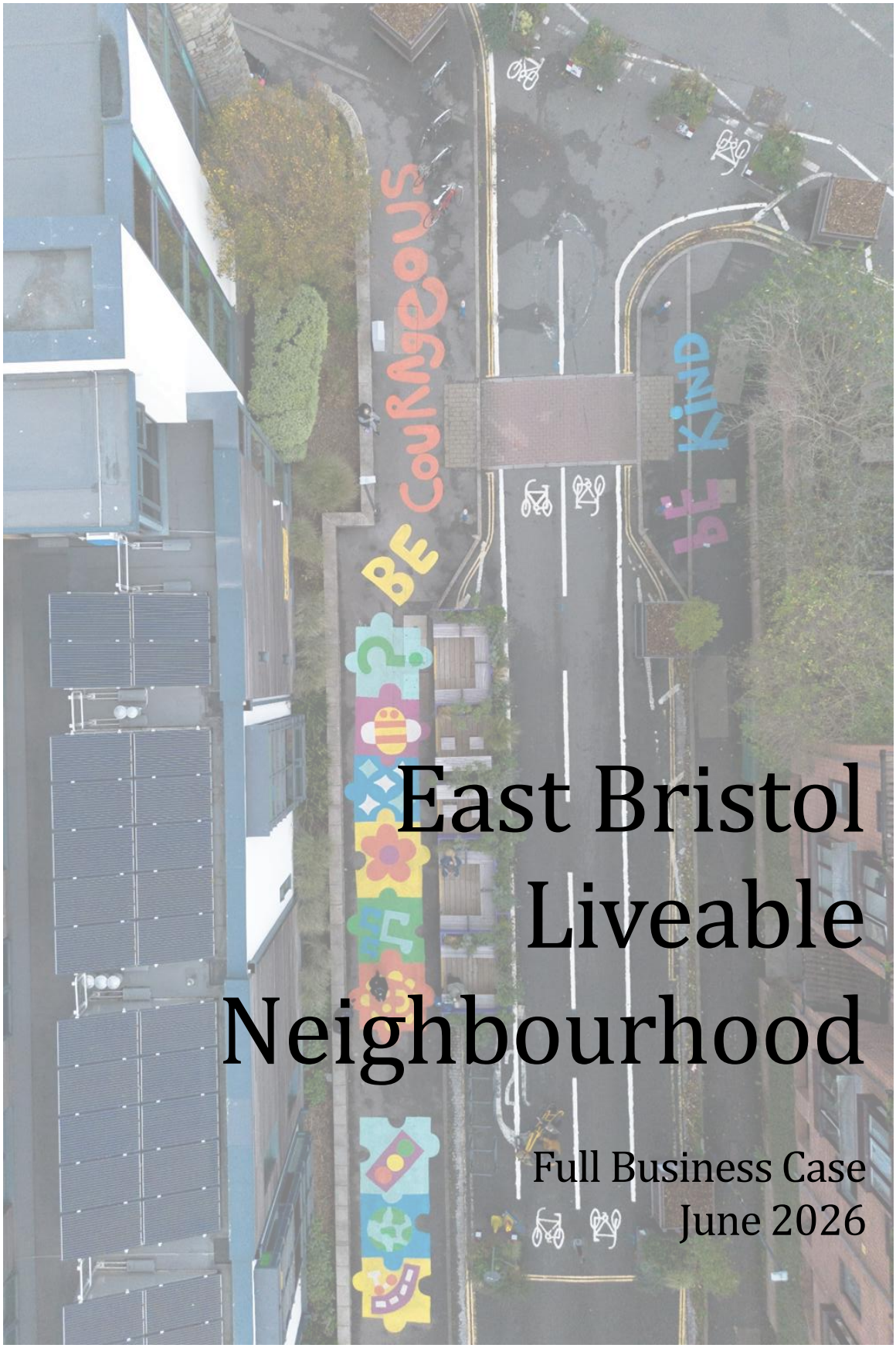


# East Bristol Liveable Neighbourhood

Full Business Case
June 2026

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# Executive Summary

**Strategic Case**

The improvements outlined in this Business Case are linked to policy and strategic aims including:

- Bristol Mini Holland Feasibility Study – the East Bristol Liveable Neighbourhood (EBLN) project sits within the Mini Holland area.
- Temple Quarter Enterprise Zone (TQEZ) and St Philip's Marsh - with a new university campus, 10,000 new homes, 22,000 new jobs with a focus on digital and creative industries. Major investment has been made in infrastructure for sustainable transport modes.
- Silverthorne Lane development near the Feeder Canal – providing hundreds of homes and a secondary school, together with a mix of student accommodation, commercial and academic functions to complement the new Temple Quarter university campus.
- The project area incorporates a key walking zone and priority cycling route in the Local Cycling and Walking Infrastructure Plan, demonstrating its value as a priority for walking, wheeling, and cycling improvements.

The project is compliant with, and delivers on, local policy including the Bristol Transport Strategy and Joint Local Transport Plan 2019-2036. Both strategic documents highlight the need for a transformational sustainable change to the transport network.

The improvements proposed within this FBC will support and integrate with the schemes and policy described above, supporting shared strategic goals for both Bristol City Council (BCC) and the West of England Combined Authority (WECA).

**Economic Case**

The EBLN scheme represents a comprehensive transformation of the urban environment focused on improving active travel infrastructure, enhancing public spaces, and reducing traffic in residential areas. The economic appraisal has calculated a Benefit-Cost Ratio (BCR) of **4.33** which, considered alongside qualitatively assessed impacts, is indicative of **"very high" value for money** under the Department for Transport's framework.

The EBLN trial data monitoring period began on the 14th April 2025, when most of the measures had been installed, and it ran until mid-October 2025. Trial measures included the following:

- Reallocation of road space for the benefit of pedestrians and cyclists;
- Closing roads to motorised through traffic using modal filters including traffic filters and bus gates. The trial scheme implemented a total of 3 bus gates and 18 traffic filters; and
- Extensive temporary greening including 4 pocket parks and 82 planters.

Alongside the trial, 15 cycle hangars were delivered (and an additional 5 were delivered in the area by another citywide project). A cultural programme was also delivered, which included large surface public artwork and the 'activation' of public realm areas.

If it is decided to make the scheme permanent, this will enable improvements such as:

- Optimising road space reallocation (e.g. junction changes that could not be delivered during the trial phase).

- Installing permanent infrastructure to maximise benefits (e.g. accessibility enhancements, including measures suggested by the West of England Centre for Inclusive Living as part of their audit of the trial scheme, such as more dropped kerbs, tactile paving at crossing points and seating) and eliminate issues that are inherent with temporary infrastructure (e.g. planters being movable, motorists sometimes physically-but-illegally being able to drive on pavements to get around planters).
- Permanent planting (trees and other permanent planting; noting that the current temporary planters would not be a feature of the final scheme), and associated long-term benefits.
- Other enhanced and additional public realm provision (e.g. improved street lighting).

The EBLN scheme is a transformative investment designed to create safer, more attractive streets and promote sustainable travel choices. By prioritising walking, cycling, and improved public transport, the scheme delivers wide-ranging benefits that extend beyond transport efficiency. These include healthier communities through increased physical activity, enhanced public realm and journey quality, and environmental gains such as reduced emissions and noise.

The economic appraisal, conducted in accordance with DfT's Transport Analysis Guidance and the HM Treasury Green Book, shows total benefits of £34.7 million against costs of £8.0 million, yielding a Net Present Value of £26.7 million over a 40-year appraisal period. The majority of benefits derive from improved journey quality (47%) and health impacts (49%), with additional benefits from marginal externalities.

Sensitivity tests examining variations in the appraisal period and using the Small-Scale Appraisal Toolkit (SSAT) for bus and highway impacts produced a range of BCRs. For a 20-year appraisal period, the BCR remains above 2.0, demonstrating high value for money and a robust economic case. When assessed using Transport for Greater Manchester's Programme Entry Appraisal Toolkit (PEAT), which better captures public realm benefits, the BCR increases significantly to between 6.02 and 7.91, depending on growth assumptions.

The scheme delivers significant non-monetised benefits, including improved community cohesion, reduced severance, enhanced security, and better access to services. These particularly benefit vulnerable groups including children, elderly residents, and those from deprived neighbourhoods. While some minor adverse impacts are noted for business users and transport providers, these are substantially outweighed by benefits to active travel users and the wider community. There is an overall net positive in non-monetised benefits.

Capital expenditure (CapEx) for the permanent EBLN scheme totals £10.2 million and covers all active travel and public realm measures, including construction works, cycle hangars, enforcement cameras, Vivacity cameras, and cultural programme delivery. Professional services costs include surveys, consultant engagement, safety audits, and post-project monitoring, while adjusted costs account for inflation, contingencies, and risk allowances. Construction represents the largest share of CapEx, followed by professional services. Operating expenses (OpEx), which cover ongoing maintenance such as vegetation management, gritting, signage upkeep, and enforcement camera costs, amount to £948,750 over 40 years.

**Commercial Case**

Procurement will be undertaken through an existing Highway Construction Framework, which provides for flexibility for smaller and larger tenders. All measures are planned to be delivered under Lot 6.

The project will be delivered by Bristol City Council's Transport Delivery Team, which has experience in delivering a range of infrastructure projects. Detailed information about the project structure is available in the Management Case section of the FBC.

**Management Case**

Political oversight: Chair of Transport and Connectivity Committee

Project Sponsor: Head of City Transport

Senior Responsible Officer: Liveable Neighbourhoods Programme Manager

Project Manager: Senior Project Manager (City Transport)

**Key Milestones**

Milestones for the project (as of 30/04/2026) are as follows.

Please note that WECA's FBC approval date is yet to be confirmed by WECA, that construction is of course subject to a decision to make the scheme permanent, and that all dates are subject to change.

| | | |
|---|---|---|
| 1 | OBC approved | 04/01/2024 |
| 2 | Majority installation of trial scheme | 11/04/2025 |
| 3 | Full installation of trial scheme | 28/07/2025 |
| 4 | Public engagement completed | 07/11/2025 |
| 5 | Trial scheme reporting completed | 08/12/2025 |
| 6 | FBC developed | 08/04/2026 |
| 7 | FBC approved by BCC | 09/07/2026 |
| 8 | FBC approved by WECA | 07/09/2026 |
| 9 | Construction start | 02/03/2027 |
| 10 | Construction end | 04/01/2028 |
| 11 | Project closure (including retention) | 12/01/2029 |

**Key Risks**

**Appendix I** provides the full details of the Quantified Cost Risk Assessment (QCRA) process which this project has undertaken to establish a final risk register and a contingency budget. Out of the 23 items that have been identified with high-risk priority, 20 have been lowered to low or medium risk priority after mitigations. The three remaining high priority risks relate to political acceptance and the likely performance of the Benefits and Costs Ratio of the scheme.

# 1 Strategic Case

## 1.1 Introduction

The Strategic Case puts forward the project's case for change and strategic fit, alongside additional supporting information. Transport and non-transport interventions are proposed to promote walking, wheeling and cycling, otherwise known as 'active travel', delivering positive environmental, economic, and social outcomes in the project area and wider east of Bristol.

The full structure is as follows:

- Project Background
- Project Objectives
- Constraints and Interdependencies
- Strategic Context
- Strategic Fit
- Case for Change
- Case Studies
- Opportunities and barriers to walking, wheeling, and cycling
- Options development and appraisal
- Full Scheme Project Scope
- Benefits and Disbenefits

## 1.2 Project Background

Bristol City Council has delivered the East Bristol Liveable Neighbourhood (EBLN) trial scheme, the first of its kind in the city. Elements were first introduced in April 2024, with monitoring concluding in mid-October 2025. The trial area encompasses Barton Hill and parts of Redfield and St George, south of Church Road. The full scheme area is outlined in **Figure 1-1** below.

BCC has an objective of reducing personal car miles by 40 per cent by 2030 to meet climate targets. Liveable Neighbourhoods are key to achieving elements of Bristol's transport, health and sustainability targets, as well as the realisation of Bristol's longer-term Transport Strategy.

Bristol's strong, engaged, and diverse communities are what make the city an attractive place to live, work and study. While all of Bristol's neighbourhoods are places of pride for the communities they serve, we know there is more that can be done to better meet the needs of our residents and respond to challenges we face as a city both now and in the future.

Liveable Neighbourhood schemes aim to create safe, healthy, inclusive, and attractive places where everyone can breathe clean air, have access to green spaces, and feel a part of a community. As well as prioritising community wellbeing over through-traffic, these schemes are set out to encourage sustainable travel by making it easier to walk, wheel (such as using a wheelchair or mobility scooter), cycle or use public transport.

Stakeholder engagement and data collection prior to the trial scheme indicated that the car-dominated environment poses a significant barrier to achieving sustainable travel within the area.

Following a successful 6-month trial, BCC has prepared this Full Business Case (FBC) to secure funding to make the EBLN scheme permanent, targeted to commence early 2027. The proposed enhancements to walking, wheeling and cycling infrastructure are designed to facilitate safe and sustainable travel, aligning with Bristol's net zero objectives. Funding for this initiative is provided through the West of England City Region Sustainable Transport Settlement (CRSTS).


Figure 1-1: Geographical scope

## 1.3 Project Objectives

Workshops were held in January 2022 to refine the project objectives for Liveable Neighbourhoods and for City Region Sustainable Transport Settlement (CRSTS) projects and make them specific to the local context and needs. The following objectives were agreed for East Bristol Liveable Neighbourhood:

- Reduce and slow local starting and finishing trips and remove through traffic
- Increase physical activity through walking, wheeling, and cycling
- Reduce inequalities in residents' abilities to access walking, cycling and sustainable transport options
- Improve connections to green spaces, particularly for areas of high deprivation
- Improve satisfaction and sense of belonging with the local area through reduced social isolation and improved local environment
- Increase walking, wheeling, and cycling trips to local high streets to support local businesses
- Increase the tree canopy in areas with a high HVI score
- Have a neutral impact in the long-term on the negative impacts of traffic in the neighbourhood such as congestion and environmental impacts
- Improve perceptions of safety for cyclists and pedestrians in the project area

In addition to the transport and environmental improvements to the local areas, there are further objectives to minimise impact on neighbouring communities, in respect of the following:

- Minimise impact on traffic congestion on the main arterial and radial routes passing through the project area;

- Minimise impact on boundary roads and neighbouring communities due to displaced traffic; and
- Bus service journey times and reliability.

As the East Bristol Liveable Neighbourhoods is a pilot scheme for Bristol, specific Management Case objectives have been identified as such:

- To create a delivery model for Liveable Neighbourhoods in Bristol;
- To document lessons learnt and impacts to build evidence base; and
- To develop an effective stakeholder engagement model for Liveable Neighbourhoods – resulting in schemes that meet the needs of the community and that the community is supportive of and invested in.

### 1.3.1 Theory of Change and Logic Model

Logic models have been developed which show the Theory of Change and benefits for a number of Liveable Neighbourhood interventions under consideration as part of the options development and appraisal. These can be found in **Appendix F**, as part of the full Monitoring and Evaluation Plan.

A summary logic map, found below in **Figure 1-2**, has been produced for the indicative permanent scheme, outlining the rationale for change and linking project interventions, short-term, medium-term and long-term benefits.

Further detail on Theory of Change and expected outcomes, including plans for assessment of the project's success in achieving benefits and minimising disbenefits following delivery, can be found in the Monitoring and Evaluation Plan.

## Rationale for Change

**Context and Rationale**

- Pre-intervention there were issues with high traffic volumes including fast cars which has led to people feeling unsafe walking and cycling in the project area, causing low physical activity. Neighbourhoods within the project area have much lower levels of car ownership and there is a lack of access to sustainable travel options which are comfortable and safe.
- Without intervention there are spaces which are not accessible or safe however, changes to vehicle volume creates concern around business footfall
- Pre-intervention there is minimal green space and an overall lack of connection to current public greenspaces which mainly impacts residents living in areas of high deprivation, who are less likely to have access to private greenspace. Impacts of interventions should be measured in terms of the negative impacts of traffic.

## Objectives

**Objectives**

- To overall improve sustainable travel around the project area by reducing traffic and vehicle speeds, improving safety and reducing collisions which will ultimately also improve people's health
- Improving the connectivity of people and places by providing safe, attractive and comfortable sustainable transport infrastructure within a walkable distance of their homes which should resort in better community spaces and increased footfall on the high street
- Improve the air quality and urban greening factor within the project area

## Activities, Inputs and Outputs

**Activities**

- Liveable neighbourhood design and delivery – improved public realm, improved walking and cycling environment, and implementation of modal filters to reduce rat running
- Community, stakeholder engagement and behaviour change activities

**Inputs**

- BCC staff time
- Consultant support
- Grant Funding
- Community Champions
- Learning from EBLN pilot

**Outputs**

Modal filters, both at the edge of residential areas and within them.
Within the project area:

- New crossings
- Low traffic speed and volume roads
- New places to rest
- New areas of planting

- Safe, attractive and comfortable active travel connections to local public greenspace for all residents including in Lawrence Hill and Barton Hill
- Reduce number of collisions involving cyclists and pedestrians in the project area.

## Outcomes and Impacts

**Short term**

- Reduced traffic on internal roads
- Slower Traffic on internal roads
- Streets are peaceful with little noise from traffic
- Percentage of residents within 10mins walk of new sustainable transport infrastructure
- Increased bus patronage
- Neutral net impact on traffic volume on internal and boundary roads
- Net neutral impact on journey times across scheme
- Neutral impact on air quality ((NOX and PM where available) across the EBLN area
- Improve perception of safety for cyclists and pedestrians in the project area

**Medium term**

- Increased walking and cycling trips in the project area
- Decrease in people who never walk or cycle
- Improved journey quality for sustainable modes
- Improved equity in access to walking cycling and sustainable transport options
- Residents in project area access local public greenspaces more regularly than pre-intervention.
- Residents from Lawrence Hill and Barton Hill neighbourhoods access local public greenspaces more regularly than pre-intervention.
- Reduction in social isolation across all residents.
- Improved sense of belonging across all residents.
- Improved satisfaction with the area across all residents.
- Increased walking and cycling trips on Church Rd and Avonvale Rd / Marsh Lane.
- Neutral impact on business revenue.
- Increase in urban greening factor.

**Long Term**

- Increase in walking and cycling
- Decrease in noise, greenhouse gas emissions and improvement in air quality
- Health and wellbeing benefits
- Indirect health benefits – reduced absenteeism, productivity, savings to the NHS etc.
- Accessibility for a greater number – equity.
- Thriving high streets – reduced vacancy rates, increased rental values.

Figure 1-2: EBLN Permanent Scheme Logic Model

## 1.4 Constraints and Interdependencies

With the population and economy of West of England region growing rapidly, there is a high expectation that transport need by local residents, workers and businesses will increase, placing unforeseen demand on the already constrained local transport network. This would not only harm the region's economic growth, but also heavily impact on the region's ability to reach its sustainable transport and decarbonisation goals. The key developments around the East Bristol Liveable Neighbourhood includes:

- Temple Quarter Enterprise Zone (TQEZ) and St Philip's Marsh - with a new university campus, 10,000 new homes, 22,000 new jobs with a focus on digital and creative industries. Major investment has been made in infrastructure for sustainable transport modes; and
- Silverthorne Lane development near the Feeder Canal – providing hundreds of homes and a secondary school, together with a mix of student accommodation, commercial and academic functions to complement the new Temple Quarter university campus.

The Covid-19 pandemic changed the way that people travel in east Bristol. Starting in 2020, more people began walking, wheeling, and cycling, and switched from public transport i.e., bus and train, to private transport i.e., private cars, walking, wheeling, and cycling. Although these trends have changed course following the pandemic, with some modes returning to roughly pre-pandemic levels, the continued prevalence of flexible hours and home working has increased travel demands in local high streets and neighbourhoods, putting stress on both highway and active travel networks. An improved understanding of post-pandemic travel patterns is continually emerging, and current travel patterns indicate a continued rise in traffic.

To make sure the East Bristol Liveable Neighbourhood achieves its full potential by being relevant to the new ways that people travel, the project will need to provide good links with new developments and sustainable transport projects facilitate positive behavioural change and to help people to switch from private cars to all kinds of sustainable transport.

This project should therefore be developed to complement other sustainable transport projects in Bristol and the wider West of England area, including:

- Bristol Mini-Holland Feasibility Study – the EBLN project sits within the Mini Holland area;
- West of England Local Cycling & Walking Infrastructure Plan (LCWIP) – which identifies Wesley Way as a key route for investment;
- Beaufort Road StreetSpace – which proposed to change part of Beaufort Road to one way for motorised traffic and keeping three main key sections two way for residence access;
- MetroWest Phase 1 with a new service between Severn Beach and Bath Spa and Phase 2 with the reopening of the Henbury line service – both services to call at Lawrence Hill Station;
- Bristol Clean Air Zone – which will lead to more vehicles cutting through the residential area due to re-assign; and
- Bristol School Streets – which will improve road safety, encourage walking, wheeling, cycling and scooting to and from school and improve the air quality and environment outside of schools.
- Lawrence Hill Station accessibility works undertaken by Network Rail that will create step-free access to all platforms.

During the early stage of the project, Bristol City Council identified a long-list of individual options to help steer the direction of the project prior to community engagement. These options include a wide range of interventions from active travel, traffic calming to public realm improvements and guided project development in the absence, at the time, of a local adopted definition of what a Liveable

Neighbourhood is. A significant constraint on these options proved to be the narrow streets of the EBLN area, including on Church Road, and as such an approach to traffic reduction was considered the most effective improvement in line with LTN 1/20 government guidance.

## 1.5 Strategic Context

### 1.5.1 Socioeconomic context

#### *1.5.1.1 Local health issues*

Transport and active travel are linked to health outcomes through physical activity. This benefit is well understood and evidenced[1], and is embedded in Transport Appraisal Guidance (TAG) for appraising active travel schemes. Widespread changes in transport behaviour which reduce emissions can also impact on air quality by reducing pollutants that can negatively impact health and mortality[2]. There is also evidence of mental health benefits of walking[3].

There are indications of health issues in the neighbourhood compared to the Bristol average, which indicate a need for increased physical activity to improve health and life expectancy. These include high levels of premature mortality from cardiovascular disease, and overweight and obesity rates being higher in some parts of the project area. Childhood obesity is a particular issue in Lawrence Hill and St. George West. Approximately half of the project area is within an air quality management area due to exceedances of Nitrogen Dioxide annual and hourly objectives. The co-discover engagement survey also highlights poor air quality and noise to be of major concerns within the project area (**Figure 1-3**).

High traffic volumes also impact on social interactions, as demonstrated by a 1969 study which was replicated in Bristol in 2011[4]. It compared three streets which varied from low traffic to high traffic and found that residents on lighter traffic streets had nigher numbers of acquaintances and friends on the street. Reasons for this included making activities which facilitated social interaction more attractive (such as play and gardening), making it easier to cross the street, increased lingering, and improved safety. Increased social interactions facilitated by lower traffic volumes has implications for reducing social isolation and improving mental health and wellbeing.

[1] Taino, M. Woodcock, J. et al. (2017) SO17859 Research into valuing health impacts in Transport Appraisal. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/639211/research-into-valuing-health-impacts-in-transport-appraisal.pdf

[2] Air Quality Consultants (2017) Health Impacts of Air Pollution in Bristol. (https://www.bristol.gov.uk/documents/20182/32675/Health+Impacts+of+Air+Pollution+in+Bristol+-+April+2014/4df2fce5-e2fc-4c22-b5c7-5e7a5ae56701

[3] Public Health England (2018) Cycling and walking for individual and population health benefits: A rapid evidence review for health and car system decision-makers. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/757756/Cycling_and_walking_for_individual_and_population_health_benefits.pdf

[4] Hart, J. and Parkhurst, G. (2011) Driven to excess: Impacts of motor vehicles on the quality of life of residents of three streets in Bristol UK. World Transport, Policy & Practice 17.2 12-30.

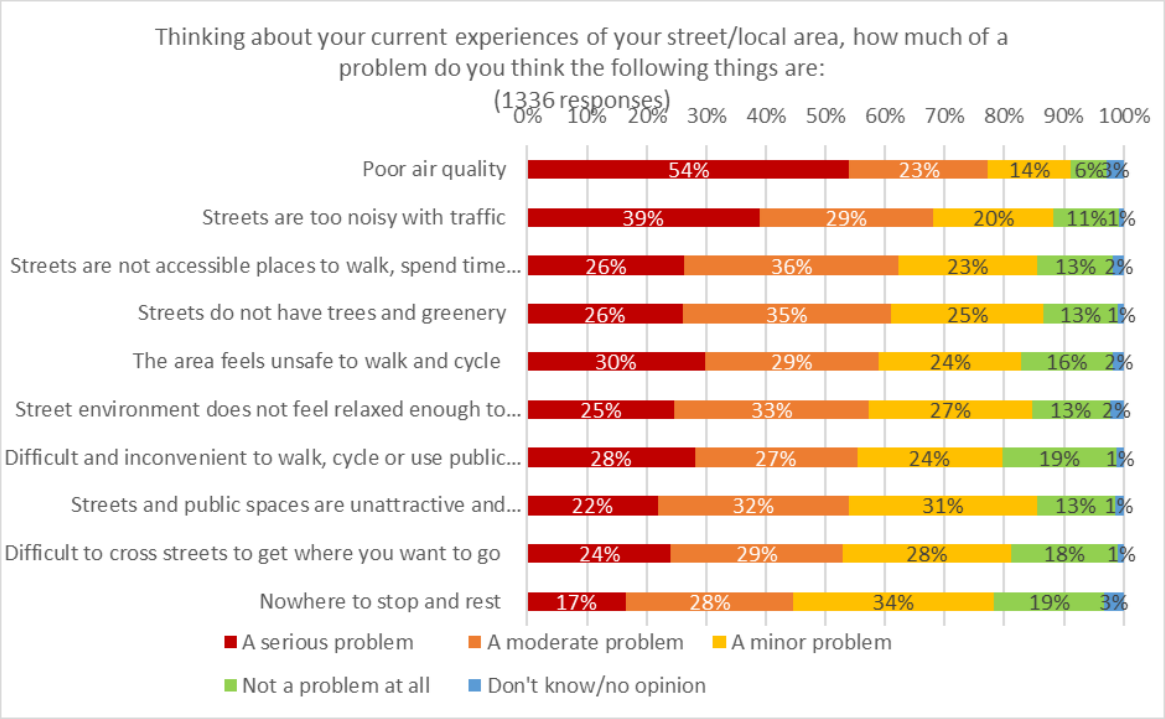


**Figure 1-3: Co-discover engagement survey results: Thinking about your current experiences of your street/local area, how much of a problem do you think the following things are**

### *1.5.1.2 Noise and air pollution*

Exposure to noise from road traffic and railways is associated with an increased risk of dementia, according to research performed in Denmark[5]. The study, involving 2 million adults and conducted over a decade, concluded that people living in areas with high transport noise face a higher risk of dementia, especially Alzheimer's disease. After taking account of potentially influential factors related to residents and their neighbourhoods, the study concluded that as many as 1,216 out of the 8,475 cases of dementia registered in Denmark in 2017 could be attributed to transport noise.

Previous research has linked air pollution to dementia risk, but in this study, researchers found a separate connection between transport noise and dementia. Possible explanations for why noise may affect health include the increase in stress and sleep disturbance, which lead to heart disease, changes in the immune system, and inflammation, all of which are seen as being linked to the onset of dementia.

### *1.5.1.3 Role of green spaces in the community*

A key objective of EBLN is to ensure equitable access to green spaces, especially by walking, wheeling or cycling. This is important to ensure One City and Council goals around Health and Wellbeing are being met, giving residents access to a free public amenity with the potential to provide the requisite amount of 'moderate' exercise per day. Green space has also been proven to have mental health benefits. Families with small children, or residents lacking access to outdoor space, are in need of these essential open spaces for outdoor recreation, to give children room to play, to give parents space to relax, and to allow for social situations, all of which beneficial to mental and physical health.

