

Bus Service Improvement Plan

Our plan for improving bus services in Southend, 2022-2027

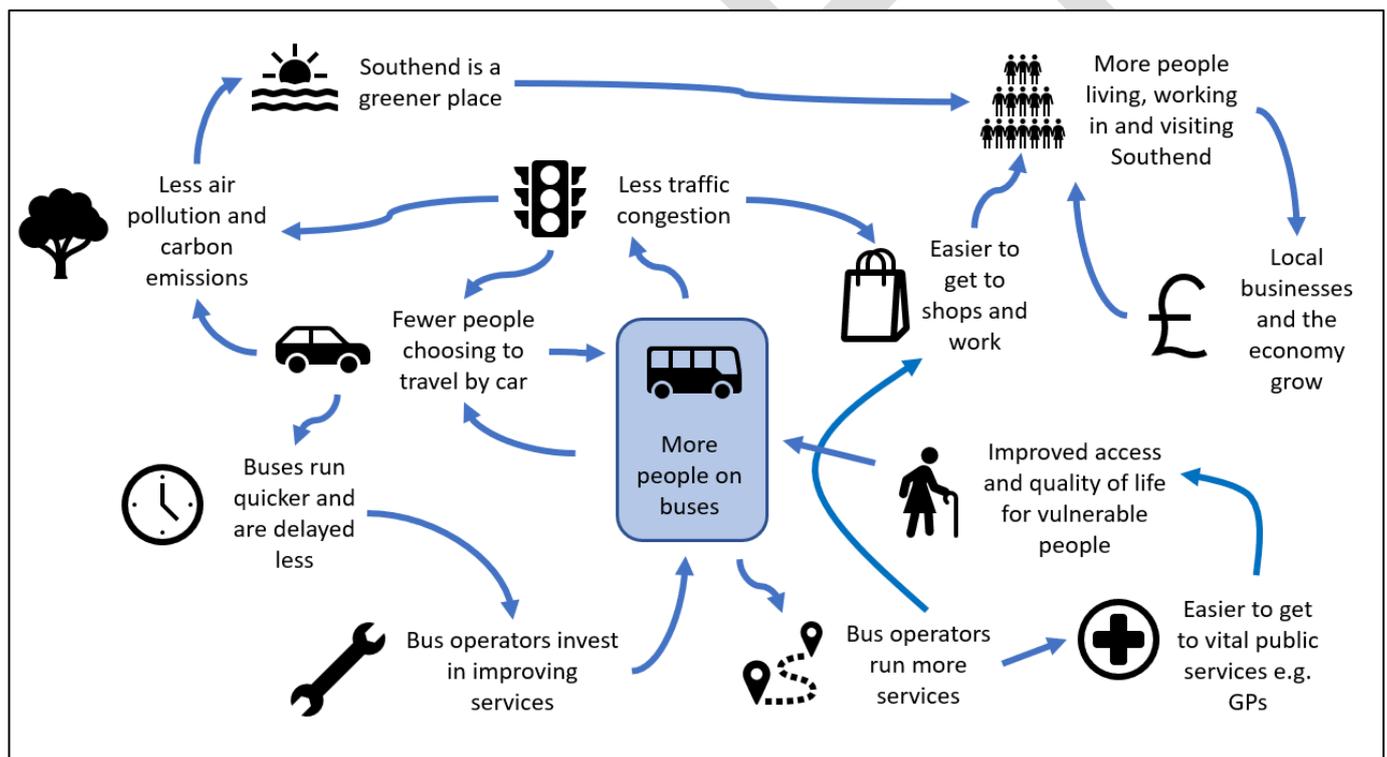
Introduction

Why have a Bus Service Improvement Plan?

Buses are important in Southend-on-Sea for our residents, business community and the many visitors to the area. The Council has been striving to improve travel options across the Borough so that more people will use buses and experience journeys that will make them want to use buses regularly. This Bus Service Improvement Plan (BSIP) sets out our plan for improving buses in collaboration with bus operators. It will make buses more attractive as a way of getting around Southend.

Buses achieve transport policy goals but when more people use them there are a range of other benefits too (Figure 1). They can reduce carbon emissions from local transport and improve local air quality, especially if people use buses instead of cars. In addition, they provide a vital service to the more vulnerable people in society, allowing them to access key public services, employment, and leisure activities. Bus services can play a big role in making Southend a better place to live.

Figure 1: How getting more people on buses achieves a number of other outcomes

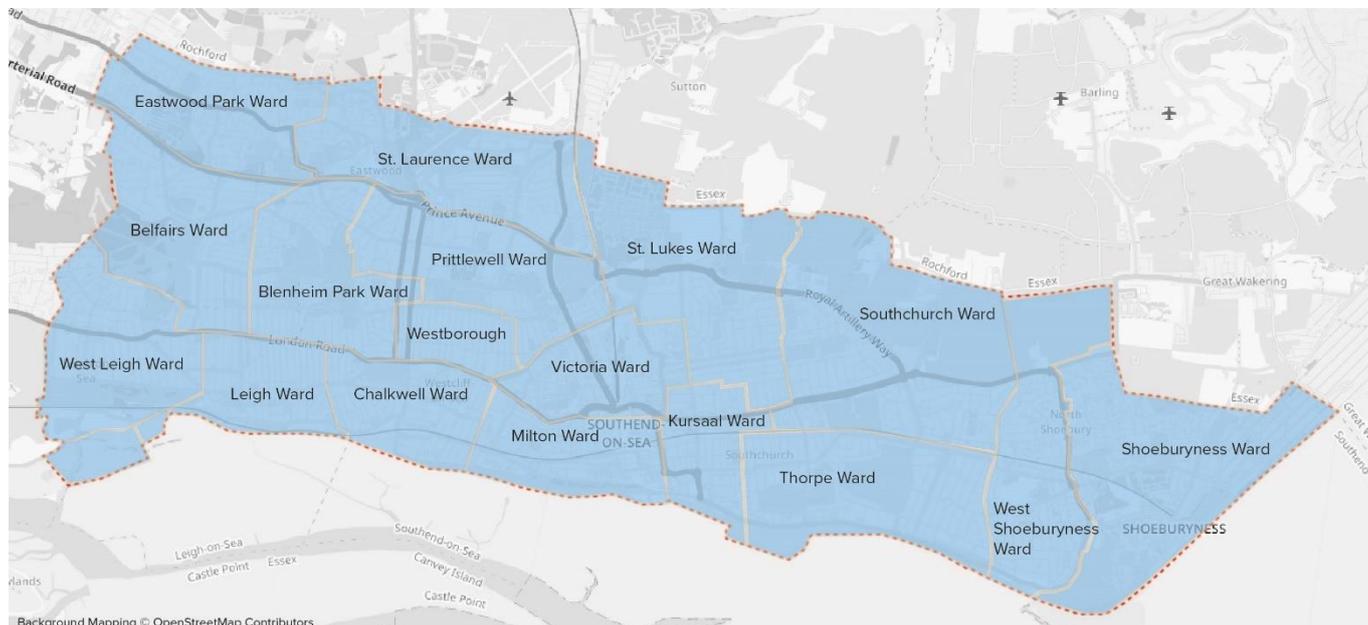


Our BSIP and forthcoming Enhanced Partnership (EP – more on this in the next section) will apply to the administrative area of Southend-on-Sea Borough Council, a unitary authority which covers the roles of highway and transport authority and local planning authority (Figure 2). It does not cover the immediate hinterland of Southend where Essex County Council is the local highway and transport authority.

Essex County Council is producing its own BSIP and EP covering its own area. Most bus services run between Southend and other nearby towns (like Rochford, Rayleigh and Basildon) and so cross into Essex - we have worked with Essex County Council to ensure that our plans align. Our local bus

operators, First Essex, Arriva Southend, Stephenson's of Essex and Ensignbus have helped shape the BSIP.

Figure 2: Wards in Southend-on-Sea BSIP area



A new Enhanced Partnership for buses in Southend

The Council and operators intend to establish a new Enhanced Partnership for buses, covering the area in Figure 2. Government guidance in the form of The National Bus Strategy Delivering Bus Service Improvement Plans using an Enhanced Partnership defines an EP as:

“An agreement that enables local authorities with operators to set a shared aims with regard to improving bus services.”

The EP will be an agreement between the Council and local bus operators to make improvements to buses in Southend. The Council intends to enter the EP with operators by 1st April 2022, and has published a Draft EP for consultation alongside this BSIP.

The EP will also have the role of reviewing the BSIP, at a minimum on an annual basis, to ensure that the plan is being delivered, and recommend changes to the BSIP (and the EP where applicable) as required.

How we have developed this Bus Service Improvement Plan

We have developed this BSIP, alongside the forthcoming EP, using a collaborative approach with local bus operators, stakeholders and community views. We have requested comments and feedback into the plan as it has developed. From this engagement, several key themes emerged.



Bus services are highly valued for the variety of roles that they play. Offering journeys to work, shopping, healthcare, education and leisure including the sea front. They allow people to get around the town, even if they do not own a car.



Bus services in the town are not fulfilling their potential. Southend has the conditions that are ideal for a local bus service, with a high population density and attractions around the town, but the current service does not live up to its potential.



Having a reliable and quick bus service is critical to its success. Few things frustrate people more than when a bus is late, or they must travel all the way into the centre and change buses to get to where they want to go. Delays to buses caused by other traffic undermines their appeal.



People face several challenges to using buses. It is critical that the whole journey is improved, from when people plan a journey, the condition of the bus stop, ease of payment, and the journey itself. Every aspect including the price, cleanliness of the bus, or the attitude of the driver can all influence the users' experience.

Throughout this process, we have engaged with people in a number of ways:

- one-to-one meetings held virtually
- online stakeholder briefing sessions
- an online survey on the Your Say Southend website
- email correspondence and sharing of ideas

Through this engagement, several key priorities have emerged:



Buses need to run on time, go where people want them to go, and in good time. Respondents told us that the most important thing about encouraging more people to use buses is that the services run well. If the basics are in place such as reliable service, running at convenient times to the places that people want to go to, and it doesn't take too long, then people will use buses.



Buses in Southend are not meeting their potential. Respondents told us that while the core bus network is extensive, it is not meeting its potential as a way of getting around Southend. Rather than there being one or two big barriers to getting back on buses, there are many small barriers, that combined, discourage people from getting on buses.



People want to see new bus services across Southend. Many respondents mentioned specific services that they wanted to see introduced across Southend, such as a route from Eastwood to Leigh-on-Sea. They considered that such services

could open up new connections across the town and avoid the need to travel into the town centre and change buses there.



People want to see the local bus infrastructure improved. Respondents said that they want to see well-maintained and clean bus stops. Some also mentioned that bus priority could be a way of making buses more reliable and run more quickly, although no respondents mentioned specific locations where it could be installed.



People want to see buses that are cleaner and smarter. Many stated how the experience on board the bus, from the driver to how clean the floor is, can make or break a journey. Also, while many respondents mentioned how using buses is better for the environment than using cars, others mentioned that buses could still do more to lower their emissions through more fuel-efficient vehicles.

The full range of specific issues and opportunities raised through our engagement is not fully captured by the above, but these matters were raised time and time again by the majority of people who we spoke to. In response to these matters, we have proposed a number of schemes and projects, including some projects mentioned by respondents.

Our engagement is still ongoing as we are preparing the EP. These engagement activities will further influence our plan for buses that will be incorporated into the EP. These activities include:

- online debate and discussion on the Your Say Southend website
- running a Consensus Conference with key local stakeholders, that will make recommendations for initiatives to include in the EP
- further direct engagement with key stakeholders such as bus operators and Essex County Council.

Our Vision for Buses

Vision and objectives

Our vision is to make bus travel the priority travel choice for everyone in Southend, and by doing so making our communities greener and more prosperous.

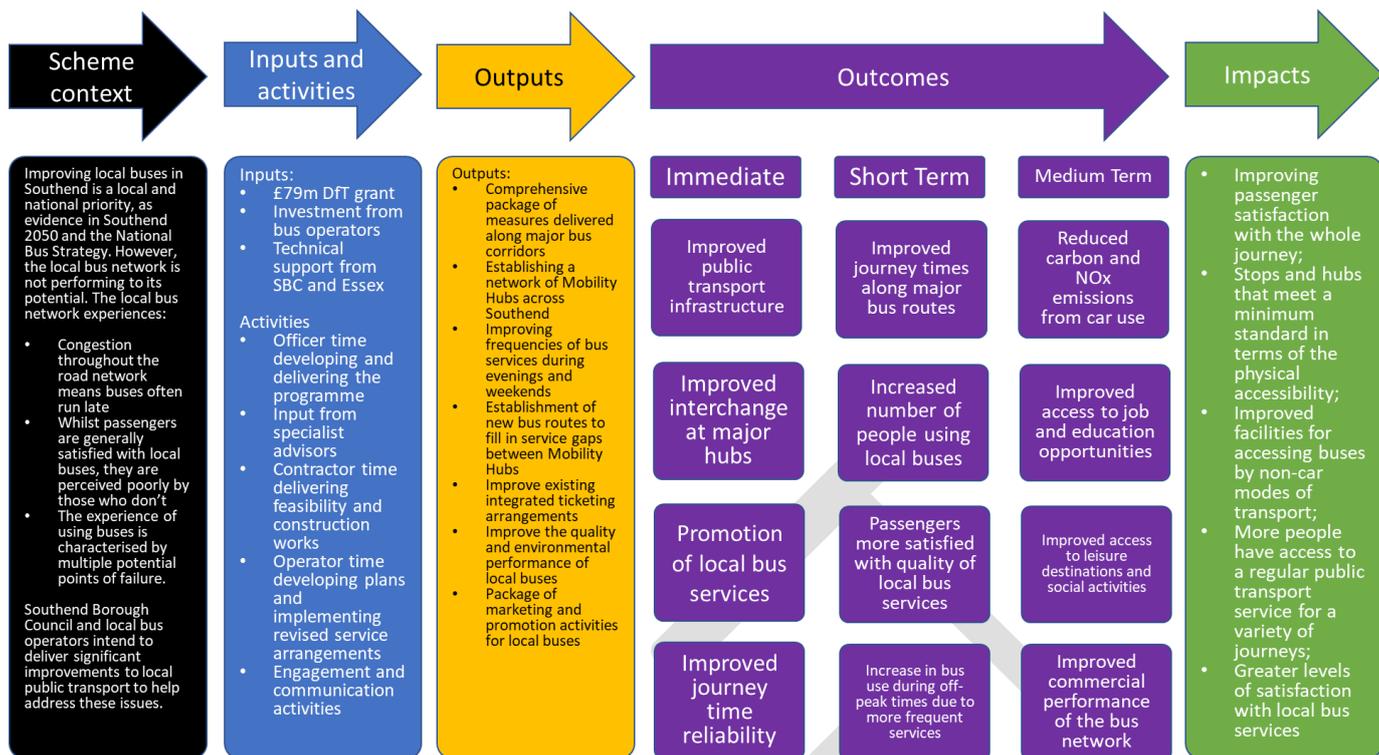
The objectives of the BSIP reflect this vision. They are to:

- manage the highway network to improve the reliability of local bus services
- make local bus journeys quicker, especially on key routes in Southend
- improve the quality of bus stops and waiting facilities for all bus users
- have the public transport network of Southend operate as a single network, and improve connectivity between buses and walking, cycling, car clubs, and other modes;
- improve the quality and accessibility of bus service information through all media
- improve the quality of local bus services, including reduced emissions
- market and promote local bus services in a holistic manner

Our theory of change

Achieving our vision requires comprehensive and significant improvements to the local bus network, based on a network that puts the users at the heart of what it does. Through the delivery of this BSIP, we will utilise funds from the Department for Transport (DfT) to deliver a comprehensive package of infrastructure and service improvements, undertake changes to ticketing and trialling lower fares, marketing and improving services, and establishing a dedicated resource within the Council to deliver this comprehensive programme of works. This will be underpinned by the strategic and monitoring role played by the EP.

