

Eastbourne Local Plan Shared Transport Evidence Base (STEB): Interim Assessment and Mitigation Strategy (Transport Note 001)

Prepared for
ESCC & EBC

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A partnership between:

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Document Issue

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Acronyms and Abbreviations

ASL	Advanced Stop Line
BHCC	Brighton & Hove City Council
BRT	Bus Rapid Transit
BSIP	Bus Service Improvement Plan
B2C	Business-to consumer
C2X	Consumer-to-all-parties
CIHT	Chartered Institution of Highways & Transportation
CIL	Community Infrastructure Levy
CREATE	Congestion Reduction in Europe: Advancing Transport Efficiency
DDRT	Digitally Demand Responsive Transport
DfT	Department for Transport
DoS	Degree of Saturation
EA	Environment Agency
EBC	Eastbourne Borough Council
ESCC	East Sussex County Council
ESCWTM	East Sussex Countywide Transport Model / "Countywide Model"
ESH	East Sussex Highways
EV	Electric Vehicle
GPS	Global Positioning Satellite
HIF	Housing Infrastructure Fund
HPE MAC	Hailsham - Polegate - Eastbourne Movement & Access Corridor
IDP	Infrastructure Delivery Plan
JTW	Journey to Work
LCWIP	Local Cycling and Walking Infrastructure Plans
LGF	Local Growth Fund
LGV	Light Goods Vehicle
LP	Local Plan
LPA	Local Planning Authority
LSOA	Lower Super Output Area
LSTF	Local Sustainable Travel Fund
LTA	Local Transport Authority
LTP	Local Transport Plan
MASHH	Movement and Access Strategy for Hailsham and Hellingly
MEH	Major Economic Hub
MRN	Major Road Network
MSOA	Middle Layer Super Output Area
NCN	National Cycle Network
NH	National Highways / Formerly HE - Highways England
NPPF	National Planning Policy Framework
NPS	National Policy Statement
NTS	National Transport Statistics
PCT	Propensity to Cycle Tool
PRC	Practical Reserve Capacity
PT	Public Transport

QBP / QBC	Quality Bus Partnership / Quality Bus Corridor
RIS	Road Investment Strategy
RTPI	Royal Town Planning Institute
SELEP	South East Local Enterprise Partnership
SEP	Strategic Economic Plan
SOBC	Strategic Outline Business Case
SRN	Strategic Road Network
STEB	Shared Transport Evidence Base
STA	Sustainable Transport Audit
STT	Sustainable Travel Town
SVD	Select Vehicle Detection
SWETS	South Wealden and Eastbourne Transport Study
TC	Town Centre
TN	Transport Note
TfSE	Transport for the South East
TfWM	Transport for West Midlands
TRICS	Trip Rate Information Computer System
UCL	University College London
VOC	Volume Over Capacity
WLPTS	Wealden Local Plan Transport Study
ZED	Zero Energy Development

Executive Summary

Purpose of this Transport Note

Eastbourne Borough Council (EBC) is preparing a new Local Plan as a framework for future development up to 2039. The Council are assessing potential spatial options, prior to consulting on a Preferred Option through Regulation 18, and starting to prepare the supporting evidence base.

The likely transport impacts of future growth will be one of the key considerations of the acceptability of the Local Plan and the Council have undertaken an early assessment of the likely impacts on the transport network and potential need for mitigation. The assessment makes use of an interim high-level spreadsheet-based modelling tool, as an initial step, and in advance of using the recently developed East Sussex Countywide Transport Model (ESCWTM / “countywide model”), which will be used to create a detailed Shared Transport Evidence Base (STEB) to assess future growth and the transport impacts of all emerging Local Plans in the county. This Transport Note (TN-001) sets out the outcomes of the early analysis for the latest Eastbourne options and provides initial sensitivity testing of the cumulative cross-boundary growth across the county.

Local Plan context

Any Local Plan is expected to mitigate the severe impacts of new development on the transport system, however, the wider policy agenda looks beyond this expectation and identifies the need to deliver a decarbonised, sustainable transport system and healthy, inclusive and high-quality places. The Council have a proposed vision, and the following objectives, to respond to the key transport themes in the borough, as well as other planning considerations:

Carbon Neutrality	make Eastbourne a carbon neutral town by 2030
Prosperous Economy	maximising limited land availability for employment space
Quality Environment	preserve and enhance Eastbourne's historic environment and landscape
Thriving Communities	healthy, safe and access to opportunities
Housing and Development	delivering new safe, secure and affordable homes
Effective Infrastructure	funding and providing the infrastructure needed

The high level of car ownership and car travel, coupled with gaps in sustainable transport infrastructure, are key challenges within the borough and connectivity with the wider functional geography. The existing scheme pipeline seeks to address some of these issues through existing strategies, e.g. Local Cycle & Walking Infrastructure Plan (LCWIP) and Bus Service Improvement Plan (BSIP), but funding is a key constraint and more will need to be done to support their delivery, as well as any additional mitigation.

The Plan-making process provides an opportunity to plan for people and places, through a decarbonised and sustainable transport system, rather than rely on planning for unconstrained traffic growth. At this stage, two potential spatial options have been assessed, which could deliver:

Option 1	3,352 houses and 95,625 sqm employment / retail / other floorspace
Option 2	5,679 houses and 70,875 sqm employment / retail / other floorspace

Transport impacts of Eastbourne Local Plan options

The two options have been assessed, alongside existing and future baseline scenarios, using the interim STEB spreadsheet-based highway assignment tool to understand the current and likely future impact on the highway network in the weekday AM and PM peak hours. Local Plan Option 1 could generate up to 2,845 additional development related vehicle trips and Option 2 an additional 3,439 vehicles on the network.

Option 2 will have the greater overall impact on the network as a whole, particularly on the A2021 / A2270 corridor, the central part of the A259 corridor, the A27 towards the west and A22 to the north. Option 1 will have a marginally higher net impact in certain directions on the A2290 and the eastern end of the A259 corridor due to a higher level of potential employment floorspace at Southbourne and Sovereign Harbour. The potential sites generating the highest level of vehicle trips include:

- Employment and retail development in the Southbourne and Sovereign Harbour areas, which could be attracting longer distance trips across the network
- Over a third of housing is allocated as uncertain Windfall, predominantly in the town centre area and to a greater extent in Option 2, impacting on the A259, A2021 and A2270 corridors
- Housing and mixed-use sites located on the A2021 corridor at the Sussex Down College and in the town centre at the Post Office Depot and railway station

Recognising the different options are all subject to more detailed assessment in the countywide model, the traffic impact of each scenario has been assessed against the theoretical link capacity of the borough road network to provide an indication of where impacts are likely to be severe and cause additional congestion and delay to journeys. The analysis indicates the overall network is currently nearing capacity and the A2021 and A259 is already exceeding capacity in the peak hours.

A forecast 2040 Reference Case has been tested as a baseline, where a new Local Plan is not delivered, which increases traffic by approximately 10%. This will further impact on the current A259 and A2021 issues and also the A27 and A2280 Cross Levels Way. The addition of Options 1 and 2 traffic could both have severe impacts, over and above the current situation and 2040 Reference Case, on the A259, A2270 / A2021, A2280 and A27 and mitigation is likely to be needed along these corridors and at key junctions to support the acceptability of the Local Plan.

Cumulative impacts of neighbouring Local Plan growth

The STEB spreadsheet-based highway assignment tool has also been used to understand the potential cross-boundary impact of the emerging spatial picture in neighbouring authorities in the county. Each district, with the exception of Hastings, is still at an early stage of option testing prior to consulting on a preferred option. The strategies are likely to change going forward and the assessment is an early sensitivity test only to understand the possible impacts of cross boundary growth.

The current level of projected growth could deliver an additional 37,000 houses and 300,000 sqm of retail / employment uses in the other districts. Neighbouring Wealden

could potentially deliver the highest level of growth and is currently assessing a potential 16,000 houses and 170,000 sqm of floorspace.

The additional traffic impact of this growth could add a further 10%-15% traffic growth, over and above the Eastbourne Local Plan options, to the borough network. The additional growth is likely to further impact the capacity issues identified on the A27, A2270, A2021 and A259 corridors and key junctions and require additional mitigation.

Acknowledging the fluidity of all Local Plans across the county, further agreement will be needed on how cross boundary growth is treated within any future countywide modelling assessment and the scale of impact expected to be mitigated by the new Eastbourne Local Plan.

Planning for sustainable transport and future mobility

The modelling indicates that Local Plan growth could have severe impacts on the borough road network, which is likely to need mitigation. The preferred approach is to plan for people and places and consider the role sustainable and future mobility options could play prior to defaulting to traditional highway capacity solutions. An initial framework strategy, which considers wider evidence within the borough context, assesses early mitigation options, the potential for mode shift and reducing car use.

Transport for the South East (TfSE) have set out a 'Sustainable Route to Growth' in their transport and future mobility strategies, which targets a 9% reduction in forecast car use, by:

- Making active travel the first choice for short journeys
- Enhanced partnerships and improvements to interurban and rural public transport services
- Placing zero emission bus rapid transit (BRT) at the centre of the transport system
- Planning for and adapting to technology 'place-based bundles', reducing car dependency and ownership

Elsewhere, the DfT's Sustainable Travel Town research indicates similar levels of reduction in car use through investment in 'smart choice' programmes over a sustained period. Eastbourne, as a relatively compact and urbanised borough with access to rail and bus, has the potential to achieve similar levels of car use reduction and, with increased investment, potentially improve on these targets. The eventual strategy will need to integrate a range of mobility solutions with the principles of placemaking and the transport needs of residents to deliver the desired outcomes, including:

Accessibility	development to plan for '15-minute' neighbourhoods with easy access to key services, public transport and active travel networks
Behaviour change	reduce the need to travel and level of car ownership or switch to electric vehicles
Active travel	move away from car dominated roads to create safe and connected corridors for pedestrians, cyclists and other micro-mobility options
Bus	develop enhanced partnerships, prioritised zero-emission bus rapid transit (BRT) and digital demand responsive transport solutions to serve more remote rural areas
Rail	continued improvement to level of service and better integration with bus and micro-mobility options
Future mobility	explore the concept of Mobility as a Service (MaaS), potential for shared mobility hubs and alternatives to traditional car ownership

At this stage, a framework package of measures has been identified, which will need to be delivered at intervals across the Local Plan period with varying levels of complexity based on cost, deliverability and technological advancement. This has allowed an early assumption for an average 10%-15% reduction in forecast car use to be applied to the initial modelling outputs across the borough network to identify potential residual issues requiring further consideration.

Further modelling will be needed in the countywide model with more detailed mode shift analysis of specific measures, journey-purposes and corridors to understand a more precise geographical distribution of modal shift on the network. Careful consideration will need to be given to how these measures can be funded and delivered within the context of a Local Plan Infrastructure Delivery Plan (IDP) and viability.

Planning for residual traffic impacts

The application of these initial headline mode shift targets to the unmitigated modelling outputs indicate that the Eastbourne Local Plan impacts could be mitigated on much of the network. The key exceptions are the A2021 and A259 corridors, which are currently at or approaching capacity, and will be further impacted by potential cross-boundary growth from neighbouring districts.

An initial capacity review of potential local junction 'hot spots' on the key corridors has been undertaken to advise on early concept improvements. Design recommendations have been combined with other parallel studies, including the A22/A2290 MRN study, and are subject to more detailed design feasibility and assessment in the countywide model and local junction models. Generally, reasonable local junction improvements could be implemented to improve capacity and complement the potential sustainable transport options. However, some key locations on the A259 and A2021 could still have some residual issues towards the end of the plan period, principally at link, rather than junction level, which may need further consideration through detailed modelling in the countywide model, including:

Junction location	Mitigation concept	Residual issue
Langney roundabout	signalise roundabout	A259 link capacity will be exceeded on both approaches and further modelling needed
Seaside roundabout	complementary enhancement to the A22/A2290 MRN study proposals to signalise the roundabout	A259 link capacity will be exceeded on both approaches and further modelling needed
A2021 / A259 Whitley Road	adjustments to signal phasing and lane capacity	A259 link capacity will be exceeded on both approaches and further modelling needed
Rodmill roundabout	increase size of roundabout and additional lane capacity	A2021 link capacity will be exceeded on both approaches and further modelling needed
Decoy roundabout	option to convert existing mini-roundabout to signals	A2021 link capacity will be exceeded on both approaches and further modelling needed

Junction location	Mitigation concept	Residual issue
Willingdon roundabout	Minor changes to central island and additional lane capacity	A2021 link capacity will be exceeded on both approaches and further modelling needed

The impacts of wider additional cross-boundary Local Plan growth, from other districts on the Eastbourne network, will need to be considered within the context of the eventual need for mitigation. Equally, the cross-boundary impacts of the Eastbourne Local Plan will need to be considered too, including key junctions in neighbouring Wealden on the A2270, A27 and A22.

Summary and next steps

An initial assessment has been undertaken of two Local Plan options with the key objectives to understand the likely high-level transport impacts, early mitigation solutions and any residual risks to the borough transport network, in advance of the countywide model being available.

The assessment indicates that Option 2, with a higher level of housing, will have the greatest impact, with both options having impacts on the already constrained A259, A2021 and A2270 corridors. An initial framework of sustainable, and progressively innovative, transport solutions have been promoted as a priority to explore the potential for modal shift and reduce forecast levels of car use. An average 10%-15% reduction in peak hour car trips has been tested as a reasonable ambition for the borough over the plan period and identifies some residual impacts on the A259 and A2021 corridors, which will need further consideration in the countywide model and possible mitigation.

Further consideration will also need to be given to the cross-boundary impacts of Local Plan growth in neighbouring districts on the borough network and, equally, the corresponding impacts of the Eastbourne Local Plan growth on their networks.

As a next step the SATURN-based strategic East Sussex Countywide Transport Model (ESCWTM / “countywide model”) will be used to refine the modelling methodology, assess impacts in more detail and further develop the transport evidence base as the Local Plan is prepared further.

1 Introduction

Eastbourne Borough Council (EBC) is preparing a new Local Plan as a framework for future development up to 2039. The public consultation on the first stage Local Plan Issues and Options Document concluded in 2020 and the Council are assessing potential spatial options, prior to inviting further representations from the public and key bodies, on a Preferred Option through a Regulation 18 consultation due in 2022.

The need for investment in transport infrastructure to meet current demand and provide alternatives to car travel, particularly through reducing the need to travel and sustainable modes, is widely recognised through national and local policy. The likely impacts of further growth will present additional transport challenges across the borough and wider region, which will need assessment and appropriate mitigation as evidence of the acceptability and soundness of the Local Plan.

A SATURN based East Sussex Countywide Transport Model (ESCWTM / “countywide model”) is currently being developed, and due for completion by March 2022, to start testing the emerging spatial picture in Eastbourne and the neighbouring Local Planning Authorities (LPAs) in the county as part of a Shared Transport Evidence Base (STEB). ESCWTM will be used to refine a Preferred Option and provide the foundation for the transport evidence base to deliver housing and economic growth in the borough.

In advance of using the countywide model, there is an immediate requirement to understand the likely impacts of potential Local Plan options on the transport system and gain an early indication of the possible scale and type of mitigation needed. A high-level interim spreadsheet-based modelling tool has been developed for each of the five East Sussex districts in the county as an initial step in the STEB process. The ‘STEB spreadsheet model’ has been used to assess the known Local Plan options at both an isolated district-level and also the emerging in-combination countywide level to identify potential constraints on the transport network, likely scale of mitigation needed and any residual impacts that could present risks to the delivery of each Local Plan.

This Transport Note (TN-001) sets out the outcomes of the early STEB analysis for the latest Eastbourne Local Plan options and, acknowledging the wider spatial picture is at a similar early stage, provides further sensitivity testing of the possible additional cross-boundary impacts of emerging Local Plan options in each district in the county.

This phase of work delivers an overview of the existing transport and movement challenges facing the borough geography, the assessment approach used and early mitigation advice. These outcomes will assist with refining the Local Plan options and guide more detailed testing of transport impacts and further mitigation planning in subsequent phases when the countywide model is available.

2 General Approach

2.1 Shared Transport Evidence Base

The impacts of new development will extend beyond the local area and across boundaries into neighbouring districts. LPAs and county councils have a duty to cooperate with each other, and with other prescribed bodies, on strategic matters. This includes delivering effective infrastructure to support and mitigate the significant impacts of new development.

The current emerging status of all Local Plans within the county provides an opportunity to assess each Local Plan on its respective merits and potential in-combination effects with its neighbouring areas. The outcome of the initial STEB assessment will enable the LPAs and ESCC to work collaboratively to consider high-level impacts and early scalable mitigation solutions, which can evolve as the eventual preferred spatial strategies are finalised.

2.2 ‘Planning for People and Places’

Any Local Plan is expected to mitigate the severe impacts of new development on the transport system, however, the wider policy agenda looks beyond this expectation and identifies the need to deliver a decarbonised, sustainable transport system and healthy, inclusive and high-quality places through the plan-making process. In response, the Council have committed to working with stakeholders to deliver a carbon neutral town by 2030. The Royal Town Planning Institute (RTPI)¹ have identified a framework (see Figure 2-1) to guide the role of spatial planning and achieving a decarbonised net zero transport system.

Step 1: Negative Carbon Developments All development is located and designed to generate zero emissions from transport, and to potentially facilitate the removal of carbon from the wider transport network.	Step 2: Substitute Trips Can the trip be substituted: <ul style="list-style-type: none">• digitally online• by delivery• or can it be made more locally
Step 3: Shift Modes Can the trip be made by: <ul style="list-style-type: none">• active travel• public transport• Shared on-demand mobility	Step 4: Switch Fuels Can the trip be made by electric or hydrogen vehicle

Figure 2-1 RTPI Sustainable Accessibility and Mobility Framework

This approach emphasises the need to move away from the traditional ‘predict & provide’ approach, where historic trends are used to forecast hypothetical futures to justify continual, and unsustainable provision of additional highway capacity, ultimately risking unconstrained levels of car-dependency. Wider industry guidance (TRICS² and CIHT³) is also pushing for a change, where a ‘decide and provide’ approach to actively choose preferred transport outcomes, is advocated. Transport for the South East (TfSE) applies this in their strategy to deliver sustainable growth and transport

¹ [Net Zero Transport: the role of spatial planning and place-based solutions \(RTPI 2021\)](#)

² [Better planning, Better transport, Better places \(CIHT 2019\)](#)

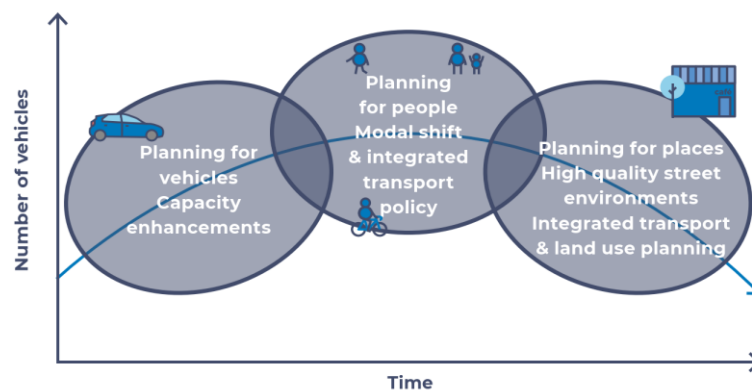
³ [Guidance Note on The Practical Implementation of The Decide & Provide Approach \(TRICS 2021\)](#)

solutions up to 2050⁴ in the South East region. This TfSE approach provides a relevant blueprint to cascade down to the county and borough level to start planning a preferred outcome for the new Eastbourne Local Plan.

TfSE has initially adopted a traditional forecast demand modelling approach to understand how and where the transport network is likely to be constrained. However, rather than immediately applying car-based capacity solutions, the strategy advocates investment in public transport alternatives, integrated land use planning, demand management and embracing emerging technologies to solve problems in the future.

The approach follows three stages of evolution in transport planning policy perspectives (see Table 2-1), developed by Professor Peter Jones – UCL, to help guide transport and land use policy. The stages demonstrate how moving away from ‘planning for vehicles’ (predict and provide) to ‘planning for people and places’ (decide and provide) can reduce car use over time and deliver high quality places and environments for people to live:

Table 2-1 Evolution of Transport Planning policy (source: TfSE Transport Strategy for the South East)



Stage 1: Planning for Vehicles	TfSE recognise that the region is still largely in this first stage and, in the short term at least, targeted highway-based schemes will still be needed to address congestion ‘hotspots’ and also provide complementary measures for bus and active modes.
Stage 2: Planning for People	Focuses on the needs of different transport users, including pedestrians, cyclists, public transport passengers, people with reduced mobility, freight operators and car, van and powered two-wheeler drivers. Understanding these needs and encouraging modal shift to more sustainable transport modes could manage future demand and minimise adverse impacts on society and the environment.
Stage 3: Planning for Places	Promotes the integration of transport and land use that both encourage sustainable travel choices and also reduce the need and/or distance for travel.

The framework and initiatives for ‘planning for people and places’, by delivering well-planned, sustainable places for people to live and work, are already evident at a policy and physical level in the region. However, there is emphasis that more will need to be done, and at a faster rate, to put people and places at the heart of the transport system. The Eastbourne Local Plan presents an opportunity to proactively plan development and transport in response to changing socio-economic, environmental and technological futures.

⁴ [Transport Strategy for the South East \(TfSE 2019\)](#)

2.3 Application of Initial STEB Approach

The initial STEB approach (shown in Figure 2-2) generally follows the TfSE principles at a local level and provides an early assessment of traffic growth and potential risks to key parts of the transport system. A ‘decide and provide’ future is the priority and the primary focus will be on sustainable transport opportunities across the network and at key developments to start ‘planning for people and places’. This will rely on evidence from elsewhere to start developing different future scenarios and, depending on the packages of interventions, the varying potential for modal shift.

The approach also recognises that an element of ‘planning for vehicles’ is still likely to be needed, in the short term at least, to address residual impacts on the highway network and to enable sustainable transport and more active travel options to come forward. Any highway focused options should be on a monitor and manage basis and consider integrating measures for all road users and not just vehicles. Key challenges and opportunities for all transport users will be identified to inform further detailed testing of mitigation in ESCWTM / countywide model.

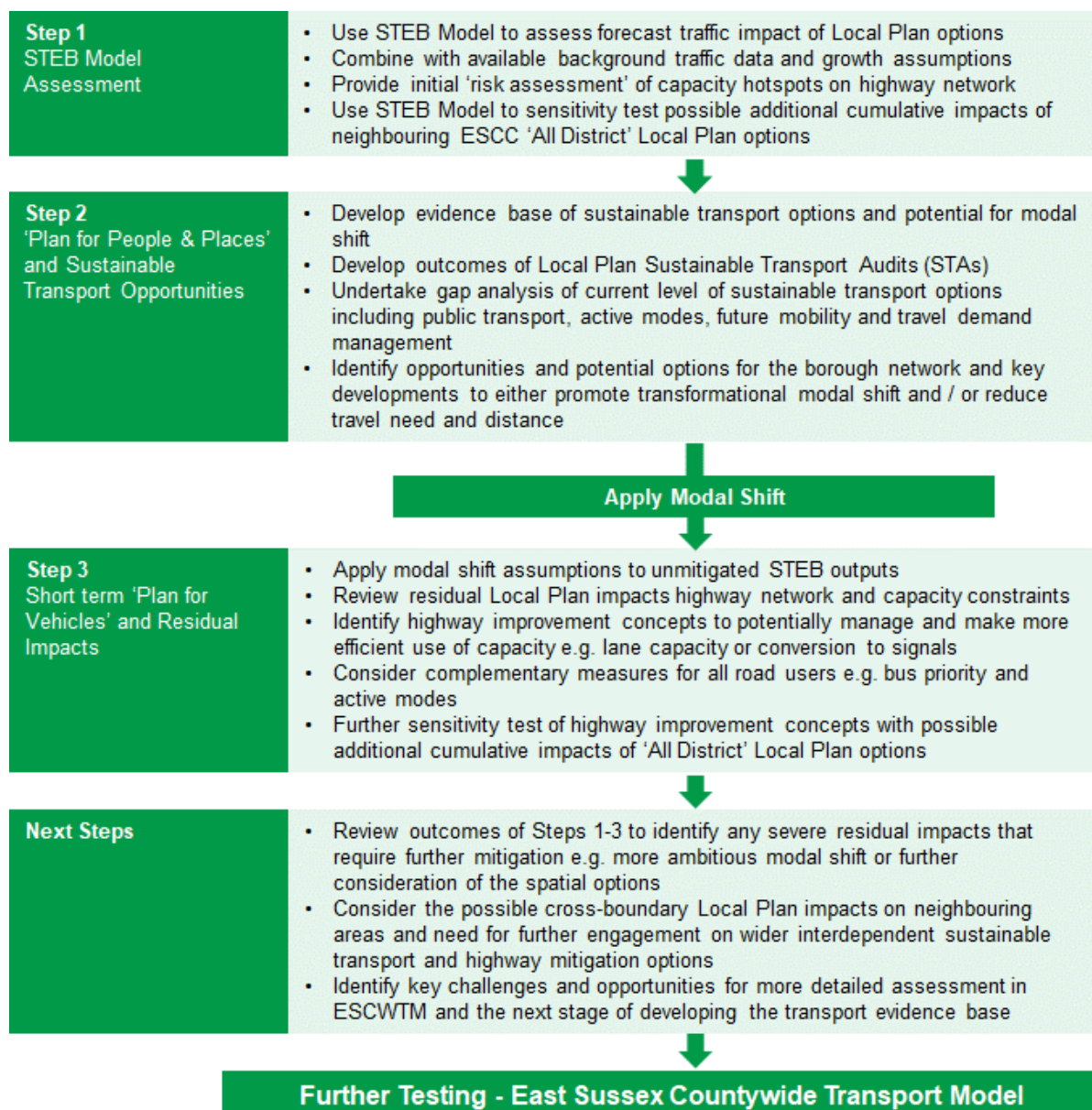


Figure 2-2 Overview of initial STEB approach

3 Eastbourne Context

3.1 New Eastbourne Local Plan 2018-2039 Options

The new Local Plan for Eastbourne will plan and manage growth, regeneration and development in the borough up to 2039. The public and other stakeholders have already responded through the Stage 1 Issues and Options consultation and EBC are assessing two potential spatial options, which could deliver between 3,350 – 5,680 houses and 70,000 – 96,000sqm of commercial floorspace, prior to consultation (Regulation 18) on a Preferred Option in 2022. The spatial distribution and approximate scale of the respective development land uses for the two options are shown in Figure 3-1 and Figure 3-2. All development locations are potential only and subject to change.

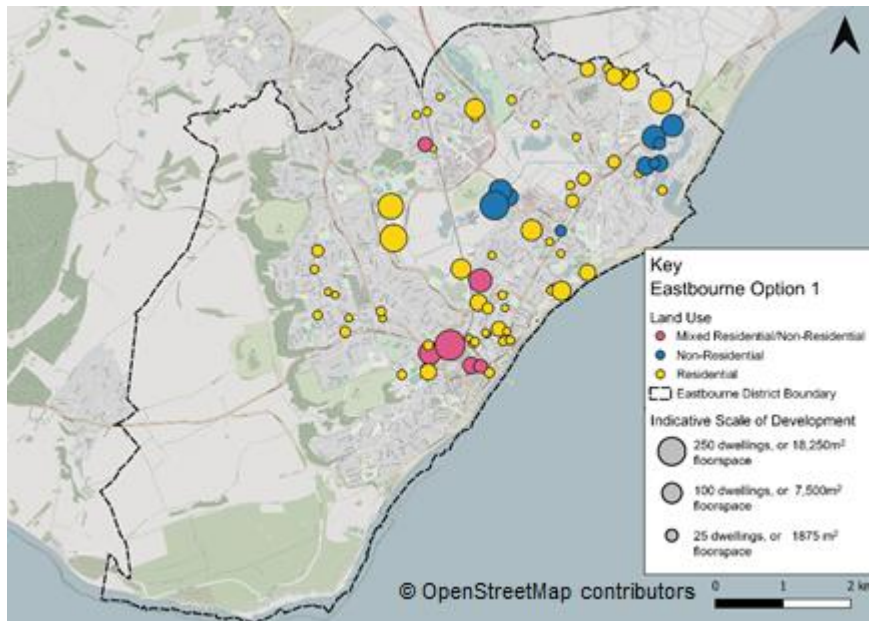


Figure 3-1 Potential development Local Plan Option 1 (excluding Windfall and Commitments)

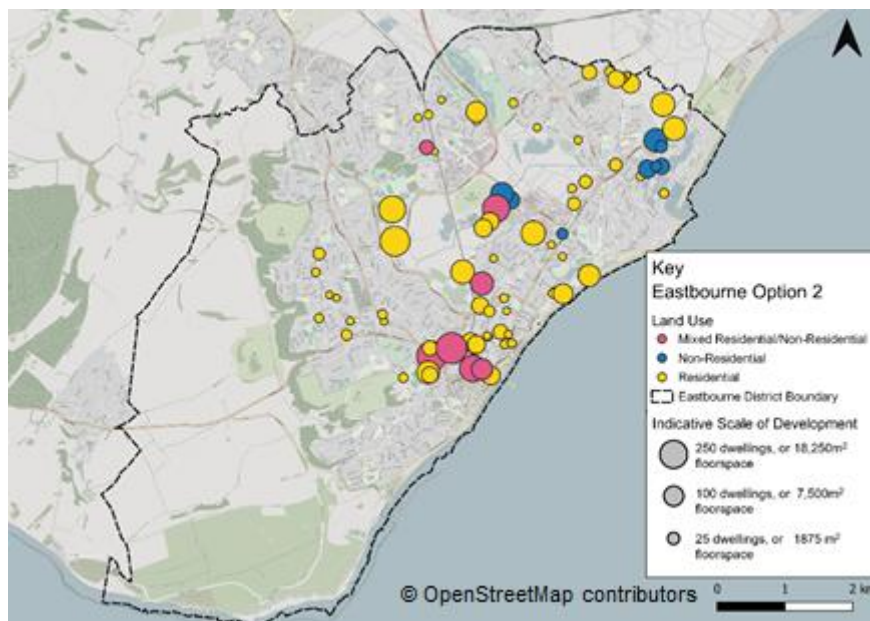


Figure 3-2 Potential development Local Plan Option 2 (excluding Windfall and Commitments)

3.2 Vision and Objectives

In 2019 EBC declared a ‘climate emergency’ in the borough and, in their Direction of Travel (2019)⁵ consultation document, propose an ambitious vision and set of objectives to create economic prosperity, reduce carbon emissions and adapt to climate change (see Table 3-1). The specific transport priorities of decarbonising energy, modal shift and promoting sustainable modes will be used to shape the mitigation approach in the STEB assessment:

Table 3-1 New Eastbourne Local Plan Proposed Vision, Objectives & Key Transport Themes

Proposed Vision	
<p><i>“In 2038... Growth within our premier coastal town, at the eastern gateway to the South Downs National Park, is contributing towards carbon neutrality through green infrastructure provision, renewable energy generation and energy-efficient development whilst embracing modal shift, culminating in a predominantly car free town centre with excellent connectivity by cycle, foot and public transport to all of our communities.”</i></p>	
Proposed Objectives	
<ul style="list-style-type: none"> • Carbon Neutrality – supporting the commitment to make Eastbourne a Carbon Neutral Town by 2030 through modal shift, energy efficiency, renewable energy and carbon off-set. • Prosperous Economy – making use of limited land availability to maximise employment space, diversifying the town centre offer to reflect changing consumer habits and supporting the vital tourist sector. • Quality Environment – preserve and enhance Eastbourne’s Historic Environment and Townscape, landscape, air quality and biodiversity through sustainable green infrastructure and an attractive, distinctive and useful public realm. • Thriving Communities – where people are healthy, safe and have access to activities and opportunities that help them prosper. • Housing and Development - delivering new safe, secure and affordable homes to meet the growing population and help attract new working age households that will contribute to the economy. • Effective Infrastructure – funding and providing the infrastructure, including transport and telecommunications, to support new houses, businesses, health and education. 	
Key Transport Themes	
<ul style="list-style-type: none"> • Decarbonising the transport system • Improving public transport options • Planning for active modes • Encouraging modal shift • Reducing car dependency and ownership • Predominantly car free town centre 	<ul style="list-style-type: none"> • High quality public realm • Planning for shorter and fewer trips • Healthy, inclusive and safe transport system • Enhancing the environment • Green infrastructure and movement • Responding to digital connectivity

3.3 Wider Policy Context

The development of the Local Plan transport evidence base will also need to respond to wider policy objectives and guidance. Table 3-2 summarises key national, regional and local transport policy guidance relevant to plan-making.

⁵ [Direction of Travel: Issues & Options for the Eastbourne Local Plan \(2019\)](#)

Table 3-2 Wider transport policy and guidance

National Policy

The National Planning Policy Framework (NPPF) (Department for Communities and Local Government, 2021)

The NPPF sets out the government's planning policies for England and identifies that development should only be refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe. The STEB assessment provides an initial assessment to understand the scale of likely impacts on the network.

DfT Circular 02/2013: The Strategic Road Network and the Delivery of Sustainable Development (2013) & The strategic road network Planning for the future - A guide to working with Highways England on planning matters (2015)

National Highways (NH) has been, and will continue to be, engaged throughout the development of the emerging Local Plan evidence base. Circular 02/2013 sets out that through the Local Planning process developments should be promoted in sustainable locations and that capacity enhancements and infrastructure required to deliver strategic growth should be identified at the Local Plan stage.

Bus Back Better: National bus strategy for England (DfT, 2021)

The strategy provides a long-term commitment to funding and delivering more frequent, reliable and easier to use bus services to significantly increase passenger numbers and reduce congestion, carbon and pollution. The vision is for fully integrated and inclusive services, multi-modal ticketing, increased bus priority, reliable real-time information and turn-up-and-go frequencies. Funding is recognised as a key challenge, and the strategy provides support to Local Transport Authorities (LTAs) to access franchising powers. It also places an expectation on LTAs to commit to establishing, more flexible, Enhanced Partnerships across their entire areas and publish a Bus Service Improvement Plan (BSIP) to access continued central funding and support. The Local Plan will need to reflect the BSIP and integrate new housing and employment with enhanced public transport services and infrastructure delivery.

Gear Change: A bold vision for cycling and walking (DfT, 2020)

The Government has set out a vision for a step-change in cycling and walking, to double uptake over the next decade, and transform their role in the transport system where "Places will be truly walkable... Cycling and walking will be the natural first choice for many journeys with half of all journeys in towns and cities being cycled or walked by 2030." Cycling and walking needs to be placed at the heart of the decision-making and Local Plan-making process to deliver healthier, greener and safer environments with convenient access to travel.

Regional Policy

Transport for the South East Transport Strategies (TfSE)

The TfSE transport strategy, and supporting strategies, aims to support their vision for a net-zero carbon South East by 2050. The strategy sets out the different priorities for the environment and economy. Eastbourne is identified as a major economic hub in the region with the potential for a range of sustainable and future mobility transport options including rail improvements. These strategies will guide the STEB approach.