[5] Transport noise linked to increased risk of dementia, study finds | Dementia | The Guardian

#### *1.5.1.4 Deprivation and equalities issues*

There are pockets of significant deprivation within the project boundaries, particularly to the west which is among the most 10% deprived neighbourhood areas in England. The Equalities Impact Assessment carried out for the project points to the links to deprivation in Bristol and negative outcomes for satisfaction with their local areas as a place to live, day-to-day life affected by fear of crime, satisfaction with parks and open spaces, feeling of belonging to neighbourhood, and life satisfaction. The project area is not an exception, with street litter and air quality and traffic pollution seen as issues across the project area and mixed views of green spaces. There also appears to be health inequalities which are linked, particularly in the Lawrence Hill area, with lower life expectancies. The full Equality Impact Assessment can be found in **Appendix K**.

Transport access can also influence economic deprivation[6] through the ability of people to get to jobs, education, and services and by causing economic stress through the cost of car ownership, with around 40% of jobseekers saying that lack of personal transport or poor public transport is a key barrier preventing them from getting a job[7]. 43% of those in the most deprived areas in Bristol do not own a car, compared to 9% in the least deprived areas. They are also more likely to walk or use the bus[8].

#### *1.5.1.5 Car ownership*

Car owners are the least mobility constrained across social groups, travelling further, which means they can access more opportunities. Low-income households are less likely to have car access and female heads of household, children, younger and older people, black and minority ethnic, and disabled people are disproportionately represented in the lowest income quintile[9].

Car access is lower for Black, Asian and Mixed Ethnicity people than White people[10]. Car access is reduced for young people who are not yet eligible for a licence. Young adults are significantly less likely to hold a licence (28% compared to 80% for all ages) and those over 70 years old are also slightly less likely to hold a licence[11].

The demographic make-up of the project area means that car access is an important issue, with the area's demographic and socio economics factors limiting access to cars in an area with busy roads which can be perceived as unsafe for walking, wheeling, and cycling.

- The western part of the project area has low access to cars.
- Age is a factor within the project area, with a population which trends younger in the west of the area and older in the east.
- There is a high working age population which will need access to jobs.
- The area has high levels of ethnic diversity in the west of the project area.

[6] NatCen Social Research (2019) Transport and inequality: An evidence review for the Department of Transport. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/953951/Transport_and_inequality_report_document.pdf

[7] Pteg (2015) Ticket to Thrive. The role of urban public transport in tackling unemployment

[8] Bristol City Council (2019) Bristol Transport Strategy. https://www.bristol.gov.uk/documents/20182/3641895/Bristol+Transport+Strategy+-+adopted+2019.pdf/383a996e-2219-dbbb-dc75-3a270bfce26c

[9] Foresight, Government Office for Science (2019) Inequalities in Mobility and Access in the UK Transport System. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/784685/future_of_mobility_access.pdf

[10] Department for Transport (2020) Ethnicity facts and figures: Car or van ownership. https://www.ethnicity-facts-figures.service.gov.uk/culture-and-community/transport/car-or-van-ownership/latest

[11] Department for Transport (2021) Driving licence holding and vehicle availability. https://www.gov.uk/government/statistical-data-sets/nts02-driving-licence-holders

Those who cannot afford to have a car or who cannot drive need to have good walking, cycling and public transport options to transform active travel from "a mode of necessity" for some, to a "mode of choice"[12] for all.

The behavioural shift in working from home caused by the Covid-19 pandemic has also had implications for transport and equalities. Higher earners and professional occupations are more likely to be able to work from home[13]. This increases the case for prioritising walking, wheeling, and cycling to ensuring those on lower incomes can access employment to help reduce economic inequalities.

Transport can also make health inequalities worse if it is focussed on cars and private vehicles. The Government Office for Science's report on Inequalities in Mobility and Access in the UK Transport System (2019) found that:

- *"People living in disadvantaged areas tend to live in more hazardous environments, with greater proximity to high volumes of fast-moving traffic and high levels of on-street parking and, as such, they have higher levels of exposure to road traffic risk.*
- *Young people (11–15 years) from disadvantaged areas are more involved in traffic injuries than their counterparts living in other urban areas. The risk is highest on main roads and on residential roads near shops and leisure services.*
- *Traffic-related air pollution is associated with worse pregnancy outcomes and the risk of death and exacerbation of asthma and chronic chest illnesses in children."*

#### *1.5.1.6 Crime*

Crime deprivation is an issue across the project area, with some LSOAs being in the 10% most deprived in England for the Crime Domain. Research into the Waltham Forest low traffic neighbourhood[14] found a 10% decrease in total street crime and a greater than 10% reduction in violence and sexual offences with no indication of displacement to other areas. However, bicycle theft increased.

The solutions identified and implemented, both in trial and permanent form, can address many of the issues of transport, health, economic, and environment deprivation and inequality in the neighbourhood, but only through good stakeholder engagement, strategic location of interventions, continuous review of impacts. Impacts, including a reduction in street crime, may be expected to follow.

#### *1.5.1.7 Heat Resilience*

The Heat Vulnerability Index (HVI) and Keep Bristol Cool mapping tool[15] combine multiple sub-indexes to give an overall level of vulnerability to the impacts of high temperatures by geography. The index factors in age related risk, deprivation and ability to adapt, indoor environment (homes and overheating) and outdoor environment (Urban heat islands/lack of green space).

**Figure 1-4** shows that the project boundary contains areas with a very high HVI score, meaning they are among the most vulnerable locations in Bristol to high temperatures. This is driven by a population with very young residents (ages 0-5), and outdoor exposure factors (land surface

[12] Banister, D. and Hickman, R. (2013). Transport futures: Thinking the unthinkable. Transport Policy, 29, 283-293

[13] Office for National Statistics (2020) Which jobs can be done from home? https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/articles/whichjobscanbedonefromhome/2020-07-21

[14] Goodman, A. and Aldred, R. (2021) "The Impact of Introducing a Low Traffic Neighbourhood on Street Crime, in Waltham Forest, London." Findings, February. https://findingspress.org/article/19414-the-impact-of-introducing-a-low-traffic-neighbourhood-on-street-crime-in-waltham-forest-london

[15] https://bcc.maps.arcgis.com/apps/instant/portfolio/index.html?appid=9bc417a1906545f38ab9f107cbd8051e

temperatures are higher than in other areas of Bristol). Improvements to the public realm, such as planting, tree cover, sustainable urban drainage systems (SUDs) and green space can help to mitigate the risks of heath vulnerability.

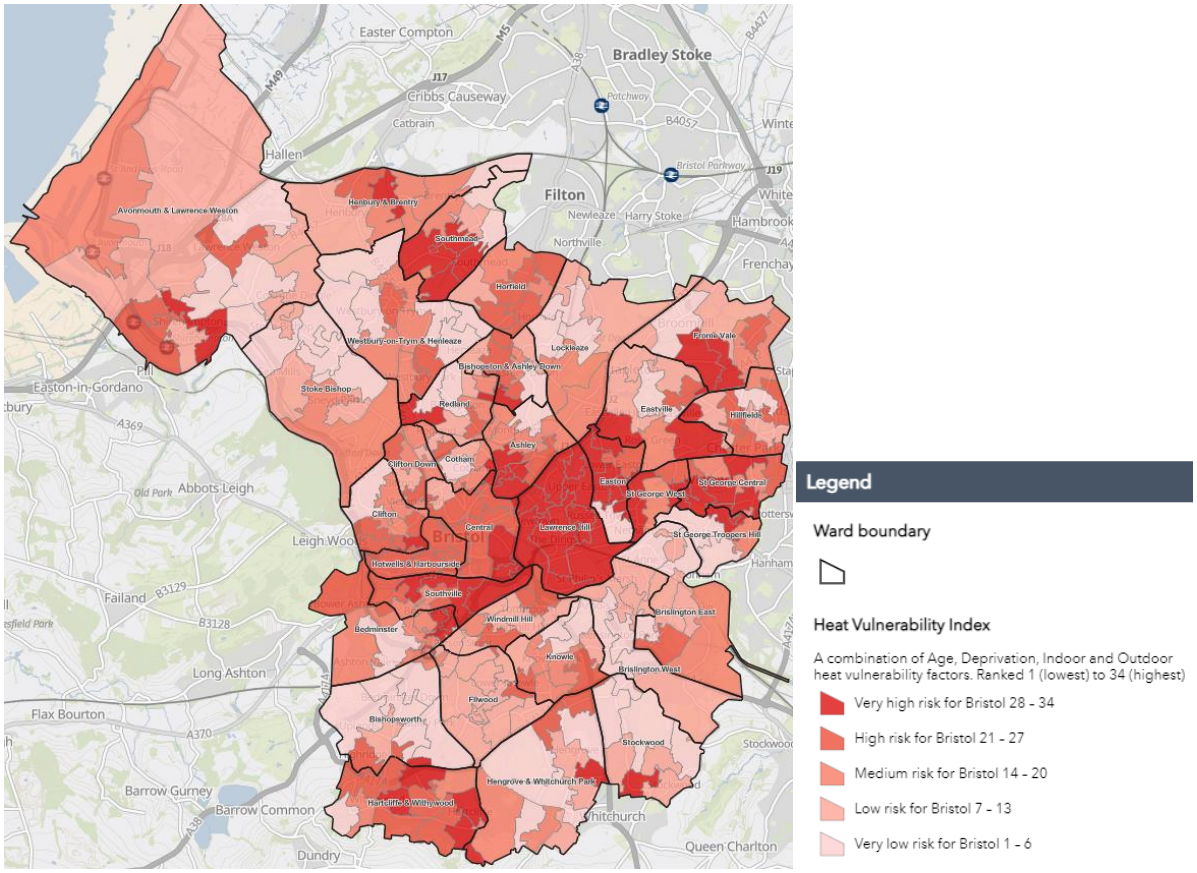


Figure 1-4: Bristol Heat Vulnerability Index

The Bristol One City Climate Strategy aims to double the tree canopy by 2046. The objective is to restore, preserve and enhance the city's natural environment to maximise carbon sequestration in carbon sinks and ensure climate resilience. There are several environmental benefits to improving the tree canopy within the city:

- Trees offset the "heat island" effect of urban centres
- Minimize solar heat gain
- Reduction of dust levels in the air and reduces flood risks
- Provides shade and reduces temperature

#### *1.5.1.8 High Streets*

High Streets are an important consideration in Liveable Neighbourhood schemes. As has been shown consistently in reviews such as the Living Streets commissioned Pedestrian Pound report[16], most recently published in 2024, improvements to walking, wheeling and cycling environments can create area-wide and business specific economic benefits. The report lists the following studies:

- A 2021 study[17] found a strong positive relationship between footfall and retail sales at 9 out of 11 fast food restaurants and 17 out of 23 family restaurants, using mobile phone data in

[16] Living Streets - Pedestrian Pound 3rd Edition
[17] Using Wi-Fi probe requests from mobile phones to quantify the impact of pedestrian flows on retail turnover - ScienceDirect

urban centres across the UK. This is caveated with the fact that socioeconomic profile of an area is also an important factor.

- A 2022 study of five pedestrianised streets in New York[18] found that sales for restaurants and bars were 19% higher than pre-pandemic levels, compared to 29% below on nearby control corridors. The number of restaurants and bars on pedestrianised streets grew by over 10%, compared to a 20% decrease on non-pedestrianised streets.
- A 2022 study[19] showed that shops in pedestrianised areas in 14 cities across Spain were shown to have higher sales compared to non-pedestrianised areas, with the difference more pronounced in small and medium over large cities.
- A 2021 North American literature review[20] looked at impacts of active travel infrastructure on local businesses. Adding or improving pedestrian and cycling facilities, even when road capacity or parking is removed, generally has a statistically positive or non-significant economic impact on adjacent retail and food service businesses.

### 1.5.2 Stakeholder Engagement Strategy

Stakeholder engagement has been ongoing with communities in Barton Hill, Redfield and St George since January 2022, helping to shape and develop the scheme.

Effective engagement is about providing a platform for the community to help shape their local area and address issues affecting their well-being, whether they are connected by geographic location, interest, or affiliation to identify.

The overall goal of the public engagement process is to understand the barriers faced by people in accessing a range of amenities (e.g., employment, education, healthcare), the impacts caused by transport, and to find out how they can be addressed to ensure that all stakeholders (residents, local groups, businesses, and educational institutions) are able to access goods and services in an equitable and sustainable way.

EBLN interventions that prioritise active and sustainable transport options are intended to make them the preferred choice of travel for those able to do so. BCC has engaged with groups representing people with protected characteristics to ensure the issues faced by people in the existing environments, and the impacts of proposed interventions, are well understood.

Please see **Appendix C** for detailed engagement approach as described at the Outline Business Case stage.

#### *1.5.2.1 Pre-engagement*

Citywide consultations were undertaken prior to the inception of the scheme, including:

- **Citizens Assembly** (January 2020), which demonstrated the appetite for transformative neighbourhood improvements with over 90% of the panel supporting the following recommendations:

[18] Streets for Recovery: The Economic Benefits of the NYC Open Streets Program
[19] Street pedestrianization in urban districts: Economic impacts in Spanish cities - ScienceDirect
[20] Economic impacts on local businesses of investments in bicycle and pedestrian infrastructure: a review of the evidence

- *Fundamentally reimagine the places we live so that they are people centred (i.e. create liveable neighbourhoods)*
- *Develop a pilot program to showcase what could be achieved if a citywide approach to being carbon neutral was taken*
- *Empower local communities in the decision-making process to deliver the services and activities that they want to promote healthy lifestyle choices*

- **"Your City our Future"** survey (August - September 2020), which suggested strong support for more 'liveable' and multi-functional neighbourhoods as highlighted by the graph below:

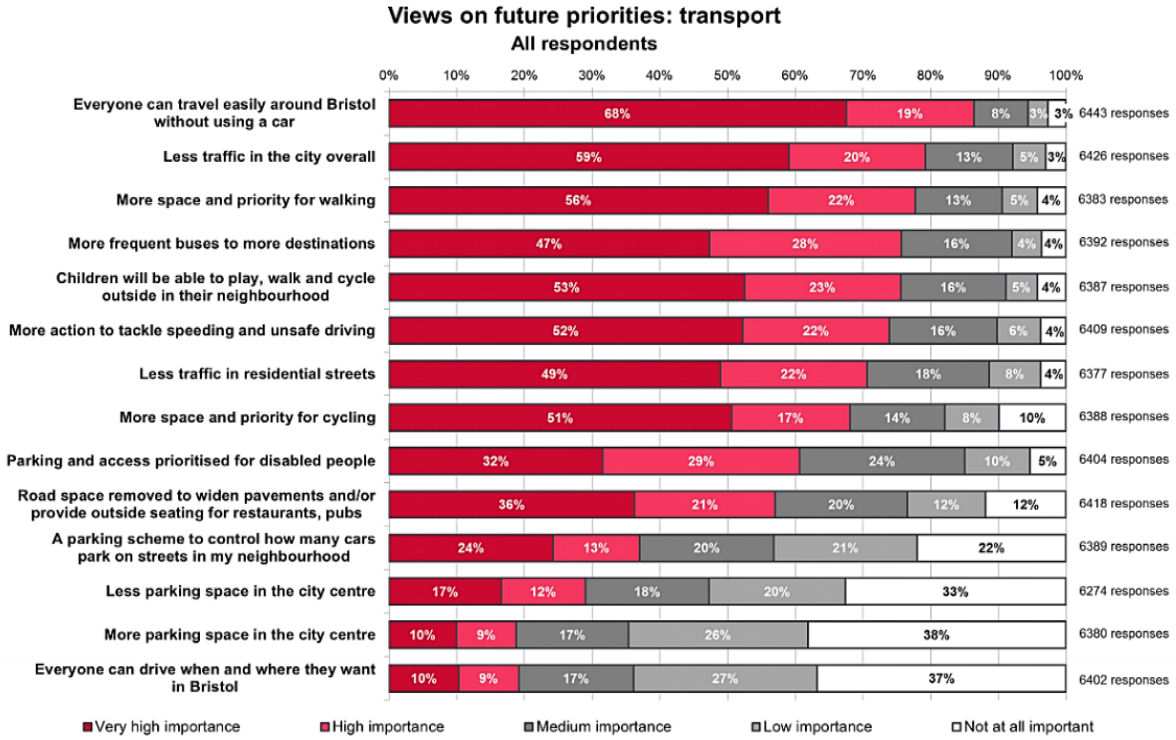


Figure 1-5: "Your City Our Future" transport priorities, 2020

### 1.5.3 Public engagement during scheme development

*Co-Discover*

**January to July 2022:** Understanding what people love and what they would change in their neighbourhood. Mapping the current barriers to a more liveable neighbourhood.

*Co-Develop*

**September 2022 to March 2023:** Gathering detailed community aspirations utilising the design toolkit to help shape the Liveable Neighbourhood.

*Trial scheme information sharing*

**May to June 2023:** Trial scheme information sharing. Sharing the plan, including a map, for the Liveable Neighbourhood that was developed with the community.

*Trial scheme statutory consultation*

**January to February 2024:** Trial scheme statutory consultation. This was the legal process for creating Traffic Regulation Orders to make changes to the highway.

### 1.5.4 Public engagement following implementation

Public engagement following implementation is detailed in section **1.9.3**.

### 1.5.5 Trial scheme overview

Trial measures introduced include:

1. Reallocation of road space for the benefit of pedestrians and cyclists
2. Closing roads to motorised through-traffic using modal filters such as traffic filters and bus gates
3. Extensive temporary greening (planters, pocket parks)

Complementing trial measures, 15 cycle hangars have been provided, alongside cultural programme including large surface artwork and the 'activation' of public realm areas. A range of offers and exemptions have also been delivered. It should be noted that, as a wider strategic matter, the exemptions policy is being reviewed separately to the main EBLN project, and exemptions may change if the scheme is made permanent. The range of exemptions and offers include the following:

- Bus gate exemptions for Blue Badge holders, those with disabled tax class vehicles and professional carers working in residents' homes
- Support for low-income households with a personal travel budget
- First Bus vouchers to encourage sustainable travel sent to all households within EBLN boundary
- Personalised travel planning
- Business adaptation grants

With the trial scheme in place for some time, BCC has conducted assessments informing the decision for EBLN to be made permanent. A key component has been the analysis of traffic and other data found in the EBLN Monitoring Report (**Appendix A**) and public engagement findings, contained in the EBLN Engagement Report (**Appendix B**).

### 1.5.6 Permanent scheme overview

The permanent scheme will deliver improvements not possible during the trial, including street trees, new crossings, junction upgrades and enhanced lighting. These fixed interventions will provide lasting benefits by improving accessibility and safety, addressing the limitations of temporary measures, and creating a robust environment for active travel. For more detail on the benefits of the permanent scheme, please refer to the **Economic Case** and section **1.12** of the Strategic Case, **Benefits and Disbenefits** .

Section **1.9** details the outcomes and changes made to the trial scheme, alongside rationale for continued investment for permanence, with **1.10.2** into **1.11** detailing the planned changes to be made to the permanent scheme.

If the scheme is approved for permanence, a statutory consultation on specific elements of the project dependant on Traffic Regulation Orders (TROs) will be conducted. Whilst existing modal filters are already covered by permanent TROs and will not be included, the consultation will include any proposed modifications to the modal filters, as well as considerations related to parking or the introduction of double yellow lines. BCC also intends to undertake some informal targeted community engagement to inform final layouts for sections of the public realm areas at two locations (Victoria Avenue and Ducie Road). A second programme of public artwork and cultural activities may be delivered by the Arts Development Team following completion of the EBLN project. This is subject to funding being identified and would involve further engagement with communities across the area.

There have been suggestions for additional improvements and measures that could be delivered in and around the EBLN area, which this project would be unable to deliver owing to time, resource and budget constraints. Delivery of such measures could be considered by the City Transport service in due course, based on monitoring findings following delivery of this scheme.

## 1.6 Strategic Fit

Improving access to walking, wheeling, and cycling, as well as health and wellbeing, social equity, and climate change mitigation are key themes at local, regional and national policy levels. The project is well aligned with and responds to these themes as represented in associated strategies, policies and plans.

### 1.6.1 Local policies

The EBLN directly responds to the Bristol One City Goal 35 (and Goal 358). An increase in short walking, wheeling, and cycling journeys benefits residents' health and wellbeing and contributes to improved community resilience, a thriving local economy and reduced transport emissions, resulting in more liveable neighbourhoods.

**Bristol Transport Strategy**: Liveable Neighbourhoods align to the following strategic outcomes:

- 5 – Walking to be safe, pleasant, accessible and the first choice for local journeys and combined with public transport for longer journeys
- 6 – Cycling to be safe, simple, accessible and convenient, either as an option for the whole journey or as part of a journey combined with public transport
- 8 – More people making sustainable and healthy transport choices by improving engagement with communities, schools and businesses
- 12 – Transport to support and enhance local centres and high streets by recognising that they provide key services and facilities for citizens to access and can also be transport corridors and destination points for visitors
- 13 – Reduced impact of motorised traffic on local centres creating better public spaces that are more accessible by walking, cycling and reliable public transport
- 14 – Key facilities and services increasingly accessible to all citizens without the need to rely on a car
- 15 – Safer places to live by working with citizens to design and deliver measures to improve movement and liveability in our neighbourhoods

**Bristol One City Climate Strategy**:

Bristol is committed to becoming carbon neutral and climate resilient by 2030. The strategy emphasises the role of transport to achieve this goal through switching to significantly more walking, wheeling, cycling, and zero carbon public transport modes.

**Bristol Corporate Strategy (2022-2027):**

- Environment and Sustainability priorities are Carbon Neutral and Climate Resilience by investing in infrastructure and systems to cool the city
- Health and Wellbeing has Mental Health and Wellbeing as a priority, which includes co-developing community and cultural assets that reduce inequalities and build resilience
- Homes and Communities priorities includes Community Participation
- Transport and Connectivity priorities includes Safe and Active Travel.

There are several local spatial strategies and plans which could have interdependencies or impacts on the project:

- **Bristol City Centre Design and Delivery Plan** – Includes transport planning for the future of the City Centre, which may be a destination for journeys from the project area
- **Spatial Development Strategy & Local Plan** – Requires increased density and new approaches to development design to encourage low impact sustainable modes
- **River Avon Flood Strategy** – The River Avon is on the project boundary and there may be neighbourhood-level engagement and interventions
- **St. Phillips regeneration and Temple Quarter** – Neighbouring the project area which could have transport impacts
- **Bristol One City Plan –** Liveable Neighbourhoods align to over 120 goals in the Bristol One City Plan

### 1.6.2 Emerging Plans and Strategies

**Road Safety Strategy**

Bristol City Council committed to a 'vision zero' approach road safety in July 2023, setting a target to end deaths and serious injuries on our roads by 2030. A new Road Safety Strategy, currently in development, will set out our approach to work towards this bold and important ambition. This won't just aim to prevent collisions and protect lives but will also seek to make our roads feel safer, especially for those most at risk, such as people who walk, wheel, and cycle, to enable more people to take advantage of these healthy and sustainable modes. Reducing through-traffic in residential streets via modal filters is well proven to significantly improve safety and feeling of safety within those areas, without negatively impacting safety on nearby roads. These are therefore a key intervention, as part of wider work, to improve safety for all and achieve vision zero.

**Bristol Transport Infrastructure Plan**

The project seeks to deliver an adopted Plan for 2025-2035 setting out the key infrastructure changes required for the transport network to meet the objectives set out in the Bristol Transport Strategy. These objectives are:

- Unlocking housing, jobs and regeneration sites
- Reducing inequalities
- Improving public health
- Creating better places
- Providing more reliable journeys
- Reducing our impact on the environment and improving our resilience to climate change

**Bristol Kerbside Strategy**

The project will deliver the following benefits:

- A strategy for better management of the kerbside space.
- Improved kerbside data and monitoring.
- Help to communicate our plans and ambitions in this area with the public and key stakeholders.
- Attract funding for new projects e.g. tree planting initiatives.

**Bristol Transport Investment Strategy**

The project will deliver the following benefits:

- Overview of City Transports net revenue position.
- A forecast of the Transport Team's net revenue position under different scenarios e.g. pricing strategies, infrastructure changes, new income streams (RPS, WPPL).
- An investment strategy for any surplus revenue e.g. bus service subsidy, cycle training.

**Bristol Local Plan refresh**

The emerging Bristol Local Plan is expected to be adopted in 2026, following consultation and independent examination previously undertaken.

### 1.6.3 Regional and National policies

The funding provided by the City Region Sustainable Transport Settlements (CRSTS) guides objectives for the project. There are also several national and regional strategies that the project is informed by and aligns to, as noted below.

**National:**

- Cycling and Walking Infrastructure Strategy 2 (CWIS2);
- Gear Change and LTN 1/20;
- DfT Decarbonising Transport: A Better, Greener Britain;
- National Planning Policy Framework (NPPF); and
- Inclusive Mobility: A Guide to Best Practice on Access to Pedestrian and Transport Infrastructure.

The East Bristol Liveable Neighbourhood permanent scheme also responds to the targets set in the January 2026 DfT Road Safety Strategy, aiming for a:

- 65% reduction in the number of people killed or seriously injured on roads in Great Britain by 2035, using a 2022-2024 baseline
- 70% reduction in the number of children (under 16) killed or seriously injured on roads in Great Britain by 2035, using a 2022-2024 baseline

**Regional:**

- West of England Local Cycling and Walking Infrastructure Plan;
- West of England Bus Strategy;
- West of England Decarbonisation Strategy;
- West of England Industrial Strategy;
- West of England Transport Vision (in draft);
- West of England Growth Strategy;
- West of England Economic Plan; and

- Joint Local Transport Plan 4 (JLTP4).

The project also responds to a number of United Nations Sustainable Development Goals (SDGs) detailed below:

- SDG3: Good health and wellbeing;
- SDG6: Clean water and sanitation;
- SDG9: Industry, innovation and infrastructure;
- SDG10: Reduced inequalities;
- SDG11: Sustainable cities and communities;
- SDG13: Climate action;
- SDG15: Life on land; and
- SDG16: Peace, justice and strong institutions.

## 1.7 Case for Change

The Case for Change explores the neighbourhood, city, and regional needs and opportunities that provide the rationale for intervention. A trial period of the project was pursued to help to validate the case for change in a live environment, providing evidence for further investment as well as learning to maximise benefits.

### 1.7.1 Bristol and Regional need

A modal shift away from cars to walking, wheeling, and cycling is needed to meet carbon and climate goals, as well as to address issues with air quality in Bristol and the wider region. Just maintaining current traffic levels in Bristol would require a reduction in the percentage of people commuting by car from 53% today to 43% in 2036 due to population and other growth factors[21]. Carbon emissions from transport currently represent 25% of Bristol's total emissions[22] and 44% of the Combined Authority region[23]. To address the gap between forecast carbon emissions and current goals for 2030, private car mileage would need to be reduced by 40% in the Combined Authority region[24]. While a shift to electric vehicles and other demand management interventions such as parking policies and congestion charging can help reduce carbon emissions and demand, a switch to active travel and public transport is essential.

To drive significant modal switching requires investment in infrastructure and behaviour change programmes which address barriers to active travel. Walking, wheeling, and cycling have many social, economic, and environmental benefits in addition to providing a way to get from A to B. Active travel promotes physical activity, social interaction, and spending with local businesses, while being quieter and less polluting. It is more accessible and inclusive to a wider range of Bristolians than car travel due to its relative affordability, age-friendliness, and other factors. Despite the many benefits, there are perceived and real barriers to individuals taking up or increasing walking, wheeling, and cycling. Addressing these will be key to replacing a significant number of car trips, needed to meet decarbonisation and One City Plan targets.

