to an efficient transport system;
- New mobility services must lead the transition to zero emissions;
- Mobility innovation must help to reduce congestion through more efficient use of limited road space, for example through sharing rides, increasing occupancy or consolidating freight;
- New mobility services must be designed to operate as part of an integrated transport system combining public, private and multiple modes for transport users; and

- 3.8 For 2019, the Government's key priorities for the urban strategy are implementing a flexible regulatory framework, supporting industry and local leaders, ensuring Government decision-making is robust, and continuing established technology-specific programmes.

Clean Air Strategy (2019)

- 3.9 The Clean Air Strategy outlines how the government will tackle all sources of air pollution, making air healthier to breathe, protecting nature and boosting the economy. The strategy highlights that transport is a significant source of emissions of air pollution and reinforced the government's commitment to cutting air pollution from all forms of transport.

Inclusive Transport Strategy (2019)

- 3.10 The Inclusive Transport Strategy sets out government's actions for achieving equal access to transport for disabled people, including a clear programme of monitoring and evaluation and a new governance framework for accountability. While it is focused on the inclusion of disabled people, many of the improvements will also benefit other travellers. The government's vision for inclusion transport is for disabled people to have the same access to transport as everyone else, travelling confidently, easily and without extra cost.

Transport Strategy for the South East (2019)

- 3.11 A draft of the Transport Strategy for the South East has recently been released for consultation and presents a shift away from traditional approaches of transport planning – one based on planning for a future based on recent trends and forecasts – to an approach of actively choosing a preferred future and setting out a plan of how to get there. Transport for the South East's vision for the area is:

By 2050, the South East of England will be a leading global region for net-zero carbon, sustainable economic growth where integrated transport, digital and energy networks have delivered a step-change in connectivity and environmental quality.

A high-quality, reliable, safe and accessible transport network will offer seamless door-to-door journeys enabling our businesses to compete and trade more effectively in the global marketplace and giving our residents and visitors the highest quality of life.

Transport for the South East's Economic Connectivity Review (2018)

- 3.12 The Economic Connectivity Review was the first major component of the transport strategy for the South East. Commissioned by Transport for the South East (TfSE), the study provided an overview of how the South East's economy works, how it connects to national and international markets and which are the key corridors of transport where investment will have the greatest effect. The final strategy, providing the blueprint for transport in the South East to 2050, will be completed by the end of 2019.

East Sussex Local Transport Plan (LTP) 2011-2026 (2011)

- 3.13 East Sussex County Council's Local Transport Plan 3 sets out the vision and objectives for the region through to 2026. The high-level objectives are:
- Improve economic competitiveness and growth;
 - Improve safety, health and security;
 - Tackle climate change;
 - Improve accessibility and enhance social inclusion; and
 - Improve quality of life.

- 3.14 Within the LTP, Hastings/Bexhill are identified as a priority area which need greater investment in transport infrastructure to deliver sustainable economic growth through regeneration and housing development. The LTP suggests that this infrastructure should be primarily delivered by providing infrastructure to help “address congestion bottlenecks, improve safety for all road users, and promote sustainable travel on foot, by bike and by public transport, and reduce carbon emissions.”
- 3.15 Key components of the approach set out in the LTP, relevant to this study are;
- A focus on improving the safety of key walking routes in both towns;
 - Developing and improving cycle networks into the town centre, along the seafront and to existing and future residential and employment areas; and,
 - Continued development of the Quality Bus Partnership (QBP)² for Hastings, including better infrastructure and operations along the A259.

Hastings Walking and Cycling Strategy (2014)

- 3.16 This strategy provides a supporting document to the LTP and reinforces that walking and cycling can make a significant contribution to supporting the local economy in Hastings by tackling congestion on the local road network and unlocking development sites by supporting access by active travel. This will be superseded in 2020 with the publication of ESCC Local Cycling & Walking Investment Plan (LCWIP), which will outline a prioritised plan of cycling and walking infrastructure and initiatives proposed for delivery during the next ten years, subject to funding. The overall ambition of the LCWIP, is to make cycling and walking the natural choices for shorter journeys, or as part of a longer journeys.

Bexhill and Hastings Movement and Access Programme 2018-2021

- 3.17 East Sussex County Council secured £9m of Local Growth Funding from the South East Local Enterprise Partnership (LEP) to deliver phase 1 of an integrated package, including cycling, walking infrastructure, improvements to bus stop infrastructure, the provision of Real Time Passenger Information and traffic management measures. Phase 1 on the programme includes increasing the extent of the cycle network across the two towns to support greater connectivity between the key destinations and support the growing appetite for cycling for everyday journeys and improving the environment for pedestrians between the station and the seafront, through the provision of improvements to the public realm.

East Sussex Active Access for Growth Programme 2017-2020

- 3.18 Active Access for Growth – East Sussex is a unique programme with the goal of inspiring and enhancing existing and longer-term cycling and walking activity across three key growth areas: Newhaven, Eastbourne/South Wealden and Bexhill/Hastings. The three-year programme focuses on active access for three core components; business and workforce development, education and training, and healthy communities. While tourism is not at the core of the programme, it is considered complementary to the objectives of this study. This programme is expected to continue during 2020/21, subject to the approval of future funding from the DfT.

² QBP – ‘Quality Bus Partnership’, a partnership between East Sussex County Council, Hastings Borough Council and Stagecoach, which aims to deliver better bus services and facilities in the town, through the Quality Bus Partnership Action Plan. This focuses on improving services and infrastructure to deliver improved punctuality on a number of key bus corridors that provide access to key services.

Planning

National Planning Policy Framework (2019)

- 3.19 The National Planning Policy Framework sets out the government’s planning policies for England, including guidance for local plan authorities on plan-making and to inform decisions on planning applications. Key to the framework is achieving sustainable development, which is summarised as “meeting the needs of the present without compromising the ability of future generations to meet their own needs”.
- 3.20 The framework sets out several transport objectives designed to facilitate sustainable development and contribute to a wider sustainability by giving people a wider choice about how they travel, which have been incorporated into the Hastings Local Plan.

Hastings Local Plan: Planning Strategy and Development Management Plan (2014)

- 3.21 The Hastings Local Plan sets out the framework for future development in the area, and consists of a set of planning document, maps and written policies. The strategic objectives relevant to this study are outlined below:
- Objective 1: Achieve and sustain a thriving economy;
 - Objective 5: Supporting sustainable communities;
 - Objective 6: Provision of an efficient and effective transport system; and
 - Objective 7: Making best use of the Seafront and promoting tourism.
- 3.22 To achieve these objectives, the Local Plan lists several policies, of which the following are related to the study:
- Policy FA3: Strategy for Hastings Town Centre, including the promotion of accessibility by local public transport, walking and cycling, and for people with disabilities.
 - Policy FA6: Strategic Policy for The Seafront, namely by encouraging the regeneration of key landmark sites along the seafront, from the Stade to West Marina, supporting development that builds on the Seafront’s distinctive heritage and attractiveness as a destination for leisure and recreational activity.
 - Policy E4: Tourism and Visitors, promoting and securing sustainable tourism development in the town to lengthen the tourism season, increase number of visitors and sustain tourism economy.
 - Policy T2: Local Road Improvements, with consideration given to a sustainable transport link along the seafront.
 - Policy T3: Sustainable Transport using the Local Transport Plan 3 policy framework and other partners to achieve a more sustainable transport future for Hastings.

Hastings Seafront Strategy (2015)

- 3.23 The overall vision for the Hastings Seafront Strategy centres around the seafront, noting that its “importance [for Hastings] can hardly be overstated”. The vision states that it wants the seafront to be filled with a range of attractions and provide public spaces which are of a high quality. The key aims of the strategy are to:
- Advance economic and social development;
 - Attract investment and new employment opportunities; and
 - Support a unique inviting urban and seafront environment.

3.24 The strategy highlights several key strategic interventions linked to this study:

- Rebalancing the town, reducing dependence on the Rock-a-Nore / Stade / Old Town hotspot by drawing people and activities westwards;
- Addressing the under-use and unsafe image of Bottle Alley (the seafront) and enhance the value of the alley itself and the promenade above;
- Build on the reopening of the pier in 2016 as a further catalyst for revival in the White Rock area; and
- Rebalancing is considered an important intervention. Currently the strategy notes that footfall is not drawn far enough West, an issue exacerbated by the closure of the pier in 2006 and its subsequent fire in 2010. It subsequently reopened in 2016 but is still not attracting the expected number of visitors.

Hastings Culture-Led Regeneration Strategy 2016-21 (2016)

3.25 Hastings has seen significant investment in its cultural and wider infrastructure over the past 10 years, but many challenges remain with high levels of deprivation in some parts of the town and an increasing gap with those areas where regeneration is moving forward more rapidly. This strategy has been developed to ensure that Hastings' cultural sector not only survives but thrives over the next five years and that the regeneration benefits are realised. While an Action Plan is currently under development, the following objectives are relevant to this study:

- Objective 4: Develop and promote a refreshed identity for Hastings which brings contemporary culture and traditional heritage together in a coherent and marketable brand. To do this, one identified action is to develop the tourism infrastructure, including transport linking to wider regeneration strategies.
- Objective 5: Develop and support a high-quality year-round cultural programme that links to regeneration and tourism strategies, noting that the aspiration for a seafront shuttle remains, with a feasibility study being undertaken as part of an EU funded programme.

Hastings Town Centre and Bohemia Area Action Plan (2018)

3.26 Hastings Town Centre and Bohemia has been identified by the Council as critical to the continued social, economic and cultural regeneration of the Borough capable of accommodating the homes, jobs and services which are needed to meet local needs and drive forward future economic growth. The area, whilst providing the town's principal focus for retail, employment, education, leisure, culture and tourism, faces several social, economic and environmental challenges. The Area Action Plan (AAP) seeks to address these issues and to unlock the significant untapped potential of the area.

3.27 The following key objectives align with the aims of this study:

- Objective 1: Achieve and sustain a thriving economy;
- Objective 2: Make best use of existing assets to make Hastings distinctive;
- Objective 3: Promote Hastings as a destination of choice; and
- Objective 6: Provide an efficient and effective transport system.

White Rock Park and Bohemia Masterplan (2017)

3.28 This Masterplan was prepared to promote the early and sustained transformation of the area and to provide a comprehensive and deliverable framework for future change and development. In doing this, it takes an integrated view of the area in order to maximise opportunities and to ensure the proposals are sustainable and deliverable. The Masterplan has informed the development of the Hastings Town Centre and White Rock AAP and provides an effective framework for future investment underpinned by a robust delivery strategy.

West Marina Masterplan (2016)

- 3.29 The West Marina site is located on West St Leonards seafront to the west of Grosvenor Gardens. This Masterplan has been developed to provide a vision for the West Marina area and is based on four key elements:
- a central square over the undevelopable waste water reservoir and adjacent services;
 - the retained seafront walkway/cycleway rethought and enclosed by relatively ephemeral timber buildings focussed around a potential artists' colony and display space;
 - an informal and somewhat eclectic village of vertical timber town houses in the west; and
 - a more formal residential development in the east relating to the form and scale of the Conservation Area.

Business, Industry and Tourism*Industrial Strategy: building a Britain fit for the future (2017)*

- 3.30 The Industrial Strategy sets out the government's plans to build a Britain fit for the future – how to help businesses create better, higher-paying jobs with investment in the skills, industries and infrastructure of the future. It focuses on sectors with lower average productivity levels, e.g. tourism, to enhance national productivity, and outlines their plans to introduce Sector Deals between the government and industry on sector-specific issues to create significant opportunities to boost productivity, employment, innovation and skills.

Tourism Sector Deal (2019)

- 3.31 The Tourism Sector Deal outlines how the government and industry will work in partnership to boost productivity, develop the skills of the UK workforce and support destinations to enhance their visitor offer. It builds on the Industrial Strategy's commitment to upgrading the UK's infrastructure, with the Tourism Sector Deal setting out how the public and private sectors will invest in tourism assets, ranging from attractions to transport to accommodation. The foundations of the Industrial Strategy and corresponding elements of the Tourism Deal are summarised in Table 3-1.

Table 3-1: Tourism Sector Deal alignment with the Industrial Strategy

	Industrial Strategy	Tourism Sector Deal
People	Generate good jobs and greater earning power for all	Ensure high quality tourism training is available, so that the sector can attract, retain and develop a workforce with the skills it needs both now, and in the future
Places	Develop prosperous communities throughout the United Kingdom	Developing the visitor economy and places that people want to visit
Business Environment	Be the best place to start and grow a business	Improve the productive of the tourist industry and establish the UK as a global leader by increasing visitor numbers throughout the year
Infrastructure	Major upgrade to the UK's infrastructure	Ensure the tourism sector can support the government's ambition to deliver a major upgrade to the UK's infrastructure
Ideas	Be the world's most innovative economy	Increase the capacity of the sector to innovate by accelerating the development of digital technology and reducing barriers in the sector

Tourism Action Plan (2016)

- 3.32 The Tourism Action Plan outlines several key actions to support tourism throughout the UK. Transport is one of five key actions the Government is working on, specifically to make it easier for visitors to explore by rail, bus and coach. This report sets out how the Government is working to achieve this through action on the tourism landscape, skills, common sense regulation, transport, and the GREAT tourism campaign.

Local Industrial Strategy (in progress)

- 3.33 In 2018, following the publication of the national Industrial Strategy in 2017, Government mandated that every LEP should produce a Local Industrial Strategy (LIS). Whilst awaiting further detail and structure from Government, the South East LEP continued its commitment to provide a refresh of the Strategic Economic Plan and in late 2018, produced an Economic Strategy Statement – Smarter, Faster, Together.

Economic Strategy Statement – Smarter Faster Together (2018)

- 3.34 The Economic Strategy Statement outlines the South East Local Enterprise Partnership's ambitions for the south east economy and the actions they will take over the next ten years, including the path towards developing the LIS. The statement largely supersedes the Strategic Economic Plan published by the LEP in 2014, and has the following headline ambitions:

- work **SMARTER**: increasing the productivity of the South East LEP area;
- deliver **FASTER**: accelerating housing and infrastructure delivery to meet planned growth; and
- work better **TOGETHER**: collaborating across the Greater South East, with Government and with business.

East Sussex Growth Strategy – Doing Business Brilliantly 2014-2020 (2014)

- 3.35 The East Sussex County Council's Growth Strategy details how the region is ideally positioned for dynamic forward-thinking businesses ready to create, innovate and grow with confidence that the strengthening connections between business, people and place make it a county with excellent prospects for the future. The strategy is built around three pillars:
- **BUSINESS**: Enabling business growth, particularly of 'high value' businesses.
 - **PLACE**: A significantly valued asset to the East Sussex economy.
 - **PEOPLE**: Meeting the skills needs of business and supporting residents to reach their full potential.

Policy review matrix

- 3.36 The above review has been compiled into a policy matrix and is summarised in Table 3-2. There is clearly strong alignment along national, sub-national and local policy to support sustainable growth along the Hastings seafront.

Table 3-2: Policy Review Matrix

	Theme 1: Sustainability	Theme 2: Tourism & transport	Theme 3: Accessibility	Theme 4: Connectivity
National a. Transport Investment Strategy b. Road to Zero, Clean Air Strategy and Inclusive Transport Strategy c. Future of Mobility: Urban Strategy d. National Planning Policy Framework e. Industrial Strategy f. Tourism Sector Deal	National policy is supportive of low emission, sustainable vehicles to improve air quality, enhance productivity and make Britain a more attractive place to trade and invest. The NPPF provides several transport objectives designed to facilitate sustainable development by giving people a wider choice about how they travel.	Tourism is a key focus of the UK's Industrial Strategy as a sector with lower average productivity levels. Government is committed to supporting this sector and has several actions including to make it easier for visitors to explore the UK by rail, bus and coach.	To promote healthy and safe communities, the NPPF specifies that planning policies and decisions should aim to achieve healthy, inclusive and safe places which are safe and accessible. Specific to this study, the Future of Mobility policy stipulates that the benefits of innovation in mobility must be available to all parts of the UK and all segments of society.	The Transport Investment Strategy emphasises the government's focus on creating a more reliable, less congested, and better-connected transport network. In addition, the Future of Mobility policy specifies that new mobility services must be designed to operate as part of an integrated transport system combining public, private and multiple modes for transport users.
Sub-Regional g. Transport Strategy for the South East h. Economic Connectivity Review i. Economic Strategy Statement j. Local Industrial Strategy	Sustainability is a key theme and focus for TfSE, with the Economic Connectivity Review detailing how investment in transport to open up sites for development will be focussed in high demand locations and needs to be supported by local sustainable transport solutions.	The draft Transport Strategy for the South East and the Economic Connectivity Review highlights the importance of transport to support tourism. The Economic Strategy Statement also highlights that the tourism industry is linked with the coast, quality of natural and built environment, and cultural offer.	TfSE is focussed on improving access to opportunities for all, as shown in their strategic principles.	Connectivity is a key focus of the TfSE Economic Connectivity Review, with an emphasis on an integrated transport system. In addition, the Strategic Economic Plan by the South East LEP highlights the A21/A259 corridor for several transport schemes to enhance the urban centres of Hastings and Bexhill and improve connectivity.
Local k. East Sussex Local Transport Plan 2011-2026 l. Hastings Walking and Cycling Strategy m. Hastings Local Plan n. Hastings Seafront Strategy o. Hastings Culture-Led Regeneration Strategy 2016-21 p. East Sussex Growth Strategy	The East Sussex LTP and Hastings Walking and Cycling Strategy clearly identify the need to provide services and infrastructure to help address congestion bottlenecks, improve safety and promote sustainable travel. The Local Plan also includes a policy on sustainable transport to improve air quality and the environment.	The Local Plan and Local Transport Plan both link improvements to cycling and walking infrastructure and other sustainable transport to tourism - ensuring infrastructure is connected to key trip attractors.	Key to the Hastings Local Plan and Local Transport Plan is promoting accessibility by local public transport, walking/cycling, and for people with disabilities. This is reinforced by the Hastings Seafront Strategy, which has a key investment objective to improve access to people with disabilities.	The Local Plan identifies a need for greater connectivity across the seafront, while the LTP highlights the need to develop and improve the cycle networks into the town centre, along the seafront and to existing and future residential employment areas.

Need for Intervention

- 3.37 Key to the DfT's Transport Appraisal Process is establishing the need for intervention. To demonstrate this need, a high-level analysis of the corridor was undertaken and then followed by a more detailed investigation of the current and future transport-related problems.
- 3.38 The high-level analysis adopted a SWOT methodology to identify strengths, weaknesses, opportunities and threats relating to the Hastings seafront. This exercise was undertaken with the Council to highlight the key issues specific to Hastings and provide focus for further investigation. The more detailed analysis was then undertaken with the following focuses to align with the national, sub-regional and local policy review:
- performance of the transport network;
 - opportunities for further development along the seafront; and
 - wider potential for tourism throughout Hastings.

Analysis of Strengths, Weaknesses, Opportunities and Threats (SWOT)

- 3.39 The key purpose of the SWOT analysis was to provide a basis for the assessment of the corridor. This analysis was discussed and agreed with the Council during the June 2019 stakeholder workshop and is summarised in Table 3-3.

Table 3-3: SWOT analysis of Hastings seafront and mobility

Strengths 	<ul style="list-style-type: none"> • Well established tourist industry with multiple language schools operating year round • Proximity of town centres and Old Town to the seafront • Goat Ledge and creative "grittiness" • Walking and cycling links along the seafront and to adjacent town • Four stations within the town provides a range of access points by rail
Weaknesses 	<ul style="list-style-type: none"> • Tourist activity concentrated in the east of the town • Poor east west connectivity along the seafront • Slow rail connections to the town, particularly from London • Access to the promenade in places, and crossing the A259 • A lack of attractions between pier and St Leonards
Opportunities 	<ul style="list-style-type: none"> • New planned development and business in the western end of the town, including a public slipway (as part of marina development/Local Plan) • Less utilised parking in the western end of the town • Improved public realm, signage and wayfinding for public and to improve attractions /attractiveness • Domestic policy and views regarding sustainability/international travel and carbon emissions
Threats 	<ul style="list-style-type: none"> • Highly constrained roads, particularly in the east along the A259 • Access to car-parking in the eastern end of the town, particularly Rock-a-Nore car park. • 'Bad' development – reliance on private sector for investment • Concerns of international visitors regarding Brexit and (perceived) xenophobia.