South East Local Enterprise Partnership's (SELEP) Strategic Economic Plan (2014)

SELEP has identified that a lack of investment on and around the A27 in Eastbourne and South Wealden is inhibiting potential growth in the area and is considered a barrier to growth. In order to enable growth, SELEP has proposed improvements to the A22/A27 corridor. These proposals will be considered within the context of this study.

Local Policy

ESCC Local Transport Plan 3 (LTP3) (2011-2026)

The East Sussex LTP3 sets out the county's vision and objectives and the strategy from 2011 to 2026. LTP3 sets out ten transport specific objectives including congestion reduction, connectivity improvement, increasing the uptake of sustainable and active modes, reducing greenhouse gas emissions and air and noise pollution from transport. Eastbourne is identified within LTP3 as an area to facilitate housing growth and to create a sustainable community. An updated LTP4 is due to be completed in 2022 and will provide a fresh set of objectives and outcomes for the transport context in the county.

East Sussex Bus Service Improvement Plan (BSIP) (ESCC, 2021)

In line with the expectations of the Bus Back Better: National bus strategy for England, ESCC have prepared a BSIP. A key target of the BSIP is to initially reverse the decline in bus patronage and then grow it significantly in future years. This will be delivered by quality improvements, including bus priority schemes to improve reliability and punctuality, simplified and reduced fares and improved services in rural areas.

East Sussex's Local Cycling & Walking Infrastructure Plan: Let's get cycling and walking (ESCC, 2021)

The LCWIP sets out a proposed network of cycling and walking routes and measures in specific areas of the County. Importantly this will sit alongside our wider plans to improve mobility and transport over the next ten years. The LCWIP places people at its centre and focuses on understanding their needs and the places they want to get to by delivering an ambitious network of additional cycling and walking routes and measures to integrate with existing cycling and walking infrastructure. The LCWIP sits alongside wider plans for the transport network and the opportunities to deliver healthier, safer and more accessible new housing and employment through Local Plans.

3.4 Area Profile

3.4.1 Local Geography

The borough, with a population of over 103,000 (2018)⁶ and principally consisting of the town of Eastbourne, forms one of the larger and more densely populated urban areas in East Sussex. The borough is located on the south coast and is bordered by Wealden District and the South Downs National Park Authority to the north and west (see Figure 3-3 for context and borough journey to work patterns).

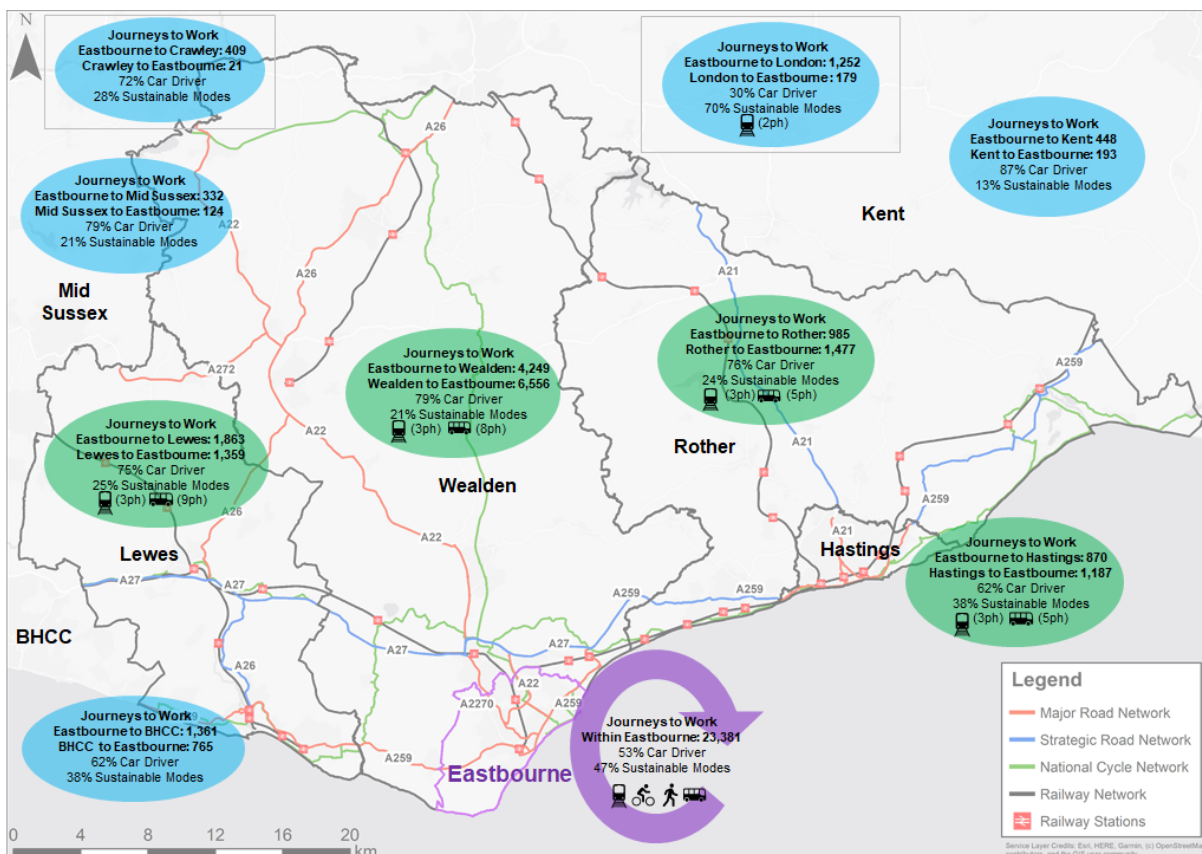


Figure 3-3 Eastbourne context and journeys to work patterns with neighbouring areas (Census 2011)

⁶ East Sussex in Figures

There are strong linkages with the south of Wealden, particularly towards Willingdon, Polegate and Stone Cross and further north to Hailsham and Hellingly, which forms the local functional geography of the area. The most recent journey to work data available (Census 2011⁷), indicates over 10,800 people commute between the two authorities in both directions, with 79% of these trips made by car / van drivers.

Over 35,500 people travel to a place of work in Eastbourne with approximately 60% of trips made by car / van drivers and 40% by sustainable modes. This includes 23,500 borough residents typically making local trips (53% by car) of 5km or less to their place of work within Eastbourne. DfT journey times statistics (2017)⁸ indicate 94% of the workforce in Eastbourne are within a 15-minute public transport journey and 99% within a 15-minute cycle of a key employment centre, indicating relatively high car dependency for shorter trips and good potential for further sustainable mode shift.

3.4.2 Transport Connectivity

Road

The borough is connected to the Major Road Network (MRN) via the A22, A259 and A2270 leading to the A27 and A259 SRN corridor immediately to the north and east leading to wider regional routes. Several key junctions and roads on these corridors are at, or reaching capacity, with congestion and delay during peak hours.

Bus

An overview of the current level of bus service in Eastbourne, connecting with neighbouring authorities, is summarised in Table 3-3. There are reasonable frequencies between the town centre, local residential areas and some cross boundary destinations towards Brighton, Heathfield, Uckfield and Hastings. Lewes is less well served and relies on rail connectivity as the key public transport link.

Table 3-3 Bus routes and frequency (Source: [cartogold-ESCC](#) – 12/2021)

Route Number	Destinations	Typical Hourly Frequency
LOOP	Eastbourne – Hampden Park	2
1/1A	Hamlands – Shinewater	3
3/3A	Roselands - Meads	2-3
5/5A/6	Eastbourne-Langney-Sovereign Hbr	1
12/12A/12X Coaster	Eastbourne-Seaford-Brighton	3-4
51	Eastbourne – Heathfield	2-3
54	Eastbourne – Uckfield	1
98/99	Eastbourne – Hastings	2-3

⁷ [Location of usual residence and place of work by method of travel to work \(ONS Census 2011\)](#)

⁸ [Journey Times statistics \(DfT 2017\)](#)

Rail

The existing rail services operated by Southern from Eastbourne railway station, the majority of which also serve Hampden Park, are summarised in Table 3-4. There are east-west connections via the East Coastway, Hastings and Marshlink lines and rail journey times are generally comparable with peak hour car journey times towards Hastings (35mins) and Brighton (45mins). Services and journey times to London and Kent from the south coast are considered slow and constrained by level-crossings and high demand on the Marshlink and East Coastway lines towards Kent and London Victoria. The lines are only partially electrified and higher polluting diesel trains are required for a number of services.

Table 3-4 Rail routes, journey times and frequency

Destination	Average Journey Time	Typical Hourly Frequency
London Victoria	1h 39 (peak), 1hr 30 (off-peak)	2
Brighton	41 mins (peak), 50 mins (off-peak)	2
Ashford International	1h 21	1
Hastings	32 mins	3

Active Travel

Eastbourne is a relatively compact and urban area, placing key destinations within easy and convenient walking distance from much of the residential areas. The Eastbourne Town Centre Movement & Access Package is a joint project that is currently being implemented to enhance and promote the vitality of the town centre. Phase 1 has delivered pedestrian, public transport and public realm improvements in and around Eastbourne station to create a high-quality and pedestrian friendly gateway to the town. Phase 2 of the scheme extends through the town centre towards the seafront.

Eastbourne currently benefits from a network of established cycling routes including National Cycle Network (NCN) Route 21 from the southern end of the Cuckoo Trail at Polegate to the seafront. There are several cycle routes that link to Route 21 throughout Eastbourne including recreational cycling routes and rights of way towards the South Downs National Park to the west of Eastbourne town. Cyclepod provide 208 secure and covered spaces at Eastbourne station and 52 spaces at Hampden Park station to encourage rail-cycle interchange.

The East Sussex Pedal Power Scheme, eligible to anyone living within East Sussex, allows individuals to rent a bike for a chosen length of time with the option to return the bike or buy it outright at the end of the loan period. This scheme aims to make cycling more accessible and targets employees across all districts in East Sussex.

Electric Vehicle Infrastructure

In Eastbourne, there are only 15 EV public-use and customer-only charging points (see Figure 3-4) with a combination of rapid, fast or slow charging primarily located at supermarkets, the University of Brighton campus, Eastbourne station and shopping centres. On-street charging points are not currently provided and a strategy will be developed by ESCC and the borough to enable this to come forward in the near future.

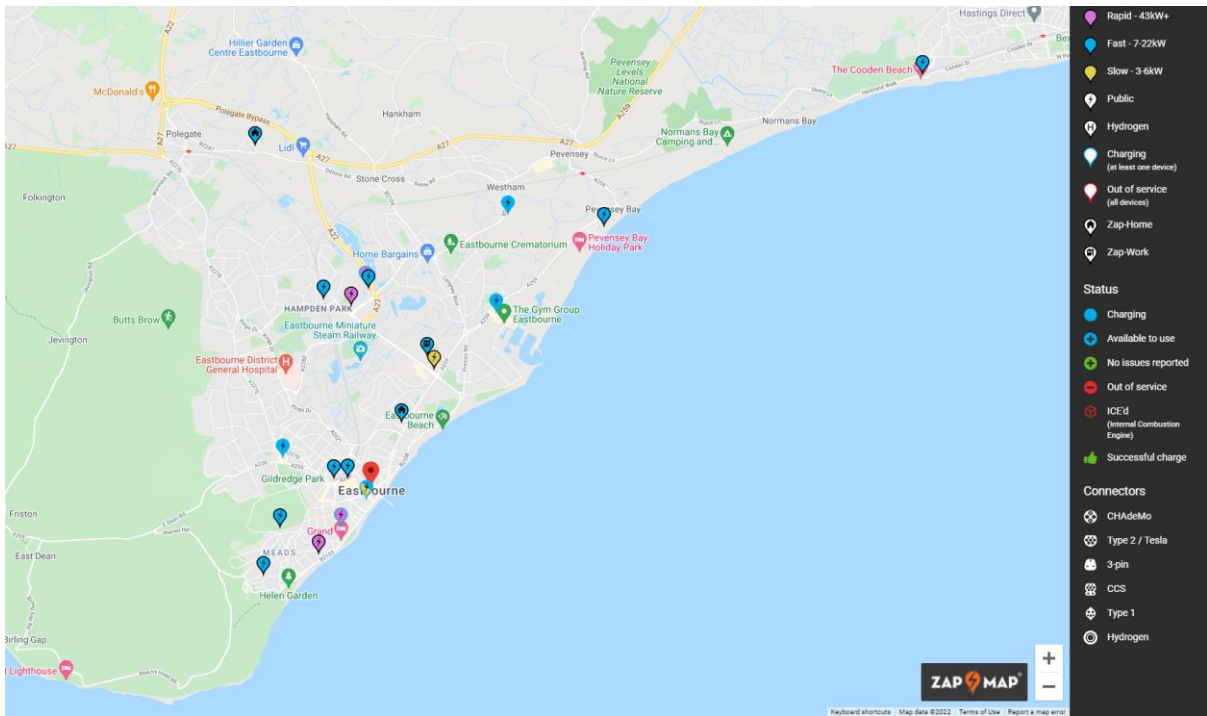


Figure 3-4 Current EV charging locations (Source: [DfT ZapMap](#), accessed 01/2022)

3.5 Issues and Challenges

Although Eastbourne has reasonable access to the transport network and good potential for sustainable mode shift there are several challenges to travel in and around the borough, including:

- The Council has committed to being carbon neutral by 2030. At present, 20% of carbon emissions in Eastbourne come from road transport
- A high car mode share for travel to work particularly for relatively short distances of less than 5km in and around the borough
- A high proportion (80%) of commuting between Eastbourne, Wealden, and neighbouring authorities is by car and leads to periods of congestion and delay on the network
- Improvements to the bus infrastructure, journey time reliability and service frequencies to employment locations and key services in Eastbourne are needed to make bus a more attractive mode choice
- A relatively low number (5%) of journeys to work are being made by bicycle, whereas 99% of residents are within a 15-minute cycle journey of key employment centres
- North-south cycle links and infrastructure to the west of the borough are limited, with a number of schools, colleges and a university campus in this area
- The reduction of traffic from the town centre is being progressed, to ensure an attractive and inclusive environment is provided for all users and to support the recovery and future growth of the local economy, which could displace traffic on to other congested routes if alternative travel options are not provided

4 Transport Scheme Pipeline

4.1 Overview

In advance of identifying new mitigation options, there are a range of schemes and measures already in the pipeline across the borough and the wider area, which also need to be considered. The following reports/studies have been used, alongside engagement with key stakeholders, to obtain the details of schemes that are already being developed:

South Wealden and Eastbourne Transport Study (SWETS - 2010)

Movement and Access Strategy for Hailsham and Hellingly (MASHH 2012)

Hailsham - Polegate - Eastbourne Movement & Access Corridor Business Case (HPE MAC - 2017)

Wealden Local Plan Transport Study (WLPTS - 2018)

Eastbourne Town Centre Movement and Access Package Phase 2 Business Case (2019)

A22 / A2290 Corridor Transport Study – Final Stage 1 Option Development Report (2020 ongoing)

Bus Service Improvement Plan – Infrastructure Statement (2021)

Local Cycling and Walking Infrastructure Plans (LCWIP 2021)

TfSE - South Central Radial & Outer Orbital Area Studies (Due early 2022).

4.2 Longlist of Schemes

A longlist of transport schemes has been identified with ESCC and categorised by the 'level of certainty' of delivery in Table 4-1 and their locations provided in Figure 4-1. Appendix A includes a more detailed summary of each scheme.

Table 4-1 Eastbourne Borough Council Pipeline Schemes and Status

Ref	Scheme name	Mode(s)
Committed (near certain / more than likely) – funding and permissions are largely secured. It is either near certain or more than likely that the scheme will be delivered in current form		
1	Section 2 Eastbourne Road (A2270) Willingdon Road	Bus/walk/cycle
2	Huggetts Lane - (A2270) Eastbourne Road Bus Lane	Bus/walk/cycle
3	Bus Stop improvements A2270	Bus
4	Eastbourne Town Centre Terminus Road (Phase 2a)	Walk
5	A22/A2270/A2021 HPE MAC (Phase 1)	Bus/walk/cycle
Planned (reasonably likely) – permissions and funding yet to be confirmed, but options and feasibility designs have been progressed and a funding route has either been partially secured, or is known, and/or a business case is being developed		
6	Victoria Drive	Bus
7	A259 Brighton-Eastbourne- Pevensey (South Coast) MRN corridor	Bus
8	A2290 – Shinewater Roundabout	Car/bus/cycle
9	A2290 – Lottbridge Roundabout	Car/cycle/walk
10	A2290 – Seaside Roundabout	Car/cycle/walk

Ref	Scheme name	Mode(s)
11	A2290 – Birch Roundabout	Car/cycle/walk
12	A22/A2270/A2021 HPE MAC (Future phases)	All
13	Town Centre to Hospital Cycle Route	Cycle
14	Stone Cross to Royal Parade	Cycle
Concept (uncertain) – still at a hypothetical level of planning with a number of options still to be considered, further feasibility needed and funding route to be confirmed.		
15	A2270 Kings Drive Bus improvements	Bus
18	Eastbourne Town Centre Phase 2b	Cycle/walk
19	Bus connectivity QBC A259	Bus
20	Marshlink High speed services PARTIAL SCHEME	Rail
21	Marshlink High speed services FULL SCHEME	Rail
22	Eastbourne bus-based mass rapid transit	Bus

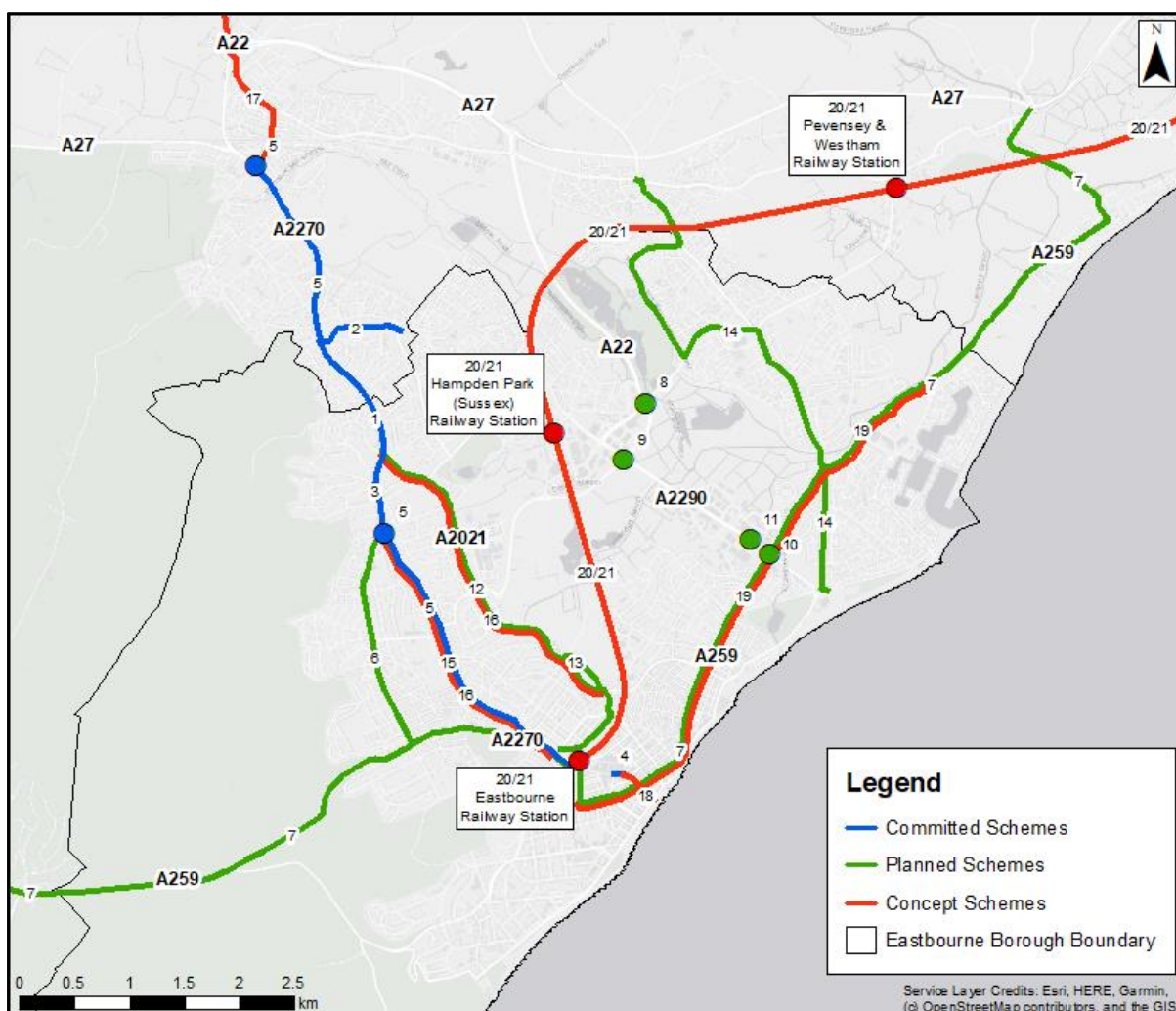


Figure 4-1 Scheme Pipeline by Status

4.3 LCWIP Schemes

The East Sussex Local Cycling & Walking Infrastructure Plan (LCWIP) sets out proposed cycling and walking networks and measures within specific areas of the county and received Member approval at a Cabinet meeting on 30th September 2021. It is focussed on areas where there are the greatest opportunities to increase levels of cycling and walking, with an emphasis on delivering infrastructure improvements which will support housing and those people who currently do not cycle or walk. The LCWIP walking and cycling proposals for the borough are shown in Figure 4-2 and Figure 4-3 with further details of the schemes in Appendix B.

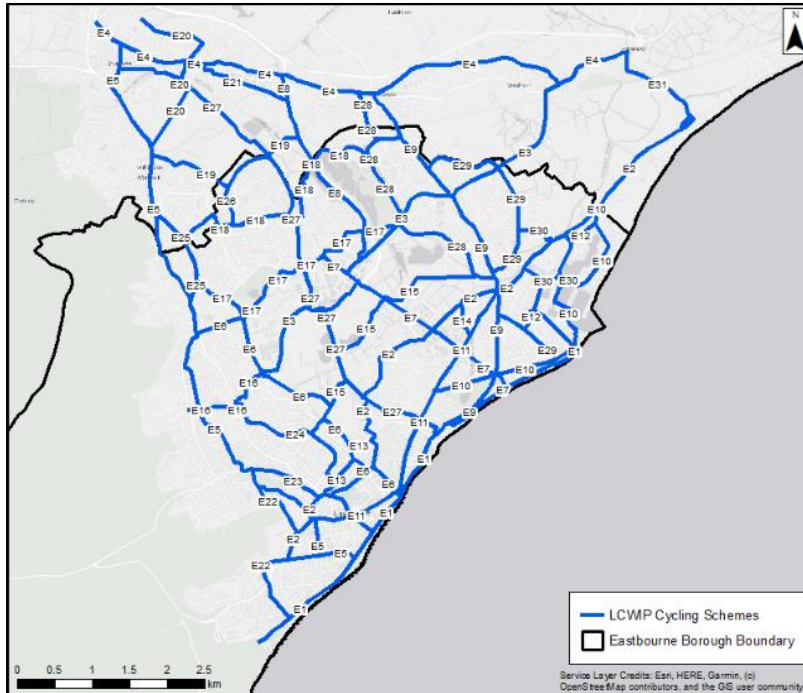


Figure 4-2 LCWIP Cycling Schemes

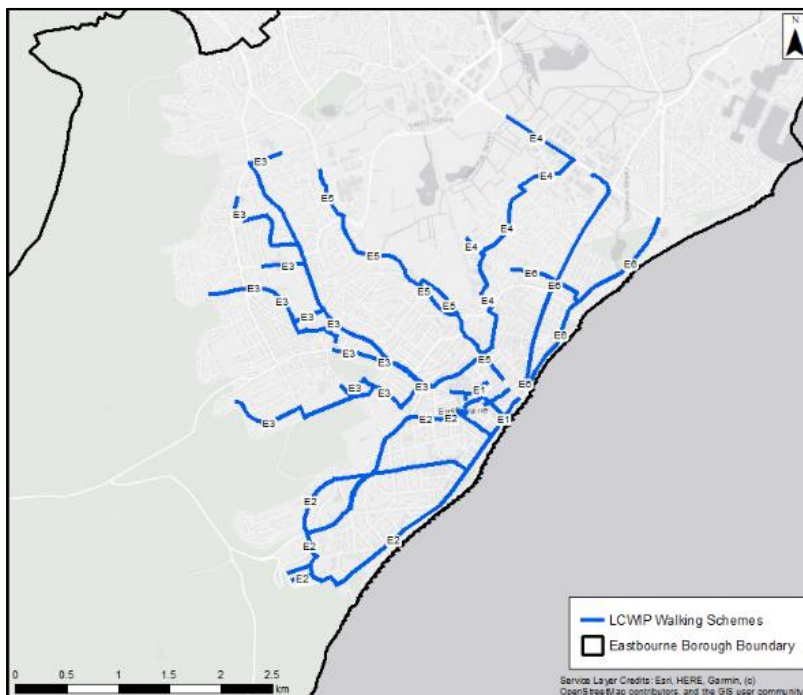


Figure 4-3 LCWIP Walking Schemes

4.4 Other schemes

The adopted 2013 Eastbourne Plan Core Strategy includes the saved Policy TR17: St Anthony's Link from the previous 2003 Eastbourne Plan. The scheme (shown indicatively in Figure 4-4) would provide a 1.2km connection between the western arm of Langney roundabout to a new roundabout on A2290 Lottbridge Drive.



Figure 4-4 Saved Policy TR17: St Anthony's Link – indicative route (source: EBC 2013)

The link could potentially provide some alleviation to the A259 corridor and constrained Seaside roundabout. Equally it could attract additional traffic to the A2880 Cross Levels Way, which also experiences congestion at peak times. At this stage, the scheme does not form part of any significant potential development allocation, nor any funding application, and it is unclear whether the policy will be saved in the New Local Plan. The current STEB spreadsheet model is not suitable to assess the impact of the scheme and the countywide model, when available, could be used to undertake a sensitivity test of the traffic impacts.

Over and above the traffic impacts of the scheme, further consideration would need to be given to how the route would be funded and delivered. There are also environmental considerations, including impact on the Langney Levels and also whether safeguarding the route provides some resilience to the local road network, particularly the A259, in response to climate change and rising sea levels. Further engagement between ESCC and EBC, potentially supported by countywide model analysis, will be needed at the next stage to agree an appropriate approach to assessing the need for and feasibility of a link.

5 Forecast Modelling



5.1 STEB model overview

The STEB highway assignment spreadsheet model (STEB Model) has been developed as one initial component of an overarching process to develop a common transport evidence base to support each of the emerging Local Plans across the county. This section gives a brief overview of the model structure and it is recommended that reference is made to the separate Phase 1 – Model Build Technical Note (East Sussex Highways April 2021) for more detail.

The eventual objective is to develop a robust and appropriate evidence base for each Local Plan using the strategic countywide model in early 2022. The STEB Model is an interim modelling solution, developed in PTV VISUM, to assign new Local Plan development only vehicle trips to the highway network. The outputs for each district are then combined to provide cumulative 'All District' Local Plan options to assess the full level of potential growth across the county. The development only flows are then combined with existing background traffic data (i.e. observed traffic data), where available, and TEMPro growth to provide future 'with Local Plan' traffic scenarios for the five districts separately ('Isolated Assessment') and in-combination with each other ('Cumulative Assessment'). Table 5-1 summarises the key modelling parameters applied.

Table 5-1 Key STEB modelling parameters

Base Year	Forecast Year	Time Periods	Trip Generation	Trip Distribution	Assignment
2019	2040 using TEMPro* AM: 1.105 / PM: 1.099	08:00-09:00 17:00-18:00	TRICS v7.8.3	2011 Census Journey to Work (JTW)	VISUM based single route choice assignment based on road hierarchy.

* 2040 was agreed as a common forecast year to account for the varying horizon years of each Local Plan. TEMPro growth factors have been adjusted to account for committed development only as a Reference Case for comparing and adding Local Plan growth.

5.2 Limitations and assumptions

The STEB model is only intended to be an interim solution to support the Regulation 18 consultation and has a number of limitations with functionality and assumptions made on how outputs should be interpreted. A summary of these limitations and assumptions are included at Appendix C and generally focus on trip purpose, network detail and the lack of a dynamic reassignment function to less congested routes in the STEB model.

Notwithstanding these limitations, the model provides an acceptable tool to gain an early understanding of the potential stress to the highway network and where mitigation solutions are most likely needed to inform the Regulation 18 process.

5.3 STEB inputs

5.3.1 Background Traffic Growth

The STEB model is a development only highway assignment model and does not explicitly model background traffic and growth. Recent 2019 turning count and link count data has been extracted, where available, for junctions and links to establish a baseline. A 2040 TEMPro growth factor (1.10) for Eastbourne, with planning assumptions adjusted to account for committed development with planning permission only (1138 houses / 325 jobs), has then been applied to establish a future year reference case to compare the ‘with’ and ‘without’ Local Plan options.

It is acknowledged that this level of growth is a conservative forecast and could realistically be higher with additional and unplanned development coming forward in the absence of an adopted Local Plan. The Reference Case will need to be reviewed as the STEB process evolves to agree an appropriate level of growth for inclusion in the baseline.

5.3.2 Local Plan Traffic Growth

The traffic growth for the two Local Plan options assessed has been calculated by applying appropriate trip rates from the TRICS database for different land uses. Some secondary trip factors (see Appendix C) have been applied solely to retail uses to account for pass-by and linked trips and remove an element of double counting.

Location maps of the two spatial options are shown in Figure 3-1 and Figure 3-2, in section 3, and a summary of the trip rates⁹ and trip generation applied to different sites and land uses for each option is included in Appendix D. The key differences between the two options are:

- Option 1 includes reduced housing / increased employment floorspace
- Option 2 includes increased housing / reduced employment floorspace

The development only total vehicle trip generation by option and specific land use is summarised in Table 5-2 and shows that Option 2 will generate a higher volume (19%-21%) of vehicle trips than Option 1 in each of the peak hours.

The trip generation is considered robust and unmitigated at this stage, i.e. with no modal shift or consideration of car free development, to present a ‘worse case’ for initial stress testing of the network and identifying potential constraints on link and junction capacity. Further consideration and refinement to specific land use trip and parking characteristics will be needed as more development detail comes forward when the countywide model is used.

Table 5-2 Development only trip generation by land use and Local Plan option (Total Vehicles)

Spatial Option	Houses (units)	Employment / Retail / Other Floorspace (sqm)	Total Trips
Option 1 Development	3,352	95,625	
AM Trips	1292	1045	2337

⁹ All trip rates have been provisionally agreed with ESCC and NH for the purposes of this assessment and are subject to further review and refinement as part of any subsequent option testing in the countywide model.

PM Trips	1401	1444	2845	
Option 2 Development	5,679	70,875	Total Trips	% Change from Option 1 Total Trips
AM Trips	2010	771	2781	+19%
PM Trips	2270	1169	3439	+21%

5.3.3 Development trip distribution and assignment

2011 Census journey to work (JTW) trip information, using a middle layer super output areas (MSOA) zoning system, was used for the distribution of development trips. An appropriate MSOA zone was identified for each Local Plan development site to generate development only trip distribution matrices. In the absence of detailed access information for all sites, each development zone is allocated up to three zone connectors, using development access information where possible, to best reflect likely loading points on to the network. Specific locations of Windfall development are not known and up to five zone connectors have been allocated to distribute traffic at a local network level.

The VISUM component of STEB is then used to assign development vehicle trips on to the network using the 'most likely' route choice based exclusively on link length and free-flow speed. It should be noted that the assignment process does not reflect full dynamic reassignment, in response to modelled congestion, generalised cost and driver behaviour, and uses a simplified single assignment based on distance and free-flow design speed of specific road type.

5.4 Isolated Eastbourne Local Plan Outputs

5.4.1 Forecast traffic flows

Figure 5-1 and Figure 5-2 provide an indication of the AM and PM peak hour Local Plan development only flow patterns for Option 1 and Option 2 and the key corridors impacted. The outputs show that flows will be heaviest along the key A259, A2021, A2270 and A2290 corridors throughout the borough. It is acknowledged that, due to the limitations of the STEB model and the quantity of uncertain Windfall development near the town centre, traffic between Willingdon and Eastbourne town centre has principally been assigned to A2021 Kings Drive (Corridor Ref. 7). However, it is likely that a proportion of this traffic could route along the parallel A2270 Willingdon Road / Upperton Road corridor (*shown in Figure 5-1 and Figure 5-2 as a 'possible alternative route') to make this journey. Similarly, the A2290/A22 corridor (Refs. 3 and 4) could take some of this traffic as an alternative north – south route in and out of the borough. The level of traffic assignment along these routes can be explored further in the countywide model when available.

Overall traffic growth patterns are similar in both options with the STEB model assigning much of the growth to the same key corridors across the borough. The flow differences between the two options are assessed in more detail in section 5.4.2. As highlighted throughout this report, these flow patterns could be subject to change when the development options are assessed in detail using the full assignment countywide

model, where traffic may seek out alternative routes across the network to avoid congestion.