Motivations for walking include health and fitness, convenience and time compared to other modes, to relax, and to enjoy good weather. Factors that improve the walking experience include

[21] https://www.bristol.gov.uk/documents/20182/3641895/Bristol+Transport+Strategy+-+adopted+2019.pdf/383a996e-2219-dbbb-dc75-3a270bfce26c
[22] https://www.bristol.gov.uk/documents/20182/3641895/Bristol+Transport+Strategy+-+adopted+2019.pdf/383a996e-2219-dbbb-dc75-3a270bfce26c
[23] https://westofengland-ca.moderngov.co.uk/documents/s4584/CEAP.pdf
[24] https://westofengland-ca.moderngov.co.uk/documents/s4584/CEAP.pdf

information and places of interest, safety, and security especially at night, cleanliness of streets, and ease of crossing[25].

There is a need to address the barriers to walking, wheeling, and cycling through interventions at a neighbourhood scale, to test and learn about Liveable Neighbourhoods, to learn how to best design and deliver improvements to active travel, how to improve stakeholder engagement in the process, and to make the case for an area wide approach to avoid displacing the issue to other areas. During the pandemic, Bristol had a mixture of success with the StreetSpace programme which proposed several isolated modal filter projects. Projects that centred around high streets such as Cotham Hill and Princess Victoria Street were successful and demonstrated the benefits of trialling a scheme layout using temporary materials – with these two schemes now permanent. However, projects centred in residential areas were more challenging to deliver due to concerns around the impact of locally displaced traffic. This demonstrates the need to take a neighbourhood level approach to fully understand impacts and maximise modal shift potential.

Stakeholder engagement in Bristol shows support for an improved walking, wheeling and cycling environment. The 'Your City our Future' survey of Bristolians identified 5 future priorities for the local environment:

- Everyone can travel easily around Bristol without using a car
- Less traffic in the city overall
- More space and priority for walking
- More frequent buses to more destinations
- Children will be able to play, walk and cycle outside in their neighbourhood

The Bristol Citizen's Assembly recommendations demonstrate the appetite for transformative neighbourhood improvements with over 90% of the panel supporting the following recommendations:

- Fundamentally reimagine the places we live so that they are people centred (i.e., create liveable neighbourhoods)
- Develop a pilot program to showcase what could be achieved if a citywide approach is taken to being carbon neutral
- Empower local communities in the decision-making process to deliver the services and activities that they want to promote healthy lifestyle choices

Neighbourhood transport plays a key role in the wider transformation of Bristol's transport network, helping to stitch together strategic corridors. The project may shift behaviours locally, but it will not deliver transformational carbon reduction on its own. Instead, it should be seen as a test bed for further roll out and as part of a wider municipal transport strategy that aims to meet these goals.

### 1.7.2 Neighbourhood need

Evidence of the need for intervention in East Bristol to address barriers to walking, wheeling, and cycling as well as secondary benefit themes such as health, deprivation and inequality, heat resilience, and high street economy can be found in the summary of the Co-Discover stage of community engagement in **Appendix C**. This complements the case for change in section **1.7**, which presents the wider evidence which links transport and these themes as well as the relevant local context.

At OBC stage, local evidence was gathered using Bristol Open Data (Quality of Life Surveys, Ward Profiles, Walking and Cycling improvements map, and Bristol Pinpoint local information), and past

[25] https://content.tfl.gov.uk/attitudes-to-walking-report.pdf

and present stakeholder engagement indicating several issues at a neighbourhood level which need to be addressed. The existing data supported the case for further engagement and the first 'Co-Discover' stage of engagement for the East Bristol Liveable Neighbourhood trial.

## 1.8 Case Studies

### 1.8.1 London Low Traffic Neighbourhood schemes

Recent research[26] based on 46 Low Traffic Neighbourhood (LTNs) schemes in 11 London Boroughs that were introduced between May 2020 and May 2021 showed systematic and substantial impact on reducing internal road traffic (32.7% reduction when measure as a median and 46.9% when measured as the mean). It also showed the impact on boundary road traffic is limited (1.3% increase as a median and 1.6% increase as a mean). It has also been suggested that such impact on boundary roads could be lower if wider factors like Covid and seasonality are considered.

#### *1.8.1.1 Waltham Forest*

Studies show that since the implementation of the Liveable Neighbourhood scheme in Waltham Forest, air quality levels have improved to the extent that more than 51,000 households in the borough are no longer living in areas with dangerously high levels of air pollution compared with a decade ago. A separate study, by Kings College London, found that measures to prioritise pedestrians and cyclists such as segregated cycle lanes, pocket parks and timed road closures, have helped to improve the life expectancy of the borough's children. The study also showed that compared with 2013, design changes to streets which prioritise walking, wheeling, and cycling in the area reduced exposure to $NO_2$ by 25%, and by 13% for particulate matter by 2020. (LN 2019, TfL).

#### *1.8.1.2 Walthamstow Village*

The Walthamstow Village trial resulted in a 56% reduction in motor vehicle volumes and a 10% reduction in mean vehicle speeds within the trial area, enabling people of all ages and abilities to cycle. The improved safety, in conjunction with the reduced convenience of using the car for short journeys resulted in residents reporting 135 minutes of extra walking, wheeling, and cycling each week. While some of the traffic was displaced to the roads outside of the trial area, 16% of all traffic evaporated off the network, most likely now shifted to more sustainable modes. Road safety improved within the trial area, with no negative impact on boundary roads.

Walthamstow Village shows:

- The importance of planning neighbourhoods holistically rather than piecemeal to avoid displacing traffic into adjacent neighbourhoods and elsewhere on the network.
- The capacity of access only principles to reduce vehicle volumes and speeds in our neighbourhoods.

#### *1.8.1.3 London Borough of Hackney*

The London Borough of Hackney introduced a community parklet scheme, with £250 grants available for residents to convert parking spaces on their street. The installation of the Calvert Avenue parklet in Shoreditch resulted in a 20% increase in revenue for the Paper & Cup coffee shop which fronts it.

This example shows that place making can:

[26] Changes in motor traffic inside London's LTNs and on boundary roads - Google Docs

- Bring creative community engagement can lead to better outcomes for all.
- Lead to increased footfall and revenue for businesses.

#### *1.8.1.4 Islington London Borough Council 'St Peter's people-friendly streets trial'*

St Peter's, as with many neighbourhoods within Islington, suffered from high traffic volumes from the use of the area as a short-cut. As a result, in 2021, the following measures were implemented:

Traffic filters at Colebrook Row, Danbury Street and Wharf Road with a traffic filter and bus gate being added on Prebend Street; and in some cases, traffic filters enforced by cameras. The interim monitoring report showed that the St Peter's people-friendly streets (PFS) trial was having the intended impacts in the area of reducing motorised traffic across internal and boundary roads, increasing levels of cycling on some internal road, and reducing the levels of speeding on internal roads, whilst air quality improved in line with borough trends.

Crucially:

- Cycling has increased by 43% on internal roads;
- Rates of speeding fell by 65%; and
- Traffic was reduced overall by 57%.

### 1.8.2 Schemes Outside of London

#### *1.8.2.1 Grangetown, Cardiff*

The 'Greener Grangetown' scheme in Cardiff used a Sustainable Urban Drainage System (SUDS) with the aim of removing surface water from entering the sewer network, resulting in reduced operational costs, and providing resilience against the impacts of climate change. It was identified that by incorporating public realm, greening and sustainable transport improvements as part of the project, providing an annual benefit of over £380,000, estimated benefit of over £8.4 million over a 30-year period from 2015 to 2045.

Studies show energy used by Marl pumping station, which receives flows from Grangetown, significantly reduced compared with the same period in 2016 (prior to construction), despite there being more than double the rainfall. This improvement demonstrates efficiency in reduced operational costs, environmental benefit in minimising associated carbon emissions, and future-proofing of the sewage network by freeing up capacity to deal with the effects of climate change.

Community engagement was at the heart of the project and continued throughout the design and delivery process, including pre- and post-construction surveys. One resident of Taff Embankment, Grangetown said:

> *'The project has made a huge, positive impact on Grangetown. My street is greener, brighter, calmer and the noise from traffic has reduced significantly. It's hard to believe I live so close to the city centre as it's so peaceful and pretty here now.'*

#### *1.8.2.2 Cowley and East Oxford Low Traffic Neighbourhoods, Oxford*

The East Oxford Low Traffic Neighbourhoods cover the areas of Divinity Road, St Clement's and St Mary's in Oxford. A trial scheme was installed in 2022, following the council decision to make the earlier Cowley Low Traffic Neighbourhoods permanent, first introduced during the pandemic in 2021.

The Cowley Low Traffic Neighbourhoods were analysed for their road safety effects by Oxford-based Campaign for Healthy Street and Active Travel[27], who found that collisions causing casualties inside the LTNs fell from 7.4 a year to 4 – a reduction of 46%.

Similarly to EBLN, an iterative approach to both LTNs allowed for the permanent scheme to implement changes from community feedback. The East Oxford LTN was approved for permanence, with these changes implemented, in October 2023.

The results of the 2023 Monitoring and Evaluation Report[28], from which the decision was made, showed the following:

- Reduced car use within the LTNs themselves and an overall reduction in car traffic in the area of over 10%. Increased traffic in some locations elsewhere.
- Increased uptake of cycling outside the LTN areas and across the LTN areas, with an overall cycling increase of over 20%. Cycling trips through the LTN area, for example from the suburbs towards the city centre, did not see significant change. Walking saw little change over the trial period.
- Improved air quality within LTN streets. Some negative impact on air quality in surrounding locations, although remaining an improvement compared to 2019 air quality.

A 2026 Oxford Brookes University qualitative study[29] of the East Oxford scheme includes in-depth interviews of residents. This study explores the views of residents who considered themselves opponents of the LTN, such as desire for wider public transport improvements, general accessibility and emergency service access concerns, and rerouted or longer car journeys. Many opponents nonetheless supported the goals of reduced traffic in town, but felt effects of the scheme differently, especially on boundary roads.

The following extracts from the 2026 study refer to supporters of the scheme:

> *Many supporters thought that the neighbourhood within LTNs had become safer for people to walk and cycle, particularly for families with young children, and that they had noticed that more people were doing so. There was a perception by some [that] small businesses, especially cafes, had flourished in certain parts of the East Oxford LTNs since their installation, and some thought that this had brought people together, for example, to organise an online community forum and an annual street festival. Many expressed delight over the opportunities to chat with neighbours, for example, Heather pointed out that the road closure on her street meant that she had experienced more serendipitous interactions with neighbours:*
>
> *'I know my neighbours better because I see them. I see them walking too. So that's really nice, actually. I mean, I very rarely walk [down to the shop at the bottom of the road] without seeing somebody […]" Heather, 70s, lived within LTN.*
>
> *[…] many conveyed how they had forfeited some short journeys by car in favour of walking or cycling, for example, to access the local shops in poor weather when they may have typically jumped in the car. People in households with small children also expressed that they felt less anxious about traffic and were more likely to walk or cycle with their families rather than drive or to allow their children to walk and cycle to school alone.*

[27] Road casualties halved in Cowley LTN - CoHSAT
[28] Annex 8 - East Oxford LTNs Monitoring Evaluation Full report - Final 3.pdf
[29] "I was a loser before, and now I'm a winner!": Perceptions and lived experience of Low Traffic Neighbourhoods

*As Kevin, in his 40s, who lived in a household with children put it, 'Before the LTN, the roads felt chaotic– now my kids can cycle to school without me worrying constantly' adding, 'I used to rely on the car for short trips, but now I cycle almost everywhere—it just makes sense'.*

The study emphasises the positive social, economic and environmental impacts that can emerge from a committed approach to Liveable Neighbourhoods, alongside nuanced consideration towards accessibility, wider public transport improvements, and support for residents in changing how they travel, especially for short journeys.

## 1.9 Opportunities and barriers to walking, wheeling, and cycling

### 1.9.1 Trial scheme outcomes

The following details the initial results of the EBLN trial, including traffic volume and safety, accessibility and outcomes of community engagement. It then goes on to consider the barriers and opportunities outstanding following the trial period, which will go towards the final designs of the permanent scheme. Addressing the below themes will be key to enabling a significant number of short car trips to be made by alternative means, a requirement for decarbonisation and One City Plan targets, as well as wider social, environmental and health and wellbeing benefits.

The EBLN trial Monitoring Report (**Appendix A**) presents the transport changes from pre- to post-implementation of the scheme infrastructure. It sets out the findings on various outcomes that were measured previously in 2024 and compares it to 2025 behaviours. Measures analysed include levels of traffic, walking and cycling, both within the trial area and on the immediate external roads.

Key headlines show:

**Traffic levels**

- Overall motorised traffic levels decreased by 26% on weekdays and 21% on weekends when considering both internal and external roads.
- Internal roads saw a 77% reduction on weekdays and 72% on weekends.
- External roads experienced 6% decrease on weekdays and 5% on weekends.

**Walking and cycling**

- Overall cycling increased by 22% on weekdays.
- Overall walking increased by 7% on weekdays and 5% on weekends.
- Use of Wesley Way cycle route increased by 60% on weekdays and 24% on weekends.

**Public transport**

- Bus use at stops within or on the boundary increased by about 5%.
- Bus patronage grew by 116% on services running through the area (routes 5 and 16).

The Monitoring Report data sources are comprised of the following:

- Bus journey times and speeds.
- SCOOT data – Bristol City Councils traffic reporting dashboard
- Stats 19 – collision data

- TOMTOM – journey times
- VivaCity – traffic counts (walking, cycling, motorised vehicles)
- Additional context – including instillation dates and some maintenance works.

A more in-depth breakdown of findings from the Monitoring Report is outlined below.

**Traffic counts**

- There has been a significant decrease in motorised vehicle traffic across most internal roads within the EBLN area.
- There is more variation of impact on external roads, but most external roads within the EBLN area have seen a decrease in motorised vehicle traffic.
- These findings indicate that the East Bristol Liveable Neighbourhood trial scheme is delivering on its objective of reducing motorised vehicle traffic on internal roads without widespread detrimental impacts on external roads.

**Traffic speeds and journey times**

- A comparison of 2024 and 2025 speed data reveals that average speeds generally decreased on both external and internal roads, especially during peak periods and weekends, indicating increased congestion or changing traffic patterns. However, some corridors showed localised improvements or stable speeds, suggesting these impacts are not uniform across the network.
- Weekday peak times saw mixed results while weekends tended to see rising journey times. Although congestion or delays have worsened in some locations, other routes have seen improvements or greater stability year-on-year.

**Bus journey times and occupancy**

- When considering both the morning and evening peaks, bus journey times for all services along the Church Road corridor (Routes 41, 42, 43, 44 and 45) generally decreased, ranging between 8 and 9mph in both the Pre- and Post-Implementation periods, with speeds increasing. Bus speeds decreased slightly for bus route 5 in both directions (from 13 to 12mph from Church Street to Netham Road, and 9 to 8mph from Netham Road to Church Street).
- Bus patronage grew by +5% at stops within, and on the boundary of, the EBLN area. Patronage more than doubled (+116%) for services running through the area (5 and 16) and decreased very slightly (-1%) for services running on the boundary along Church Road. This is likely down to some Church Rd trips transferring to the new local 16 service, noting there is a net increase of 5% overall.

**High street footfall**

- The daily visit index shows a consistent month-on-month increase from April to October, with the most significant growth during the spring months. This suggests enhanced footfall and potentially greater business activity in these shops due to the scheme.
- For Church Road shops, the impact is more mixed. While there is a slight month-on-month increase in daily visits from April to July, the trend reverses in the latter part of the period, with a noticeable decline from August to October. This indicates that the scheme may have

benefited these shops in the spring and early summer but did not sustain improved visit numbers into late summer and autumn.

Data found in the EBLN trial Monitoring Report (**Appendix A**) provides an objective expression of the scheme as recorded in the monitoring period. Due to the nature of Liveable Neighbourhood projects, there is expected to be continued impacts as residents take advantage of safer and quieter internal streets for walking, wheeling and cycling, as well as adapt their travel patterns to allow for public transport usage. The initial data speaks for itself in that expected positive results have emerged quickly, and initial patterns of traffic impact have not been outside of acceptable levels. The further the scheme 'beds in', the more traffic will disperse to other more suitable routes, and the more people will feel comfortable using the internal routes for short trips by walking, wheeling or cycling.

### 1.9.2 Accessibility for active travel

The trial scheme was audited by the West of England Centre for Inclusive Living (WECIL) in partnership with Disability.Inc. A document listing the priorities of interventions as suggested in the resultant access audit report can be found in Appendix C of the EBLN trial Engagement Report (**Appendix B**). All recommendations have been considered and responded to, contributing towards the designs for the permanent scheme.

Alongside suggested changes, the report also notes areas of positive impact:

- Quieter streets that support safer walking and cycling
- Introduction of the Number 16 bus service to allow for Disabled residents without a car to more easily access public transport into the city centre
- Early signs of behavioural change around school travel

### 1.9.3 Community Engagement Feedback

There has been extensive public engagement from January 2022 to the end of the trial engagement period in November 2025.

The full Engagement Report from December 2025 can be found in **Appendix B**. The report summarises the pre-trial activity (May 2023 to March 2025) and focuses on the trial period (April 2025 to October 2025).

The report compares the 2022 EBLN perception survey responses (S1) with the 2025 EBLN perception survey responses (S2).

The two key public engagement approaches during the 2025 engagement period have been:

- Independent polling
- Perception survey (repeated from 2022 for comparison)

Other public engagement has included an accessibility audit by West of England Centre for Inclusive Living (WECIL), two iterations of a Citizens' Observatory, extensive stakeholder liaison (with businesses, emergency services, ward councillors, schools, community groups and residents), along with promoting travel offers.

The independent polling was carried out by a fully independent company, and a representative sample of the local population was interviewed, with interviews lasting for around 10 minutes.

Polling is the recommended evaluation method for Liveable Neighbourhood schemes by the Department for Transport. This polling was carried out by an independent, accredited polling organisation, Walnut Unlimited Ltd.

- BCC received 296 responses, giving us a robust sample size that provides a reliable snapshot of local views.
- Questions were based on Department for Transport questions used for similar schemes, which is the recommended approach for liveable neighbourhoods.

For the percentage surveys:

- Questions were the same as the pre-trial survey (S1) to allow for before and after comparison.
- Letters were sent to all households within the EBLN boundary, inviting them to complete the survey.
- Paper copies in English were available at community centres in the area and on request.
- Online survey form open for all to complete, available in English, Arabic, Somali and Easy Read.
- Different formats available on request, including braille and British Sign Language.

BCC engaged extensively with local businesses pre–trial (May 2023 to March 2025). This included in-person visits to businesses on Church Road, Barton Hill Trading Estate, Robert Street, Avonvale Road and Marsh Lane. Multiple in-person and online briefings for businesses were held in the area, as well as in-person meetings with some businesses. Seven rounds of business visits were completed in total, with two business briefings, and three individual business meetings. Engagement was targeted for those where concern has been raised.

The purpose of the independent polling was to measure satisfaction and the perceived benefits of the recently installed Liveable Neighbourhood trial scheme in east Bristol, the first to be installed in Bristol.

The survey covered:

- Satisfaction of the local area.
- Feelings of belonging in the local area.
- How much residents feel they know about the Liveable Neighbourhood scheme.
- Support and opposition of the Liveable Neighbourhood scheme.
- Perceived impact of the Liveable Neighbourhood scheme.

Key findings from the polling found EBLN to be a polarising topic amongst residents.

- The awareness rate was 84% with limited neutral responses throughout interviewing.
- When asked, a third support the scheme, almost half say they oppose, and 18% said they neither oppose nor support the scheme.
- 81% of those polled own a car, which is significantly higher than actual car ownership in the area.

- When looking at the perceived benefits, many measures show an even split between positive and negative responses, with far fewer respondents selecting neutral compared to the benchmarking survey.
- Almost one in three residents are in support for scheme, and support is especially high among higher social grades.
- Many also see the benefits of the scheme, with 38% saying the scheme has had a positive impact on the safety of walking and cycling, and 29% on the number of vehicles travelling through.

Considerations should be given to the following regarding the polling feedback:

- 81% of people polled reported owning a car – 50% one car or van, 31% two or more cars or vans. This is higher than the LSOA average car ownership for the EBLN area, which is 68% (Census 2021).
- Neutral responses in general throughout the report are lower than benchmark studies, which shows this scheme is polarised. The polling report suggests that this could indicate that the high levels of awareness of the scheme has likely resulted in strong opinions among residents.
- Schemes in the benchmark studies have been in situ for a longer period than the EBLN (one and a half years and one year). This poll has been completed unusually early (with the scheme in situ for six months) compared to benchmark studies, therefore the results are not directly comparable.

The perception survey was designed in line with the Healthy Street indicators[30]. These are the indicators that are essential for making streets work well for all people. Delivering against these indicators will make sure that the majority of residents can access and enjoy using streets and lead active, healthy lives.

Each indicator is backed by scientific evidence that it improves health, reduces inequalities, and encourages people to walk, wheel and cycle.

A total of 2,736 responses were received for S2, an increase of 79% from S1 (1,528). The results of S2 have been compared to S1 and the key headlines are:

- Demographics of the respondents have changed. There are more commuters/visitors to the area who have responded than in S1. There are also more regular car users.
- The Redfield area had the highest response rate for S2 at 650 responses, followed by 643 responses from people in the 1km 'buffer' around the scheme.

The difference in response rate can make comparison difficult. However, full details on the perception survey and further cross analysis regarding postcodes is included within Appendix A of the full Engagement Report from December 2025, which can be found in **Appendix B** of this document.

Feedback on the EBLN trial has also been analysed as part of the results to Question 13 (Please tell us if there is anything else that is important to you within your local area), in which 52% of survey respondents commented on the trial and specific aspects.

[30] What is Healthy Streets? — Healthy Streets

### 1.9.4 Barriers and opportunities for active travel

Analysis undertaken prior to the implementation of the EBLN trial scheme pointed to barriers and opportunities to walking, wheeling, and cycling in the project area, which may have limited the number of active travel journeys and their benefits.

A Healthy Streets[31] (an approach to embedding public health in transport, public realm and planning with 10 indicators focusing on the human experience) Design Check was carried out in 2021 to capture the real-life experience of people walking, cycling and spending time in various parts of the neighbourhood area.

If approval to continue is received, the Healthy Streets Design Check will be repeated upon final delivery of the permanent scheme.

The overall healthy street scores are shown in **Figure 1-6**. Key takeaways from the survey are listed below:

- With the boundary roads including Church Road and Feeder Road being key radial routes to Bristol city centre, the survey identified the key issues as high volumes of road traffic and noise. Safety of walking, wheeling, and cycling journeys were also impacted by the general lack of separation of modes on roads and at crossings.
- Within the residential areas including the Wesley Way and the East Bristol LCWIP route, although there is less traffic, the general streetscape was dominated by vehicles. The survey identified the lack of cycle parking, seating, and resting space to encourage street activities and general surveillance. The physical and environmental qualities of footpaths were also poor, making them unattractive and inaccessible.

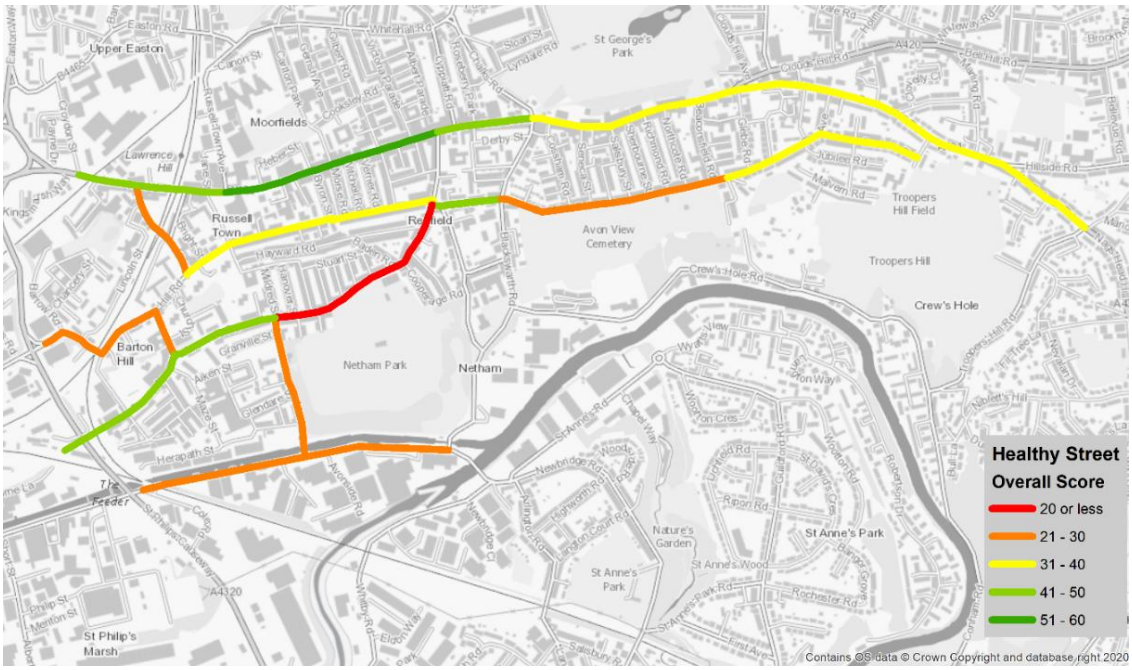


Figure 1-6: Pre-Trial Heathy Streets Design Check scores within the project area

Cycling levels were high compared to the Bristol average in some areas within the project boundary, with 34-45% of residents in three wards within the project boundary reporting that they cycle once per week. There was also significant contrast in terms of car ownership in the neighbourhood, with 56.2% of Lawrence Hill households having no cars or vans and the lowest average number of cars per

[31] Healthy Streets | Making streets healthy places for everyone

household in Bristol, to St. George Troopers Hill in the east of the project area having the third highest average number of cars per household in Bristol. Despite its low car ownership, Lawrence Hill does not have the highest rate of cycling in the project area.

A survey was also conducted in a local school with 120 children aged 5-8 years. This revealed the top 3 things that they believed were important to introduce, and the top 3 issues within the project area.

Top 3 things that were important where they lived:

- Everyone feels safe to walk, scoot and cycle
- It feels good to stay and play in your street
- Easy to walk, scoot or cycle around, or use buses

Top 3 issues within the project area were:

- It doesn't feel good to stay and play in the streets
- Not enough trees or plants on the street
- Nowhere to stop and rest

### 1.9.5 Pre- and Post-Trial ATE Area Checks

Since OBC Stage, Active Travel England (ATE) have made the Area Check a statutory requirement for area-based transport schemes, acting as supplementary to previously undertaken Healthy Streets assessments, but taking precedence. This builds upon and replaces the Mini-Holland assessment, which was based upon ATE Route Checks of key routes within the area, as well as other elements such as permeability, and density of high-quality active travel routes.

The Area Check simplifies this assessment and provides a single number output to audit the quality of schemes for providing active travel and environmental improvements, as well as incorporating the quality of delivery of schemes. The outcomes for this assessment at Pre-Trial stage is below, with the further stages included as suitable further on in the Strategic Case. The full results of all assessments can be found in **Appendix E**.

Table 1-1: EBLN Trial Area Scorecard and Traffic Mitigation Check Results

| Area | Existing Area Score | Proposed Area Score | Uplift |
|---|---|---|---|
| *East Bristol Liveable Neighbourhood Trial* | *27* | *45* | ***18*** |

| Area | Traffic Mitigation Results |
|---|---|
| *East Bristol Liveable Neighbourhood Trial* | *Like other examples of implemented Low-Traffic Neighbourhoods, it is expected that some traffic that would have used residential short-cuts will be moved to boundary roads which are more suitable for carrying traffic. Current data shows that there has been a significant decrease in traffic on streets within the scheme area, however some boundary roads have seen a slight increase in traffic.* |

### 1.9.6 Rationale for Public Intervention and State Aid Implications

#### *1.9.6.1 Implications of removal of the scheme*

The trial is demonstrating benefits to active travel and bus patronage, and therefore can be considered as the baseline 'do minimum' standard for the purposes of this FBC. Building upon this current 'minimum' standard, which is already showing the promise of a full scheme, will deliver additional benefits beyond what is already present, and maximise the potential positive results for local residents. In terms of Bristol transport strategy, the removal of existing trial measures without development into a full scheme will be detrimental to the resolution of safety, accessibility and environment issues that future BCC projects are aiming for.