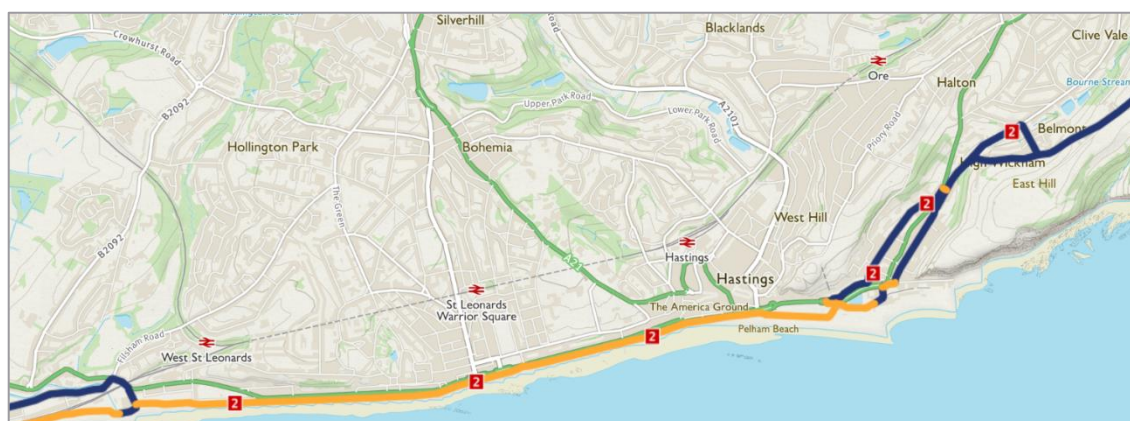
Existing transport corridor

- 3.40 The seafront is approximately three miles long, with the fishing fleet, amusements and other visitor attractions including the Hastings Contemporary Museum focused at the eastern end. The Pier is towards the middle of the seafront, with the western half largely residential with a double deck promenade running along the front. The busy A259 runs along the seafront causing severance between the town and the seafront for pedestrians and cyclists³.
- 3.41 An assessment of the existing conditions has been conducted for non-vehicular modes (walking and cycling), public transport and the surrounding highway network to establish the need for transport intervention.

Accessibility by non-vehicular modes

- 3.42 The Hastings seafront includes both a wide promenade and dedicated cycle lanes and is well used by pedestrians. The promenade ranges in width from 4.5m to 12.0m (including cycle lanes), and runs the length of the seafront, while the cycle lanes run from Grosvenor Gardens to the Hastings Pier and are 2.5 to 3.0m wide. The promenade also ranges in grade, running level with the A259 from the A2101 (Albert Road) to the Pier, and then fluctuating in height through to Grosvenor Gardens.
- 3.43 The seafront is included in the National Cycle Network (NCN2) and links to Fairlight on the edge of Hastings, but there are missing links on this route that the Council is looking to address⁴. Figure 3-2 illustrates the extents of the NCN2 along the Hastings seafront.

Figure 3-2: National Cycle Network (Source: Ordnance Survey)



- 3.44 East Sussex County Council has recently secured £9m of Local Growth Funding from the South East Local Enterprise Partnership to deliver Phase 1 of an integrated package to improve movement and access across Hastings and Bexhill, including increasing the extent of the cycle network across the two towns, a Wayfinding Project to make it easier for visitors to find their way to and from the bus and rail network, bus stop infrastructure and real time passenger information and greater provision for pedestrian crossing facilities. Providing an improved east-west service along the seafront is expected to complement this programme and help to realise the full benefits of the LGF investment.

³ Note: Reference to pedestrians and cyclists refers to all non-motorised and micro-transit users (e.g. e-bikes, skateboards and scooter).

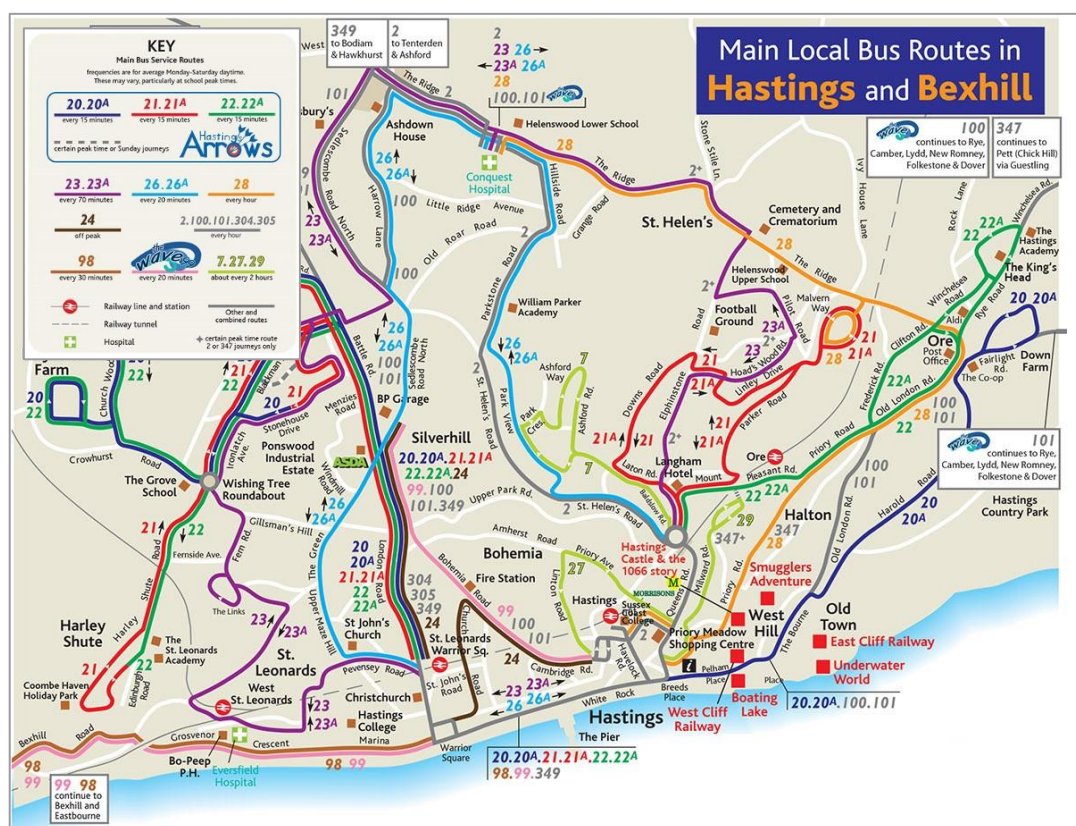
⁴ Cycle and Walking Strategy, East Sussex County Council, May 2014

3.45 There are several operators along the seafront that offer bike hire, including a Hastings Borough Council initiative on the promenade adjacent to Pelham Place car park. For 2019, this service operated from Friday to Tuesday, 20 July to 2 September.

Public transport provision - bus

3.46 Nearly all of Stagecoach's bus route network throughout Hastings operate at least in part along the seafront, if only between Harold Place and Albert Road. This network is illustrated in Figure 3-3.

Figure 3-3: Hastings Bus Services, without Route 66 (Source: Stagecoach)



3.47 A summary of the bus service frequencies for is provided in Table 3-4.

Table 3-4: Hastings Bus Services Frequency (Source: Stagecoach)

Route	Description	Frequency ¹
20.20 ^A	Ore – Hastings – Hollington	15 minutes
21.21 ^A	(Hollington -) St Helens – Hastings	15 minutes
22.22 ^A	Ore – Hastings – Hollington (– Harley Shute)	15 minutes
23.23 ^A	Conquest Hospital – Hastings – St Leonards – Hollington	70 minutes
24	Hastings – Silverhill	Off peak
26.26 ^A	Conquest Hospital – Hastings – St Leonards – Conquest Hospital	20 minutes
28	Hastings – Ore – Conquest Hospital	Hourly
2.100.101.304.305	Various routes	Hourly
7.27.29	Various routes	2 hours
98	Hastings – Bexhill – Sidley – Hailsham – Polegate - Eastbourne	30 minutes
The Wave 99	Silverhill – Hastings – Bexhill – Pevensey Bay - Eastbourne	20 minutes

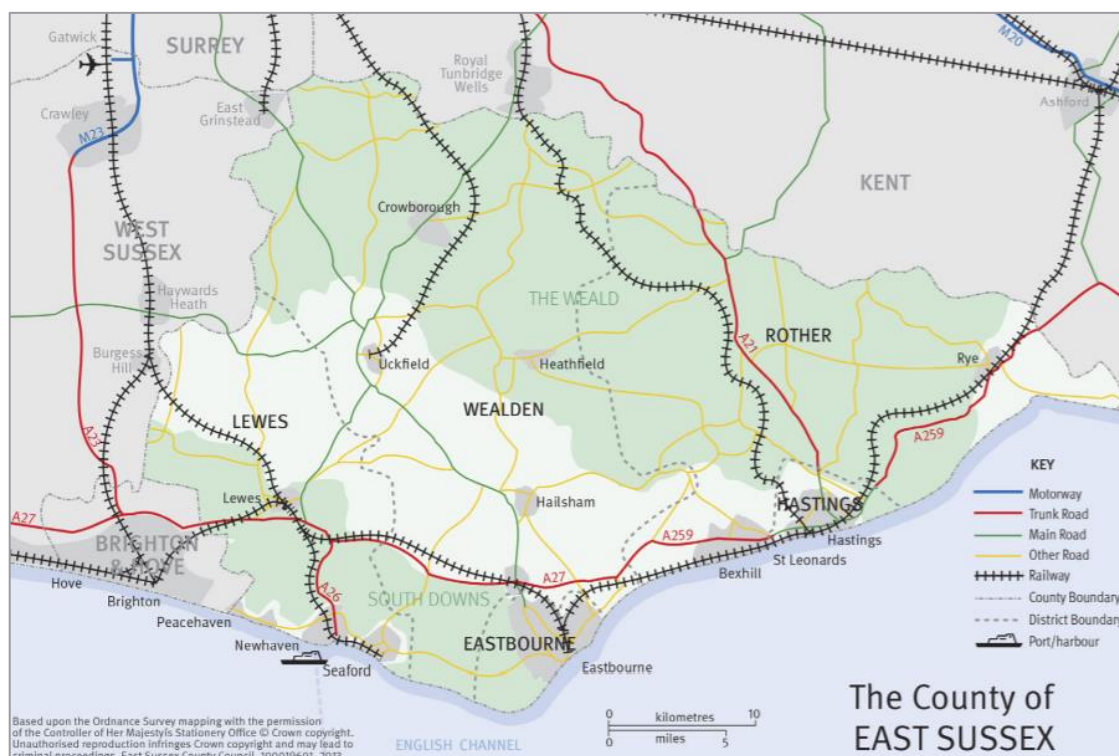
Note: ¹Frequencies are for average Monday – Saturday daytime and may vary, particularly at school peak times.

- 3.48 At the time of the commission of this project, there were no routes that provided an end to end service without interchange, as existing routes instead divert off the seafront in the town centre to access the central town centre area (e.g. Priory Meadow Shopping Centre and Hastings Station), as these are the destinations of highest travel demand. This lack of service was considered by HBC as a disjointed public transport offering for tourists, as outlined in the Hastings Seafront Strategy, which states “points of interest are too far apart for pedestrians to be drawn naturally along the promenade, while bus companies have never seen commercial value in a continuous seafront route from the Old Town to West Marina and Glyne Gap”.
- 3.49 On 20 May 2019, following this study’s inception, Stagecoach announced a special open-top bus running in Hastings over the summer (Route 66). This service has run hourly from the Combe Haven holiday park to The Stade in Hastings Old Town. A single adult fare for the route costs up to £3.40 for the full length of the route, with a hop on and hop off ‘day rider’ ticket allowing unlimited travel inclusive of the wider Hastings bus network for £4.50 (or £3.20 for under 19s). Accompanied children can travel for £1.00 each with any adult ticket holder.
- 3.50 The Route 66 service operated daily during the summer (seven services from 9:30am to 5:30pm) from Saturday 25 May until 2 June and then on Saturdays and Sundays from 8 June to 21 July. It then resumed a daily service throughout the summer holiday from 24 July to 8 September. There are 13 stops along the route, including at Warrior Square, Hastings Castle, Hastings Adventure Golf and the Old Town. The vehicle used for Route 66 is an open topped double decker, diesel bus.
- 3.51 The significant operational issue for buses terminating in the Old Town is there is no suitable turning arrangement. The current Route 66 service requires a 3-mile route via Old London Road, Saxon Road and Harold Road, which deducts from the operational efficiency and commercial viability the service. This issue is in addition to the major traffic delays which occur over the Summer period at this end of the seafront, which require additional time to be added into the bus schedule.
- 3.52 At the start of the summer, early signs from Stagecoach were positive as to the commercial performance of the Route 66. Following the end of the summer, Stagecoach indicated that revenue from Route 66 due to low levels of demand did not meet the operating costs of running the service even factoring one-off setup costs. As a result, the service is not yet commercially viable. However, this situation is not uncommon in the first year of operating a service and as a result the service will likely continue to be run next year with the expectation that demand will increase.

Public transport provision - rail

- 3.53 Hastings is well served by two main rail routes in East Sussex; the East Coastway Line (Brighton-Ashford) and Brighton Main Line to London, and the Hastings-London Line (via Tonbridge), as shown in Figure 3-4.

Figure 3-4: Map of rail routes in the East Sussex county (Source: East Sussex Rail Strategy)



- 3.54 Three of the four stations in Hastings could provide access to the seafront: West St Leonards to the west, St Leonards Warrior Square Station in the town centre, and Hastings station. Table 3-5 shows the distance of these stations to the seafront.

Table 3-5: Distance from Hastings stations to seafront

Station	Distance to seafront (approx.)	Description
West St Leonards	450m	Footpaths through to seafront, although no signage, must cross overpass and several roads without priority. Zebra crossing across A259.
St Leonards Warrior Square Station	450m	Footpaths through town centre to seafront. No signage and several roads without priority, however low speed environment. Signalised junction at A259 / London Road and A259 / A2101 (Warrior Square), as well as a zebra crossing east of Warrior Square.
Hastings station	500m	Footpaths through town to seafront. Signalised junction at Havelock Road / Devonshire Road and A259 / Harold Place.

- 3.55 While rail provides east-west connectivity through Hastings, it is considered too far from the seafront to promote tourist use of both the eastern and western ends, especially for visitors with limited mobility.

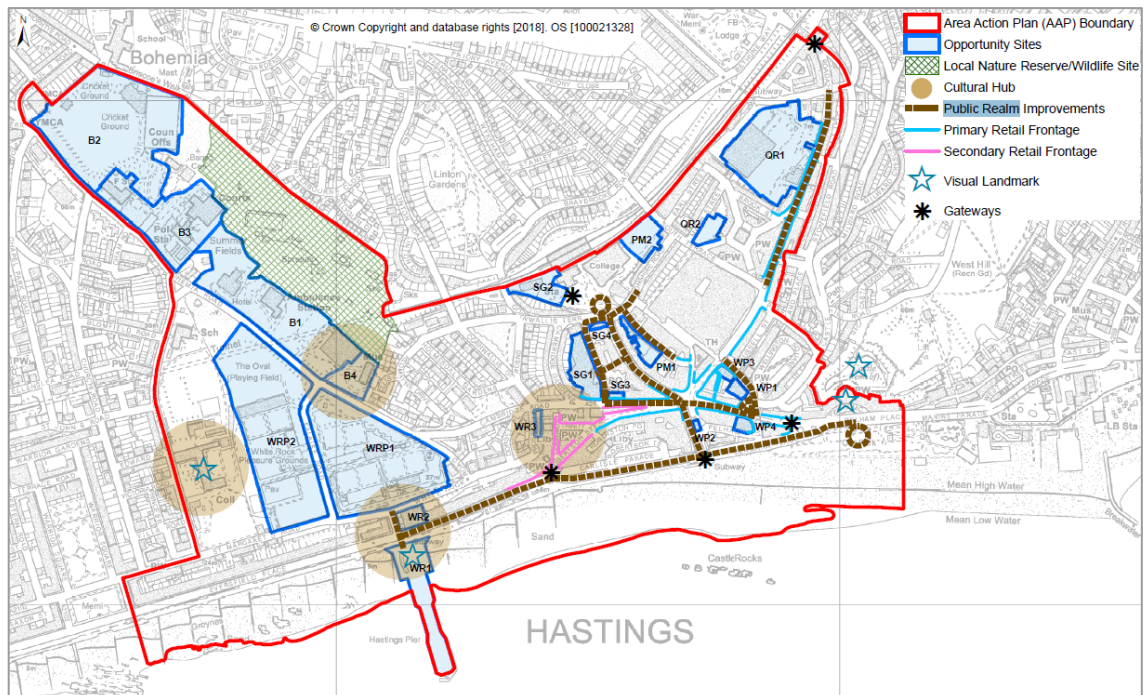
Local highway network and parking

- 3.56 The A259 runs along the whole of the seafront and provides the main points of road access to the east and the west of the town. It is a two-way single carriageway with a low speed environment (30mph) with parking and bus stops along the route. The only section with bus priority measures is a section of westbound bus lane in the vicinity of Warrior Square Gardens.
- 3.57 While the A259 has a high number pedestrian crossing between Pelham Place and Rock-a-Nore, formal crossings are more spaced out along the remaining section and often without pedestrian priority, which acts as a barrier to movement between the seafront and town centre. The Harold Place underpass is also unwelcoming to pedestrian users.
- 3.58 There are several parking locations distributed along the seafront. The Hastings Old Town Seafront zone has the most parking capacity, with two car parks on Rock-a-Nore and at Pelham Place that have a combined capacity of 700 spaces. However, due to the high demand from visitors, this area becomes full to capacity in the summer months and has, on several occasions, caused gridlock along Rock-a-Nore Road, particularly on weekends from midday onwards. There is on-street parking along the A259, as well as a 97-space Marina car park and underground car parks at Harold Place and the Hastings Pier.
- 3.59 The A259 is relatively free-flowing along the seafront on weekdays, however does experience congestion in the peak periods, especially the PM peak. The modelling that had been prepared for the Hastings Town Centre and White Rock Area Action Plan supports this, forecasting that no serious bottlenecks will occur along the seafront in the 2028 and 2040 Do Minimum scenarios⁵.
- 3.60 The SATURN and VISSIM modelling do however indicate localised capacity issues at several junctions along the seafront, such as the A259/Robertson Street and A259/Warrior Square, in both the AM and PM peak periods. These pinch points may therefore impact the journey time and reliability of services along the seafront. Given that both the SATURN and VISSIM models have been validated using weekday data, it is possible that this previous analysis underestimates the congestion experienced in the Old Town seafront zone, especially along Rock-a-Nore Road, on the weekends.
- 3.61 The combination of traffic congestion issues including delays caused by pedestrian crossings, particularly at peak times including the Summer period, add significantly to bus running times.

Future developments along the seafront*Hastings Town Centre and Bohemia Area*

- 3.62 The Hastings Town Centre and Bohemia area has been identified by Hastings Borough Council as critical to the continued social, economic and cultural regeneration of the Borough capable of accommodating the homes, jobs and services which are needed to meet local needs and drive forward future economic growth. Consultation on the first draft 'Preferred Approaches' version of the Area Action Plan took place between 2 July and 24 September 2018 and outlines a number of opportunity sites and public realm improvements, as illustrated in Figure 3-5.