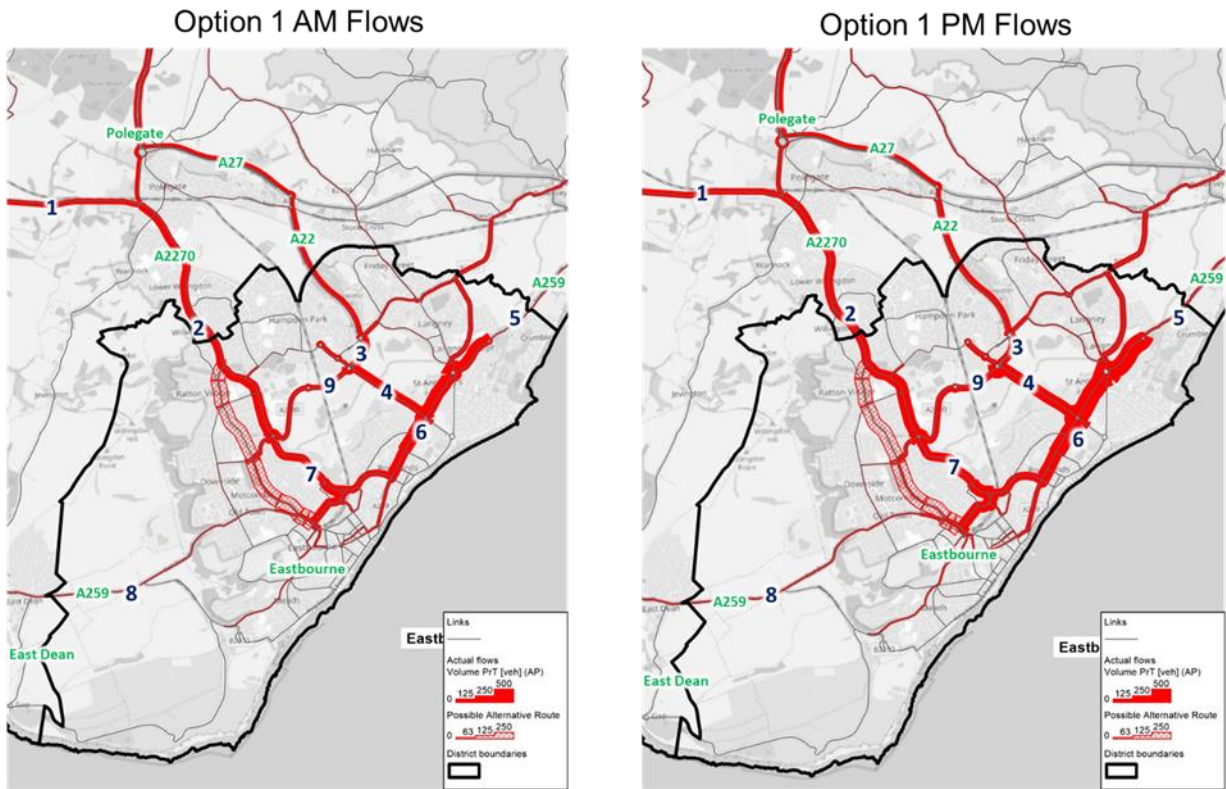


Figure 5-1 Isolated Eastbourne Local Plan Option 1 Indicative Flows & Key Corridors (*A2270 possible alternative route shown in light red) - (© OpenStreetMap contributors)

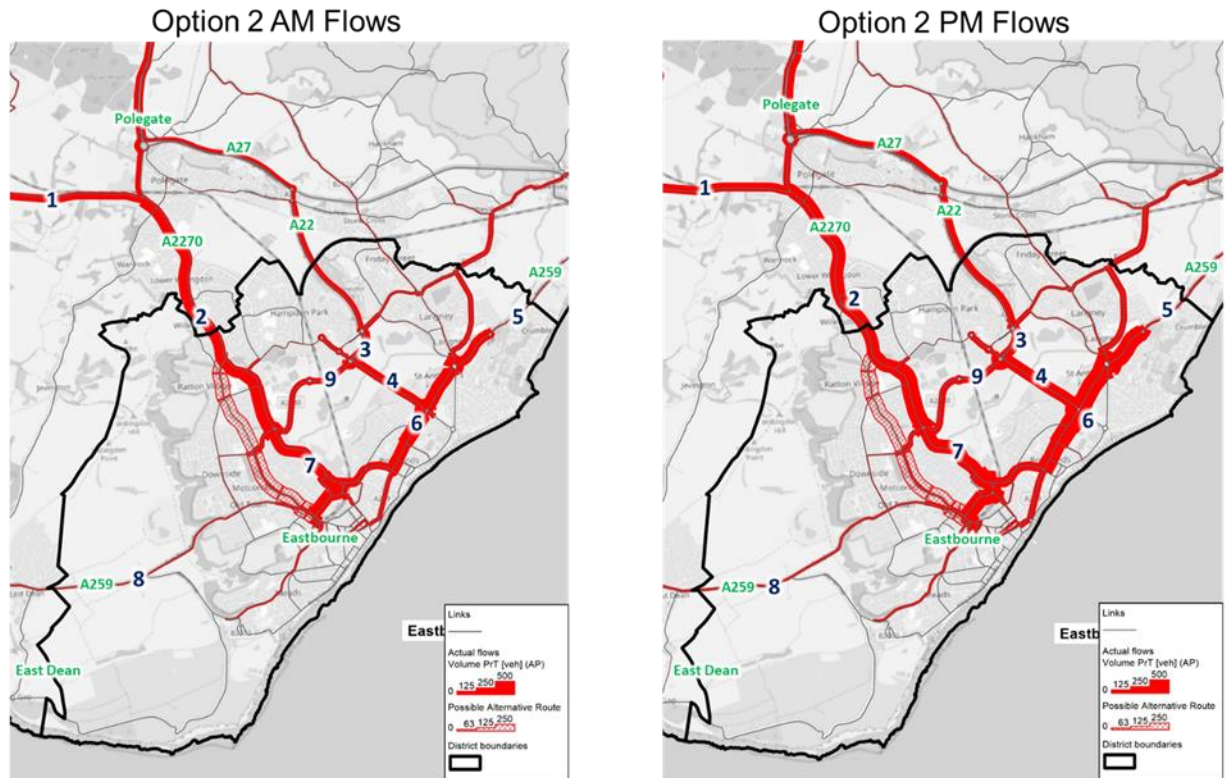


Figure 5-2 Isolated Eastbourne Local Plan Option 2 Indicative Flows & Key Corridors (*A2270 possible alternative route shown in light red) - (© OpenStreetMap contributors)

5.4.2 Flow comparisons of Local Plan Options

The differences between Option 1 and Option 2 peak hour flows are shown in Figure 5-3 where red indicates a higher flow in Option 2 and green indicates a higher flow in Option 1. The principal flow differences between the options are an approximate increase of 130-160 two-way flows on the A2021 / A2270 corridor and an increase of 100 two-way flows on the A259 corridor in both peaks of Option 2. There are minor (<100) directional flow reductions in Option 2, on the A2290 and the eastern end of the A259 at Sovereign Harbour, generally due to a trade-off between the level of employment floorspace and housing between the two options at these locations.

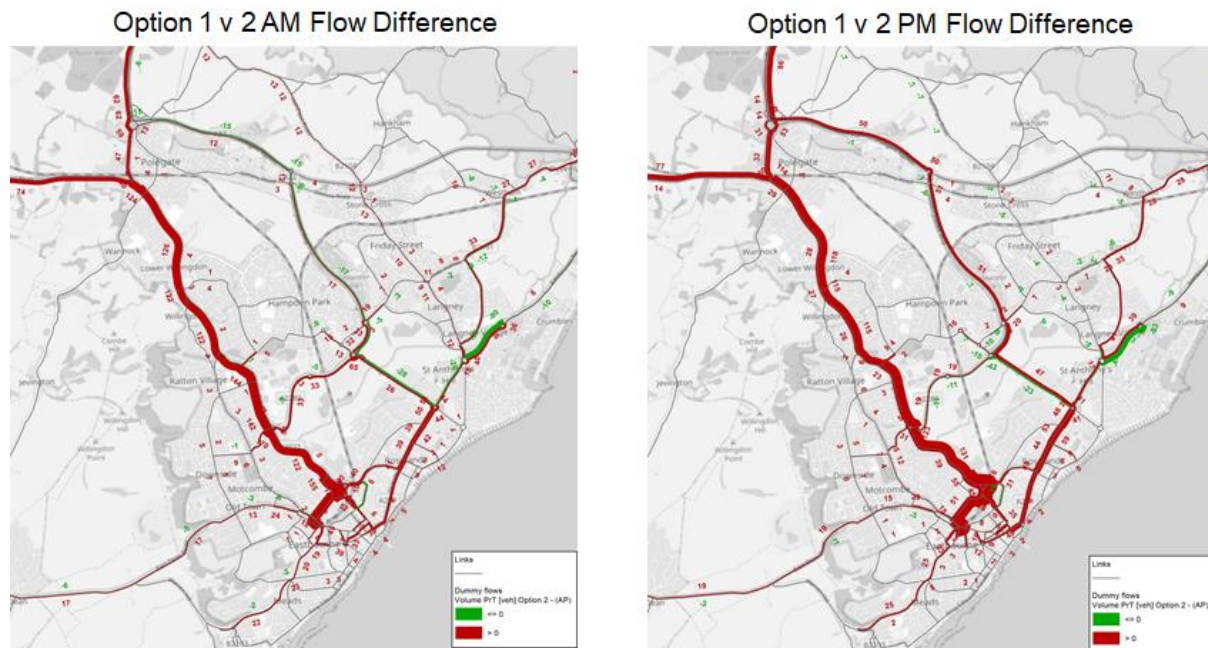


Figure 5-3 Isolated Eastbourne Local Plan Option 1 v Option 2 Flow Difference Plot (© OpenStreetMap contributors)

Option 2 will have the greater overall impact on the network as a whole, particularly on the A2021 / A2270 corridor, A27 towards the west, A22 to the north and also on the central part of the A259 corridor.

Option 1 will have a marginally higher net impact in certain directions on the A2290 and the eastern end of the A259 corridor in each of the peak hours due to an additional 10,000sqm of potential employment floorspace at Land at Southbourne and 9,250 sqm of potential employment floorspace at Sovereign Harbour.

5.4.3 Link capacities and impacts

Observed 2019 road link flows, taken from peak hour traffic counts at or near key junction approaches, have been factored to a 2040 forecast year, using TEMPro and committed development growth, as a reference case. The STEB development only flows are then added to establish the forecast Local Plan options. Table 5-3 and Table 5-4 compare the directional impact of 2019, 2040 Reference Case and 2040 with Local Plan option peak hour flows with the hourly theoretical road link design capacity for key routes across the borough (see corridor references in Figure 5-1 and Figure 5-2). A link is generally considered to be approaching theoretical capacity when the volume over capacity (VOC) is between 75%-90%, given there is insufficient spare capacity to address typical +/- flow changes throughout the peak hour. This provides

an early indication, prior to the consideration of further capacity constraints at individual junctions, of how severely different roads could be impacted and whether there is sufficient network capacity.

Table 5-3 2019, 2040 and Option 1 Local Plan peak hour link flows, capacities and volume over capacity (VOC %)

Ref	Count Location	Direction	One-way Link Capacity	AM Peak Hour Observed Flow (2019)	AM VoC ratio (2019)	AM Peak Hour Ref Case Flow (2040)	AM Option 1 Development Flow	AM Option 1 VoC (2040)
1	A27 Between Alfriston Rd and Milton Street	Eastbound	1350	979	73%	1082	52	84%
		Westbound	1350	1001	74%	1106	106	90%
2	A2270 Willingdon Area	Northbound	1700	990	58%	1094	231	78%
		Southbound	1700	1004	59%	1109	76	70%
3	A22 Between Shinewater and Lottbridge Roundabout	Northbound	2600	973	37%	1075	71	44%
		Southbound	2600	1605	62%	1774	224	77%
4	A2290 Between Lottbridge Roundabout and Birch Roundabout	Northbound	2600	862	33%	953	104	41%
		Southbound	2600	1188	46%	1313	232	59%
5	A259 Between Martello Roundabout and Pevensey Bay	Eastbound	1350	479	35%	529	24	41%
		Westbound	1350	538	40%	594	44	47%
6	A259 Between Southbourne Rd and Seaside Roundabout	Eastbound	900	877	97%	969	285	139%
		Westbound	900	839	93%	927	211	126%
7	A2021 Between Rodmill Roundabout and Upper Avenue	Northbound	900	539	60%	596	190	87%
		Southbound	900	810	90%	895	117	112%
8	A259 Between Eastdean and Warren Hill Rd	Eastbound	1350	653	48%	722	35	56%
		Westbound	1350	444	33%	491	38	39%
9	Cross Levels Way	Eastbound	1700	1115	66%	1232	115	79%
		Westbound	1700	1290	76%	1425	83	89%

Ref	Count Location	Direction	One-way Link Capacity	PM Peak Hour Observed Flow (2019)	PM VoC ratio (2019)	PM Peak Hour Ref Case Flow (2040)	PM Option 1 Development Flow	PM Option 1 VoC (2040)
1	A27 Between Alfriston Rd and Milton Street	Eastbound	1350	981	73%	1078	108	88%
		Westbound	1350	850	63%	934	73	75%
2	A2270 Willingdon Area	Northbound	1700	983	58%	1080	166	73%
		Southbound	1700	1101	65%	1210	193	83%
3	A22 Between Shinewater and Lottbridge Roundabout	Northbound	2600	1257	48%	1381	129	58%
		Southbound	2600	1161	45%	1276	173	56%
4	A2290 Between Lottbridge Roundabout and Birch Roundabout	Northbound	2600	1058	41%	1163	224	53%
		Southbound	2600	1045	40%	1148	217	53%
5	A259 Between Martello Roundabout and Pevensey Bay	Eastbound	1350	628	47%	690	62	56%
		Westbound	1350	543	40%	597	43	47%
6	A259 Between Southbourne Rd and Seaside Roundabout	Eastbound	900	1006	112%	1106	264	152%
		Westbound	900	924	103%	1015	306	147%
7	A2021 Between Rodmill Roundabout and Upper Avenue	Northbound	900	840	93%	923	162	121%
		Southbound	900	757	84%	832	188	113%
8	A259 Between Eastdean and Warren Hill Rd	Eastbound	1350	591	44%	650	45	51%
		Westbound	1350	501	37%	551	44	44%
9	Cross Levels Way	Eastbound	1700	1203	71%	1322	76	82%
		Westbound	1700	1185	70%	1302	174	87%

Table 5-4 2019, 2040 and Option 2 Local Plan peak hour link flows, capacities and volume over capacity (VOC %)

Ref	Count Location	Direction	One-way Link Capacity	AM Peak Hour Observed Flow (2019)	AM VoC ratio (2019)	AM Peak Hour Ref Case Flow (2040)	AM Option 2 Development Flow	AM Option 2 VoC (2040)
1	A27 Between Alfriston Rd and Milton Street	Eastbound	1350	979	73%	1082	56	84%
		Westbound	1350	1001	74%	1106	167	94%
2	A2270 Willingdon Area	Northbound	1700	990	58%	1094	357	85%
		Southbound	1700	1004	59%	1109	80	70%
3	A22 Between Shinewater and Lottbridge Roundabout	Northbound	2600	973	37%	1075	103	45%
		Southbound	2600	1605	62%	1774	199	76%
4	A2290 Between Lottbridge Roundabout and Birch Roundabout	Northbound	2600	862	33%	953	130	42%
		Southbound	2600	1188	46%	1313	204	58%
5	A259 Between Martello Roundabout and Pevensey Bay	Eastbound	1350	479	35%	529	32	42%
		Westbound	1350	538	40%	594	34	47%
6	A259 Between Southbourne Rd and Seaside Roundabout	Eastbound	900	877	97%	969	325	144%
		Westbound	900	839	93%	927	253	131%
7	A2021 Between Rodmill Roundabout and Upper Avenue	Northbound	900	539	60%	596	312	101%
		Southbound	900	810	90%	895	122	113%
8	A259 Between Eastdean and Warren Hill Rd	Eastbound	1350	653	48%	722	29	56%
		Westbound	1350	444	33%	491	55	40%
9	Cross Levels Way	Eastbound	1700	1115	66%	1232	110	79%
		Westbound	1700	1290	76%	1425	116	91%

Ref	Count Location	Direction	One-way Link Capacity	PM Peak Hour Observed Flow (2019)	PM VoC ratio (2019)	PM Peak Hour Ref Case Flow (2040)	PM Option 2 Development Flow	PM Option 2 VoC (2040)
1	A27 Between Alfriston Rd and Milton Street	Eastbound	1350	981	73%	1078	171	93%
		Westbound	1350	850	63%	934	88	76%
2	A2270 Willingdon Area	Northbound	1700	983	58%	1080	194	75%
		Southbound	1700	1101	65%	1210	311	89%
3	A22 Between Shinewater and Lottbridge Roundabout	Northbound	2600	1257	48%	1381	119	58%
		Southbound	2600	1161	45%	1276	238	58%
4	A2290 Between Lottbridge Roundabout and Birch Roundabout	Northbound	2600	1058	41%	1163	200	52%
		Southbound	2600	1045	40%	1148	264	54%
5	A259 Between Martello Roundabout and Pevensey Bay	Eastbound	1350	628	47%	690	52	55%
		Westbound	1350	543	40%	597	52	48%
6	A259 Between Southbourne Rd and Seaside Roundabout	Eastbound	900	1006	112%	1106	317	158%
		Westbound	900	924	103%	1015	419	159%
7	A2021 Between Rodmill Roundabout and Upper Avenue	Northbound	900	840	93%	923	201	125%
		Southbound	900	757	84%	832	319	128%
8	A259 Between Eastdean and Warren Hill Rd	Eastbound	1350	591	44%	650	64	53%
		Westbound	1350	501	37%	551	42	44%
9	Cross Levels Way	Eastbound	1700	1203	71%	1322	95	83%
		Westbound	1700	1185	70%	1302	163	86%

The analysis indicates that the A2021 (Ref.7), near Upper Avenue, and the A259 (Ref.6) approaches to Seaside Roundabout already exceed capacity. The additional

impact of the Local Plan options will exacerbate the impact at these locations with respective links exceeding capacity. The A2270, A2280 and A27 corridors will also be approaching capacity, particularly in Option 2, leading to potential severe delays on these corridors.

5.4.4 Summary of link capacities and impacts

A review of the level of traffic impact on highway link capacity, for key parts of the network in the AM and PM peaks, is summarised in Table 5-5 for the 2019 current and the 2040 Reference Case, Option 1 and Option 2 scenarios.

Table 5-5: 2019, 2040 Reference Case, Option 1 and Option 2 link volume over capacity (%)

Ref	Count Location	Direction	One-way Link Capacity	AM VoC Ratio (2019)	AM VoC Reference Case VoC Ratio (2040)	AM Eastbourne Option 1 VoC Ratio (2040)	AM Eastbourne Option 2 VoC Ratio (2040)
1	A27 Between Alfriston Rd and Milton Street	EB	1350	73%	80%	84%	84%
		WB	1350	74%	82%	90%	94%
2	A2270 Willingdon Area	NB	1700	58%	64%	78%	85%
		SB	1700	59%	65%	70%	70%
3	A22 Between Shinewater and Lottbridge Roundabout	NB	2600	37%	41%	44%	45%
		SB	2600	62%	68%	77%	76%
4	A2290 Between Lottbridge Roundabout and Birch Roundabout	NB	2600	33%	37%	41%	42%
		SB	2600	46%	50%	59%	58%
5	A259 Between Martello Roundabout and Pevensy Bay	EB	1350	35%	39%	41%	42%
		WB	1350	40%	44%	47%	47%
6	A259 Between Southbourne Rd and Seaside Roundabout	EB	900	97%	108%	139%	144%
		WB	900	93%	103%	126%	131%
7	A2021 Between Rodmill Roundabout and Upper Avenue	NB	900	60%	66%	87%	101%
		SB	900	90%	99%	112%	113%
8	A259 Between Eastdean and Warren Hill Rd	EB	1350	48%	53%	56%	56%
		WB	1350	33%	36%	39%	40%
9	Cross Levels Way	EB	1700	66%	72%	79%	79%
		WB	1700	76%	84%	89%	91%

Ref	Count Location	Direction	One-way Link Capacity	PM VoC Ratio (2019)	PM VoC Reference Case VoC Ratio (2040)	PM Eastbourne Option 1 VoC Ratio (2040)	PM Eastbourne Option 2 VoC Ratio (2040)
1	A27 Between Alfriston Rd and Milton Street	EB	1350	73%	80%	88%	93%
		WB	1350	63%	69%	75%	76%
2	A2270 Willingdon Area	NB	1700	58%	64%	73%	75%
		SB	1700	65%	71%	83%	89%
3	A22 Between Shinewater and Lottbridge Roundabout	NB	2600	48%	53%	58%	58%
		SB	2600	45%	49%	56%	58%
4	A2290 Between Lottbridge Roundabout and Birch Roundabout	NB	2600	41%	45%	53%	52%
		SB	2600	40%	44%	53%	54%
5	A259 Between Martello Roundabout and Pevensy Bay	EB	1350	47%	51%	56%	55%
		WB	1350	40%	44%	47%	48%
6	A259 Between Southbourne Rd and Seaside Roundabout	EB	900	112%	123%	152%	158%
		WB	900	103%	113%	147%	159%
7	A2021 Between Rodmill Roundabout and Upper Avenue	NB	900	93%	103%	121%	125%
		SB	900	84%	92%	113%	128%
8	A259 Between Eastdean and Warren Hill Rd	EB	1350	44%	48%	51%	53%
		WB	1350	37%	41%	44%	44%
9	Cross Levels Way	EB	1700	71%	78%	82%	83%
		WB	1700	70%	77%	87%	86%

The analysis indicates:

- The network is currently nearing or exceeding total link capacity (100%) in the peak hours on the A259 link approaches to Seaside Roundabout and A2021 link approaches to Rodmill Roundabout. Any future traffic growth on these links would lead to further congestion and delays
- The 2040 Reference Case, representing a future situation in the absence of a new Local Plan, increases traffic growth by approximately 10% across the network and will further impact on the current A259 and A2021 peak hour constraints. Other parts of the network on the A27 and A2280 Cross Levels Way will also be approaching capacity
- Option 1 will have further impacts over and above the current and 2040 Reference Case A259 and A2021 peak hour constraints. The A27, A2270 and A2280 Cross Levels Way are also all likely to exceed theoretical link capacity (75%-90%).

- Overall Option 2 has a greater impact than Option 1 on the constrained A259, A2021, A2280 and A2270 corridors. The level of impact is likely to be severe on these links and poses a risk to the future operation of the network.
- Without mitigation, the level of impact in both Local Plan options is likely to be severe on the links showing above 100% and pose a risk to the operability of the network at these locations. Elsewhere, at a link level at least, the impacts are less severe in both options, however, this will need further consideration at a junction capacity level and in the countywide model.

5.5 Potential development impacts

Further analysis has been undertaken of the larger potential development sites and clusters to understand their respective traffic impacts on the network. Table 5-6 summarises the vehicle trip generation of these sites and the principal corridor where the traffic joins the Eastbourne network.

Table 5-6: Total peak hour trip generation of larger potential sites and key impact on the network

Corridor	Potential Development Site	Land Use	Vehicle Trip Generation			
			Option 1		Option 2	
			AM	PM	AM	PM
A2270/A2021 (between A27 and Upper Avenue)	Sussex Downs College, Kings Drive	Res	178	183	223	228
	Windfall (Old Town)	Res	33	35	49	52
	Former Railway Sidings, Tutts Barn Lane	Res	37	38	64	66
A2021 (between Upper Avenue and A259)	Land adjoining Railway station and Enterprise Centre	Mixed	168	201	107	147
	Post Office Depot Upperton Rd / Southfields Rd	Mixed	37	55	76	112
	Windfall (Town Centre)	Res	125	180	253	366
	Debenhams, 152-170 Terminus Road	Mixed	24	37	60	89
	ESK, Courtlands Road	Mixed	66	76	66	76
A259 (between A2021 and Seaside roundabout)	Windfall (Seaside)	Res	105	100	117	112
	Fort Fun, Royal Parade	Res	21	22	51	52
	Land in Southbourne	Mixed	132	121	109	104
	Former Gas Works, Land East of Finmere Road	Res	44	45	71	72
	Land north of Hammonds Drive, Lottbridge Drove	Emp	43	69	43	69
A259 (between Seaside roundabout and Sovereign Harbour)	Land off Lottbridge Drove, Southbourne	Emp	62	55	62	55
	Land within Admiral Retail Park, Lottbridge Drove	Retail	33	68	33	68
	Land North of Pevensey Bay Road	Res	77	75	77	75
	Windfall (St Anthonys & Langney Point)	Res	63	55	63	55
	Sites at Sovereign Harbour	Mixed	529	840	469	777

The STEB modelling identifies the following potential sites with the highest vehicle trip generation and potential impact. **Additional commentary is provided on specific modelling assumptions made at this stage, which would need further consideration at the more detailed countywide model assessment stage:*

- **Sovereign Harbour sites** – approximately 20,000m² to 30,000m² of potential retail and office space generating up to 840 peak hour trips to the east of the borough and on the A259 corridor. The modelling also indicates longer distance trips could also be impacting on the wider network including the constrained A2021 and A2270 corridors.

**The potential end use and market catchment of the retail uses is unknown at this stage and relies on generic retail trip rates and journey to work travel patterns as a proxy. Further consideration should be given to test whether current assumptions are overestimating trip generation, distribution and distances on the network.*

- **Windfall housing sites** – Windfall housing accounts for approximately a third of housing allocated in both Option 1 (1,071 dwellings) and Option 2 (1,818 dwellings). Over 75% of this Windfall is located in and around the town centre and seafront areas of the borough, potentially adding 280 and 478 peak hour vehicle trips in the respective options, to the key A259, A2021 and A2270 corridors.

**Windfall housing, by definition, lacks certainty in location, scale, dwelling type (e.g. private or affordable, housing or flats) and parking provision. At this stage, the model has made broad assumptions on where this development could load on to the network and has also applied trip rates that reflect current ESCC parking standards. Further consideration will need to be given to the potential location of this development and impact of lower parking standards and / or car free development.*

- **Employment land on the southern side of Lottbridge Drove (Southbourne area)** will generate additional traffic onto the A2290 corridor and potentially south towards the constrained A259 corridor. The A2290 is dual carriageway with a central barrier and employment sites in this location are generally served by left-in-left-out restricted accesses. These arrangements rely on the Lottbridge, Birch and Seaside roundabouts to complement the restrictions and provide onward travel for vehicles. However, the proposed A2290 corridor schemes will convert both Birch and Seaside roundabouts to signal junctions, removing the 'U-Turn' movement and further restricting access to these sites.

**Specific access arrangements to these sites have not been fully considered at this stage within the modelling and the wider impact of signalling these junctions has not been fully captured. It is likely that an eastbound right turn lane will be required on the A2290 to conveniently access these sites and avoid wider impacts on the A2290 and A259 corridors. Further design, modelling and engagement will be required to understand the most appropriate access arrangement and where accesses to a number of land uses could be consolidated.*

- Other potential housing and mixed-use sites along A2021 Kings Drive, at the **Sussex Down College** and within the town centre, at the **Post Office depot and land adjoining the railway station**, will also notably contribute to traffic growth in the borough.

**The eventual level of parking provision and improvements to sustainable access will need further consideration at these developments.*

5.6 In-combination ‘All District’ sensitivity test

The STEB model has also been used to test the likely in-combination and cross-boundary effects of additional growth from the emerging spatial strategies of all ESCC districts. It is important to note that this is a sensitivity test, for information purposes only at this stage, given each Local Plan is still at the early option testing stage and likely to change. Furthermore, the cumulative modelled traffic patterns also need to be considered within the limitations and assumptions of the STEB model (see Appendix C), the effects of which are potentially amplified by applying STEB cumulatively at a larger countywide scale.

As the modelling exercise evolves, agreement will also be needed on how cross boundary growth is treated within the assessment, particularly concerning the level of growth that is included in the reference case and the scale of impact to be mitigated by the New Eastbourne Local Plan.

5.6.1 Cross-boundary growth

The latest Local Plan options for each of the districts are summarised in Table 5-7 and identifies up to 38,000 new houses and approximately 300,000 sqm of commercial / other use floorspace could be delivered over and above the Eastbourne options in the next 15-20 years. The spatial picture will almost certainly change as neighbouring LPAs explore alternative options as their Local Plans evolve.

Table 5-7 Emerging Local Plan Options – All ESCC Districts (excl. Eastbourne)

District/Borough	Cumulative Option A		Cumulative Option B	
	Houses (units)	Commercial / Other Floorspace (sqm)	Houses (units)	Commercial / Other Floorspace (sqm)
Wealden	16,186	170,600	16,186	170,600
Lewes (2 options)	9,714	11,500	8,820	26,500
Rother	6,831	24,088	6,831	24,088
Hastings	4,612	91,134	4,612	91,134
Total	37,343	297,322	36,449	312,322

Outside of Eastbourne, only Lewes are currently considering more than one option, assessing a west of district versus east of district pattern of development, and this is the only difference between the two cumulative option assessments. Initial testing of these two options demonstrated that both of the Lewes options had very similar impacts (net difference of <1%) on the Eastbourne network. In the interest of rationalising the number of assessments, only ‘Cumulative Option A’ has been assessed against the two Eastbourne isolated options to understand the additional ‘All District’ in-combination effects.

5.6.2 Potential cumulative impacts in Eastbourne

The additional traffic uplift of the ‘Cumulative Option A’ is summarised in Table 5-8 and Table 5-9 and demonstrates an approximate average network wide uplift of 9%-15% to the two Eastbourne isolated options in each peak hour. The impact on

individual links (see corridor locations in Figure 5-1 and Figure 5-2) is highest on the A2270 / A2021 (Ref. 2 & 7) corridor between Wealden and the west of Eastbourne. There are also notable increases along the A22 / A2290 (Ref. 3 & 4) corridor and the A259 Seaside roundabout (Ref. 6).

Table 5-8 Emerging Cumulative Option A total peak hour vehicle and uplift to Eastbourne options AM

Ref	Count Location	Direction	All District Cumulative 1	Veh. Uplift to Option 1	Veh. Uplift to Option 2	% Uplift to Option 1	% Uplift to Option 2
1	A27 Between Alfriston Rd and Milton Street	EB	1231	97	93	9%	8%
		WB	1414	202	141	17%	11%
2	A2270 Willingdon Area	NB	1685	360	234	27%	16%
		SB	1559	374	370	32%	31%
3	A22 Between Shinewater and Lottbridge Roundabout	NB	1234	88	56	8%	5%
		SB	2152	154	179	8%	9%
4	A2290 Between Lottbridge Roundabout and Birch Roundabout	NB	1118	61	35	6%	3%
		SB	1659	114	142	7%	9%
5	A259 Between Martello Roundabout and Pevensey Bay	EB	573	19	11	3%	2%
		WB	646	8	18	1%	3%
6	A259 Between Southbourne Rd and Seaside Roundabout	EB	1343	89	49	7%	4%
		WB	1338	200	158	18%	13%
7	A2021 Between Rodmill Roundabout and Upper Avenue	NB	997	211	89	27%	10%
		SB	1158	146	141	14%	14%
8	A259 Between Eastdean and Warren Hill Rd	EB	779	23	29	3%	4%
		WB	555	26	9	5%	2%
9	Cross Levels Way	EB	1406	59	64	4%	5%
		WB	1630	122	89	8%	6%
Approximate Network Average			AM			12%	9%

Table 5-9 Emerging Cumulative Option A total peak hour vehicle and uplift to Eastbourne options PM

Ref	Count Location	Direction	All District Cumulative 1	Veh. Uplift to Option 1	Veh. Uplift to Option 2	% Uplift to Option 1	% Uplift to Option 2
1	A27 Between Alfriston Rd and Milton Street	EB	1419	233	170	20%	14%
		WB	1161	154	139	15%	14%
2	A2270 Willingdon Area	NB	1799	553	525	44%	41%
		SB	1818	415	297	30%	20%
3	A22 Between Shinewater and Lottbridge Roundabout	NB	1626	115	125	8%	8%
		SB	1675	226	161	16%	11%
4	A2290 Between Lottbridge Roundabout and Birch Roundabout	NB	1438	52	76	4%	6%
		SB	1544	179	132	13%	9%
5	A259 Between Martello Roundabout and Pevensey Bay	EB	768	16	26	2%	3%
		WB	668	28	19	4%	3%
6	A259 Between Southbourne Rd and Seaside Roundabout	EB	1550	181	128	13%	9%
		WB	1554	233	120	18%	8%
7	A2021 Between Rodmill Roundabout and Upper Avenue	NB	1361	276	237	25%	21%
		SB	1236	216	85	21%	7%
8	A259 Between Eastdean and Warren Hill Rd	EB	730	36	17	5%	2%
		WB	631	36	38	6%	6%
9	Cross Levels Way	EB	1518	120	101	9%	7%
		WB	1540	64	75	4%	5%
Approximate Network Average			PM			15%	11%

As a worse case, the additional impact of the 'Cumulative Option A' has been combined with the Eastbourne Isolated Option 2 to assess the potential impact on link capacity (VOC %). Table 5-10 compares this growth with the corresponding link capacities for the existing (2019), 2040 Reference Case and 2040 Eastbourne isolated options. The analysis demonstrates that the link capacity issues, identified previously on the A27 / A2270 / A2021 corridor and A259 around Seaside roundabout, will worsen with a number of links well in excess of theoretical capacity and at risk of severe congestion and delay.

Table 5-10 'Cumulative Option A' comparison with Reference Case and Eastbourne Options 1 & 2 link capacity VOC (%)

Ref	Count Location	Direction	One-way Link Capacity	AM VoC Ratio (2019)	AM VoC Reference Case VoC Ratio (2040)	AM Eastbourne Option 1 VoC Ratio (2040)	AM Eastbourne Option 2 VoC Ratio (2040)	AM All District Cumulative VoC Ratio (2040)
1	A27 Between Alfriston Rd and Milton Street	EB	1350	73%	80%	84%	84%	91%
		WB	1350	74%	82%	90%	94%	105%
2	A2270 Willingdon Area	NB	1700	58%	64%	78%	85%	99%
		SB	1700	59%	65%	70%	70%	92%
3	A22 Between Shinewater and Lottbridge Roundabout	NB	2600	37%	41%	44%	45%	47%
		SB	2600	62%	68%	77%	76%	83%
4	A2290 Between Lottbridge Roundabout and Birch Roundabout	NB	2600	33%	37%	41%	42%	43%
		SB	2600	46%	50%	59%	58%	64%
5	A259 Between Martello Roundabout and Pevensy Bay	EB	1350	35%	39%	41%	42%	42%
		WB	1350	40%	44%	47%	47%	48%
6	A259 Between Southbourne Rd and Seaside Roundabout	EB	900	97%	108%	139%	144%	149%
		WB	900	93%	103%	126%	131%	149%
7	A2021 Between Rodmill Roundabout and Upper Avenue	NB	900	60%	66%	87%	101%	111%
		SB	900	90%	99%	112%	113%	129%
8	A259 Between Eastdean and Warren Hill Rd	EB	1350	48%	53%	56%	56%	58%
		WB	1350	33%	36%	39%	40%	41%
9	Cross Levels Way	EB	1700	66%	72%	79%	79%	83%
		WB	1700	76%	84%	89%	91%	96%

Ref	Count Location	Direction	One-way Link Capacity	PM VoC Ratio (2019)	PM VoC Reference Case VoC Ratio (2040)	PM Eastbourne Option 1 VoC Ratio (2040)	PM Eastbourne Option 2 VoC Ratio (2040)	PM All District Cumulative VoC Ratio (2040)
1	A27 Between Alfriston Rd and Milton Street	EB	1350	73%	80%	88%	93%	105%
		WB	1350	63%	69%	75%	76%	86%
2	A2270 Willingdon Area	NB	1700	58%	64%	73%	75%	106%
		SB	1700	65%	71%	83%	89%	107%
3	A22 Between Shinewater and Lottbridge Roundabout	NB	2600	48%	53%	58%	58%	63%
		SB	2600	45%	49%	56%	58%	64%
4	A2290 Between Lottbridge Roundabout and Birch Roundabout	NB	2600	41%	45%	53%	52%	55%
		SB	2600	40%	44%	53%	54%	59%
5	A259 Between Martello Roundabout and Pevensy Bay	EB	1350	47%	51%	56%	55%	57%
		WB	1350	40%	44%	47%	48%	49%
6	A259 Between Southbourne Rd and Seaside Roundabout	EB	900	112%	123%	152%	158%	172%
		WB	900	103%	113%	147%	159%	173%
7	A2021 Between Rodmill Roundabout and Upper Avenue	NB	900	93%	103%	121%	125%	151%
		SB	900	84%	92%	113%	128%	137%
8	A259 Between Eastdean and Warren Hill Rd	EB	1350	44%	48%	51%	53%	54%
		WB	1350	37%	41%	44%	44%	47%
9	Cross Levels Way	EB	1700	71%	78%	82%	83%	89%
		WB	1700	70%	77%	87%	86%	91%

5.6.3 Potential cross-boundary impacts of Eastbourne growth

The key cross-boundary impacts of the isolated Eastbourne Local Plan Option 2 have been assessed, as the worse-case, and the greatest impacts will be towards Wealden with additional two-way peak hour flows of up to 500 vehicles on the A2270 and 300 vehicles on the A22 corridors leading north and east-west along the A27 SRN between Drusilla's, Cophall and Pevensy Roundabouts. The impacts are more negligible on the wider network and towards the other ESCC districts subject to further assessment in the countywide model.