Removing the present interventions will return to a situation where only pre-trial road network and public realm is maintained, resulting in continued increases in car ownership and usage in line with increases in income, an assumption that underpins the National Trip End Model for future forecasts of transport demand.

Barring the rapid decarbonisation of private cars, this is not sustainable from the perspective of the amount of carbon reduction needed to mitigate climate change, nor would it address the health, deprivation and inequalities, heat resilience and high street issues outlined in the Case for Change. A modal shift to walking, wheeling, cycling and sustainable modes is needed to achieve transport decarbonisation goals and Liveable Neighbourhoods are one of the many enablers of this transition. Liveable Neighbourhoods cannot achieve this alone but should be seen as an essential part of a wider programme to transform the transport network and shift transport behaviours.

To improve health and wellbeing through increased physical activity, reduced social isolation, and increased satisfaction with the local environment would also be missed without intervention. Shifting priority to walking, wheeling, and cycling would also reduce inequalities associated with transport access and access to economic opportunities and services.

#### *1.9.6.2 Public Intervention and Externalities*

Bristol City Council has statutory responsibility for maintenance of the road and cycle network, pavements and aspects of the public realm – all public goods. The rationale for intervention in the supply of public goods is because interventions on the public highway are limited to the Local Authority and there is no route to area traffic reduction via the market. Public goods, and negative and positive externalities can cause a market failure in the supply of car journeys, resulting in an inefficient economic outcome for society.

Negative externalities mean that private vehicle drivers do not bear the full cost of pollution, carbon emissions and noise and other negative impacts of their journeys. There will be too many car journeys if there are external costs because drivers will not reduce their journeys to reflect the true cost. Nearby major re-developments such as St. Philip's Marsh, Silverthorne Lane and Temple Quarter Enterprise Zone may generate additional trip demands on the local network, but the private sector investors and businesses don't bear the costs directly of the negative impacts on the transport network.

Positive externalities exist in that walkers and cyclists do not receive all of the benefits of their journeys as these benefits fall to the residents and businesses of the local neighbourhood and wider society. Their demand for walking, wheeling, and cycling journeys does not increase to reflect all of the benefits of the journeys.

In terms of both the positive and negative externalities, intervention would be required to optimise the supply of car and active travel journeys to the benefit of wider society.

#### *1.9.6.3 Business Support*

While local businesses may benefit from the interventions, there will be no permanent financial aid going directly to businesses. Business adaptation grants were offered to high street businesses on Avonvale Rd. These were small grants of £500 and up to £10,000 matched if certain criteria were met. All businesses in the wider area could apply for Mayoral Authority standard business grants – Grants & Funding – WEST.

BCC have undertaken in-depth engagement over multiple years including bespoke surveys, in-person drop-ins and ongoing communication. Senior managers, councillors and the area's Member of Parliament have been to visit businesses to discuss the changes.

## 1.10 Options Development and Appraisal

### 1.10.1 Development of Trial

At the OBC stage of business case development, a longlist optioneering process was conducted and 22 options were subject to an early sifting and options assessment process. The assessment included a total of 16 criteria which are broadly consistent with DfT's Multi Criteria Assessment Framework (MCAF) tool and the five-case approach adopted by the Transport Business Case. This was followed by a co-develop phase which involved engagement with the public to assess various configurations of the Liveable Neighbourhood, resulting in three final options. Further detail of the trial's options development and selection process is described in the OBC and **Appendix D**. Option 3 was chosen as the single preferred option. This has now been progressed to a trial scheme and, following the review period, the purpose of this business case is to secure funding to implement the scheme permanently.

This Full Business Case also includes a refreshed Economic Case for the purpose of demonstrating the value for money of the option to proceed with scheme permanence.

#### *1.10.1.1 Community Aspiration Design Decision*

The final decision to deliver Option 3, 'Community Aspiration', at trial stage was based upon the following assessment of factors. More detail may be found in the EBLN Outline Business Case.

Table 1-2: Pros and Cons of Option 3 Trial Design

| Pros | Cons |
|---|---|
| • Delivers community aspiration whilst delivering additional quality to enhance performance of the scheme<br>• Applies technical knowledge to make sure that the scheme is cost effective and delivers on historic priorities<br>• Likely to score well with ATE quality requirements and demonstrate a good BCR | • Scheme potentially more expensive due to the additional crossing points<br>• If not communicated well, the community may feel that there is a disconnect between what they have mapped and what is being delivered as a trial scheme<br>• Additional crossings may not be deliverable, so clear communication required to manage expectations |

| | |
|---|---|
| • Opportunity to provide clear narrative to demonstrate how community aspirations have formed the scheme<br>• Additional community assets ensure scheme equity | |

Options appraisal for the final permanent scheme has not considered alternative design decisions to the depth included in the OBC. As described below in **1.10.2**, options for project progression were appraised with regard to the impact of fundamentally altering a scheme which is meeting its aspired targets, or removing a project that is foundational to council ambition in sustainable transport, health and wellbeing, and economic growth.

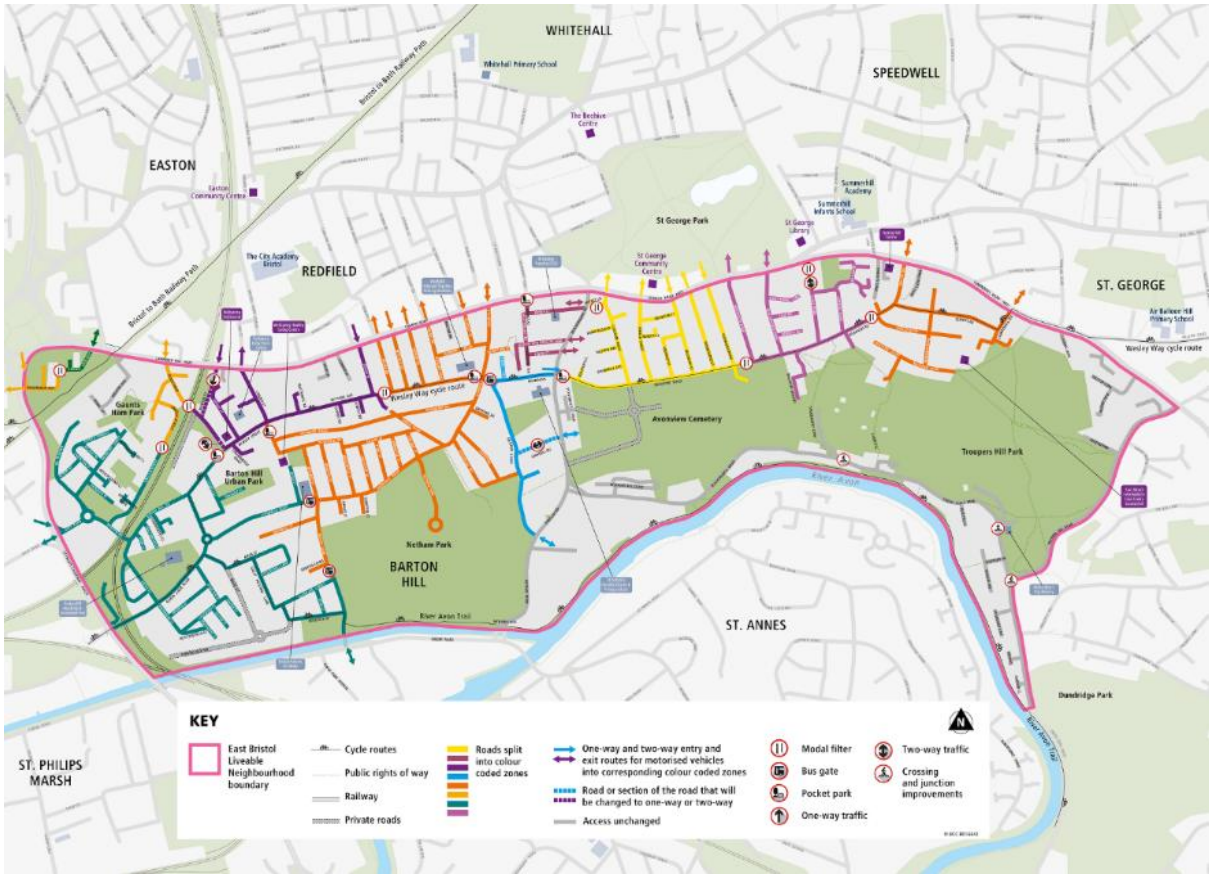


Figure 1-7: Initial trial scheme layout

### *1.10.1.2 Trial period description*

The EBLN trial data monitoring period began on the 14th of April, when most of the measures were installed, and ran until mid-October 2025. During the six-month period, data such as the volume of traffic, bus journey times, and number of cyclists and pedestrians has been collected from across Barton Hill and parts of Redfield and St George and the surrounding area. **Figure 1-7** illustrates the location of the interventions initially implemented using temporary materials to test feasibility and effectiveness. The trial measures comprised:

- Reallocation of road space for the benefit of pedestrians and cyclists
- Closing roads to motorised through traffic using modal filters including traffic filters and bus gates. The trial scheme implemented a total of 3 bus gates and 18 traffic filters
- Extensive temporary greening including 4 pocket parks and 82 planters

Alongside the trial, 15 cycle hangars were delivered (and an additional 5 were delivered in the area by another citywide project). A cultural programme was also delivered, which included large surface public artwork and the 'activation' of public realm areas.

### 1.10.2 Changes to Trial and Evolution to Permanent Scheme

Some changes to the trial scheme were announced in December 2025, following the results of the monitoring report and community feedback on the effects of the trial in certain areas (and subsequent liaison between the Chair of the Transport and Connectivity Committee and ward councillors, the MP for Bristol East and Bristol Labour).

Measures delivered in advance of a final decision on the permanent scheme have been as follows:

- Avonvale Road
    - Movement of bus gate to Marsh Lane's junction with Mildred Street, to allow a left turn from Marsh Lane on to Avonvale, improving vehicle access to the Wellspring Centre and Days Road.
    - For avoidance of doubt, there will still be a bus gate across Avonvale Road, preventing access from Marsh Lane turning right onto Avonvale Road and vice-versa.
- Marsh Lane
    - Removal of bus gate, to improve access between Feeder Road, Barton Hill and St Phillip's Causeway and support businesses in the area.
    - This will have the additional effect of alleviating increased vehicle volumes on Great Western Lane. Through traffic will now reach Barton Hill via Marsh Lane and Avonvale Road.
- Victoria Avenue
    - Removal of modal filter on Victoria Avenue West, between where it meets Byron Street and Morse Road, to improve access within the surrounding residential streets, including for waste crews.
- The Avenue and Ducie Road Bridge
    - Replacement of bollards with camera enforcement, to make it quicker for emergency services to access properties across the area and enable drivers with EBLN bus gate exemptions, such as taxi drivers and blue badge holders, to use these routes.
- Providing additional exemptions - for residents living on 14 streets in the vicinity of the Pilemarsh bus gate (in recognition of issues that can only be resolved if the scheme is made permanent, by way of changes to the Blackswarth Road/Church Road junction); and for blue badge holders living outside of the scheme area who are registered at the Wellspring Surgery.

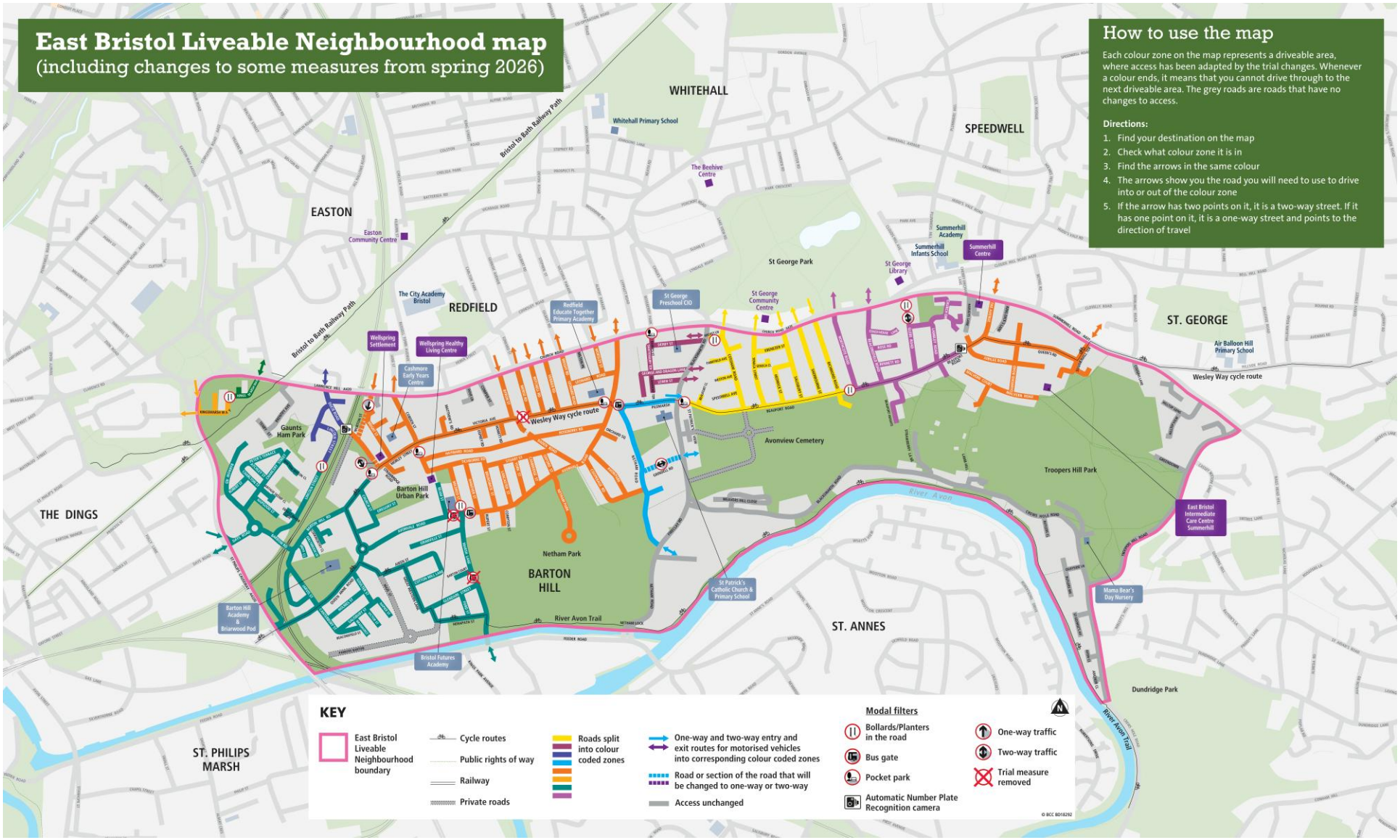


Figure 1-8. Map showing the final trial scheme layout of EBLN following changes

Changes that have been made to proposed permanent scheme designs as a result of the data monitoring and public engagement exercise are as follows:

- Derby Street – one-ways added to prevent queue jumping, in response to monitoring and engagement findings and resulting feedback from political leaders.
- Queens Road (Diamond/Queens Road junction) - cycle symbols to the carriageway and cycle signage at the junction, in response to monitoring and engagement findings and resulting feedback from political leaders.
- Blackswarth Road (on turning into St Patrick's View) - bollards added to prevent pavement parking, in response to monitoring and engagement findings and resulting feedback from political leaders.
- Blackswarth Road/Church Road junction - bollards added to prevent vehicles from mounting shared spaces, as per request from ward councillor.
- Avonvale Road - removal of raised table and moving of the Orchard Square bus stop, as per suggestions received from First Bus and others following introduction of the no.16 service.
- Avonvale Road - parking bays added, timed in line with opening hours of businesses there, following reports of reduced trade.
- Beaufort Road - informal parking added to the lower section of Beaufort Road, following a request from St Patrick's Primary School.
- Beaufort Road – signage added to improve wayfinding to the cemetery, as recommended by WECIL. Wayfinding signage also added on Church Road, following a request from the Cemeteries team.
- Beaufort Road /Northcote Road - two bollards reduced to one at centre of modal filter, following feedback from Avon Fire & Rescue.
- Victoria Avenue – movement of cycle storage and a related extension of double yellow lines, following feedback from Avon Fire & Rescue.
- Beaconsfield Road - extension of double yellow lines at junction with Beaufort Road, following feedback from Avon Fire & Rescue.
- Grindell Road - supplementary road markings added, following reports of speeding at this location.
- Marsh Lane – restrictions added following reports of pavement parking at this location.

A thorough optioneering assessment, as taken at project design and OBC phase, has not been repeated, as it has been demonstrated that the scheme has been broadly delivering on its objectives. There were nonetheless alternative options considered in the evolution of the trial to a proposed permanent scheme:

- An option would be to not proceed with the project, but while the risk of adverse publicity and objections at TRO stage and a broader risk of protest activity should certainly be noted, this option is not recommended. Bristol City Council has an objective of reducing personal car miles by 40 per cent by 2030 to meet climate targets, and liveable neighbourhoods are key to achieving council transport, health and sustainability targets and to realising Bristol's longer-term Transport Strategy.

- Another option would be to reduce or otherwise alter the scope of the scheme, but this is also not recommended. Detailed design work has certainly been informed by feedback and findings (and wherever specific concerns are raised in relation to the scheme, the project team has an ongoing role in reviewing and responding to those to provide assurance wherever possible), but officers do not believe that any fundamental changes are required to the scheme. The proposed scope (as per this FBC) has been identified as being the most viable option in terms of meeting the scheme's aims and delivering benefits, and any significant deviation could compromise those outcomes and potentially its overall viability. It is also important to note that any significant deviation would certainly result in very significant delays and associated cost increases, while designs and documents were reworked and relevant processes repeated.

## 1.11 Permanent Scheme Project Scope

The permanent scheme will deliver elements that could not be implemented during the trial phase, such as street trees, new pedestrian crossings, junction upgrades, and improved street lighting. These permanent interventions will provide long-term benefits by enhancing accessibility, for example, through additional dropped kerbs, and improving safety and usability for all road users. Installing fixed infrastructure will also address limitations inherent in temporary measures, such as planters being movable or motorists occasionally bypassing restrictions by driving onto pavements. By creating a robust, high-quality environment, the permanent scheme aims to maximise the benefits of active travel, improve public realm aesthetics, and ensure the durability and effectiveness of the interventions.

Trial interventions were developed in response to community engagement (see **Appendix C** for more detail) and can be grouped into three broad categories:

- **Main roads** – Measures that address severance and improve walking, wheeling, and cycling on perimeter roads.
- **Local streets** – Measures that when used in combination can address high levels of traffic and make the area easier and more convenient to walk, wheel, and cycle.
- **Community assets** – Measures that change the balance of how local streets are used and help to create greener, more attractive and people centred streets.

Making the scheme permanent would enable improvements such as:

- Optimising road space reallocation (e.g. junction changes that could not be delivered during the trial phase).
- Installing permanent infrastructure to maximise benefits (e.g. accessibility enhancements, including measures suggested by the West of England Centre for Inclusive Living as part of their audit of the trial scheme, such as more dropped kerbs, tactile paving at crossing points and seating) and eliminate issues that are inherent with temporary infrastructure (e.g. planters being movable, motorists sometimes physically-but-illegally being able to drive on pavements to get around planters).
- Permanent planting (trees and other permanent planting; noting that the current temporary planters would not be a feature of the final scheme), and associated long-term benefits.

- Other enhanced and additional public realm provision (e.g. improved street lighting).

Specific proposed permanent measures (including those already in place on a trial basis) are as follows:

Table 1-3: EBLN Proposed Permanent Measures

| Location | Design Type(s) |
|---|---|
| Chalks Road / Church Road | New crossings |
| Blackswarth Road / Pile Marsh | New crossings |
| Crews Hole Road / Conham Road | New crossings |
| Glebe Road | Basic modal filter |
| The Avenue | Basic modal filter |
| Beaufort Road / Northcote | Basic modal filter |
| Wicket Lane | Basic modal filter |
| Ducie Road Bridge | Basic modal filter |
| Lincoln Street | Basic modal filter |
| Victoria Avenue East | Pocket park plus |
| Ducie Road / Barton Hill Road | Pocket park plus |
| Barnes Street | Pocket park |
| Cobden Street | Pocket park |
| Avonvale Road / Marsh Lane | Bus gate plus |
| Avonvale Road / Pile Marsh | Bus gate plus |
| Marsh Lane / Glendare Street | Pedestrian improvements |
| Derby Street | One ways |

Proposed permanent designs can be found at **Appendix L**.

Please note:

- Designs provided in the appendix have passed through the council's QA4 (Quality Assurance) stage (which gives permission to build, in design terms, should it be decided to make the scheme permanent).
- If decision-makers agree to make the scheme permanent, there would be statutory consultation on specific Traffic Regulation Order (TRO)-dependent elements of the scheme. Some further informal targeted community engagement would also be planned, to inform final layouts for sections of the public realm areas at two locations (Victoria Avenue and Ducie Road).

### 1.11.1 Proposed Permanent Scheme ATE Area Check Score

The ATE Area Check has been repeated for the proposed permanent scheme designs, giving the following uplift. The full assessment may be found in **Appendix E**.

Table 1-4: Permanent Scheme Area Check Scorecard

| Area | Existing Area Score | Proposed Area Score | Uplift |
|---|---|---|---|
| *East Bristol Liveable Neighbourhood Permanent Scheme* | *45* | *64* | ***19*** |

## 1.12 Benefits and Disbenefits

One of the roles of a pilot project like East Bristol Liveable Neighbourhood is to evidence the benefits this type of scheme can achieve, to prove the concept and reduce uncertainty for future roll-out. Liveable Neighbourhood-type projects are relatively new and their longer-term impacts may take years to be seen. However, there is evidence from similar types of projects in Oxford, London and the rest of the UK that demonstrate the potential benefits and disbenefits, such as the LTN interventions in Bournemouth Birds Hill area (August 2020), Birmingham Kings health scheme (October 2020), Walthamstow Village Low Traffic Neighbourhood and Cowley and East Oxford Low Traffic Neighbourhoods.

What many of these projects show is that some potential benefits require a wider transformational change to be achieved, arising as a combined result of multiple interventions at a city or regional level. Individual projects may not be able to deliver specific benefits, but together they can produce a step-change that allows a benefit to be realised. By implementing safer neighbourhoods citywide, we can extend the reach of the sustainable transport network as space is reallocated to active and public transport modes.

When delivered in conjunction with wider changes to the Bristol transport network such as Strategic Corridors and other Liveable Neighbourhood schemes, East Bristol Liveable Neighbourhood is likely to act as an enabler for the following benefits:

- Reduced carbon and greenhouse gas emissions from transport, as a result of a wider modal shift to cycling, walking and sustainable modes of transport in the region;
- Improved air quality as a result of as a result of a wider modal shift to cycling, walking and sustainable modes of transport in the region; and
- Associated improved health benefits as a result of improvements to the local environment

### 1.12.1 Benefits

The expected benefits of continuing EBLN into the permanent scheme are as follows.

#### *1.12.1.1 Short-Term*

The likely short-term benefits identified include:

- Reduced traffic on internal roads
- Slower traffic on internal roads
- Streets are peaceful with little noise from traffic
- Percentage of residents within a 10-minute walk of new sustainable transport infrastructure increased
- Increased bus patronage
- Neutral net impact on traffic volume on internal and boundary roads

- Net neutral impact on journey times across the scheme
- Neutral impact on air quality across the EBLN area
- Improved perception of safety for cyclists and pedestrians in the project area

#### *1.12.1.2 Medium Term*

The likely medium-term benefits identified include:

- Increased walking and cycling trips in the project area
- Decrease in people who never walk or cycle
- Improved journey quality for sustainable modes
- Improved equity in access to walking, cycle and sustainable transport options
- Residents in project area access local public greenspaces more regularly than pre-intervention
- Residents form Lawrence Hill and Barton Hill neighbourhoods access local public greenspaces more regularly than pre-intervention
- Reduction ins social isolation across all residents
- Improved sense of belonging across all residents
- Improved satisfaction with the area across all residents
- Increased walking and cycling trips on Church Road and Avonvale Road/ Marsh Lane
- Neutral impact on business revenue
- Increase in urban greening factor

#### *1.12.1.3 Long Term*

Finally, longer-term benefits that may be expected from making the scheme permanent include:

- Increase in walking and cycling
- Decrease in noise, greenhouse gas emissions and improvement in air quality
- Healthy and wellbeing benefits
- Indirect healthy benefits – reduced absenteeism, productivity, savings to the NHS etc.
- Accessibility for a greater number of people – equity
- Thriving high streets – reduced vacancy rates, increased rental values

In general, the benefit of continuing the East Bristol Liveable Neighbourhood scheme is demonstrated in its present achievement of set goals in a short period of time. With introduction of permanent interventions, what has already been achieved can be improved upon further, and over the course of years the longer term impacts will begin to appear in greater quantity and quality.

Removing the scheme now would represent a significant disbenefit for the area, where the adequate timeframe needed for full development of scheme benefits is not allowed for.

### 1.12.2 Disbenefits

Potential scheme disbenefits, which have proposals for or currently mitigated against, are presented below.

#### *1.12.2.1 Short Term*

Disbenefits which are currently less certain in the short-term, dependent on the specific design of the scheme and the ability of boundary roads to absorb increased traffic, include:

- Increased journey times and reduced journey quality for private vehicles;
- Other roads unable to absorb re-routed through traffic
- Increased journey times for bus users on boundary roads
- Reduced negative impacts of traffic in the neighbourhood including congestion and environment – such as noise, congestion, air quality, greenhouse gas emissions
- Transport economic disbenefits resulting from increased journey times and reduced journey quality for private vehicles and decreased bus journey times as a result of congestion (if transformational change to the overall transport system is not delivered)
- Reduced bus demand and revenues.

The potential longer-term disbenefits include:

- Reduced ability to reroute buses in the future

Mitigations include:

- Bus gate exemptions for Blue Badge holders, those with disabled tax class vehicles and professional carers working in residents' homes
- Support for low-income households with a personal travel budget
- First Bus vouchers to encourage sustainable travel sent to all households within EBLN boundary
- Personalised travel planning
- Business adaptation grants

# 2 Economic Case

## 2.1 Introduction

This section presents the economic case for the active travel and public realm elements of the East Bristol Liveable Neighbourhood (EBLN) permanent scheme, demonstrating its value for money. It outlines methods and assumptions used to estimate benefits and costs and assesses the project's value for money.

Due to the nature of the construction works likely to be required for EBLN, these being low impact and of short duration, it is considered reasonable and proportionate to not assess the impact of construction at this stage.

The appraisal has been undertaken in accordance with the Department for Transport's (DfT) Transport Analysis Guidance (TAG), specifically TAG Unit A5.1 active travel appraisal, and HM Treasury Green Book principles, following the approach set out in the Appraisal Specification Note (ASN) submitted to The West of England Mayoral Combined Authority (WECA) Grant Assurance Team. The ASN was submitted in November 2025 following engagement with the Grant Assurance Team and confirmation an Appraisal Summary Report (ASR) was not required.

The rest of the economic case is structured as follows:

- Critical Success Factors
- East Bristol Liveable Neighbourhood Scheme
- Appraisal Methodology
- Economic Social Impacts
- Economic Costs
- Value for Money (VfM) assessment

As established within the ASN, the methodology for the calculation of VfM utilises the Active Mode Appraisal Toolkit (AMAT) developed by DfT as the core analysis and economic assessment. The Simplified Scheme Appraisal Tool (SSAT) is also used to quantify the journey time and distance impact for highway and bus users. In addition, a qualitative assessment is also included for social and distributional impacts that cannot be captured through monetised or quantified benefits assessment.