⁵ Hastings Town Centre and White Rock Area Action Plan – Traffic Modelling Report, Mott MacDonald, February 2018

Figure 3-5: Opportunity Areas and Public Realm Improvements (Source: Hastings Town Centre and Bohemia AAP)

- 3.63 While it is unlikely that the identified opportunity sites in Hastings Town Centre and Bohemia will be dependent on an east-west public transport service along the seafront, it will be important that any transport intervention considers these future developments, especially the proposed public realm improvements connecting the Hastings Pier to Pelham Place. It should be noted that Hastings is currently looking to develop a composite Local Plan which supersedes the work that has been done on the Town Centre and Bohemia Area Action Plan.

White Rock Masterplan

- 3.64 The White Rock Masterplan has been developed to promote the early and sustained transformation of the area and to provide a comprehensive and deliverable framework for future change and development. Figure 3-6 illustrates the vision for White Rock by 2040.
- 3.65 As noted in the Masterplan, critical to the transformation of the White Rock area is improved connections and linkages with the seafront and public transport. The document identifies several key interventions to achieve this, such as traffic calming on seafront with improved pedestrian crossings and rationalisation of parking provision. However, similarly to the Hastings Town Centre and Bohemia AAP, it is unlikely that the opportunity sites within White Rock will be dependent on an east-west service along the seafront and will also likely be superseded by the Hastings composite Local Plan.

Figure 3-6: White Rock 2040 Masterplan (Source: White Rock Park & Bohemia Strategy)



West Marina Masterplan

- 3.66 The West Marina site at the end of the waterfront promenade has also been identified for future development and is currently under consideration by the Hastings Borough Council. The Hastings Seafront Strategy had previously stated that these sites provided for 145 residential units and opportunities for commercial and leisure uses, however this could be subject to change. While the development is also considered unlikely to be dependent on an east-west public transport service along the seafront, subject to requirements for car free development, it may benefit from a more regular service than is currently provided by Stagecoach.

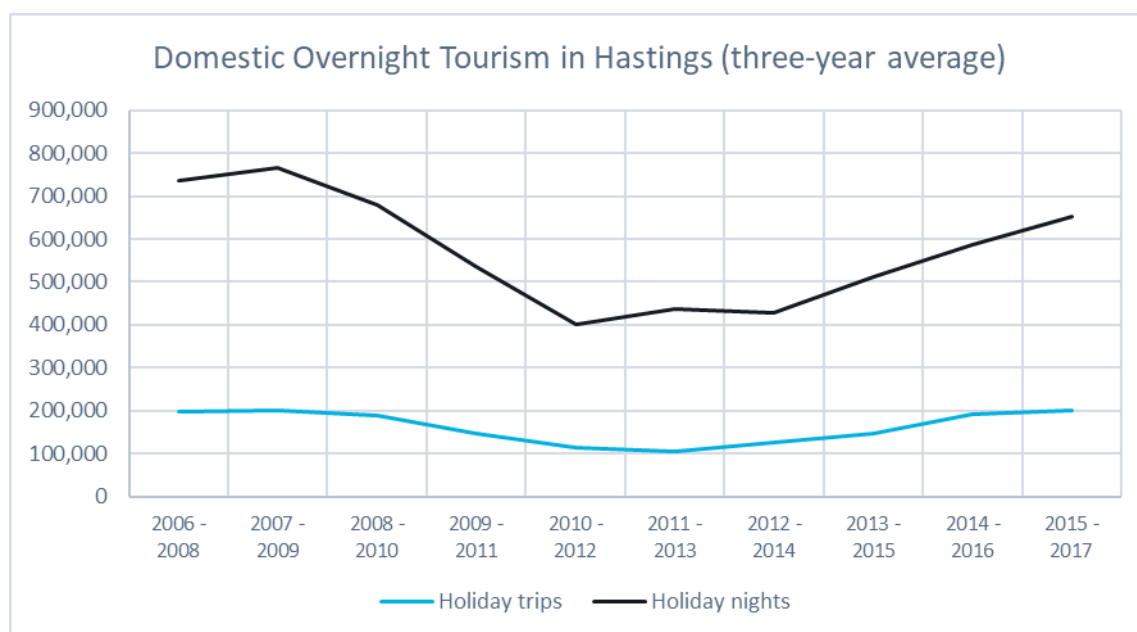
Hastings Pier

- 3.67 The Hastings Pier is a key site along the seafront and was first opened in 1872. The pier has undergone various uses since its opening, from Victorian pleasure park to popular music venue, and has been in varying states of disrepair, most recently following extensive fire damage in 2010. The pier was reopened in 2016 after a £14m renovation paid for by the Heritage Lottery Fund, however has recently been the source of public complaints following its temporary closure in early 2019, and subsequent reopening. Regardless of whether the pier undergoes any further development, the site may benefit from a more regular service that provides east west connectivity along the seafront.

Potential for tourism

- 3.68 Domestic and international tourism is still recovering from the 2008-2009 Global Financial Crisis, which is estimated to have caused a decline of 4% in worldwide international tourist arrivals and a decrease of international tourism revenues by 6% in 2009⁶. This decline is reflected in the tourist numbers visiting Hastings, with analysis undertaken by VisitEngland on domestic overnight tourism showing a comparable decline of overnight holiday trips that has only recently returned to pre-Global Financial Crisis⁷, as shown in Figure 3-7.

Figure 3-7: Domestic Overnight Tourism in Hastings – 2006 to 2017 (Source: VisitEngland)



- 3.69 The data also suggests that Hastings is yet to reach the pre-Global Financial Crisis level of total overnight holiday nights (i.e. total number of nights spent in Hastings from domestic tourists). There is therefore strong potential for further tourism growth in Hastings as domestic and global tourism continues to recover from the Global Financial Crisis.
- 3.70 There is also the opportunity to convert day trips to overnight visits in Hastings, with a recent study estimating that combined domestic and international tourism accounted for approximately 3.3 million day-trips and 0.5 million overnight visits⁸. Conversion to overnight visits would have a positive effect on the Hastings economy, as recent analysis indicates that the average spend per person for day visits throughout England is £37 per person on average⁹, whereas overnight visitors spend over £60 per person per night¹⁰.

⁶ Economic crisis, international tourism decline and its impact on the poor, Department for International Development, 2011

⁷ Analysis undertaken using Domestic Overnight Tourism (GBTS) data from VisitEngland, source: <https://www.visitbritain.org/destination-specific-research>

⁸ The Economic Impact of Tourism on Hastings Borough 2017, Tourism South East Research Unit

⁹ The Great Britain Day Visitor Survey 2018 Annual Report, VisitEngland, VisitScotland, VisitWales, 2019

¹⁰ The Great Britain Tourism Survey 2017 Annual Report, VisitEngland, VisitScotland, VisitWales, 2018

3.71 Tourism is a key driver of economic growth and jobs in Hastings, with the latest Tourism South East Research Unit study indicating that the local visitor economy is worth over £250m a year to the borough and supporting approximately 6,600 jobs, 21% of the workforce, both directly and indirectly¹¹. In addition, it supports an estimated 400 enterprises in the hospitality and leisure sectors, and visitors are a key element for the continued health of the town's retail sector¹².

3.72 With the role tourism plays to the Hastings economy, it is important to consider opportunities to further promote tourism throughout the borough in line with the *East Sussex Growth Strategy*. The *Hastings Seafront Strategy* was developed by the Council to highlight several of these opportunities related to the seafront specifically, with key aims to advance economic and social development, as well as attract investment and new employment opportunities to Hastings.

Hastings Old Town Seafront (eastern zone)

3.73 The Hastings Old Town seafront is Hastings' hotspot for visitors, including tourist attractions such as Rock-a-Nore, the Hastings Contemporary art gallery (formerly Jerwood Gallery), Hastings Fishermen's Museum, the Stade Open Space, which hosts a range of events throughout the year, amusement arcades, funfair, the Blue Reef Aquarium and Hastings Adventure Golf. As detailed in the Hastings Seafront Strategy, "*Rock-a-Nore is famous for its maritime heritage, attracting thousands of visitors in its' own right each year*". This is supported by VisitEngland data which estimates that there were nearly 120,000 visitors to the Hastings Fishermen's Museum in 2018 alone¹³.

3.74 While the Old Town welcomes thousands of tourists every year and is economically healthy, it does suffer from several weaknesses, such as demand being highly seasonal (see Figure 4-4) and having areas of poor design, such as access through Rock-a-Nore Road. The area becomes full to capacity in the summer months, as evidenced by the capacity issues at the Rock-a-Nore and Pelham Place car parks, particularly at busy summer weekends from midday onwards. These delays have a substantial impact on the reliability of bus routes serving the area. The prevalence of cars, both moving and parked, also undoubtedly detracts from the visitor experience.

3.75 The availability of a reliable public transport service that operates along the full length of the seafront may increase the attractiveness of parking in either the western or central zones instead of the eastern zones. However, it is acknowledged that this would require extensive advertising to inform tourists of the alternative option before they arrive in the Old Town zone and therefore have any impact on the congestion along the A259 and Rock-a-Nore Road.

White Rock Zone (central zone)

3.76 The White Rock zone spans from Breeds Place roundabout to Warrior Square. It is characterised by art deco structures, including The Source Park skate and BMX complex (previous White Rock Baths) and Bottle Alley, and centres on the Hastings Pier. Further back

¹¹ The Economic Impact of Tourism on Hastings Borough 2017, Tourism South East Research Unit

¹² Hastings Seafront Strategy, Hastings Borough Council, 2015

¹³ 2018 Full Attractions Listing, VisitEngland, 2018

from the seafront is also the Hastings Museum & Art Gallery, which had almost 50,000 visitors in 2018¹⁴.

- 3.77 As detailed in the Hastings Seafront Strategy, this is potentially the “most exciting area of the seafront for improvement, with a potential to create a balanced package to provide and fund a range of high-quality commercial and leisure facilities, along with enhanced open spaces”.

St Leonards Zone (central zone)

- 3.78 The St Leonards zone spans from Warrior Square to West Marina and includes such attractions as the Warrior Square Gardens and Grosvenor Gardens, the Azur, Royal Victoria Hotel, and Marine Court. The area benefits from a wide two-tier promenade but is also the most exposed to the elements, particularly in the offseason. This zone has been identified by the Council as having the highest potential for tourism with the implementation of an east-west public transport intervention, especially if it encourages tourists to park in the west and take the service to the existing attractions in the east.

Bulverhythe Zone (western zone)

- 3.79 The Bulverhythe zone is further west from the Marina and contains the only areas of industrial use along the seafront, which are not expected to undergo transformation that will bolster the Hastings tourism offer. It is noted that on the Bulverhythe beach is the site of the Amsterdam Wreck, a shipwreck site that can be visited on foot at very low tides, although overall this zone is not considered a priority for connectivity along the seafront.

Tourism link to transport

- 3.80 There is clearly tourism potential along the seafront outside of the Rock-a-Nore, Stade and Old Town hotspots. While the attractions to the east currently have the most visitors, there is a real opportunity to encourage tourists to also visit the central and western sections, extending their stay in Hastings and potentially converting a day trip to an overnight visit. Improving transport connectivity along the seafront is considered a necessary step to maximising its tourism potential, although it is acknowledged that other initiatives will also be required to complement this intervention. This includes improvements to infrastructure, public realm, buildings and structures, as well as initiatives to encourage leisure and health/sporting, and community and cultural use as outlined in the Hastings Seafront Strategy.

Summary

- 3.81 It is evident that the seafront has an over-reliance on the visitor economy in the Rock-a-Nore, Stade and Old Town hotspots. There are emerging tourist attractions in the central and western zones of the seafront, as well as future developments sites, that would greatly benefit from an attractive and reliable public transport provision that ideally provides east-west connectivity. It is noted that the recently started Route 66 service has begun to provide this wider connectivity, however this is considered a starting point and a more frequent and longer service that operates throughout the year would better service the local population and tourist economy along the seafront.

¹⁴ Most visited free attractions – South East 2018, VisitEngland, 2018

Rationale for Intervention

- 3.82 The rationale for public sector intervention to meet the need for improved east-west public transport connectivity is built upon the existence on an on-going **coordination failure**. There is a disconnect between the beneficiaries of the proposed intervention and the incentives of the commercial operator likely to deliver this service. As a result of **asymmetric information (or information failure)** between bus operators and developers, policy makers and tourist industry actors it is considered very unlikely that the private sector alone will meet this. As such, public sector intervention to deliver this public transport improvement would help to remedy the existence of coordination failure and take on a “market making” role to bolster the local economy.
- 3.83 Information failures occur where one party has more information about economic activities (e.g. investments or sales decision) than others. This inequality in information may be due to the withholding of information or because parties wish to avoid the cost of searching for and processing information. Either way decisions are not likely to be optimal. Coordination failures arise out of information failures. For example, within Hastings, the potential impact of public and private sector investment decisions is interdependent; but those making the decisions do not know others are proposing to do.
- 3.84 The proposed intervention improves east-west connectivity across Hastings Seafront. It, in combination with on-going and future initiatives, will provide benefit to the local economy through several functions and across a broad range of stakeholders. The proposed intervention will:
- support the realisation of benefits for the developing Masterplan at White Rock, Hastings Town Centre and Bohemia, as well as maximising potential benefits from LGF investment to support Wayfinding initiatives;
 - help to safeguard Hastings’ existing tourism industry by mitigating some of transport disbenefits experienced as a result of congestion during high seasons;
 - strengthen Hastings’ existing tourist offer by providing more ‘join-up’ public transport provision improving the quality of the visitor experience; and
 - has the potential to support future development of tourism sector assets and new businesses across a broader geography aligning closely with local ambitions and policy priorities.

Scheme objectives

- 3.85 The following objectives for the scheme intervention have been developed with HBC to align with DESTI-SMART aspirations, as well as local, sub-regional and national policies. This includes a core objective, wider objectives, deliverability objectives and further considerations.

Table 3-6: Study objectives

Theme	Objective
Core Objectives	
Improve East to West Connectivity for visitors and residents	<ul style="list-style-type: none"> Support new development in the west of the town (St Leonards) Supports growth of new and existing businesses in the west Generate more visitor/tourist spending in the local economy <ul style="list-style-type: none"> Attracting new visitors Leading to longer stays (e.g. overnight rather than day trips) Relieve congestion at peak times in the Rock-a-Nore and Pelham Place car parks by encouraging people to 'Park & Ride' using car parks and on street parking in the east
Wider Objectives	
Fully accessible	<ul style="list-style-type: none"> Promotion of accessibility by local public transport, walking and cycling, and ensuring that this is inclusive for people with both physical and hidden disabilities
Sustainable	<ul style="list-style-type: none"> Zero or very low emission vehicles to improve health and the environment
New attraction as part of the visitor/tourist offer	<ul style="list-style-type: none"> Complement the growing tourist offer in Hastings, and if possible, a trip attractor
Deliverability Objectives	
Acceptable to stakeholders	<ul style="list-style-type: none"> Wide-ranging acceptance of the option by residents, businesses and other stakeholders throughout Hastings
Affordable	<ul style="list-style-type: none"> Ensure the recommended option is commercially viable, with the aim of investment being minimised (both capital & operational cost)
Further considerations	
Preserve usage of the promenade	<ul style="list-style-type: none"> Service should not be detrimental to how the promenade is currently used
Support or complement walking and cycling	<ul style="list-style-type: none"> Support the provision of new and enhanced cycle routes to connect residential areas to key trip attractors in the town, and improving walking routes and provision for pedestrians

Measures for success

- 3.86 It is envisaged that successful outcomes from the scheme will be gauged in terms of providing an improved service along the seafront that is well used by both tourists and locals and encourages rebalancing of the seafront.

Constraints

3.87 The following constraints have been noted for the potential transport intervention:

- market demand for service – needs to be commercially viable for operator;
- must consider hourly service introduced by Stagecoach in 2019 that operates along the seafront;
- existing infrastructure along the seafront, both on-highway and off-highway (i.e. the promenade);
- connectivity between the existing Hastings rail stations and the seafront (Table 3-5); and
- evolving technological environment for sustainable transport interventions (e.g. autonomous pod technology).

Inter-dependencies

3.88 There are several dependencies with other projects and work streams that may affect the delivery of the potential transport intervention:

- the Bexhill and Hastings Movement and Access Programme 2018-2021 for cycling and walking infrastructure along the seafront;
- the East Sussex Active Access for Growth Programme 2017-2020 to enhance existing and longer-term cycling and walking activity; and
- the Hastings Town Centre and Bohemia Area Action Plan¹⁵, which includes public realm improvements along the seafront.

Stakeholders

3.89 Table 3-7 provides an outline categorisation of known stakeholders. This list will be refined throughout the stakeholder management process.

Table 3-7: Stakeholder Groupings

Category	Stakeholder Groups	Engagement Method
Category A: Local Government	Hastings Borough Council East Sussex County Council	Partnership via meetings / workshops
Category B: Central Government	MP DfT	Participation via reports
Category C: Operators, Businesses and civil society groups	Interreg Europe Stagecoach Hastings & Rother Disability Forum (HRDF) / Greenway Hastings Pier Hastings Business Improvement District (BID) Groundwork South	Consultation via meetings / workshops, written correspondence or telephone
Category D: DESTI-SMART	European Union Interreg Europe Other European Partners	Partnership via meetings / workshops
Category E: Public	Residents / Public	N/A

3.90

¹⁵ Hastings Town Centre and Bohemia Area Action Plan: Preferred Approaches for Public Consultation – Hastings Borough Council, 2018.

- 3.91 The first stakeholder workshop was conducted in June 2019 with Hastings Borough Council. The objectives of this workshop were to provide an overview of the DESTI-SMART project and the Feasibility Study, discuss and refine the results of the SWOT analysis, present the long-list of six options and to complete a group exercise to review the option long-list against the objectives of DESTI-SMART.
- 3.92 Following the workshop, there was consensus from stakeholders that the potential transport intervention should meet the following requirements:
- an electric or ultra-low emission vehicle;
 - modern and innovative;
 - a new attraction that complements the growing tourist offer in Hastings, and if possible, a trip attractor; and
 - be fully accessible to people with disabilities.
- 3.93 Stakeholders that were unable to attend the workshop were then consulted via telephone, including a representative from East Sussex County Council (ESCC), Hastings & Rother Disability Forum (HRDF) and Stagecoach. Feedback from these stakeholders was then incorporated into the shortlisting process.
- 3.94 The second stakeholder workshop was undertaken in August 2019 with Hastings Borough Council. The key objective of this workshop was to present the initial results of the option assessment for all six options before finalising in the MCAF. Feedback from this workshop was then incorporated into the option assessment and the MCAF was finalised and provided to HBC and ESCC for review.
- 3.95 A final workshop was undertaken in October 2019 to review the shortlisted options, provide an overview of the initial 'five case model' findings, and undertake group exercises to get feedback for each of the shortlisted options. The stakeholder feedback has been incorporated into this SOBC and is expanded upon in Section 8.

Shortlisted Options

- 3.96 The following tasks were undertaken to identify and evaluate options to improve the public transport provision along the Hastings seafront:
- generate a long-list of options to meet the high-level objectives;
 - develop a multi-criteria assessment framework (MCAF) to assess the long-list of options against the current situation for seafront mobility in Hastings; and
 - option assessment in accordance with the framework.