5.7 Key Junction Impacts

The STEB analysis has identified the key corridor impacts of both the Eastbourne Local Plan options and also the Cumulative 'All District' growth. An initial list of key junctions on these corridors has been identified (see Figure 5-4) to understand specific impacts at key nodes on the network, including junctions on the SRN and in the south of Wealden, which could be at risk in the future. The list has been determined based on existing Google[®] traffic data, previous studies and in consultation with key stakeholders. Subject to further modelling, additional junctions may need consideration also.

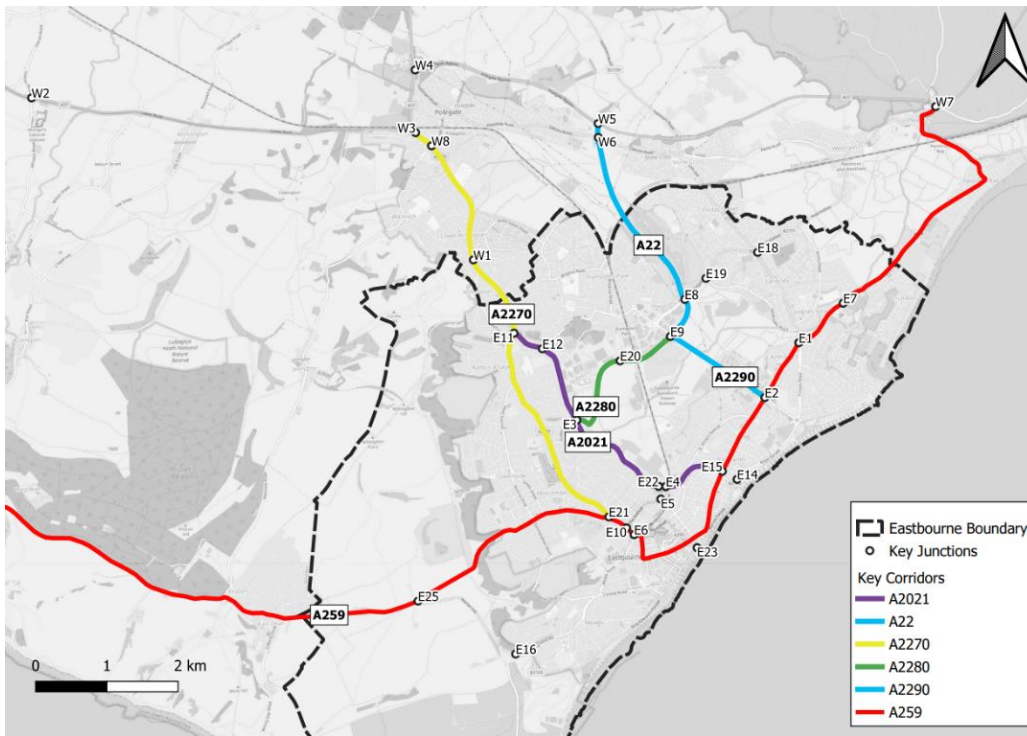


Figure 5-4 Map of key corridors and junctions (© OpenStreetMap contributors)

The isolated Eastbourne Local Plan Option 2 is generally considered to be the ‘worse case’ with the exception of some higher impacts around the A259 Sovereign Harbour area in Option 1. The isolated development only total vehicle flows (all junction arms) and percentage impacts at key junctions for the isolated Option 2 and the Cumulative ‘All District’ option are summarised in Table 5-11 with higher impacts highlighted in increasingly darker red.

Table 5-11 Cumulative and Eastbourne isolated Option 2 development only junction impacts (total veh. / % increase) – AM & PM peak hour (*“No Base” – observed / background data unavailable)

Junction	Ref	Corridor	AM				PM			
			Isolated Impact	Isolated % Impact	Cumulative Impact	Cumulative % Impact	Isolated Impact	Isolated % Impact	Cumulative Impact	Cumulative % Impact
Beachy Head Road/Upper Duke's Dr.	E16	-	66	No Base	76	No Base	42	No Base	51	No Base
B2104/Langney Rise	E18	-	175	8%	316	15%	184	7%	369	15%
B2191/Sevenoaks Road	E19	-	177	15%	292	25%	196	9%	367	17%
Shinewater Roundabout	E8	A2290	373	8%	692	15%	449	9%	879	18%
Lottbridge Roundabout	E9	A2290/A2280	437	10%	561	13%	532	13%	724	18%
B2247/A22 Roundabout Dittons	W6	A22	217	5%	588	13%	293	7%	801	18%
A259/Warren Hill	E25	A259	84	7%	158	13%	106	8%	192	15%
Langney Roundabout	E1	A259	597	17%	726	21%	869	21%	1024	24%
Seaside Roundabout	E2	A259	767	22%	1052	30%	967	25%	1296	34%
Harbour Roundabout	E7	A259	256	No Base	267	No Base	364	No Base	378	No Base
Beamsley Road/Royal Parade	E14	A259	22	No Base	22	No Base	21	No Base	21	No Base
A2021/A259	E15	A259	491	31%	658	41%	626	35%	823	46%
A259/The Avenue	E10	A259	528	22%	750	31%	659	29%	954	42%
The Goffs/Upperton Road	E21	A259	143	8%	172	9%	188	11%	228	14%
Station Roundabout	E4	A259	475	23%	682	33%	589	30%	863	44%
Bedfordwell Roundabout	E5	A2021	473	No Base	661	No Base	721	No Base	881	No Base
Upper Avenue Roundabout	E6	A2021	618	67%	858	92%	763	61%	1098	88%
A2021/Upper Avenue	E22	A2021	580	No Base	815	No Base	706	No Base	1040	No Base
B2106/Cavendish Place	E23	A2021	16	No Base	16	No Base	10	No Base	10	No Base
Rodmill Roundabout	E3	A2021/A2280	658	18%	1033	28%	833	21%	1419	36%
Decoy Roundabout	E12	A2021	548	No Base	943	No Base	650	No Base	1259	No Base
Willington Roundabout	E11	A2270	447	No Base	1027	No Base	528	No Base	1325	No Base
Huggetts Lane/A2270	W1	A2270	437	No Base	1042	No Base	506	No Base	1338	No Base
A2270/Wannock Road	W8	A2270	454	19%	1086	45%	512	19%	1413	51%
Broadwater Roundabout	E20	A2280	226	7%	323	10%	258	9%	396	13%
Station Road/A27/Alfriston Road	W2	SRN	223	9%	469	20%	259	10%	597	24%
A27/A2270	W3	SRN	434	14%	1153	36%	489	14%	1422	39%
Cophall Roundabout	W4	SRN	350	7%	1173	23%	443	8%	1658	32%
Golden Jubilee Roundabout	W5	SRN	167	4%	529	13%	239	6%	798	20%
Pevensey Roundabout	W7	SRN	149	No Base	631	No Base	176	No Base	863	No Base

The STEB modelling indicates that total flows will increase significantly at key junctions across the network in both the isolated and cumulative assessments, including:

- **A22 / A2290 Corridor** – total flows will increase by up to 13% (+532 veh.) in the isolated and 18% (+879 veh.) in the cumulative assessment. These flow uplifts will need to be considered alongside the A22 / A2290 schemes currently being assessed as part of an associated corridor study. The impact of converting Birch and Seaside roundabouts to signal junctions will need further consideration, particularly for sites located along the A2290 corridor with restricted left in-left out accesses.
- **A259 Corridor** – impacts to the east of borough, around Seaside roundabout and Langney roundabout, could be up to 25% (+969 veh.) in the isolated and 34% (1,296 veh.) in the cumulative. A scheme for Seaside roundabout is also being assessed for the A22 / A2290 corridor and will need further consideration with these flows. Flow increases are proportionally higher where the A259 intersects with the A2021 and west of the town centre at The Avenue.
- **A2021 Corridor** – the analysis shows very high increases, in both the isolated and cumulative, on the A2021 in the areas immediately surrounding the town centre. Acknowledging this is one of the principal routes in and out of Eastbourne, these increases should be treated with some caution and are potentially influenced by the high level of Windfall housing proposed in the town centre and edge of town centre in the two options (850 units Option 1 / 1,451 units Option 2). The location and where these developments potentially load traffic onto the network is unknown and an assumption only at this stage. Furthermore, the impact of ‘car free’ development in the town centre has not been considered at this stage.

The impacts further north on the A2021, at Rodmill Roundabout and Decoy Roundabout are also high in both the isolated (21% / 833 veh.) and cumulative (36% / 1,419 veh.).

- **A2270 Corridor** – the A2270 is a continuation of the A2021 to the north and provides the principal north-south route to the west of the borough and with neighbouring Wealden. Flow increases are similar to the A2021 and demonstrate that the corridor junctions will be significantly impacted by the isolated and cumulative growth.
- **A2280 Corridor** – the corridor provides a key east-west alternative to the A2021 / A259 corridor and is already congested at times. The key constraints are where traffic joins the A2021 and A2290 corridors at Rodmill and Lottbridge roundabouts and will largely be influenced by the impacts on these adjacent corridors as well as the 7%-13% increases forecast along the A2280.

5.8 Assessment Summary

The STEB model provides a high-level assessment of future traffic impacts on the key road network in Eastbourne. The traffic data used is considered robust and ‘worse case’ to stress test network capacity and highlight the potential risks to further congestion, constraints and where mitigation is most likely needed. The initial analysis at this stage indicates the following:

- The key A259, A2021 and A2270 corridors will be most impacted in both the isolated and cumulative assessments. It is likely that highway link capacity will be exceeded, as well as junction capacity, on these corridors.

- The STEB model assigns much of the wider north-south development trips to the A2270 / A2021 / A259 corridor and it is feasible that a full assignment model will redistribute some of this traffic to the A22 / A2290 / A259 corridor. Noting that both routes end up at the constrained Seaside roundabout and adjacent A259 approaches.
- Overall, Option 2 has a greater impact than Option 1 on the constrained A259, A2021, A2280 and A2270 corridors. The level of impact is likely to be severe on these links in both options and poses a risk to the future operation of the network.
- The potential employment and retail floorspace at Sovereign Harbour and Southbourne, to the east of the borough, are attracting significant levels of traffic along the A259 corridor, particularly in the PM, in both options.
- There are some marginal directional differences on the A2290 and the eastern end of the A259 at Sovereign Harbour, where there is a trade-off between the level of employment floorspace and housing between the two options at these locations.
- Further consideration is needed of the potential impacts of reduced parking or car free development at town centre sites, given the proposed level of uncertain Windfall development and specific site details.
- Mitigation, to encourage sustainable modal shift and also address local congestion 'hotspots' will be needed to address the likely severe traffic impacts of both options.

The development trip information, including trip rates and journey purposes, will need to be refined through further scenario testing in the countywide model as more detailed development information becomes known.

6 Sustainable Transport



6.1 The case for mitigation

The STEB modelling indicates that the level of Local Plan related traffic growth, and from elsewhere in the region, could be significant with parts of the network severely constrained in the future if car dependency is left unchecked. The network is already constrained and interventions are needed to encourage both entrenched and future car use to utilise other more sustainable modes.

An initial review of the likely scale and type of interventions needed to encourage modal shift and reduce predicted levels of car use on the network has been undertaken. These interventions will need to be developed into a comprehensive sustainable mitigation strategy to confirm what is deliverable and how it will support the Local Plan.

A phased approach is likely to be needed across the plan period, moving from an enhanced 'business as usual' scenario in the short term towards more 'ambitious' scenarios towards the end of the Plan, transforming travel behaviour and responding to new and emerging technologies. Similarly, the Local Plan is being assessed against forecast traffic patterns some 15+ years in the future, and uncertainties around external drivers of travel behaviour, such as net-zero, technological changes, fuel prices, new ways of working and global events, emphasises the need for a proportionate and flexible approach to delivering specific measures.

This section provides an initial framework of evidence, likely opportunities and challenges facing the proposed Local Plan vision, objectives and key transport themes (summarised in section 3.1 and Table 3-1) to outline the potential for modal shift in Eastbourne.

6.2 Wider evidence

The mapping of future travel behaviour trends is subject to levels of uncertainty with different socio-economic, environmental and technological drivers. The following sections explore the wider evidence of where future sustainable scenarios have been assessed, where initiatives have worked in practice and what might reasonably be applied in Eastbourne.

6.2.1 TfSE Sustainable Routes to Growth

TfSE¹⁰ have tested distinct scenarios to arrive at a preferred 'Sustainable Route to Growth', combining economic aspirations with the positive aspects of 'sustainable' and 'digital' futures, including:

- Investment in sustainable transport to support cross-regional travel
- Targeted investment in orbital coastal strategic corridors (especially rail)

¹⁰ [Transport Strategy for the South East – Scenario Forecasting Summary Report \(Steers 2019\)](#)

- Fast adoption of digital technology
- Demand management policies

TfSE looks beyond the 2039 Eastbourne Local Plan period and up to 2050. It provides an appropriate projection of the impacts of wider strategy interventions in the region, which could be translated into potential modal shift at a local level. Figure 6-1 illustrates TfSE's expected reductions in car use (-9%), and corresponding increases in sustainable modes for their preferred 'Sustainable Route to Growth'. As part of their scenario testing, TfSE have also explored a potential 'Sustainable Future', where a more ambitious reduction in car use (-15%) could be achieved through a greater focus on demand management. While this latter scenario is not necessarily being prioritised at a regional level, it could reasonably be prioritised in specific locations with the potential to support greater levels of sustainable access, such as Eastbourne, without compromising potential economic growth.

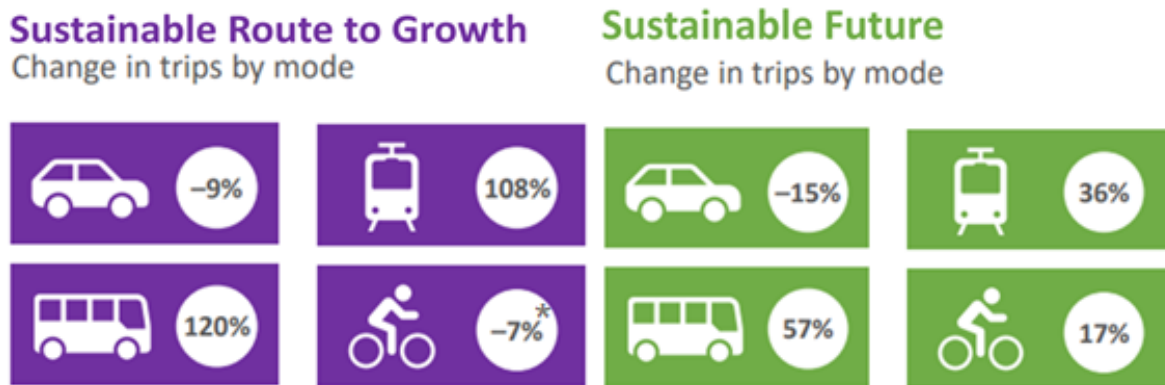


Figure 6-1 Transport Strategy for the South East, Mode Shift by Scenario (source TfSE 2019)¹⁰

*Walking and cycling trips potentially fall (-7%) in the Sustainable Route to Growth scenario due to a relative decline in the cost and shift towards other sustainable modes

The roles of future mobility and digital connectivity are still in their infancy with only emerging evidence around 'what-works-well-and-where'. The TfSE Future Mobility Strategy¹¹ sets out a vision for the South East and provides a prioritised framework for 'place-based bundles' for different geographies.

Eastbourne is described by TfSE as a 'Coastal Major Economic Hub (MEH)' with a stronger transport network and higher investment potential to incubate new technologies. Figure 6-2 illustrates TfSE's priorities, from very low (VL) to very high (VH), and the range of interventions to typically be delivered in a location similar to Eastbourne:

¹¹ [Future mobility strategy \(TfSE 2021\)](#)

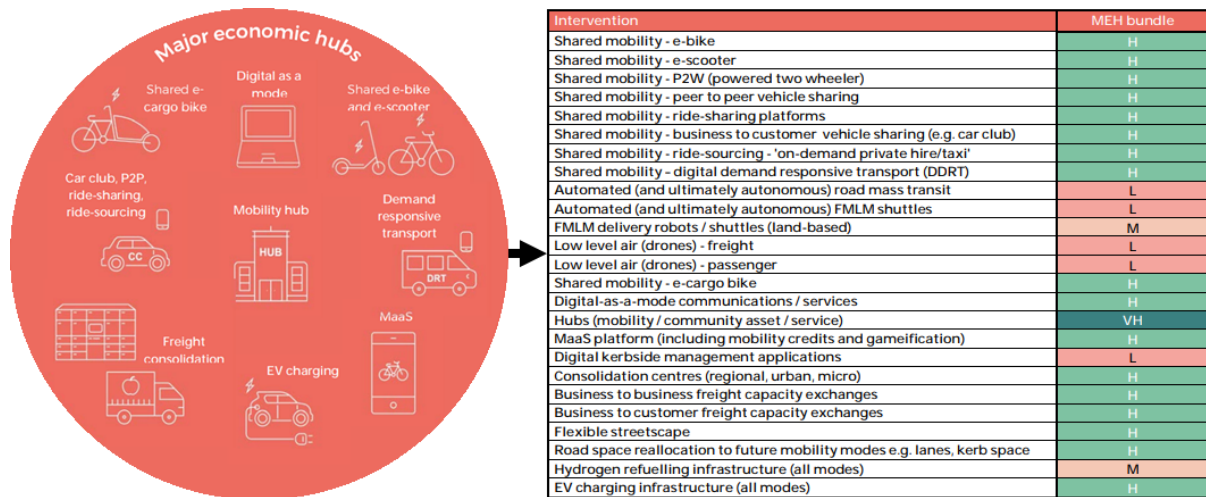


Figure 6-2 TfSE Future Mobility Strategy – 'place-based bundles' priorities for Coastal MEH (very low (VL) to very high (VH)) (source TfSE 2021)

The TfSE approach provides a blueprint for Eastbourne to start moving from an enhanced 'business as usual' short term future to a more sustainable and technology based longer term future, by applying the following measures to reduce car dependency and ownership:

- Making active travel the first choice for short journeys
- Enhanced partnerships and improvements to interurban and rural public transport services
- Placing zero emission bus rapid transit (BRT) at the centre of the transport system
- Planning for and adapting to technology 'place-based bundles', reducing car dependency and ownership

6.2.2 Sustainable Travel Towns

The DfT selected three Sustainable Travel Towns (STTs) in 2004, at Darlington, Peterborough and Worcester, to receive a joint total of £10 million in funds to implement 'smart choice' programmes over a five-year period. An evaluation of the longer terms impacts¹² of this investment was undertaken in 2016 to understand the overall effects and concluded that the programmes were broadly successful in meeting and sustaining these objectives, with a reduction of 7-10% in the number of car driver trips over 10 years.

The three STTs had populations of approximately 100,000-180,000 and share some similar geographies to Eastbourne. A similar STT template could reasonably be delivered in Eastbourne to support the overarching TfSE targets of reducing car travel by approximately 10%, or more with a greater level of investment to encourage sustainable travel options and discourage car use.

Funding will be a key challenge for any similar programme applied in Eastbourne. Both Darlington and Peterborough used wider Local Sustainable Transport Funds (LSTF) and developer S106 funding to increase their investment over 10 years to approximately £15m each (approximately £100 per head of population in 2004 prices).

¹² [Sustainable travel towns: An evaluation of the longer-term impacts \(TRL 2016\)](#)

A key challenge will be the need for a higher level of funding per head of population to achieve, and improve on, this level of modal shift.

6.2.3 Funding considerations

Applying these concepts to Eastbourne will require significant investment in sustainable transport beyond current levels. Careful consideration will need to be given to how this can be funded and delivered within the context of a Local Plan Infrastructure Delivery Plan (IDP) and viability. Funding considerations could include:

- In March 2021 the Government released their prospectus for the £4.8bn Levelling Up Fund to support investment for high value local infrastructure, including transport, in places where it can make the biggest difference to everyday life, including ex-industrial areas, deprived towns and coastal communities
- The 2021 Autumn Budget and Spending review included £3 billion for buses (including support for 4000 Zero emission buses) and £2 billion for walking and cycling. Similarly, £1.3 billion has been announced to support the roll out of charging infrastructure for Electric Vehicles
- The ESCC BSIP and enhanced partnerships with operators will help unlock central funding and further support for public transport as part of a countywide approach
- The delivery of an updated ESCC Local Transport Plan (LTP) 4 will allow available funding for infrastructure and sustainable travel to be tailored to the emerging spatial strategy across the county
- Developer contributions, through Section 106 and Community Infrastructure Levies (CILs), provide the mechanism for securing development specific funding for infrastructure in a district as well as match funding for any available central and regional funding opportunities
- Explore wider funding opportunities, as and when they are announced, to support growth and infrastructure, similar to previous rounds of the Housing Infrastructure Fund (HIF), Local Growth Fund (LGF) and MRN funding, as well as the emerging NH Route Investment Strategy (RIS3) for any cross-boundary impacts on the SRN. While these opportunities have traditionally tended to allocate funding towards highway infrastructure, potentially locking in car dependent growth, a fresh approach is needed to deliver positive outcomes for innovative and sustainable transport infrastructure.
- Conventional appraisal metrics typically focus on car journey time savings and highway capacity, but do not capture carbon, health, wellbeing, economic and environmental impacts. Consider developing alternative multi-criteria approaches to modelling and appraisal with broader metrics relating to place, social interactions and quality. The DfT Early Assessment Sifting Tool (EAST) could be used with wider metrics to complement the transport planning policy perspective of 'planning for people and places' developed by Professor Peter Jones – UCL (see Table 2-1).

6.3 Sustainable transport and future mobility options

6.3.1 Planning for sustainable transport and future mobility

The emerging Local Plan process is an opportunity to apply a single strategy approach and integrate behaviour change across a range of different interventions to reduce car

travel and continue to build consensus and commitment to the Council’s vision and objectives.

This approach will need to integrate the infrastructure and technology requirements of physical interventions with the principles of urban design and placemaking as outlined in Figure 6-3. This will maximise the sum of the parts of each intervention and develop a coherent delivery strategy that encourages modal shift and improves the overall fabric of the borough environment and public realm.

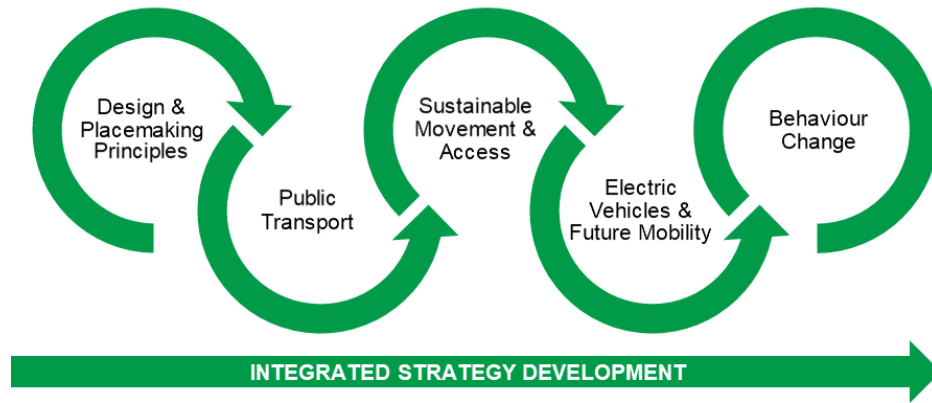


Figure 6-3 Integrating sustainable options, future mobility and placemaking with behaviour change

6.3.2 Accessibility at new development

A key component of promoting accessibility to new development is a strategy for ‘door to door’ journeys, which should primarily be made by walking, cycling and/or public transport. This strategy would address the wider street, walking, cycling and local bus service networks within the borough, ensuring that people can travel from ‘door to door’ sustainably.

This builds on a parallel Sustainable Transport Audit (STA) study being undertaken to understand the existing level of sustainable accessibility to development sites included in the two current Local Plan options. Analysis included the assessment of travel times and distance between key service attractors (destinations) and Local Plan developments (origins). Further analysis of catchment areas for non-residential and mixed use (residential and non-residential) developments was also undertaken, to assess levels of accessibility to key catchment areas for employees and customers.

Figure 6-4 and Figure 6-5 illustrate the collective levels of accessibility by all sustainable modes for the new Local Plan Options 1 and 2 sites (all development locations are potential only and subject to change). In relation to the key travel corridors identified to be most impacted by forecast traffic growth in section 5. For every site, the minimum travel time via public transport, cycle and walk has been calculated to each of the nearest attractor types and accessibility scores were allocated based on journey time bands appropriate for each attractor type and mode. These journey time bands allowed an overall score to be allocated to each site. Scores are expressed as a % with 60%-100% representing good accessibility across all modes (PT, walking and cycling).

The analysis indicates that sustainable accessibility to key services, within a reasonable journey time, varies across the borough for public transport and walking. However, cycle accessibility is generally more favourable, given the relatively small area of the borough, high population density and ability to cycle to a number of key services.

Overall, general accessibility levels are good, particularly in and around the town centre, and the lowest levels are found to the east of the borough near the A259 corridor. Accessibility along the A22 / A2290, A2021, A2270 and central section of the A259 all demonstrate moderate to very good levels of accessibility and the potential to promote sustainable travel in the future.

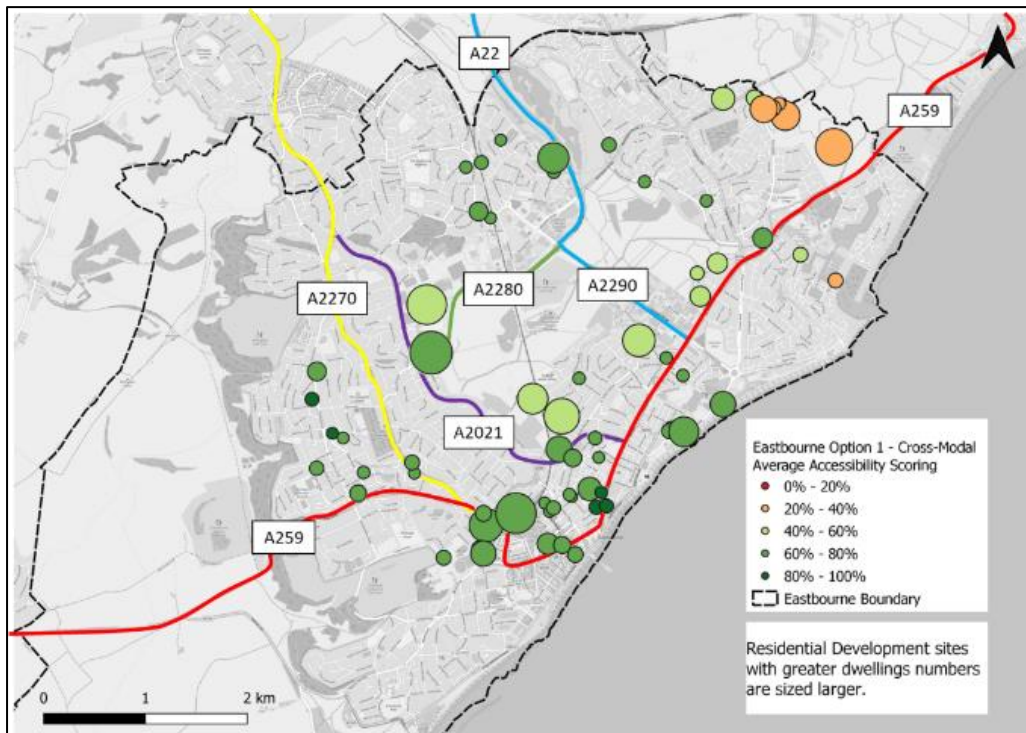


Figure 6-4 Levels of Accessibility of Local Plan Option 1 potential sites in relation to key corridors (© OpenStreetMap contributors)

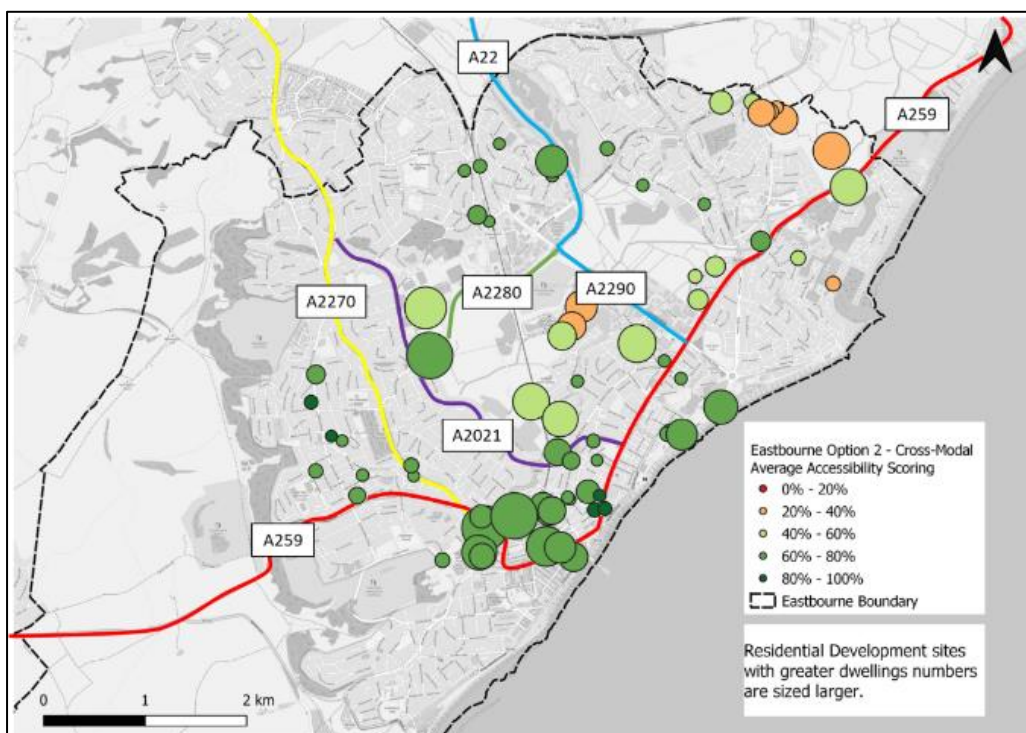


Figure 6-5 Levels of Accessibility of Local Plan Option 2 potential sites in relation to key corridors (© OpenStreetMap contributors)

A second phase of STA work has also been undertaken to overlay the long list of ESCC LCWIP routes (see section 4) with the new Local Plan options. This provided a gap analysis of where routes could be prioritised to help serve future development and improve the network. The analysis indicated that the LCWIP proposals and existing routes provided a good level of cycle connectivity with most sites within 500m of the network. However, while the borough is generally flat for cycling, further segregation and cycle priority on specific road-based connections is recommended to enhance the overall cycle experience and maximise further modal shift.

Walking routes scored less favourably than cycling. Overall footway condition, coherence and widths reduce the attractiveness of walking. A lack of segregation, proximity to high traffic volumes and limited crossing opportunities, particularly at the eastern end of the A259 corridor, acts as a barrier to pedestrian movement and a lower perception of safety.

Larger sites, including those at East Sussex College, on A2021 Kings Drive, and development in and around the town centre have the greatest potential to deliver sustainable transport options. Conversely, a high proportion (32%) of Eastbourne's housing delivery is allocated to Windfall, which is delivered sporadically across the plan period, difficult to plan for and unlikely to provide significant funding for mitigation. Opportunities and challenges for accessibility at new development are summarised below.

New development accessibility opportunities and challenges

Opportunities:

- Finalise relevant development frameworks, design codes and infrastructure requirements prior to permitting new development, particularly strategic sites, to ensure proposals align with the Council's vision and objectives
- Develop placemaking and design principles to masterplan in active travel and public transport connectivity (c 400m from most homes) from the start to deliver attractive and healthy streets from day one and create '15-minute' neighbourhoods
- Secure effective Travel Plans to complement and deliver overarching Eastbourne approach
- Deliver high quality housing close to attractive employment opportunities and key services
- Developer contributions to wider off-site improvements to active travel, bus, car clubs, micro-mobility initiatives, improve crossing facilities on 'key streets' and junctions
- Provide EV charging infrastructure for vehicles, e-bikes and e-scooters
- Deliver ultrafast/5G digital connectivity
- Provide services, live/work balance and 'first/last mile' micro-hubs at larger sites
- Review parking standards and consider car free in accessible/town centre locations

Challenges:

- Unpredictable and phased delivery
 - Negotiating with developers, viability and level of contribution available
 - High proportion of uncertain Windfall and smaller scale development with lower potential for contributions and harder to plan for
 - Coordinating meaningful and sustained public transport contributions across groups of developers
 - Additional traffic generation on constrained corridors e.g. A259, A2021 and A2270
-

6.3.3 Behaviour change

Behaviour change needs to be a key outcome of the strategy to change ‘hearts and minds’ and engender a partnership approach. Campaigns have traditionally focused on engagement with businesses and organisations to set up workplace and school travel plans to promote broader travel awareness and underpin more targeted initiatives to reduce car travel. Other emerging interventions, including the following, will also need to be considered as technologies and working practices continue to evolve.

Homeworking / Impact of COVID-19 opportunities and challenges**Opportunities:**

In response to the COVID-19 pandemic, many organisations asked their employees to work from home where possible. This work-from-home ‘experiment’ has potentially accelerated and increased trends towards more flexible and remote working practices, digitisation, and tele-working. There is consensus¹³ that UK businesses aim to implement hybrid working models, signalling that working from home and some level of travel reduction is likely to stay beyond the COVID-19 pandemic.

Analysis of DfT data for transport use during the coronavirus (COVID-19) pandemic¹⁴ shows that traffic levels have significantly reduced at times since March 2020. The period of May 2021 up to December 2021, following implementation of Step 3 of the Government Roadmap out of lockdown and potentially a crude representation of what a ‘new normal’ might look like, shows an England average reduction in car use of approximately 7% per day. Noting this would need to be monitored further and within an ESCC context.

The continued investment and roll out of digital superfast broadband and 5G networks and the facilitation of local teleworking-hubs in new development and key destinations will also enable these travel reducing behaviours in Eastbourne.