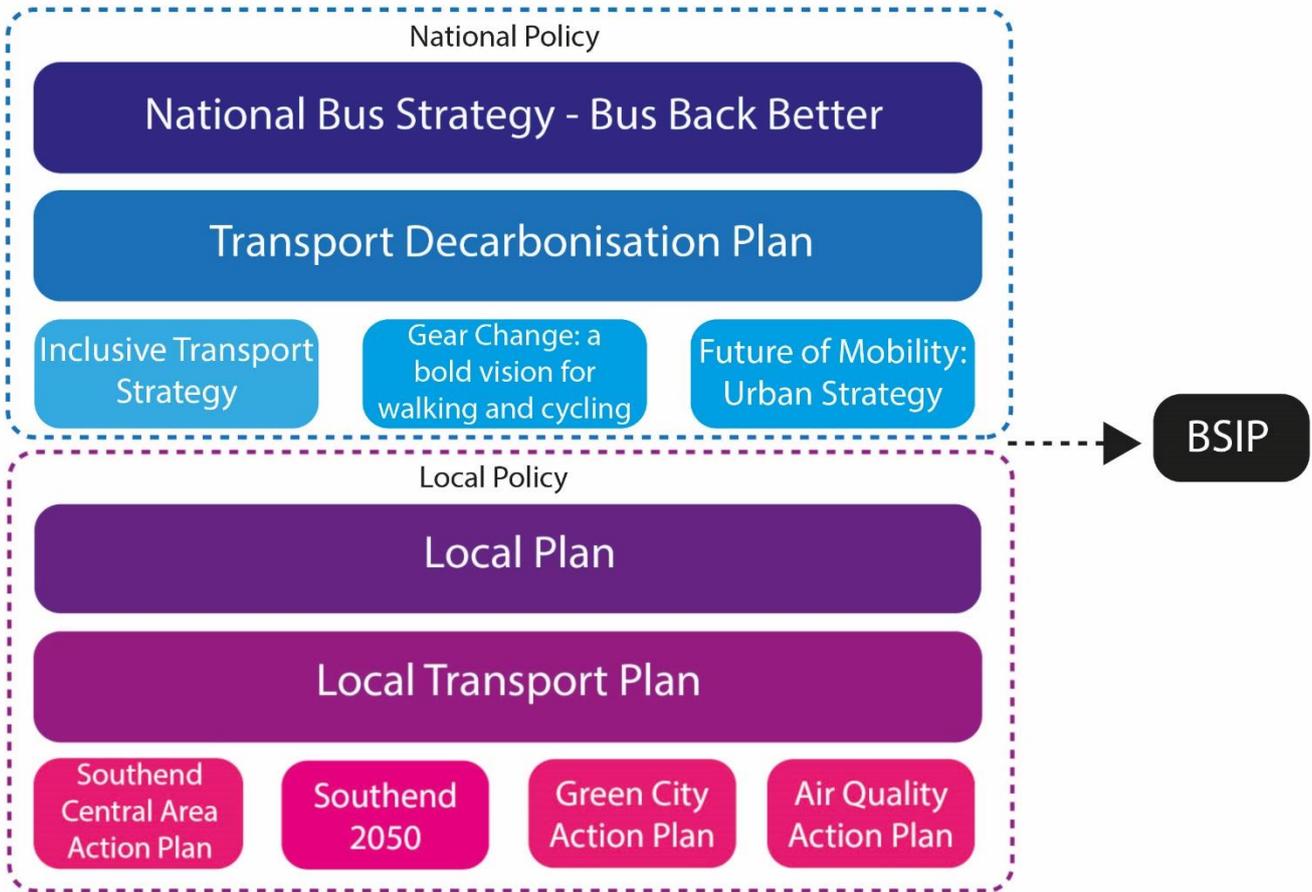
Figure 3: Our theory of change for buses in Southend



Policy Context

The BSIP must take into account the wider policy and strategic context, including national transport priorities set by central government but also existing local Southend strategies and policies which set the local context.

Figure 4: Policy context of the BSIP



Bus Back Better – The National Bus Strategy

Producing this BSIP is a requirement of the National Bus Strategy for England ('Bus Back Better'). It is critical that this BSIP aligns with aims and objectives of this strategy it states its goal as...

"...to get bus use back to what it was before the pandemic. Then we want to increase patronage and raise buses' mode share. We can only do these things by ensuring that buses are an attractive alternative to the car for far more people."

This means taking actions across several areas, and our BSIP plans to do just that.

Table 1: Alignment with the National Bus Strategy for England ('Bus Back Better')

Priority of Bus Back Better	What our BSIP is doing about it, with government funding
More frequent services	We will aim to have a regular frequency on all major bus routes during the weekday daytime, and we will boost the frequency of services in the evening and on Sundays.
Faster and more reliable	We will start during 2022/23 by delivering bus priority signalling. We will then undertake feasibility work in 2022/23 to identify schemes that will further improve bus journey times and reliability along the key corridors, to commence construction from 2023/24 subject to feasibility and funding. Buses will also be actively considered as a priority in every transport project from now on.
Cheaper buses	We plan to trial cheaper flat fares, and we will improve our Octopus multi-operator tickets.
More comprehensive	Southend has a comprehensive bus network, but we will work with operators to introduce new routes that fill identified service gaps where appropriate.
Easier to understand	We will improve all aspects of the passenger journey, with better bus stops, clearer service information, better co-ordinated services, improvements to integrated ticketing will also develop a brand identity with local bus operators and Essex County Council and deliver a marketing and communications plan.
Easier to use	We will expand the Octopus ticket to mobile and contactless payment, and aim to expand it onto local rail services with the agreement of train operators. We will also create mobility hubs across the town where several means of transport converge.
Better integrated with other modes and each other	We will create a series of Mobility Hubs across the town, where buses will seamlessly integrate with each other, local rail services, parking and car clubs, electric vehicles, shared bikes and with local services and shops.
Better to ride in	Southend has a relatively modern bus fleet. The BSIP will ensure that the buses provided in Southend will maintain the good level of service and encourage operators to invest in further improvements as part of their fleet renewals.

Priority of Bus Back Better	What our BSIP is doing about it, with government funding
Greener buses	Existing buses will be retrofitted to have Euro VI standard emissions. Through the EP, we propose to phase in the introduction of lower emission vehicles with the intention to have a low emission fleet by 2027.
Accessible and inclusive by design	Stops will be upgraded to the latest accessibility requirements where it is practicable to do so. Operators will be expected to operate to the highest standards in terms of their accessibility and customer service. We will also have audible announcements for stops on all buses.
Innovative	We will explore the potential for new types of bus service, such as demand responsive transport services. We will also explore and install where appropriate bus priority at traffic signals where it is feasible.
Seen as a safe mode of transport	We will deliver a range of initiatives to improve safety, such as reviewing bus stop arrangements and CCTV.

Transport Decarbonisation Plan

This BSIP will support the Government's commitments to reducing carbon emissions through local transport planning and improving the efficiency of the bus network. This will primarily be achieved through encouraging modal shift from single occupancy car use to using local buses for journeys within the town and beyond.

Table 2: Alignment with the Transport Decarbonisation Plan

Commitment in the Transport Decarbonisation Plan	What our BSIP is doing about it, with government funding
We will deliver the National Bus Strategy's vision of a transformed bus industry and a green bus revolution	This BSIP will deliver a package of improvements that, combined, will significantly improve the local bus network, and directly contribute to the Government's National Bus Strategy.
We will support delivery of 4,000 new zero emission buses and the infrastructure needed to support them	This BSIP contains no specific plans to deliver electric buses in Southend. However, through the Enhanced Partnership, the Council and operators will work together to ensure that new buses in Southend are low emissions, including electric buses when feasible.

Commitment in the Transport Decarbonisation Plan	What our BSIP is doing about it, with government funding
We will improve rail journey connectivity with walking, cycling and other modes of transport	This BSIP will develop Mobility Hubs in Southend Town Centre (within proximity of Southend Central and Southend Victoria stations), at Thorpe Bay station, Shoeburyness Town Centre (within proximity of Shoeburyness station), and at Southend Airport. It will also develop mini hubs at all other stations, where possible.
We will support decarbonisation by investing more than £12 billion in local transport systems over the current Parliament, enabling local authorities to invest in local priorities – including those related to decarbonisation such as reducing congestion and improving air quality	This BSIP contains plans to increase the number of people using local bus services throughout Southend, enabled through funding from the Department for Transport through the National Bus Strategy. This will be delivered through a comprehensive package of measures as outlined in the action plan.

Other national policy

This BSIP will also contribute to other national transport policies and initiatives, through direct action or through influencing how the Council delivers its other activities to help deliver against those objectives.

Table 3: Alignment with National Policy

National Strategy	How this BSIP contributes to achieving these goals
Gear Change: a bold vision for cycling and walking	New Mobility Hubs will provide for better integration between buses, walking and cycling and by providing cycle parking and will be designed to prioritise the needs of people walking and cycling.
Inclusive Transport Strategy	This BSIP will improve all aspects of the experience of using buses for vulnerable people in the community, from bus stops to services themselves. Our Bus Passenger Charter will also make people aware of their rights while travelling.
Future of Mobility: Urban Strategy	When delivering new technological solutions, we will consider the needs of passengers and vulnerable groups, engaging them throughout the process.

Local policy

In addition to aligning with national policy, the BSIP also aligns with several key local policies. It is recognised that a strategy for buses alone will not bring the level of change required, and so this Plan needs to work alongside other strategies to achieve this.

Southend 2050

Southend 2050 sets out the Council's ambition for the future of Southend. It is bold and challenging, and requires the Council to work together with local partners to achieve its ambition. Improving our local bus services meets several of the outcomes under 'Connected and Smart', that envisages Southend as a leading digital city and accessible place that is easier for people to get around.

Table 4: Alignment with Southend 2050

Southend 2050 Outcome	How this BSIP contributes to achieving these goals
Working with the public transport providers to enhance and encourage the use of the existing provision moving towards a long-term aspiration to open new routes, enabling a wider accessibility to public transport options	This BSIP articulates this vision for buses. By securing government funding to kick-start the radical changes needed to the local bus network, new routes and improvements to services can make the public transport network more accessible and improved for all.
People have a wide choice of transport options	Through an improved and expanded bus network, more people will have a wider choice of transport options for their everyday trips.
We are leading the way in making public and private travel smart, clean and green	This BSIP contains a plan to make improvements to the local bus network that will encourage more people to travel using a low carbon mode of transport.

Local Transport Plan 3

Southend's Local Transport Plan 3 (LTP3) Strategy Document 2011 – 2026 (Revised 2015) sets out the local priorities in relation to transport and public transport in Southend. This BSIP forms an integral part of the delivery of the objectives of LTP3.

Table 5: Alignment between BSIP and LTP£ objectives

LTP3 Objective	How this BSIP contributes to achieving this objective
A thriving and sustainable local economy in the Borough.	This BSIP contains a plan to make improvements to the local bus network that will encourage more people to travel using a low carbon mode of transport. This in turn will reduce road congestion, making the use of public buses even more attractive to potential users and improving access to shops and services for all.
Minimise environmental impact, promote sustainability for a greener Borough.	This BSIP contains a plan to make improvements to the local bus network that will encourage more people to travel using a low carbon mode of transport.
A safer Borough.	Through making improvements to stops and bus services throughout the Borough, the safety needs of passengers and non-users will be a key priority. By delivering improvements to CCTV, lighting, and other safety features, streets will become safer.
Reduce inequalities in health and wellbeing and for a more accessible Borough.	Through an improved and expanded bus network, more people will have a wider choice of transport options for their everyday trips.

The Council is commencing the review of the Local Transport Plan to produce a new Local Transport Plan, LTP4, within the lifetime of this BSIP. This revision will take account of the priorities established by this BSIP and the EP, and in turn the BSIP and EP may be amended to reflect new policies and direction set by LTP4.

Other policies

Our BSIP also aligns with a number of other local policies, including:

Table 6: Alignment with Local Policy

Local Strategy	How this BSIP contributes to achieving these goals
Existing and emerging Local Plan	This BSIP includes measures to support future growth in the borough, including Southend's role as a major tourist destination. This includes improvements along the main passenger transport corridors, new bus routes to the airport, integrated ticketing and discounted fares.

Southend Central Area Action Plan	A range of measures is proposed to meet the needs of residents, employees and visitors. This includes revised bus service frequencies, including evening and weekend services, integration with rail services stations, real time information and ensuring safety at bus stops.
Air Quality Action Plan	This BSIP will support a mode shift from car to bus, which in turn will help to improve air quality for residents health and wellbeing and reduce vehicle emissions and improve the environment.
Green City Action Plan	This BSIP includes measures to reduce transport emissions by enabling a shift from private vehicles to bus in addition to promoting a low-carbon bus fleet.

Bus services are an important element of local mobility and a key contributor to social inclusion, the local economy and an improved environment. To achieve growth in demand, all of these need to be addressed alongside a significant shift in perceptions of bus use.

Central to this is enabling a shift from car use to more sustainable means of local travel. At the same time, better walking links and improved connections at the Borough's rail stations will provide a reliable option for more users. Our intention is to provide more and better bus services so that more people will choose to use the services available. In doing so, they will help alleviate traffic congestion, improve air quality and link people with work and other opportunities. We have taken a wide view of the bus network to move away from traditional routes and destinations while retaining and improving popular services.

Delivering Improvements through the Enhanced Partnership

Transforming the bus network involves a carefully managed transition. The delivery programme involves transforming travel information, easier payments and pricing, bus priority measures, fully accessible services and the acquisition of newer vehicles. These have challenged the accepted norm of how urban areas function, now undermining the dominance of the car in street design and instead working towards more liveable communities in which bus services allied to walking and cycling become the new norm.

In delivering these improvements, we will deliver them as an integrated package of measures that are mutually supportive. Whilst individual schemes may have a benefit individually, packaging them as an integrated package of measures will boost their impact further.

A key part of this delivery will be the establishment of the EP, which is due to commence on 1st April 2022. At the time of the publication of this BSIP, a Draft EP will be published for consultation, which states that

This Enhanced Partnership is intended to deliver the vision and ambition set out in the Southend-on-Sea Bus Service Improvement Plan 2022 – 2027.

The EP will provide the mechanism through which the Council and local bus operators delivers this BSIP. Whilst both parties will retain full authority in terms of financial decision making and their own processes, the EP will enable the Council and operators to work in partnership together to deliver the changes needed to local buses.

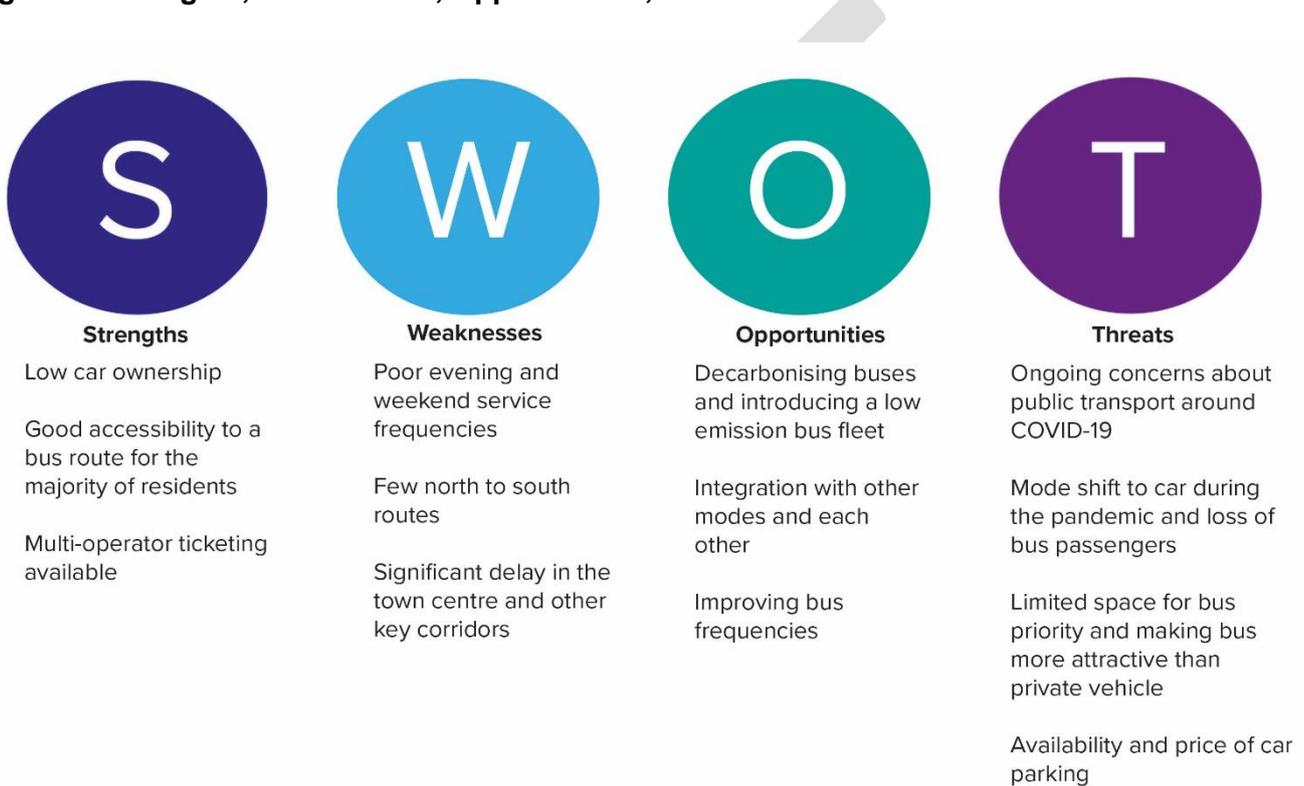
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Current bus offer to passengers

Introduction

We have collected data on the current bus network, how it operates, who uses it, and what people think of it. The general view that we have managed to gather from this analysis is that while the bus network is comprehensive and services on the key routes are frequent, the bus network is not living up to its potential. There are several strengths, weaknesses, opportunities and threats to the network as summarised in Figure 5.