The Programme Entry Appraisal Toolkit (PEAT) developed by Transport for Greater Manchester's (TfGM) was originally used as the main appraisal toolkit in the Outline Business Case and is included as part of the sensitivity testing in Full Business Case development stage.

## 2.2 Critical Success Factors

The Economic Case will be structured around a set of Critical Success Factors (CSFs) derived from the scheme objectives and aligned with the categories set out in the Green Book guidance. These CSFs represent the essential conditions required for the East Bristol Liveable Neighbourhood to achieve its intended economic, social, and environmental outcomes. They were agreed with the BCC client team during preparation of the Economic Case and guide the appraisal of options and the evaluation of whether the preferred scheme delivers measurable value for money.

Table 2-1: Critical success factors

| CSF category | Critical success factor |
|---|---|
| Strategic fit and meets business needs | Reduce through traffic within the EBLN project area and enable modal shift |
| | Increase physical activity levels, improve connections to green spaces and reduce inequalities in residents' ability to access walking, cycling and sustainable transport options |
| | Improve sense of satisfaction and sense of belonging with the local area and improve perceptions of safety for cyclists and pedestrians in the project area |
| Funding | Fully secure the required capital funding for the EBLN Permanent Scheme in line with CRSTS 1 programme deadlines |
| Potential value for money | Deliver high value for money for society that outweighs the costs over the scheme lifecycle |
| Potential affordability | Deliver the EBLN Permanent Scheme within the CapEx and OpEx budgets using established council delivery and maintenance processes |
| Potential achievability | Deliver Permanent Scheme infrastructure within project timescales |

### *2.2.1* Public realm and ambience measures

The public realm and ambience benefits appraisal in PEAT assesses the ambience improvements designed to improve active travel journey quality within EBLN and is based on the latest design specification. In response to trial scheme monitoring and engagement findings, a number of modifications have been incorporated into the proposed permanent EBLN measures. The modal filter previously located on Victoria Avenue West has been eliminated, following monitoring and evaluation results and decisions by political leaders. This change enhances access within the neighbouring residential areas, making it easier for services such as waste collection. New features have also been introduced, including implementing a one-way system on Derby Street to address queue-jumping. Other long-term improvements involve installing cycle symbols and signage, adding bollards to deter pavement parking, enhancing wayfinding and signage, revising cycle storage facilities, and updating road markings. Additionally, current bollards on The Avenue and Ducie Road Bridge are being upgraded to camera enforcement. Further specifics about these updates can be

found in **1.10.2.** The information in **Table 2-2**: Cycling Ambiance Measures**Table 2-3:** Walking Ambience Measures sets out the features of the proposed investment that are used to inform the PEAT assessment, drawing on the most recent design information.

**Table 2-2: Cycling Ambiance Measures**

| Types of Ambience Feature | Planned Provision | Notes |
|---|---|---|
| Cycle parking | Cycle parking infrastructure including cycle parking racks are proposed throughout Lawrence Hill and Redfield. Two cycle parking racks are proposed along Barton Hill Road, adjacent to the pocket park on Ducie Road, providing convenient access for users of Barton Hill Urban Park and the University of Bristol Barton Hill campus. A third cycle parking rack is planned for Victoria Avenue, located near the Redfield Educate Together Primary Academy. | Informed by existing cycle parking provision, housing and street characteristics, community engagement feedback, the locations of key destinations and local businesses, visitor cycle parking (e.g. Sheffield stands) and resident cycle parking (e.g. secured and covered hangars) are proposed in visible, accessible locations across the area. |
| Cycle route | The permanent scheme includes a series of modal filters and bus gates across the study area, designed to create quieter and safer streets for cyclists. The modal filters are proposed at Glebe Road, The Avenue, Beaufort Road/Northcote, Wicket Lane, Ducie Road Bridge and Lincoln Street. Bus gates are located on Avondale Road/Marsh Lane and Pilemarsh. Together, these measures reduce through-traffic while maintaining full access for pedestrians and cyclists, creating traffic-free sections along the route and improving comfort, safety and accessibility for cycling.<br><br>Several streets will also incorporate green interventions, including pocket parks and pocket park plus features, which provide small areas of urban greenery. These improvements enhance the visual quality of the route and make cycling more attractive, with associated benefits for wellbeing and the overall public realm experience. These will be introduced along Victoria Avenue, Ducie Road, Barnes Street and Cobden Street. | The design improves the cycle network by eliminating short-cutting on residential streets, reducing the traffic flow, and through creating quieter links across the whole area. |
| Cycle surface | The permanent scheme will include drainage upgrades designed to reduce the risk of surface water flooding and | Effective drainage will help protect paths, cycle lanes, and roads from water damage, reducing the need for repairs |

| Types of Ambience Feature | Planned Provision | Notes |
|---|---|---|
| | standing water, which can create hazards and limit accessibility for pedestrians and cyclists.<br><br>Cycle symbols and cycle signage will improve wayfinding and make the route clearer and more intuitive to navigate. | and keeping the infrastructure in a better condition for active users. |

Table 2-3: Walking Ambience Measures

| Types of Ambience Feature | Additional/Planned Provision | Notes |
|---|---|---|
| Crossings | Residential streets in the area that are used for short-cuts will receive modal filter treatment to reduce car traffic, creating conditions for safer crossing and places which are more suitable for people rather than heavy traffic volumes. The modal filters are proposed at Glebe Road, The Avenue, Beaufort Road/Northcote, Wicket Lane, Ducie Road Bridge and Lincoln Street. Bus gates are located on Avondale Road/Marsh Lane and Pilemarsh. | Placing modal filters will discourage short-cutting and reduce traffic volumes on certain residential streets. This will encourage pedestrians to use these quieter routes, which in turn may reduce the need for additional pedestrian crossings on the busier streets. These filters maintain access for pedestrians, cyclists, and other active travel users while restricting through-traffic for motor vehicles. As a result, overall traffic levels and associated noise are expected to decrease, creating a safer and more pleasant environment for residents. |
| Street security | The permanent scheme will include additional street lighting across the EBLN study area, focusing on key underpasses and other locations where existing lighting is inadequate. These improvements aim to increase safety, visibility, and comfort for pedestrians and cyclists, particularly during evening hours. | Lighting improvements will be prioritised along sections of key walking and cycling routes, as well as locations where residents have expressed concerns about safety. |

| Types of Ambience Feature | Additional/Planned Provision | Notes |
|---|---|---|
| Facilities and visual attractions | Several streets will also incorporate green interventions, including pocket parks and pocket park plus features, which provide small areas of urban greenery. These enhancements will create a more attractive, safer, and comfortable environment that encourages physical activity.<br><br>The installation of benches will provide resting spots for pedestrians, supporting those with mobility challenges by enabling them to walk more frequently and cover longer distances. Public art will be installed throughout the study area, which will improve overall quality of life and social cohesion within neighbourhoods by enhancing perceptions of safety. | Road space reallocation will create more places for people, which will include seating provided near schools, parks and other people focussed places such as retail centres. Street trees and public art will be delivered as part of the permanent scheme, as these elements cannot be effectively trialled during the temporary phase. |
| Street signs | New street signs will improve wayfinding within the study area, helping cyclists, pedestrians, motorists, and bus drivers navigate the route more easily. Improved signage will help reduce the likelihood of accidents and confusion and ensure that all users are aware of the rules, contributing to a safer environment for active travel. | The permanent scheme will incorporate additional street signage. |

### 2.2.2 Appraisal Methodology

The economic appraisal and VfM assessment have been undertaken in line with TAG, which sets out the requirements of HM Treasury's Green Book for transport schemes. The Green Book is used across Government for investment decisions through the option identification, selection and appraisal processes. At the heart of the approach to assessing the VfM potential of EBLN options is the cost-benefit analysis (CBA) that enables the Net Present Value (NPV) and the Benefit-Cost Ratio (BCR) to be estimated. The economic appraisal was conducted in accordance with the approach set out in the ASN appraisal methodology technical note submitted to and approved by WECA.

**Table 2-4** presents the definitions of the DfT VfM categories, taken from the DfT VfM Framework published in November 2024. However, it is important to note that the overall VfM assessment is based on more than just the BCR. Recent updates to the HM Treasury Green Book reaffirm that wider considerations such as the strategic fit must also be accounted for when making a judgement on value for money.

Table 2-4: DfT VfM categories

| VfM Category | Implied By |
|---|---|
| Very High | BCR greater than or equal to 4 |

| VfM Category | Implied By |
|---|---|
| High | BCR between 2 and 4 |
| Medium | BCR between 1.5 and 2 |
| Low | BCR between 1 and 1.5 |
| Poor | BCR between 0 and 1 |
| Very Poor | BCR less than 0 |

### 2.2.3 Parameters

A summary of the appraisal assumptions which have been used across the AMAT, PEAT and SSAT models are summarised in **Table 2-5** below.

**Table 2-5: Key appraisal assumptions**

| Assumption Category | Value |
|---|---|
| Opening year of all elements | 2028 |
| Appraisal period | 40-year period from 2028 to 2067<br><br>Sensitivity tests of 10-year and 20-year appraisal periods have been conducted |
| Discount rate | All results are in present values, discounted to 2023 using a rate of 3.5% for first 30 years and 3.0% thereafter (1.5% and 1.29% for health benefits) |
| Price base | All results are presented in 2023 prices using the TAG GDP deflator inflation index |
| Construction year | All capital costs are assumed to be incurred between 2025-2028 |
| Optimism bias | Capital costs: 20% (TAG Unit A1.2) |
| TAG Databook | V2.01 (May 2025) |
| Annualisation factor (from single day to full year) | 253, reflecting the number of weekdays in a year |

#### *2.2.3.1 Appraisal Period*

The appraisal period for the scheme is 40 years. This is consistent with the EBLN Outline Business Case. Sensitivity testing of 10 and 20 years have been included in the Economic Case to allow for a level playing field across other active travel programmes and strategies.

#### 2.2.3.2 Scheme Opening Year

The scheme's opening year is planned for 2028, with all construction activities scheduled to take place between the first quarter of 2026 and March 2028 to align with CRSTS 1 funding requirements.

#### 2.2.3.3 Scenarios

When conducting a cost benefit analysis, a base case must be articulated, with which to compare the project case. It represents the scenario in which the interventions are not put in place and thus can be referred to as the 'Do Minimum' scenario. The economic appraisal will therefore compare the value for money of the scheme to the 'Do Minimum' scenario through appraising the 'Do Something', where the Liveable Neighbourhood interventions are in place.

### 2.2.4 Data collection

At the OBC stage, highway and traffic impacts were assessed using the PEAT, informed by VISSIM models developed for AM, PM and Saturday peak periods. Outputs from the 'Do Minimum' and 'Do Something' scenarios were used to monetise journey time impacts.

For the FBC appraisal inputs are based on observed evidence from the EBLN trial scheme, which provides a more reliable representation of post-intervention conditions including active travel demand as well as highway demand. The permanent scheme incorporates several minor design updates, reflecting feedback from the trial, with some elements being added and others removed. These updates, outlined in **1.10.2**, have been assessed and are not considered significant enough to alter expected outcomes. On this basis, the evidence from the trial scheme remains appropriate for use in the appraisal.

The following sections outline the data collected for each mode and how these have been factored for use in the appraisal tools.

#### 2.2.4.1 Growth factors

As data is sourced from multiple years, TEMPro[32] growth factors have been applied to factor all baseline datasets to the 2028 scheme opening year. The factors were calculated for the core analysis average weekday as an average across the relevant TEMPro Medium Super Output Areas (MSOA) E02003040 and E02003044, which comprise the majority of the study area. A summary of factors is provided in **Table 2-6**.

Table 2-6: TEMPro growth factors for adjusting to 2028

| Mode | 2022 base factor | 2024 base factor | 2025 base factor |
|---|---|---|---|
| **Walking** | 1.0052 | 1.0049 | 1.0047 |
| **Cycling** | 1.0032 | 1.0030 | 1.0029 |
| **Bus** | 0.9899 | 0.9959 | 0.9990 |
| **Car** | 1.0561 | 1.0343 | 1.0238 |

[32] TEMPro (Trip End Model Presentation Program): tool which presents the National Trip End Model (NTEM) dataset in line with DfT's TAG to forecast trips up to future years

The permanent scheme design will operate nearly identical to the scheme trial temporary measures, and therefore no additional uplifts are applied to the observed trial scheme data. Whilst new or higher quality permanent infrastructure may encourage further active travel trips, this cannot be guaranteed and therefore, the conservative approach of using scheme trial data has been selected.

For example, the permanent scheme includes improvements on Crews Hole Road which will benefit existing and future users of River Avon Trail - the benefits from these additional improvements have not been included in the benefits appraisal and the benefits assessment is therefore considered conservative.

Similarly, no additional factors have been applied to account for any later stage modal share changes which may occur as the scheme matures. As per the literature review presented at OBC stage, observations from case studies elsewhere in the UK suggests that active travel usage continues to grow as the scheme matures. By excluding further modal shift a conservative and robust BCR is produced. Where relevant, additional positive impacts of the permanent scheme will be qualitatively reported on within this report.

#### *2.2.4.2 Active Modes*

**OBC methodology**

Baseline data was previously collected in March 2022 during OBC preparation, through a range of data sources, including Automatic Number Plate Recognition (ANPR), Automatic Traffic Counts (ATC) and Manual Classified Counts (MCC). The ANPR data was used to identify distinct journeys through the study area and combined with mode share data from the University of Bristol All Trips study[33] to determine overall cycle, pedestrian and public transport trips. A further assumption that all public transport journeys include a walk to a bus stop/station further added to the existing walking mode share. The established trips were then compared against the MCC and ATC count data to validate the methodology against observed data.

**FBC approach**

In Spring 2024, 27 Vivacity counters were installed in the EBLN study area to provide continuous automated monitoring. Some irregularities and installation issues render the first surveyed months less reliable. Data accuracy stabilised from September 2024 and therefore, comparisons can be made between data collected in October 2024 – pre implementation of scheme trial – with October 2025 – post implementation of scheme trial. The direct comparison of the first two weeks of October (2/10/2024 – 16/10/2024 and 1/10/2025 – 15/10/2025, respectively) removes seasonality influences and weather data suggests similar conditions over both periods. Data has been curtailed to the 12-hour period between 7AM and 7PM, as erroneous detections were observed by BCC during nighttime hours, which would have inflated pedestrian and cycle counts.

For walking movements, percentage uplifts across all sensors were calculated to understand the change in movement patterns after the introduction of the trial.

[33] Swan, A. et al. “Bristol Net Zero by 2030 – A Modal Share for a Sustainable Transport System” (May 2020). Available at: Bristol Net Zero by 2030

For cycling, the analysis focussed on the Wesley Way Cycle route, which is the key east-west cycle route through the study area and best aligns with the corridor appraisal approach outlined within AMAT. The observed uplifts are summarised in **Table 2-7**. In order to capture utility and commuting journeys, the average Tuesday to Thursday was selected as the representative average weekday. This best reflects post-covid commuting patterns, where home working options have resulted in Tuesday, Wednesday and Thursday becoming core commuting days, with Mondays and Friday having higher volatility. This approach could result in a minor uplift in the BCR compared to a Monday to Friday average, however, the effect is considered modest.

Table 2-7: Active mode uplifts observed during the trial

| Mode | % uplift weekday (Tuesday to Thursday average) | % uplift weekend (Saturday to Sunday average) | % uplift 7-day average |
|---|---|---|---|
| **Walking** | 6.8% | 5.4% | 4.0% |
| **Cycling (Wesley Way)** | 60% | 24% | 52% |

As Vivacity counters do not track users through the study area, a screenline assessment would typically be used instead to estimate total trips within a study area. By identifying an east-west line and a north-south line along which trips are counted on links, this type of assessment avoids double counting of users. Whilst an east-west screenline could be set up along Blackswarth Road, no clear north-south countline could be identified. Additionally, there were concerns around the reliability of the sensors at the Blackswarth Road / Beaufort Road / Pile Marsh junction which reported significantly different percentage uplifts along Wesley Way compared to the remaining route count sites (+1% and +208%, respectively, compared to other sensors ranging between +37% and +84%, with an average of +63% for the average Tuesday to Thursday). Therefore, the decision was made to use the baseline ANPR methodology used in the OBC – as outlined above – to estimate the 'do minimum' and 'do something' scenario trips. For cycling trips, this methodology was adjusted to only cover Wesley Way. **Table 2-8** provides a summary of the trip data used within this economic appraisal.

Table 2-8: Active modes appraisal data summary

| Scenario | Trip data used in appraisal |
|---|---|
| **Do Minimum** | OBC trip data uplifted using the TEMPro 2022 factor (**Table 2-6**) |
| **Do Something** | Do minimum, uplifted by the observed increase in the relevant active mode movements during the trial as per **Table 2-7**. |

#### *2.2.4.3 Bus*

Bus patronage data has been provided by First Bus via WECA and the dataset includes the following:

Table 2-9: Bus patronage data availability

| Service | Data coverage period |
|---|---|
| **5** | May to September 2024 and 2025 |
| **16** | May to September 2025 only (service was introduced in April 2025) |
| **42,43,44,45** | 2/10/2024 – 16/10/2024 and 1/10/2025 – 15/10/2025 |

Patronage data for service 41 was requested, however this was not available for the comparative period and therefore could not be included in the analysis.

Where bus patronage data has been supplied, the standard comparative periods (2/10/2024 – 16/10/2024 and 1/10/2025 – 15/10/2025) have been used for analysis. For services 5 and 16 the last two weeks of September (11/09/2024 – 25/09/2024 and 10/09/2025 – 24/09/2025) were used to best align with the Wednesday-to-Wednesday analysis of the standard comparative period.

Patronage data is collected across three-hour intervals and therefore, the peak hour was established through vehicle traffic volumes instead, resulting in an 8-9AM peak hour and 5-6PM peak hour. A conservative assumption was made that of the three-hour data collection interval which encapsulates the peak, one third of the recorded patronage volume occurs during the peak hour.

As the patronage data and any analysis derived from this commercially sensitive, the following SSAT inputs has been redacted before publication across all periods and scenario[34]s:

- Demand: number of bus trips (number of trips)
- Time: total current bus travel time (person hours)

In the comparative period, bus ticket prices for bus journeys have increased which may have impacted travel behaviour.

Table 2-10: Bus ticket prices

| Ticket Type | October 2024 | October 2025 |
|---|---|---|
| Adult Single | £2.00 | £2.50 (up to £3.00 for longer trips) |
| Adult Return | £3.50 | Approx. £5.00–£6.00* |
| Child Single | £1.00 | £1.00 |
| Child Return | £2.00 | Approx. £2.00–£3.00* |

[34] A non-redacted version is available upon request, for parties that sign the required Non-Disclosure Agreement (NDA).

*Please note that return fares were phased out between the two comparative periods with users having to purchase two single tickets.

Bus journey time data was sourced from the DfT's Analyse Bus Open Data Service (ABODS) platform. The assessment uses the Church Road corridor and averages the mean journey times across the inbound and outbound directions.

#### *2.2.4.4 Highway Users*

A range of data sources have been used to evaluate the post scheme trial implementation for the purpose of the economic appraisal and include:

- Vivacity Counters: Motorised vehicle data for the comparative period. Analysis includes a review of the change in the quantum of traffic on internal roads, external roads and boundary roads. As with the active travel counts, these were factored to a 2028 base year using the factors outlined in **Table 2-6**.
- SCOOT traffic signal data: additional count points to supplement the assessment of vehicle volumes on the wider network. It should be noted that these sites are relatively limited beyond Church Road, which is already covered through the Vivacity analysis. Additionally, the intention was to sum the counters on Easton Road and Russell Town Avenue to better understand flows on Whitehall Road. However, the Easton Road counters reported zero values for the 2024 comparative period and thus could not be used. Therefore, only the Russell Town Avenue 'spur' could be assessed. Where data was available, this was factored to a 2028 base year using the factors outlined in **Table 2-6**.
- TomTom Move: journey time analysis on selected through-routes across the scheme implementation area, covering perimeter, boundary, and wider network roads as well as residential roads that had been flagged by residents.
- STATS19: due to a lag in data reporting, road traffic accident casualty data was only provided for the period September 2022 to August 2025. Considering that the trial construction was fully completed in June 2025, this data is insufficient to complete a robust statistical analysis.

A summary of considered routes and count locations is shown in **Figure 2-1**.

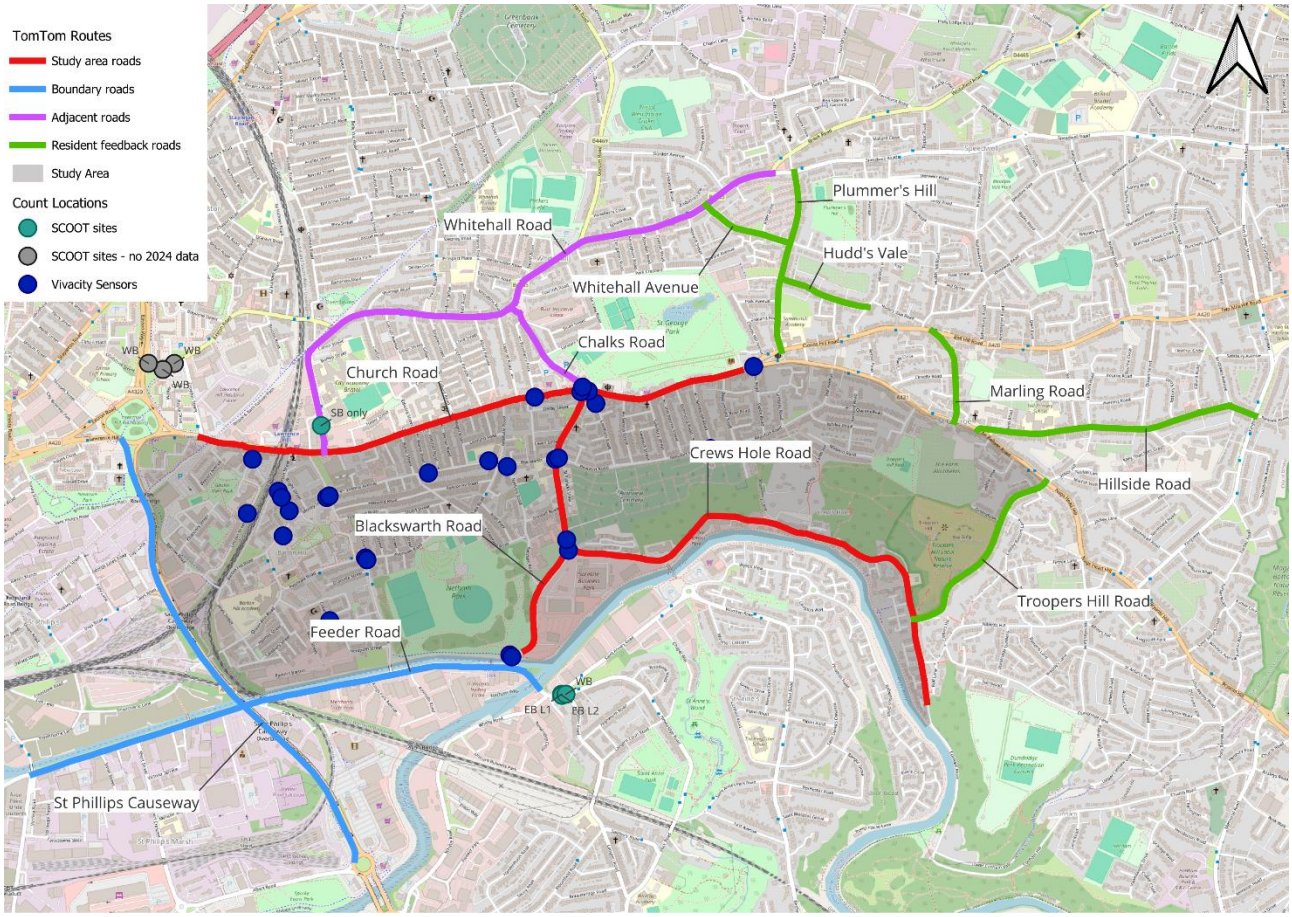


Figure 2-1: TomTom Move, Vivacity, and SCOOT sites

For the SSAT, calculation of overall vehicle hours and vehicle kilometres is required. The following routes, where both journey times and traffic volumes are available, have been included:

- Feeder Road WB;
- Feeder Road EB;
- Church Road WB;
- Church Road EB;
- Blackswarth Road NB;
- Blackswarth Road SB;
- Whitehall Road WB;
- Chalks Road SB;
- Chalks Road NB;
- Crews Hole Road WB; and
- Crews Hole Road EB.

## 2.3 Economic and Social Impacts

This section covers the approach to be adapted to the key appraisal aspects covered in the Appraisal Summary Table (AST) provided in **Appendix G**.

The benefits appraisal comprises of three components; all aligned with TAG:

- A quantification of monetised benefits of Active Travel elements, using the Active Mode Appraisal Toolkit (AMAT) including facilities as part of the public realm and ambience improvements such as cycling storage and benches.
- Quantification of the journey time and distance impacts for highways and bus users using the Simplified Scheme Appraisal Tool (SSAT) in line with TAG Unit A1.3.
- Qualitative assessments for other economic, social and environmental impacts.

### 2.3.1 Quantitative and Monetised Benefits

AMAT has been used to capture the active travel impacts of the EBLN, including mode shift, health benefits, and improvements in active travel journey quality. In parallel, an SSAT assessment has been undertaken for the FBC, providing a proportionate method for monetising the highway and bus user impacts associated with smaller-scale transport interventions.

PEAT has been utilised in Greater Manchester for DfT funded schemes successfully for several years and has also been applied to this project. A PEAT assessment has therefore been added as a sensitivity test to assess the wider impacts of place-based interventions. This provides a clear differentiation between the direct benefits included in TAG and the additional benefits arising from public realm and ambience interventions.

#### *2.3.1.1 Active Modes Appraisal Toolkit (AMAT)*

The purpose of the economic appraisal is to determine the VfM category of the proposed interventions. The quantification the scheme costs and benefits will be compared to assess whether the project represents an efficient allocation of resources.

The economic appraisal for EBLN uses AMAT, a spreadsheet-based model that quantifies benefits from walking and cycling interventions. The main inputs for AMAT are the number of trips before and after the scheme delivery as well as scheme specifications, and the output produces benefits generally split into three categories:

- Health improvements from increased levels of physical activity in terms of reduced mortality risk and lower work absenteeism;
- Improvements to journey quality with the perception of a safer or pleasant journey whilst using walking and cycling infrastructure; and
- Impacts arising from modal shift away from cars and taxis, which generate changes in marginal external costs—including congestion, greenhouse gas emissions, air quality, noise, accidents, infrastructure maintenance, and indirect tax revenues—due to reduced car and taxi kilometres travelled.

The model uses inputs related to the proposed intervention, including the number of walking and cycling trips with and without the intervention, as well as the walking and cycling infrastructure planned as part of the scheme. In addition to these inputs, the model incorporates pre-populated benchmarks based on standard practice, such as average cycling and walking speeds (15 km/h and 5 km/h respectively) from the National Travel Survey (NTS). Average trip lengths are taken from South West-specific NTS data. The proportion of an average cycling trip expected to use the intervention is calculated by dividing the length of the Wesley Way cycle corridor by the average cycling trip distance. For walking trips, the proportion is estimated as half the length or width of the scheme area (assuming most trips are to the midpoint) divided by the average walking trip length.

#### *2.3.1.2 Programme Entry Appraisal Toolkit (PEAT)*

Like AMAT, PEAT also uses existing and forecast data on pedestrian and cycling movements to calculate a range of impacts resulting from an intervention. However, it differs from AMAT by also covering detailed quality and public realm improvement measures for walking and cycling routes for ambience benefits. The range of impacts of an intervention which can be calculated in PEAT are:

1. Noise impacts;
2. Local Air Quality changes;
3. Greenhouse Gases impacts;
4. Journey Quality impacts;
5. Physical Activity impacts;
6. Changes in the rate of collisions;
7. Severance impacts;
8. Wider Public Finances impacts (Ind. Tax Rev); and
9. Impacts arising from transport efficiencies.