Challenges:

- Potential for traffic levels to return to normal once restrictions are lifted without counter measures
-

¹³ [Working from Home: The Sustainability Question \(London School of Economics April 2021\)](#)

¹⁴ [Transport use during the coronavirus \(COVID-19\) pandemic \(DfT February 2022\)](#)

- Evidence also points towards a potential substitution effect whereby people might be driving less for work but, at the same time, they might be driving more often for other purposes such as shopping, socialising or recreation at other times of day
- COVID-19 has led to reductions in public transport use, loss of revenue and the potential removal of marginal, yet vital, services
- Impacts on viability, vibrancy and service sector in town centres and the need to travel further for services

Reduced Car Ownership and Car Free Development opportunities and challenges

Opportunities:

Parking provision in terms of its location, quantity, cost and the way users pay for it, is a key influence on car use. Reduced car ownership in central urban areas, like Eastbourne, will also free up existing road space for public realm improvements for other modes and could be supplemented by on-street or development-based shared-mobility options including car clubs, micro-mobility hubs or on-street EV charging stations.

Brighton and Hove City Council (BHCC) provide a regional template for ‘car free developments’ in order to meet the objectives for their City Plan. New residential development is assessed on a case-by-case basis looking at: scale and type of development, accessibility of the location to sustainable modes, and the current capacity of surrounding streets.

BHCC has relatively low car ownership levels (62% of households have at least 1 car/van compared to the Eastbourne 2021 average of 71%). Approximately 65% of residents live and work in Eastbourne, similar to Brighton, however, 53% drive to work compared to 30% in Brighton, reflecting the potential for significant mode shift for shorter journeys. Furthermore, the analysis of development trip rates at potential town centre sites indicate that new Local Plan car trips could be reduced by up to 20% depending on the level of parking reduction delivered.

Case Study:

Completed in 2002, the BedZED (Beddington Zero Energy Development) community in Sutton Borough did not provide specific residential parking spaces with housing and parking must be paid for separately as an annual charge. Separating the cost of parking from housing has resulted in significantly lower car ownership levels (54%) than Sutton Borough as a whole (71%), which is the same as Eastbourne’s level of ownership. Investment in alternatives, including quality public transport, walking and cycling, is key to the success of these parking schemes.



Source: Peabody.org.uk

Challenges:

- Subjective nature of imposing ‘car free’ restrictions on residential development can provide challenges for planning and political acceptability
 - Investment in alternatives is central to the success of reduced parking schemes – particularly well-developed public transport networks
 - The need for extensive controlled parking enforcement and permit systems
 - Displacement of parking demand into wider urban areas and surrounding streets
-

Electric Vehicles opportunities and challenges

Opportunities:

In 2020 the Government announced sales of new petrol and diesel cars will end in the UK by 2030 and over £1.8bn will be invested in infrastructure and grants to increase access to zero-emission vehicles. At a local level, EVs will support the decarbonisation of the Local Plan and the borough will need to support their uptake by significantly enhancing the charging network and through a range of policies e.g. traffic regulation orders, parking tariffs, residential parking zones, EV on-street infrastructure and at new developments. A fleet of electric car clubs would help reduce overall car ownership and encourage trips, where necessary, by cleaner vehicles to contribute to a net zero carbon town.

Challenges:

- EV strategy needed to define the technology and appropriate roll out of infrastructure
 - Not necessarily a universal solution to reducing car travel, congestion, overall particulate emissions or car ownership
 - Implementing energy networks to supply EV charging infrastructure
 - Planning and physical constraints to delivering widespread on-street charging infrastructure
-

6.3.4 Active travel

Where possible, walking and cycling needs to be the primary travel choice for shorter journeys. The LCWIP schemes, ongoing public realm improvements around the town centre and the Council’s own car free vision in the town centre provide a valuable starting point to improve the overall active travel environment in Eastbourne to:

- Ensure the existing street network is attractive for walking and cycling
- Revitalise the borough’s existing walking and cycling network
- Filling in key missing links in the existing borough cycling and walking network
- Reduce severance
- Provide safe and convenient connections to the wider active travel network

Active travel opportunities and challenges

Opportunities:

In 2022 the Highway Code¹⁵ updated the hierarchy for road users placing those most at risk in the event of a collision at the top of the hierarchy. This hierarchy will need to be established around key corridors and local connections to complement the overall public realm strategy. This design approach will promote a move away from car dominated roads and deliver seamless active, public transport and shared mobility sustainable movement corridors. There are a number of opportunities to capitalise on the ongoing LCWIP programme:

- Speed management / limit programme including 20mph zones for residential areas
- Gateway / entry treatments into residential areas
- Continue to identify and address key gaps in the walking and cycling networks
- Improve crossing facilities on ‘key streets’ and at junctions
- Provide cycle parking and e-bike charging at destinations
- Develop programme of ‘sustainable movement corridors’ placing active travel, public transport and future shared-mobility at the heart of the network

Potential for cycling:

The DfT Propensity to Cycle Tool (PCT)¹⁶ for England and Wales provides a strategic planning tool and an evidence base to inform future cycling investment and policies that seek a wider shift towards sustainable transport. It tests different scenarios of change, at a local area level (MSOA or LSOA¹⁷), to understand the potential uptake in cycling that could be achieved in different parts of the country, including:

- the UK Governments target to double cycling in a decade
- a more ambitious ‘Go Dutch’ scenario, applying cycling levels equivalent to the Netherlands (allowing for English and Welsh hilliness and trip distances)
- greater uptake of e-bikes

Cycling potential is calculated using a function based on trip distance and local gradient. The tool forecasts the following ranges in cycling to work mode share for Eastbourne commuter trips for each scenario (see Table 6-1) compared to Census 2011 levels. This indicates that over and above the Government’s policy expectation of doubling cycling, a greater level of investment in infrastructure, engagement and uptake in e-bikes could significantly increase cycling mode share across the borough (see Appendix E for corresponding plots for each scenario):

Table 6-1 Potential changes to Eastbourne cycling commuter mode share (PCT)

Census 2011	DfT Target	‘Go Dutch’	E-Bikes
2%-4%	4%-10%	18%-32%	25%-36%

¹⁵ [The Highway Code: 8 changes you need to know from 29 January 2022](#) (GOV.UK)

¹⁶ Propensity to Cycle Tool (PCT) (www.PCT.Bike)

¹⁷ MSOA: middle layer super output area, av. population 7,500 / LSOA: lower layer super output area, av. population 1,650

Challenges:

- Design principles and street hierarchy need to be defined as part of an overarching place-making strategy
 - Lack of scope for fully segregated active travel on network due to land availability, building lines and on street parking
 - Traffic congestion creating unhealthy, unsafe and car dominated environments
 - Delivering continuous high quality, safe and convenient routes across the network to ultimately place ‘sustainable movement corridors’ at the top of street hierarchy
 - Ensuring the level of healthier active travel activities is not substantially replaced by less active, but more convenient, new sustainable modes, e.g. e-scooters, e-bikes and BRT
-

6.3.5 Public transport

Public transport will need to be at the centre of encouraging transformational change. Partnerships with the local bus operators will be vital to delivering both Bus Rapid Transit (BRT), Demand Responsive Transport (DRT) and improving traditional fixed services. Long term goals for public transport quality and mode share need to be agreed and coordinated programmes of investment need to be planned through a mechanism such as enhanced partnerships, possible franchising and seamless ‘sustainable movement corridors’. The following opportunities and challenges will need to be considered for public transport.

Bus opportunities and challenges**Opportunities:**

The following opportunities are at various stages of development and being considered along the key movement corridors and cross boundary routes:

- Enhanced Partnerships with operators
 - A22/A2290/A259 corridors – Shinewater, Lottbridge, Birch and Seaside roundabouts – proposed improvements to capacity for all vehicles and virtual signal-controlled priority for buses
 - A2021/A2270 – virtual bus priority at key junctions alongside improvements for pedestrians and cyclists are being delivered through the HPE MAC Phase 1 schemes
 - Explore feasibility and deliver seamless ‘sustainable movement corridors’ placing bus, walking and cycling as the primary modes on key corridors
 - Longer term potential for a strategic mobility hub at a relocated Polegate station in Wealden with the opportunity for Park & Ride link with Eastbourne.
 - Movement towards cleaner fuels and EVs for the bus fleet will be needed to support the decarbonisation of the Local Plan and enhance the borough environment
-

- The role of autonomous vehicles will need to be reviewed in the longer term as technology and legislation permits.

Challenges:

- Overarching strategy is needed to integrate public transport with the Local Plan and other sustainable transport options
- Lack of scope on network for fully segregated bus priority due to land availability, building lines and on street parking
- Traffic congestion leading to bus journey time delay and reliability issues
- Current bus services do not match the key movement corridors in their entirety

Digital Demand Responsive Transport (DDRT) opportunities and challenges

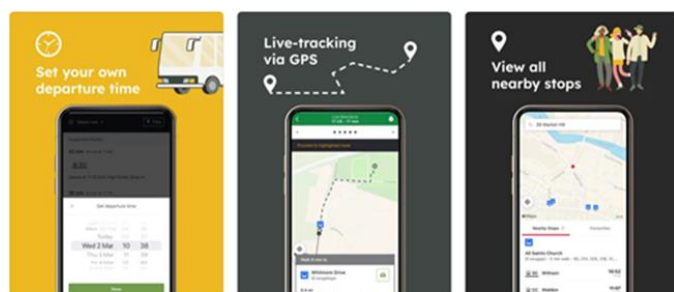
Opportunities:

DDRT services provide transport on demand to passengers using fleets of vehicles scheduled to pick up and drop off people in accordance with their needs. ESCC are currently considering options for DDRT through their Bus Service Improvement Plan (BSIP). A number of UK schemes have trialled DDRT buses in recent years and they are seen as a potentially more flexible alternative to conventional buses, particularly for less profitable and rural routes, and would be expected to use cleaner fuels with the opportunity to ultimately be autonomous as technology permits.

Case study:

Essex County Council, as part of their Technology Strategy for Transport, undertook two pilot studies in 2018/19 to explore the effectiveness of digital tools to make passenger transport more efficient. These involved digitising home to school journeys through a commercially available app to match shared routes, vehicles and passengers. The pilots deployed a demand responsive service, over six months, to two relatively inaccessible colleges to explore demand, awareness of the scheme, route optimisation and revenue potential.

The pilots applied a data-led approach to demonstrate DDRT was technically feasible and provide a flexible alternative to traditional modes of travel or fill gaps in the transport network. This led to a successful £2.5m bid through the DfT's 2020 Rural Mobility Fund to deliver two DDRT services to connect and level-up areas in Essex that currently have little or no provision of public transport. "DigiGo"¹⁸ was launched in 2022 connecting rural areas, to the south of Braintree and in central Essex, to key services and transport interchanges. Services are booked through a bespoke TravelEssex app (see figure), allowing users to specify when and where they want to travel, their fare and also monitor vehicle progress in real-time. The app also provides additional information on other



TravelEssex App (source Essex County Council)

¹⁸ <https://www.essexhighways.org/getting-around/ddrtdigigo/digigo>

available multi-modal options e.g. buses, trains and micro-mobility options (e-scooters and bike hire).

Challenges:

- Developing successful business models to minimise any public subsidy and provide a good level of service
- DDRT is not necessarily a cheaper alternative and it should be seen as part of a blended solution with conventional fixed route services

Bus-based Rapid Transit (BRT) opportunities and challenges

Opportunities:

The physical segregation of bus services from traffic enables BRT services to operate with a limited-stop service to enhance convenience and reduce journey times. A review of international¹⁹ case studies demonstrate that Bus Rapid Transit (BRT) is emerging as a leading mode of urban passenger transit. Success is partly accredited to the evidence of moderate implementation costs, whilst maximising existing resources and stakeholder buy-in. The research indicates BRT can deliver significant reduction in car use on key corridors.

Case Study:

Key examples in the South East include:

- Fastrack at Ebbsfleet, Kent (opened 2006) - 19% of BRT passengers previously used private vehicles
- Fastway in West Sussex (opened 2003) - 19% reduction²⁰ in traffic levels on key corridors from 2006-2013

The schemes rely on fully integrated, high quality bus services with segregated corridors to deliver improved and reliable public transport journey times to achieve modal shift. TfSE are currently assessing the concept of BRT across the county as part of their outer orbital and south-central radial area studies (due end of 2021) including the potential to improve intra-urban, rural and inter-urban services on key corridors serving Eastbourne. The constrained A259, A2021, A2270 and A2090 corridors, particularly towards Wealden and Lewes, will stand to benefit most from a potential BRT solution and help deliver the principle of 'sustainable movement corridors'.



Source: Crawley FastWay

Challenges:

- Number of service providers and complexity of negotiating with several parties on ticketing prices and mechanisms

¹⁹ [Effects of new bus and rail rapid transit systems – an international review \(Ingvardson and Nielsen 2018\)](#)

²⁰ [Crawley Fastway Case Study \(Greener Transport Council\)](#)

- Physical constraints of land availability, building lines, on -street parking and network capacity to deliver fully segregated bus priority
- Uncertainty, complexity and cost of delivering BRT and required infrastructure
- Delivering energy networks for cleaner buses e.g. EV or hydrogen fuelled

Rail opportunities and challenges

Opportunities:

TfSE identify rail travel as a priority in their Sustainable Route to Growth and, together with Network Rail and other stakeholders, are currently exploring longer term options to improve rail services in the region, including:

- Solutions to realign the A259 and remove level crossings on the Marshlink line at East Guldeford near Rye
- Partial option to introduce hourly high-speed services between Eastbourne and St Pancras via Ashford with other complementary measures
- Full options including electrification, removal of level crossings and hourly high-speed services between Eastbourne and St Pancras via Ashford with other complementary measures

Eastbourne, Hampden Park and neighbouring Polegate stations would also benefit from the introduction of a Mobility Hub (see section 6.3.6 below) offering improved interchange to a range of first and last mile active or micro-mobility options, better access to bus services and a high-quality public realm.

Challenges:

- Uncertainty, complexity and cost of delivering rail solutions and required infrastructure
- Integrating services across all modes to optimise interchange at a mobility hub

6.3.6 Future mobility

The trajectory towards future mobility is less certain than more traditional interventions and it will take time to pilot, evaluate and deliver a specific strategy for Eastbourne. Partnerships with established providers and digital incubators can work towards securing the transport data needed for the development of Mobility as a Service (MaaS), smart ticketing and digital demand responsive options. MaaS, as illustrated in the figure opposite, is the use of digital



MaaS Concept ([Source: Greener Transport Solutions](#))

technology to seamlessly integrate and enhance public and private transport services through better journey information, integrated ticketing and payment systems to meet the complete mobility needs of the customer.

In practice, customers could have a choice of either pay-per-ride or monthly subscriptions where pre-purchase ‘mobility packages / bundles’ allows a customer to consume mobility across all providers participating in the scheme up to set limits e.g. a certain amount of travel by e-bike, travel by bus, use of a car club etc.

The concept of MaaS is still in its infancy and schemes are being rolled out with varying degrees of success across the world. The following opportunities and challenges will need to be considered as a starting point for future mobility measures.

Mobility as a Service (MaaS) Opportunities and Challenges

Opportunities:

The long-term trajectory for travel planning is likely to be towards MaaS. Establishing a steering group at an early stage, between key local authorities, transport providers and MaaS advisors, will ensure collaboration and sharing of knowledge as technology develops to tailor a MaaS strategy that is workable within an Eastbourne and East Sussex context.

Establishing digital platforms for transport services, with real-time trip planning, can provide the opportunity to better manage demand across the network by using pricing mechanisms to incentivise travel at less busy times, by more sustainable modes and make travel more accessible to a range of different user groups²¹.

Moovit currently provide a branded mobility application with real-time travel planning and information services in Eastbourne. EBC could seek to establish an integrated fare payment system through Moovit as the company has successfully provided this service elsewhere through their ‘plan, pay, and ride’ system.

Case Study:

In March 2018, Transport for West Midlands (TfWM) joined forces with MaaS Global/Whim to trial the UK’s first app-based MaaS scheme integrating taxis, National Express buses, Midland Metro trams, local train services, city bikes, rental cars and car club vehicles. The trial ended in 2021 and, while overall participation was lower than expected, lessons learned from the scheme have shown that a transport authority-led approach to MaaS was the right fit for the region and TfWM are in the process of tendering for a new MaaS partner. The key difference from the pilot being that they will look to build this on top of TfWM’s successful Swift smartcard ticketing system.

Evidence is generally limited at this stage and the data from the TfWM Whim trial is commercially sensitive and not readily available. However, a 2019 study undertaken by Ramboll Group²² of a similar MaaS Global/Whim scheme in Helsinki, implemented in 2017, highlights possible emerging travel trends associated with the scheme:

- A higher proportion (63%) of Whim members ride public transport than the metropolitan average (48%)
-

²¹ [Mobility as a Service \(MaaS\) in the UK: change and its implications \(Government Office for Science 2018\)](#)

²² [WHIMPACT Insights from the world’s first Mobility-as-a-Service \(MaaS\) system \(Ramboll 2019\)](#)

- Whim users are more likely to combine different modes with public transport including bicycle and taxi to solve the issue of first and last mile
- 95% of Whim trips are made by public transport and 68% of all Whim trips occur in areas with the highest public transport accessibility
- Amongst speculation that unlimited MaaS packages might lead to a significant upsurge in total trips and travel, the number of daily trips made by Whim users is similar to the metropolitan average (3.4 per day)
- Cycling, walking, and not just private car, trips could be replaced by increased uptake of public transport and taxi trips leading to potential active travel, health and well-being disbenefits

Challenges:

- Inertia to change and uncertainties around appropriate business model and likely return for investors and partners
 - Management of pricing and revenue distribution due to the complexity of the different fare systems and partners involved
 - Negotiating with a number of major transport providers and procurement barriers to the range of services
 - Unanticipated societal and environmental implications that could arise from a wholesale adoption of MaaS e.g. reduction in active travel, increased use of taxis to replace car trips
 - Establishing a secure and accessible digitally connected eco-system
-

Shared-Mobility Travel Hubs

Opportunities:

Mobility/Travel Hubs consist of decision, movement and opportunity spaces for users to seamlessly navigate between primary transport modes with more appropriate active or micro-mobility (e-scooters) travel modes to conveniently fulfil the first or last mile of a journey. Hubs can, but not exclusively, be provided at key public transport interchanges, such as railway and bus stations, to encourage modal shift for longer journeys and provide secure, convenient and safe interchange between modes. A network of micro-hubs would also enable end-to-end destinations to access different travel options, such as docking-hire stations, a car club (peer to peer vehicle sharing) or cycle freight, at a local level to support reduced car ownership and the burden of parking.

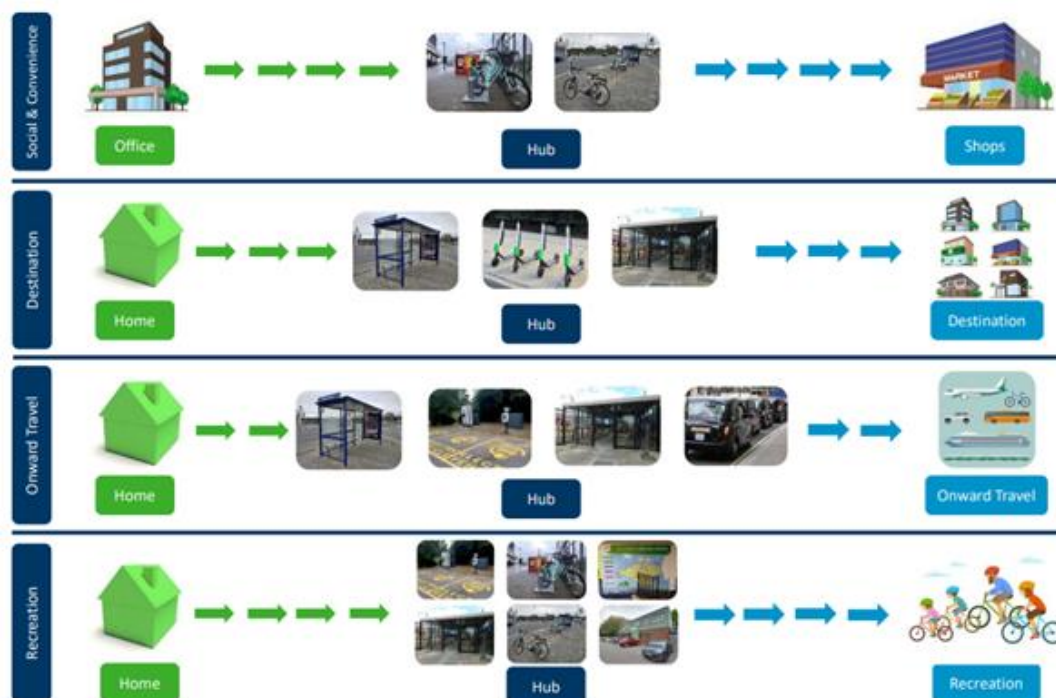
The integration of strategic mobility hubs at Eastbourne's stations and more destination-based hubs at key employment or education sites with a network of boroughwide micro-mobility hubs will provide realistic and affordable mode choices to support the ambition for a predominantly car free town centre.

Case Study:

Solent Transport have developed a design guide²³ to help councils and transport authorities deliver successful Mobility Hubs for communities. The guide identifies four key purposes the hub could be used for:

²³ [Mobility Hub Design Guide](#) (Solent Transport)

- Destination – a hub that enables users to access a key destination e.g. place of work, gym, hospital or education and provides a range of mode choices including public transport, bicycles and scooters
- Onward travel – a larger hub located adjacent to connections with other modes of transport e.g. rail and bus stations where the use will be for a longer period of time and largely during commuter periods
- Social and Convenience – a smaller hub that allows the user to make shorter trips by bus, cycle or scooter with a quicker turnaround of use and linking key destinations
- Recreation – a hub linking users with events, leisure destinations and access to rural areas. Hubs may be seasonal or temporary and provide different transport options to cater for a broader range of users.



Mobility hub design concept (Source: Solent Transport)

Challenges:

- General lag with uptake, uncertainty and complexity of technological advancement and delivery
- Funding and investment and who takes ownership of delivering hub and securing necessary travel options
- Achieving 'critical mass' of hubs and micro-hubs to deliver truly flexible, convenient and accessible options for all

Freight and last-mile deliveries

The movement of freight and last-mile delivery to homes and businesses is growing with the rise of on-line shopping. The number of LGVs on the road is expected to rise

by more than 20% (DfT)²⁴ over the next 15 years. COVID-19 restrictions have also increased deliveries for many goods and Royal Mail²⁵ has forecast that UK parcel volumes in the Business-to consumer (B2C) and Consumer-to-all-parties (C2X) sub-sectors will grow at approximately 5% per annum in the medium term. Local Plan growth will influence this and there are a number of opportunities and challenges that could be considered to make last-mile freight delivery more sustainable in borough communities:

Opportunities:

- Freight, loading and delivery restrictions and / or consolidation points (e.g. lockers) in new development to reduce the number of trips, distances travelled and encourage use of more sustainable modes for last-mile delivery
- A network of cargo bikes and e-cargo bikes (see opposite) at mobility hubs and appropriate destinations can form a part of a borough-wide shared mobility system
- ‘Lifestyle’ couriers are becoming more common, often app-based and using sustainable transport modes, they provide a more flexible interface with the main logistics provider
- Mobile depots (see opposite) and micro-consolidation hubs can be used as staging posts on the edge of congested urban centres for smaller sustainable transport modes to undertake the last-mile delivery
- Technology and innovation will also play a significant role with the application of improved GPS tracking, dynamic route optimisation and the emerging potential of autonomous drone delivery vehicles in the air and on the ground being trialled e.g. Amazon, DHL and Matternet



e-cargo bike (Source: [Cycling UK](#))



Mobile depot (Source: [STRAIGHTSOL](#))

Challenges:

- Carriers’ ability to cope with the ever-growing demand for parcel deliveries during peak periods will require additional infrastructure investment
 - Consumers are demanding ever faster, more reliable and convenient delivery services
 - Rise in less efficient B2C and C2X deliveries with high first-time failure rates, lower drop densities and higher inter-drop distances
 - Competition for road space between kerbside deliveries, priority for sustainable active and public transport modes and impacts of road traffic delays
-

²⁴ [Road Traffic Forecasts 2018 \(DfT\)](#)

²⁵ [Last mile urban freight in the UK: how and why is it changing? \(Government Office for Science – 2019\)](#)

-
- Impact of ‘free’ delivery options leading to low pricing models and restricting investment in more efficient infrastructure and cleaner carrier fleets
 - Physical, legal and regulatory barriers to autonomous airborne and land-based drone delivery technology
-

6.4 Potential for reducing car use

The wider evidence indicates that a package of different mobility solutions has very good potential to reduce car use in Eastbourne, notably:

- Up to 10% reduction in car trips with area wide ‘smarter choice’ travel strategy and investment similar to the STT programme
- Potential for BRT to reduce car use by up to 20% on key corridors, within the borough and cross boundary, and be complemented by enhanced partnerships with bus operators and DRT services
- Continued investment, scheme delivery and promotion of the health and wellbeing benefits of cycling and walking, coupled with greater uptake of e-bikes, could significantly increase cycling and walking mode share for trips within the borough
- Car free or reduced parking, particularly in town centre or edge of town centre locations, could reduce the overall traffic impact of new Local Plan development by up to 20% from the unconstrained STEB modelled levels

The TfSE regional target of a 9% reduction in overall car trips (see Figure 6-1) is a reasonable ambition for a location similar to the borough of Eastbourne. Increased investment, delivery of frequent bus-based rapid transit and by embracing a more ‘sustainable’ and ‘digital’ future, also means a more ambitious 15% reduction could be achieved by the end of the Local Plan period.

This is a **headline average modal shift target as a starting point at this stage** and equates to reducing the forecast modelled level of car trips by approximately 10%-15% across the borough by the end of the Local Plan period. The level of reduction will vary across the borough network, subject to the eventual schemes delivered and for specific trip purposes, e.g. higher modal shift for in-borough only shorter trips and key corridors versus lower modal shift on wider cross-boundary trips and less accessible locations. Further modelling will be needed in the countywide model to undertake more detailed mode shift analysis of specific measures, journey-purposes and corridors to understand a more precise geographical distribution of the benefits to the network.

Acknowledging that a package of measures will need to be delivered at intervals across the Local Plan period, with varying levels of complexity based on cost, deliverability and technological advancement, the following timescales (see Table 6-2) set out an indicative evolutionary timeline for a strategy in Eastbourne.

Table 6-2 Overarching mitigation timeline

Stage	Timescale	Reduction in car trips*	Rationale
'Enhanced Business as Usual'	0-5 years	5%	Continuation of current policies and interventions with increased funding, supporting behaviour change strategy and enhanced bus partnerships and services
'More Ambitious'	5-10 years	5%-10%	Initial BRT services, improved rail, car free development, shared-mobility and early digital roll out
'Digital Sustainable Future'	10+ years	10%-15%	Full segregated BRT, full digital roll out and car free town centre

*Borough-wide average % reduction in forecast modelled car trips across the network

The following sections highlight specific transport-related measures, across different modes, that could be implemented in Eastbourne, and an initial framework action plan to help achieve the 'more ambitious' and 'digital sustainable future' mode shift targets set out above.

6.5 Framework Action Plan

The case for mitigation has identified a likely scope of interventions that are potentially needed as a minimum requirement to support the Local Plan. The package is by no means exhaustive and will need enhancing, adapting and complementing throughout the Local Plan period. Further work around feasibility, funding and engagement will also be needed to develop this framework into real-world solutions.

The eventual strategy will need to focus on types of journeys (short, medium and long distance) and the most appropriate mode. Figure 6-6 illustrates an outline mitigation strategy based on the following four key zones with different travel characteristics and measures:

- **Zone 1 (Town Centre)** would focus primarily on walking, the quality of public realm and experience of Eastbourne as a high-quality place. It will support passenger transport access into the town centre and a strategic focal point for a borough-wide network of mobility hubs, last-mile freight consolidation and digital solutions
- **Zone 2 (Wider Urban Area)** would see walking and cycling prioritised, along with passenger transport access throughout the urban area and into adjacent urban areas of Polegate and Stones Cross in Wealden
- **Zone 3 (Wider Commuter Areas)** cross-boundary urban areas where connectivity to passenger transport is needed to support inbound and outbound commuting
- **Zone 4 (Strategic Corridors)** represents key strategic road and rail corridors to be developed and / or improved over time to deliver improved passenger transport (BRT, enhanced bus services and rail), segregated priority, integrated ticketing and substantial corridor-oriented mode shift within the borough, wider region and towards London
- **Zone 5 (Rural Areas)** continued support and investment in rural bus services and active travel connectivity with key services and National Cycle Network. Improve digital connectivity and opportunities for DDRT services to support traditional bus

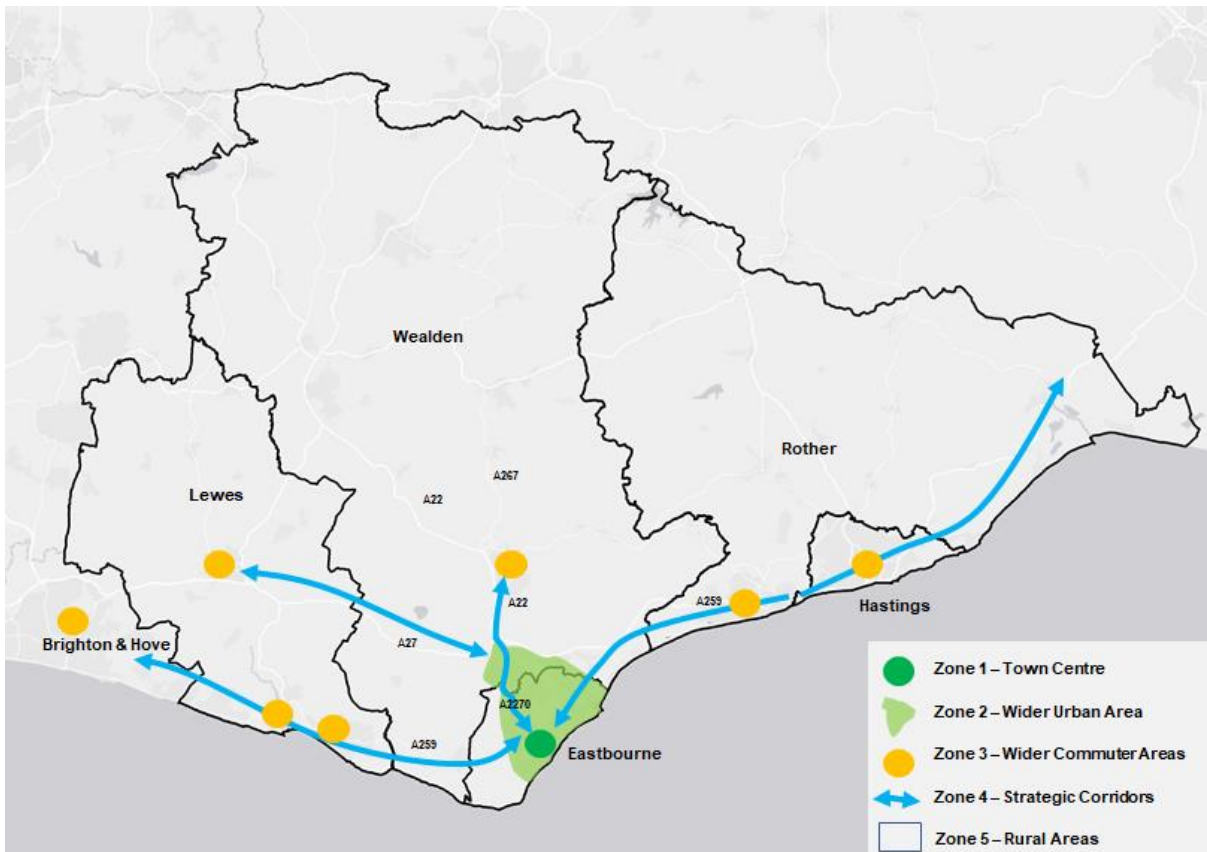


Figure 6-6 Outline mitigation strategy - Eastbourne

A suggested framework action plan to deliver the scope of measures needed, to achieve an average 15% reduction in forecast car trips by the end of the Plan-period, is summarised in Table 6-3 to Table 6-5, to reflect the proposed strategy timeline of moving from an ‘Enhanced Business as Usual’ to the ‘Digital Sustainable Future’. The action plan includes both the known scheme pipeline and additional measures, highlighted in blue, at key locations to deliver the range of sustainable options to support the Council’s proposed vision and objectives.