Figure 5: Strengths, Weaknesses, Opportunities, and Threats to the bus network in Southend



Our data collection is not complete, and does not tell the whole picture of bus use specifically in Southend, and we will be establishing a comprehensive programme of data collection and monitoring as part of the EP. However, the data we have collected has painted a picture of the current state of the network.

Current Services

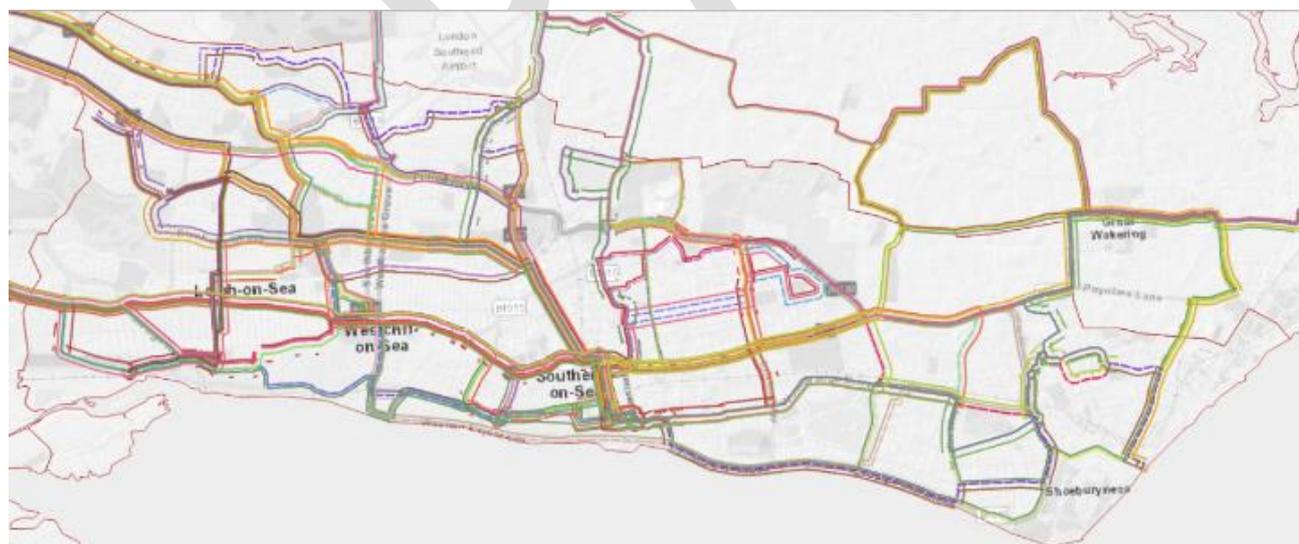
Overview

A full list of the current public buses that operate in Southend is given in Table 7. Figure 6 shows all services combined on one map (each a different colour) illustrating the current network and highlighting those corridors in which bus services are most concentrated including the A13 London Road from the west, Prittlewell Chase (another east-west corridor), A1015 Rayleigh Road, A13 Southchurch Road to the east, the town centre and seafront.

Table 7: Current bus services in Southend¹

Service	Operator	From	To
1	Arriva	Rayleigh	Shoeburyness
4A	Arriva	Southend	Shoeburyness via Great Wakering
6	Arriva	Southend	Temple Sutton
7	Arriva	Rayleigh	Shoeburyness
8	Arriva	Rayleigh	Shoeburyness
9	Arriva	Rayleigh	Shoeburyness
29	Arriva	Southend	Belfairs
20	First South Essex	Southend	Hullbridge
21/21B	First South Essex	Southend	Canvey
22/28	First South Essex	Southend	Basildon and Canvey
25	First South Essex	Southend	Basildon
26	First South Essex	Southend	Hadleigh
27/27A	First South Essex	Southend	Canvey
X10/X30	First South Essex	Southend	Basildon, Chelmsford, Stansted Airport
14	Stephensons	Southend	Shoeburyness
17	Stephensons	Southend	Leigh-on-Sea
24	Stephensons	Southend	Southchurch
60	Stephensons	Southend	Paglesham
61	Stephensons	Southend	Southend (via Fossetts Way) circular route
68	Ensign Bus	Southend Pier circular	Via Chalkwell and Leigh-on-Sea (summer only)

Figure 6: Bus services in the Southend-on-Sea area



Service 1 between Rayleigh and Shoeburyness via Hadleigh is the most frequent service (every 10 minutes) and service 9 between Rayleigh and Shoeburyness via Southend has a 12 minute frequency. Several weekday daytime services operate every 15 minutes (25, 27 and 28) while services 6, 29 and 26 operate every 20 minutes. A 30 minute frequency is available on services 20, 21 and 61. The majority of

¹ This does not include peak time school bus services

these core services start before 0700 on weekdays with inter-urban services before 0630. Evening services are less frequent after 1900, the majority being inter-urban routes.

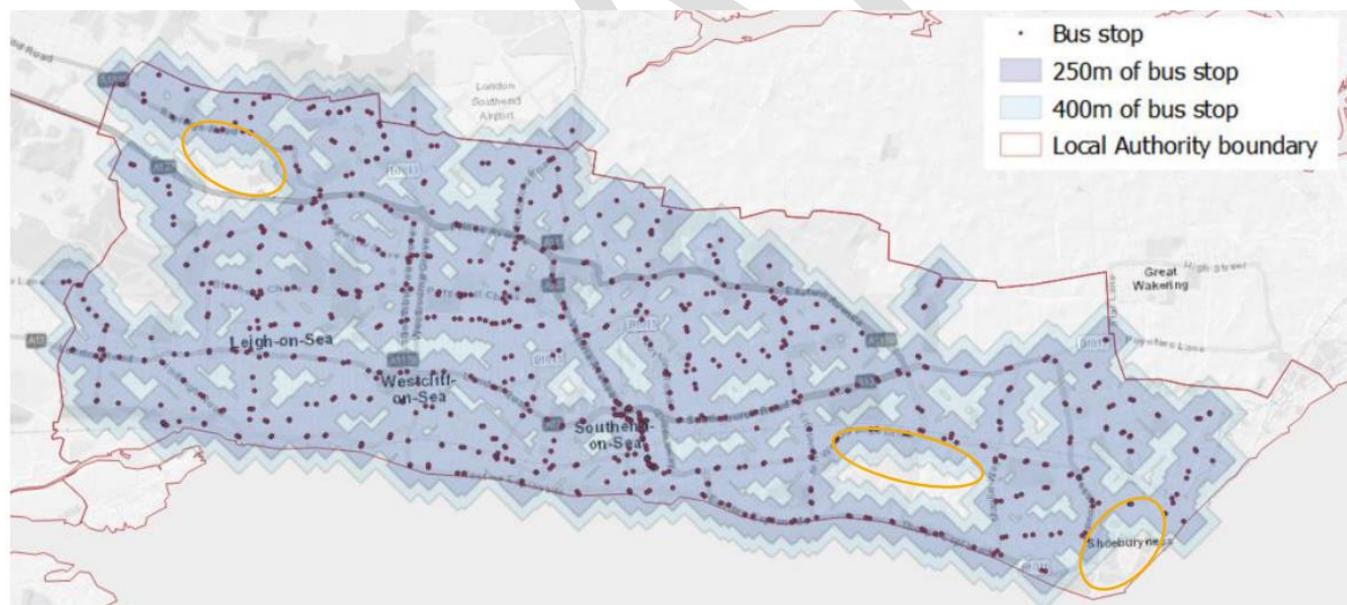
This network has evolved over time as bus operators have focussed on routes that provide high levels of demand and consequently are commercially viable routes. Consequently, these routes are where the highest passenger demand for services can be found. As well as serving the town itself, these routes also run towards nearby towns such as Rochford and Basildon, providing an inter-urban public transport service.

The result is that most bus services in Southend operate across the boundary between Southend and Essex (Castle Point and Rochford Districts), for which the local highway and transport authority is Essex County Council. Consequently, operational issues in Southend have a knock-on impact into Essex, and vice-versa.

The coverage of local buses

Being in a dense urban area, most local residents within Southend are within 400 metres (or 5 minutes walking distance) of a bus stop in Southend. There are notable gaps in this accessibility, namely in Eastwood, Thorpe Bay, and in Shoeburyness.

Figure 7: Walking distance to nearest bus stops in Southend²



Who runs local buses in Southend

The local network is provided mainly by Arriva and First, who operate in excess of 90% of the route miles with some additional services provided by Stephenson's and a single service by Ensignbus along the sea front for the summer season.

² Source: Analysis by Mott MacDonald

Local authority support for buses

Southend-on-Sea Borough Council does not provide any revenue support for subsidy or tendered bus services.

Delays to bus services

The most significant issue facing local bus services is that of delays meaning that buses can turn up late. Pre-pandemic data (2 March 2020) showed that 40% of services across the network (over 14,800 timing points) were over five minutes late. The main locations of bus delays are shown in Figure 8. The hours of operation, routes and fares have been compromised by the effects of congestion that undermines efficient operation. There are limited priority measures for buses throughout Southend.

Figure 8: Locations of bus delays³



Whilst there are several notable delay hotspots, what our analysis reveals is that delays consistently occur at many points across routes. Whilst individually these delay locations may not be significant, over the course of a route these delays add up, resulting in late-running buses.

What causes delays to buses

There is no local data in Southend that identifies the specific causes of delays to buses in service. From engagement with local bus operators, and wider research into the causes of delays to buses from across the UK, several factors that delay buses have been identified:



Traffic congestion. Buses often get held up in traffic congestion as much as any other vehicle. Their size also makes it difficult for them to manoeuvre around obstacles and obstructions that may be delaying traffic. In Southend, the spots

³ Source: Analysis by Mott MacDonald

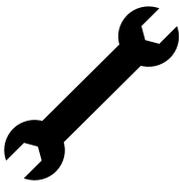
where buses are most delayed also correlate with known traffic congestion hotspots.



People boarding and alighting buses. The process for people boarding and alighting services takes time. Passengers must board, pay the driver (sometimes in cash), and sit down before the bus sets off again, and many people can board the bus at the same time. Stops that are closer together, while good for accessibility, can amplify this issue.



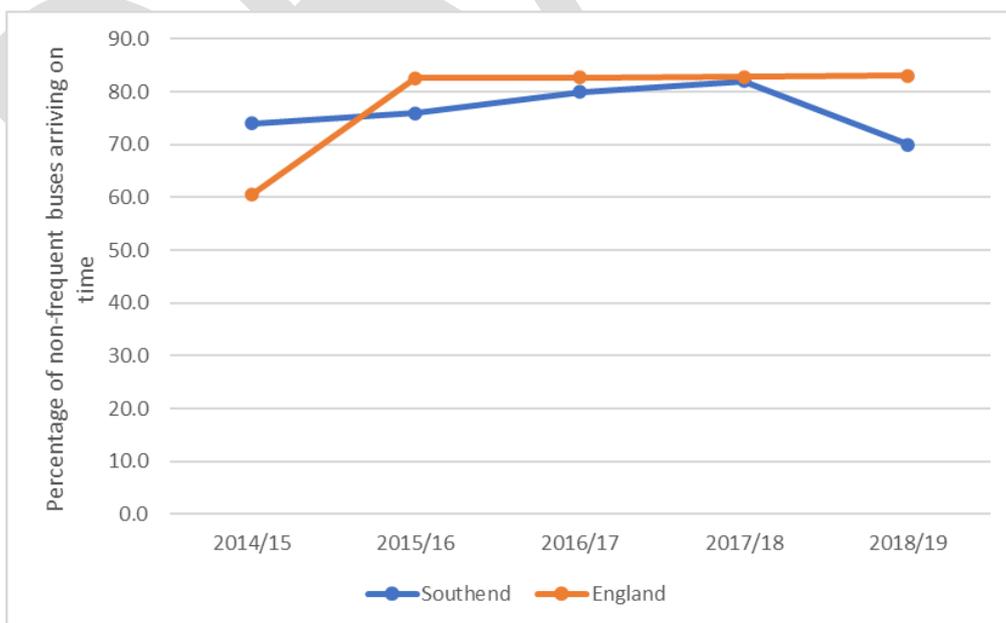
Highway network incidents. Sudden road closures and diversions can temporarily, and sometimes significantly, delay buses. Where works are taking place over a long period of time, this can mean that delays happen more regularly.



Operator incidents. Although rarer than the other issues highlighted, incidents associated with the bus or the operator can sometimes cause delays or cancellations. Such incidents can include buses developing mechanical faults or driver availability, although these issues are very rare.

In setting their timetables, operators do account for delays, as they are held accountable to the Area Traffic Commissioner should buses run late. Despite this, delays do occur in Southend. Historic evidence from the Department for Transport indicates that delays to buses in Southend are comparatively worse than the national average.

Figure 9 – Percentage of non-frequent buses arriving ‘on time’⁴



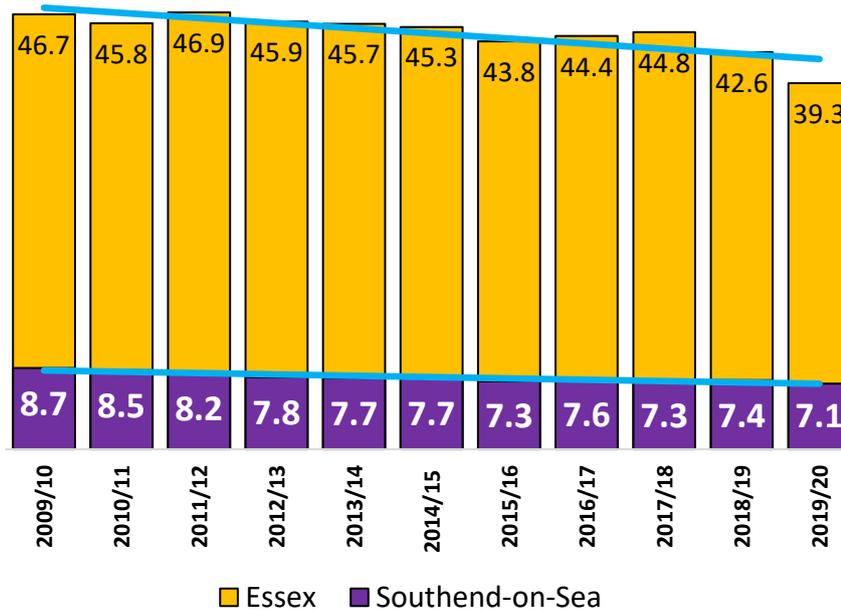
⁴ Department for Transport (2021) Bus reliability and punctuality (BS09). <https://www.gov.uk/government/statistical-data-sets/bus09-frequency-and-waiting-times>

The experience of using local bus services

How much local bus services are used, and who uses them

Figure 10 shows how overall demand for bus use in Southend reflects the trend for Essex and many places in England before the effects of the pandemic. There has been an overall decline in bus use since 2009/10, with total passenger declining from 8.7 million per annum in 2009/10 to 7.1 million in 2019/20. Conversely, road traffic levels increased over a similar period, particularly on the A13 – a major bus corridor – and the A127 strategic route.