Active Neighbourhoods in Greater Manchester have used PEAT across the early, intermediate and final stages of project appraisals[35]. In addition to the inputs required by the AMAT tool—such as the number of walking and cycling trips with and without the intervention—PEAT requires more detailed information on the type of intervention proposed. For walking, this includes elements like crossings, street security, signage, pavements, and amenities, as well as visual enhancements such as lighting, public art, street trees, planting, and benches. For cycling, the intervention details can include cycle parking, routes, surface quality, and provision measures such as lanes, signage, and drainage. PEAT also allows users to specify the average number of minutes per trip during which passengers are exposed to each attribute.

#### *2.3.1.3 Small Scheme Appraisal Toolkit (SSAT)*

Following engagement with WECA Grant Assurance team, it was also recommended to apply the WECA Small Scheme Appraisal Toolkit. The toolkit can provide an estimate of the Present Value of Benefits (PVB), Present Value of Costs (PVC) and Benefit Cost Ratio (BCR) of a scheme based on the forecast impacts in the scheme opening year. Depending on the scheme type and the inputs provided, the toolkit will produce a monetised assessment of the following impacts:

1. Highway journey time
2. Highway vehicle operating cost
3. Bus journey time
4. Bus journey quality
5. Noise
6. Accidents
7. Air quality
8. Greenhouse Gases
9. Indirect tax

To estimate the scheme's benefits, the toolkit requires demand inputs for both the Do-Minimum and Do-Something scenarios. For EBLN, bus-related data includes the number of bus trips, total current bus travel time, and fare per passenger for each scenario. Highway data covers total travel

[35] Wigan Metropolitan Borough Council, *Freedom of Information response, ref. 14675: "Toucan crossing proposals on Spencer Road West"*, FOI Disclosure Log (January 2023). Available at: 14675.pdf

time or delay, total vehicle travel distance, and the number of highway trips for both scenarios. All inputs must reflect conditions in the scheme's opening year. Additionally, a peak period expansion factor is applied to convert peak hour demand into total peak period demand. For example, if the AM peak hour (07:00–08:00) represents an average hour within the peak period (07:00–10:00), the factor would be 3.

### 2.3.2 Qualitative Assessment

A qualitative assessment of the EBLN scheme interventions has been undertaken to identify the wider, non-measurable benefits that the scheme could deliver beyond those quantified through the tools listed above. The qualitative assessment adopts a standardised seven-point scoring system, ranging from Large Adverse to Large Beneficial, with Neutral as the midpoint. This scoring framework aligns with the recommended format for Appraisal Summary Tables in TAG. Each impact category is assessed by comparing the effects of the proposed option against the Do Minimum scenario, where the study area remains unchanged. The seven-point categories are:

- Large Adverse;
- Moderate Adverse;
- Slight Adverse;
- Neutral;
- Slight Beneficial;
- Moderate Beneficial; and
- Large Beneficial.

This structured approach allows a consistent comparison of impacts across different assessment categories, where both positive and negative effects relative to the baseline conditions are clearly identified. The qualitative assessment includes the following sub-categories of impacts:

- Economic Impacts;
- Social Distributional Impacts;
- Environmental Impacts; and
- Public Accounts

The qualitative assessment results are summarised in **Table 2-11**. A more detailed description for each impact category is included in the Appraisal Summary Table in **Appendix G**. In addition to assessing overall scheme impacts, the qualitative analysis also considers social and distributional effects, focusing on how vulnerable groups within the study area may be affected by the proposed ENLN interventions. This includes residents experiencing deprivation, as well as elderly and disabled individuals, ensuring that equity and inclusivity are central to the evaluation.

**Table 2-11: Qualitative Assessment Framework**

| Category | Scheme Impacts | Do Something |
|---|---|---|
| Economy | Business users and transport provider impact | Slight Adverse |
| | Wider Impacts | Moderate Beneficial |
| Environmental | Air Quality | Slight Beneficial |

| Category | Scheme Impacts | Do Something |
|---|---|---|
| | Greenhouse Gases | Moderate Beneficial |
| | Noise | Moderate Beneficial |
| | Landscape | Slight Beneficial |
| | Townscape | Slight Beneficial |
| | Historic Environment | Neutral |
| | Biodiversity | Slight Beneficial |
| | Water Environment | Slight Beneficial |
| Social | Commuting and Other users | Slight Beneficial |
| | Physical activity | Large Beneficial |
| | Journey quality | Large Beneficial |
| | Accidents | Slight Beneficial |
| | Security | Slight Beneficial |
| | Access to services | Slight Beneficial |
| | Severance | Neutral |
| Public Accounts | Cost to Broad Transport Budget | Moderate Beneficial |
| | Indirect Tax Revenues | Slight Adverse |

### 2.3.3 Impacts on the economy

This section includes an overview of impacts of the economy that has been considered in the economic appraisal.

#### *2.3.3.1 Business users and transport provider impact*

Business users, including those travelling by taxi, private vehicles, and goods vehicles, may experience slight adverse impacts due to the introduction of modal filters at Glebe Road, The Avenue, Beaufort Road/Northcote, Wicket Lane, Ducie Road Bridge and Lincoln Street as well as bus gates on Avondale Road/Marsh Lane and Pilemarsh. The addition of a one-way system on Derby Street will also slightly adversely impact private vehicle users because it will require longer diversion routes and reduce the ability to travel directly through the area. These changes will redirect motorised traffic to perimeter roads such as Church Road, Summerhill Road and Feeder Road, reducing permeability through residential streets. This could cause additional journey times for business users that rely on these routes during the day such as uber or delivery drivers. Those business users whose trips start or end within the internal area of the study area may also face slight

disbenefits such as increased journey times, fuel costs and stress levels due to rerouting. However, the introduction of one-way streets is also designed to reduce conflict points and prevent unnecessary spillover onto main roads, helping to manage traffic flow more effectively.

The EBLN internal area is primarily residential, with several schools (including Barton Hill Academy, Bristol Futures Academy, Redfield Educate Together Primary, St George Preschool, and St Patrick's Catholic Primary School), parks such as Netham Park and Troopers Hill, allotments, and Avonview Cemetery. Local businesses—such as restaurants, corner shops, pharmacies, and mechanics—are dispersed throughout the area, with a small cluster around Marsh Lane and Avonvale Road, alongside a small industrial park located on Blackswarth Road and the main local high street on Church Road. As this industrial zone sits on the edge of the study area, it is unlikely to experience significant impacts from the scheme. Church Road, one of the external roads with through traffic, features a major cluster of shops, including hospitality businesses, retail outlets, and international delis. Overall, the anticipated effect on businesses on Church Road is minimal, with the impact on business users assessed as slight adverse. Data from sources such as PlaceInformatics can support monitoring this in the next stage of Monitoring and Evaluation.

#### *2.3.3.2 Wider Impacts*

The permanent scheme includes a range of community assets such as street trees, low-level planting with improved drainage, street art and wayfinding and small public spaces designed to improve the public realm across the neighbourhood. These improvements are expected to have a positive impact on both land and property values within the study area. By creating a more attractive, safe and green streetscape, the scheme could increase the desirability of the area for residents and businesses. The pedestrianisation of local streets is likely to increase footfall, leading to higher retail activities, making the area more attractive for new businesses, particularly those in hospitality and services. Enhanced cycling and e-scooter parking provision will further support this by improving accessibility and encouraging active travel. These changes can boost the desirability of the area for cafés, restaurants, and independent shops, potentially creating a vibrant local economy similar to Whiteladies Road in Clifton, which benefits from high footfall and a strong mix of retail and leisure uses.

**Figure 2-2** shows that parts of the study area fall within the top 10% of the most deprived Lower-layer Super Output Areas (LSOAs) in England under the Living Environment Deprivation Index, which measures housing quality and outdoor factors such as air quality and road safety. Poor living environments often limit economic potential by reducing attractiveness for investment and contributing to health inequalities. Improving outdoor spaces and environmental quality can therefore unlock significant wider benefits—enhancing property values, stimulating business activity, and improving public health. Large parts of the study area are also within the top 30% of deprived LSOAs in England for living environment, underlining the scale of opportunity to deliver transformative economic and social outcomes through targeted interventions. Overall, the impact on the wider economy is expected to be moderate beneficial.

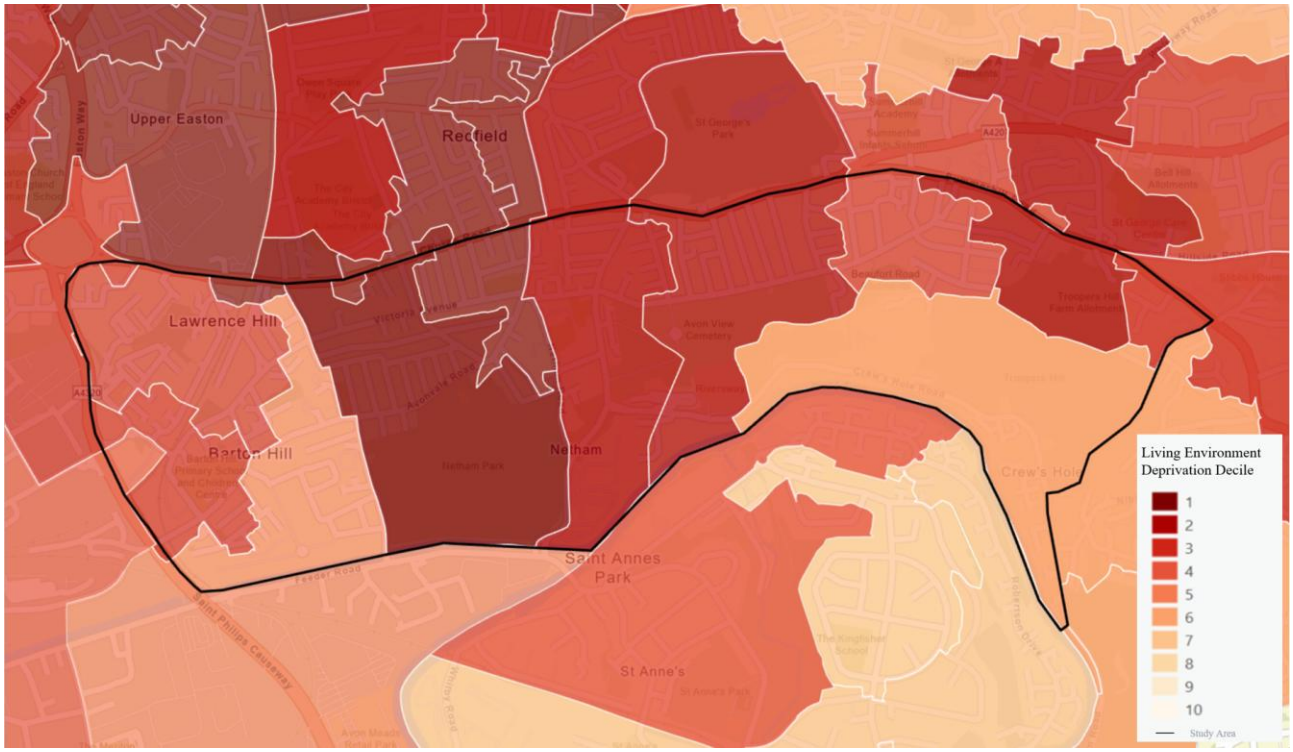


Figure 2-2: Living Environment Deprivation Decile 2025 (Source: ONS)

### 2.3.4 Environmental impacts

This section includes an overview of economic impacts considered in the economic appraisal.

#### *2.3.4.1 Air Quality*

The introduction of low-level planting, pocket parks, and street trees is expected to have a slight beneficial impact on local air quality by absorbing and assimilating pollutants. Research indicates that trees can actively remove pollutants from the urban atmosphere by trapping some pollutants on their leaves. [36]. However, because trees can also slow down the movement of air, they may reduce how quickly pollution disperses. These two effects balance each other out, so while the overall impact is still positive, the improvement in air quality is expected to be modest. Furthermore, reduction in through-traffic on local streets where people live and children play will likely have a positive impact on local air quality. There may be offset by a slight increase in pollutants on external road. There are diffusion tubes installed to monitor $NO_x$ at strategic locations across the study area, but due to data processing lead times and analysis required in external laboratories, the data from the scheme trial period has not been analysed at the time of this document's submission. For future Monitoring and Evaluation, this data will be available to assess longer-term impact on air quality.

#### *2.3.4.2 Greenhouse Gases*

A shift from car travel to active modes is expected to reduce greenhouse gas emissions by lowering $CO_2$ and Nitrogen Dioxide ($NO_2$) output. Urban vegetation, such as trees and green spaces, will further help absorb carbon dioxide and mitigate the urban heat island effect, creating a moderate positive impact. In the short term, emissions may rise slightly due to rerouting and longer trips around the EBLN area. However, as more residents adopt walking, cycling, and public transport for

[36] Grylls, T., & van Reeuwijk, M. (2022). How trees affect urban air quality: It depends on the source. *Atmospheric Environment*, 290, 119275. Available at: How trees affect urban air quality: It depends on the source - ScienceDirect

local journeys, fossil fuel emissions are forecast to decline. The cut in $NO_2$ levels, will improve air quality and deliver major public health benefits by reducing respiratory and cardiovascular risks. Lower traffic volumes lead to smoother driving conditions, improving fuel efficiency for remaining vehicles and reducing emissions per mile. Additionally, fewer cars mean less non-exhaust pollution from tire and brake wear, which is a major source of particulate matter in urban areas. Research indicates that replacing just one car trip per day with cycling can save an average of 0.5 tonnes of $CO_2$ annually per person[37].

#### *2.3.4.3 Noise*

The anticipated reduction in vehicle traffic from the scheme is likely to lower noise levels within the project area. On boundary roads, overall traffic volumes have generally decreased, reflecting both the influence of the EBLN measures and a wider decline in background passenger vehicle trips. The observed trend in EBLN trial scheme and the expected longer-term shift from motorised travel towards active modes and public transport have suggested that noise levels on boundary roads are anticipated to reduce over time. Traffic noise is known to negatively affect health by causing stress, sleep disturbance, and annoyance, which can lead to serious conditions such as cardiovascular disease, high blood pressure, and diabetes. Long-term exposure can also impact mental health, contributing to anxiety and depression, and affect children's cognitive development and behaviour. Research by the UK Health Security Agency (UKHSA) found that in 2018, approximately 100,000 Disability-Adjusted Life Years (DALYs) were lost in England due to road traffic noise, primarily from chronic annoyance and sleep disturbance, followed by stroke, ischemic heart disease, and diabetes[38]. Reducing traffic noise will particularly benefit vulnerable populations who are more susceptible to these health impacts. The overall assessment concludes a moderate beneficial impact on noise.

#### *2.3.4.4 Landscape*

The landscape impact of the EBLN scheme is expected to be slight beneficial. There are expected to be improvements to the landscape through the delivery of pocket parks and street art. Pocket parks are proposed in the permanent scheme along Victoria Avenue, Ducie Road/Barton Hill Road, Barnes Street and Cobden Street. These have been shown to contribute to ecological diversity and sustainability but also act as catalysts for community engagement and social well-being[39]. By providing much-needed habitats for a variety of flora and fauna, these small green spaces act as mini ecosystems within the concrete jungle. They offer a haven for birds, insects, and small mammals, thereby not only promoting biodiversity but also aiding in the preservation of local species. Moreover, the presence of vegetation in pocket parks plays a vital role in air purification. Plants in these parks absorb harmful pollutants and carbon dioxide, acting as natural air filters. This process is particularly significant in urban areas, where air pollution remains a persistent and serious public health concern. The presence of greenery also aids in temperature regulation, creating cooler micro-climates. The highway improvements will mostly be within the existing carriageway and thus will not lead to any undue negative landscape impact.

[37] Creutzig, F. **et al.** (2021). Demand-side solutions to climate change mitigation consistent with high levels of well-being. *Global Environmental Change*, 68, 102224. Available at: https://www.sciencedirect.com/science/article/abs/pii/S0959378021000030

[38] UK Health Security Agency (2023). *Noise pollution: Mapping the health impacts of transportation noise in England*. Available at: https://ukhsa.blog.gov.uk/2023/06/29/noise-pollution-mapping-the-health-impacts-of-transportation-noise-in-england/

[39] Hui Zhang and Gregory Kiyai, "Pocket Parks in Urban Design: Enhancing Urban Environment and Community Well-being," *Highlights in Art and Design* 5, no. 3 (2024). Available at: https://www.researchgate.net/publication/380155250_Pocket_Parks_in_Urban_Design_Enhancing_Urban_Environment_and_Community_Well-being

#### 2.3.4.5 Townscape

The development of a liveable neighbourhood is expected to lead to a slight beneficial impact on townscape. Townscape refers to the overall character and composition of a town, encompassing its buildings, open spaces, and the relationships between them. The expected reduction in traffic flow and vehicle speeds within the scheme area and the improvement of safety and convenience for active travel users is likely to lead to a more pleasant, attractive, and liveable environment. The public realm improvements including pocket parks, trees and benches will lead improve the aesthetic appeal and environmental quality of the study area. Better quality walking, cycling, and wheeling routes will create better connections to key services, education, and employment opportunities, making the town centre more accessible and inclusive for all social groups, including those without car access.

#### 2.3.4.6 Historic Environment

The impact of the scheme on the historic environment is limited and the overall impact will be neutral. The scheme is not in a historically sensitive area, and the majority of interventions are located either within or in close proximity to the existing carriageway.

#### 2.3.4.7 Biodiversity

The scheme is expected to contribute positively to biodiversity through the delivery of trees, low-level planting and pocket parks. These small areas of public green space will provide food and habitat for local wildlife. Trees and vegetation also serve as primary habitats for urban wildlife and are undoubtedly important for maintaining populations of plants and insects. Small urban green spaces in high density, well connected and distributed across the urban landscape can also support the taxonomic and functional diversity of plants and animals through the provisioning of food and shelter[40].

#### 2.3.4.8 Water Environment

The delivery of pocket parks, plus street tree planting, is expected to contribute positively to the local water environment through helping with the reduction of stormwater runoff and providing areas for Sustainable drainage systems (SuDS). The pocket parks and street greening will help absorb, store, and slow rainwater to help reduce surface water flooding while creating a healthier, more inviting urban environment. The overall impact on the water environment is expected to be slightly beneficial.

### 2.3.5 Social distributional impacts

This section includes an overview of social distributional impacts considered in the economic appraisal. A screening of distributional impacts was undertaken at the OBC stage (**Appendix H**) in accordance with TAG Unit A4.2. This assessment has since been expanded and refined for the Full Business Case, with additional analysis incorporated where proportionate and supported by available evidence.

#### 2.3.5.1 Commuting and other users

Commuters travelling by private motorised vehicles would experience a negative highway impact and increased journey times due to the modal filters and bus gates, which physically prevent

[40] Nadja Kabisch & Monika Egerer, "Resetting the clock by integrating urban nature and its biodiversity into the 15-minute city concept," *Nature Communications* 16, no. 1 (2025). Available at: https://www.nature.com/articles/s41467-025-65170-8

through-movement of motor vehicles rerouting these trips onto less direct routes. Several of the modal filters will be enforced using cameras, such as those along The Avenue and Ducie Road Bridge. Drivers could receive fines if they pass through restricted points. Those commuting by bus will experience improved journey times with the bus gate installations reducing conflict between private vehicles and goods vehicles. The enhanced public realm will also improve the experience for those walking to bus stops within the study area, making the overall commuter journey by bus more pleasant. In addition, those commuting to work by bike will experience substantially better journey quality, more direct routes and better safety as a result of the modal filters. These measures reduce through-traffic on residential streets, creating calmer, less congested environments that make cycling both safer and more enjoyable.

Installing cycle hangers will incentivise more people to cycle to work by providing a safe and convenient storage facility for bikes. More commuters cycling to work could make it safer for everyone due to "safety in numbers" and drivers becoming more accustomed to interacting with cyclists. Preventing cars and other large vehicles using residential streets as a short-cut will increase safety and create a more pleasant environment for those walking to work. While the early stages of the scheme may cause disruption due to rerouting and road closures, a mode shift is expected over the scheme's lifecycle. In the long term, commuting and other users would prefer traveling by walking, cycling, and bus that will experience benefits and improvement to their journeys.

#### *2.3.5.2 Physical Activity*

The scheme promotes walking and cycling by creating a more attractive and accessible environment, encouraging people to choose active travel for both commuting and leisure. A 2021 Healthy Street survey found that the safety of walking and cycling journeys are impacted by a lack of segregation on roads and at crossings, and poor-quality footways, highlighting the need for intervention.

Increased physical activity from walking and cycling is associated with a range of health benefits, including reduced obesity, lower absenteeism from work, and decreased risk of chronic conditions such as cardiovascular disease and type 2 diabetes. Greener streets, planters, and communal seating areas are likely to encourage residents to spend more time outdoors, including walking to nearby parks. A safer walking and cycling environment will also improve access to local healthcare services, such as the Wellspring Surgery within the EBLN study area.

**Figure 2-3** shows that a significant portion of the study area falls within the top 30% most health-deprived LSOAs in England, with areas around Barton Hill and Redfield ranking in the top 10%. This indicates that the proposed interventions could deliver meaningful health benefits for local residents. These improvements are likely to be especially valuable for vulnerable groups, such as children and older adults, who are less likely to rely on private vehicles.

Improving the walking environment and road safety could also help increase social participation and reduce exclusion for people who are unable to drive. National data from 2017/18 shows that around 33% of households in the lowest income quintile did not have access to a car, compared with just 5% in the highest income quintile[41]. By making it easier and safer for people without a car to reach

[41] Health Foundation, **"How transport offers a route to better health,"** by Nadya Mihaylova, February 2021. Available at: https://www.health.org.uk/reports-and-analysis/briefings/how-transport-offers-a-route-to-better-health

essential services, the scheme has the potential to help reduce health deprivation. Working age Disabled adults are also less likely than non-Disabled people to hold a driving license, which makes active travel important to enable many Disabled people to make journey when and where they want to[42]. Most public transport journeys also begin and end with active travel. However, it is recognised there are some individuals who rely on their vehicle, and they will have a disbenefit. Overall, the impact on physical activity levels is assessed as largely beneficial.

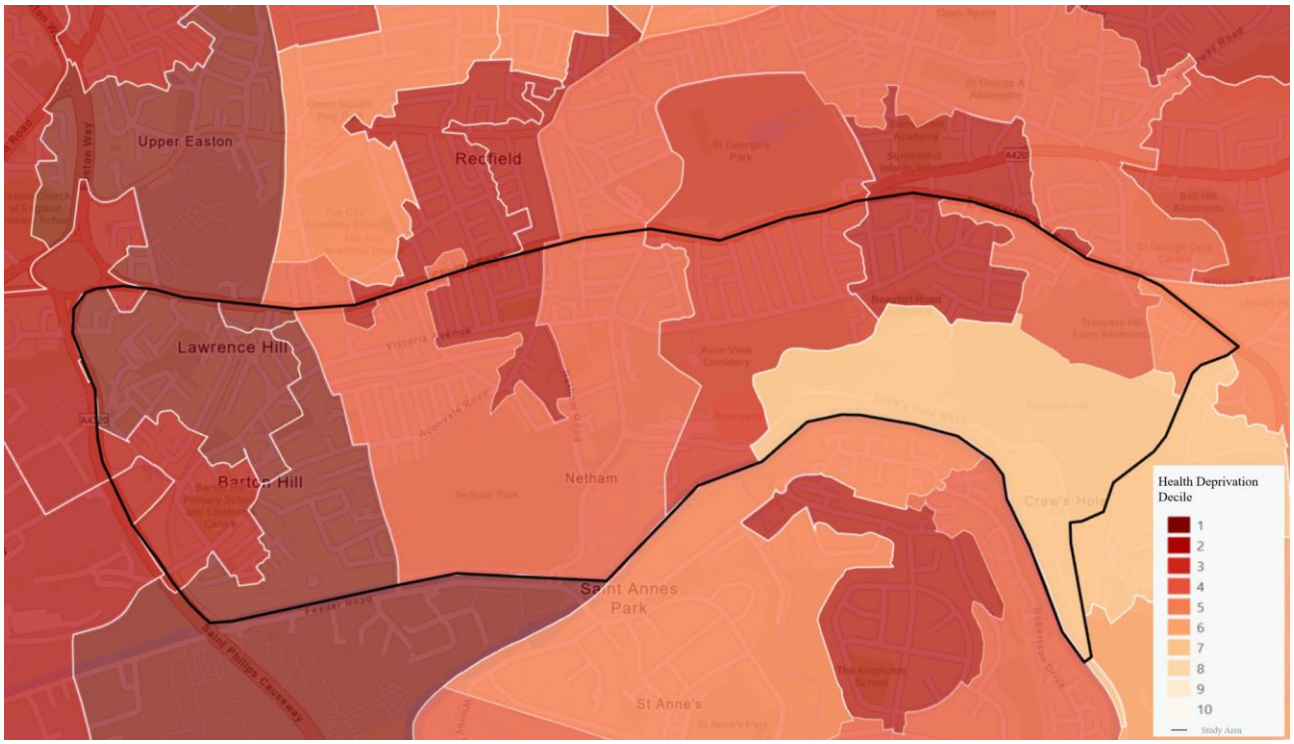


Figure 2-3: Health Deprivation Decile 2025 (Source: ONS)

#### *2.3.5.3 Journey quality*

The EBLN scheme is expected to have a largely beneficial impact on journey quality. Walking, cycling, and wheeling will become safer and more enjoyable due to reduced traffic volumes and lower speeds. Enhancements such as improved lighting and urban greening will further increase comfort and perceived safety for active travellers. By reducing congestion on internal roads, the scheme will also ease pressure on public transport, improving bus reliability and journey times. Better walking connections to bus stops will enhance the overall public transport experience.

Active travel users—cyclists, pedestrians, and scooter riders—will benefit from safer streets, reduced traffic danger, and greater freedom to use road space, making journeys easier and more pleasant. These improvements may encourage more people to walk to bus stops, creating a more positive experience for public transport users. However, some residents and vehicle users may face longer or more complex routes, and potentially higher costs due to indirect travel paths. Despite

[42] Wheels for Wellbeing. (n.d.). *Quick guide to accessible active travel*. Retrieved December 5, 2025. Available at: https://wheelsforwellbeing.org.uk/our-campaigns/resources/wheels-for-wellbeing-quick-guide-to-accessible-active-travel/#:~:text=Providing%20accessible%20active%20travel%20options,and%20end%20with%20active%20travel.

these drawbacks, the overall impact is expected to be strongly positive, as the benefits for active travel and public transport users outweigh the disadvantages for private vehicle users.

#### *2.3.5.4 Accidents and Collisions*

Safety for active travel users is expected to improve through the introduction of new crossings, bus gates, and modal filters, which restrict motorised traffic from short-cutting in the residential area. The associated accident benefits for pedestrians and cyclists are captured quantitatively within the transport externalities section of AMAT.

The re-routing of highway traffic away from residential streets will also have important safety implications for trips starting or ending within the EBLN area. Substantial reductions in vehicle volumes on local streets are expected to enhance safety for all road users, particularly for vulnerable users such as pedestrians and cyclists. However, increases in traffic on boundary roads may lead to short-term congestion and delay, which could have adverse impacts on motorised vehicles in terms inducing collision risk. The overall impact on accidents is considered slight beneficial.

#### *2.3.5.5 Security*

By creating safer and more attractive streets, it is expected that an increase in walking and cycling will naturally enhance passive surveillance. The introduction of pocket parks, trees, low-level planting and community art will lead to a stronger sense of safety and encourage more people to spend time outdoors, helping to reduce anti-social behaviour. Urban greening also helps facilitate social interactions, contributing to greater social cohesion, fostering a sense of community and strengthening bonds among residents. Additionally, improved lighting will further reinforce perceptions of safety and contribute to a welcoming environment. Pleasant green spaces can also promote mental health by providing therapeutic effects, such as reducing stress, anxiety, and emotional tension which could in turn reduce rates of crime. Cycle hangers and better cycle and e-scooter parking will also have an impact on the safety and security of cyclists. Providing a safe space for cyclists to leave their bikes will deter theft and protect bicycles from damage, providing peace of mind to cyclists.