6.5.1 Framework Action Plan: 0 to 5 years ‘Enhanced Business as Usual’ – target 5% forecast car trip reduction

Table 6-3 ‘Enhanced Business as Usual’ Measures - 0 to 5 years

Scheme Location / Package	Mode	Measures
A2270 / A2021 Corridor HPE MAC Phase 1 (Willingdon Rd & Huggetts Lane)	All	<ol style="list-style-type: none"> 1. Bus stop improvements on A2270 2. Cycle lanes and crossing facilities for active modes at junctions with 3. Virtual detection and physical bus gates priority
Station and town centre Terminus Rd Phase 2a	All Active	<ol style="list-style-type: none"> 4. Delivering high quality public realm and active travel improvements in and around town centre and railway station 5. Traffic management to reduce vehicle traffic and reroute through traffic around town centre via Cavendish Place / Upper Avenue
LCWIP & town centre cycle routes – All corridors and town centre	All Active	<ol style="list-style-type: none"> 6. Prioritisation and roll out of LCWIP schemes to all corridor, town centre and new development 7. Improved town wide cycle parking
A259 Quality Bus Corridors Improvements	Bus	<ol style="list-style-type: none"> 8. A259 Seaside Eastbourne Town Centre to Sovereign Harbour 9. Bus link between Atlantic Drive, Sovereign Harbour, Pevensey Bay Road and Pacific Drive
Develop Branded Travel Behaviour Change Strategy and Campaign	All	<ol style="list-style-type: none"> 10. Develop boroughwide branded strategy and campaign with public transport operators, ESCC, local groups and digital incubators & service providers
Public Transport – Boroughwide	Bus/Rail	<ol style="list-style-type: none"> 11. Enhance partnerships with existing operators and ESCC 12. Develop boroughwide public transport strategy and action plan in partnership with ESCC, TfSE rail and bus operators 13. Explore TfSE opportunities for BRT and more flexible forms of public transport, e.g. DDRT, to support existing network
New Developments – Boroughwide	All	<ol style="list-style-type: none"> 14. Develop design principles to plan for sustainable movement in and around new development 15. Reduce parking, where feasible and supported, moving towards car free in the town centre
Mobility Hubs – Key destinations	Bus/Rail/ First Mile Last Mile	<ol style="list-style-type: none"> 16. Improve interchange for bus and ‘first and last mile’ travel modes at Eastbourne and Hampden Park Stations 17. Explore potential to create mobility hubs for a range of modes at stations and other key destinations in borough
Electric Vehicles (EV) – Boroughwide	Low Emission Vehicles	<ol style="list-style-type: none"> 18. Develop boroughwide EV strategy and action plan in partnership with ESCC 19. Increased roll out of EV charging infrastructure on-street and at key destinations 20. Greening of public transport fleet to low-emission vehicles and deliver associated energy networks e.g. hydrogen
Future Mobility / MaaS / Shared-Mobility	All	<ol style="list-style-type: none"> 21. Develop boroughwide Future Mobility strategy and action plan in partnership with ESCC, TfSE and digital incubators & service providers 22. Engage with shared-mobility providers e.g. car clubs, e-scooters and explore potential for micro-mobility hubs 23. Engage with infrastructure providers to deliver ultra-fast broadband and 5G coverage of borough

Scheme Location / Package	Mode	Measures
'Sustainable Movement Corridors' – Boroughwide	Bus/Active/ First Mile Last Mile	24. Develop a boroughwide movement and access strategy and action plan to create seamless public transport and active mode movement corridors

6.5.2 Framework Action Plan: 5 to 10 years 'More Ambitious' – target 10% forecast car trip reduction

Table 6-4 'More Ambitious' Measures - 5 to 10 years

Scheme Location / Package	Mode	Measures
A22/A2290 Corridor Improvements (Seaside, Shinewater & Lottbridge Rbts)	All	25. Local and signal improvements to lane capacity and operation for vehicles 26. Cycle lanes and crossing facilities for active modes 27. Virtual detection bus priority
HPE MAC Phases 2-5 QBC Eastbourne to Hailsham	Bus	28. QBC with bus improvements along Victoria Drive towards Hailsham – integrate with TfSE recommendations for BRT 29. Virtual detection and physical bus priority Improvements to A2021 Rodmill Roundabout, Kings Drive and towards town centre
Station and town centre Terminus Rd Phase 2b	All Active	30. Extending Phase 2a high quality public realm and active travel improvements from station and town centre to seafront at Grand Parade
LCWIP & town centre cycle routes – All corridors and town centre	All Active	31. Continued roll out of LCWIP schemes and boroughwide cycle schemes
A259 Brighton-Eastbourne- Pevensey (South Coast) MRN corridor	All	32. Introduce multi-modal transport measures to improve A259 corridor between Pevensey and Brighton for vehicles and buses
Marshlink High-Speed services	Rail	33. Partial <u>or</u> full introduction of high-speed services to London via Ashford with removal of Marshlink level crossings
TfSE Bus-based Rapid Transit – Boroughwide and Cross-boundary	BRT	34. Phased roll out of core BRT and early infrastructure requirements – potential to combine with A259 & Eastbourne to Hailsham QBCs
TfSE Rural / Interurban Bus – Boroughwide and Cross-boundary	Bus	35. Roll out boroughwide public transport strategy and action plan 36. Enhance multiple rural / interurban routes to interface with BRT via traditional fixed services and DDRT
Branded Travel Behaviour Change Strategy and Campaign	All	37. Roll out boroughwide branded strategy and campaign with established partners
Additional highway enhancements	All	38. Monitor local junction capacity, public transport and active mode improvements to support Local Plan mitigation if required
New Developments – Boroughwide	All	39. Car free development in town centre supported by car clubs and reduced on-street parking 40. Lower parking at peripheral new development supported by enhanced public transport, micro-mobility hubs and car clubs

Scheme Location / Package	Mode	Measures
Key Destination Mobility Hubs & Micro-mobility Hubs - Boroughwide	Bus/Rail/ First Mile Last Mile	41. Create strategic and micro-mobility hubs at key destinations, including Eastbourne and Hampden Park Stations and at wider and peripheral locations
Electric Vehicles (EV) – Boroughwide	Low Emission Vehicles	42. Continued roll out of EV Strategy, energy networks and charging infrastructure 43. Low/Zero Emission public transport fleet
Future Mobility /MaaS / Shared-Mobility	All	44. Roll out MaaS consumer platform and digitally demand responsive shared-mobility options across network of mobility & micro-mobility hubs 45. Establish fully connected ultra-fast broadband and 5G coverage of borough
'Sustainable Movement Corridors' – Boroughwide	Bus/Active/ First Mile Last Mile	46. Commence delivery of early infrastructure for 'sustainable movement corridors' including reduced traffic, segregated sustainable modes and on-street parking removal on core network 47. Explore opportunities for further 'sustainable movement corridors' on other parts of the network

6.5.3 Framework Action Plan: 10 to 15 years 'Digital Sustainable Future' – target 15% forecast car trip reduction

Table 6-5 'Digital Sustainable Future' Measures - 10 to 15 years

Scheme Location / Package	Mode	Measures Rationale
Marshlink High-Speed services	Rail	48. Full introduction of high-speed services to London via Ashford with removal of Marshlink level crossings
TfSE Bus-based Rapid Transit – Boroughwide and Cross-boundary	BRT	49. Full roll out of core BRT service and infrastructure requirements 50. Explore potential for bus related automated technology
TfSE Rural / Interurban Bus – Boroughwide and Cross-boundary	Bus	51. Roll out enhance multiple rural / interurban routes to interface with BRT via traditional fixed services and DDRT
Electric Vehicles (EV) – Boroughwide	Low Emission Vehicles	52. Comprehensive EV charging network and conversion of borough car and fleet ownership in line with net-zero targets
Additional highway enhancements	All	53. Monitor local junction capacity, public transport and active mode improvements to support Local Plan mitigation if required (see Section 7)
MaaS / Shared-Mobility	All	54. Roll out MaaS consumer platform and digitally demand responsive shared-mobility options across network of mobility & micro-mobility hubs 55. Update Future Mobility Strategy to explore and adapt to emerging technologies e.g. automation
'Sustainable Movement Corridors' – Boroughwide	Bus/Active/ First Mile Last Mile	56. Complete core network of fully segregated 'sustainable movement corridors' 57. Explore potential for automation at a corridor level

6.6 Headline outcomes

A set of suggested initial headline outcomes, which generally respond to the approach discussed in this section, are listed in Table 6-6. It is important to note that these provide an initial framework as they are underpinned by an interim evidence base. The preferred outcomes that the eventual strategy will seek to deliver need to be tailored with further transport assessment work and agreed with the Council and key stakeholders throughout the development of the Local Plan transport evidence base.

The Local Plan horizon year of 15+ years in the future and uncertainties, around external drivers of travel behaviour, emphasise the need for a more flexible, monitor and manage approach to delivering these outcomes. Monitoring and evaluation would be an important component of any strategy to develop evidence around the effectiveness and future delivery of different interventions and to measure the eventual agreed outcomes.

Table 6-6 Initial Strategy Headline Outcomes

Initial Headline Outcome	
1.	An average reduction in forecast car trips of 5%-15% with an increase level of journeys to work made by sustainable modes across the borough by the end of the Local Plan period
2.	Transport network is sustainable, easy to access, convenient and inclusive to all and connects housing with key services and employment
3.	Strong culture of walking and cycling placing active modes as the default travel choice, where possible, for short trips across the borough network
4.	High quality, frequent and rapid public transport is available that competes with car journey times, convenience and serves key destinations within and outside the borough
5.	Resilient borough transport network and, where possible, can adapt and respond to changing technologies, trends and associated opportunities
6.	Transport system contributes to achieving the commitment for a carbon neutral Eastbourne by 2030
7.	Predominantly car free town centre with excellent connectivity by cycle, foot and public transport contributing to an enhanced natural and built environment

7 Application of Sustainable Targets



The boroughwide modal shift targets of up to a 15% reduction in forecast car trips, as discussed in section 6, have been applied to the end of Plan-period STEB modelling flows and network link capacities assessed in section 5. This provides an indication of any likely residual traffic impacts on the network that will need to be considered further through more detailed countywide modelling and / or additional mitigation.

7.1 Unmitigated link capacities

The unmitigated modelled flows and key link capacities (from Table 5-10) are reiterated in Table 7-1 below for reference.

Table 7-1 Key link capacities VOC (%) – unmitigated Local Plan Scenarios

Ref	Count Location	Direction	One-way Link Capacity	AM	AM VoC	AM Eastbourne	AM Eastbourne	AM All District
				VoC Ratio (2019)	Reference Case VoC Ratio (2040)	Option 1 VoC Ratio (2040)	Option 2 VoC Ratio (2040)	Cumulative VoC Ratio (2040)
1	A27 Between Allfriston Rd and Milton Street	EB	1350	73%	80%	84%	84%	91%
		WB	1350	74%	82%	90%	94%	105%
2	A2270 Willingdon Area	NB	1700	58%	64%	78%	85%	99%
		SB	1700	59%	65%	70%	70%	92%
3	A22 Between Shinewater and Lottbridge Roundabout	NB	2600	37%	41%	44%	45%	47%
		SB	2600	62%	68%	77%	76%	83%
4	A2290 Between Lottbridge Roundabout and Birch Roundabout	NB	2600	33%	37%	41%	42%	43%
		SB	2600	46%	50%	59%	58%	64%
5	A259 Between Martello Roundabout and Pevensey Bay	EB	1350	35%	39%	41%	42%	42%
		WB	1350	40%	44%	47%	47%	48%
6	A259 Between Southbourne Rd and Seaside Roundabout	EB	900	97%	108%	139%	144%	149%
		WB	900	93%	103%	126%	131%	149%
7	A2021 Between Rodmill Roundabout and Upper Avenue	NB	900	60%	66%	87%	101%	111%
		SB	900	90%	99%	112%	113%	129%
8	A259 Between Eastdean and Warren Hill Rd	EB	1350	48%	53%	56%	56%	58%
		WB	1350	33%	36%	39%	40%	41%
9	Cross Levels Way	EB	1700	66%	72%	79%	79%	83%
		WB	1700	76%	84%	89%	91%	96%

Ref	Count Location	Direction	One-way Link Capacity	PM	PM VoC	PM Eastbourne	PM Eastbourne	PM All District
				VoC Ratio (2019)	Reference Case VoC Ratio (2040)	Option 1 VoC Ratio (2040)	Option 2 VoC Ratio (2040)	Cumulative VoC Ratio (2040)
1	A27 Between Allfriston Rd and Milton Street	EB	1350	73%	80%	89%	93%	105%
		WB	1350	63%	69%	75%	76%	86%
2	A2270 Willingdon Area	NB	1700	58%	64%	73%	75%	106%
		SB	1700	65%	71%	83%	89%	107%
3	A22 Between Shinewater and Lottbridge Roundabout	NB	2600	48%	53%	58%	58%	63%
		SB	2600	45%	49%	56%	58%	64%
4	A2290 Between Lottbridge Roundabout and Birch Roundabout	NB	2600	41%	45%	53%	52%	55%
		SB	2600	40%	44%	53%	54%	59%
5	A259 Between Martello Roundabout and Pevensey Bay	EB	1350	47%	51%	56%	55%	57%
		WB	1350	40%	44%	47%	48%	49%
6	A259 Between Southbourne Rd and Seaside Roundabout	EB	900	112%	123%	152%	158%	172%
		WB	900	103%	113%	147%	159%	173%
7	A2021 Between Rodmill Roundabout and Upper Avenue	NB	900	93%	103%	121%	125%	151%
		SB	900	84%	92%	113%	128%	137%
8	A259 Between Eastdean and Warren Hill Rd	EB	1350	44%	48%	51%	53%	54%
		WB	1350	37%	41%	44%	44%	47%
9	Cross Levels Way	EB	1700	71%	78%	82%	83%	89%
		WB	1700	70%	77%	87%	86%	91%

7.2 Link capacities – 10% reduction in car trips

The application of the 10% reduction in car trips to the end of Plan total modelled flows and key link capacities is summarised in Table 7-2. The analysis indicates that the potential issues identified on the A27 (Ref. 1), A2270 (Ref 2.) and A2280 Cross Levels Way (Ref 9.) could be mitigated to a reasonable level of service, at least, in the isolated Eastbourne Local Plan scenarios. The addition of the cumulative scenario could still increase the impact closer to 100% capacity on these links.

The key residual impacts would remain on the A259 approaches to Seaside Roundabout (Ref. 6) and, to a lesser extent, on the A2021 Kings Drive (Ref. 7). Noting

the substantial amount of Windfall housing assigned to the A2021, and limitations of the STEB spreadsheet model, could be overstating or understating the impact on this corridor.

Table 7-2 Key link capacities VOC (%) – 10% total traffic reduction in Local Plan scenarios

Ref	Count Location	Direction	One-way Link Capacity	AM VoC Ratio (2019)	AM VoC Reference Case VoC Ratio (2040)	AM Eastbourne Option 1 VoC Ratio (2040)	AM Eastbourne Option 2 VoC Ratio (2040)	AM All District Cumulative VoC Ratio (2040)
1	A27 Between Alfriston Rd and Milton Street	EB	1350	73%	80%	76%	76%	82%
		WB	1350	74%	82%	81%	85%	94%
2	A2270 Willingdon Area	NB	1700	58%	64%	70%	77%	89%
		SB	1700	59%	65%	63%	63%	83%
3	A22 Between Shinewater and Lottbridge Roundabout	NB	2600	37%	41%	40%	41%	43%
		SB	2600	62%	68%	69%	68%	74%
4	A2290 Between Lottbridge Roundabout and Birch Roundabout	NB	2600	33%	37%	37%	37%	39%
		SB	2600	46%	50%	53%	53%	57%
5	A259 Between Martello Roundabout and Pevensey Bay	EB	1350	35%	39%	37%	37%	38%
		WB	1350	40%	44%	43%	42%	43%
6	A259 Between Southbourne Rd and Seaside Roundabout	EB	900	97%	108%	125%	129%	134%
		WB	900	93%	103%	114%	118%	134%
7	A2021 Between Rodmill Roundabout and Upper Avenue	NB	900	60%	66%	79%	91%	100%
		SB	900	90%	99%	101%	102%	116%
8	A259 Between Eastdean and Warren Hill Rd	EB	1350	48%	53%	50%	50%	52%
		WB	1350	33%	36%	35%	36%	37%
9	Cross Levels Way	EB	1700	66%	72%	71%	71%	74%
		WB	1700	76%	84%	80%	82%	86%

Ref	Count Location	Direction	One-way Link Capacity	PM VoC Ratio (2019)	PM VoC Reference Case VoC Ratio (2040)	PM Eastbourne Option 1 VoC Ratio (2040)	PM Eastbourne Option 2 VoC Ratio (2040)	PM All District Cumulative VoC Ratio (2040)
1	A27 Between Alfriston Rd and Milton Street	EB	1350	73%	80%	79%	83%	95%
		WB	1350	63%	69%	67%	68%	77%
2	A2270 Willingdon Area	NB	1700	58%	64%	66%	67%	95%
		SB	1700	65%	71%	74%	81%	96%
3	A22 Between Shinewater and Lottbridge Roundabout	NB	2600	48%	53%	52%	52%	56%
		SB	2600	45%	49%	50%	52%	58%
4	A2290 Between Lottbridge Roundabout and Birch Roundabout	NB	2600	41%	45%	48%	47%	50%
		SB	2600	40%	44%	47%	49%	53%
5	A259 Between Martello Roundabout and Pevensey Bay	EB	1350	47%	51%	50%	49%	51%
		WB	1350	40%	44%	43%	43%	45%
6	A259 Between Southbourne Rd and Seaside Roundabout	EB	900	112%	123%	137%	142%	155%
		WB	900	103%	113%	132%	143%	155%
7	A2021 Between Rodmill Roundabout and Upper Avenue	NB	900	93%	103%	109%	112%	136%
		SB	900	84%	92%	102%	115%	124%
8	A259 Between Eastdean and Warren Hill Rd	EB	1350	44%	48%	46%	48%	49%
		WB	1350	37%	41%	40%	40%	42%
9	Cross Levels Way	EB	1700	71%	78%	74%	75%	80%
		WB	1700	70%	77%	78%	78%	82%

7.3 Link capacities – 15% reduction in car trips

The application of the 15% reduction in car trips to the end of plan total modelled flows and key link capacities is summarised in Table 7-3. The analysis indicates that the majority of links will generally operate within theoretical capacity (90%) in the isolated Local Plan options if this level of mitigation is achieved.

While the A2021 could still exceed capacity, subject to the uncertainty of Windfall housing and further modelling, the analysis highlights that the A259 corridor approaches to Seaside roundabout could still exceed capacity. This corridor does already exceed capacity in the existing situation and the mitigated scenarios do bring the impact of the Local Plan options closer to the Reference Case. However, more detailed assessment of this corridor is needed in the countywide model, to assess potential reassignment away from the corridor to other routes, as well as the full benefits of BRT on this corridor. The level of retail and employment development proposed at the nearby Sovereign Harbour, and how this has been modelled, will also need to be considered in more detail.

The cumulative scenario could generally be mitigated to within 90% on most links with the exception of the A259 and A2021.

Table 7-3 Key link capacities VoC (%) – 15% total traffic reduction in Local Plan scenarios

Ref	Count Location	Direction	One-way Link Capacity	AM VoC Ratio (2019)	AM VoC Reference Case VoC Ratio (2040)	AM Eastbourne Option 1 VoC Ratio (2040)	AM Eastbourne Option 2 VoC Ratio (2040)	AM All District Cumulative VoC Ratio (2040)
1	A27 Between Alfriston Rd and Milton Street	EB	1350	73%	80%	71%	72%	78%
		WB	1350	74%	82%	76%	80%	89%
2	A2270 Willingdon Area	NB	1700	58%	64%	66%	73%	84%
		SB	1700	59%	65%	59%	59%	78%
3	A22 Between Shinewater and Lottbridge Roundabout	NB	2600	37%	41%	37%	39%	40%
		SB	2600	62%	68%	65%	64%	70%
4	A2290 Between Lottbridge Roundabout and Birch Roundabout	NB	2600	33%	37%	35%	35%	37%
		SB	2600	46%	50%	51%	50%	54%
5	A259 Between Martello Roundabout and Pevensey Bay	EB	1350	35%	39%	35%	35%	36%
		WB	1350	40%	44%	40%	40%	41%
6	A259 Between Southbourne Rd and Seaside Roundabout	EB	900	97%	108%	118%	122%	127%
		WB	900	93%	103%	107%	111%	126%
7	A2021 Between Rodmill Roundabout and Upper Avenue	NB	900	60%	66%	74%	86%	94%
		SB	900	90%	99%	96%	96%	109%
8	A259 Between Eastdean and Warren Hill Rd	EB	1350	48%	53%	48%	47%	49%
		WB	1350	33%	36%	33%	34%	35%
9	Cross Levels Way	EB	1700	66%	72%	67%	67%	70%
		WB	1700	76%	84%	75%	77%	82%

Ref	Count Location	Direction	One-way Link Capacity	PM VoC Ratio (2019)	PM VoC Reference Case VoC Ratio (2040)	PM Eastbourne Option 1 VoC Ratio (2040)	PM Eastbourne Option 2 VoC Ratio (2040)	PM All District Cumulative VoC Ratio (2040)
1	A27 Between Alfriston Rd and Milton Street	EB	1350	73%	80%	75%	79%	89%
		WB	1350	63%	69%	63%	64%	73%
2	A2270 Willingdon Area	NB	1700	58%	64%	62%	64%	90%
		SB	1700	65%	71%	70%	76%	91%
3	A22 Between Shinewater and Lottbridge Roundabout	NB	2600	48%	53%	49%	49%	53%
		SB	2600	45%	49%	47%	49%	55%
4	A2290 Between Lottbridge Roundabout and Birch Roundabout	NB	2600	41%	45%	45%	45%	47%
		SB	2600	40%	44%	45%	46%	50%
5	A259 Between Martello Roundabout and Pevensey Bay	EB	1350	47%	51%	47%	47%	48%
		WB	1350	40%	44%	40%	41%	42%
6	A259 Between Southbourne Rd and Seaside Roundabout	EB	900	112%	123%	129%	134%	146%
		WB	900	103%	113%	125%	135%	147%
7	A2021 Between Rodmill Roundabout and Upper Avenue	NB	900	93%	103%	102%	106%	129%
		SB	900	84%	92%	96%	109%	117%
8	A259 Between Eastdean and Warren Hill Rd	EB	1350	44%	48%	44%	45%	46%
		WB	1350	37%	41%	37%	37%	40%
9	Cross Levels Way	EB	1700	71%	78%	70%	71%	76%
		WB	1700	70%	77%	74%	73%	77%

7.4 Summary of residual impacts

The application of the sustainable travel targets to the unmitigated STEB modelling outputs indicate that the isolated Local Plan impacts could be mitigated on much of the network if the targets are achieved. The key exceptions are the A2021 and A259 corridors, which are already at or approaching capacity in the existing situation.

The impacts on the A2021 are much closer to the reference case where, a new Local Plan and sustainable transport improvements are not delivered. When the uncertainty of Windfall housing and the assignment limitations of the STEB model are considered, it is likely that the impacts at a link level would be broadly similar to the Reference Case and therefore acceptable on this corridor, subject to a review of junction capacities.

The A259 corridor will require more detailed consideration of a number of factors, including:

- More detailed modelling in the countywide model of trip patterns, reassignment and the potential for modal shift from specific measures e.g. BRT
- Adoption of a monitor and manage approach across the Plan-period to determine whether predicted traffic growth is being realised and / or whether a greater level of mode shift, through cycling, walking, car free development and BRT can be delivered
- Level of retail / employment development at Sovereign Harbour and whether this has been modelled realistically or whether it needs to be rationalised

The cumulative assessment illustrates that potential additional cross boundary Local Plan growth could add further traffic impacts, particularly on the A2021 and A259 corridors. Further consideration will need to be given going forward to how these additional impacts are treated within the context of the new Eastbourne Local Plan and what it is expected to mitigate, noting that this is also an emerging picture and subject to change.

8 Local Junction Improvements



8.1 Overview

The objective of this phase of work is to understand the risks posed to key junctions by Local Plan growth and provide early options to 'plan for vehicles in the shorter term', which aligns with the perspective of 'planning for people & places', to mitigate the impacts. While the overall focus needs to be on sustainable solutions, it is acknowledged some form of improvements to local capacity 'hotspots' may be needed. This section provides an initial capacity and concept review of the key borough junctions listed in Table 8-1 (see Figure 5-4 for locations). Any design commentary is purely observational at this stage and subject to more detailed design feasibility and assessment in both strategic and local junction models.

Table 8-1 Key borough junctions

Ref	Junction	Corridor	Ref	Junction	Corridor
E8	Shinewater Roundabout	A2290	E21	The Goffs/Upperton Road	A259
E9	Lottbridge Roundabout	A2290/A2280	E4	Station Roundabout	A259
E1	Langney Roundabout	A259	E5	Bedfordwell Roundabout	A2021
E2	Seaside Roundabout	A259	E6	Upper Avenue Roundabout	A2021
E7	Harbour Roundabout	A259	E3	Rodmill Roundabout	A2021/A2280
E15	A2021/A259	A259	E12	Decoy Roundabout	A2021
E10	A259/The Avenue	A259	E11	Willingdon Roundabout	A2270

The review translates the outputs from the initial STEB model assessment, the potential sustainable travel targets and, making use of available local junction modelling from the A22 / A2290 Corridor Study, advises on potential capacity solutions at the key junctions. Consideration is also given to the possible cross-boundary effects the Eastbourne Local Plan could have on key parts of the network and any emerging mitigation requirements from the related wider STEB work in other districts.

This is an early concept review of key junctions only and, as a conservative approach, applies an average 10% reduction in traffic to the higher Isolated Local Plan Option 2 traffic growth and the Cumulative Option to test the network. Further testing in the countywide model could identify different results, as well as impacts at other locations, which will need further assessment and potential solutions.

8.2 A2290 Corridor

The A2290 in Eastbourne forms part of the A22 / A2290 Corridor Study assessing different options to deliver capacity, bus priority and active mode improvements at key junctions between the A27 and A259. The emerging options have not previously been tested with the latest new Eastbourne Local Plan options growth and the available local junction models have been updated to test the impact on the proposed designs. The local junction modelling results are included at Appendix F.

The junction modelling demonstrates the current proposals for Shinewater Roundabout would operate within capacity with the Isolated growth and marginally exceed capacity with the cumulative growth. The junction does not necessarily require further mitigation at this stage and should be considered alongside the potential for higher modal shift and monitored throughout the Local Plan period against changing traffic conditions. Figure 8-1 summarises the junction review and provides further design considerations to fully signalise the junction as a mitigation solution if needed and provide public transport select vehicle detection (SVD) to provide priority at the junction for buses, through automated changes in the signal timings.

Site E8- Shinewater Roundabout

Scheme Proposal: Full signalised Roundabout, suggested as a part of the A22/A2290 MRN study

Impacts and Constraints:

- Local Plan will increase demand by approximately 8-9% (370-450 veh per hour) during the peak periods and currently junction catering to considerable traffic volume.
- There would be 10% increase in traffic levels with the cumulative impact, which would push the junction delays over its threshold saturation levels.
- Further improvements to be considered for A22 North and Willingdon Drive (NE) approaches
- Widening on Willingdon Drive (NE) approach would need widening of the bridge structure and would involve lane take

Opportunities:

- Proposed signalised layout is expected to generally accommodate the forecast Eastbourne Local Plan Flows and additional measures are to be considered to accommodate Cumulative Local Plan flows
- Further capacity improvements can be considered for A22 North and Willingdon Drive (NE) approaches
- Dedicated, safe and convenient crossing facility for pedestrians and cyclists provided on the southern side of the junction
- Select Vehicle Detection (SVD) for the future to implement bus priority measures

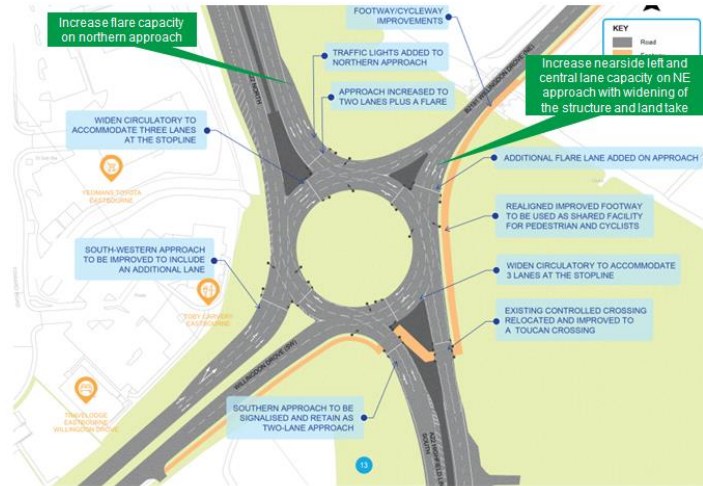


Figure 8-1 E8 Shinewater Roundabout concept review summary

The updated junction modelling for Lottbridge Roundabout demonstrated that the proposed junction improvements in the A22 / A2290 Corridor Study would accommodate both the isolated and cumulative growth options. Figure 8-2 summarises the junction review and recommends no further changes to the layout at this stage.

Site E9- Lottbridge Roundabout

Scheme Proposal: Full signalised Roundabout, suggested as a part of the A22/A2290 MRN study

Impacts and Constraints:

- Local Plan will increase demand by approximately 10-13% (435-530 veh per hour) during the peak periods
- No further improvement in addition to proposals suggested within the A22/A2290 MRN scheme
- The roundabout is predicted to be catering to 4-5% higher traffic flows in the cumulative local plans scenario
- This additional traffic would not necessitate any mitigation as the proposal to signalise the roundabout would provide sufficient capacity for the future up to 2040.

Opportunities:

- Proposed signalised layout is expected to generally accommodate the forecast Eastbourne Local Plan Flows and Cumulative Local Plan flows
- Dedicated, safe and convenient crossing facility for pedestrians and cyclists provided on the southern side of the junction
- Select Vehicle Detection (SVD) for the future to implement bus priority measures

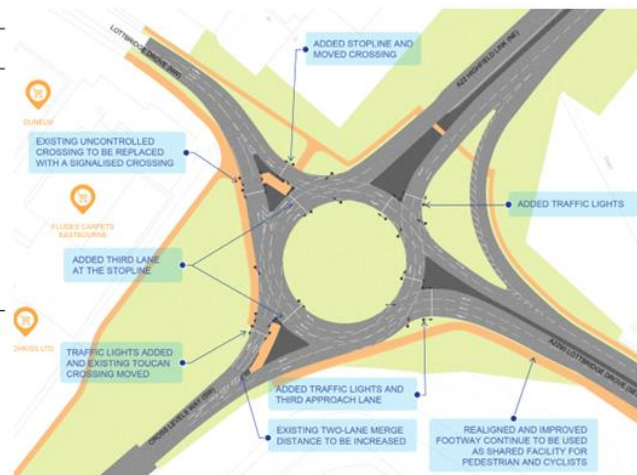


Figure 8-2 E9 Lottbridge Roundabout concept review summary

As previously highlighted in section 5.5, further consideration will need to be given to the proposed left-in/left-out only access arrangements for employment land on the southern side of Lottbridge Drive. The A2290 Corridor Study proposes the conversion of Birch and Seaside roundabouts to signal junctions at the southern end of the A2290, which would remove the 'U-Turn' movement and further restrict access to these sites.

It is likely that a southeast bound right-in junction, at least, will also be needed to allow access to vehicles arriving from the north.

8.3 A259 Corridor

The STEB modelling indicates that the A259 corridor, particularly to the east of the borough, is likely to be heavily constrained at a link capacity level, which is a key consideration over and above whether any further junction mitigation would be needed. Notwithstanding the link capacity issues, a review of key junctions has been undertaken with the anticipated future growth. It should also be noted that the Environment Agency (EA) is commencing consultation on the Pevensey Bay to Eastbourne Coastal Management Scheme²⁶, which will be one of the largest coastal flood risk projects in the country, in response to the current climate emergency. While there is no specific detail on what this scheme will consist of and the potential interrelationships with key transport corridors close to the coastline, such as the A259, consultation on options is expected throughout 2022, which will need further consideration and engagement between the Council, ESCC and EA.

The expected level of demand at Langney Roundabout in both the isolated and cumulative options indicate there will be capacity issues and the review (see Figure 8-3) indicates a fully signalised is likely to be needed, subject to overall A259 link capacity. Langney Roundabout currently includes an unused fifth 'stub' arm, which would theoretically be the eastern termini for the safeguarded route of the St Anthony's Link and would also an access to a proposed small residential allocation (35 dwellings at site EP12 North East St. Anthony's Hill). As highlighted in section 4.4, whilst the link could potentially provide some alleviation to the A259 corridor, the scheme does not form part of any significant potential development allocation, there are a number of environmental considerations that would need to be addressed and there is no current identified funding stream to deliver the scheme.

Site E1- Langney Roundabout

Scheme Proposal: Full signalisation of roundabout and additional lane capacity

Impacts and Constraints:

- Local Plan will increase demand by approximately 15-20% (600-870 veh per hour) during the peak periods
- Cumulative Local Plan assessment could increase by a further 150 vehicles per hour
- All arms, excluding A259(E), will exceed capacity by 20-30% with the PM assessed as the most congested peak period
- The northern B2104 Langney Rise and southern A259 St Anthony's Ave would experience greatest delay
- On street parking on southern A259 St Anthony's Ave and land availability on Princes Road could restrict improvements to lane capacity and geometry

Opportunities:

- Full signalisation is expected to generally accommodate the forecast Eastbourne Local Plan and Cumulative Local Plan flows
- Increase flare length and lane capacity on A259 and B2104 approaches
- Dedicated, safe and convenient crossing facility for pedestrians and cyclists
- Select Vehicle Detection (SVD) for the future to implement bus priority measures



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Figure 8-3 Langney Roundabout concept review summary

Seaside roundabout is a key existing constraint on the A259 and the A22 / A2290 Corridor Study recommends conversion to a fully signalised multi-lane crossroads. The available local junction model has been rerun and shows the current proposals

²⁶ [Pevensey Bay to Eastbourne Coastal Management Scheme \(Environment Agency\)](#)

would be over capacity with the isolated and cumulative growth, particularly in the PM. The current proposals would maximise available road space to deliver the signal junction and the review in Figure 8-4 can only recommend minor additional lane capacity at this stage. This will improve the isolated and cumulative results but the PM is still likely to exceed capacity at the junction, particularly with the cumulative flows.

The A259 link capacity either side of this junction will also be over capacity and further consideration of how to manage and reduce demand at this location will be needed going forward. Road space is also very limited, due to building lines and on-street parking, and providing fully segregated bus priority would be a challenge. However, as stated previously, more detailed assessment of this corridor is needed in the countywide model, to assess potential reassignment away from the corridor to other routes, as well as the possible need for further mitigation. The level of retail and employment development proposed at the nearby Sovereign Harbour, and how this has been modelled, will also need to be considered in more detail.

<p>Site E2- Seaside Roundabout Scheme Proposal: Full signalised crossroad junction, suggested as a part of the A22/A2290 MRN study</p> <p>Impacts and Constraints:</p> <ul style="list-style-type: none"> Local Plan will increase demand by approximately 20-25% (760-960 veh per hour) during the peak periods, out of which around 8% increase would be along Seaside Road from SW to NE direction and vice-versa depending on the tidal pattern. It is expected that in both AM and PM peak hours, except Lottbridge Drive, all three other arms would operate near to its capacity. Proposed signalised layout would be just adequate to meet Eastbourne Local Plan flows. Except PM peak which is worst peak when occasional delays might occur. With the cumulative flows, there would be around 10% further increase in traffic levels, which would push the junction delays over its threshold saturation levels. Further measures are suggested over the A22/A2290 signalised layout to provide an additional lane for the ahead movements along the A259 corridor. In addition, the A259 (SW) would experience occasional delays along the corridor, up to the junction with A2021. The high flows predicted along these constrained, busy residential single-lane carriageways would cause delays. These delays would further restrict exit capacity at the Seaside junction and introduce additional constraints. <p>Opportunities:</p> <ul style="list-style-type: none"> Parking and other kerbside activity along the A259 southwest of the Seaside roundabout should be looked at to provide additional link capacity. Dedicated, safe and convenient crossing facility for pedestrians and cyclists Select Vehicle Detection (SVD) for the future to implement bus priority measures 	<p>The diagram shows a four-way junction with the following features:</p> <ul style="list-style-type: none"> Added two lanes: Now one lane dedicated to left-turn and two lanes dedicated to right-turn movement. Added second lane: Close to junction. Added traffic lights: And a dedicated right-turn lane. Added a staggered Toucan crossing. Added traffic lights: And a third lane. Existing island: To be extended further southeast up to Lottbridge Drive South Retail Park Entrance. Two-lane exit: To merge in a single lane at 75m distance from the roundabout. Added direct Toucan crossing: Along National Cycle Network route. Junction converted: From roundabout to traffic signal controlled crossroads. Added traffic lights: And a third dedicated right-turn lane. Added direct Toucan crossing: Along National Cycle Network route. <p>Key: Road, Footway, Kerbside, Grass verge, Signal head.</p>
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Figure 8-4 Seaside Roundabout concept review summary

Harbour roundabout provides access to the Sovereign Harbour Retail Park and the junction review in Figure 8-5 recommends some minor alterations to accommodate future growth and improve facilities for active modes.