Figure 10: Annual bus use in Southend-on Sea and Essex 2009/10 to 2019/20⁵



The COVID-19 pandemic has had a significant impact on local buses. Data from DfT shows that as of week commencing 27th September, the use of local buses across England is averaging at around 75% of pre-pandemic levels⁶. Whilst we have not been able to analyse local data, discussions with operators have revealed that there are similar challenges in Southend in terms of passengers returning to local buses. This presents a significant commercial challenge for local bus operators, who are currently supported in their services by COVID-19 support grants from government.

In Southend, a relatively high proportion of trips are undertaken on the National Concessionary Bus Pass, which is available to all people of the State Pension Age or older. Until 2018/19, trips using the pass accounted for around 40% of local bus trips, before dropping sharply in 2019/20 for reasons that are unknown (Figure 11).

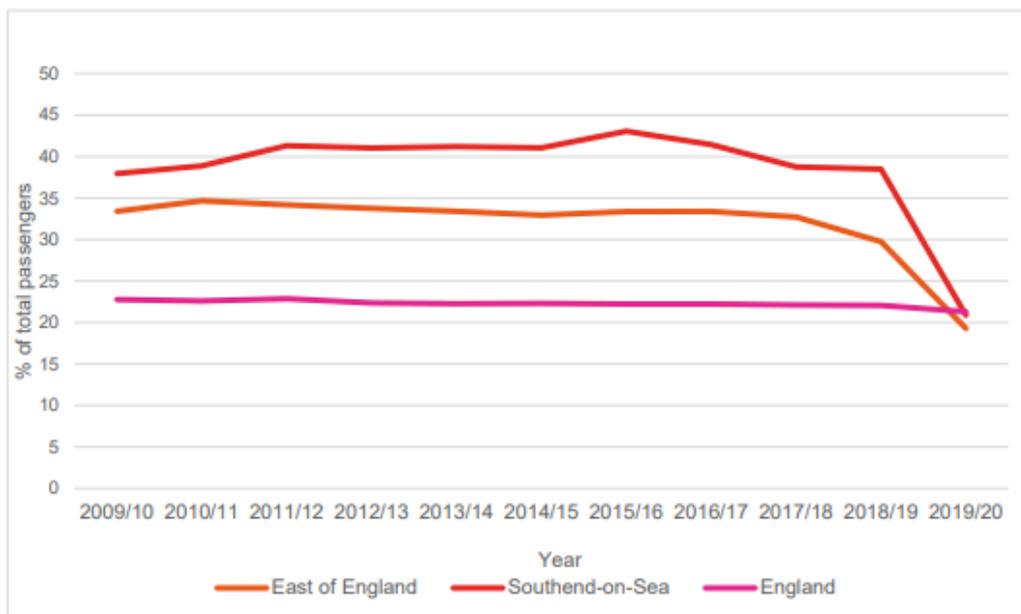
⁵ Department for Transport (2021) Local bus passenger journeys (BUS01).

<https://www.gov.uk/government/statistical-data-sets/bus01-local-bus-passenger-journeys>

⁶ Department for Transport (2021) Transport use during the coronavirus (COVID-19) pandemic.

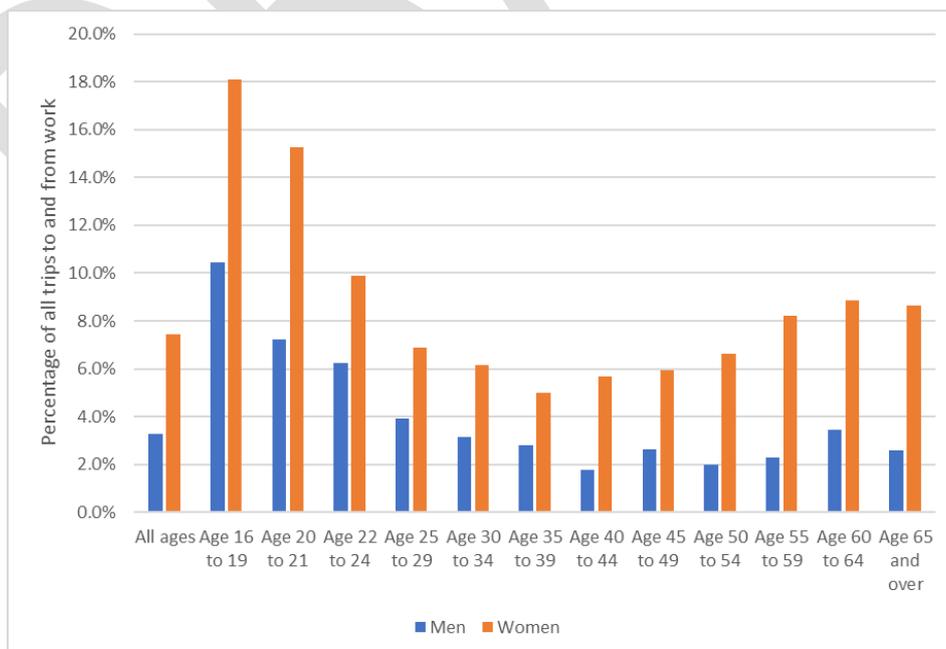
<https://www.gov.uk/government/statistics/transport-use-during-the-coronavirus-covid-19-pandemic>

Figure 11 – Percentage of local trips undertaken on concessionary bus passes⁷



In terms of who uses local buses, there is data from the Census 2011 for people who use buses to travel to and from work in Southend. This indicates that for this journey purpose, women are more likely to use the bus to travel to and from work, especially young women aged 24 years old or under. People who classified themselves as being Black / African / Caribbean / Black British ethnic group in the 2011 Census are also more likely to use the bus to travel to and from work.

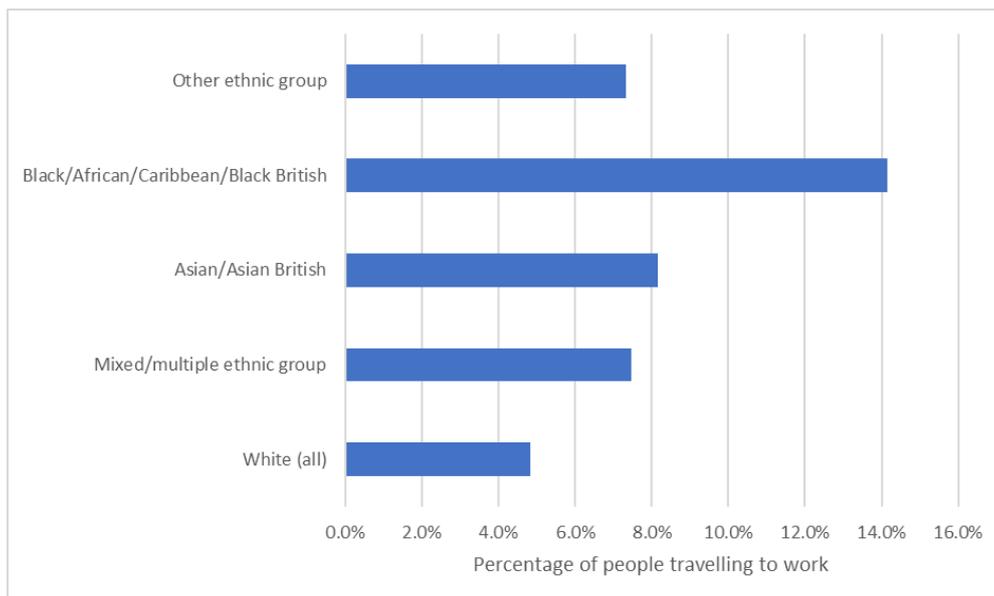
Figure 12 – Percentage of Southend residents who travel to and from work by bus by age and gender⁸



⁷ Department for Transport (2021) Concessionary travel (BUS08). <https://www.gov.uk/government/statistical-data-sets/bus08-concessionary-travel>

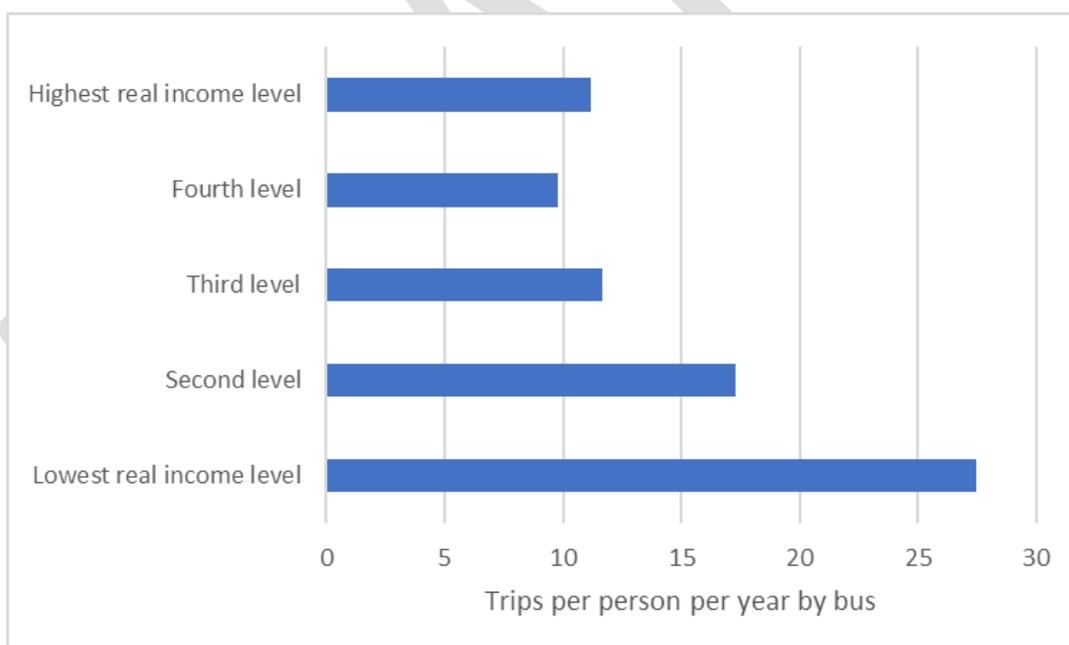
⁸ NOMISWeb (2021) Method of travel to work. <https://www.nomisweb.co.uk/census/2011/qs701ew>

Figure 13 – Percentage of Southend residents who travel to work by bus by ethnic group⁹



Data from the National Travel Survey also states that households that are more likely to use buses are those on lower incomes and without access to a car are more likely to travel by bus across the UK.

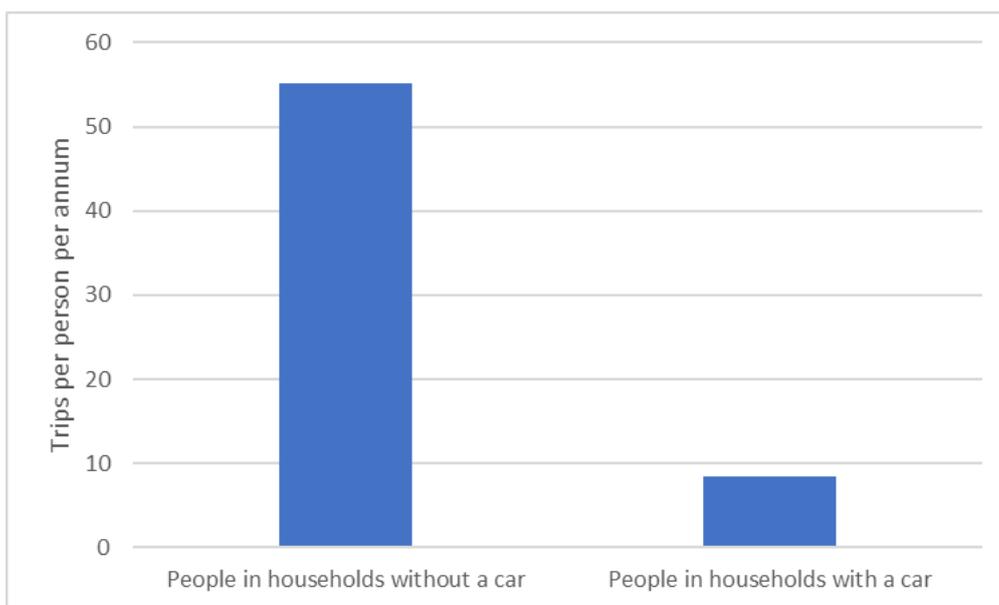
Figure 14 – Use of buses in households by income level¹⁰



⁹ NOMISWeb (2021) Method of travel to work. <https://www.nomisweb.co.uk/census/2011/qs701ew>

¹⁰ Department for Transport (2021) National Travel Survey. <https://www.gov.uk/government/collections/national-travel-survey-statistics>

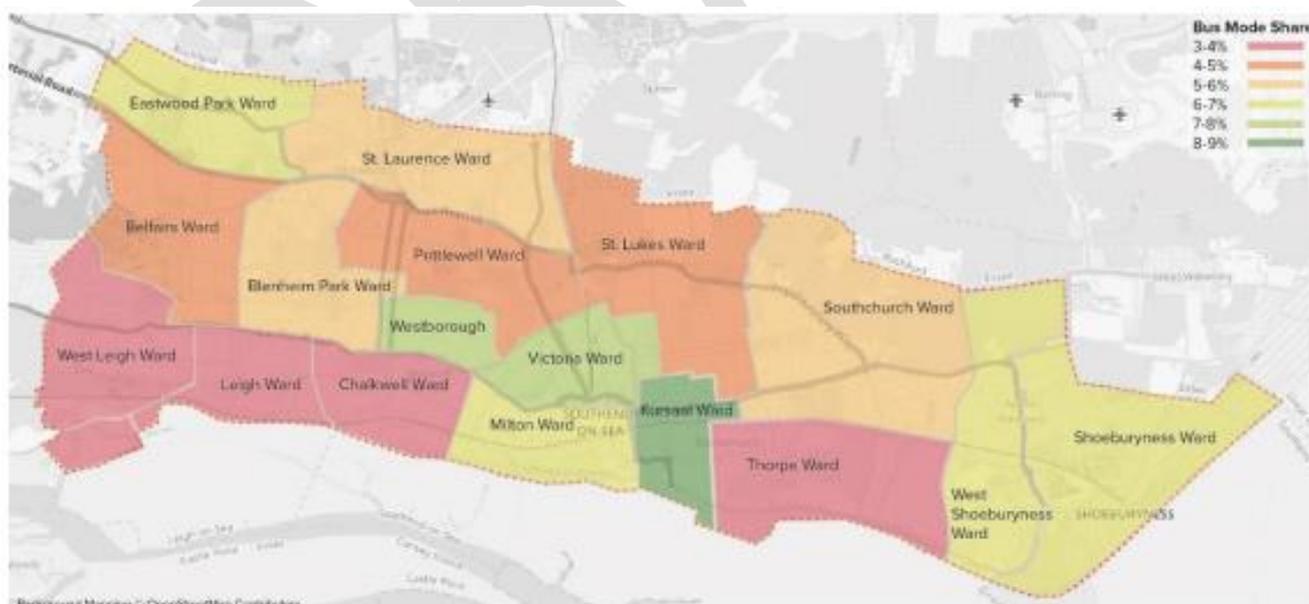
Figure 15 – Use of buses in households with access to a car, and without access to a car¹¹



Where people travel to and from on buses, and where they do not

Travel to Work data from the Census in 2011 indicates that the highest proportion of households that use buses can be found in central areas of Southend, notably Kursaal, Victoria, and Westborough Wards. The average mode share of journeys to work as identified in the Census is 5.5%, although it should be noted that since the time of the 2011 Census overall bus trips in Southend have declined.