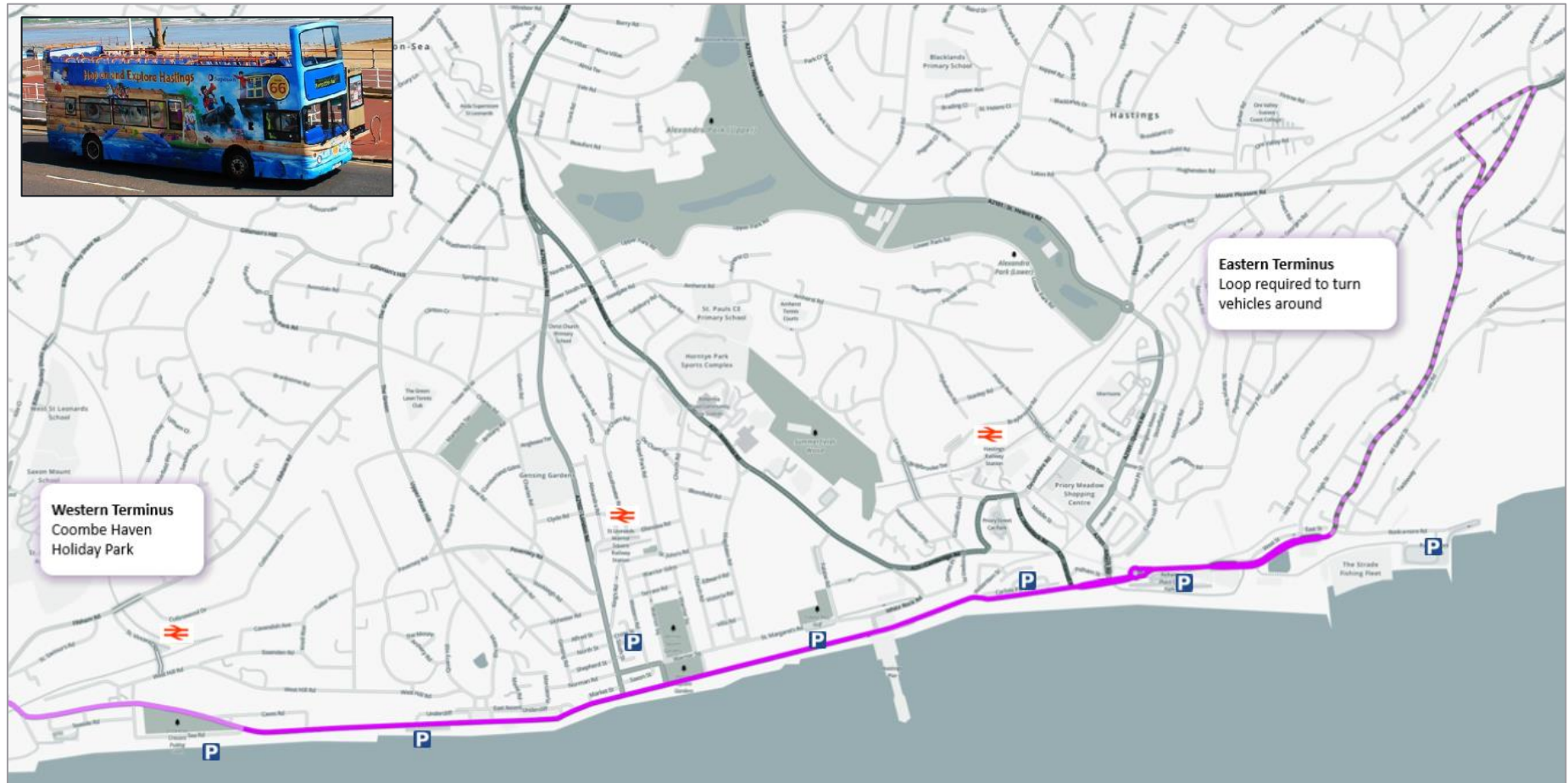
Option Generation: Long List

- 3.97 A long list of options was developed to improve east to west connectivity along the Hastings seafront. These range from generic options widely used across the world, to proprietary systems with much less coverage, as well as an option currently operating:
- Option 1 – Route 66 (Do Nothing);
 - Option 2 – Narrow Body “Mini” Bus;
 - Option 3 – Bi-directional Bus;
 - Option 4 – Mini “Tram”;
 - Option 5 – Autonomous Pods; and
 - Option 6 – Extending Miniature Railway.

Option 1 – Route 66

- 3.98 The Route 66 option is the existing open-top bus service operated by Stagecoach. The operator has indicated that the new service had a successful season operating over the summer, and it has therefore been adopted as the 'Do Nothing' / 'Do Minimum' option. The service currently includes a long loop to turn around at the eastern terminus, as illustrated in Figure 3-8. It should be noted too that the current Route 66 service, unlike other options proposed, extends in the west to and from the Cmbe Haven Holiday Park.

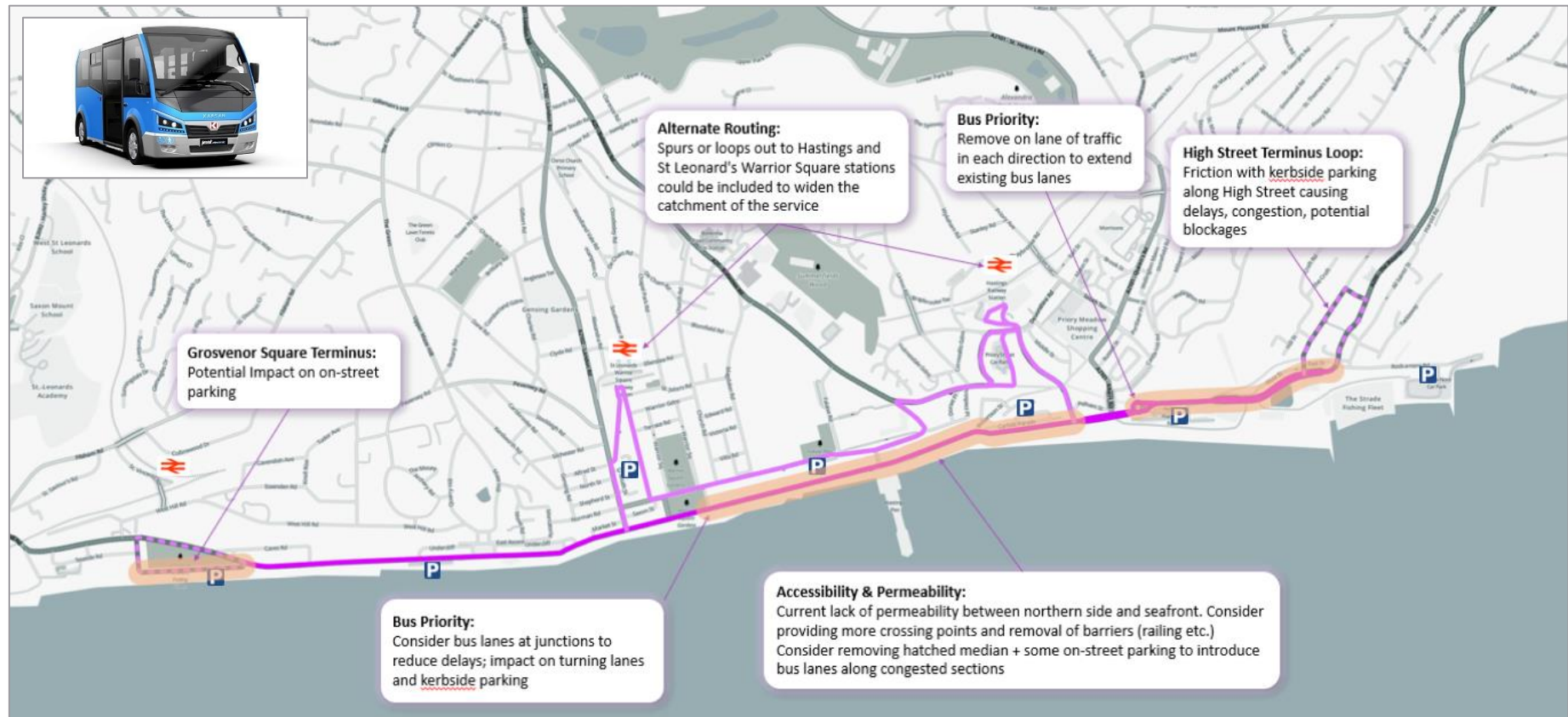
Figure 3-8: Option 1 - Route 66+ Proposed Route



Option 2 – Narrow Body “Mini” Bus

- 3.99 This option consists of a narrow body “mini” bus that would operate on-highway, however with enhanced bus priority measures to mitigate impacts of congestion and protect the reliability of the service schedule. Whilst there are many examples of this vehicle type, very few are available with electric propulsion. One available in the UK is the Mellor Orion-E, though with a very limited range of less than 100 miles between charges which makes it unsuited to all day service provision. The Turkish Jest Electric vehicle from Karsan could offer a potential solution with a claimed range of up to 140 miles, though this would be dependent upon the supplier manufacturing vehicles suitable for the UK market. According to Karsan, there are more than 6,500 Jest vehicles currently operating on the road, and several have recently been tested in Madeira, Portugal, a partner in the DESTI-SMART programme.
- 3.100 The smaller bodied vehicles can undertake a smaller turn around loop along the High Street, as illustrated in Figure 3-9, which is expected to reduce route length and improve reliability of the service. This option could also include spurs or loops out to Hastings and St Leonards Warrior Square stations to widen the catchment of the service.

Figure 3-9: Option 2 - Narrow Body "Mini" Bus Proposed Route



Option 3 – Bi-directional Bus

- 3.101 Option 3 consists of a bi-directional bus that is fully functional at both ends and removes the requirement for a turnaround loop. This vehicle would have double ended steering and doors on either side and operate using a rotation direction reversal of the automatic transmission, allowing travel in both directions at the same speed.
- 3.102 An example of this vehicle, a Caetano 2500, is known to be currently operating in Le Mont-Saint-Michel with a diesel motor, although it is not a widely spread vehicle type. Alstom also manufactures an electric Aptis model in volume with a bi-directional version, operating in Strasbourg, with a variety of charging methods.
- 3.103 Using this vehicle would eliminate the need for the vehicle to do a loop on the east terminus, resulting in less “dead time” during operation, as shown in Figure 3-10. However, for the Caetano it is expected that all inset stops along the route will have to be replaced with bus boards due to vehicle lack of manoeuvrability, which could impact on traffic delays along the seafront.

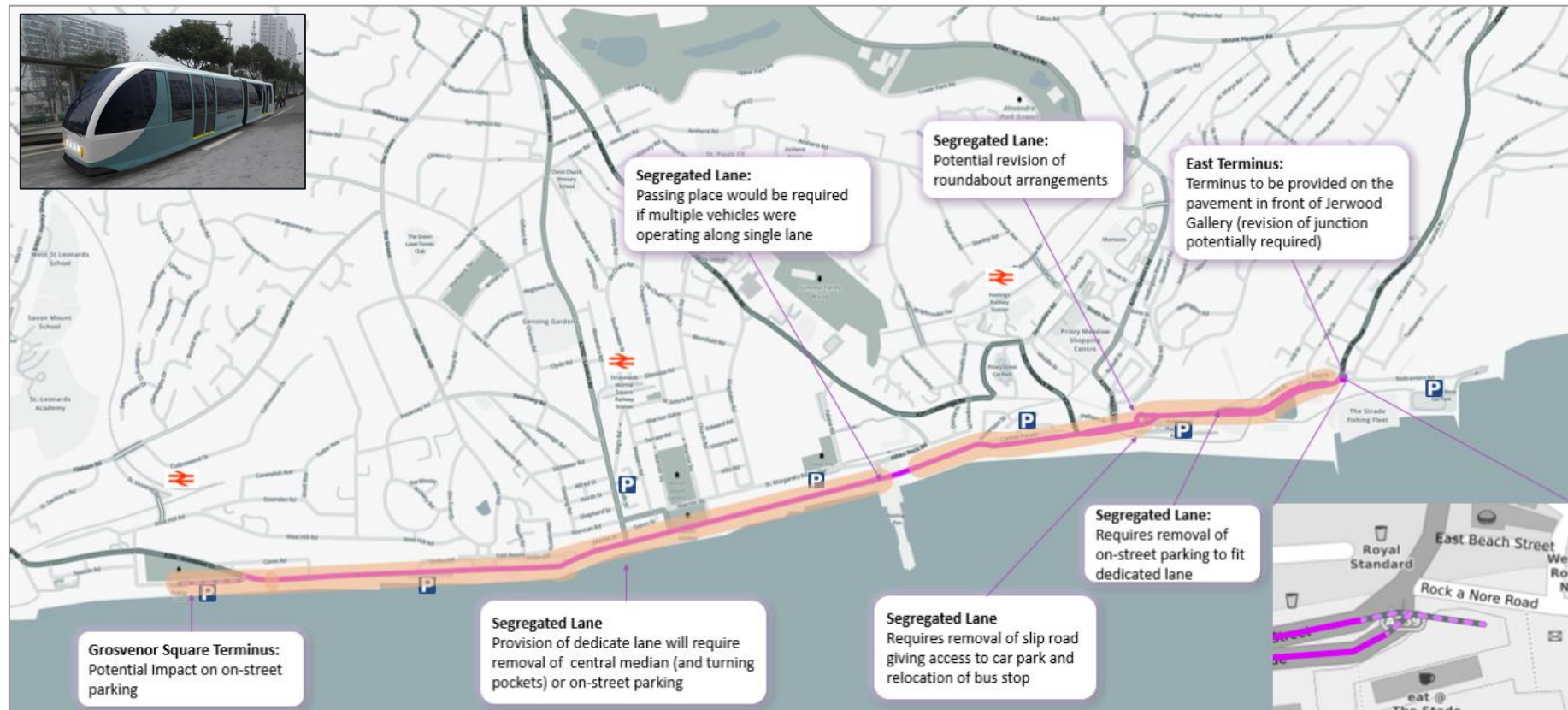
Figure 3-10: Option 3 – Bi-directional Bus Proposed Route



Option 4 – Mini “Tram”

- 3.104 This option consists of a small tram-like vehicle running on-road on rubber tyre wheels and without tracks, differentiating it from a conventional tram/ light rail transit system. Like the bi-directional bus, the mini tram would be fully functional at both ends although would be fully electric. An example of this vehicle has been trialled by Severn Lamb at both Stratford and Althorp in the early 2000s, however a more recent concept vehicle has been developed and is illustrated in Figure 3-11. There are no known examples of this vehicle in operation, or in manufacture, in the United Kingdom.
- 3.105 The concept vehicle from Severn Lamb is designed to be able to run with multiple cars coupled together allowing for flexibility in the capacity of the vehicle. Due to the vehicle type, this option would include a segregated lane, which may require removal of the central island at points along the corridor, as well as on-street parking.

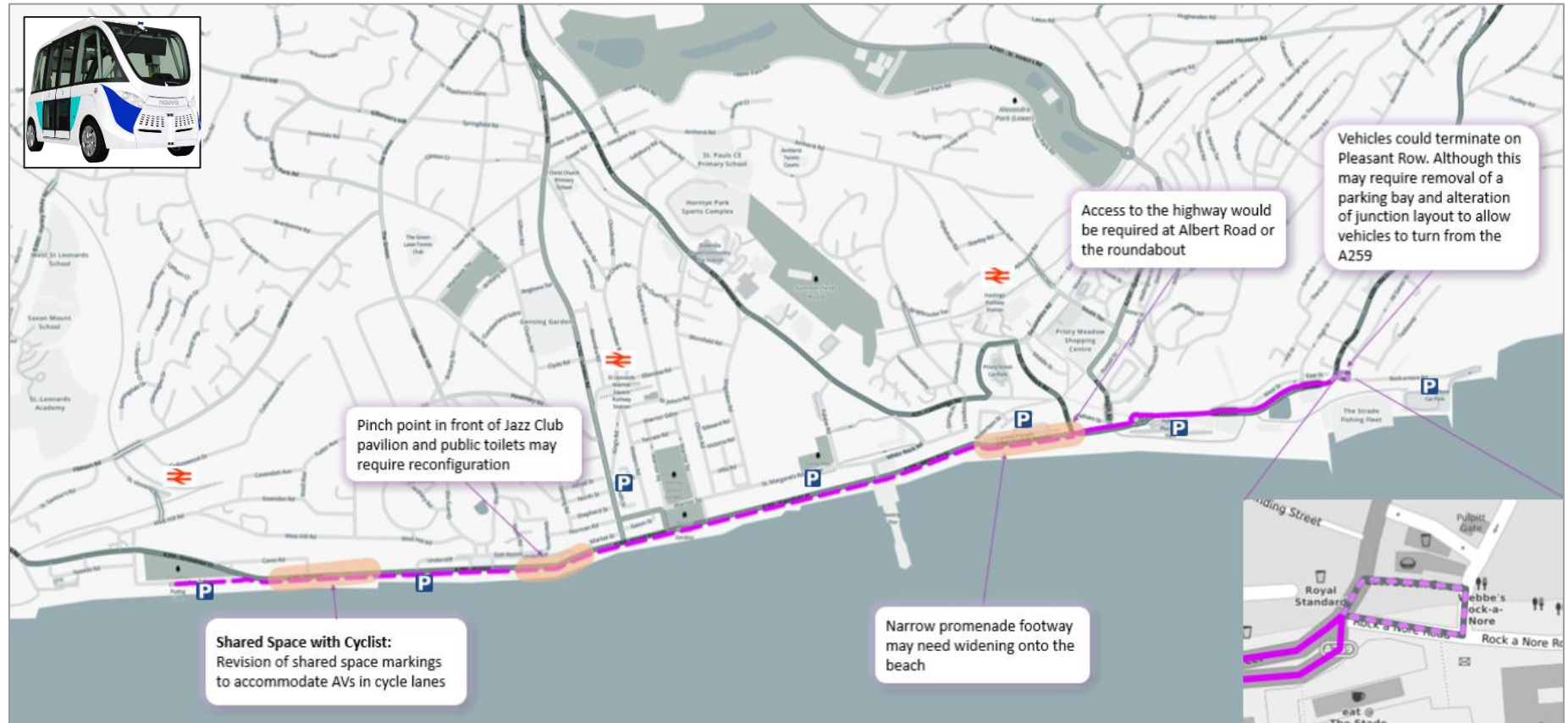
Figure 3-11: Option 4 – Mini “Tram” Proposed Route



Option 5 – Autonomous Pods

- 3.106 Advances in data science, artificial intelligence and sensing technology have increased the speed of transport innovation, particularly for autonomous vehicles. Option 5 therefore involves a fleet of autonomous pods to provide east west connectivity along the seafront, with the proposed route illustrated in Figure 3-12.
- 3.107 Examples of this technology include the Westfield POD from the Westfield Technology Group, which is currently undergoing trials in real-world environments in Bristol and London (Queen Elizabeth Olympic Park) through the Capri project, the Gacha all-weather bus by Muji, and the Navya Autonom (Arma), one of the most developed small autonomous buses. The Navya pod is a Level 4 autonomous electric shuttle bus that operates completely without a driver and in some test regions without any form of on-board operator. It has undergone extensive testing in 14 regions across multiple countries and is in some areas carrying passengers, including on public roads.
- 3.108 The intention for the pods is to mostly operate off-road at low speeds on either the promenade or in the segregated cycle lanes. While it is envisaged that this option would operate along the full length of the promenade of the seafront, it would likely be necessary for the route to move onto the highway to the east of the A259 / Albert Road junction, which may present further challenges.