<p>Site E7- Harbour Roundabout Scheme Proposal: Retain existing roundabout layout, potential to investigate either a part-time signal or a pedestrian crossing on the development access arm</p> <p>Impacts and Constraints:</p> <ul style="list-style-type: none"> Local Plan will add approximately 250-360 veh per hour during the peak periods Due to heavy 2040 LP flows predicted on A259 (SW) in the PM peak hour, occasional delays would occur, although it dependent on traffic volumes turning right from the development access to the east Potential mitigations to include indirect traffic signal controls or pedestrian crossings on the development access to allow A259 (SW) traffic to get gaps and exit at a higher capacity The cumulative LP flows will have result in minor increases over and above the Eastbourne isolated growth and unlikely to need any further mitigation. <p>Opportunities:</p> <ul style="list-style-type: none"> Existing layout with minor signalisation on the development access expected to generally accommodate the forecast Eastbourne Local Plan and Cumulative Local Plan flows Dedicated, safe and convenient crossing facility for pedestrians and cyclists can be accommodated on the southern arm 	<p>The aerial view shows the roundabout with the following callouts:</p> <ul style="list-style-type: none"> Potential occasional queues: During PM peak hours. Potential indirect traffic signal: To introduce gaps for A259 SW traffic to exit (pedestrian crossing or part-time peak hour signals).
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Figure 8-5 Harbour Roundabout concept review summary

The A2021 / A259 junction is also located on the constrained A259 corridor and provides a key east-west route to bypass the town centre with heavy turning flows. The isolated and cumulative growth are expected to need further mitigation at this junction and additional lane capacity on the northern arm and the removal of the ‘all red’ pedestrian crossing stage, with the introduction of staggered crossings, are likely to be needed as a minimum (see Figure 8-6). Furthermore, the A259 link capacity, particularly on the northern arm, is going to have additional impacts that will need mitigating.

Site E15- A2021/A259

Scheme Proposal: Retain existing signalised layout, potential local lane improvements and signal configuration changes to be considered

Impacts and Constraints:

- Local Plan will increase demand by approximately 31-35% (490-625 veh per hour) during the peak periods.
- A predominant share of LP traffic (around 30-50%) would operate in between A2021 and A259 (N) Seaside Road in a busy direction as per tidal pattern.
- There would be around 10-11% further increase in traffic levels with the cumulative impact
- It is likely junction would operate over its capacity in the PM peak and It is likely to experience moderate delays that would need mitigation.

Opportunities:

- Proposal to increase in right turn flare length storage to provide additional capacity when operating as in an independent stage, along with the left-turn filter on the A2021 approach.
- A further review of the existing ‘All-red’ stage to be conducted if any pedestrian movements can be accommodated along with traffic phases
- Conversion of straight crossing to staggered crossing and incorporate movements with traffic phases
- Signalised layout suggested could be confined within the highway boundary
- Dedicated, safe and convenient crossing facility for pedestrians and cyclists
- Select Vehicle Detection (SVD) for the future to implement bus priority measures



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Figure 8-6 A2021 / A259 concept review summary

The STEB modelling at Station roundabout needs to be treated with caution, given this is a model loading point for a large quantity of uncertain Windfall development proposed in the town centre, which will need more detailed consideration moving forward. The modelled isolated and cumulative flows will potentially need mitigating and there is the opportunity for conversion into a signal junction to provide additional capacity (see Figure 8-7). This option would also integrate the legibility of the network with the recently implemented signals and public realm improvements at the A259 / Terminus Road junction immediately to the south. Further modelling is needed in the countywide model to understand flows at this junction.

Site E6- Station Roundabout

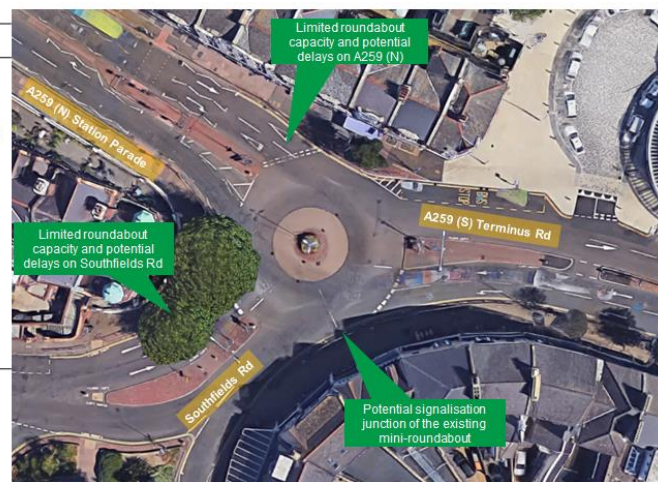
Scheme Proposal: Potential conversion to signal junction and integrate with public realm and active travel improvements at station

Impacts and Constraints:

- Local Plan will increase demand by approximately 23-30% (475-590 veh per hour) during the peak periods.
- Projected 2040 LP flows suggest; there is a potential for some delays to occur in A259 (N) and Southfields Rd.
- Current mini-roundabout layout would not offer a significant capacity and also encounter delays at the crossing while catering to busy pedestrian activities
- Due to the limited highway boundary and the need to prioritise the active travel mode movements, it is suggested to consider converting the junction to a signalised layout with pedestrian/cycle facilities and tie with the Eastbourne TC Phase 1 works.
- Further, the projected 2040 cumulative LP flows suggest around 11-13% increase in total flows, which would add further delays
- The proposal to convert the junction to a signalised layout would likely cater for the cumulative traffic flows.

Opportunities:

- The proposed signalised layout is expected to generally accommodate the forecast Eastbourne Local Plan and Cumulative Local Plan flows
- The proposed signalised layout could be confined within the highway boundary
- Dedicated, safe and convenient crossing facility for pedestrians and cyclists
- Select Vehicle Detection (SVD) for the future to implement bus priority measures



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Figure 8-7 Station Roundabout concept review summary

The A259 / The Avenue junction also needs to be treated with caution due to the possible impact of Windfall traffic and model loading points. It also forms the western end of a secondary inner route to bypass the town centre and new public realm improvements at the station. Turning flows are expected to be high and additional mitigation is likely to be needed to provide additional lane capacity (see Figure 8-8). Further modelling will be needed in this area to understand any local reassignment impacts arising from the station improvements and also the loading of town centre Windfall traffic on this part of the network.

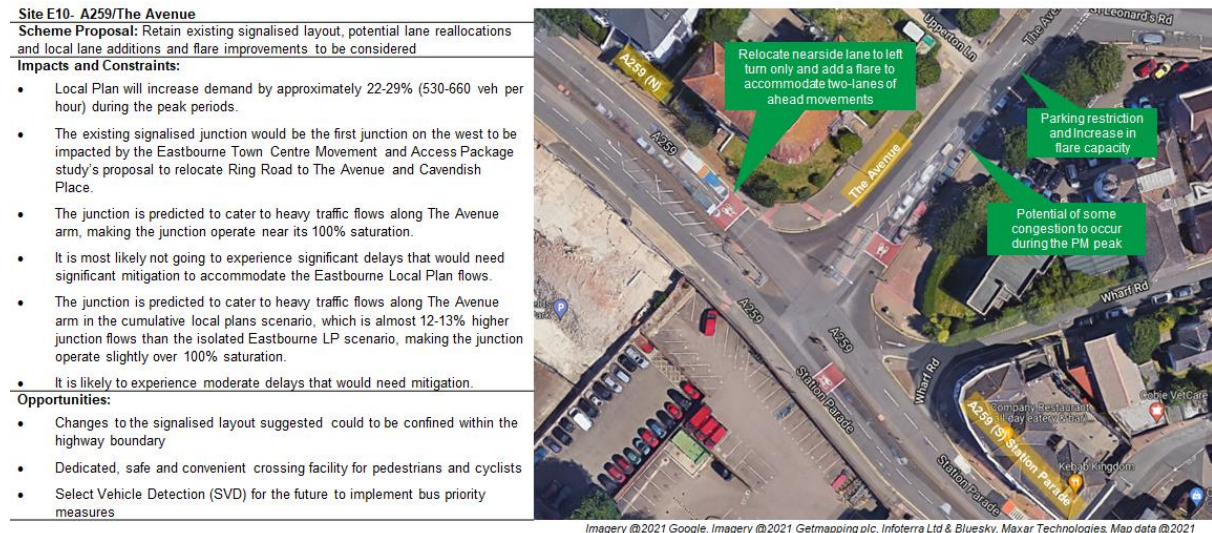


Figure 8-8 A259 / The Avenue concept review summary

The STEB modelling does not identify significant growth at the A259 / The Goffs junction in either the isolated or cumulative options. As with other junctions on this section of the A259, the impact could be affected by Windfall traffic and model loading points. However, the minor A259 arm could exceed capacity in the future and signalling the junction would be a potential option (see Figure 8-9), subject to levels and forward visibility on The Goffs western arm.

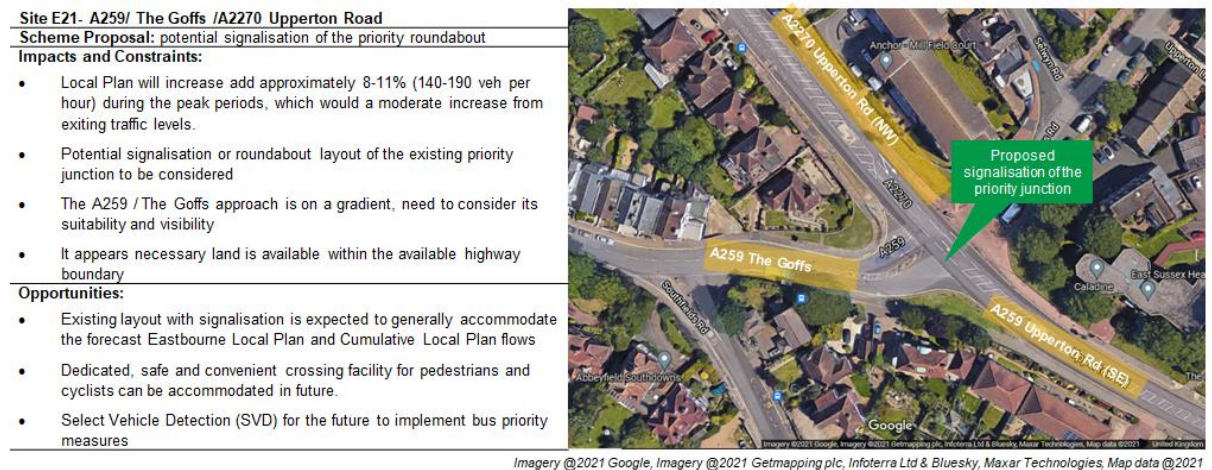


Figure 8-9 A259 / A2270 / The Goffs concept review summary

8.4 A2021 / A2270 Corridor

The A2021 / A2270 corridor is the principal north-south route between Eastbourne town centre and the wider county. The STEB modelling identifies significant growth on this corridor and that it is likely to exceed link capacity. This is to a lesser extent than

the A259, however, any recommendations at a junction level will need to be considered within the context of this additional impact. An element of caution should be applied, given STEB is assigning the majority of cross boundary traffic to this corridor, rather than the alternative similar A22 / A2290 corridor to the east of the borough. The countywide model will need to be used to assess how traffic is balanced on the network when capacity and congestion is considered.

The A2021 Bedfordwell Roundabout is likely to need mitigation to accommodate future growth and conversion to signals is a potential solution (see Figure 8-10). This would provide an opportunity to coordinate with the two signalised junctions located to the east on the A2021 at Stansted Road/Firle Road and Waterworks Road. These signalised junctions could also be impacted due to the increase in flows on the A2021, particularly on the side roads, and further local junction modelling is recommended to explore how these junctions could be linked to maximise capacity.

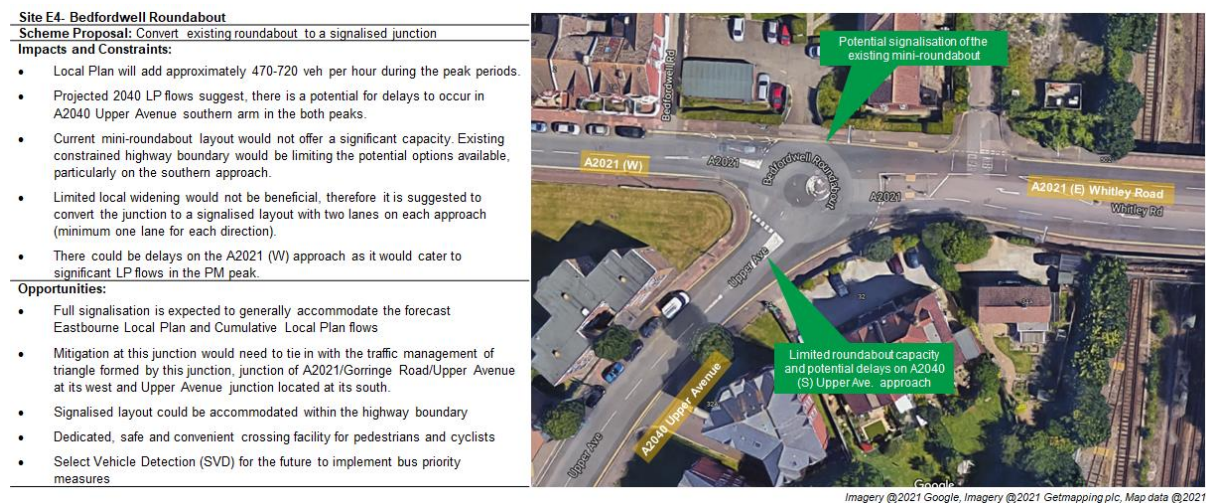


Figure 8-10 A2021 / Bedfordwell Roundabout concept review summary

The A2040 / Upper Avenue junction is not on the main A2021 corridor but does form part of the secondary inner route to divert traffic around the town centre between Cavendish Place, The Avenue and A259. The review indicates that the junction is likely to have sufficient capacity with the future growth. However, further modelling will be needed in this area to understand any local reassignment impacts arising from the station improvements and potential loading of Windfall traffic on to the network.

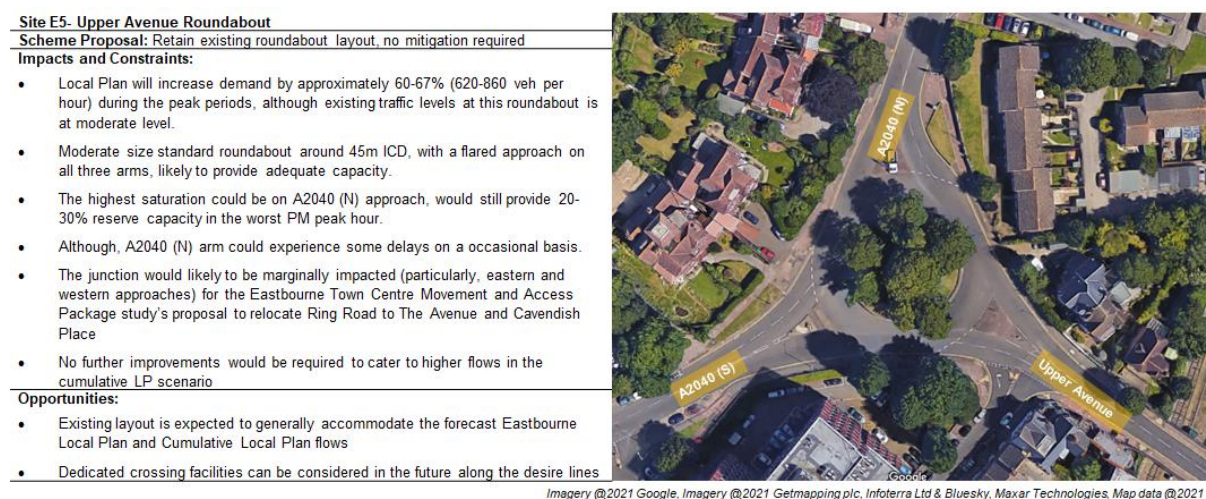


Figure 8-11 A2040 Upper Avenue Roundabout concept review summary

The A2021 Rodmill Roundabout is a key junction on both the A2021 and the east-west A2280 corridor, which provides an alternative route to bypass the town centre. The Local Plan also proposes larger residential allocations at the nearby college campus. The future impacts are likely to need mitigation and the review (see Figure 8-12) makes use of the available land, subject to highway boundary, to provide additional lane capacity on all arms of the roundabout. There are good quality cycle lanes in and around the junction with a grade separated route under the A2880 arm. There are no controlled crossings for active modes and further modelling could consider whether these can be incorporated with any design.

Site E3- Rodmill Roundabout

Scheme Proposal: Improve the existing roundabout (increased ICD) with three lanes on circulatory, additional lane on A2021 (S), a bypass on Cross Levels Way and also additional flare capacity on rest of the arms.

Impacts and Constraints:

- Local Plan will increase demand by approximately 18-21% (650-830 veh per hour) during the peak periods and almost half of the LP traffic would traverse along A2021 and depict a tidal pattern.
- Both Cross-Levels Way and A2021 (N) Kings Drive is expected to be over at capacity, during some occasions, A2021 (S) would also experience queues
- The roundabout is predicted to cater to 12-13% higher traffic flows in the cumulative local plans scenario compared to the isolated Eastbourne LP scenario, which would create severe delays along Cross Levels Way, A2021 (N) and A2021 (S).
- With cumulative flows, the roundabout should be considered for the higher ICD and three circulating lanes along with potential three-lane approaches on both the A2021 and Cross Levels Way approaches.
- Potential mitigation would include the addition of flare storage Cross-Levels Way and A2021 (S) Kings Drive approaches
- Existing pedestrian and cycling crossing facilities are uncontrolled

Opportunities:

- Left turning traffic from Cross Levels Way to A2021 (S) would benefit from a left-segregated slip lane
- It appears land take could be accommodated within the highway boundary
- Dedicated crossing facilities can be provided along with the proposed improvements



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Figure 8-12 A2021 Rodmill Roundabout concept review summary

Over and above the potential link capacity issues on the A2021, Decoy Roundabout is a mini-roundabout with limited opportunity for additional capacity other than signalling the junction (see Figure 8-13). This will be challenging to deliver within the highway boundary and the alignment of both minor roads. Further modelling is needed in the next stages to understand flows at this junction and inform the design of any signalised layout.

Site E12- Decoy Roundabout

Scheme Proposal: Convert existing roundabout to a signalised junction

Impacts and Constraints:

- Local Plan will add approximately 550-650 veh per hour during the peak periods.
- Current mini-roundabout layout would not offer a significant capacity
- Current mini-roundabout layout would not offer a significant capacity. Existing constrained highway boundary would be limiting the potential options available
- Limited local widening would not be beneficial, therefore it is suggested to consider converting the junction to a signalised layout.
- Projected 2040 cumulative LP flows suggest around 100% increase development flows, and the current mini-roundabout layout would experience severe delays.
- The proposal of signalised junction likely to cater for the cumulative traffic flows.

Opportunities:

- Fully signalised crossroads is expected to generally accommodate the forecast Eastbourne Local Plan and Cumulative Local Plan flows
- Signalised layout could be confined within the highway boundary
- Dedicated, safe and convenient crossing facility for pedestrians and cyclists
- Select Vehicle Detection (SVD) for the future to implement bus priority measures



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Figure 8-13 A2021 Decoy Roundabout concept summary review

The A2270 Willingdon Roundabout is likely to need upgrading to accommodate future Local Plan growth. The principal south eastern A2270 Kings Drive approach will need

additional land take and possible realignment to provide further capacity. There are currently no controlled crossing facilities and further design and modelling will need to consider how active modes can be better accommodated at this junction as well as the potential for bus priority.

Site E11- Willingdon Roundabout

Scheme Proposal: Conduct minor changes to the central island to safety on both the A2270 approaches and capacity improvements on the A2021 (SE) arm.

Impacts and Constraints:

- Local Plan will add approximately 445-530 veh per hour during the peak periods.
- Potential mitigation measures to include
 - Redesign of circulatory and add additional approach lanes on both the A2270 approaches
 - Improvement in flare capacity on the A2021 (SE) approach
 - Investigation if a segregated lane is achievable

Opportunities:

- Existing layout with minor capacity improvement is expected to generally accommodate the forecast Eastbourne Local Plan and Cumulative Local Plan flows
- Dedicated, safe and convenient crossing facility for pedestrians and cyclists can be accommodated in future



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Figure 8-14 A2270 Willingdon Roundabout concept review summary

8.5 Wider Mitigation

The impacts of wider additional cross-boundary Local Plan growth, from other districts on the Eastbourne network, will need to be considered within the context of the eventual need for mitigation. Equally, the cross-boundary impacts of the Eastbourne Local Plan will need to be considered too.

The STEB assessment of the isolated Eastbourne Local Plan Option 2 indicated that up to 500 two-way vehicles could be distributed to the A2270 corridor and 300 two-way vehicles to the A22 corridor leading up to the A27. These impacts will potentially change with further modelling and need to be considered alongside the additional impact of all Local Plans. At this stage Table 8-2 summarises the outcomes of a similar emerging concept review, for neighbouring Wealden, of junctions on these corridors. Junction locations are shown in Figure 5-4 and the review is only an early indication of what might be needed and advisory only.

Table 8-2 Potential need for cross-boundary mitigation

Junction	Ref	Corridor	Mitigation Summary
Dittons Road Roundabout	W6	A22	A signalised crossroads junction layout is suggested as a part of the A22/A27 MRN study with provision for crossing facilities for active modes. Potential additional need for further capacity on western and southern approaches.
A2270 / Huggetts Lane	W1	A2270	Additional lane capacity is recommended on both the northern and western approaches, supported by two continuity exit lanes in both directions of A2270.
A2270 / Wannock Road	W8	A2270	Additional capacity envisaged to be provided by the HPE MAC proposal by adding two lanes of SB movement along A2270. The proposal potentially needs further capacity improvement, changes to crossing arrangements and restricting the minor conflicting crossing movements.
A27 Drusillas Rbt	W2	SRN	Further improvements unlikely to be needed to NH A27 East of Lewes Scheme currently being implemented.

Junction	Ref	Corridor	Mitigation Summary
A27/A2270	W3	SRN	Minor improvements to existing NH's A27 East of Lewes Scheme improvement layout potentially required to provide additional flare capacity on the SB approach.
Cophall Roundabout	W4	SRN	On completion of NH's A27 East of Lewes schemes, the A27 (S) arm will be a dual-carriageway. Further, partial signalisation of the eastern and southern arm (both approaches of the A27) could be needed.
Golden Jubilee Roundabout	W5	SRN	An improved priority layout is suggested as a part of the A22/A27 MRN study, additional approach lane capacity on western and southern approaches, increased flare length on the eastern approach. No further improvement is required to the current proposal.

8.6 Summary

The high-level outcomes of the initial highway mitigation concept review are summarised in Table 8-3. Generally, reasonable local improvements could be implemented to improve capacity at a junction level, at least, and to complement the potential for more sustainable travel. Noting that junction capacity is not the overriding constraining factor, the STEB model has identified that the key A259 and A2021 corridors could exceed link capacity, which would reduce the effectiveness of any junction improvements. As previously highlighted, a range of factors need further consideration on these corridors, including the potential for reassignment, further modal shift and how specific development sites have been modelled.

All design advice is subject to more detailed feasibility, land availability, modelling and further consideration will be needed to explore the full potential for active modes and bus priority to support the sustainable mode shift needed to mitigate the Local Plan.

Table 8-3 Summary of concept review options

Junction	Ref	Corridor	Mitigation Summary
Shinewater Roundabout	E8	A2290	A fully signalised roundabout is proposed as part of the A22/A2290 MRN study that would need further flare length capacity improvements A22 North and Willingdon Drove (NE) approaches. Improvement to existing crossing point on the A22 (S) approach is proposed.
Lottbridge Roundabout	E9	A2290	A fully signalised roundabout is proposed as a part of the A22/A2290 MRN study and would need no further capacity improvements.
Langney Roundabout	E1	A259	Full signalisation of the existing priority roundabout and additional lane capacity on northern and western approach. A259 link capacity will be exceeded on both approaches. Further modelling needed.
Seaside Roundabout	E2	A259	Further capacity improvements likely to be needed to A22/A2290 MRN study proposals. Additional lane flares and capacity required on both the A259 approaches and would involve land take. Dedicated cyclist and pedestrian crossing points to be improved. A259 link capacity will be exceeded on both approaches. Further modelling needed.
Harbour Roundabout	E7	A259	Minor improvements to existing roundabout are proposed to provide an indirect signal or pedestrian crossing on the development access approach.

Junction	Ref	Corridor	Mitigation Summary
A2021/A259 Whitley Road	E15	A259	<p>Potential to retain the existing signalised layout with potential capacity improvements on the right turn lane on the A259 (N) approach and other signal configuration changes, including reconfiguring the existing 'All-Red' stage.</p> <p>A259 link capacity will be exceeded on both approaches. Further modelling needed.</p>
A259/The Avenue	E10	A259	<p>Proposal to retain existing signalised layout, potential lane reallocations, local lane additions and flare improvements to be considered. Further modelling of the impact of Windfall development needed.</p>
The Goffs/Upperton Road	E21	A259	<p>Potential to convert to signal subject to forward visibility and level constraints on A259 The Goffs approach. Further modelling of the impact of Windfall development needed.</p>
Station Roundabout	E4	A259	<p>Consider converting to signals to integrate with adjacent public realm and active travel improvements at the station. Further modelling of the impact of Windfall development needed.</p>
Bedfordwell Roundabout	E5	A2021	<p>Option to signalise existing mini-roundabout and make provision for active modes.</p>
Upper Avenue Roundabout	E6	A2021	<p>Retain existing roundabout layout, no mitigation required at this stage. Further modelling of traffic reassignment to A2040 corridor between Cavendish Place and A259 needed.</p>
Rodmill Roundabout	E3	A2021	<p>Potentially increase the size of the existing roundabout, with additional lane capacity provided predominantly on A2021 (SE) and Cross Levels Way arms. Dedicated crossings to be considered in the future with other capacity improvements.</p> <p>A2021 link capacity will be exceeded on both approaches. Further modelling needed.</p>
Decoy Roundabout	E12	A2021	<p>Option to convert existing mini-roundabout to signals and make provision for active modes.</p> <p>A2021 link capacity will be exceeded on both approaches. Further modelling needed.</p>
Willingdon Roundabout	E11	A2270	<p>Minor changes to the central island suggested to improve safety on both the A2270 approaches and also capacity improvements needed on the A2021 (SE) Kings Drive arm. Consider options for bus priority and active modes.</p> <p>A2021 link capacity will be exceeded on both approaches. Further modelling needed.</p>

9 Summary and Next Steps



9.1 Impacts of Eastbourne Local Plan Options

Eastbourne Borough Council (EBC) is preparing a new Local Plan as a framework for future development up to 2039. An initial assessment has been undertaken of two Local Plan options with the key objectives to understand:

- The likely high-level transport impacts of further growth
- Early mitigation solutions to address additional transport challenges
- Potential residual risks to the transport network from Local Plan growth across the borough and wider region

The approach aligns with wider guidance, and the Council's own proposed vision and objectives, to place sustainable transport at the centre of any mitigation solutions and move away from traditional 'predict and provide' towards a preferred 'decide and provide' future, which aims to reduce reliance on a car dependant transport system.

Eastbourne faces a number of transport-based challenges around car ownership, dependency and congestion on key corridors. As one of the main economic hubs in the county, there is a high level of car-based movement, within the borough and particularly to / from Wealden, generating impacts on the network. Equally, Eastbourne also presents greater opportunity, given the largely urban nature and transport links, to encourage higher levels of sustainable mode shift.

The assessment identifies that, without mitigation, the potential level of traffic growth for both options could have severe impacts on the borough transport network, including the following observations:

Option 1

Tests 3,352 houses and 95,625 sqm employment / retail / other floorspace

Potentially generates up to 2,845 additional development related vehicle trips in the peak hour

Lower impact on most of the network than Option 2 with the exception of marginally higher impacts on the A2290 and A259 to east of the borough due to higher level of employment at these locations

Potential capacity issues on links and junctions on key A259, A2021 and A2270 corridors needing mitigation

Over 30% of potential housing allocated as Windfall, lacking certainty and difficult to plan for

Option 2

Tests 5,679 houses and 70,875 sqm employment / retail / other floorspace

Potentially generates up to 3,439 additional development related vehicle trips in the peak hour

Higher impact (approximately 20%) than Option 1 with the exception of marginally lower impacts on the A2290 and A259 to east of the borough

Potential residual capacity issues on links and junctions on key A259, A2021 and A2270 corridors

Higher level of uncertain Windfall housing, predominantly in the town centre and potentially impacting on the constrained A259, A2021 and A2270 corridors

9.2 Initial mitigation options

Wider evidence has been considered to identify an initial framework of sustainable interventions, to build on the existing scheme pipeline and the potential for ambitious modal shift targets in Eastbourne, including:

- Enhanced partnerships with operators and zero emission bus-based rapid transit (BRT) on key corridors and connecting key destinations
- Delivering a network of public transport, active mode and micro-mobility solutions to provide alternative seamless travel routes to the key highway corridors and desire lines
- Reduction in car ownership, parking demand and use in the town centre and surrounding area
- Progressive adoption of innovative technologies

At this early stage, an average sustainable travel target of a 10%-15% reduction in forecast peak hour car trips has been applied at a borough level. While this will need refining as the Local Plan assessment evolves, and with more certainty of the package of measures to be delivered, there are still some residual impacts on the A2021 and, more specifically, the A259 key corridors, which could pose a potential risk to the delivery of either Local Plan option. Key considerations to be taken forward for further testing, and also complement, the proposed package of measures could include:

- Early development of design codes, road user hierarchy and infrastructure requirements to ‘plan for people & places’
- Review where car free and reduced parking developments could be delivered
- Maximise the scale, density and type of residential accommodation with reduced parking provision in most accessible locations and key destinations to create sustainable transport-oriented development
- Greater certainty and detail, where possible, of the likely location and delivery strategy for the high proportion of Windfall housing in and around the town centre can this be replaced by more certain and coordinated delivery
- Review the scale or need for edge of town retail and employment at Sovereign Harbour
- Continued engagement with ESCC, operators and TfSE to explore and maximise the potential of enhanced bus partnerships and the role BRT could play
- Planning obligation and CIL strategy, to complement strategic funding opportunities, and contribute to a range of ‘Sustainable Travel Town’ initiatives
- Explore and embrace a range of emerging technologies and future mobility opportunities to support sustainable and less traditional travel alternatives
- Can a greater level of modal shift, than the average 10%-15% assessed, be achieved on some key corridors with the introduction of BRT and other measures

9.3 Potential cross-boundary impacts

A cumulative assessment of neighbouring Local Plan growth also illustrates that potential additional cross boundary Local Plan growth could add further traffic impacts,

particularly on the A2021 and A259 corridors. Similarly, the Eastbourne Local Plan growth will impact on key corridors in neighbouring districts including the A22 and A27 corridors in Wealden.

Further consideration will need to be given going forward to how these additional impacts are treated within the context of the New Eastbourne Local Plan, and what it is expected to mitigate, noting that this is also an emerging picture and subject to change.

9.4 Next steps

At this stage, the initial STEB spreadsheet-based modelling has shown that the Eastbourne Local Plan options could generally be accommodated with a significant, but potentially achievable, level of sustainable modal shift and local highway improvements. However, the STEB modelling does highlight that the key A259 corridor, and to a lesser extent the A2021 / A2270 corridor, could exceed capacity during the peak periods, even with the target level of modal shift applied. The countywide model will need to be used to test these corridors in more detail, including reassignment of traffic and whether a greater level of modal shift can be achieved, to confirm the eventual likely level of impact. If this process demonstrates a higher level of impact on parts of the network, then alternative spatial options and mitigation solutions may need further consideration.

The SATURN-based strategic East Sussex Countywide Transport Model (ESCWTM / “countywide model”) will be used to refine the modelling methodology, assess impacts in more detail and further develop the transport evidence base as the Local Plan is developed further. The key analysis to be considered going forward is likely to include, but not be limited to, the following:

- Development of initial framework of sustainable options into an integrated delivery strategy across different interventions to drive behaviour change including, place-making, public transport, cycling, walking, electric vehicles and future mobility
- Updated origin and destination information using mobile phone data rather than historic Census 2011 data
- Full dynamic reassignment to balance demand across a number of feasible routes based on available capacity, travel time, congestion and generalised cost variables
- Consideration of a range of journey purposes, and not just travel to work, to refine trip distribution patterns and understand the impacts of both shorter and longer distance trips
- Further refinement of specific land use trip rates including the potential for car free development and sustainable travel options
- Corridor specific modal shift accounting for full range of sustainable options including BRT, bus, rail, walking, cycling and other transport options
- Further testing of cumulative and cross boundary impacts of all Local Plan on the transport network within Eastbourne and in neighbouring districts
- Sensitivity testing and design of potential highway interventions and junction improvements –this could include a test of the historical St Anthony’s link road, previously proposed in the 2003 Eastbourne Plan and 2013 Core Strategy
- Additional option testing, if required, of alternative spatial strategies

A key consideration going forward is that the Local Plan is being assessed against forecast traffic patterns some 15+ years in the future and there are uncertainties around key external drivers of travel behaviour, including net-zero carbon, technological changes, fuel prices, new ways of working and global events, which could fundamentally change the predicted outcomes. A proportionate, flexible, monitor and manage approach to delivering specific measures and outcomes, is therefore needed, which can respond to these changes.