Figure 16 – Mode share of travel by bus by Southend ward¹²

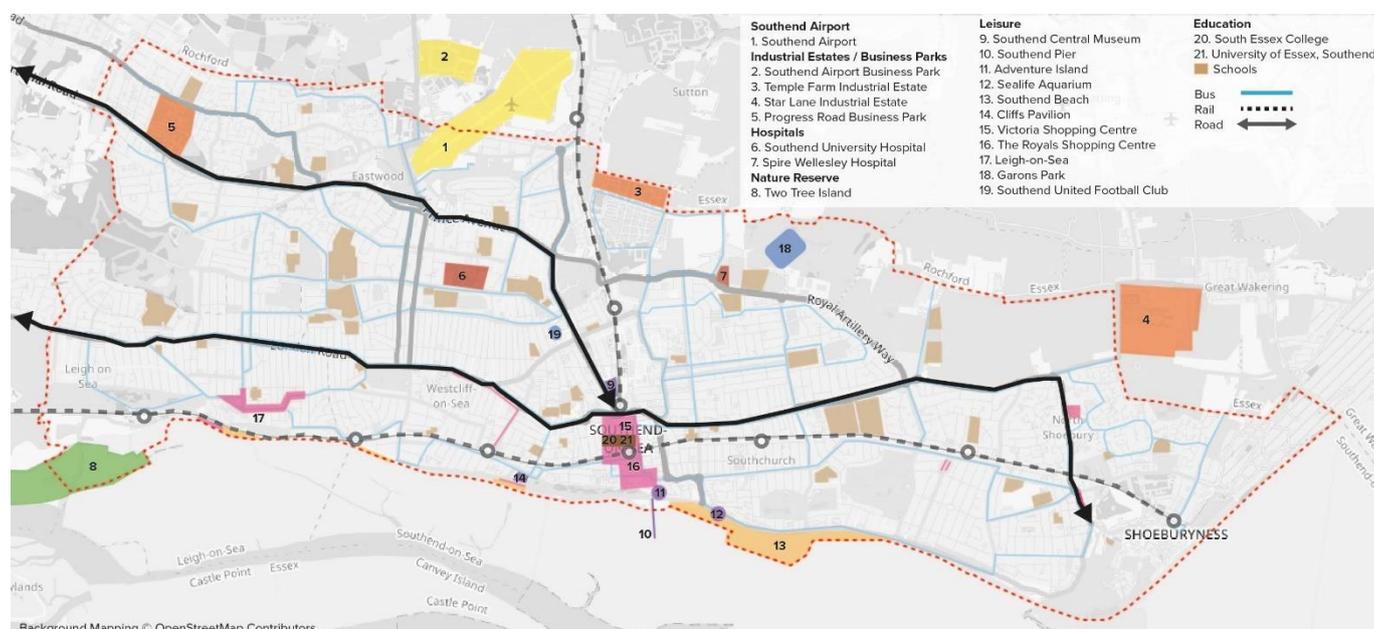


¹¹ Department for Transport (2021) National Travel Survey. <https://www.gov.uk/government/collections/national-travel-survey-statistics>

¹² NOMISWeb (2021) Method of travel to work. <https://www.nomisweb.co.uk/census/2011/qs701ew>

We have also investigated main attractors in the Borough i.e. places where people need to go such as healthcare facilities, rail stations, the town centre and local centres, employment areas and the seafront. We have considered the coverage, performance and quality of current bus services to identify areas for improvement; significant benefits can be expected by introducing measures that ensure that buses are not delayed by traffic and where journey times can be improved.

Figure 17 – Major trip generators in Southend¹³



How passengers and local people in Southend experience local bus services, and their priorities for action

Data from the National Bus Passenger Survey undertaken by Transport Focus on satisfaction with local buses in Essex shows that bus passengers are most satisfied with the journey times and availability of seating on buses. Conversely, they are less satisfied with value for money and for punctuality.

Table 8 – Bus passenger satisfaction in Essex (2019)¹⁴

	Essex	Arriva services in Essex	First services in Essex
Overall journey	86%	91%*	85%
Journey time	86%	85%*	85%
Punctuality	65%	62%*	63%
Value for money	53%	**	54%
Bus driver greeting / welcome	75%	79%*	74%

¹³ Analysis by Mott MacDonald

¹⁴ Transport Focus (2021) Transport Focus Data Hub. <https://transportfocusdatahub.org.uk>

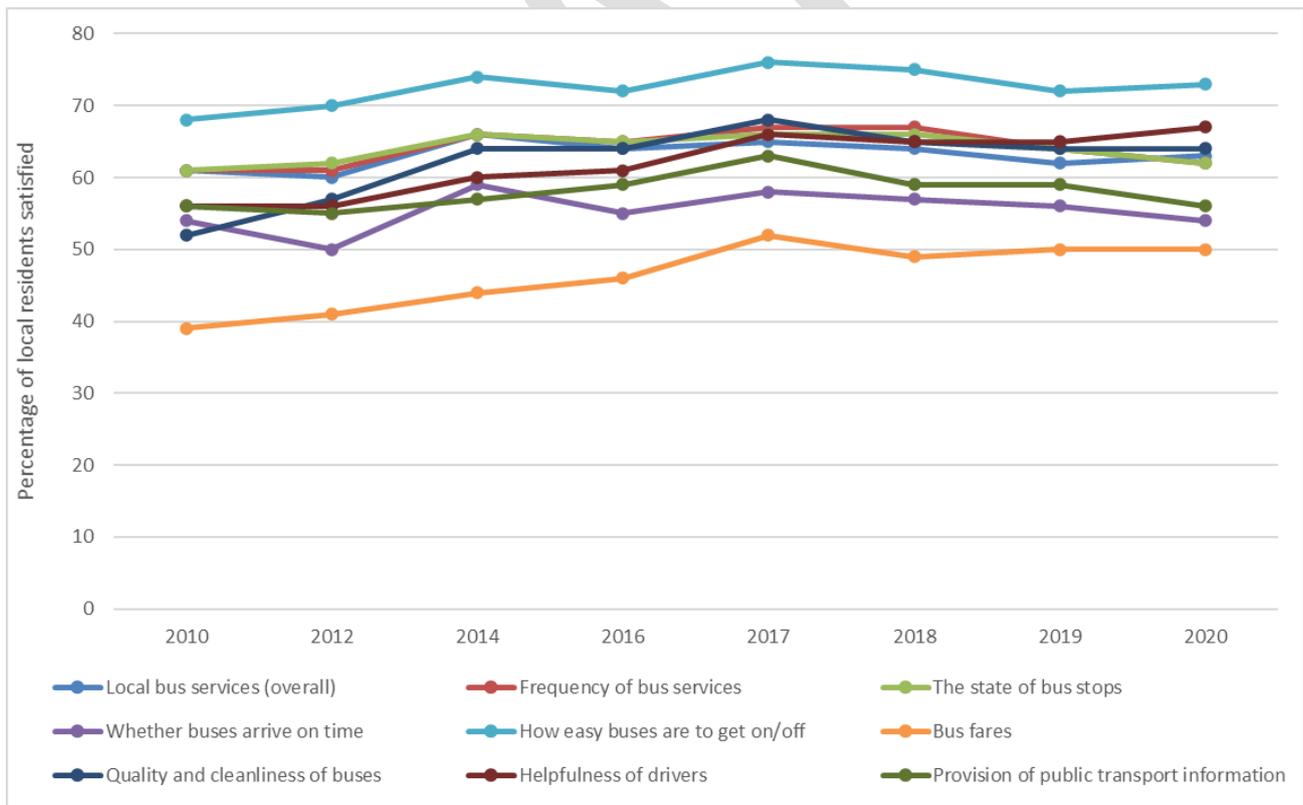
	Essex	Arriva services in Essex	First services in Essex
Interior cleanliness and condition	77%	79*	75%
Availability of seating or space to stand	87%	85%	86%

* - Low sample size ** - Insufficient sample size to report robust results

It should be noted that these results are for the whole of Essex, and a detailed breakdown for Southend is not available.

The annual National Highways and Transport Survey tracks local resident satisfaction with local bus services. As of 2020, 63% of residents are satisfied with local bus services, but a detailed breakdown shows areas where satisfaction is higher and lower. Local residents are the most satisfied with how easy buses are to get on and off, and how helpful drivers are. They are least satisfied with bus fares and whether buses arrive on time.

Figure 18 – Local resident satisfaction with bus services¹⁵



Whilst this variance can be partly explained by differences in methodology between the National Highways and Transport Survey and the National Bus Passenger Survey, these results indicate a difference in attitude between bus users and non-users. Whilst users are generally more satisfied with

¹⁵ National Highways and Transport Network (2021) NHT Network Results. <https://nhtnetwork.org/survey-results/>

local buses – although they do raise issues about value for money and punctuality – non-users (who are included in the National Highways and Transport Survey) could be more negative towards buses. The reasons for this are unknown at present.

Air Quality and Carbon Emissions

Air Quality Management Areas in Southend

There are two Air Quality Management Areas (AQMAs) in the Borough that are traffic-related – at The Bell Junction and a short section of the A127 Victoria Avenue, close to the junctions with East Street, West Street, Priory Crescent and Fairfax Drive. The issues at both related nitrogen dioxide. The primary source of this air pollution is local road traffic, of which buses are a part but not the primary source of air pollution.

Table 9 – Sources of Nitrogen Dioxide at two Air Quality Management Areas in Southend¹⁶

	The Bell Junction	A127 Victoria Avenue (close to junctions with East Street, West Street, Priory Crescent and Fairfax Drive)
Sources of Nitrogen Dioxide	 <p>31% Diesel cars and light goods vehicles</p>	 <p>40% Diesel cars</p>
	 <p>15% Heavy Goods Vehicles</p>	 <p>26% Diesel light goods vehicles</p>
	 <p>15% Buses</p>	 <p>19% Heavy Goods Vehicles</p>
	 <p>3% Petrol cars</p>	 <p>9% Buses</p>
		 <p>6% Petrol cars</p>

The Council’s Low Emission Strategy is working towards improving local air quality. Adopted in 2018, it states its priorities for action as being:

- Reducing emissions via the Local Transport Plan (LTP3), Southend Local Plan and the Joint Spatial plan.
- The Southend Intelligence Hub, Smart City Journey and Digital Strategy.

¹⁶ Source: Southend-on-Sea Borough Council own analysis

- Land Use Planning, Development Control and Low Emission infrastructure.
- Procurement.
- Reducing emissions from commercial vehicles, passenger cars and light goods vehicles, borough wide access and parking strategy.
- Reducing emissions from taxis and buses.
- Raising awareness.

Current pollutant levels are all below the national air quality objectives of an annual mean for nitrogen dioxide of $40\mu\text{g}/\text{m}^3$ due to the travel changes resulting from the Covid-19 pandemic but are expected to increase to the former levels over time. Data has been recorded specifically at The Bell junction on the A127 as part of pre-development monitoring which has recorded levels below the national objective for nitrogen dioxide and PM10 particulates.

Bus operators in Southend have made investments in their buses to reduce emissions by bringing in newer buses with more efficient engines. The current bus fleet is a range of vehicles from having Euro VI engines as their standards for emissions to Euro III standards for emissions. For reference, Euro III engines have standards of $500\text{mg}/\text{km}$ in emissions of Nitrogen Dioxide and $50\text{mg}/\text{km}$ for Particulate Matter, and Euro VI engines have standards of $80\text{mg}/\text{km}$ for Nitrogen Dioxide, and $5\text{mg}/\text{km}$ for Particulate Matter.

Carbon emissions

Local carbon emission estimates from the Department for Business, Energy, and Industrial Strategy (BEIS) (Figure 19) shows that local transport is a significant proportion of local carbon emissions, accounting for 29% of all estimated local emissions in 2019. Since 2005, estimated local emissions from all sources has gradually declined by about 40%, and although local transport emissions have lagged behind this trend, they are estimated to be just over 10% lower in 2019 compared to 2005.

The major source of these emissions, according to BEIS, is road transport, accounting for 89% of these emissions. These figures are not broken down any further by mode of transport, so we are not able to estimate what proportion of local transport emissions are from buses. However, BEIS estimates a medium petrol car emits 192g of carbon dioxide (CO₂) per passenger kilometre, and a medium-sized diesel car emits 171g of CO₂ per passenger kilometre. Buses, at current levels of utilisation, emit 105g of CO₂ per passenger kilometre.

Figure 19 – Estimate sources of local carbon emissions in 2019¹⁷

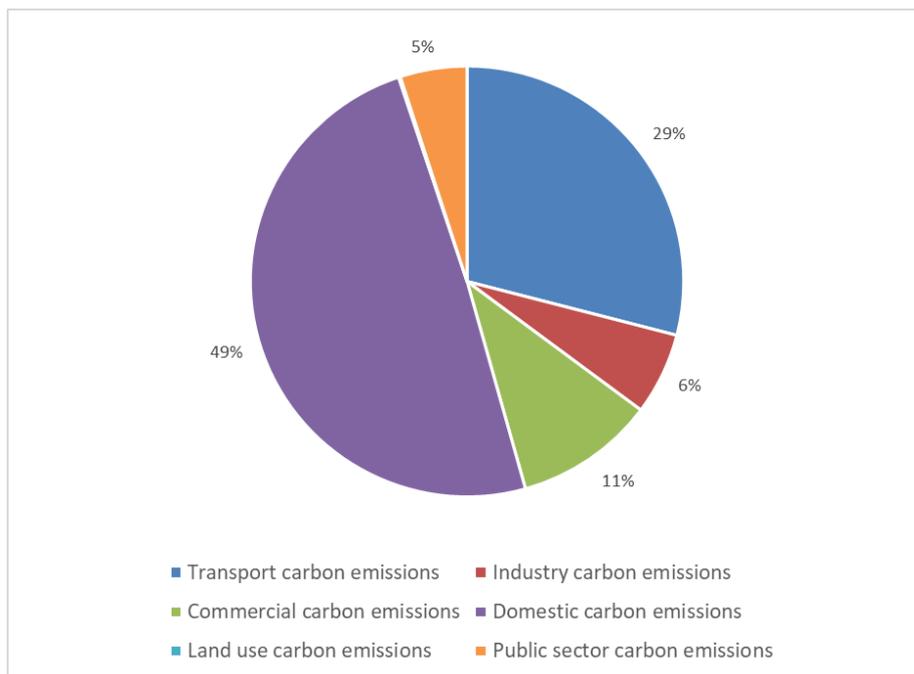
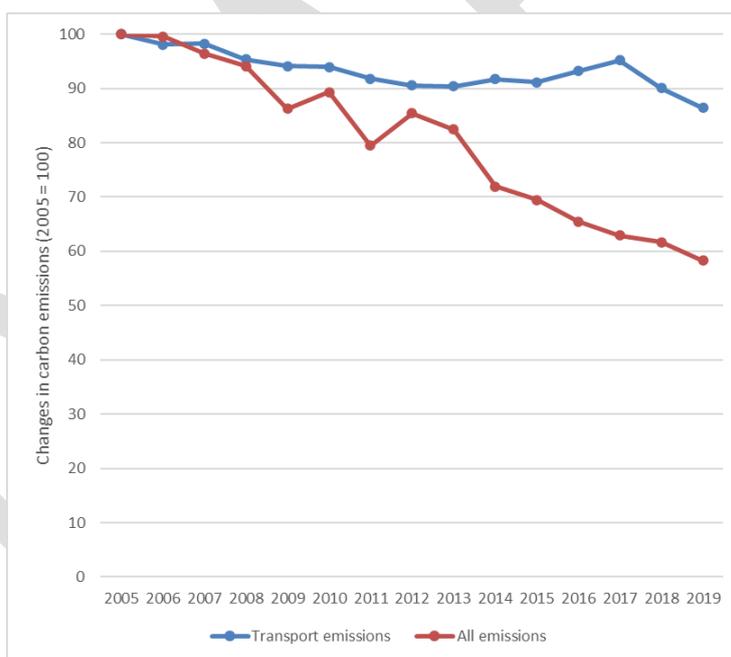


Figure 20 – Indexed changes in local carbon emissions by source – 2005 to 2019¹⁸



¹⁷ Department for Business, Energy, and Industrial Strategy (2021) UK local authority and regional carbon dioxide emissions national statistics: 2005 to 2019. <https://www.gov.uk/government/statistics/uk-local-authority-and-regional-carbon-dioxide-emissions-national-statistics-2005-to-2019>