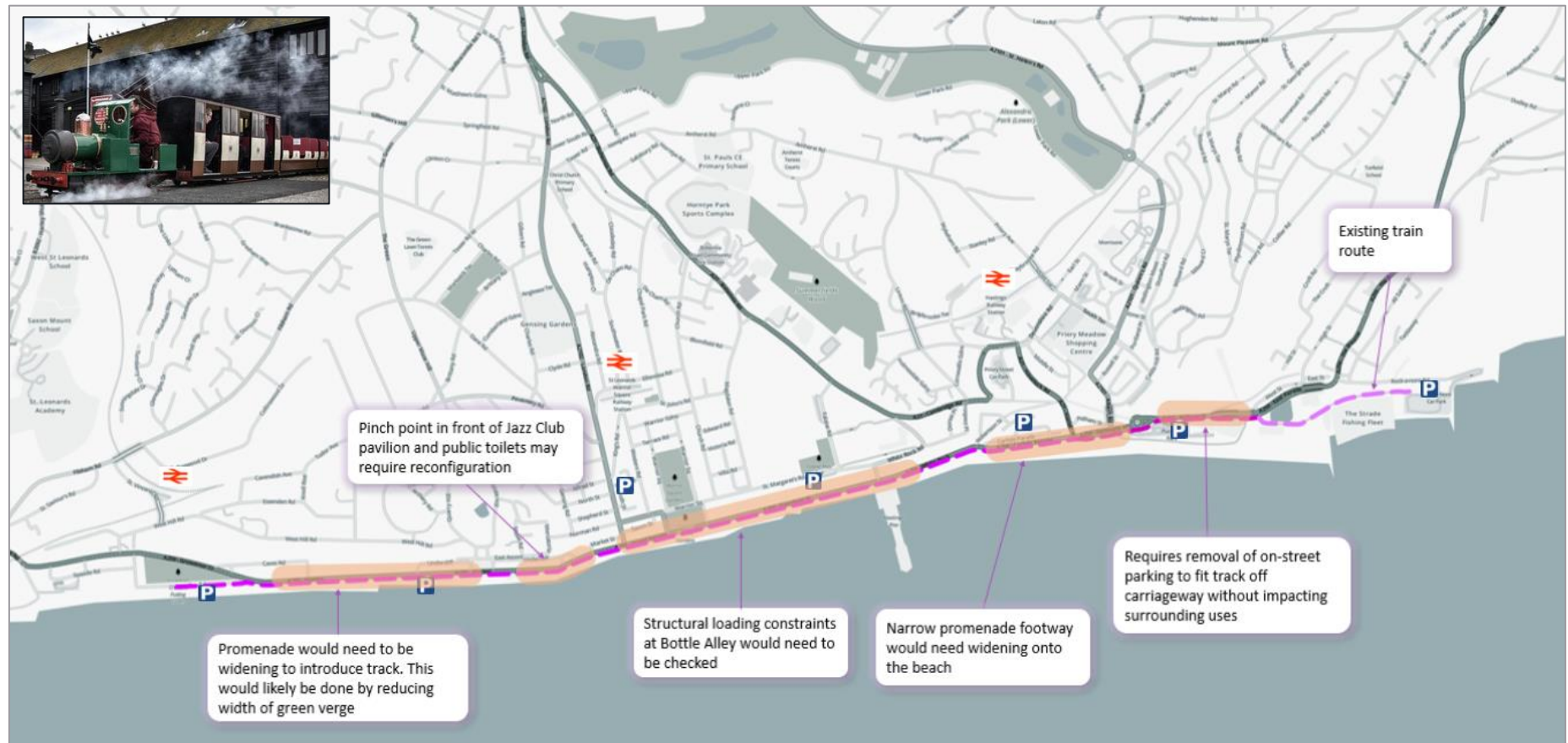
Figure 3-12: Option 5 – Autonomous Pods Proposed Routes



Option 6 – Extending Miniature Railway

- 3.109 The final option is the extension of the existing miniature railway along the seafront, running entirely off-highway. The extended route could either utilise existing vehicles or potentially a larger gauge track could be laid allowing for larger vehicles, as shown in Figure 3-13.

Figure 3-13: Option 6 – Extending Miniature Railway Proposed Route



Options Assessment Framework

- 3.110 A Multi Criteria Assessment Framework (MCAF) has been developed by adapting the DfT Early Assessment and Sifting Tool (EAST), which is a decision support tool used to quickly summarise and present evidence on options in a clear and consistent format. EAST has been designed to be consistent with Transport Business Case principles and provides decision makers with relevant, high-level, information to help them form an early view of how options perform and compare, to inform option selection. The MCAF is not intended to be used for final funding decisions.
- 3.111 The MCAF is a refined version of the EAST tool to provide a local context to Hastings and align with the scheme objectives. A Red, Amber, Green (RAG) scoring system has been implemented to qualitatively show how each option performs in each category within the five business cases. Based on conversations with Stagecoach, it is assumed that Route 66 will continue operation and therefore this option is taken as the "Do Nothing" case. For each sub-criterion, the assessment is therefore based on a differentiated system in comparison to the existing service.

Option Assessment

- 3.112 Using the assessment framework, a workshop was undertaken to examine the criteria relevant for each set of options and present initial assessments with justifications. These were interrogated, challenged and moderated for consistency by the Council and other stakeholders, before the qualitative assessment was agreed and finalised.
- 3.113 An Option Assessment Report has been developed to detail the full option assessment, with a summary of the MCAF provided in Table 3-8.

Table 3-8: Option Assessment Summary

<div> Worse than Route 66 Similar to Route 66 Better than Route 66 </div>							COMMENTS
Option	Strategic Case	Economic Case	Financial Case	Commercial Case	Management Case	OVERALL	
1. Route 66							
2. Narrow Body "Mini" Bus							This option would likely provide the best enhancement to east-west connectivity but would be expected to be limited in how attractive it was to tourist. A key issues arises in conflicting and abstracting from the Bus network operated by stagecoach. Undertaking a new service with multiple vehicles could costly and require significant investment.
3. Bi-Directional Bus							This option performs similarly to Route 66 in most categories but solves a key issue around the Eastern terminus in the old town. Although there are additional costs these could be outweighed by the benefits of this solution.
4. Mini "Tram"							Although transformative in terms of East-West connectivity. This solution is highly costly and has significant impact on the A259 and potentially risky in it's deliverability.
5. Autonomous Pods							Although there are risks to delivery as it is a relatively untested technology, it has potential to be a significant attraction for tourist and provide improvements to East-West connectivity over the current route 66 and other solutions. The use of multiple autonomous pods will incur significant costs and will need to deliver significant benefits to offset this in the Economic Case. However, there are more funding sources available to support this type solution as opposed to the other options considered.
6. Miniature Railway Extension							This solution would be highly costly and difficult to implement. The overall benefit and improvement offered by this option would be limited compared to the other options.

3.114 The options that have been shortlisted and agreed for further assessment are:

- Option 1 – Route 66 as the ‘Do Nothing’/ ‘Do Minimum’;
- Option 3 – Bi-directional bus as ‘Do Something 1’; and
- Option 5 – Autonomous pods as ‘Do Something 2’.

3.115 A summary of the system characteristics for each shortlisted option is provided in Table 3-9.

Table 3-9: Summary of System Characteristics

	Route 66 (Do Nothing)	Bi-directional bus (Do Something 1)	Autonomous pods (Do Something 2)
Vehicle Capacity	77 (seated)	90	11
Bi-directional	No	Yes	Yes
Fuel Type	Diesel	Electric	Electric
Accessibility	Wheelchair space, low floor	Wheelchair space, low floor	Wheelchair space, low floor, automatic access ramp
Length	10-12m	14.5m	4.8m
Width	2.5m	2.5m	2.1m
Weight	18+ tonnes	15+ tonnes	3.5 tonnes
System examples	Yes	Operating in Le Mont-Saint-Michel and Strasbourg	Trials currently underway in UK, although operating in other countries

Alignment with scheme objectives

3.116 The shortlisted options have been analysed in relation to the scheme objectives (i.e. strategic fit), with the RAG rating illustrated in Table 3-11. As stated above, the assessment was based on a differentiated system in comparison to the existing Route 66 service, with Red considered “worse than Route 66”, Amber “similar to Route 66” and Green “better than Route 66”. For the purposes of comparison, the following service is assumed for each option:

Table 3-10: Assumed service for each option

	Route 66 (Do Nothing)	Bi-directional bus (Do Something 1)	Autonomous pods (Do Something 2)
Route / Alignment	On-Highway	On-Highway	Off-Highway
Annual days of operation	74 (29 th May – 8 th Sep)	150 (Extended operation)	150 (Extended operation)
Operating Hours	09:30-17:30	09:30-22:30	09:30-22:30
Service frequency	Hourly	Half hourly	12 minutes
Vehicles in operation	1	1	5-10
Number of stops	15	5	15

Table 3-11: Alignment with scheme objectives

Objective	Sub-criteria	Route 66 (Do Nothing)	Bi-directional bus (Do Something 1)	Autonomous pods (Do Something 2)
Core Objective				
Improve East to West Connectivity for visitors and residents	Journey time between East and West of the seafront			
	Frequency of Service			
	Reliability of service: is the vehicle less vulnerable to disruption than current transit			
	Capacity of the vehicle			
	Resilience of the fleet (i.e. capability to maintain level of service in the event of a vehicle breaking down)			
Wider Objectives				
Fully accessible	Accessibility of vehicles for all users			
	Impact on permeability to Seafront			
Sustainable	Options for usage of alternative fuels			
	Potential to induce modal shift away from less sustainable modes			
New attraction as part of the visitor/tourist offer	The potential for solution to act as an additional draw tourist and form part of the wider tourism offer of Hastings			
Deliverability Objectives				
Acceptable to stakeholders	Impact on the current usage of the seafront/vulnerable users/cyclist			
	Impact on parking supply			
Affordable	Affordability for users			
Further considerations				
Preserve usage of the promenade	Capability to link to the train stations and wider transport network			
	Impact on the A259			
Support or compliment walking and cycling	Capability to link to areas not directly on the seafront (e.g. Bohemia)			
	Ability to carry bicycles			

Strategic Risks

- 3.117 The key strategic risks for each option have been summarised in Table 3-12 and are discussed in more details in the following cases.

Table 3-12: Key strategic risks for shortlisted options

Risk	Description
Bi-directional bus (Do Something 1)	
Commercial conflict with existing Route 66 service	A local authority cannot set up a new directly owned bus operator in competition with an incumbent
Insufficient demand to support half hourly service	The service is not commercially viable for the operator
Infrastructure improvements insufficient for a half-hourly service	Removal of bus stops and other interventions are insufficient to improve travel times and reliability along the seafront to enable a 30-minute frequency with only one vehicle.
Service has negligible impact on rebalancing the seafront	Tourism in Hastings remains centred at Rock-a-Nore, with the new service having negligible impact on rebalancing the seafront.
Autonomous pods (Do Something 2)	
Commercial conflict with existing Route 66 service	Unclear legal implications of setting up a new directly owned autonomous pod operator in competition with Stagecoach
Insufficient demand to support fleet of autonomous pods	The service is not commercially viable for the operator
Deliverability of autonomous pods	Evolving technological environment means high risk that autonomous pods (both hardware and firmware) cannot be delivered
Conflict between autonomous pods and pedestrians/cyclists	Extensive safety and operational issues with an autonomous pod service interacting with pedestrians and cyclists along the promenade
Liability implications of autonomous pod service	Unclear insurance and liability implications of autonomous vehicle technology
Service has negligible impact on rebalancing the seafront	Tourism in Hastings remains centred at Rock-a-Nore, with the new service having negligible impact on rebalancing the seafront.
Route 66 (Do Nothing)	
Existing service has negligible impact on rebalancing the seafront	Tourism in Hastings remains centred at Rock-a-Nore, with the new service having negligible impact on rebalancing the seafront.
Existing service is discontinued by Stagecoach	Route 66 service is unprofitable for Stagecoach and is discontinued

Summary

- 3.118 The Strategic Case for this scheme has been assessed by first establishing the need (and rationale) for intervention and developing options through an objective-led and evidence-based approach. With the wide-ranging project objectives, it was important to consider how the sustainable transport option aligned within local, sub-regional and national policy, especially in the context of transport, planning and business, industry and tourism. A policy matrix was developed for the purposes of pairing the policies with the themes of DESTI-SMART, inform the analysis of a need for intervention, establishing scheme specific objectives and to guide the option generation, shortlisting and assessment.

- 3.119 An appraisal of the strategic fit of the bi-directional bus, ‘Do Something 1’, has shown that minor improvement is expected in comparison to the Route 66 service for several objectives, such as improving east to west connectivity for visitors and residents (the “core objective”), accessibility and sustainability. While the bi-directional bus is considered an attractive design, it is unlikely to be more attractive to tourists than Route 66 on its design alone and is expected to have a similar impact as the Route 66 option in improving affordability. In addition, it is anticipated that the bi-directional bus will be a “worse” option in relation to the impact on the A259 and improving capacity of the vehicles.
- 3.120 In contrast, the autonomous pod option provides a considerable improvement to east to west connectivity and offers the best opportunity as a trip attractor of all the options. There are several other positives in comparison to the Route 66 service, such as being electric and fully accessible to people with limited mobility, although also several negatives. The pods will also have a smaller capacity, and therefore are expected to require 5+ vehicles depending on the proposed service frequency. The cost of running would likely mean higher fares than the existing public transport network and could create conflict with other users (e.g. cyclists and other vulnerable users) along the promenade.
- 3.121 Overall, it is anticipated that the autonomous pod option will have the most impact as a transport intervention, both positive and negative, in relation to the strategic objectives. The bi-directional bus option is expected to provide more marginal improvements, however also has less risks.

4 The Financial Case

Introduction

- 4.1 The financial case of the SOBC considers the costs and revenue associated with a project and the resultant impact on both local and central government accounts. It seeks to establish; how the capital investment in the project is funded, essentially who ultimately pays for the upfront costs of the scheme (e.g. passengers or tax payers); what sources of funding are available; and whether finance is required to cover any shortfall in funding. Any financing for this type of scheme would usually come in the form of borrowing, which generates additional amortisation costs coming from the interest paid on any loans.
- 4.2 In general, the political environment in recent years has reduced the grant funding being made available from central government and instead shifted the focus to securing funding from local sources. Because of this, and the project being a small scale, local intervention, it means that the project is unlikely to attract direct government grant funding.
- 4.3 The financial case also evaluates the on-going affordability of a project. For a transport scheme the general expectation is that on-going cost should be met by the revenue generated from fares. This should also factor in any costs associated with financing such as the repayments on borrowing. Whilst affordability is an important part of the financial case and a specific objective to this project, it should be assessed in conjunction with the Strategic and Economic Cases. An option that requires on-going revenue support may be considered acceptable if it aligns particularly well to the strategic objectives and delivers particularly good value for money.
- 4.4 This chapter will first consider the on-going affordability of the service. As part of this, consideration will also be given to the extent to which the operation of the three shortlisted options can expanded to deliver increased operating hours and a longer season of operation. Second, it will outline the potential sources of capital funding and financing that could be available for each option and how likely these are to be forthcoming.
- 4.5 Following the option generation and assessment process outlined in the Option Assessment Report, the options that have been shortlisted and agreed for further assessment are:
 - Option 1 – Route 66 as the ‘Do Nothing’/ ‘Do Minimum’;
 - Option 3 – Bi-directional bus as ‘Do Something 1’; and
 - Option 5 – Autonomous pods as ‘Do Something 2’.
- 4.6 In addition, part of the affordability assessment has been to consider the expansion on the existing Route 66 service to provide a benchmark to the other affordability of the other options.

On-going Affordability

- 4.7 To evaluate the on-going affordability of each of the shortlisted options we need to establish both the annual operating expenditure (OpEx) of running the service and the potential revenue each of the options might generate. Affordability is then assessed against the net of cost and revenue with the aim that these should either net out or generate a surplus.

Costing Methodology

- 4.8 The costs for each option have been estimated based on the following publicly available sources against the cost categories shown in Table 4-1 below.

Table 4-1: Cost categories used for operating costs

Category	Description	Base Units
Staff Costs	Driver salary costs, Pension, National Insurance and direct overheads. Most services use a one-person operation. If a conductor required, this has been estimated as adding between 60% to the staff costs.	£ per hour
Fuel & Tyre Costs	Predominately fuel costs. Tyres represent <2% of cost. For diesel vehicles this will be inclusive of BSOG. The cost fuel cost for electric buses are approximately half of diesel.	£ per kilometre
Maintenance Material Costs	This covers the costs of replacement parts.	£ per kilometre
Insurance Costs	Cost of premiums and claims.	£ per kilometre
Overheads	Depot and central office costs over each vehicle in a fleet. If a vehicle not operated as part of a wider fleet costs would be expected to be higher.	£ per peak vehicle per annum
Depreciation	Based on the spread of the purchase cost of a vehicle spread over the typical life which for a bus is normally 14 years.	£ per peak vehicle per annum

- 4.9 The costs considered are driven by either:
- total annual operational hours of all vehicles, inclusive of time traveling to/from the depot (£ per hour);
 - total annual operational kilometres of all vehicles, inclusive of distance traveling to/from the depot (£ per km); or
 - an annual cost per number of vehicles used in the peak hours of operation (£ pa).
- 4.10 To enable comparison with revenue, all costs presented have been inflated to 2019 prices. This has been done using WebTAG Retail Price Index values that have adjusted, where relevant, based on Confederation of Passenger Transport (CPT), index values.

Revenue Methodology

- 4.11 We have only considered the revenue from fares that each option could generate, excluding revenue sources such as advertising. The 'farebox' revenue that is generated is a function of the overall passenger demand that each option attracts, and the average yield each journey generates. The standard approach to forecasting farebox revenue of a new transport scheme requires a known baseline of revenue and passenger demand. A demand/ revenue model is then used to estimate the uplift in demand that the proposed scheme would generate based on the benefits, such as journey shorter times, it delivers to passengers. The revenue is then calculated from the new demand and yield.

4.12 For this study no such baseline data is available. Therefore, a top-down approach has been taken to evaluate the affordability of each option. Based on the estimated cost and yield per journey of each option, a breakeven demand can be established. This is the demand at which the revenue equals the operating costs. This is first done for the existing Route 66 operation which provides the reference level of demand. The breakeven demand for each of the other 'Do Something' options can then be qualitatively evaluated against this to understand if the required demand could realistically be achieved.

4.13 There are four scenarios that have been considered as part of the appraisal of affordability. These are:

- Existing Route 66 ('Baseline/Do Minimum')
- Route 66 Extended Operation
- Bi-directional Bus ('Do Something')
- Autonomous Pods ('Do Something')

Do Minimum – Existing Route 66 Service

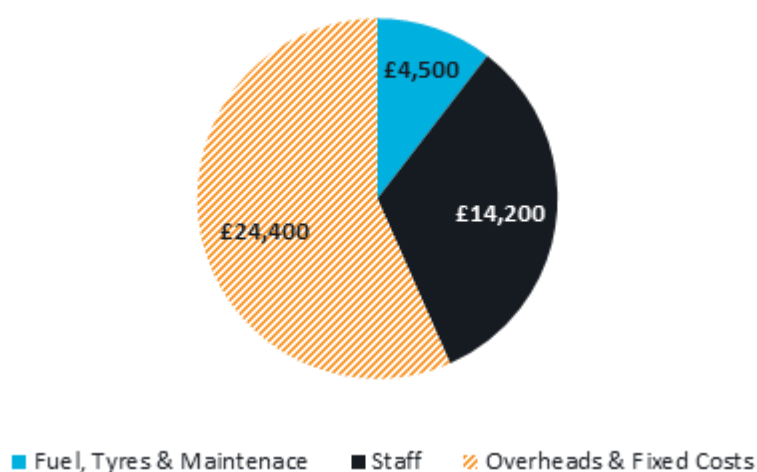
4.14 The existing Route 66 service began operating on Saturday 25th May 2019. The establishing of the Route 66 is perceived as being a test of the market by Stagecoach to understand if sufficient demand exists for such a service in Hastings to run commercially. As a result, the current service is thought to have been designed to minimise operating costs. It uses a bus which is 15 years old and therefore would have been procured at near zero costs. As a bus of this age is 'fully depreciated' it won't have any associated annual depreciation costs. The service also appears to have been timetabled as to require only a single driver shift, reducing driver costs.

4.15 Table 4-2 below outlines the full operational details of the service.

Table 4-2: Operational details of the existing Route 66 service

Vehicle	1 vehicle Euro 5 diesel engine 69-Seater
Route	Combe-Haven Holiday Park (West) to The Stade - Hastings Old Town (East) + Additional turnaround Loop via Old London Road
Operating Season	25 th May – 1 st September All week – Summer & Easter School Holidays Saturday/ Sunday/ Bank holidays – Non-school holidays 74 days (2019)
Operating times	9:30 – 17:30 1-hour driver break, 13:00 – 14:00 7 hours of operation per day

4.16 The breakdown of the estimated annual operating costs is presented in Figure 4-1 overleaf.

Figure 4-1: Estimated annual operating costs (2019 prices) based on publicly available data and Steer analysis**Route 66 - Current Estimated Annual Operating Costs**

- 4.17 The estimated total annual cost of operating the Route 66 is £43,000. Compared to the typical cost of running a bus, the staff and fuel costs are lower as a proportion of the overall cost, this is due to lower mileage and shorter season that the Route 66 services operates compared to other services. The overheads and fixed costs are based on values for a typical bus. The actual cost of these, for Stagecoach, could be less than this total depending on whether a single additional vehicle generates any material uplift in the depot and head office costs. As a result, two cost scenarios should be considered; one inclusive of all costs (£43,000) and one excludes overheads and fixed costs (£18,700).
- 4.18 To estimate breakeven demand an average yield per journey is needed. The average yield is dependent on the fare paid by different groups of passengers and the relative demand of these different groups. For passengers using the existing Route 66 service there are a variety of different ticket types available. These are summarised, along with any restriction, in Table 4-3 below.