#### *2.3.5.6 Access to services*

The improved cycling and walking links will provide improved access to services for residents within the scheme area who travel on foot or by bike. The liveable neighbourhood will increase permeability and inclusivity of the street network. For Disabled people who do not have access to a car, improvements to walking and cycling routes, including quieter, safer streets, will make it easier and more comfortable to reach essential services. Because active travel and public transport use far less road space than private vehicles, they also help reduce congestion. This benefits those who need to drive or be driven, including Disabled people, individuals with temporary impairments, and anyone transporting heavy items over long distances[43]. Modal filters also create quieter, safer routes for local residents thus improved access to services such as the schools in the neighbourhood, Wellspring Surgery, Barton Hill Trading Estate and community services like the Strawberry Lane Community Garden as well as outdoor spaces such as Troopers Hill Park and Netham Park.

[43] Wheels for Wellbeing. (n.d.). *Quick guide to accessible active travel*. Retrieved December 5, 2025. Available at: https://wheelsforwellbeing.org.uk/our-campaigns/resources/wheels-for-wellbeing-quick-guide-to-accessible-active-travel/#:~:text=Providing%20accessible%20active%20travel%20options,and%20end%20with%20active%20travel.

Car users would experience reduced access because the scheme would encourage more active travel and public transport based local journeys. This will affect some people with mobility needs who rely on their vehicles. However, the disbenefits for motorized vehicles are outweighed by the substantial improvements for walking, cycling and better public transport access.

**Figure 2-4** indicates that a low percentage of LSOAs within the study area have residents aged 70 and over, based on ONS data. This suggests a younger demographic, potentially with more young families. The scheme could therefore deliver significant benefits for younger people. It will improve access to schools and childcare facilities, making daily journeys safer and more convenient. It will create safer, greener streets for play and social interaction. This supports child development and community cohesion. It will encourage active travel habits from an early age, promoting long-term health and wellbeing. It will also enhance access to parks and outdoor spaces, providing opportunities for recreation and physical activity.

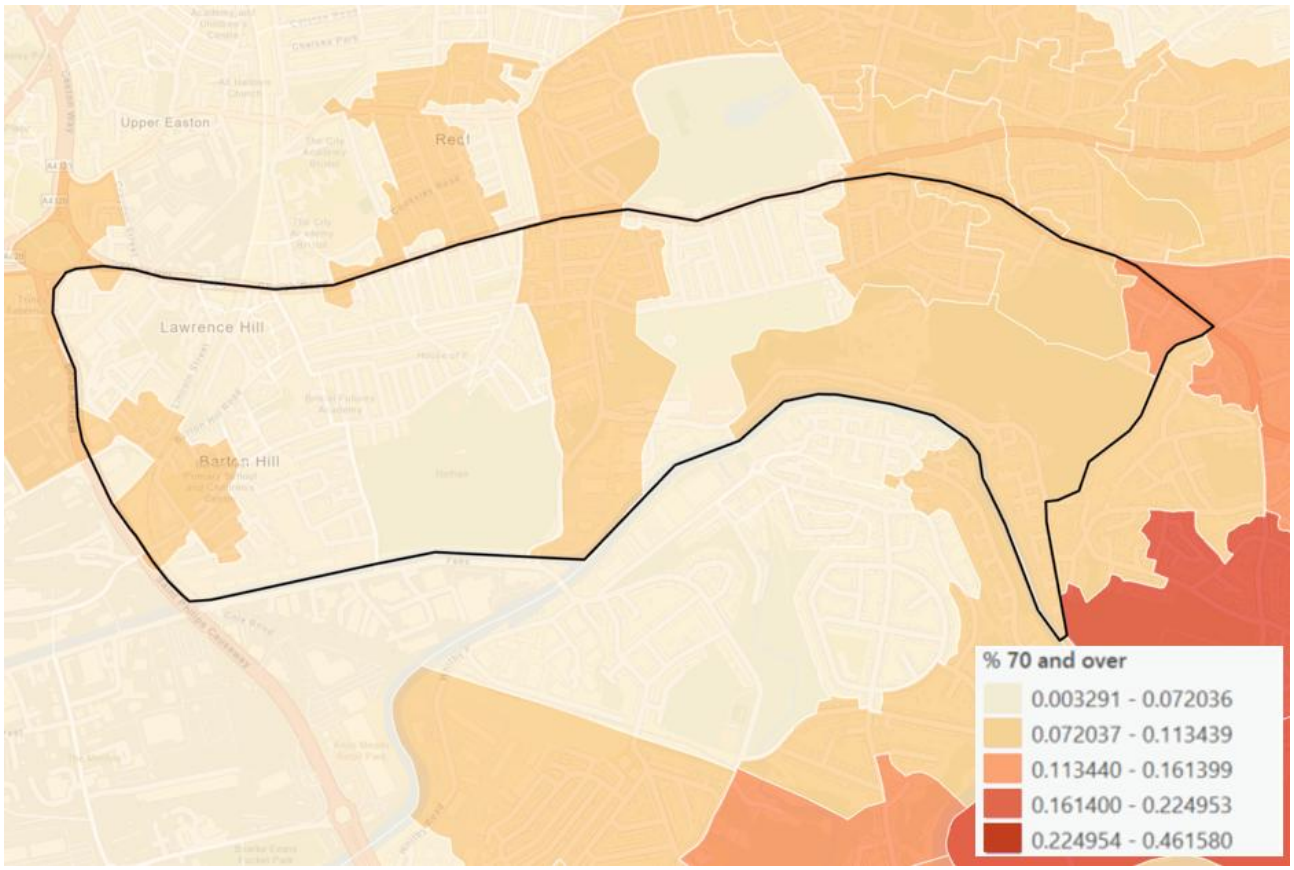


Figure 2-4: Percentage of residents in the study area that are aged 70 and over (Source: ONS)

#### *2.3.5.7 Severance*

The concept of community severance is used when transport infrastructure or motorised traffic acts as a physical or psychological barrier to the movement of pedestrians. The EBLN scheme will reduce severance by implementing measures such as modal filters. This will help create quieter and safer streets, improving local connectivity and social cohesion. By filtering out through traffic and reducing short-cutting, the perceived and actual danger of walking and cycling along roads within the neighbourhoods is reduced. This will encourage more people, especially children, the elderly, and those with mobility impairments to make more local journeys by foot or by bike. Although, these

benefits will be partly offset by the increased severance for private vehicles. One-way streets, modal filters will force car traffic onto the main roads, often resulting in longer journey times and reduced connectivity.

### 2.3.6 Public Accounts

#### *2.3.6.1 Cost to broad transport budget*

EBLN is expected to encourage increased physical activity and social interaction while delivering long-term reductions in noise and air pollution across the scheme area. Sustained mode shift away from private vehicles will generate significant health and wellbeing benefits, including lower healthcare costs and reduced absenteeism, which in turn support wider productivity. Although the introduction of modal filters and bus gates may create short-term inconvenience for motorised traffic as users adjust to new routes and behaviours, these changes will ultimately lead to fewer conflicts between vehicles, pedestrians and cyclists. Over time, as active travel and public transport become more attractive options, users are expected to benefit from improved travel conditions and potentially lower household transport costs.

#### *2.3.6.2 Indirect Tax Revenues*

The EBLN trial has already demonstrated mode shift away from motorised travel, leading to reduced fuel consumption and, consequently, lower fuel duty receipts. Over time, decreased reliance on private car ownership may also emerge as walking, cycling and more reliable bus services become viable alternatives, potentially reducing vehicle-related tax revenues. However, this is expected to be partially offset by increased bus patronage in the permanent scheme, which would generate additional VAT receipts through higher operator revenues.

Local businesses and high streets are likely to benefit from higher levels of pedestrian and cycling activity. Evidence from pedestrian street improvements and cycle-way interventions suggests increased footfall and consumer spending, particularly in businesses accessible by walking or cycling[44]. More local trip-making and social interaction can stimulate neighbourhood commerce, increasing retail spending and associated tax revenues. Growth in local economic activity, particularly in the retail and property sectors, would also support new employment and business opportunities, yielding higher income tax, National Insurance and corporation tax receipts for central government. The permanent scheme will include parking bays with timed restrictions aligned to local business opening hours, following reports of reduced trade during the trial scheme.

Liveable Neighbourhood schemes typically contribute to rising land and property values. Over time, this may lead to increased property transactions and associated stamp duty receipts, as well as longer-term uplifts in council tax revenues as properties move into higher valuation bands.

Overall, the impact on indirect tax revenues is likely to slight adverse, because much of the direct tax revenues represents a redistribution and shows temporary reduction in transport-related taxation. The principal long-term value of the EBLN lies not in tax revenue changes but in its wider economic

[44] Local Economic Impacts of Active Travel. (n.d.). *Appendix E*. London School of Hygiene & Tropical Medicine. Retrieved December 5, 2025. Available at: https://researchonline.lshtm.ac.uk/id/eprint/4673669/31/Appendix_E_Local_Economic_Impacts_of_Active_Travel.pdf

benefits and positive externalities, including improved public health, wellbeing, environmental quality and strengthened local economies.

## 2.4 Economic Costs

### 2.4.1 Capital Expenditure

Capital expenditure (CapEx) covers all active travel and public realm measures for the permanent EBLN scheme. Costs are divided into construction, professional services, and post-project activities. Construction costs include contractor works such as civil engineering, lighting, landscaping, and drainage, as well as the installation of cycle hangars, enforcement cameras, Vivacity cameras, and delivery of the cultural programme. Professional services costs cover activities such as drainage surveys, consultant engagement, road safety audits, and post-project monitoring and evaluation. Adjusted project costs account for inflation, general project contingency and construction contingency. Construction costs represent the largest share of total capital expenditure, followed by professional services. The total CapEx is £10,713k in 2023 prices (in £000s).

A Quantitative Cost Risk Assessment (QRCA) was undertaken to analyse and quantify cost risk exposure for the scheme (**Appendix I**). The assessment produced a P80 value, representing the cost level at which there is an 80% confidence that actual outturn costs will not exceed this amount. This provides a conservative estimate that captures a broad range of potential cost variability. The resulting P80 value for the EBLN scheme is £1,783,433, which has informed the contingency allocation within the overall cost plan and results in a contingency allowance of £1,788,693. The P80 value reflects the output of the QCRA model, whereas the contingency allowance is determined through project-level decision-making. Consequently, the two figures are not expected to align precisely but their proximity indicates that the contingency allowance is viable and appropriate.

### 2.4.2 Operating Expenses

Operating expenses (OpEx) refer to the annual recurring costs required for the operation and maintenance of the scheme. These include activities necessary to preserve the quality and functionality of liveable neighbourhoods and active travel infrastructure. Typical maintenance tasks involve vegetation management, verge trimming, leaf clearance during autumn, and gritting during winter cold spells. Additional costs cover the upkeep of signage, road markings, and repairs to infrastructure elements such as traffic filters and benches. Furthermore, OpEx encompasses expenses related to enforcement cameras and the delivery of the cultural programmes. For the EBLN scheme the total discounted OpEX are £624k in 2023 prices (in £000s).

A summary of the approach used to derive the OpEx has been set out in the Financial Case Operating Costs section of this document.

### 2.4.3 Renewal Costs

Renewal costs comprise of replacement and maintenance expenditure that is not annually recurring. At this phase of the project, renewal costs have not been considered.

### 2.4.4 Summary of Scheme Costs

**Table 2-12** below summarises the scheme costs including capital and operating expenses and are discounted and shown in the 2023 prices.

Table 2-12: Scheme Costs

| Categories | Total Discounted (£000 in 2023 prices) |
|---|---|
| **Capital Expenses** | **10,712.6** |
| Construction Costs | 5,251.7 |
| Professional Services Costs | 3,784.8 |
| Adjusted Project Costs | 1,676.1 |
| **Operating Expenses** | **624.3** |

## 2.5 Value for Money Assessment

The following section includes a description of the VfM Assessment.

### 2.5.1 Value for Money Assessment

The core analysis has been undertaken using the AMAT model and the SSAT, with scheme costs discounted separately. Results from the AMAT model are presented in **Table 2-13**, while the SSAT outputs are shown in **Table 2-14**. **Table 2-15** also details the discounted scheme costs, which were calculated outside the AMAT tool.

A summary of the total Present Value Benefits (PVB), Present Value Costs (PVC), and the resulting Benefit-Cost Ratio (BCR) is provided in **Table 2-18**.

Table 2-13: Analysis of Monetised Benefits from AMAT

| Categories | Values (£000 in 2023 prices) |
|---|---|
| Congestion Benefit | 660.0 |
| Infrastructure maintenance | 3.2 |
| Accident | 109.4 |
| Local air quality | 3.3 |
| Noise | 7.3 |
| Greenhouse gases | 43.2 |
| Reduced risk of premature death | 8,934.9 |
| Absenteeism | 2,182.4 |
| Journey ambience | 11,023.8 |
| Indirect taxation | 14.7 |
| **PVB (excluding infrastructure cost saving)** | **22,979.0** |

The AMAT model estimates a total Present Value Benefit (PVB) of £22,979K (in £000s), with health-related improvements accounting for the largest share at £11,023k in £000s (49%). These benefits include a reduction in the risk of premature death and lower absenteeism, as increased physical activity improves health and reduces sick days, boosting economic productivity. The second-largest benefit category is journey quality, valued at £10,539k in £000s (47%), which reflects improvements in route quality and perceived safety, including reduced fear of accidents. Mode shift benefits—such as congestion relief, reduced greenhouse gas emissions, and indirect taxation—represent the smallest share at 4%.

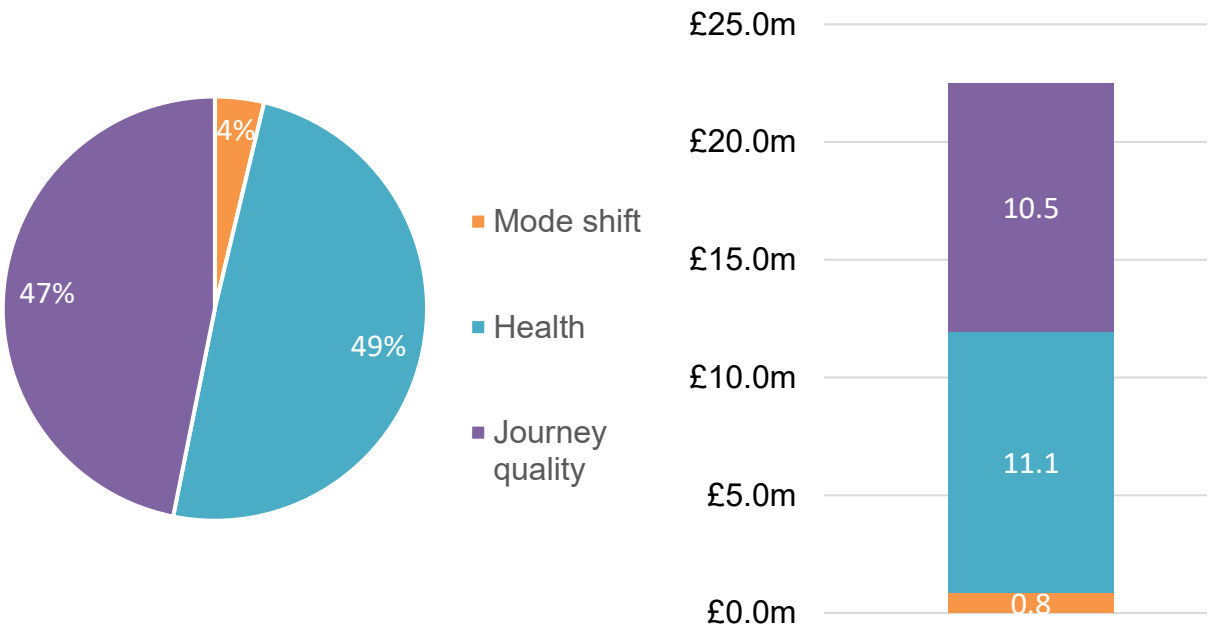


Figure 2-5: Present Value Active Travel Benefits by Type (% and 2023 prices)

The highway and bus appraisal shown in **Table 2-14** shows a total Present Value Benefit (PVB) of £11.75 million (2023 prices). The largest positive contribution comes from Highway Journey Time savings (£11.4m), indicating that despite modal filters and restrictions, the scheme improves efficiency for certain trips, likely due to reduced congestion on key corridors and improved traffic flow for permitted movements. All Marginal External Cost (MEC) components reflect the net benefits to highway and bus users arising from spillover effects of the EBLN scheme, with the exception of the congestion element, which is reported separately and focuses solely on impacts to bus users. Additional benefits include reductions in greenhouse gas emissions (£2.05 million), and noise improvements (£1.38 million), reflecting environmental gains from lower traffic volumes. Infrastructure cost savings (£3.3 million) are not included in the present value of benefits but will reduce the scheme present value of costs.

Smaller benefits are observed in local air quality (£0.44 million) and accident reduction (£0.52 million), indicating safety and health improvements. Bus-related benefits are modest, with £147,800 in journey time savings and £815,900 in revenue gains. However, there are notable disbenefits, including increased congestion (–£4.5 million) and reduced indirect tax revenue (–£1.18 million). This reflects the temporary reduction in bus patronage observed in 2025 following the bus fare increase. In the SSAT, this appears as bus users shifting to alternative travel modes for reasons unrelated to the EBLN scheme.

There are no targeted measures or interventions within the EBLN scheme that directly improve bus service quality, and therefore SSAT does not attribute any bus-related benefits to the scheme.

Overall, the results suggest that while short-term congestion impacts exist, the scheme delivers strong net benefits driven by journey time improvements, environmental gains, and infrastructure savings.

Table 2-14: Analysis of Monetised Benefits from the SSAT model

| Categories | Values (£000 in 2023 prices) |
|---|---|
| Highway Journey Times | 11,435.7 |
| Highway VOCs | 649.7 |
| Bus Journey Times | 147.8 |
| Bus Revenue | 815.9 |
| Bus Quality Impacts | 0.0 |
| Congestion | -4,509.6 |
| Infrastructure | 3,311.7 |
| Accident | 524.4 |
| Local Air Quality | 440.4 |
| Noise | 1,379.7 |
| Greenhouse Gases | 2,053.9 |
| Indirect tax | -1,183.2 |
| | |
| **PVB (excluding infrastructure cost saving)** | **11,754.6** |

The final Present Value Benefits are estimated at £34.7 million (discounted to 2023 prices) calculated through addition of the AMAT and SSAT model results. The Present Value Costs total £8.0 million, comprising capital expenditure of £10.7 million and operating costs of £0.6 million, offset by £3.3 million of cost saving captured in the Infrastructure Maintenance in **Table 2-13** and **Table 2-14**.

Dividing the Present Value Benefits by the Present Value Costs produces a Benefit–Cost Ratio (BCR) of 4.33 for the Do Something Core Scenario, indicating that the scheme represents 'Very High' value for money and delivers substantial net benefits.

Table 2-15: Do Something Core Scenario Appraisal Results (2023 prices)

| | Categories | Total Discounted (£000 in 2023 prices) |
|---|---|---|
| ***a*** | **Present Value Benefits** | 34,733.6 |
| ***b*** | **Present Value Costs** | 8,022.0 |
| ***a-b*** | **Net Present Value** | 26,711.7 |
| ***a / b*** | **Benefits-Costs Ratio** | 4.33 |

### 2.5.2 Sensitivity Tests

In line with the requirements of the HM Treasury Green Book, the DfT Transport Analysis Guidance (TAG) and the DfT Uncertainty Toolkit, the Economic Case includes a programme of sensitivity and scenario testing to assess the robustness of the appraisal results under alternative future conditions. These tests are informed by the Common Analytical Scenarios (CAS), which provide a structured set of assumptions for exploring uncertainty in travel demand, behavioural change, economic activity, decarbonisation and technology uptake.

For the EBLN permanent scheme, a proportionate approach has been adopted. The scheme is highly localised, and supported by observed data from the trial scheme, rather than long-term demand forecasts. As such, it is neither practical nor proportionate to apply all CAS in full. Instead, a targeted selection of scenarios has been assessed, focusing on those most relevant to the EBLN context—

specifically, using PEAT appraisal toolkit that accounts for different scenarios and growth projections, different appraisal periods that are comparable to more active travel and liveable neighbourhood schemes, and isolating bus and highway benefits from the core analysis.

This approach results in sensitivity tests which are fit for purpose, while providing decision-makers with a robust understanding of how the scheme's value for money may vary under different outcomes for the permanent scheme, while remaining consistent with national guidance and proportionate.

The sensitivity tests are summarised in **Table 2-16**:

Table 2-16: Summary of proposed sensitivity tests

| Sensitivity Test No. | Scenario | Units | Sensitivity Tests |
|---|---|---|---|
| 1 | AMAT based impacts assessed using PEAT | £ | Include additional benefits calculated in PEAT |
| 2 | Appraisal period | Years | 10 |
| 3 | | Years | 20 |
| 4 | SSAT sensitivity | £ | Bus Impacts Only |
| 5 | | £ | Highway Impacts Only with same bus patronage |
| 6 | | £ | Highway Impacts Only with same bus patronage and revenue |

Sensitivity Test 1 uses PEAT to appraise the active travel benefits. PEAT brings together established tools and techniques, input data, spreadsheet calculators and a reporting suite in one place to support the development of walking and cycling projects and multi-modal 'Streets for All' projects.

PEAT has specified its assumptions and parameters in an assumptions log that allows flexibility in applying appraisal parameters for different schemes. PEAT also appraises the journey ambience benefits elected by the user from the drop-down menus for both cycling and walking infrastructure and the ambience benefits are also included in the cost benefit analysis. PEAT has three scenarios for each scheme option appraised: they differ by growth projections, collision and e-bike uptake forecast and labelled Business as Usual (NTEM45), 2040 Vision and Go Dutch respectively.

Table 2-17: Scenario Variables

| Variable | Business as Usual (NTEM) | 2040 Vision | Go Dutch |
|---|---|---|---|
| Trip Growth | NTEM | Right Mix mode split | Go Dutch (10X cycling) |
| E Bike Uplift | No | Yes (+10%, 3-year delay, 10-year ramp) | Yes (+20%, no delay, 20-year ramp) |
| Collisions | Extrapolate from current trends | 50% towards Vision Zero by 2050 | Vision Zero by 2100 |

45 National Trip End Model

The sensitivity tests have been applied to the core analysis from the Do Something Scenario. Comparison between the Do-Something core analysis and the three sensitivity tests is presented below.

Table 2-18: Sensitivity Test 1 results (£000 in 2023 prices)

| | Core Analysis | Business as Usual (NTEM) | 2040 Vision | Go Dutch |
|---|---|---|---|---|
| PVB | £34,733.6 | £106,860.8 | £125,754.6 | £140,376.6 |
| PVC | £8,022.0 | £18,737.9 | £18,737.9 | £18,737.9 |
| NPV | £26,711.7 | £88,122.9 | £107,016.8 | £121,638.8 |
| BCR | 4.33 | 5.70 | 6.71 | 7.49 |

The BAU (NTEM), 2040 Vision, and Go Dutch scenarios within PEAT all demonstrate Very High value for money. Overall, using PEAT provides a more representative assessment of VfM because it captures the benefits associated with public realm improvements that are not fully reflected in AMAT and SSAT alone.

Results from the other sensitivity tests (2-6) are summarised below with analysis provided overleaf.

Table 2-19: Sensitivity Test 2 - 6 results

| | Core Analysis | Sensitivity Test 2 | Sensitivity Test 3 | Sensitivity Test 4 | Sensitivity Test 5 | Sensitivity Test 6 |
|---|---|---|---|---|---|---|
| Description | Core Scenario | 10-year appraisal | 20-year appraisal | SSAT-No Highway Impacts | SSAT-Highway Impacts only with same bus patronage | SSAT-Highway Impacts only with same bus patronage and revenue |
| AMAT Benefits | 22,979 | 6,413 | 12,716 | 22,979 | 22,979 | 22,979 |
| SSAT Benefits | 11,755 | 4,065 | 7,132 | -4,220 | 19,895 | 15,974 |
| **PVB** | **34,734** | **10,478** | **19,848** | **18,759** | **42,874** | **38,953** |
| CapEx | 10,713 | 10,713 | 10,713 | 10,713 | 10,713 | 10,713 |
| OpEx | 624 | 193 | 330 | 624 | 624 | 624 |
| Infrastructure Cost Saving | -3,312 | -550 | -1,661 | 691 | -4,009 | -4,009 |
| **PVC** | **8,022** | **10,355** | **9,380** | **12,028** | **7,328** | **7,328** |

| | Core Analysis | Sensitivity Test 2 | Sensitivity Test 3 | Sensitivity Test 4 | Sensitivity Test 5 | Sensitivity Test 6 |
|---|---|---|---|---|---|---|
| **NPV** | **26,712** | **122.7** | **10,468** | **6,731** | **35,546** | **31,626** |
| **BCR** | **4.33** | **1.01** | **2.12** | **1.56** | **5.85** | **5.32** |

Sensitivity Tests 2 and 3 were undertaken using shorter appraisal periods of 10 and 20 years, compared to the 40-year appraisal period assumed in the core scenario. These sensitivity tests assess whether the BCR remains robust when fewer years of benefits are included in the present value calculation. Shorter appraisal periods are commonly applied to active travel schemes to reflect uncertainties around future usage and the asset life of walking and cycling infrastructure. They provide a more conservative scenario.

The present value of costs indicates that while CapEx remains constant across all appraisal periods, a shorter timeframe results in lower accumulated OpEx. Infrastructure cost savings appear as negative values because the externalities captured in AMAT and SSAT generate net benefits—primarily driven by reduced highway traffic, which delivers £3.3 million in savings. As the appraisal period shortens, these infrastructure savings decrease proportionately, falling to £0.6 million in sensitivity test 2 and £1.7 million in sensitivity test 3. The present value of benefits declines with a shorter appraisal horizon because fewer years of benefits are captured. Conversely, the present value of costs (PVC) increases under shorter appraisal periods, as the reduced infrastructure savings within the MEC components of AMAT and SSAT outweigh the relatively small reduction in OpEx, while CapEx remains unchanged. Overall, the results show that a 10-year appraisal period yields a BCR of 1.01, indicating Low value for money, while a 20-year appraisal period produces a BCR of 2.12, representing High value for money.

Sensitivity Test 4 was undertaken by removing any highway impacts from the core analysis. For this test, in the SSAT model the highway demand, total travel time and total vehicle travel distance inputs were kept constant in both the with and without intervention scenarios. This isolates the impact of a change in the number of people using bus services (bus patronage) and the change in bus fare alone. The sensitivity test results in a negative SSAT benefit of –4,220. This outcome is driven by an increase in bus fares during the trial period, which led to a reduction in bus patronage as some passengers shifted to alternative modes of travel. When highway benefits are excluded, the SSAT, used to capture both highway and bus impacts in the core analysis, records only the negative bus benefit resulting from higher fares and lower bus patronage. With highway benefits and the associated modal-shift effects removed, the total SSAT benefit becomes negative. As a result, the bus-related infrastructure externality turns into a positive cost: reduced bus patronage means fewer car and other vehicular trips could be displaced by bus services. Consequently, infrastructure costs appear as a positive value in the PVC, amounting to £0.7 million. This results in a BCR of 1.56, which is lower than the core scenario and falls within the Medium Value for Money (VfM) category.