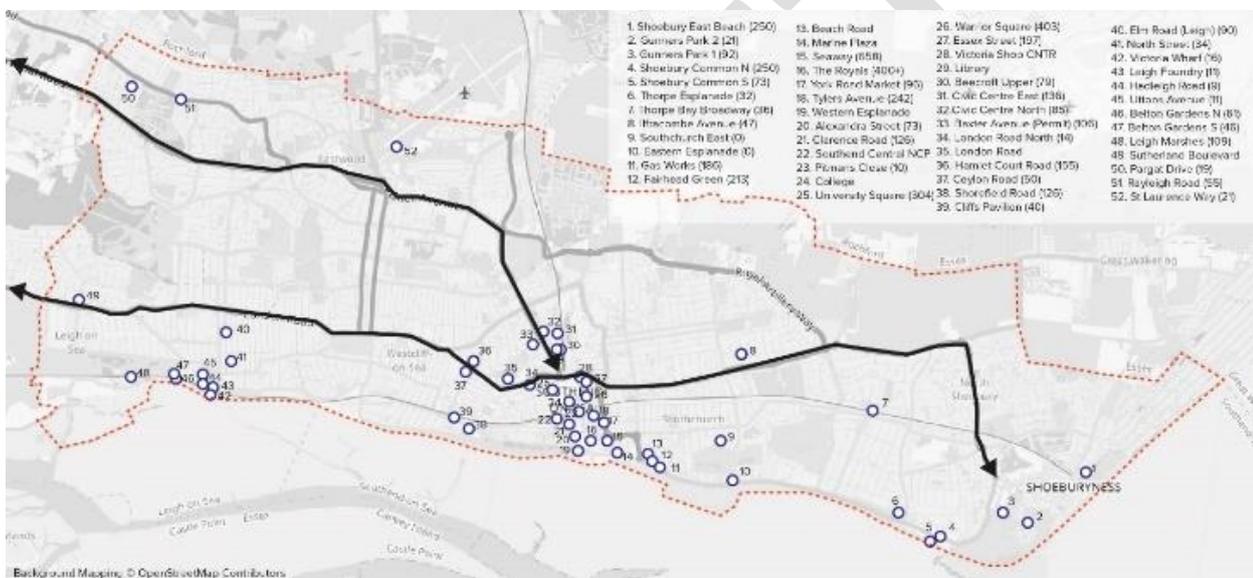
¹⁸ Department for Business, Energy, and Industrial Strategy (2021) UK local authority and regional carbon dioxide emissions national statistics: 2005 to 2019. <https://www.gov.uk/government/statistics/uk-local-authority-and-regional-carbon-dioxide-emissions-national-statistics-2005-to-2019>

Other factors that affect the use of local bus services

Parking

Public car parking is available in central Southend and elsewhere in the Borough in designated car parks and extensive on-street spaces. There are over 5,000 spaces available in the central area and while the retail-related car parks are well used (but rarely full), the other parking locations are lightly used. Most car parks are managed by the Council but other capacity is owned or managed by large retailers, Southend Hospital, South Essex College, shopping centres and NCP at Southend Victoria, Southend Central, Prittlewell, Westcliff and Thorpe Bay stations. Capacity is generally underused but, at certain times of the year, demand is strong associated with seasonal activity towards the end of the year and during the summer holiday when there is a large influx of visitors.

Figure 21: Public car parking in Southend



The car parks owned and managed by the Council and for on-street control and enforcement represent a resource that could change over time as improved bus services are introduced.

Land use planning and development

The location, scale, density, and type of development that takes place has an impact on the use of local bus services. Southend's Development Planning Document (2015) states that:

"...development should be located in areas which are sustainable, or areas which it can be demonstrated can be made sustainable, and accessible by non-car modes and which reduce the overall need to travel."

Further stating that...

"Developments should also facilitate opportunities for people to use public transport both for local journeys and to access the wider public transport network as a viable and practical alternative to private transport."

How better buses create change

Headline Targets

We have devised targets for each of the proposed interventions, thereby linking 'cause' and 'effect' while showing the combined effect of a package of initiatives. This maintains targets at an achievable level based on the evidence available. The targets are set against a pre-pandemic baseline of 2019, based upon government guidelines as set out in Transport Analysis Guidance (TAG), noting that recovery since travel restrictions were eased will continue for some time and the initial step is to regain the market that has been lost as a result of the pandemic. All the targets accord with local policies and include performance targets – how the provision of services will be improved – and levels of user satisfaction. Achieving some of the targets will be determined by the level of funding available, notably improved and new services for which there is a revenue risk, at least initially.

The indicators set out below will constitute our core indicators, or ultimately how we will know that we are succeeding against the objectives and vision of this BSIP. As part of the establishment of the EP, we will also be developing a series of monitoring indicators, whose purpose will be to indicate that changes in the bus network and its use are happening, that could in the longer term have an impact on our ability to achieve the vision and objectives of this BSIP. These will be incorporated into the BSIP when it is first revised.

Targets for journey times and reliability improvements

Achievable targets have been devised for each of the proposed schemes which were shortlisted from a long list contributed by local interest groups and others. Each infrastructure ('facilities') and other proposals ('measures') was considered against their expected impact, implementation time and indicative cost (high/medium/low) to provide a prioritisation. Each was aligned with a target for the relevant routes measured by a defined performance indicator that embedded the fit with policy objectives. Significantly, none of the proposals on their own was associated with a large effect but collectively, the package of schemes devised adds up to a considerable targeted improvement both in the performance of services and customer satisfaction.

It should be noted that in some cases, it has proven difficult to establish a baseline for some indicators due to an absence of data. In such instances, the targets set are aspirational at this stage, based upon the informed professional view of experts, and will be revised once the baseline data collection has been undertaken. This will either be before the establishment of the EP in April 2022, or during the first year of the Bus Service Improvement Plan.

The targets, expressed as a proportional change from the baseline number of users per route, are translated into indices to avoid presenting details of the commercially-sensitive number of users of current services. Monitoring and reporting will take place every six months. Our proposed schemes are included in the Delivery section of this BSIP, but below we detail our core indicators and targets.

Bus punctuality and journey times

With bus priority measures in place across the Borough, bus punctuality is expected to improve substantially. Operators' main requirement is to make journeys punctual with improved and predictable journey times which will be supported by the installation of bus detection equipment at key traffic signal junctions, removal of on-street parking where this is obstructive and more bus priority measures. This will be measured by operators' records supplemented by customer surveys.

Our core targets will be as follows:

25% Reduction in journey times between major hubs on our 4 key corridors in Southend.

15% Reduction in the number of buses arriving late at their end destination on our 4 key corridors.

95% Of all Southend residents will be within a 400 metre walking distance of a bus service running every 15 minutes¹⁹

Targets for passenger growth and customer satisfaction

Our improvements are anticipated to increase the number of people using local bus services, and combined with improvements to local buses delivered through the Enhanced Partnership, people will become happier with local bus services.

We have assessed the potential effects of the schemes selected as a percentage change of annual use for the relevant routes. Realistically, some schemes will have a limited effect individually but as part of a package of improvements, the change could be magnified with each element of the package supporting growth in demand resulting from more punctual journeys and a higher quality offer.

Our core targets for passenger growth and customer satisfaction will be as follows. In 2022/23, we will also establish a baseline of satisfaction of local bus users, with the intention of setting a target to be monitored in consequent BSIPs.

500k Additional trips on local buses every year above 2019/20 levels by 2027

65% The proportion of bus trips in Southend undertaken by non-concessionary pass holders by 2027

75% The percentage of local people satisfied with local buses by 2027

¹⁹ On weekdays, between 0700 and 1900

Targets for air quality and carbon reduction

In this BSIP, we will not be setting specific targets for buses to improve air quality or to reduce carbon emissions. There are two reasons for this. Firstly, there is a lack of good quality local data against which to set a target specifically for buses for each of these factors, and consequently any such target set in this BSIP would be unreliable and prone to significant errors. In 2022/23, we will be tackling these issues by undertaking more robust data collection as part of LTP4, with the view to set a specific target for buses as soon as practicable and in agreement with operators and local stakeholders.

Secondly, any such targets must be considered in the wider context of reducing carbon emissions from transport. The ability of buses to contribute to wider improvements in air quality and carbon emissions will be affected by policies and initiatives to improve local transport. Two such policy documents (the Local Plan and LTP) are currently in the process of being reviewed. As a consequence, setting a specific carbon reduction and air pollution target for buses in advance of this work is premature.

Regardless of this, the plans contained within this BSIP are likely to make a contribution towards improving air quality and carbon emissions through making the use of buses more attractive and increasingly a priority choice.

Our Action Plan

Overall approach

Our work on developing this BSIP has identified that, in order for buses to achieve their potential in Southend, significant change needs to take place, and all aspects of bus services need to improve in order to encourage people back to buses and to grow bus use in the future. During 2022/23, the Council and operators will deliver changes that can be delivered quickly and will re-establish bus use while more detailed work will be undertaken to deliver more radical changes.

Our programme has been prioritised to maximise the current strengths and opportunities of the bus network, and to get the basics of the network right first and use that as a basis upon which to build. Whilst this plan is a complimentary package of measures, we have clear priorities for what needs doing in order for us to achieve our objectives.

The delivery plan has a number of complementary packages of measures. These are summarised as follows:

1

Improving our key bus corridors is our highest priority and the basis of our commercial bus network. We will get more people using buses by improving the reliability of buses, improving journey times for buses, and improving the whole journey experience along each corridor. In priority order, these are:

1. Southend Town Centre to Hadleigh (as far as the boundary with Castle Point)
2. Southend Town Centre to Eastwood
3. Southend Town Centre to Shoeburyness Town Centre via Thorpe Bay
4. Southend Town Centre to Southend Airport (as far as the boundary with Rochford)

2

Supporting bus use by **improving existing services** is our second highest priority, through measures such as standardising timetables along routes, and through the EP setting minimum frequencies for daytime, evening, and weekend services along the key corridors. This will provide a good level of service along these corridors, while giving operators the flexibility to adjust their service patterns through joint working.

3

Improving cross-town connectivity will be our next highest priority. This will include delivering a Mobility Hub in Southend Town Centre, and launching (subject to feasibility and funding) new services between Southend Airport and

Shoeburyness, Thorpe Bay, Leigh-on-Sea, Eastwood, and Chalkwell (via Southend Hospital).

4

Improving ticketing and fares by upgrading the Octopus ticket so it is available on smartphones and through contactless payment and can be used on local trains, and trialling a potential £1.50 flat single fare across the town on summer weekends.

5

Better marketing and promotion of local buses, including developing and delivering a joint marketing and promotions plan involving operators and Essex County Council, as well as an area brand.

6

Improving existing vehicles by retrofitting existing engines so that their emissions are lower emissions, requiring that all new buses coming into the area are low emission vehicles, and delivering audio-visual announcements on buses.

In addition to this, funding is needed to boost capacity and capability at the Council to oversee the delivery of this comprehensive programme of improvements. This includes maintenance of bus stops, project management and delivery expertise for infrastructure and services, and supporting administrative costs.

To deliver our action plan, investment from the Department for Transport is critical in improving the infrastructure and services that are needed to deliver the transformational change that we envisage. Accordingly, this BSIP sets out our funding ask to the Department, without which this transformational change is not feasible. Operators are already making investments in improving local bus fleets, and the Council is also ensuring that the needs of buses are being prioritised through planned schemes such as Active Travel Corridors and major junction upgrades. Without this funding, these plans and their transformative potential will not be realised.

Table 9 outlines our funding request to the Department for Transport. A more detailed action plan is provided in Appendix A.

Table 9 – Southend’s funding request to the Department for Transport

Priority Area	Funding requested by year ²⁰					Total funding requested
	22/23	23/24	24/25	25/26	26/27	
1 Improving our key bus corridors	£2.575m	£7.545m	£6.7m	£5m	£8.5m	£30.32m
2 Improving existing services	£4.81m	£4.76m	£4.76m	£4.763m	£4.766m	£23.859m
3 Improving cross-town connectivity	£1.225m	£1.45m	£1.4m	£0.901m	£0.902m	£5.878m
4 Improving ticketing and fares	£0.15m	£1.7m	£0	£0	£0	£1.715m
5 Better marketing and promotion	£0.265m	£0.055m	£0.055m	£0.055m	£0.055m	£0.485m
6 Improving existing buses	£0.5m	£1.5m	£1m	£0	£0	£3m
Other activities	£0.635m	£0.635m	£0.635m	£0.635m	£0.635m	£3.175m
Total:	£10.36m	£18.145m	£14.050m	£11.354m	£14.858m	£67.967m
	Three years:		£42.555m	Five years:		£68.647m

²⁰ As many of the schemes included in this BSIP are at outline stage, we have included a 40% optimism bias in our costings

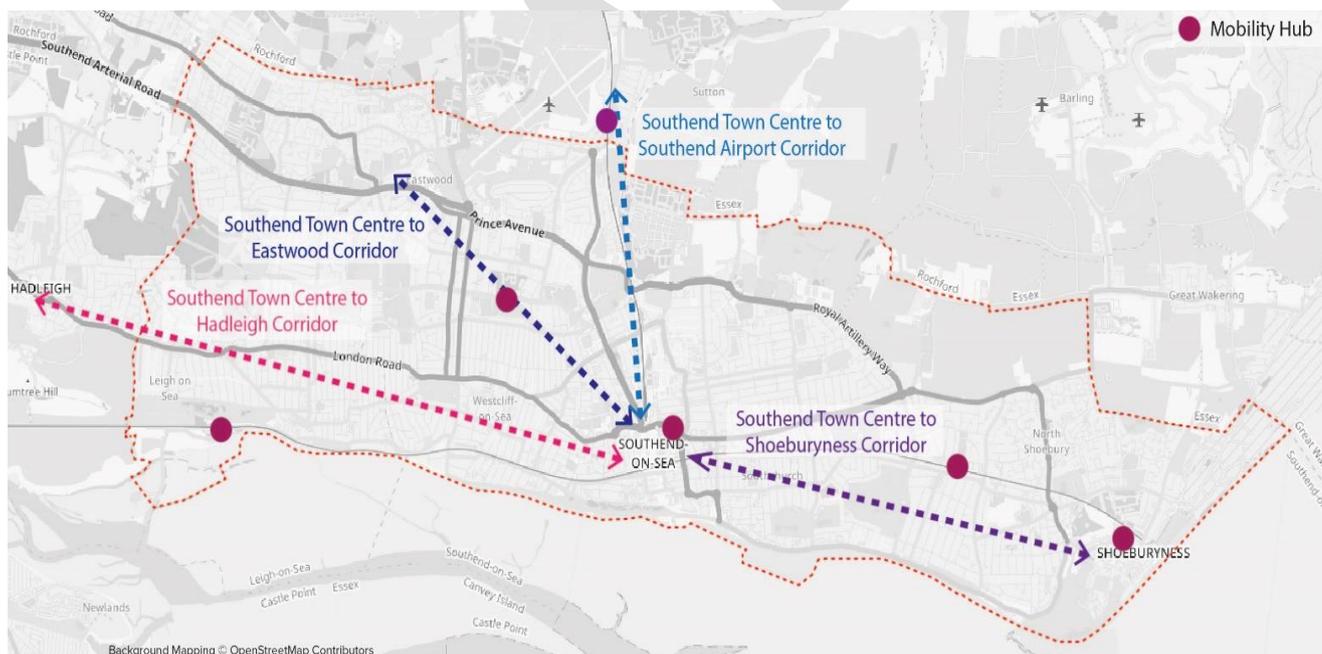
Improving our key corridors

What our plans will achieve

- Reducing journey times along each corridor for buses by 25% by 2027
- Reducing the percentage of buses running late along each corridor by 15% by 2027
- Improve frequencies of buses along each corridor, and boost the frequency of off-peak services;
- Increase the number of people boarding and alighting buses along each corridor.

Our vision for each corridor is for key hubs and the town centre to be linked together by frequent, high quality bus services, building upon the current strengths of the commercial bus network. These routes currently have an established bus network, and our planned improvements will focus on that network. An improved infrastructure will make buses more reliable and quicker, and lower cost to run. Without these improvements, the service improvements that are part of this plan will not be viable.