Table 4-3: Available bus tickets for existing Route 66 service

Ticket Type	Restrictions	Ticket Value
Adult Single	Valid for a single journey	£3.40
Child Single	Valid for a single journey (5 – 15 years old)	£1.00
Adult Day Rider	Valid for unlimited trips on Stagecoach Services in Hastings & Bexhill on a specified date	£4.50
Child Day Rider	Valid for unlimited trips on Stagecoach Services in Hastings & Bexhill on a specified date	£3.20
ENTCS/ Over 60	Free concessionary travel for retirees, over 60s and people who are registered disabled.	£0

4.19

- 4.20 Only the single ticket types generate revenue for the Route 66 alone. The Dayrider tickets can be used for multiple trips on Stagecoach buses in the Hastings and Bexhill area. As a result, any revenue generated by these tickets is apportioned across all services. The yield per journey these generate is also dependent on the average number of trips taken during the course of a day using each ticket. ENTCS and Over 60's passes provided free travel to certain people. Although no on-bus revenue is generated by these, Stagecoach will receive some revenue in the form of grant payments.
- 4.21 Calculating the actual average yield per journey for the Route 66 isn't possible using the available data. The approach taken to evaluate current demand instead uses a yield range of £1.50 - £2.00 per passenger journey. The average yield per passenger journey, in England, in the financial year 2018 (2017/18) was £1.27 [Department for Transport, Bus Statistic – Table BUS0402a, 2018] and £1.42 in metropolitan areas. For Route 66 the yield would be expected to be higher as the target market for this service is tourists who would more likely to be full fare paying passengers.
- 4.22 In evaluating breakeven demand four scenarios have been tested to capture the potentially variability in cost and in yield. The scenarios and the resultant breakeven demand are provided in Table 4-4 below.

Table 4-4: Breakeven demand for existing Route 66 scenarios

Scenario	Breakeven Demand (annual passenger journeys)
Low Cost (Overhead cost reduced), High Yield (£2.00)	10,000
Low Cost, Low Yield (£1.50)	14,000
Full Cost, High Yield	24,000
Full Cost, Low Yield	31,000
Average	20,000

- 4.23 An average demand of 20,000 passenger journeys implies that on each leg of operation (i.e. travelling in one direction between each terminus) the bus would carry on average 19 passengers¹⁶ or 266 passengers per day.

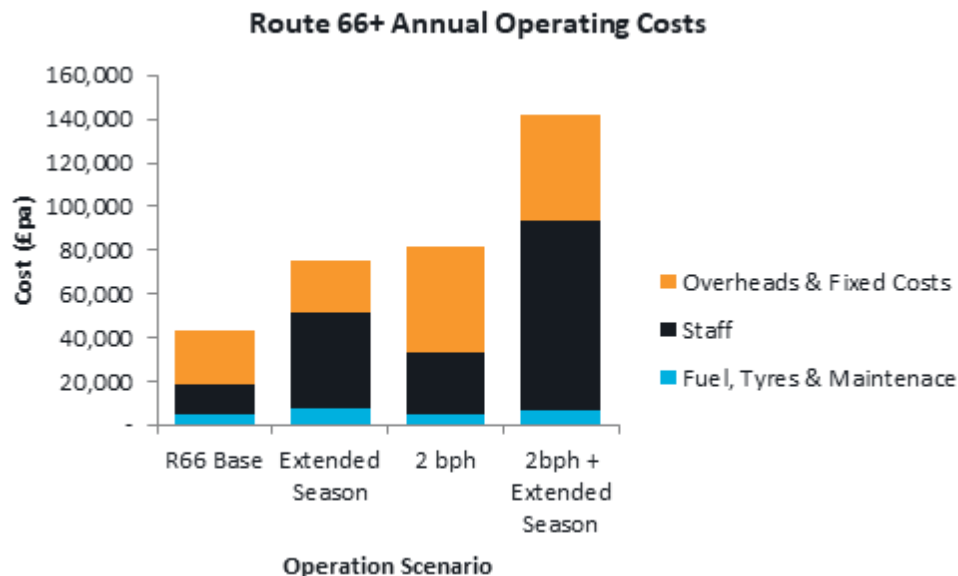
Route 66 Extended Operation

- 4.24 To evaluate the affordability of the bi-directional bus, understanding the costs and breakeven demand implications of expanding the existing Route 66 service is an important comparison to make. This also feeds into the assessment of the economic case for the bi-directional bus.
- 4.25 Two scenarios have been tested for expanding the route 66:
1. Doubling the frequency of service to two buses per hour.
 2. Extending the operating hours to 22:30 and the season to 150 days per year.

¹⁶ On each leg the bus may carry less than 19 passengers at any one time as passengers may board and alight at different times along the route.

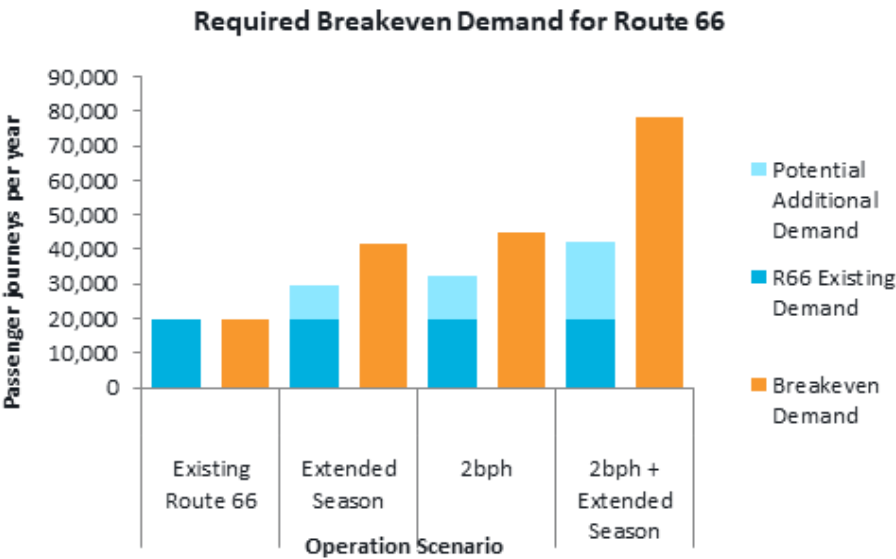
- 4.26 The doubling of service frequency has been costed using two buses. Even if Route 66 ceased to serve Combe Haven Holiday Park, the turning constraints at the eastern end of the town mean that the vehicle mean that it would not be possible to reduce the journey time per leg sufficiently to allow this frequency to be run using one bus.
- 4.27 A breakdown of the costs for each scenario is shown in Figure 4-2 below, based on publicly available data and Steer analysis.

Figure 4-2: Costs for enhanced operation of Route 66

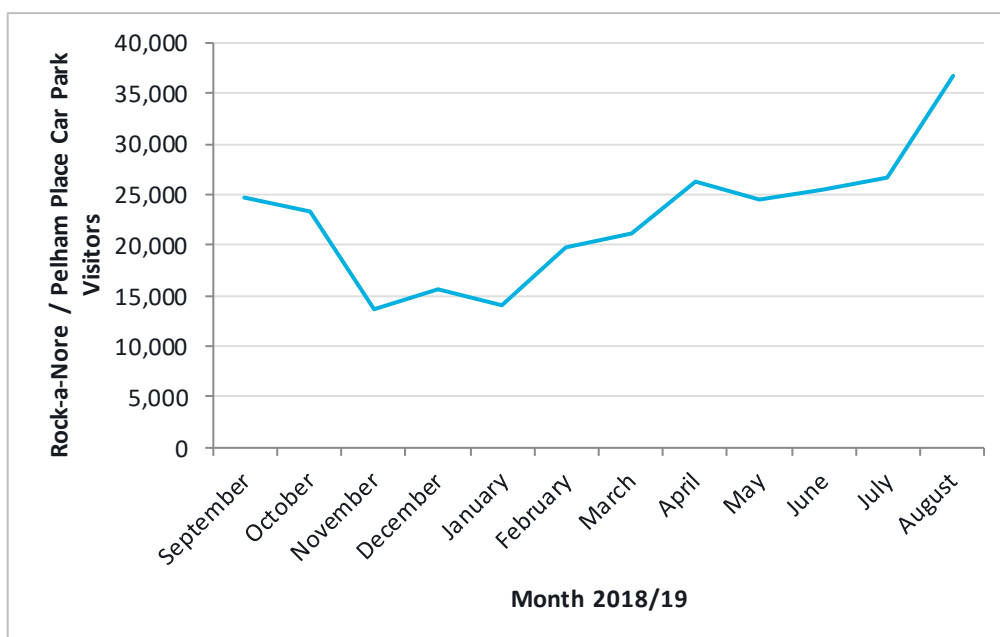


- 4.28 For the extended season the majority of the increase in costs comes from increased staff costs. The cost increase due to fuel, tyre and maintenance is small by comparison, with overheads and fixed costs not expected to vary materially. When two buses per hour (pbh) are run this increase in cost primarily comes from the increased overheads of operating two vehicles. Both extending the season and doubling the frequency approximately doubles the cost of operating the Route 66. As a result, the breakeven demand, shown in Figure 4-3 overleaf, would also be required to double and if both were implemented demand would be required to quadruple.

Figure 4-3: Breakeven demand for extended Route 66 operation scenarios



- 4.29 To put this demand uplift in context, indicative uplifts above the base demand that could be expected to occur due to enhanced operation of the service have been estimated for each scenario. For the frequency enhancement a 60% uplift in demand is shown. For the extended season a 50% uplift in demand is shown. No specific uplift has been estimated for extended hours of operation.
- 4.30 The impact of increased service frequency on passenger demand has been estimated using an elasticity approach. The 60% uplift has been calculated using elasticity values provided in “The demand for public transport: a practical guide” (Transport Research Laboratory, 2004). Whilst the actual demand response could be different to this, evidence suggests that the demand uplift, in response to increased service frequency, is greatest for bus passengers traveling at weekends. As the Route 66 primarily operates at weekends and during school holidays, where the dynamics of passenger behaviour would be expected to be similar to a weekend, it is reasonable to expect a higher demand response. The 60% uplift suggested is based on a general elasticity response for any bus service, therefore can be considered reasonable in this context.
- 4.31 The demand increase, as a result of extending the season, would not be expected to linearly increase as the operating season is extended as demand is not spread proportionately throughout the year. The car parking data from the two main carparks on the East end of Hastings Seafront, Rock-a-Nore and Pelham Place, can be used as a proxy for the variation of visitor demand over the course of the year, which will be a direct driver of Route 66 patronage. These monthly variation in parking demand is presented in Figure 4-4 overleaf.

Figure 4-4: Monthly car parking demand (2018/19) for Rock-a-Nore and Pelham Place Carparks, Hastings

- 4.32 The months with the highest levels of parking demand are from April to August, which aligns with the operating season of the Route 66, running from May to the end of August. 42% of parking demand occurs during the period of May to August. An additional 23% of the demand occurs during the months April, September and October. This represents an uplift of 66% above the period May to August. Based on this comparison a demand uplift of 50% for the extended operating season to 150 days per year seems reasonable. The remaining 31% of parking demand occurs over the rest of the year. The total relative uplift for the period September to April is therefore 140% above the period May to August.

Table 4-5: Car parking demand by monthly groups

Period	Length of period (days)	% of total demand
May to August	123	42%
April, September, October	91	23%
November to March	151	31%

- 4.33 Using the 60% (frequency impact) and 50% (extended season impact) demand uplift comparisons suggests that demand increase alone is not sufficient to support either increased frequency or an extended season for the Route 66. These service enhancements would therefore require ongoing revenue support to be brought forward. The revenue support required of doing either would be in the order of £20,000 per annum (2019 financial year prices).

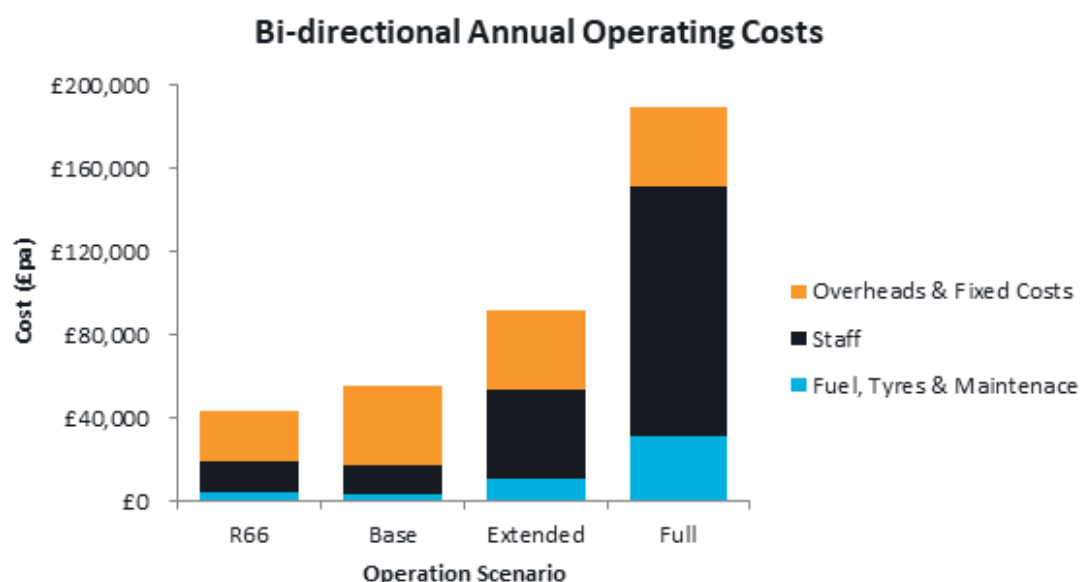
Bi-directional Bus ('Do Something 1')

4.34 The first 'Do Something' option considered is the bi-directional bus. This option has been brought forward, in part, because it provides a solution to the constrained turn around at the Eastern end of the route in Hastings Old Town. As a result, the bi-directional bus, if it doesn't serve Combe Haven Holiday Park and with some additional interventions along the route, can deliver a service every 30 minutes. In evaluating the bi-directional bus, three operational scenarios have been considered:

- route 66 baseline season (May – August, 74 days, 7 hours per day),
- extended season and hours (150 days, 13 hours per day), and
- full season and hours (360 days, 13 hours per day).

4.35 As with the Route 66 the service is assumed to use a driver only operation. The cost breakdown for these three scenarios are provided in Figure 4-5 below.

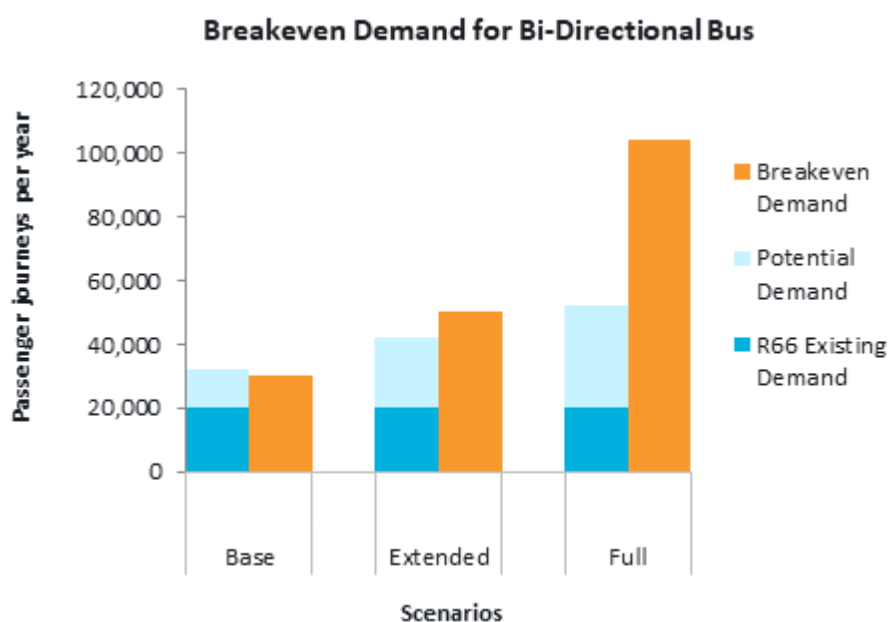
Figure 4-5: Annual operational costs for bi-directional bus for three operational scenarios



4.36 The overall baseline costs for the bi-directional bus are higher than for the Route 66. This is driven by greater overheads and fixed costs due to using a non-standard vehicle. Using such a vehicle will require specialist maintenance staff and potentially increase component costs due to greater mechanical complexity of the vehicle. There is a reduction in fuel cost as it has been assumed this vehicle would be fully electric. However, this reduction is small by comparison. The use of an electric vehicle would also generate some on-going operational costs related to the battery charging equipment used in the depot. Depreciation of the vehicle has not been included in the operating cost as the funding of the capital costs of purchase is not expected to be met by fare revenue.

4.37 As with the Route 66, extending the season and operating hours of the nearly doubles the annual operating costs which doubles again if extended to year-round operation. Again, this is primarily driven by increased staff (driver) costs.

4.38 Figure 4-6 (overleaf) presents the required breakeven demand for each of the operational scenario.

Figure 4-6: Breakeven demand for bi-directional bus operation scenarios

- 4.39 Using the 60% and 50% uplift comparisons discussed above, for frequency and extended season respectively, it appears that in the baseline operational scenario the bi-directional bus could generate sufficient farebox revenue to cover its operating costs. However, extending the season and operating hours would require on-going revenue support in the order of £16,000 and £100,000 per annum for the extended and full scenarios respectively.

Autonomous Pods ('Do Something 2')

- 4.40 The second 'Do Something' option is the use of autonomous pods along the seafront promenade. This option is markedly different to either the Route 66 or the bi-directional bus due to the size of the vehicles used, their autonomous operation and the route alignment along the promenade. Like the bi-directional bus a number of operational scenarios have been considered. As well as varying the length of the operating season, different numbers of vehicles and operating staff have also been tested. The parameters for each of the scenarios are presented in the table below. The 'full' scenario is intended to be comparable to operating either the bi-directional bus or Route 66, at a 30-minute frequency, all year round for 13 hours per day. Each pod is assumed to make one round trip of the seafront per hour.

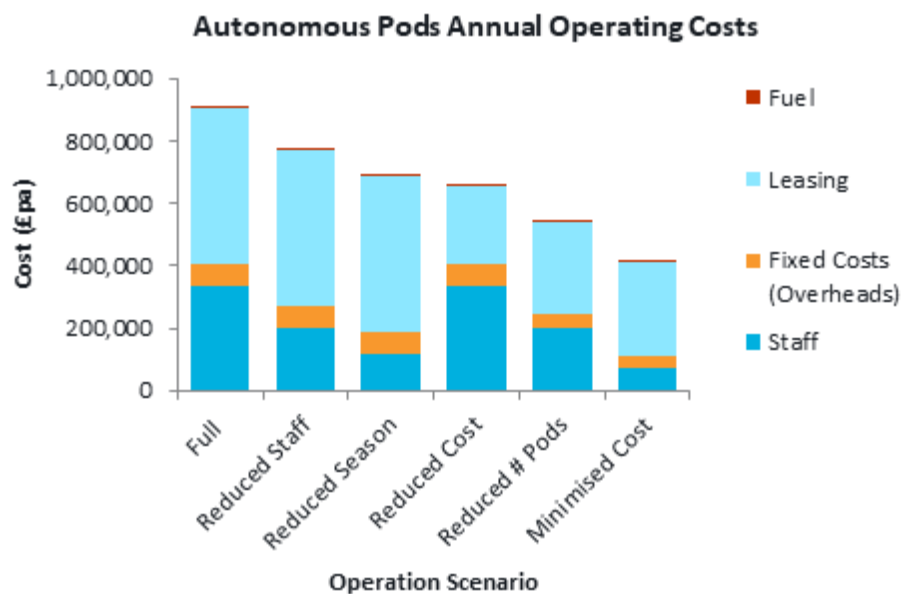
Table 4-6: Autonomous pods option operational scenarios

Scenario	# of pods	# of staff	Length of season (days)
Full	5	5	360
Reduced Staff	5	3	360
Reduced Season	5	5	150
Reduced # Pods	3	3	360
Minimised Cost	3	3	150

4.41 For the full scenario it is assumed that one conductor per pod is required to both collect fares and monitor the pods movement along the promenade, dealing with any emergency situations or operational issues. Potentially, as the technology more comes more widely adopted and people become more accustomed to using autonomous vehicles, the required number of conductors could be reduced. Rather than manning each pod individually, conductors could be placed at stops along the route. As a result, a scenario with a reduced number of conductors has been considered. Both the season that the pods operate four and the number of pods used will materially impact the costs. Therefore, the impact of reducing these has also been considered.