Appendix

Appendix A: Known Scheme Pipeline

Scheme Number	Scheme name	Mode(s)	Description
Committed			
1	Section 2 Eastbourne Road (A2270) Willingdon Road	Bus/walk/cycle	Bus lanes, off-road shared footway/cycleway, upgrade traffic signals to include bus gate, toucan crossing and ASLs, new 30mph speed limit
2	Huggetts Lane - (A2270) Eastbourne Road Bus Lane	Bus/walk/cycle	Bus lanes, off-road shared footway/cycleway, upgrade traffic signals to include bus gate, toucan crossing and ASLs, new 30mph speed limit, off-road footway/cycleway on the eastern side of the road between Broad Road and Huggett's Lane
3	Bus Stop improvements A2270	Bus	Bus stop infrastructure improvements in Phase 1 corridor
4	Eastbourne Town Centre Terminus Road (Phase 2a)	Walk	Between Bankers' Corner, Bolton Road and Langney Road, Terminus Road will be pedestrianised and the public realm
5	A22/A2270/A20 21 HPE MAC (Phase 1)	Bus/walk/cycle	<p>A package of cycling, walking and public transport interventions. Phase one works:</p> <ul style="list-style-type: none"> • Wannock Road/Polegate High Street/Eastbourne Road signalised junction improvement • Eastbourne Road bus lane between Broad Road and Huggett Lane including enhanced pedestrian and cycle facilities • Victoria Drive bus lane on approach to Eastbourne Road junction

Scheme Number	Scheme name	Mode(s)	Description
Planned			
6	Victoria Drive	Bus	Provision of northbound bus lane, with retention of 30mph speed limit and introduction of parking restrictions
7	A259 Brighton-Eastbourne-Pevensey (South Coast) MRN corridor	Bus	Bus-based interventions along the corridor particularly on these sections: <ul style="list-style-type: none"> • Peacehaven - Newhaven • Newhaven to Seaford • Eastbourne Town Centre to Sovereign Harbour (Seaside) corridor
8	A2290 – Shinewater Roundabout	Car/bus/cycle	Geometric roundabout improvements including signalisation, cycling improvements and bus detection
9	A2290 – Lottbridge Roundabout	Car/cycle/walk	Geometric junction improvements including signalisation, walking and cycling improvements
10	A2290 – Seaside Roundabout	Car/cycle/walk	Geometric junction improvements including signalisation, walking and cycling improvements
11	A2290 – Birch Roundabout	Car/cycle/walk	Geometric junction and road layout improvements including signalisation, walking and cycling improvements
12	A22/A2270/A2021 HPE MAC (Future phases)	All	A package of cycling, walking and public transport interventions. Further phases of works will include bus-based interventions on the A2021 Kings Drive serving the District General Hospital and Sussex Coast College.
13	Town Centre to Hospital Cycle Route	Cycle	The Eastbourne and South Wealden walking and cycling package will deliver a number of routes and complementary measures that are interdependent and will support an expanding walking and cycling network
14	Stone Cross to Royal Parade	Cycle	The proposed route consists of largely off-road shared facilities to allow cyclists to travel in either direction from Stone Cross, via Langney (adopting the Langney Rise cycle route) to the seafront. Access is provided to an off-road route on Dittons Road to Polegate, as well as the Horsey Way Cycle Route and the National Cycle Route 21.

Scheme Number	Scheme name	Mode(s)	Description
Concept			
15	A2270 Kings Drive Bus improvements	Bus	Bus lane
18	Eastbourne Town Centre Phase 2b	Cycle/walk	Public realm improvements from Terminus Road – Langney Road to Grand Parade. Capability (Active Travel) Funding, ESCC Capital Programme, other central funding and Developer Contributions
19	Bus connectivity QBC A259	Bus	Quality Bus Corridor (QBC) linking Seaside, Eastbourne TC to Sovereign Harbour and Pevensey Bay Rd/Pacific Drive
20	Marshlink High speed services PARTIAL SCHEME	Rail	<ul style="list-style-type: none"> • New hourly service from Eastbourne, Bexhill, Hastings to London St Pancras throughout day • Dedicated train in the peak, joins Dover train in the off-peak • 19-minute journey time saving for Hastings direct train to London (7 minutes off-peak) • 35-minute journey time saving for Bexhill direct train to London
21	Marshlink High speed services FULL SCHEME	Rail	<ul style="list-style-type: none"> • A259 diverted, upgrade of some crossings, some foot crossings closed and diverted • Upgrade between Bexhill and Hampden Park to reduce journey times • New hourly service from Eastbourne, Bexhill, Hastings to London St Pancras throughout day • Dedicated train in the peak, joins Dover train in the off-peak • 29-minute journey time saving for Hastings direct train to London (17 minutes off-peak) • 45-minute journey time saving for Bexhill direct train to London
22	Eastbourne bus-based mass rapid transit	Bus	TFSE Areas studies exploring early feasibility of bus-based mass rapid transit for the Eastbourne/Wealden and wider area

Appendix B: LCWIP Schemes List

Proposed Cycling Schemes	Proposed Walking Schemes
E1 - South Downs Way - Sovereign Harbour via Seafront	E1 - Core Walking Zone
E2 - University - Pevensey Way	E2 - Devonshire Place to Wellcombe Crescent
E3 - Hospital Westham	E3 - Terminus Road to Park Avenue
E4 - Polegate High street - NCN21 and A22	E4 - Ashford Road to Lottbridge Drive
E5 - Polegate - Seafront	E5 - Cavendish Place to King's Drive
E6 - Willingdon Road - Seafront	E6 - Marine Parade Rd to Birch Rbt
E7 - Hampden Park - Sovereign Centre	
E8 - A22/Dittons Road - NCN21 - Willingdon Drove	
E9 - Stone Cross - Royal Parade via Langney	
E10 - Seaside Road - Sovereign Harbour - Eastbourne Road	
E11 - Town Hall - Langley Roundabout	
E12 - Ramsay Way - Route 200 - Pacific Drive	
E13 - Station - Upper Avenue	
E14 - Horsey Way - Seaside	
E15 - Upperton - Eastbourne Park - Sevenoaks Road	
E16 - Victoria Drive - Hospital	
E17 - Willingdon Roundabout - South Shinewater Park	
E18 - Willingdon - The North Shinewater Park - Friday Street	
E19 - Lower Willingdon Upper	
E20 - Eastbourne Road - Polegate Recreation Ground - Cuckoo Trail	
E21 - Dittons Road - Cuckoo Trail - A22	
E22 - Borough Lane - King Edward's Palace	
E23 - Old Town - Library and Council Offices - Terminus Road - Seafront	
E24 - Rodmill - Eastbourne Rail Station	
E25 - Coopers Hill - Wish Hill	
E26 - Hazelwood Avenue and Hampden Park - Eastbourne Station Link	
E27 - Polegate - New North Railway Path - Hampden Park - Ringwood Road - Seafront	
E28 - Stone Cross - Larkspur Drive - Sevenoaks Road, Friday Street - Pennine Way - Seafront	
E29 - Friday Street - Pennine Way Seafront	
E30 - Netherfield Avenue - Sovereign Harbour - Seafront	
E31 - Pevensey - Pevensey Bay	

Appendix C: STEB Limitations & Assumptions

Limitation	Assumption
Trip Distribution	<p>Based on 2011 Census JTW at MSOA level and will potentially differ from ESCWTM.</p> <p>JTW trips doesn't capture employer business/education/leisure/shopping, however for cumulative assessments NTS trip purpose proportions were applied to cross boundary trips. Based on the NTS data, a discount of 34% and 10% was applied as a proxy for education trips in the AM and PM respectively. Similarly, a discount of 2% and 12% was applied as a proxy for shopping trips in the AM and PM peak.</p>
Zoning and network detail	<p>Highway network includes a simplified road hierarchy structure with network imported from ITN 2019. Also, for LP assessments no future committed transport infrastructure was included.</p> <p>Junctions were not coded in detail therefore delay from junctions are not captured.</p> <p>For zones, up to three connectors were coded to provide access to the nearest highway network.</p>
Traffic Assignment	<p>Traffic assignment was based on a simplified road hierarchy structure with free flow speed taken into account. There is no capacity constraint in the model and therefore there is no impact on route choice.</p>
Trip Pairing	<p>Considers all LP employment trips as new i.e. does not factor in LP resi/emp trip pairing, nor displacement, erosion, relocation and conversion of existing employment sites (some of which will become new LP residential e.g. office to flats)</p>
Secondary trips - retail uses	<p>TRICS does not account for pass by/linked, applied separately:</p> <p>Shopping Parade – 60% reduction in AM and PM to reflect local nature of these shops serving local residential area and reasonably high level of pass-by trips.</p> <p>Town Centre – 80% in AM and PM reduction to reflect very high linked trip to other town centre uses, pass by with station commuters and good sustainable access. Uses are very unlikely to be sole trip attractors and the 20% new trips will be employees and deliveries.</p> <p>Existing Retail Park – 25% reduction in the AM and 40% reduction in the PM – most of these sites are on the A259 and this presents a combined pass by / linked trip assumption with higher proportion in the PM.</p>
Car Free Residential Development	<p>This has not been explicitly modelled at this stage, but will contribute towards overarching modal shift assumptions. Further assessments can be undertaken when specific sites are identified.</p>
Windfall housing sites	<p>Distribution and location based on historic trends and consolidated into geographical clusters with notional highway connections for modelling purposes.</p>
Existing traffic data	<p>Existing traffic data, where available was used, but new data was not collected due to COVID limitations. It is anticipated that the ESCWTM will fill the gaps once made available.</p>

Appendix D: Local Plan Options

Trip Rates and Trip Generation

Vehicle class	Type of development	Development location	AM Origin	AM Destination	PM Origin	PM Destination	Trip Rate Parameter	Comment
Total Veh.	Residential	Town Centre	0.20000	0.02500	0.07500	0.25000	per dwelling	
Total Veh.	Residential	Neighbourhood Centre	0.32300	0.10400	0.12500	0.31100	per dwelling	
Total Veh.	Residential	Suburban Area	0.40100	0.11800	0.18300	0.37000	per dwelling	
Total Veh.	Residential	Edge of Town	0.36600	0.13500	0.15100	0.33300	per dwelling	
Total Veh.	Residential	Edge of Town Centre	0.30400	0.14600	0.18500	0.24300	per dwelling	
Total Veh.	Residential	Free Standing	0.36100	0.15300	0.18100	0.40300	per dwelling	
Total Veh.	Retail	Town Centre	0.02539	0.03057	0.04286	0.04704	per 1sqm	
Total Veh.	Retail	Neighbourhood Centre	0.01527	0.02134	0.04707	0.04728	per 1sqm	
Total Veh.	Retail	Suburban Area	0.01445	0.02028	0.03539	0.02973	per 1sqm	
Total Veh.	Retail	Edge of Town	0.01923	0.02279	0.03611	0.03233	per 1sqm	
Total Veh.	Retail	Edge of Town Centre	0.02306	0.02569	0.06403	0.05736	per 1sqm	
Total Veh.	Retail	Free Standing	0.00000	0.00000	0.00000	0.00000	per 1sqm	
Total Veh.	Office	Town Centre	0.00117	0.01628	0.01351	0.00080	per 1sqm	
Total Veh.	Office	Neighbourhood Centre	0.00091	0.01260	0.01340	0.00047	per 1sqm	Copied from edge of town
Total Veh.	Office	Suburban Area	0.00185	0.01292	0.01041	0.00145	per 1sqm	
Total Veh.	Office	Edge of Town	0.00091	0.01260	0.01340	0.00047	per 1sqm	
Total Veh.	Office	Edge of Town Centre	0.00234	0.01810	0.01634	0.00220	per 1sqm	
Total Veh.	Office	Free Standing	0.00091	0.01260	0.01340	0.00047	per 1sqm	Copied from edge of town
Total Veh.	Industrial	Town Centre	0.00000	0.00000	0.00000	0.00000	per 1sqm	
Total Veh.	Industrial	Neighbourhood Centre	0.00208	0.00634	0.00660	0.00184	per 1sqm	Copied from edge of town
Total Veh.	Industrial	Suburban Area	0.00171	0.00403	0.00280	0.00105	per 1sqm	
Total Veh.	Industrial	Edge of Town	0.00208	0.00634	0.00660	0.00184	per 1sqm	
Total Veh.	Industrial	Edge of Town Centre	0.00071	0.00128	0.00185	0.00199	per 1sqm	
Total Veh.	Industrial	Free Standing	0.00017	0.00217	0.00200	0.00025	per 1sqm	
Total Veh.	Warehouse	Town Centre	0.00000	0.00000	0.00000	0.00000	per 1sqm	
Total Veh.	Warehouse	Neighbourhood Centre	0.00061	0.00320	0.00244	0.00015	per 1sqm	Copied from edge of town
Total Veh.	Warehouse	Suburban Area	0.00000	0.00000	0.00000	0.00000	per 1sqm	
Total Veh.	Warehouse	Edge of Town	0.00061	0.00320	0.00244	0.00015	per 1sqm	
Total Veh.	Warehouse	Edge of Town Centre	0.00000	0.00000	0.00000	0.00000	per 1sqm	
Total Veh.	Warehouse	Free Standing	0.00044	0.00112	0.00070	0.00016	per 1sqm	
Total Veh.	Leisure	Town Centre	0.00276	0.00310	0.01759	0.01310	per 1sqm	
Total Veh.	Leisure	Neighbourhood Centre	0.00050	0.00075	0.00000	0.00000	per 1sqm	
Total Veh.	Leisure	Suburban Area	0.00020	0.00030	0.00050	0.00076	per 1sqm	
Total Veh.	Leisure	Edge of Town	0.00052	0.00076	0.00172	0.00187	per 1sqm	
Total Veh.	Leisure	Edge of Town Centre	0.00077	0.00092	0.00240	0.00265	per 1sqm	
Total Veh.	Leisure	Free Standing	0.00052	0.00076	0.00172	0.00187	per 1sqm	Copied from edge of town

Source TRICS® v7.8.1 - data extracted 2021

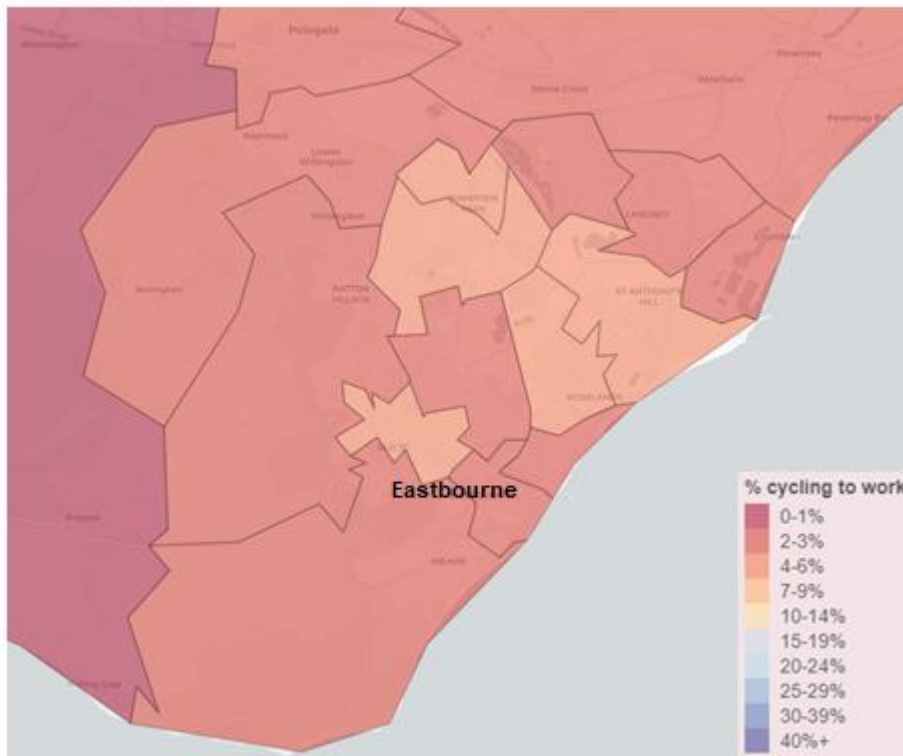
Eastbourne Option 1				Eastbourne Option 2			
Site Name	Peak Hour Veh. Trips				Site Name	Peak Hour Veh. Trips	
	AM	PM				AM	PM
North East St. Anthony's Hill	11	11			North East St. Anthony's Hill	11	11
Land at Larkspur Drive	5	5			Land at Larkspur Drive	5	5
Land north of Hammonds Drive, Lottbridge Drove	43	69			Land north of Hammonds Drive, Lottbridge Drove	43	69
Land off Sevenoaks Road, Eastbourne	3	3			Land off Sevenoaks Road, Eastbourne	3	3
Land off Lottbridge Drove, Southbourne	62	55			Land off Lottbridge Drove, Southbourne	62	55
Land in Southbourne	132	121			Land in Southbourne	43	44
Former Railway Sidings, Tutts Barn Lane	37	38			Land in Southbourne	66	61
Land at end of Lottbridge Drive	4	4			Land off Horsye Road	30	31
Station House, Station Approach, Hampden Park	3	3			Land off Homewood Close	29	30
Garages adjacent Northumberland Court, Fletching Road	4	4			Former Railway Sidings, Tutts Barn Lane	64	66
Land adjacent to 44 Wilton Avenue	3	3			Land at end of Lottbridge Drive	4	4
Brassey Parade Shopping Centre	10	11			Station House, Station Approach, Hampden Park	3	3
Brassey Parade Shopping Centre	14	26			Garages adjacent Northumberland Court, Fletching Road	4	4
Garages to the rear of 17 Pulborough Avenue	3	3			Land adjacent to 44 Wilton Avenue	3	3
Land off Fletching Road	47	50			Brassey Parade Shopping Centre	10	11
Land at end of Slindon Crescent	10	10			Brassey Parade Shopping Centre	14	26
Garages adjacent to 45 Westerham Road	3	3			Garages to the rear of 17 Pulborough Avenue	3	3
Land at south side of Hide Hollow, Priory Road	7	6			Land off Fletching Road	52	55
Mountney Levels	38	37			Land at end of Slindon Crescent	10	10
Spring Cottage, Priory Lane	4	3			Garages adjacent to 45 Westerham Road	3	3
Valarose, Priory Lane	8	7			Land at south side of Hide Hollow, Priory Road	7	6
Land east of Priory Road Eastbourne	31	30			Mountney Levels	38	37
Land North of Pevensey Bay Road	77	75			Spring Cottage, Priory Lane	4	3
Sussex Downs College, Kings Drive	81	83			Valarose, Priory Lane	8	7
St. Elizabeth's Church, Old Town	10	11			Land east of Priory Road Eastbourne	31	30
38 Motcombe Road	3	3			Land North of Pevensey Bay Road	77	75
1 Green Street, Eastbourne	8	8			Sussex Downs College, Kings Drive	95	97
16a Chamberlain Road	3	3			St. Elizabeth's Church, Old Town	10	11
Milton Garage, 72a Milton Road	3	3			38 Motcombe Road	3	3
The Mews, 5 Watts Lane	2	2			1 Green Street, Eastbourne	8	8
Garages to the rear of 36-40 Broomfield Street	5	5			16a Chamberlain Road	3	3
Garages to rear of Edinburgh Court, Central Avenue	4	4			Milton Garage, 72a Milton Road	3	3
Land at 6 Fimmere Road	3	3			The Mews, 5 Watts Lane	2	2
Garages between 59 and 65 Astaire Avenue	3	3			Garages to the rear of 36-40 Broomfield Street	5	5
Dairy Crest, Waterworks Road	25	24			Garages to rear of Edinburgh Court, Central Avenue	4	4
ESK, Courtlands Road	58	59			Land at 6 Fimmere Road	3	3
ESK, Courtlands Road	8	17			Garages between 59 and 65 Astaire Avenue	3	3
Former Gas Works, Land East of Fimmere Road and North of Britland Estate	44	45			Dairy Crest, Waterworks Road	25	24
59 Bourne Street	2	2			ESK, Courtlands Road	58	59
67 Bourne Street	3	3			ESK, Courtlands Road	8	17
104 Firle Road	8	7			Former Gas Works, Land East of Fimmere Road and North of Britland Estate	71	72
55a/67a Willowfield Road	18	17			59 Bourne Street	2	2
Coachmakers Business Centre, 116a Seaside	3	3			67 Bourne Street	3	3
38/40 Leslie Street	2	2			104 Firle Road	8	7
20 Vine Square/18a Winchelsea Road	3	3			55a/67a Willowfield Road	18	17
142 Langney Road	4	4			Coachmakers Business Centre, 116a Seaside	3	3
Senlac House & Marine Garages, 53-59 Seaside	4	3			38/40 Leslie Street	2	2
Garages to the rear of 1-11 Wannock Road	5	5			20 Vine Square/18a Winchelsea Road	3	3
Land to the rear of 73-91 Dudley Road	4	3			142 Langney Road	4	4
Garages to the rear of 13-19 Wannock Road	4	4			Senlac House & Marine Garages, 53-59 Seaside	4	3
Fort Fun, Royal Parade	21	22			Garages to the rear of 1-11 Wannock Road	5	5
Fishermans Green, Royal Parade	35	35			Land to the rear of 73-91 Dudley Road	4	3
Hide Hollow Farm, Hide Hollow	20	21			Garages to the rear of 13-19 Wannock Road	4	4
Site 2, Sovereign Harbour	4	4			Fort Fun, Royal Parade	51	52
Site 4, Sovereign Harbour	76	163			Fishermans Green, Royal Parade	39	40
Sovereign Harbour Site 6	114	115			Hide Hollow Farm, Hide Hollow	20	21
Site 7a, Pacific Drive, Sovereign Harbour	125	128			Site 2, Sovereign Harbour	4	4
Land within Sovereign Harbour Retail Park	137	283			Site 4, Sovereign Harbour	76	163
Sovereign Harbour Boatyard	27	57			Sovereign Harbour Site 6	114	115
Shingle Bank, Harbour Quay	41	85			Site 7a, Pacific Drive, Sovereign Harbour	64	65
Land adjacent to the Lock Gates, Sovereign Harbour	4	4			Land within Sovereign Harbour Retail Park	137	283
Land to rear of 76-83 Rotunda Road	3	3			Sovereign Harbour Boatyard	27	57
Open Space off Leeds Avenue	11	11			Shingle Bank, Harbour Quay	41	85
Land within Admiral Retail Park, Lottbridge Drove	33	68			Land adjacent to the Lock Gates, Sovereign Harbour	4	4
Compton Cottage, Compton Place Road	5	4			Land to rear of 76-83 Rotunda Road	3	3
Burlington Road car park to the rear of Burlington Hotel	3	4			Open Space off Leeds Avenue	11	11
TC DO Site 3 - Post Office Depot between Upperton Road and Southfields Road	26	37			Land within Admiral Retail Park, Lottbridge Drove	33	68
TC DO Site 3 - Post Office Depot between Upperton Road and Southfields Road	11	18			Compton Cottage, Compton Place Road	5	4
Vincent's Yard, 65a Susans Road	1	2			Burlington Road car park to the rear of Burlington Hotel	16	24
5c Commercial Road	2	3			TC DO Site 3 - Post Office Depot between Upperton Road and Southfields Road	65	94
Debenhams, 152-170 Terminus Road	7	10			TC DO Site 3 - Post Office Depot between Upperton Road and Southfields Road	11	18
Debenhams, 152-170 Terminus Road	17	27			Vincent's Yard, 65a Susans Road	8	12
TJ Hughes, 177-187 Terminus Road	3	5			5c Commercial Road	6	8
TJ Hughes, 177-187 Terminus Road	11	18			Debenhams, 152-170 Terminus Road	43	62
60a Ashford Square	1	2			Debenhams, 152-170 Terminus Road	17	27
111a Ashford Road	2	3			TJ Hughes, 177-187 Terminus Road	21	31
Pembroke House, 8-10 Upperton Road	5	5			TJ Hughes, 177-187 Terminus Road	11	18
Eastbourne Law Courts, Old Orchard Road	5	7			60a Ashford Square	13	18
DOS2 - Land adjoining the Railway Station and the Enterprise Centre	45	65			111a Ashford Road	15	21
DOS2 - Land adjoining the Railway Station and the Enterprise Centre	123	136			Pembroke House, 8-10 Upperton Road	17	16
Eastbourne Police Station, Grove Road	11	16			Eastbourne Law Courts, Old Orchard Road	30	44
54-56 Upperton Road	4	4			DOS2 - Land adjoining the Railway Station and the Enterprise Centre	67	97
Town Centre Windfall	125	180			DOS2 - Land adjoining the Railway Station and the Enterprise Centre	40	50
Upperton Windfall	28	27			Eastbourne Police Station, Grove Road	11	16
Seaside Windfall	105	100			54-56 Upperton Road	4	4
Old Town Windfall	33	35			Town Centre Windfall	253	366
Ocklynge & Rodmill Windfall	3	3			Upperton Windfall	29	28
Roselands & Bridgemere Windfall	8	8			Seaside Windfall	117	112
Roselands & Bridgemere Windfall	12	11			Old Town Windfall	49	52
Hampden Park Windfall	11	12			Ocklynge & Rodmill Windfall	3	3
Hampden Park Windfall	6	4			Roselands & Bridgemere Windfall	12	12
Shinewater & North Langney Windfall	2	2			Roselands & Bridgemere Windfall	12	11
Summerdown & Saffrons Windfall	3	3			Hampden Park Windfall	29	30
Meads Windfall	28	29			Hampden Park Windfall	6	4
Ratton & Willingdon Village Windfall	5	5			Langney Windfall	11	11
St Anthonys & Langney Point Windfall	12	12			Shinewater & North Langney Windfall	13	14
St Anthonys & Langney Point Windfall	52	43			Summerdown & Saffrons Windfall	5	5
					Meads Windfall	32	33
					Ratton & Willingdon Village Windfall	9	10
					St Anthonys & Langney Point Windfall	12	12
					St Anthonys & Langney Point Windfall	52	43

***All development locations are potential only and subject to change**

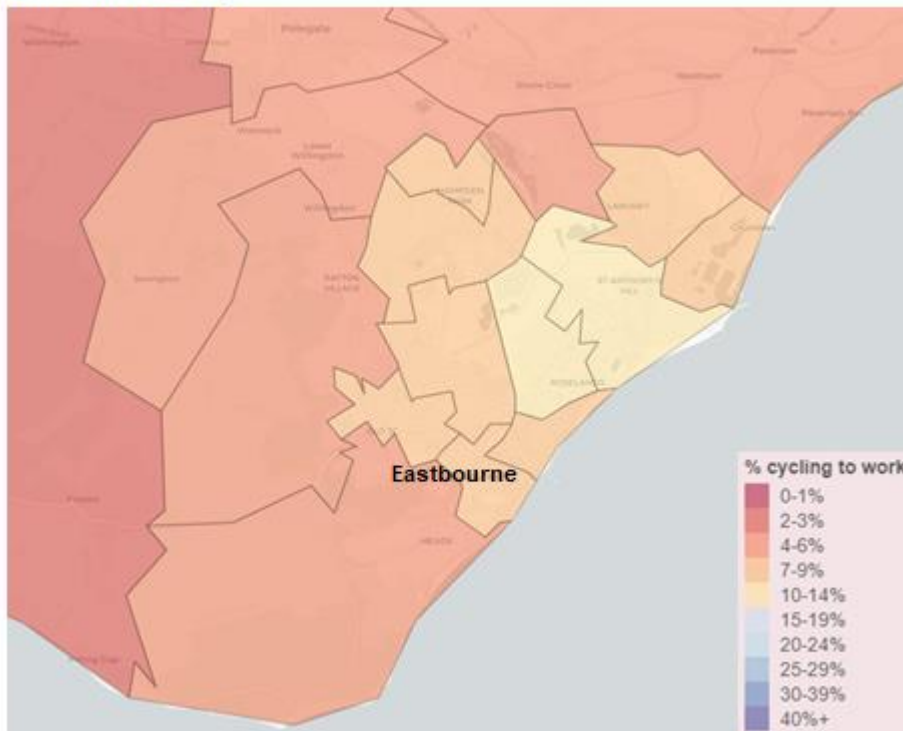
Appendix E: Propensity to Cycle Tool – Eastbourne Scenarios

Source: DfT Propensity to Cycle Tool (PCT²⁷) – date March 2022

Census 2011

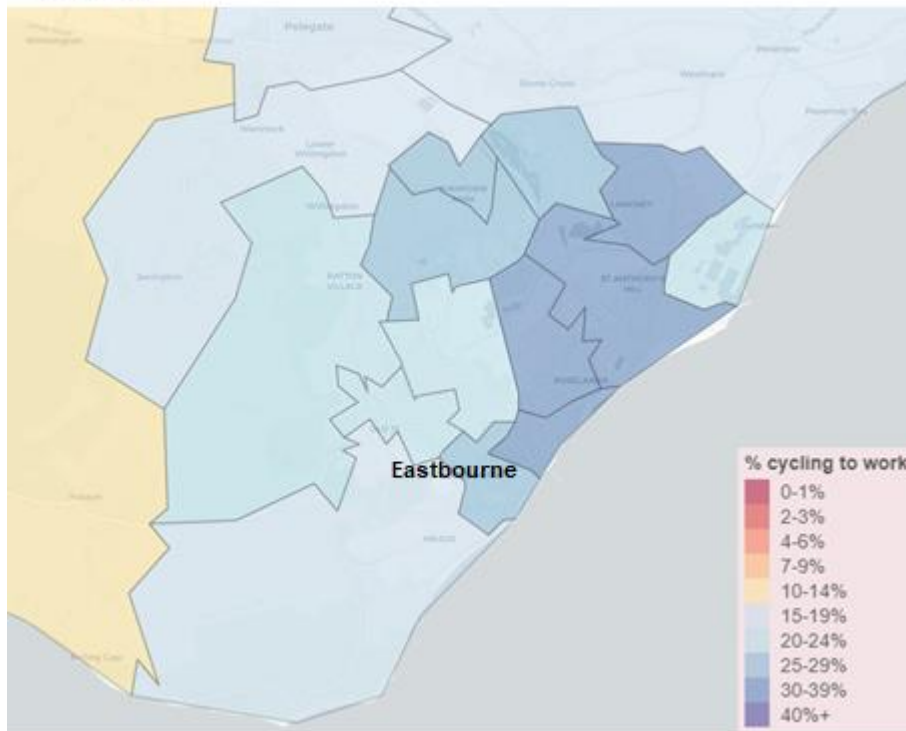


Government Target

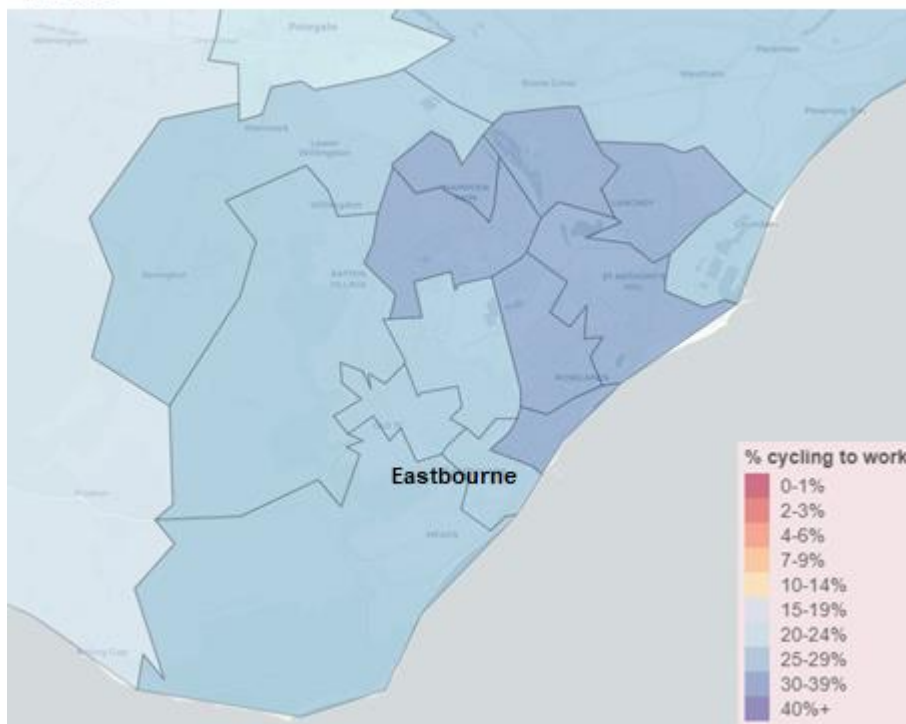


²⁷ www.pct.bike

'Go Dutch'



E-Bikes



Appendix F: Local Junction Models

Key:

DoS Degree of Saturation – Represents maximum ratio of volume over capacity as a % on a particular approach. An approach is operating within capacity with a value <90% and exceeding theoretical capacity with a value of >90%

PRC Practical Reserve Capacity – the proportion (%) of theoretical spare capacity available across a junction level:

Positive (+) PRC = junction has spare capacity

Negative (-) PRC = junction exceeds capacity

E8 Shinewater Roundabout – As per A22/A2290 Corridor Study Proposed Layout

Lane Description	2040 AM Peak-Isolated LP DoS	2040 PM Peak-Isolated LP DoS	2040 AM Peak-Cumulative LP DoS	2040 PM Peak-Cumulative LP DoS
A22 Golden Jubilee Way (North)	85.0%	83.3%	99.9%	92.0%
Willingdon Drove (East)	85.0%	85.3%	100.0%	100.0%
A22 Highfield Link (South)	62.9%	77.4%	66.0%	85.5%
Willingdon Drove (West)	62.1%	66.6%	65.6%	70.2%
PRC	5.8%	5.5%	-11.1%	-11.1%

E8 Shinewater Roundabout – Further improvement to A22/A2290 Corridor Study Proposed Layout

Lane Description	2040 AM Peak-Isolated LP DoS	2040 PM Peak-Isolated LP DoS	2040 AM Peak-Cumulative LP DoS	2040 PM Peak-Cumulative LP DoS
A22 Golden Jubilee Way (North)	82.1%	74.4%	89.1%	82.3%
Willingdon Drove (East)	81.8%	80.5%	97.6%	92.3%
A22 Highfield Link (South)	63.2%	76.5%	66.0%	82.1%
Willingdon Drove (West)	70.5%	71.3%	70.2%	65.2%
PRC	4.9%	7.0%	-8.5%	-2.6%

E9 Lottbridge Roundabout - As per A22/A2290 Corridor Study Proposed Layout

Lane Description	2040 AM Peak-Isolated LP DoS	2040 PM Peak-Isolated LP DoS	2040 AM Peak-Cumulative LP DoS	2040 PM Peak-Cumulative LP DoS
A22 Highfield Link (Northeast)	73.4%	53.7%	71.1%	54.2%
A2290 Lottbridge Drove (Southeast)	77.5%	81.8%	85.4%	86.1%
Cross Levels Way (Southwest)	57.1%	70.3%	55.7%	71.5%
Lottbridge Drove (Northwest)	73.7%	67.5%	83.4%	89.7%
PRC	16.2%	10.0%	5.4%	0.3%

E2 Seaside Roundabout – As per A22/A2290 Corridor Study Proposed Layout

Lane Description	2040 AM Peak-Isolated LP DoS	2040 PM Peak-Isolated LP DoS	2040 AM Peak-Cumulative LP DoS	2040 PM Peak-Cumulative LP DoS
A259 Seaside East	66.1%	87.8%	81.5%	95.6%
Lottbridge Drove South	98.5%	120.2%	108.4%	133.0%
A259 Seaside West	100.3%	120.4%	109.6%	136.6%
Lottbridge Drove North	97.5%	117.2%	107.4%	134.6%
PRC	-11.5%	-33.8%	-21.8%	-51.8%

E2 Seaside Roundabout – Further improvement to A22/A2290 Corridor Study Proposed Layout

Lane Description	2040 AM Peak-Isolated LP DoS	2040 PM Peak-Isolated LP DoS	2040 AM Peak-Cumulative LP DoS	2040 PM Peak-Cumulative LP DoS
A259 Seaside East	53.5%	87.8%	65.9%	95.6%
Lottbridge Drove South	84.9%	93.2%	92.2%	106.5%
A259 Seaside West	83.8%	95.0%	91.6%	106.6%
Lottbridge Drove North	84.9%	93.3%	92.9%	107.7%
PRC	6.0%	-5.5%	-3.2%	-19.6%