Figure 22: Key corridors in Southend



Along each corridor, we plan to make significant improvements to the infrastructure, ranging from improving bus stops to making improvements to bus journey times. Our priority corridors are determined by their levels of services in terms of buses and passengers, and accordingly any works will be prioritised as so:

1. Southend Town Centre to Hadleigh;
2. Southend Town Centre to Eastwood;
3. Southend Town Centre to Shoeburyness Town Centre, and;
4. Southend Town Centre to Southend Airport.

Our proposed improvements

Bus priority signalling.

This is the quick win to deliver along each corridor in 2022/23. Our existing traffic control and signalling system will be upgraded so that when buses approach the signals at key junctions, the signals will be green for longer. This will result in some small improvements in reliability along all key corridors.

More detailed scoping works will be needed at each location, however an initial view of engineers is that this will mostly be achieved through upgrading existing signal control systems without the need for major highway works.

	Estimated cost per unit	Total number of units	Total cost	Anticipated outcomes
Bus priority signalling	£20,000 per junction ²¹	13	£260,000	Improved reliability and improved punctuality

Bus stop maintenance and upgrades

Starting in 2022/23 and continuing to 2026/27, the Council will undertake a regular programme of maintenance and where applicable upgrades to the key bus stops along all key corridors. The objective of this work will be to identify how bus stops can become more accessible by design along each of the key corridors.

This will commence with a full audit of all stops on the key routes, with the aim to create a consistent quality standard, that shall include but not be limited to the following:

- Security of the stop
- Bus stop post and flag
- Bus passenger shelter and seating where feasible
- Quality and accessibility of information, including timetables and real time displays
- Surface markings for buses
- Ability for buses to approach and exit the stop
- Height and type of kerb
- Access to the pedestrian footway and clear walking routes

Following this assessment of stops, a programme of improvements will be identified for each key route. Funding for maintaining and upgrading stops be used to repair stops and maintain them, and to undertake upgrade works to ensure that all stops are of an accessible standard.

²¹ Source: Estimated cost based on a mixture of software upgrades and on-site infrastructure works from historic SBC costs

Where stops could be upgraded through Mobility Hubs or major route upgrades, explained in more detail later, then funding for those projects will be used to deliver those upgrades. The corresponding savings from this programme will then be reinvested in lower priority stops identified as part of the initial audits.

	Estimated cost per unit	Total number of units	Total cost	Anticipated outcomes
Bus stop maintenance and upgrades	£25,000 per stop ²²	100	£2,500,000	Improved passenger experience and public perception of buses

Delivering Mobility Hubs and Mini Hubs

Hubs are locations where people can interchange between transport services. They are characterised as not simply being a place where people can change from one mode of transport to another, but as being a space that improves the surrounding public realm, prioritises the needs of pedestrians, cyclists, and public transport users, and gives information on onward travel. They are not simply places to interchange but are integrated into the surrounding area.

The difference between a Mobility Hub and Mini Hub will be their scale of use and the range of services that are on offer at each.

Table 10: Characteristics of Mobility Hubs and Mini Hubs

	Mobility Hub	Mini Hub
Has at least the following:	<ul style="list-style-type: none"> A major trip-generating destination within 400 metres, e.g. Hospital Bus services Cycle parking Car club parking Local wayfinding and onward travel information 	<ul style="list-style-type: none"> Bus services Cycle parking Local wayfinding and onward travel information
Plus one or more of the following:	<ul style="list-style-type: none"> Rail services Car parking, including electric vehicle charging Bike share parking E-scooter parking. Shops and services Delivery points 	<ul style="list-style-type: none"> A neighbourhood-scale trip generating destination within 400 metres Rail services Car parking, including electric vehicle charging points Car club parking Bike share parking E-scooter parking Shops and services

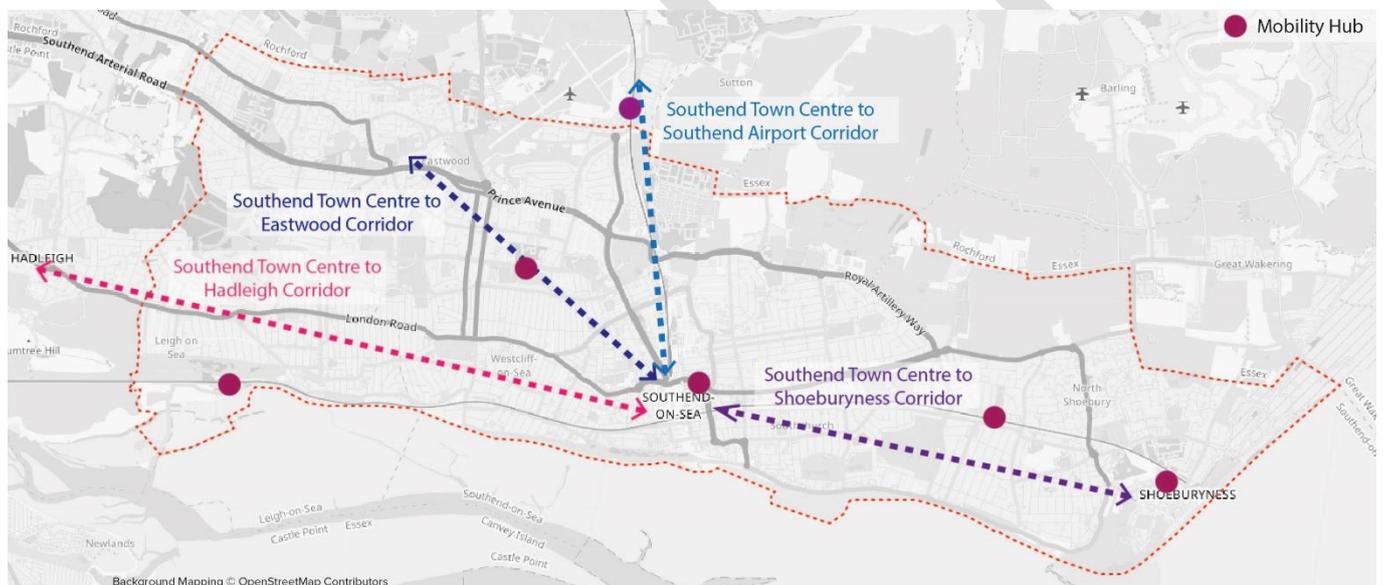
²²²² Source: Estimated costs per stop replacement, based upon SBC figures

We propose to develop and deliver a series of Mobility Hubs across Southend at the following locations:

- Southend Town Centre (described in more detail later)
- Southend Airport
- Thorpe Bay Rail Station
- Shoeburyness Town Centre
- Leigh-on-Sea
- Southend Hospital

The establishment of these Mobility Hubs is subject to more detailed site investigations, feasibility studies, technical investigations and consultation. The locations identified should be considered as indicative only at this stage.

Figure 23: Mobility Hub Locations



With regards to Mini Hubs, we are initially proposing to deliver Mini Hubs at Chalkwell Station and in Eastwood, as part of plans to improve these corridors and to introduce new cross-town bus services. The locations of further Mini Hubs will be scoped in further detail during 2022/23.

	Estimated cost per unit	Total number of units	Total cost	Anticipated outcomes
Mobility Hubs	£650,000 per hub ²³	5	£3,250,000	Improved customer satisfaction and ease of interchange
Mini Hubs	£425,000 per hub ²⁴	2	£850,000	

²³ Source: Officer review of Mobility Hubs delivered in locations similar to Southend, focussing on costs of upgrading transport infrastructure at these hubs

²⁴ Source: Officer review of Mobility Hubs delivered in locations similar to Southend, focussing on costs of upgrading transport infrastructure at these hubs

Major corridor projects

Along each corridor, the Council commits to delivering transformational change that will not only improve buses but also improve the quality of place along each corridor. These are likely to be significant projects and further feasibility work is needed to specify the improvements that will be delivered.

These infrastructure projects will focus on what changes to the street environment can be made to achieve the objectives of this BSIP and the forthcoming EP. Within the scope of these projects will be several potential solutions that will be investigated, including (but not limited to):

- bus priority measures
- changes in highways and network management, including parking
- improving walking and cycling routes to and from stops and Mobility Hubs
- improve the quality of bus stops along the route
- improving the quality of roadside information and wayfinding along each route.

At this stage, it is not possible to identify what specific improvements will be made on each corridor until more detailed technical feasibility works are undertaken. In benchmarking our costs, we have referenced a project that delivered improvements to bus infrastructure along the A13 London Road in Southend. The scheme improved public transport along the A13 by implementing bus stop improvements, providing real time information and bus prioritisation at signals, as well as targeted junction enhancements and road widening. It also included the construction of a new Travel Centre in the town centre at the location of old Central Bus Station. Southend's major scheme linked with a similar programme of improvements that were implemented by Essex County Council outside the Borough boundary. The impact of these measures included an increase in bus patronage of 10% along the route of the A13.

Although outline as this stage, the delivery of such a significant programme of works will be critical to the success of this BSIP. Such major projects will deliver the transformational changes required to improve bus services and the street environment along these main corridors that will boost journey times, patronage, and reliability.

	Estimated cost	Total cost	Anticipated outcomes
Major Corridor Projects – Feasibility and Major Scheme Business Case	All corridors (x4): Range from £500,000 to £750,000 ²⁵	£2,000,000	Costed, deliverable schemes that will achieve the objectives of this BSIP
Major Corridor Projects - Delivery	Southend Town Centre to Hadleigh: £5,000,000 Southend Town Centre to Shoeburyness: £6,000,000 Southend Town Centre to Southend Airport: £4,000,000	£21,000,000 ²⁶	Faster bus journeys More reliable bus journeys More people using buses

²⁵ Source: Benchmarking of costs to develop schemes from Strategic Outline Business Case to Full Business Case, inclusive of all statutory assessments and documentation, technical feasibility, and detailed design works

²⁶ Source: Estimated costs of A13 Corridor Upgrade, with costs of inflation added

	Southend Town Centre to Eastwood: £6,000,000		
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Improving services

What our plans will achieve

- Increase the number of people boarding and alighting buses along each of the key corridors across the day
- Increase the number of people boarding and alighting buses during the evenings and on Sundays by 50%

Proposed improvements

Minimum frequencies

It is our intention to establish minimum service frequencies along each of our key corridors through the EP. It is our intention that these frequencies should be across operators, as opposed to requiring every single service to be at the frequencies, subject to further discussion with bus operators:

- Every 15 minutes between 0700 and 1900 on weekdays;
- Every 20 minutes between 1900 and 2200 on weekdays, and all day on Saturday and Sunday;
- Every 30 minutes all day on Sunday.

These should be considered as minimum service frequencies, and there are areas along these corridors where services operate at a higher frequency than this. Where there is the commercial case to further improve frequencies above any such set minimums, operators will be encouraged to boost frequencies.

Important to boosting service frequencies further is reducing bus journey times and improving the reliability of services through infrastructure works. This is for two reasons. First, more reliable and faster buses attract more passengers, making the case for boosting services more. Secondly, improving journey times and reliability means that operators can run their existing level of service with fewer buses, freeing up buses and drivers to run additional or new services at no extra cost. Accordingly, further improving frequencies requires investment in bus infrastructure that improves journey times and reliability.

Additional services will initially be financed by grants from the Department for Transport. Through the infrastructure improvements identified along each of these corridors, and other initiatives identified as part of this BSIP, it is intended that these additional services will become commercially viable over time.

In recognition of the demand for local bus services being concentrated on the key corridors and during the working week, our priorities for the delivery of these improvements are as follows, and subject to further discussion with operators and investigation of feasibility:

1. Services every 10 minutes on each of our key corridors, between Monday and Friday at 0700 to 1900;
2. Services every 20 minutes on key corridors between 1900 and 2200 on weekdays, all day Saturday, and every 30 minutes on Sundays;
3. Services every 30 minutes on other corridors.

Where there is a commercial case to do so, operators will be encouraged to provide a level of service that exceeds these minimum thresholds.

	Estimated cost per unit²⁷	Total number of units	Total cost	Anticipated outcomes
Maintaining service frequencies on key corridors of every 10 minutes weekday 0700 to 1900	£70,000	19 PVR	£6,650,000	More people on local bus services Significant growth in off-peak bus use
Maintaining service frequencies on key corridors of every 20 minutes, weekdays 1900 to 2200, all day Saturday and every 30 minutes on Sunday	A mixture of additional vehicles (estimated to be 6 PVR), plus extended operational times of existing vehicles and staff		£8,009,000	
Maintaining service frequencies on other corridors of every 30 minutes, all day weekdays, all day Saturday and Sunday	A mixture of additional vehicles (estimated to be 13 PVR), plus extended operational times of existing vehicles and staff		£9,100,000	

Better co-ordination of buses.

Many of these corridors already have regular bus services running along them. Under this proposal, service times will be better co-ordinated between operators so that passengers along each corridor will have an even spread of services provided at set intervals (otherwise known as a clockface timetable). Furthermore, through co-ordinating services, operators may be able to make some operational savings whilst maintaining a good level of service along each corridor. Any such co-ordination of services would need to comply with the appropriate competition legislation. The costs of this co-ordination are included in the figures in the figures above.

Additional evening and Sunday services

To meet the specified service frequencies, we are seeking additional services along the key corridors to run during the evenings Monday to Saturday (1900 to 2200) and on Sundays. This will be enabled by funding from the Department for Transport for a minimum of three years from 2022/23. The costs of these additional services, primarily consisting of running existing vehicles for longer periods, are included in the figures above.

Improving cross-town connectivity

What our plans will achieve

- Increase the number of people boarding and alighting buses across Southend
- Improved passenger experience of the interchange in the town centre
- New services to become commercially viable within 5 years

²⁷ Source: Standard bus operating costs of £100,000 per bus per annum, with additional revenue assumed

On the existing main bus corridors, there is an established good level of service. Many of the actions planned under the banner of service improvements are covered as part of the key corridors but there are several gaps in services that have been identified. In order for Southend to have a comprehensive bus network, these gaps need to be filled.

Proposed service improvements

New service: Leigh-on-Sea – Eastwood – Southend Airport

To improve cross-town connectivity, a new service will be established between Leigh-on-Sea, Eastwood, and Southend Airport, subject to funding. This service will fill an existing service gap in connectivity by public transport, specifically providing a regular service between the local centres of Leigh-on-Sea and Eastwood and providing connectivity to employment opportunities at Southend Airport and Leigh-on-Sea train station.

Different route options and service types will be tested through a technical and operational feasibility study, as well as forecasting potential demand for the service. A preferred service option will be selected, and Southend-on-Sea Borough Council will procure the new service, subject to Department for Transport funding being made available.

New service: Chalkwell – Southend Hospital – Southend Airport

To improve cross-town connectivity, a new service will be established between Chalkwell, Southend Hospital, and Southend Airport, subject to funding. This service will fill an existing service gap in connectivity by public transport, specifically providing a regular service between the local centre of Chalkwell and Southend Hospital, and providing connectivity to employment opportunities at Southend Airport.

Different route options and service types will be tested through a technical and operational feasibility study, as well as forecasting potential demand for the service. A preferred service option will be selected, and Southend-on-Sea Borough Council will procure the new service, subject to Department for Transport funding being made available.

New services: Shoeburyness Town Centre – Southend Airport and Thorpe Bay – Southend Airport

To improve cross-town connectivity, a new service will be established between Shoeburyness town centre and Southend Airport, and Thorpe Bay and Southend Airport, subject to funding. This service will fill an existing service gap in connectivity by public transport, specifically providing connectivity to employment opportunities at Southend Airport from Shoeburyness. It will also complement planned development of a new Southend United football stadium and ancillary commercial and residential development at Fossetts Farm.

Different route options and service types will be tested through a technical and operational feasibility study, as well as forecasting potential demand for the service. A preferred service option will be selected, and Southend-on-Sea Borough Council will procure the new service, subject to Department for Transport funding being made available.