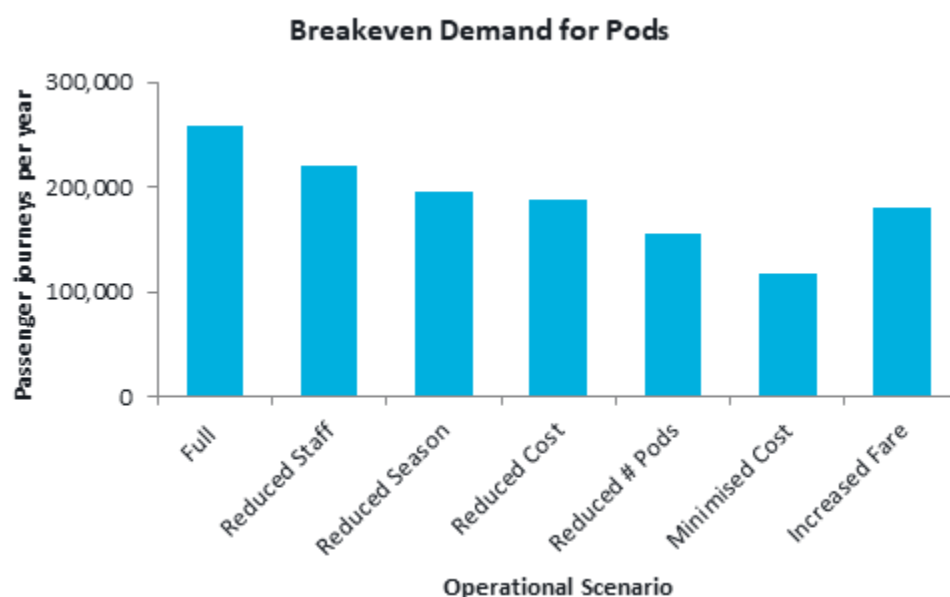
4.42 The cost breakdown for each of the five scenarios is presented in Figure 4-7 below.

Figure 4-7: Annual operational costs for autonomous pods for three operational scenarios



4.43 The main driver of the costs of autonomous pods is the costs of leasing the vehicles. Currently no vehicles on the market are available for direct purchase. The only company that has commercially leased vehicles, of the type being considered for Hastings, is Navya (Autonom Shuttle). The annual cost of leasing this vehicle £100,000 with a minimum contract period of 48 months. The leasing costs are inclusive of; maintenance, monitoring; insurance and implicitly depreciation. Whilst this cost would be expected to come down significantly, the nascent stage of development of these vehicles means that there is no certainty on the timeline. As a result, no future reductions in costs have been assumed.

4.44 The annual operating costs for the autonomous shuttles are an order of magnitude greater than either Route 66 or bi-directional bus. However, the option is also radically different, the service would be unique in the UK and would be expected to not only be a functional form of passenger transit but an attraction in itself, forming part of the visitor offer of Hastings. As a result, a more premium fare could be charged for using the service. An assumed average yield of £3.50 per passenger journey (equivalent to £5 per ticket for an adult passenger) has been used to evaluate the breakeven demand for the autonomous pods. The breakeven demand for each scenario is presented in the figure below.

Figure 4-8: Breakeven demand for autonomous pods operation scenarios

- 4.45 Even with a more premium fare the pods require a significantly greater level of patronage than the Route 66 or the bi-directional bus. However, as discussed above the autonomous pods provide a very different service to other options and would therefore attract significantly more demand. A useful benchmark for the level of patronage that the autonomous pods could attract is the number of visitors using the East Hill lift (funicular railway) which is approximately 200,000 annually. If this level of demand were achieved by the autonomous pods, they could be viable operating with a reduced season on number of pods. However, the level of demand for the reduced season also implies that the pods would need to be carrying, on average, 10 passengers per leg of the journey. Although this average is less than the capacity of the pod, as demand would not be evenly distributed, this implies that loadings greater than the capacity of the vehicle might be required to achieve this average. For the reduced number of pods the implied average demand is 6 passengers which is more likely to be achievable given the distribution of demand.
- 4.46 Although the autonomous pods can reasonably be expected to generate more demand than other options, there is a significant likelihood that the revenue generated would not cover the operational costs and therefore require on-going subsidy in order to operate.

Summary

- 4.47 Of all the options considered only the bi-directional bus, operating for the same times and season as the existing Route 66 can be reasonably expected to generate sufficient revenue to operate without the need for additional subsidy. To extend the operation of the Route 66/ bi-directional bus or bring forward the autonomous pod option, Hastings Borough Council or East Sussex County Council would have to take on the revenue risk of operating these services. The affordability of this would have to be based on available council budgets and the ability to draw in any other funding streams such as central government grants.

Project funding

- 4.48 Several funding options have been identified that have the potential to support the seafront service, whether it is the bi-directional bus, autonomous pods or an improvement to the existing Route 66 service.

National

- 4.49 As stated previously, the political environment in recent years has reduced the grant funding being made available from central government and instead shifted the focus to securing funding from local sources. While this may be the case for more traditional transport schemes, there are still opportunities for funding through several sources that focus on the delivery of sustainable transport solutions.

Office of Low Emission Vehicles

- 4.50 The Office for Low Emission Vehicles (OLEV) funds and manages a programme of industry-led research and development to support emerging technologies, such as electric and hybrid vehicles, which the UK can champion and lead globally. OLEV currently comprises people and funding from the Department for Transport (DfT) and Department for Business, Energy and Industrial Services (BEIS), and their ambition is for the UK to be at the forefront of the design and manufacturing of zero emission vehicles, and for all new cars and vans to be effectively zero emission by 2040. The following schemes have been identified to potentially support the Hastings seafront service:

- **Ultra-low Emission Bus Scheme:** available to local authorities, combined authorities or bus operators to increase the uptake of ultra-low emission buses (ULEB), speeding up the full transition to a low emission fleet throughout the UK and reducing the need for subsidy support. As part of this scheme, OLEV announced in February 2019 a £48 million investment for 263 new ultra-low emission buses and supporting infrastructure across 19 bidders, including Brighton, Wolverhampton and Newport¹⁷. Future funding through this scheme could be applicable for the bi-directional bus option, should the vehicle specifications meet OLEV requirements.
- **Workplace Charging Scheme:** available to businesses, charities and public sector organisations that can declare a need for electric vehicle charging equipment, has dedicated off-street parking for staff and/or fleets, and own the property or have consent from the landlord for charge-points to be installed at all the sites listed in the application. This scheme could be applicable for both the bi-directional bus and autonomous pod option, however it is acknowledged that this scheme will only provide minor assistance in meeting the project shortfall, as it reduces the purchase and installation cost of a new workplace charging station (single socket) by 75% and is capped at £500 per socket.

¹⁷ <https://www.gov.uk/government/news/48-million-funding-to-drive-down-bus-emissions-across-the-uk>

Centre for Connected and Autonomous Vehicles

- 4.51 The Centre for Connected and Autonomous Vehicles (CCAV) is another joint policy team between the DfT and BEIS that was established in 2015 to secure the UK's position at the forefront of connected and autonomous vehicles (CAV). Since 2014, the government has invested significantly into the research and development of CAVs, already investing £120 million in CAV projects, with a further £68 million coming from industry contributions. The team has supported over 70 projects with more than 200 partners¹⁸. Projects supported by CCAV include:
- **CAPRI:** a consortium of experienced partners from industry, academia, public sector authorities and local government, working together to deliver a complete pod on demand mobility service¹⁹. The project started in October 2017, and recently undertook public trial of pods in complex, densely populated pedestrianised routes at Queen Elizabeth Olympic Park. The consortium has received £4.2 million from the DfT and BEIS as part of the government's £100 million Intelligent Mobility Fund, and it is planned to undertake a third and final public trial of pods on a complex on-road navigational route in early 2020.
 - **Insight:** is a collaborative research and development project to upgrade an existing POD design with advanced sensors to detect and recognise pedestrians, cyclists, mobility scooters and other road users²⁰. The aim of the consortium is to ensure there is an appropriate regime for testing driverless vehicles with an emphasis on the mobility requirements of blind and visually impaired users as well as the general public. The project received £1.5 million in funding and ended in June 2019.
- 4.52 The autonomous pod option for the Hastings seafront service may provide a compelling case for funding through the CCAV with its combination of high tourist activity, seaside environment (i.e. high salinity), and mixed pedestrian and cyclist use. However, any new funding would be extremely competitive and bids with industry partners already in place are likely to be more successful. Any funding through CCAV is also expected to be for trial purposes only, due to the early stages of both software and hardware development for autonomous pod technology.
- 4.53 The CCAV most recent call for funding, pilot studies were "expected to develop and then test connected and autonomous vehicles in a real-world public or semi-controlled environment, with at least a 6-month public trial". This recent funding competition was for up to £25 million and closed in September 2018, with eligible pilot projects required to be completed by 31 March 2022²¹. It is unclear when the future funding rounds will be open.

¹⁸

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/737778/ccav-research-and-development-projects.pdf

¹⁹ <https://caprimobility.com/>

²⁰ <http://insight-cav.com/>

²¹ <https://apply-for-innovation-funding.service.gov.uk/competition/182/overview>

Department for Transport

- 4.54 In addition to the above partnerships between DfT and BEIS, the DfT has also previously allocated £90 million of capital funding to the Future Mobility Zones Fund to meet the following objectives:
- Trial new transport services, modes and models, creating a functioning marketplace for mobility that combines new and traditional modes of transport;
 - Improve integration of services;
 - Increase the availability of data; and
 - Provide access to digital planning and payment options.
- 4.55 Seven areas were shortlisted for this fund to progress to phase 2 of the competition in July 2019. However, there may be opportunity for the Hastings seafront service if future funding rounds are opened.

Zenzic (formerly MERIDIAN)

- 4.56 Zenzic is a government-backed and industry-led coordination hub for the development of connected and autonomous vehicle technology in the UK. Originally launched in 2017 under the name Meridian Mobility UK, Zenzic was created to lead the move to a safer, more inclusive and productive mobile future. The coordination hub is focussing on key areas of UK capability for the future of connected and automated mobility, particularly for the on-road environment, and may therefore be considered inappropriate for the Hastings seafront service.

Sub-regional

- 4.57 The South East Local Enterprise Partnership (LEP) is one of 38 LEP's across the country. Formed in 2011, it is a partnership between businesses, local authorities and the education sector. Its aim is to enable economic growth and job creation in the local area. The South East LEP has significant funding as part of the Growth Deal Programme, with £102.65 million recently allocated as part of Local Growth Fund (LGF) 3 in January 2017²². It may be worthwhile to engage the South East LEP about funding for the Hastings seafront service as part of the next round of LGF funding, however it is expected that the scale of this scheme will be too small, both in terms of infrastructure and jobs, to justify funding. Therefore there may be the potential to consider this scheme as part of wider infrastructure projects for the town.
- 4.58 Transport for the South East (TfSE) is a shadow sub-national transport body that was established in 2017 to grow the South East's economy through delivery of a safe, sustainable and integrated transport system. As a partnership of 16 local transport authorities, five LEPs and other stakeholders, TfSE released their Transport Strategy for consultation in October 2019, outlining a shared vision for the South East area. They are currently seeking to formalise their role as the voice for strategic transport issues in the South East by becoming a statutory sub-national transport body, which would allow them to directly influence the development of national investment programmes and become a trusted partner for government, Highways England and Network Rail. As with the South East LEP, it is anticipated that should the TfSE be granted statutory status, the Hastings seafront service will be too small a scheme to justify funding.

²² Growth Deal Round 3, February 2017, South East Local Enterprise Partnership

Local

- 4.59 For the Hastings seafront service to be delivered, it is expected that funding would need to be provided from both the Hastings Borough Council (HBC) and East Sussex County Council (ESCC).
- 4.60 The capital expenditure (CapEx) requirements outlined for both the bi-directional bus and autonomous pod are estimated at £1.8m and £8m, respectively. The bi-directional bus option is expected to be the most acceptable of the two options for ESCC due to its deliverability, lower procurement risk, and availability for funding for example through further phases of the Bexhill and Hastings Movement and Access Programme. The proposed bus priority upgrades are also expected to benefit other existing bus services along the A259.
- 4.61 As outlined in the affordability section, the use of a bespoke vehicle or autonomous vehicles by operators and associated infrastructure requirements and software platform for users is also unlikely to come forward without financial support that subsidises the operational expenditure (OpEx). The viability of this subsidy will need to be explored by HBC. While nearly half of all bus routes in England currently receive partial or complete subsidies from Councils, these subsidies are under threat with the overall funding gap throughout England expected to exceed £5 billion in 2020²³.
- 4.62 A subsidy to the operator could take the form of a direct subsidy for the service and/or purchase and leasing of the vehicle to the operator. Should this avenue be pursued, it will be important to avoid state aid issues, as outlined in the Commercial Case.

Private Sector

- 4.63 In addition to funding from local government, there is also opportunity for funding through the private sector, for example through the service operator, advertising/sponsorship, or developer contributions ('S106 agreements'). It is noted that the Hastings Borough Council does not currently have an adopted Community Infrastructure Levy (CIL) charging schedule in place.

Summary

- 4.64 There are several funding options that may be available to support the Hastings seafront service. Of these options, many will be subject to support/agreement from public or private bodies, and it will be important to consult with these bodies to help filter funding options and identify the most feasible funding strategy. A qualitative assessment of these options has been presented; however, it is recommended that further consideration of each source is undertaken as part of future work.

²³ <https://www.local.gov.uk/about/news/lga-nearly-half-all-bus-routes-under-threat-because-funding-cuts-local-government>

5 The Economic Case

Overview

- 5.1 The Economic Case establishes whether the shortlisted options represent overall *value-for-money* (whether the benefits of the scheme outweigh the costs).
- 5.2 The economic assessment is underpinned by estimates of scheme capital costs, and monetised benefits. As only an indicative assessment of operational costs and revenue has been conducted these have been excluded from the economic appraisal of each option. DfT and Green Book guidance has been used as the basis for evaluating the economic performance of each option.
- 5.3 Following the option generation and assessment process outlined in the Option Assessment Report, the options that have been shortlisted and agreed for further assessment are:
- Option 1 – Route 66 as the ‘Do Nothing’/ ‘Do Minimum’;
 - Option 3 – Bi-directional bus as ‘Do Something 1’; and
 - Option 5 – Autonomous pods as ‘Do Something 2’.

Appraisal approach and assumptions

- 5.4 A standard WebTAG appraisal would use an appraisal period of 60 years. However, whilst this period is appropriate for a large infrastructure project it is less so here. A 15-year appraisal period has been used as this is around the lifecycle of a typical bus. Beyond this there isn’t sufficient certainty that the interventions proposed as part of this study would be continued. Therefore, appraising benefits and cost for a longer period would be inappropriate. As per WebTAG guidance a 3.5% annual discount rate has been applied to benefits and costs. All costs and benefits here are presented in 2019 values.

Costs

- 5.5 Capital cost estimates have been produced for each option inclusive of the interventions required along the route, at depots and, where applicable capital cost of vehicle purchase. A breakdown of the costs for each option is provided in the tables below (Table 5-1 and Table 5-2). The cost for both options is inclusive of estimates for design fees, contingency. In line with WebTAG guidance a 66% optimism bias (OB) is applied to these costs for the purposes of the economic appraisal.

Table 5-1: Bi-directional Bus Capital Expenditure

Item	Cost (£, 2019)
Civils Works (Highway, Signals, Bus Stops)	£730,000
Depot Charging Infrastructure	£45,000
Bus Cost	£300,000
<i>Sub Total</i>	£1,075,000
Total (including 66% Optimism Bias)	£1,784,500

Table 5-2: Autonomous Pods Capital Expenditure

Item	Cost (£, 2019)
Civils Works (Highway layout, Signals, Bus Stops, Depot ²⁴)	£4,600,000
Depot Charging Infrastructure	£150,000
<i>Sub Total</i>	£4,950,000
Total (including 66% Optimism Bias)	£8,017,000

Benefits

- 5.6 The benefits of each of the two 'Do Something' options should be those which are considered additional to 'Do Minimum' i.e. the current Route 66 service. A standard WebTAG appraisal would have to consider the additionality of benefits in a UK wide context. As this scheme is not expected to be drawing directly on central government funds the geographical scope can be narrowed to consider the additionality to just Hastings. The additional benefits delivered by the proposed options include:
- Journey time benefits to passengers using the service.
 - Journey time benefits to users of other bus services travelling on the A259 (Resulting from bus-priority measure put in place as part of the bi-directional bus option).
 - Decongestion benefits as a result of modal shift to public transport.
 - Increased tourist spending as a result of more visitors to Hastings and longer visits.
 - New development being supported due to better transport links.
 - Environmental benefits (CO₂, air quality, accident reduction, noise reduction).
 - Additional CO₂ reduction due to using 'zero' emission vehicles.
 - Journey time disbenefit to non-public transport users as a result of bus priority measures.
- 5.7 Only journey time benefits to passengers using the service and additional tourist spending have been monetised as part of this appraisal. The remaining benefits are either expected to be relatively immaterial in monetary terms or challenging to reasonably attribute to any of the options.
- 5.8 The journey time benefits primarily come from an increased frequency of service plus some additional benefits due to shorter in vehicle time (IVL). There is no current evidence for bus passengers that provides specific Generalised Journey Times (GJT) values for different service intervals (frequency). The Passenger Demand Forecasting Handbook (PDFH) version 6.0, suggests that moving from a hourly to half hourly service interval improves a passengers GJT by 13 minutes for full (Anytime) and season ticket passengers or 6 minutes for reduced ticket (off-peak, advanced) passengers.
- 5.9 These values are impacted by the whether a person plans their departure or turns up at random, as well as the journey purpose. It seems reasonable to suggest that a greater proportion of bus passengers than rail passengers would be turning up at random, which would create a bias to a higher average GJT value. However, because most of the passengers using this service will be traveling for leisure purposes, the remaining proportion who have planned their departure will place a lower perceived value on the service interval, therefore biasing the GJT benefit lower.

²⁴ The costs of building a new depot on the seafront has been included as it is assumed that running pods on highway to an exist depot would not be feasible.