	Estimated cost per unit ²⁸	Total number of units	Total cost	Anticipated outcomes
New service: Leigh-on-Sea to Southend Airport	£152,000 per PVR	2 PVR	£1,525,000	More people on local bus services

²⁸ Estimated costs based upon costs of operating a vehicle, staff costs, and initial subsidy requirements, variable by distance and running time

New service: Chalkwell to Southend Airport	£107,500 per PVR	2 PVR	£1,075,000	Significant growth in off- peak bus use
New services: Shoeburyness and Thorpe Bay to Southend Airport	£113,750 per PVR	4 PVR	£2,275,000	

Proposed infrastructure improvements

Town Centre Mobility Hub

To improve cross-town connectivity and to support plans for a regenerated town centre, a comprehensive mobility hub will be established in the town centre. A feasibility study will be undertaken to determine options for delivering a mobility hub and their technical, operational, and financial feasibility.

	Estimated cost per unit	Total number of units	Total cost	Anticipated outcomes
Mobility Hub – Town Centre	£1,000,000 per hub ²⁹	1	£1,000,000	Improved customer satisfaction and ease of interchange

Improving tickets and fares

What our plans will achieve

- Increase the number of people boarding and alighting buses across Southend
- Improved passenger experience of using local bus services
- Encouraging new people to trial local bus services

Providing an integrated ticket is an essential part of making the journey by bus seamless for passengers. Southend already has a multi-operator ticket, the Octopus ticket, which is seldom advertised or used, and is only a paper ticket. Specifically, improving ticketing and fares will deliver a more integrated public transport network that is easy for everyone to use.

Bus operators will still be able to provide their own tickets and will be able to promote them. Doing so will provide passenger with choice of the type of ticket they can use for their journeys.

Proposed service improvements

²⁹ Source: Officer review of Mobility Hubs delivered in locations similar to Southend, focussing on costs of upgrading transport infrastructure at these hubs

Upgrading the Octopus Ticket to mobile payment and contactless payment, and to be accepted on local rail services

Our plan will upgrade the current Octopus ticket in two ways:

- The existing ticket will be made available on mobile ticketing apps (all local operators will be required to sell the ticket on their mobile apps), and through contactless card payment. This will first necessitate feasibility work into the technological and contractual requirements to enable this. Delivery may also require an upgrade to the on-board ticket machines currently provided by operators; and
- Working with local train operators to accept Octopus on local rail services. This will deliver a truly integrated public transport network across Southend but requires extensive work to integrate several technical systems and to enter contractual and revenue sharing arrangements.

	Estimated cost ³⁰	Anticipated outcomes
Upgrade of Octopus ticket to contactless and mobile payment, and acceptance on local rail services	£250,000	Increased number of people using existing bus services

Trial a £1.50 flat single fare for all buses

The impact of offering flat fares on services in Southend is currently unknown. We will run an initial trial of a £1.50 flat fare for single bus journeys across Southend, initially during weekends in the Summer, to understand the impact of having a flat fare on the operations of buses, fare revenues, and passenger numbers. Prior to this trial, a more detailed study will be undertaken, the study and trial is subject to funding from the DfT.

Subject to a successful trial, this flat fare will be rolled out to become permanent.

	Estimated cost ³¹	Anticipated outcomes
£1.50 flat fare trial during Summer weekends	£1,600,000	Increased number of people using existing bus services

Better marketing and promotion of buses

What our plans will achieve

- Increase the number of people using buses across Southend
- Increased awareness of local bus services across Southend amongst users and non-users
- Improved perceptions of local bus services
- Improve the quality and accessibility of bus information through all channels
- Market and promote local bus services in a holistic manner

³⁰ Based on the cost of a review of technical feasibility and system upgrades

³¹ Based on estimates of costs of feasibility, revenue loss from the trial, and undertaking the trial for one 6 week period during the summer

Standardised timetable changes

All operators commit to a regular pattern of timetable and service changes that does not exceed any more than four times per calendar year. This also enables operators to plan ahead when changes are proposed and to coordinate publicity material through various media that incorporates all operators' changes. This also reduces confusion for passengers and costs to operators and the Council. This will be carried out in collaboration with the operators and Essex County Council. There is no cost assumed for this works.

Promotion and marketing of services

The Council commits to preparing and delivering a joint marketing and promotions plan to promote local bus services. This will be aimed at people who are lapsed bus users and habitual car users from where growth in bus use is targeted and cover all aspects of bus use from finding out about services via various media, buying the right ticket and completing the journey.

Collaborative working with other Essex Authorities could enhance this outcome and be supported by the ForwardMotion brand that was developed by Thurrock, Southend and Essex Councils through the DfT Access Fund.

Passenger information

The Council is committed to providing up-to-date real time bus information at important bus stops and interchanges including those in the town centre, at rail stations and local mobility hubs. This will have increasing coverage as the system expands in stages. All stops will also have up-to-date timetable information for all bus services in a single, clear, readable format.

Branding

All operators and the Council are seeking to establish a single brand identity for public buses and to apply this branding across all digital and physical assets. This brand identity can be used in a complementary manner to existing branding, noting that many bus routes extend beyond Southend into Essex. Some of the vehicles used are not dedicated specifically for the area hence branding is expected to be a logo rather than all-over branding.

	Estimated cost per unit	Total number of units	Total cost	Anticipated outcomes
Develop and deliver a 'Get back on the bus' marketing campaign	£100,000 per campaign ³²	1	£100,000	Market and promote services holistically More people on local buses

³² Source: Estimated cost of developing and delivering campaign, including design and print works using existing promotional channels such as buses and online channels

Develop and deliver a joint marketing and comms plan	£350,000 per plan ³³		£350,000	Market and promote services holistically Increased awareness of local bus services More people on local buses
Establish a brand logo and network identity	£10,000 per brand identity ³⁴		£10,000	Market and promote services holistically
Link to operator websites on a shared online portal	£5,000 per annum in officer time and hosting fees	5 years	£25,000	Market and promote services holistically

Improving existing buses

What our plans will achieve

- Improve the environmental performance of local bus services even further
- Introduce low emission vehicles in Southend

Whilst using the bus overall is more environmentally beneficial, and the buses in Southend are modern with a good level of customer facilities on board, it is important that this level of service is maintained and where feasible improved. Improving the on-board facilities of buses will be achieved through better standards in the EP, but the BSIP provides the opportunity to improve the environmental performance of local bus services bus services.

Supporting vulnerable bus users

The Council also wishes to support all users, particularly those with visual impairments and users who are unfamiliar with local bus services. An immediate improvement that could be delivered is audio-visual announcements on buses that announce the stop as the bus approaches them. This BSIP would fund a roll-out of this technology on existing buses. At this stage, we are seeking to retro-fit the existing fleet of buses, but as new vehicles start service in Southend they may also be retrofitted.

Bus emissions

Operators have stated they are committed to phasing out their most polluting vehicles, which will be delivered through the EP. To deliver immediate improvements, we seeking funding to retrofit the engines

³³ Source: Estimated cost of developing and delivering a plan, as provided by communications professionals. There is opportunity for leveraging existing resources such as in-house branding and marketing capabilities in operators, the Council, and Essex County Council

³⁴ Source: Estimated cost of design works provided by communications professionals

of up to 100 buses with engines of an emissions standard of Euro V or earlier to be a Euro VI standard. This funding will be made available to operators who wish to retrofit their existing engines.

Both First and Arriva are involved with alternative fuel trails around the country. The Essex and Southend operations are reviewing the effects of these schemes so that experiences can be transferred to the area. This will clarify issues of fuel/charging capability, range, maintenance requirements and operating costs for fully electric and hydrogen fuel cell buses. If diesel buses elsewhere are displaced by new zero-emission buses and those buses are then transferred to Southend, then these should be of a lower emission standard.

	Estimated cost per unit	Total number of units	Total cost	Anticipated outcomes
Retrofitting existing buses with audio-visual announcements	£8,000 per vehicle ³⁵	100	£800,000	Increased use of local buses by vulnerable groups
Retrofitting existing buses to Euro VI emissions standards	£23,000 per vehicle per annum ³⁶	26	£3,000,000	Lower NOx and PM emissions from buses

Other initiatives

What our plans will achieve

Alongside the improvements made through BSIP funding, a number of other initiatives are being committed to that, whilst not projects and programmes in their own right, are critical to the success of the BSIP. As these are cross-cutting initiatives, they will help deliver against all the objectives of this BSIP.

Management of roadworks and traffic

The Council is committed to engaging with operators of essential and emergency roadworks and changes to traffic management that will affect the operation of bus routes. The current permit scheme will be linked more closely to bus operators with sufficient time to plan and mitigate for disruption, with operators being engaged as the work is proposed and dates agreed. It should be noted that in some instances, such as emergency works, the notification time will be limited. In such instances, the Council will work closely with operators to mitigate the anticipated impacts of disruption.

Planning applications and major developments

The Council will work with operators and developer to ensure that operators are consulted commits to informing operators of major planning applications and will seek to engage with operators on the review

³⁵ Source: Industry estimates of costs

³⁶ Source: Industry estimates of costs

of networks where a major development is likely to provide additional services. The most significant planned redevelopment is in the town centre which includes major developments.

Bus Passenger Charter

We will devise a Passenger Charter which aims to ensure that all bus users are treated fairly and with respect so that good customer relations are maintained and constantly improved.

	Estimated cost per unit	Total number of units	Total cost	Anticipated outcomes
Maintaining roadside information	£10,000 per annum ³⁷	5 years	£300,000	Delivery of programme of works
Maintaining Mobility Hubs	£75,000 per annum ³⁸	5 years	£375,000	
Council staff and resourcing	£500,000 per annum ³⁹	5 years	£2,500,000	

Competition Requirements

We have taken into account the intention of bus operators to cooperate with each other without breaching competition law. Any possible initiatives that may be regarded as anti-competitive by favouring one operator over another will not be pursued.

There is scope across South Essex to better coordinate bus services and create a unified identity. Coordinating timetables along key corridors has proved more challenging in that adjusting times in Southend means adjustments in other towns because most of the routes extend beyond Southend. However, adjustments are possible to more evenly space bus departure times where possible.

³⁷ Source: SBCs own costs

³⁸ Source: SBCs own costs for maintaining the Town Centre Travel Centre

³⁹ Source: SBC estimates of staff time, national insurance and pension contributions of 2 staff, plus up to 2 agency staff for specialist project management and engineering skills

Reporting

Our approach to reporting and monitoring

This BSIP will be a live document, and will be updated as and when necessary to ensure that not only is progress reported, but that there is a continuous process for learning lessons, review, and revising the document to ensure that it remains relevant. The reporting against our targets and indicators will be every 6 months, as required by the National Bus Strategy, reported to the EP in the first instance, before then being posted on the Council's website at www.southend.gov.uk.

Our monitoring will be in accordance with the Department for Transport's guidance "Monitoring and Evaluation Framework for Local Authority Major Schemes" (September 2012) and aims to provide a useful means of demonstrating to others that this BSIP:

- Was delivered effectively and efficiently;
- Has delivered anticipated outcomes;
- Had realised any unintended affects (positive or negative)

The focus for our monitoring and evaluation is on measuring performance, understanding scheme impacts and disseminating this.

The role of the Enhanced Partnership

The EP will be the primary mechanism through which performance against our targets and objectives will be monitored. It is anticipated that, subject to funding from the Department for Transport, the projects, targets, and indicators contained in this BSIP will be incorporated into the EP.

The Draft EP, published alongside this BSIP, gives details on how the EP is anticipated to operate. The EP will constitute the Local Bus Forum, and the Local Bus Board.

The Local Bus Forum will bring together representatives from a wide range of key stakeholder groups to review the progress of the BSIP and EP annually and to give recommendations to the Local Bus Board about the priorities for improving the bus network that it should consider for the following year. This is an advisory body and has no formal decision-making powers.

The Local Bus Board represents all the parties to the Enhanced Partnership. This is the body which will formally make recommendations on the delivery of EPP. The role of the Board will be:

- To set the future aims and objectives of the BSIP, EPP and Enhanced Partnership, including recommending to its constituent organisations changes that should be made;
- To develop and make policy recommendations to Southend-on-Sea Borough Council about planning and priorities for the improvement of the local bus network;
- To develop and make operational recommendations to operators for the improvement of the local bus network;

- To develop recommendations for any variations in the Enhanced Partnership agreement;
- To be a consultee on any changes in policies such as the Local Transport Plan and Local Plan.

The EP will formally review the BSIP annually, making recommendations for changes to the BSIP and potentially the EP from this review.

Timescales

The timescales for the implementation and review of the BSIP and EP is outlined below:

- 31st October 2021: Publication of the BSIP
- 31st March 2022: Publication of the EP
- 1st April 2022: Implementation of the BSIP through the EP
- End of September 2022: Reporting on the progress of the EP in achieving the targets set out in the BSIP (with six monthly reporting undertaken in March and September every year)
- March (2023 and beyond): Annual revision of the BSIP to reflect any changes, including the adoption of a new Local Transport Plan (LTP4).

Overview Table

Name of authority or authorities:	Southend-on-Sea Borough Council
Franchising or Enhanced Partnership (or both):	Enhanced Partnership
Date of publication:	October 2021
Date of next annual update:	October 2022
URL of published report:	To follow

Targets	2018/19	2019/20	Target for 2024/25	Description of how each will be measured (max 50 words)
Journey time reduction on each key corridor	No data	No data	25% reduction	This baseline will be established prior to the introduction of the EP. Punctuality data recorded by operators, particularly reducing peak period delays which currently incur longer journey times due to traffic congestion.
Reliability	No data	No data	15% reduction	This baseline will be established prior to the introduction of the EP. This will be assessed as lost mileage recorded by operators.
Passenger numbers	7440531	7051291	7600000	Number of annual users with supplementary data to show changes at different times of day by season.
Average passenger satisfaction	80% ³	86% ⁴⁰	To be set	Passenger satisfaction surveys to be compatible with those undertaken by Transport Focus.

Delivery – Does your BSIP detail policies to:	Yes/No	Explanation (max 50 words)
Make improvements to bus services and planning		
<i>More frequent and reliable services</i>		

⁴⁰ Data for all of Essex

Review service frequency	Yes	Introduce more services especially Monday to Saturday evenings and Sundays to support evening economy.
Increase bus priority measures	Yes	Road space constrained but new measures proposed including greater priority at traffic signal junctions.
Increase demand responsive services	Yes	To be considered for train-to-home services from stations as an alternative to conventional services.
Consideration of bus rapid transport networks	No	Stronger core services to be developed but BRT corridors not possible.
<i>Improvements to planning / integration with other modes</i>		
Integrate services with other transport modes	Yes	Improved links to rail stations through Mobility Hubs and Mini Hubs, cycle parking and defined walking routes to bus stops.
Simplify services	Yes	Renummer routes where required for simplicity and produce joint publicity with south Essex
Review socially necessary services	Yes	None at present but to be considered if subsidy is made available
Invest in Superbus networks	No	Not appropriate
<i>Improvements to fares and ticketing</i>		
Lower fares	Yes	Mainly season tickets but also a trial of a £1.50 flat fare
Simplify fares	Yes	Trialling of a £1.50 flat fare
Integrate ticketing between operators and transport	Yes	Building on Octopus functions to extend range of multi-operator tickets and then local rail services.
Make improvements to bus passenger experience		
<i>Higher spec buses</i>		
Invest in improved bus specifications	Yes	Newer fleet profiles
Invest in accessible and inclusive bus services	Yes	Installation of audio-visual announcements of stops on buses. Improved waiting facilities at bus stops.
Protect personal safety of bus passengers	Yes	Improved waiting environment at bus stops including CCTV where possible plus well lit walking routes to bus stops
Improve buses for tourists	Yes	Simple fares and payment, especially

		summer services for visitors.
Invest in decarbonisation	Yes	Learning from alternative fuel trials by Arriva and First to cascade to Southend
<i>Improvements to passenger engagement</i>		
Passenger charter	Yes	Partnership with bus users
Strengthen network identity	Yes	Simplification with South Essex identity and branding (most buses operate beyond Southend alone)
Improve bus information	Yes	Coordinate publicity and marketing across all operators in South Essex and Southend for unified multi-media outputs.
Other		
Other	Yes	Establishing a Local Bus Forum to include Southend Area Bus Users' Group to recommend improvements to the Enhanced Partnership's Local Bus Board.

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Support from operators

Forthcoming.

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Appendix A – Detailed Action Plan

Attached as PDF file

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