- 5.10 Assuming the impact of this would result in the typical GJT value per passenger being somewhere between 6 and 13 minutes for the proposed improvement to the service interval, even once the in-vehicle time (a maximum of two minutes) is included, the likelihood is that the total GJT benefit would sit between 10 to 15 minutes.
- 5.11 Due to the lack of evidence to estimate the GJT benefit, as with the financial case, a top-down approach has been used. Three indicative levels GJT benefit per passenger have been tested; 5min, 10min and 15min. The breakeven demand for each scenario is then used to calculate the total time benefit. Applied to this are WebTAG values of time (VoT) with the rule of a half being used for the benefits accrued to new passengers. As the target market for this bus is expected to be predominately visitors, the overall demand won't be directly linked to the overall population of the town or other demographic factors, therefore demand is assumed to be flat. The VoT for leisure passengers is also ubiquitously applied across all passengers.
- 5.12 An appraisal of additional tourist spending has only been conducted for the Autonomous Pod option. Whilst the bi-directional bus may generate some additional visitors the number is expected to be marginal. On the other hand, autonomous pods are still a very novel concept and would be a unique attraction for seaside resorts in both in the UK and Europe. As a result, it is reasonable to expect a material uplift in visitors would occur.
- 5.13 The additional visitor spending has been assessed on the basis of an uplift in visitor days with an associated average spending per additional day. A daily spend per visitor of £75 has been calculated based on the total revenue and visitor numbers provided in the report "The Economic Impacts of Tourism on Hasting Borough" (Tourism South East, 2017). The uplift in visitors has again been assessed through a top-down scenario approach. A 0.1% and 0.15% increase in visitor days has been evaluated. The table below provides context for what this uplift means in the context of the number of people visiting Hastings annually.

Table 5-3: Impact of uplift on visitor days and numbers

Annual Visitor Demand	0.1% Uplift	0.15% Uplift
4.6m Visitor Days	+ 4.6k day	+ 7k days
3.8m Visitors	+ 3.3k day visitors	+ 5K day visitors
- 3.3m day visitors	+ 500 overnight visitors	+ 750 overnight visitors
- 0.5m overnight visitors		

- 5.14 In comparison to the total number of visitors to Hastings, the tested scenarios present a modest uplift and therefore a robust estimation of what is realistic in terms of additional visitors.

Appraisal Results

Bi-directional bus

- 5.15 The passenger journey time benefits for the tested bi-directional bus scenarios are presented in the table below. For each scenario the baseline number of existing passenger journeys (pax) is 20,000, taken from the financial case.

Table 5-4: Total monetised Generalised Journey Time benefit for bi-directional bus over appraisal period

GJT Benefit	Benefit (£m)	
	Annual Pax = 30,000	Annual Pax = 100,000
5 mins	£0.2m	£0.4m
10 mins	£0.3m	£0.7m
15 mins	£0.4m	£1.1m

- 5.16 Based on a cost of £1.8m the benefit cost ratio of the bi-directional bus, considering capital costs alone, is in the range 0.1 to 0.6.
- 5.17 From the affordability analysis conducted in the financial case, it is very likely that any of the options would require on going subsidy. This additional cost would further erode the BCR. As a result, the likely BCR would be much less than 0.6.

Autonomous Pods

- 5.18 The passenger journey time benefits for the tested autonomous pods scenarios are presented in the table below. For each scenario the baseline number of existing passenger journeys (pax) is 20,000, taken from the financial case.

Table 5-5: Total monetised Generalised Journey Time benefit for autonomous pods over appraisal period

GJT Benefit	Benefit (£m)	
	Annual Pax = 120,000	Annual Pax = 200,000
5 mins	£0.4m	£0.6m
10 mins	£0.8m	£1.3m
15 mins	£1.2m	£2.0m

- 5.19 The benefit, over the appraisal period for the additional visitor spending is estimated to be:
- At 0.1% Uplift - £4m
 - At 0.15% Uplift - £6m
- 5.20 The range of estimated benefit delivered by the autonomous pods is therefore £4.4m to £8m, delivering a BCR in the range of 0.6 to 1.0. As for the bi-directional bus, the final BCR, if on-going subsidy is included, would likely be significantly lower.

Conclusions

- 5.21 Because all the options are expected to almost only serve leisure passengers the benefits from reduced journey times are relatively small. For the autonomous pods option, the benefits due to visitor spending are estimated to be significantly greater. However, overall for the benefits which can be monetised, neither scheme delivers a strong value for money case.
- 5.22 Of the un-monetised benefits, the benefits accrued through supporting new development could be deemed to be significant. The benefits associated with development occur due to the land value uplift when a site moves from a less valuable to more valuable use. Using standard appraisal mechanisms to attribute land value uplift benefits to a scheme, the development in question has to be shown to be dependent on that scheme i.e. the development would not occur without the scheme in place. For the options considered here this dependency cannot be demonstrated and there isn't a methodology for assessing only tangential support.

6 The Commercial Case

Overview

- 6.1 The Commercial Case should ensure that the Promoting Authority is able to oversee the delivery of the project and the output specification, in terms of quality, service level and performance, and hence ensure the scheme delivers the transport benefits and wider outcomes envisaged and meets its overall objectives.
- 6.2 The delivery of a successful project is dependent on its commercial viability. The transport intervention should therefore be delivered in a way that: allocates risk appropriately across contracts; incentivises the intended outcomes in terms of performance, efficiency and innovation; facilitates the delivery of the project to time and budget; and secures the targeted economic, social and environmental benefits of the project as discussed with stakeholders and agreed with decision makers.
- 6.3 At this stage of the project, it is only possible to provide a very high-level view of the Commercial Case.

Approach

- 6.4 The Hastings seafront scheme is expected to be promoted by East Sussex County Council as the Highway and Transport Authority for Hastings, with the support of Hastings Borough Council as the local authority. A wide range of other stakeholders would need to support the project.
- 6.5 It is too early in the project to define a firm procurement strategy; however depending on when any funding is secured, it is likely that East Sussex Highways, the Highways Contract Joint Venture, will develop and deliver the infrastructure elements on behalf of the East Sussex County Council, similarly to the Bexhill and Hastings Movement and Access Programme. Specific procurement issues for the operation of each option are provided below.

Bi-directional bus

- 6.6 Current legislation specifies that a local authority (whether transport or not) cannot set up a new directly owned bus operator in competition with an existing provider if it “has or is likely to have a significantly adverse effect on competition”²⁵. For the operation of the bi-directional bus service, it will therefore be most efficient if the existing bus operator, Stagecoach, was contracted to provide the seafront service, with East Sussex County Council retaining the responsibility for maintaining on-street infrastructure.

²⁵ Transport Act 1985, Schedule 10 para. 2, with Local Transport Act 2008 amendments

- 6.7 As discussed in the Financial Case, it is expected that the bi-directional bus option may require support from local government to be commercially viable. This raises potential issues relating to State Aid, which is defined as financial assistance given by the government to companies or other organisations that has the potential to distort market competition. It is expected that if the authority purchases a bespoke bi-directional bus and leases it to an operator for a commercial service, the lease will need to be to full commercial value to avoid state aid issues. This will require further investigation to ensure the East Sussex County Council and Hastings Borough Council are compliant with the state aid rules, and could potentially impact funding from other funding sources, such as the Office for Low Emission Vehicle's Workplace Charging Scheme²⁶.

Autonomous pod

- 6.8 There is no autonomous pod service that is currently available for commercial operation, both from a hardware (vehicle) and software (on-demand platform) perspective. While the government has invested significantly into the research and development of connected and autonomous vehicles, for example through the Centre for Connected and Autonomous Vehicles (CCAV) support to the Capri and Insight projects, the technology is still in pilot phase. Recent discussions with technology platform developers specialising in on-demand travel have confirmed that these systems are not currently for purchase, although one stated that their system could be commercially operational by 2021. There is therefore a high procurement risk for the autonomous pod option with an unclear timeline for delivery.
- 6.9 In addition to the procurement issues, there are also liability implications of connected and autonomous vehicles that are not yet established in law, specifically regarding providing accident victims with compensation. This is expected to progress further when other CAV systems become commercially operational.
- 6.10 As outlined in the Financial Case, an autonomous pod service in Hastings may provide a compelling case as a pilot program with its combination of high tourist activity, seaside environment (i.e. high salinity), and mixed pedestrian and cyclist use, and does have promotion opportunity with the potential to position an operator at the forefront of developments in transport. However, a trial only will clearly not deliver the long-term ambitions for the Hastings seafront. Should a pilot programme be progressed along the Hastings seafront, the trial should be in accordance with the Code of Practice: Automated Vehicle Trialling document released by CCAV in February 2019.

²⁶

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/793669/workplace-charging-scheme-guidance.pdf

7 The Management Case

Overview

- 7.1 The purpose of the Management Case is to demonstrate that the transport intervention option can be delivered successfully. At the SOBC stage, the purpose of the Management Case is to describe:
- How the Sponsors will manage the risks in the design, build, funding and operational phases of the scheme and put in place contingency plans;
 - How the Sponsors will deal with inevitable business and service change in a controlled environment; and
 - How the Sponsor will ensure that the scheme's objectives will be met, how its anticipated outcomes will be delivered, and how its benefits will be evaluated.
- 7.2 As with the Commercial Case, it is only possible to provide a high-level view of the Management Case at this stage of the project. With no clear scheme to progress, this Case is indicative of how a seafront service could be delivered. The Management Case would be completed more fully during the intermediate (Outline Business Case) and final stages of a proposal's development culminating with the Full Business Case.

Project governance

- 7.3 East Sussex County Council would be the likely promoter of a seafront scheme if progressed, working with key stakeholders such as Hastings Borough Council and Stagecoach.
- 7.4 It is anticipated that the governance structure would be divided into three key elements;
- Financial Management
 - Programme and Project Management
 - Programme Scheme Delivery.
- 7.5 These elements would be linked to ensure that a robust framework is in place to undertake financial monitoring, management of risks, any programme dependencies, alongside available resource to deliver the programme.
- 7.6 As part of the scheme development, key resources would be identified within ESCC, East Sussex Highways and Hastings Borough Council to ensure that the programme will be delivered.

Indicative Delivery Programme

- 7.7 Should a seafront scheme be progressed, an indicative delivery programme is outlined in Table 7-1 below.

Table 7-1: Indicative Delivery Programme

Task	Date
Confirmation of preferred option	Early 2020
Refinement of business case	Early 2020
Public Consultation	Mid 2020
Outline funding agreements	Late 2020
Development of full business case	Late 2020
Outline of design	Late 2020
Further public and stakeholder consultation	2021
ESCC decision to proceed with the project	2021
Start of Consents process	2021
Consent obtained	2021
Design and Construct tender process	2021
Detailed design	2021/22
Construction phase	2022/23
Testing and Commissioning	2023
Scheme Opening	2023

Risk management strategy

- 7.8 Project risk would be managed in line with the risk management strategies developed by the organisations involved in the development and delivery of the Hastings seafront service. Risks would be clearly articulated with timescales attached to them and an accountable officer assigned to manage them. A risk register would be developed and maintained, to then be reviewed on an on-going basis by the Project Board. It would be important to undertake early mitigation measures to reduce the likelihood of these risks.
- 7.9 As detailed in the previous Cases, the overarching key risks associated with the seafront service are in relation to the delivery timescales for either vehicle option. The bi-directional bus clearly has a lower risk profile than the autonomous pods option.
- 7.10 A detailed Risk Management Strategy would be developed if the scheme progresses to the next stage.

Change management and cost control

- 7.11 A formal Change process would be described as the scheme progresses. This is expected to outline that any significant change to the Sponsor's Requirements will be reviewed and agreed by the Project Board when the full implications of the change (including impact on time, costs, quality and benefits) is understood. This process would also set out tolerances for variations in the Sponsor's Requirements and describe when and how variances should be reported to the Project Board.

- 7.12 The ESCC and HBC would be expected to put in place an oversight regime for the project to manage its costs. This would include:
- Cost control procedures and respective roles and responsibilities;
 - Cost management process which sets out the format and standards by which the project costs will be measured, reported and controlled;
 - Management reporting and controls, which will ensure the senior responsible officer (SRO) has visibility of project costs and exposure against risk limits (along with agreed trigger points where intervention or escalation is needed); and
 - Project board oversight of the plan against the cost programme, the budget envelope and levels of risk exposure, which could be formalised through the creation of a Cost and Risk Group or Sub-Committee.
- 7.13 The end-to-end cost management process would cover the full process from the setting of initial requirements at the project level through to the monthly performance management and payment cycle at contract level. This would ensure that every opportunity to optimise costs is taken at the appropriate time throughout the project lifecycle.

Communications and stakeholder engagement

- 7.14 The project is expected to require careful management of regional and local stakeholders to ensure that all perspectives are listened to, understood, and where appropriate and feasible, actioned. The overall engagement strategy is expected to be based on a clear explanation of, and rationale for, the seafront service, and its roles within the Hastings transport network.
- 7.15 The key stakeholders for the Hastings seafront service, and how they have been engaged as this study progresses, are summarised in Table 7-2 below.

Table 7-2: Stakeholder Groupings

Category	Stakeholder Groups	Engagement Method
Category A: Local Government	Hastings Borough Council East Sussex County Council	Partnership via meetings / workshops
Category B: Central Government	MP DfT	Participation via reports
Category C: Operators, Businesses and civil society groups	Interreg Europe Stagecoach Hastings & Rother Disability Forum (HRDF) / Greenway Hastings Pier Hastings Business Improvement District (BID) Groundwork South	Consultation via meetings / workshops, written correspondence or telephone
Category D: DESTI-SMART	European Union Interreg Europe Other European Partners	Partnership via meetings / workshops
Category E: Public	Residents / Public	N/A

- 7.16 Considerable engagement has already been undertaken to identify viable options along the Hastings seafront, as detailed in the Strategic Case.
- 7.17 A detailed proposal for future stakeholder and public engagement would be developed as the scheme progresses. A strong existing working relationship through an existing and effective engagement framework will support the timely delivery of the programme.

Evidence of similar projects

- 7.18 The East Sussex County Council Strategic Economic Infrastructure team has extensive experience in managing multi-million-pound programmes of local transport improvement schemes, such as the schemes identified in the Bexhill and Hastings Movement and Access Programme.
- 7.19 The implementation of a bespoke public transport service to be run by a private operator has not recently been undertaken by the East Sussex County Council or Hastings Borough Council. However, there are clear examples of services similar to the bi-directional bus throughout the UK and Europe, such as the Dotto Train operated by Stagecoach in Eastbourne and the Alstom electric Aptis operating in Strasbourg, and the lessons learnt from these projects will be investigated as this scheme progresses.
- 7.20 As outlined in the Commercial Case, there are no similar projects for autonomous pod services due to the technology not currently being available for commercial operations.

Benefits management

- 7.21 The Hastings seafront service is expected to provide a range of benefits that would align with the DESTI-SMART objectives. As described in the Strategic Case, the scheme objectives are to:
- Improve east to west connectivity for visitors and residents;
 - Provide a service that is fully accessible, sustainable and a new attraction as part of the visitor/tourist offer;
 - Ensure the service is acceptable to stakeholders and affordable (i.e. deliverable); and
 - Preserve usage of the promenade will supporting/complimenting walking and cycling.
- 7.22 Benefits management is intended to ensure that the Project Board remains focussed on delivering the benefits identified in the business cases. The proposed approach would therefore be designed to support the realisation of the benefits specific to the Hastings seafront service.
- 7.23 To ensure the intended benefits are fully delivered, lessons learnt from similar project would be used to inform the project, particularly to inform the way in which the project should be structured. The ESCC and HBC would be expected to develop a strategy for benefits management, which, in keeping with best practice, would be based on the following five principles:
- Accountability follows funding – those funding the benefits will be accountable for their realisation;
 - Benefits-led decisions - decision making will be expected to optimise overall benefits from the seafront service;
 - Continuous improvement – the project team will continuously strive to find additional benefits;
 - Benefits-led performance - the realisation of benefits will be at the heart of performance management; and
 - Monitored regularly - best in class integrated benefits reporting will help accountable and responsible parties realise benefits.
- 7.24 There is a considerable overlap between benefits and evaluation. It would therefore be important to ensure work on benefits and evaluation is aligned. Further details about the approach to benefits management would be provided in the OBC.

8 Conclusions

Summary

- 8.1 This Strategic Outline Business Case has examined the case for two options for a Hastings seafront service; a bi-directional bus and autonomous pod service. These options were selected following an option identification, development and assessment as part of the DESTI-SMART project.
- 8.2 A summary of each options alignment to the five cases is provided in Table 8-1.

Table 8-1: Strategic Outline Business Case summary

	Bi-directional bus	Autonomous pod
Strategic	Minor improvement in comparison to the Route 66 service for strategic fit.	Most impact as a transport intervention, both positive and negative, in relation to the strategic objectives.
Financial	Potential for on-going costs to be met by the revenue generated from fares. Several funding options may be available.	Unlikely that on-going costs will be met by revenue generated from fares. Funding options available for pilots.
Economic	Poor economic case with quantified travel time, although several benefits unquantified (e.g. development, wider travel time impacts and environmental impacts).	Relatively stronger economic case, although highly dependent on benefit delivered by increased tourist spending.
Commercial	If support from local government required to be commercially viable, potential issues relating to State Aid.	No autonomous pod service that is currently available for commercial operation, as well as liability implications.
Management	Strong management case, although no similar project for bespoke public transport service by ESCC or HBC.	Marginal management case as no similar projects for autonomous pod services for commercial operation.

- 8.3 The above findings were presented to a final stakeholder workshop in October 2019, with the intention to receive feedback for each shortlisted option. The breakout sessions identified the following key points:
- Either seafront service would likely not alleviate congestion and parking capacity issues at Rock-a-Nore on busy weekends, however would promote parking in the west;
 - Existing Route 66 service was popular over summer and received good feedback from users, however according to Stagecoach made a loss even with significant advertising. Also noted that the service was heavily weather dependent and had high loading and unloading time due to high proportion of tourist users;

- Queries whether there was opportunity to further refine the existing Route 66 service, for example by investigating further in a turnaround at Rock-a-Nore, although noted that any impact to Winkle Island would be “sacrilegious”;
- Question on whether wider highway network improvements that reduce reliance on the A259 could open opportunity for A259 to be allocated to public transport and emergency services only, and what impact this would have on either option;
- Concern over excluding Combe Haven from either seafront service option, as “big player” on Route 66 service;
- For the bi-directional bus, general agreement that this was most deliverable, although expected that assistance (e.g. “Happy Harold” helpers) would be required at each end to improve access/egress times;
- For autonomous pod service, generally scepticism over deliverability, as well as operational issues such as disruption to the service by pedestrians and cyclists, whether intentionally or unintentionally. However, also positive feedback about opportunity for the future.

8.4 This feedback clearly shows there is further opportunity to investigate and refine an improved public transport service along the Hastings seafront, whether in the form of a bi-directional bus, autonomous pod service or improvement to the existing Route 66 service. There are clearly risks for each option, particularly in relation to future financial burden, however further investigation will provide greater certainty to the Hastings Borough Council and East Sussex County Council to progress an option and help achieve the vision for the Hastings Seafront.

Next steps

8.5 Before progressing to Phase Two of the Transport Business Case, it is recommended the following actions are undertaken:

- Undertake further liaison with Stagecoach regarding their appetite for a bespoke public transport option for the Hastings seafront (e.g. bi-directional bus);
- Investigate opportunities to further refine the existing Route 66 service, for example by implementing a more efficient turnaround facility at Rock-a-Nore, and the likely impact of excluding Coombe Haven from a refined route;
- Further investigate funding options as many will be subject to support/agreement from public or private bodies, and it will be important to consult with these bodies to help filter funding options and identify the most feasible funding strategy; and
- Investigate the possibility of wider highway network improvements that reduce reliance on the seafront allowing the A259 to be allocated greater access for public transport and emergency services only, alongside retaining and improving access for people walking and cycling, and what impact this would have on seafront service options.

Control Information

Prepared by

Steer
28-32 Upper Ground
London SE1 9PD
+44 20 7910 5000
www.steergroup.com

Prepared for

Hastings Borough Council
Muriel Matters House
Breeds Place
Hastings TN34 3UY

Steer project/proposal number

23612701

Client contract/project number

208150

Author/originator

EWI/TBO

Reviewer/approver

SGB/TWH

Other contributors

MNO/NAM/ASW/MRC/HTT/RGG

Distribution

Client: Hastings Borough Council Steer: Project Team

Version control/issue number

v0.9 – Draft for review
v1.0 – Draft issued to client
v2.0 – Final version for review
v2.1 – Final version submitted to client

Date

10/11/19
15/11/19
22/11/19
22/11/19