Sensitivity Test 5 retains the highway benefits from the core analysis, which reflects a decline in overall passenger car journeys and therefore generates associated cost savings and user benefits. In this test, the SSAT model assumes that highway demand, total travel time, and total vehicle travel

distance are reduced in the 'Do Something' scenario. The number of bus trips is kept constant before and after the intervention, but bus fares are increased to reflect that during the trial period bus fares increased from £2.00 to £2.50. Although trial data shows that higher fares negatively impacted bus patronage, this was an external factor unrelated to the EBLN scheme. In sensitivity test 5, bus patronage is assumed to remain unchanged despite the fare increase, on the basis that the scheme is expected to promote greater long-term public transport use rather than displace existing trips. As shown in **Table 2-19**, AMAT benefits, CapEx and OpEx remain the same as the Core analysis. The SSAT benefits increase due to the higher assumed bus patronage. For the same reason, the infrastructure cost saving becomes more negative: with greater bus usage in sensitivity test 5 compared with the Core analysis, the resulting infrastructure externality is larger, leading to a greater infrastructure cost saving.

Sensitivity Test 5 represents a "most likely" but still conservative future, characterised by reduced highway trips and increased active travel, without any decline in bus ridership. Under these assumptions, SSAT benefits are the highest of all tests because bus revenue increases (same passenger numbers paying higher fares). The scheme performs strongly, with a combined AMAT and SSAT Present Value of Benefits (PVB) of £42.4 million, a total Present Value of Costs (PVC) of £7.3 million, and a Benefit–Cost Ratio (BCR) of 5.85 —indicating Very High value for money.

Sensitivity Test 6 builds on Test 5 but excludes any bus revenue impacts, as the recent fare increase is unrelated to the EBLN scheme and should not be included in EBLN scheme benefits. This adjustment removes the bus revenue impacts and results in a BCR of 5.32, which also indicates Very High value for money.

Overall, the sensitivity tests demonstrate that the scheme's economic case is resilient under varying assumptions. Shortening the appraisal period significantly reduces value for money, while both bus and highway impacts deliver weaker benefits. Tests isolating bus service changes and highway impacts confirm that each component contributes meaningfully, with bus performance improvements showing particularly high returns. This indicates that the scheme offers robust and high value for money, especially over the long term.

### 2.5.3 Conclusion

The economic appraisal has been undertaken in accordance with TAG guidance. The assessment uses the AMAT, a recognised tool for evaluating active travel and public realm schemes, alongside the Small-Scale Appraisal Toolkit (SSAT), which provides a proportionate approach to monetising impacts of minor highway and bus improvements. The Benefit-Cost Ratio (BCR) for the EBLN scheme is estimated at 4.33. This, considered alongside qualitatively assessed impacts, represents "very high" VfM under the DfT VfM Framework[46]. The permanent scheme represents a Net Present Value (NPV) of £26.7m compared against the Do Minimum. Both qualitative and quantitative benefits are taken into consideration when appraising the scheme. This scheme drives modal shift away from private vehicles, implements traffic calming measures, and improves safety and security for all road users, bringing positive impacts in economic, social, and environmental terms.

[46] Value for money framework

# 3 Financial Case

The financial case discusses the costs and affordability of works to deliver the project. This section is structured as follows:

- Chief Financial Officer sign off
- Scheme costs
- Spend profile and funding sources
- Full business case

## 3.1 Chief Financial Officer sign off

The FBC and all associated documentation is reviewed and approved on the Bristol City Council (BCC) decision pathway. This includes sign off by the Executive Director of Growth and Regeneration at Executive Directors Meeting (EDM) and Chief Financial (section 151) Officer at Capital Improvement Board (CIB). It will then be formally approved by the Transport and Connectivity Committee, and this is expected to happen in May 2026.

Once it has been approved by Bristol City Council for submission to the West of England Combined Authority, it will then be reviewed and approved on the MCA decision pathway, including Regional Director Team (RDT) and Mayoral Combined Authority (MCA) Portfolio Board.

## 3.2 Scheme Costs

The total scheme cost in current prices is £10,102,033.97, as outlined in **Table 3-1** below:

Table 3-1: EBLN Scheme Costs

| | |
|---|---|
| *Total project cost (including project management and QRA allowance)* | **£10,102,033.97** |
| *Funding sought (City Regional Sustainable Transport Settlement), including the £1,009,846.90 already released as per DN CRSTS066 (and any additional amount that might be released for FBC development ahead of this decision as part of the ongoing CRSTS re-baselining exercise)* | **£9,398,962.53**<br>(Note: £542,001.26 was claimed from Transforming Cities Fund for early development of the project, in 2021-23) |
| *Match funding (assumed to be coming from Section 106)*<br>*Estimated total project construction cost (including inflation and contingency, but excluding resource costs)* | ***£161,070.18***<br>***£4,469,178.56*** |

### 3.2.1 Capital Elements

The estimate for capital cost was developed by BCC's City Transport and Engineering Design teams, based on different sources of pricing information where appropriate. They include recent supplier

quotation, the latest BCC framework rates and known costs based on comparable schemes recently delivered in Bristol and other English local authorities delivering similar schemes. These rates reflect up-to-date costs for materials, supplies and resources.

Provision for risk has been estimated via a Quantified Cost Risk Assessment (QCRA) process. The assessment has considered the potential project risks, their likelihood, and their potential cost implications (see **Appendix I**). Risks considered are discussed in more detail in the Management Case.

The designs are currently at detailed stage and estimates are reflective of this. Appropriate processes are being undertaken in order to ensure a high-quality design.

The scheme will not require further costs to cover the on-going maintenance and renewal costs following the successful construction of the scheme because all measures are on the existing adopted highway which will be the responsibility of BCC to maintain. Where scheme elements are on land owned by others, legal agreements will be put in place to clarify any necessary maintenance responsibilities. Ongoing operational, maintenance, and renewals costs associated with the scheme are included separately at **Appendix J**.

## 3.3 Quantified Cost Risk Assessment (QCRA)

A quantified cost risk assessment has been completed for this project, and the full extent of this analysis is provided at **Appendix I**. The QCRA has provided a structured assessment of the potential impacts associated with the full implementation of the East Bristol Liveable Neighbourhood scheme. The analysis, based on agreed assumptions and a bespoke risk matrix, indicates that the majority of risks analysed fall within acceptable thresholds, with mitigation measures identified for higher-impact scenarios. The P80 value of £1,783,433 highlighted offers a conservative benchmark for planning, ensuring confidence in cost and impact projections.

The following recommendations are provided to manage risks effectively:

- Implement agreed mitigations;
- Engage stakeholders continuously;
- Monitor scheme rollout and update risks live; and
- Consideration and regular review of risk exposure against held contingency should be given to ensure that contingency sum is proportionate to the risk exposure.

## 3.4 Spend Profile and Funding Sources

The spend profile for the scheme is presented in the **Table 3-2** below:

**Table 3-2: EBLN Spend Profile**

| Financial Year | Forecast | Comments |
|---|---|---|
| 2021-23 | £542,001.26 | Actual (claimed from TCF) |
| 2023-24 | £433,565.66 | Actual |
| 2024-25 | £1,071,438.19 | Actual |
| 2025-26 | £1,164,791.16 | Actual |
| 2026-27 | £1,492,912.69 | Forecast (as of 30/04/2026) |
| 2027-28 | £5,041,906.45 | Forecast (as of 30/04/2026) |

| | | |
|---|---|---|
| 2028-29 | £355,418.56 | Forecast (as of 30/04/2026). Note: includes £161,070.18 of match funding (which is assumed to be coming from Section 106) |

Other than the TCF and match funding referred to above, all funding is coming from CRSTS.

The total cost to develop the FBC (spend to-date, and all projected spend ahead of theoretical WECA FBC approval in September 2026) is projected (as of 30/04/2026) to be £3,793,118.07; the remainder can be considered to be delivery costs.

# 4 Commercial Case

The commercial case covers the following topics which consider the operational and commercial viability of the proposed permanent scheme, sets out the process that BCC will take in procuring services and materials to deliver the project. It also covers the approach for contract and risk management to ensure the achievement of the commercial outcome.

The full structure is as follows:

- Procurement
- Operation and Financial Viability
- Contingency Plans
- Social Value Act

## 4.1 Procurement

This section describes the delivery frameworks which currently exist within BCC and can be used to deliver the proposed permanent scheme.

### 4.1.1 Delivery Frameworks

Delivery frameworks are used to construct BCC schemes. BCC has a Highways Asset Management and Civils Framework (HAMAC) to ensure that it can draw upon the services of contractors. A new framework went live on 1st October 2025. It is intended to procure all permanent works via Lot 6.

### 4.1.2 Payment Mechanism

Payments will be paid in line with agreements between WECA and BCC. Along with monitoring the cumulative totals of invoicing for the scheme, WECA will monitor the invoicing against the detailed cost estimates for each element to ensure payments remain on track to avoid overspend. WECA will require evidence of invoices to release the funding to BCC.

## 4.2 Contingency Plans

The chosen contractor will have been subjected to a competitive tender process whereby their application to complete the works would have been assessed by BCC. As part of the assessment the contractor's capacity to complete the works will be examined, including resources, supplies, and materials.

If for any reason the contractor chosen to complete the work through the tender process is no longer able to fulfil the requirement of the contract within the 90-day period where quotes from the

other tender applicants are still valid, the second placed tender applicant will be offered the works. If the tender winner is unable to fulfil the requirements of the contract outside of the period where other tender applications are valid, then the works may be subject to re-tendering.

As an NEC4 contract, the Highways Asset Management and Civils Framework (HAMAC) allows BCC to ask contractors to include a performance bond within the tender submissions. A performance bond is a way of ensuring a contractor's performance and the guarantor would take on the responsibility of payment to the client (BCC) should the contractor breach the contract. Typically, would cost the project between 1 – 3% of the construction value.

## 4.3 Operation and Financial Viability

The relevant Combined Authority Guidance, namely West of England Outline and Full Business Case Guidance Note (20th April 2020), states that at Full Business Case (FBC) stage schemes are either required to identify source of funding required for ongoing operation or confirm self-sustaining by providing the likely revenue projections along with measures which could be taken if these revenue targets are not met.

To support this FBC, an assessment of additional operating, maintenance, and renewal costs of the relevant assets (net of the reference case) was considered. The total cost for 40 years (as suggested by Active Travel England's guidance for active travel schemes) is estimated at £948,750 (excluding inflation). For Economic Case purposes, assuming 2023 prices, the figure is £624,000, arrived at when accounting for inflation, optimism bias, market price conversion and discounting. The same approach was taken to the capital expenditure figures, which change from roughly £10.2m to £10.7m. Information on how the operations, maintenance and renewals costs were arrived at for OBC can be found in **Appendix J**.

BCC's Maintenance Team have been involved in the project works and will assume responsibility for the maintenance, repair, and replacement of all the schemes element post-delivery. The proposed designs have factored in maintenance costs and inflation for the scheme over a 40-year appraisal period.

## 4.4 Social Value Act

WECA and BCC note the importance of the Social Value Act and wishes to demonstrate its commitment in the principles of the Act and to achieving the top 10 priorities below:

1) Promote the local economy through the use of local suppliers and the voluntary and community sector in order to create and sustain new local jobs and apprenticeships.
2) Contribute to carbon reduction targets and use resources wisely.
3) Conserve and enhance the environment, supporting biodiversity, minimising pollution and waste and making best use of the environmental opportunities of work undertaken by our suppliers.
4) Promote the personal and physical health and the mental and emotional well-being of people within Bristol and the rest of the West of England.
5) Support schools and colleges e.g., through new work placements schemes, providing mentors or assisting in mock interviews.

6) Increase participation in the Children's 6 Commissioner Takeover Challenge[47]

7) Provide training, workplace experience and/or employment opportunities for:

   i) People with Disabilities,

   ii) People with Learning Difficulties,

   iii) Care Leavers,

   iv) Young People who are not in Education, Employment, Training, or Others who may find access to employment more challenging or who may be under-represented in the workforce e.g., ex-offenders.

8) Support schools through the provision of business support services.

9) Reduce health and social care inequalities across the Bristol area.

10) Achieving a service delivery model which uses, engages, or supports the local community and voluntary sector including ideas such as adopting a local voluntary organisation as the provider's 'charity of the year'.

During the construction of the scheme, it has been agreed that the framework sourced contractors will:

- Continue to achieve priority 1 through its procurement framework: Any commissions or purchases for this project will contribute to priority 1, however these could not be easily quantified.
- Continue to achieve priority 2 through its day-to-day operations: Meaning that activities under this project will contribute to this priority, however these could not be easily quantified.
- Continue to achieve priority 3 through its day-to-day operations: Activities under this project will contribute to priority 3, however these could not be easily quantified.

# 5 Management Case

The management case covers how the project will be delivered. This section discusses the proposed governance structure, delivery programme, how the risks will be managed and plans for stakeholder engagement, as well as plans for monitoring and evaluation.

The full structure is as follows:

- Promoter and delivery arrangements
- Project governance and delivery
- Programme plan
- Risks, constraints, and dependencies
- Land acquisition, planning, and other consents

[47] https://www.childrenscommissioner.gov.uk/takeover-challenge/

- Project assurance
- Monitoring and evaluation

## 5.1 Promoter and Delivery Arrangements

BCC is the promoter for the project and will procure all services relating to the delivery of the project as well as maintain ownership over all assets after project completion.

BCC has been delivering these types of transport schemes, as the Local Highway Authority, for many years and is well placed, in terms of capacity and capability, to continue this rollout. Well-established in-house and third-party arrangements for the identification, design, procurement, and delivery of schemes of this type are in place.

## 5.2 Project Governance and Delivery

### 5.2.1 Organogram

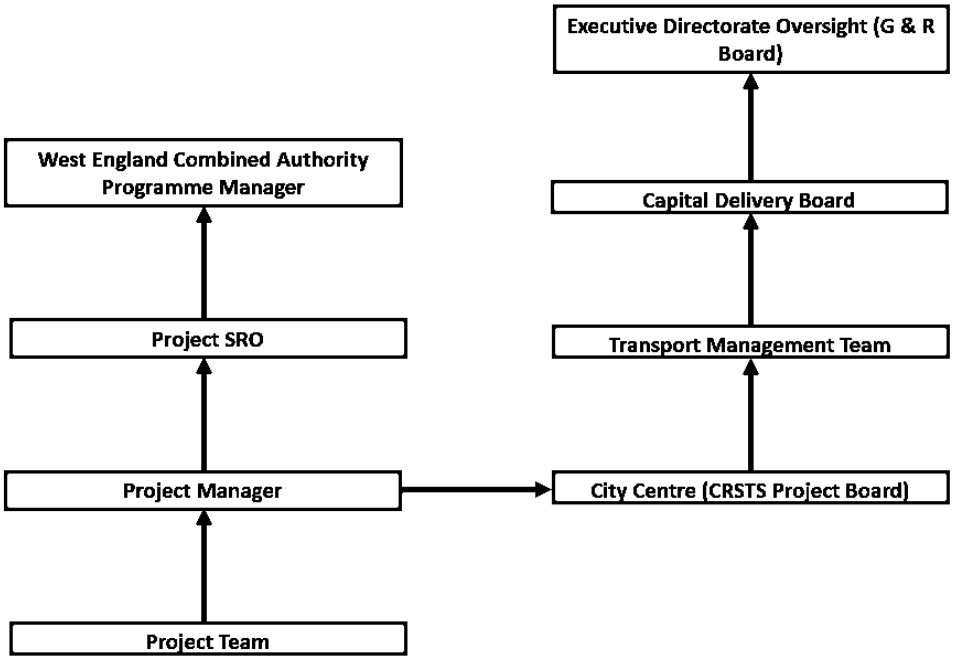


Figure 5-1: City Transport Delivery Organogram

### 5.2.2 Project Roles and Responsibilities

The governance structure described below clearly outlines the roles, responsibilities, and oversight needed to implement the permanent scheme for the project.

**Political oversight:** Chair of Transport and Connectivity Committee

**Project sponsor:** Head of City Transport

**Senior Responsible Officer:** Liveable Neighbourhoods Programme Manager

**Project Manager:** Senior Project Manager (City Transport)

The project manager reports monthly using the established highlight reporting process. The highlight reporting process enables the delivery team to identify progress with the project against key

milestones, review risks and issues and track spend against the programme. Any issues unable to be resolved by the Project Manager are escalated as appropriate.

#### *5.2.2.1 Project Reporting and Change Control Processes*

Project Managers provide monthly updates on each project through the established highlight reporting process. This includes a highlight report, project schedule, and finance capture sheet. The PMO team quality-assures this information monthly, using it to monitor progress against key milestones, review risks and issues, and track programme spend. Any issues that cannot be resolved by the Project Manager are escalated via the decision pathway, following the SRO programme meetings, Portfolio Review Meeting, and BCC CRSTS Programme Board structure. Project Managers will use Change Control Notices to raise concerns within this pathway.

The change control process aligns with this structure. Requests involving changes to scope, time, or budget are escalated to the appropriate level of the decision pathway based on their scale. Budget changes must also comply with the BCC Financial Scheme of Delegations, which defines approval levels for Finance System actions—from Project Manager through Head of Service, Service Director, and Executive Director. All change requests and approved changes are recorded in the Highlight Report.

After quality assurance, the PMO uploads financial spend and forecasts, milestone progress, and risk/issue data to the CRSTS programme dashboard, submitted monthly to the MCA. Approved change requests, early work requests, and early warning notices are also sent to the MCA for consideration through their decision pathway, which includes RDT, Directors, CEOs, and Grant Assurance. Grant Assurance issues the Grant Funding Allocation Letter and Officer Decision Notice. Decisions exceeding £5m must be added to the MCA forward plan for 28 days.

With regard to Construction and Design Management regulations (CDM), the following roles shall be allocated:

- Client shall be represented by the Project Manager;
- Principal Designer shall be represented by the Principal Engineer and
- Principal Contractor shall be the appointed contractor, following procurement.

BCC will be responsible for progressing the procurement process for the civils works, inviting tenders, and assessing tender submissions. The project manager will be responsible for obtaining approval to accept winning tenders. BCC will supervise the civils works and any other site-related activities.

#### *5.2.2.2 Delivery*

BCC has an experienced track record of successful delivery of complex projects, including the following:

**Table 5-1: Successful Delivery of Previous Schemes**

| Schemes | Summary |
|---|---|

| | |
|---|---|
| *Baldwin Street* | BCC delivered a segregated bidirectional cycle lane from Bristol Bridge through the harbourside fountains linking the bottom of Park Street. This cycling infrastructure resulted in a 231% increase over 5 years. |
| *Prince Street* | A segregated bidirectional cycle lane linking Cumberland Rd across Prince St bridge to join the Baldwin Street works (as part of Metrobus). This saw a 146% increase over 5 years. |
| *Whitehouse Street* | Whitehouse Street segregated bidirectional cycle lane was installed to link Windmill Close with York Road. This particular length of cycle infrastructure is an exemplar example of continuous crossings over side roads. |
| *Bristol Bridge* | Following the installation of a bus gate on Bristol Bridge, work was undertaken to improve the infrastructure for pedestrian and cycle traffic. This new design, incorporating seating and new greenery, provides a key link at the very centre of the city's cycle network. |
| *Old Market Gap* | Bridging the key missing link between Castle Park and Old Market roundabout, the Old Market Gap scheme has delivered a safe, high quality separated cycle route on a key walking, wheeling and cycling corridor. |
| *Park Row*[48] | The Council received strong support from public consultation on changes to Park Row to make the temporary protected cycle lanes installed during the pandemic permanent with a new design. These works have now been completed, and include bus stop and loading bay bypasses that allow people cycling to continue on safe routes even when buses or delivery vehicles are stopped. |
| *Cotham Hill*[49] | The temporary closure of Cotham Hill from traffic received overwhelming 90% support from residents as well as local businesses to keep the road free from traffic. This has since been made permanent and continues to provide a high quality public realm destination, and walking, wheeling, and cycling through-route. |
| *Princess Victoria Street*[50] | The temporary pedestrianisation of this historic local high street was found to be successful in bringing back customer footfall, the scheme being welcomed by both local residents and traders in Clifton Village. A permanent scheme has now been delivered, providing outdoor spill out space for businesses to improve public realm and high street vitality, with high quality paving materials, planting and seating. |
| *Overton Road* | The conversion of this side street, adjacent to Gloucester Road, has created a safe walking and cycle access to the amenities of the area from this main corridor, such as St Andrews Park, and created spill-out space in an improved public realm for local businesses. |

### 5.2.3 WECA Grant

The West of England Combined Authority will provide the funding for the scheme subject to a decision in its CRSTS Portfolio meeting and any other required meetings, after the FBC is reviewed by the assurance team. The grant approach allows a flexible governance approach between WECA and BCC.

[48] The parts of Bristol that will be permanently pedestrianised including Cotham Hill | ITV News West Country
[49] Locals support plans to keep Cotham Hill closed to vehicles - Bristol Live (bristolpost.co.uk)
[50] Clifton's Princess Victoria Street pedestrian zone to be made permanent - Bristol Live (bristolpost.co.uk)

## 5.3 Lessons Learned

The East Bristol Liveable Neighbourhood is unique in terms of Bristol Council transport schemes, in that it has progressed through several stages of development and has been introduced in trial form. This means that there has been the possibility to take lessons learned from this stage to inform the delivery of the full scheme, as well as other liveable neighbourhood projects, such as the South Bristol Liveable Neighbourhood.

**Pre-Trial Scheme Implementation**

- Ensure a suitable level of contingency in budget and programme time, to allow for change to the costs of the scheme, and programme, in the future.
- Manage expectations from the outset, by clearly detailing what the scheme will and will not be able to deliver, as well as scope of community input.
- Communicate more effectively how resident feedback has led to tangible design changes
- Ideally have shorter gaps between consultation periods. Ensuring communities have regular updates, but at the same time avoiding 'engagement fatigue'.

**Trial Scheme Implementation**

- Deliver supplementary public realm improvements, such as greenery, cycle hangars, and arts and culture, ahead of traffic management measures, in order to demonstrate the wider benefit to community spaces that a liveable neighbourhood provides.
- Where dissenting voices are present, ensure maximum information is available to ensure an accurate representation of the expected outcomes and impacts of the scheme.

**Maintenance**

- Ensure that teams across the council are sufficiently engaged to have scheme maintenance plans in place well before delivery, to prevent delays.

**Permanent Scheme Development**

- The unique nature of the trial scheme meant allowing for amendments to the scheme following trial implementation. Ensuring that adequate programme contingency is in place to allow for this, and suitably managing expectations with regard to trial outcomes, will be essential.

## 5.4 Programme Plan

Milestones for the project (as of 30/04/2026) are as follows.

Please note that WECA's FBC approval date is yet to be confirmed by WECA, that construction is of course subject to a decision to make the scheme permanent, and that all dates are subject to change.

| | | |
|---|---|---|
| 1 | OBC approved | 04/01/2024 |
| 2 | Majority installation of trial scheme | 11/04/2025 |

| | | |
|---|---|---|
| 3 | Full installation of trial scheme | 28/07/2025 |
| 4 | Public engagement completed | 07/11/2025 |
| 5 | Trial scheme reporting completed | 08/12/2025 |
| 6 | FBC developed | 08/04/2026 |
| 7 | FBC approved by BCC | 09/07/2026 |
| 8 | FBC approved by WECA | 07/09/2026 |
| 9 | Construction start | 02/03/2027 |
| 10 | Construction end | 04/01/2028 |
| 11 | Project closure (including retention) | 12/01/2029 |

## 5.5 Risks, Constraints and Dependencies

### 5.5.1 Risk management

**Appendix I** provides the full details of the Quantified Cost Risk Assessment (QCRA) process which this project has undertaken to establish a final risk register and a contingency budget.

This project's Risk Register and Design Risk Register were used as the basis for the QCRA.

Table 5-2: Abridged Project Risks

| Risk description | Degree of risk pre mitigation | Risk Mitigation Measure |
|---|---|---|
| Delivery costs being higher than expected, meaning that secured funding is insufficient | 15 | Where scarcity of materials is concerned - keeping in contact with suppliers to determine their supply where possible, seeking new suppliers/prioritising scheme delivery/seeking alternative materials if necessary. Where the financial risk is concerned - inflation is included in updated cost estimates, as well as what is currently considered to be adequate contingency; seeking further funding if necessary |
| Network disruption associated with construction/ delivery of the scheme | 15 | Acceptance that negative impact might be had on the network, particularly in the short term, but ensuring that ward councillors are aware of the negative impacts and complaints. Ensuring alignment with other schemes in the area in order to minimise disruption; scheduling works to minimise disruption wherever possible. |
| Change of political direction | 10 | Brief any new politicians early. |
| Perceived/actual network disruption/negative impacts post-delivery | 15 | Monitoring will track actual impacts, post-delivery survey will be used to gauge local opinion and feelings. |

| | | |
|---|---|---|
| Construction taking longer than programmed | 12 | Work with contractor to seek to accelerate elements of programme (if affordable/cost-effective/etc) |
| Resurfacing/HFS works being delayed by adverse weather | 12 | Reduce - minimise such works in Winter; ensure that we are specifying MMA |
| Wider network disruption | 10 | Develop close working relationship with politicians, to clearly indicate project aims and benefits. Closely monitor scheme delivery and make adjustments where necessary |

### 5.5.2 Programme dependencies

The programme is subject to:

- Timely approval of the FBC;
- Further detailed design work;
- Internal quality assurance processes;
- Applicable statutory consultation; and
- Any required utility works.

### 5.5.3 Project dependencies

The East Bristol Liveable Neighbourhood is a standalone project in the way that it has its own delivery programme and funding source that are independent of any other scheme or development. However, it does form part of BCC's Liveable Neighbourhoods programme; as well as the wider CRSTS delivery programme. There are also several adjacent developments that will influence the outcome of the project, as follows.

*Bristol Temple Quarter*

- New housing and other development is taking place in the Temple Quarter area of Bristol. EBLN has a dependent relationship in its status as a mitigation for the increased population in this adjacent area of Bristol
- The Southern Gateway is seeking to install a new junction on the Bath Road, adjacent to Bath Bridges roundabout. This will connect the south of the city to Temple Meads southern entrance. The highway works are due to be completed by March 2027 and are likely to be on site at the same time as the EBLN project. These works will need to be co-ordinated to prevent conflicting traffic management and reduce the impact on congestion.

*St Philips Marsh*

- Significant development is expected to change the character of St Phillips Marsh from its largely industrial character to a mixed use, dense residential district, with retained industrial function.
- To mitigate against the increased traffic and highway usage that this will cause, the East Bristol Liveable Neighbourhood is intending to ensure a clear and safe cycle alternative through to St Phillips Marsh, through routes such as the Wesley Way.

## 5.6 Land Acquisition, Planning and Other Consents

The temporary scheme interventions include the installation of traffic filters, planters, pocket parks and bus gates, as well as traffic restrictions and public realm improvements on public highways. The

majority of these interventions are Permitted Development on adopted highway and therefore have no dependencies relating to land acquisition or planning.

Traffic Regulation Orders will be required in relation to some measures, as is standard legal practice for changes to the highway.

## 5.7 Service Diversions

The C2 to C4 process forms part of the design delivery of new or diversionary utility works on the public highway operating under the legal framework of the New Roads and Street Works Act 1991 (NRSWA). The process entails the following stages:

C2 – Scheme identification (Preliminary Inquiry). The Project Sponsor or in this case Overseeing Organisation (OO) (being a highway authority) seek from the Undertakers (utilities company), details of their apparatus within the specific section of the highway which is being considered for improvement without making any commitment to the scheme.

C3 – Budget Estimate. The OO submit a preliminary design to the Undertakers. The Undertakers should respond with preliminary details of the effects on their apparatus and provide budget estimates for the necessary works and an indication of any special requirements involved.

C4 – Detailed Budget Estimate. The OO submits a final detailed design with working drawings and an outline programme. The Undertakers should come back within 25 days with (a) their detailed design of their works (b) a detailed specification of the works required; (c) a detailed estimate with itemised costs; (d) provisional programmes and timescale for works; and (e) all necessary information for the civil engineering work required if the Undertaker's works are to be undertaken by the OO's contractor.

The project is currently between the C3 and C4 stages. The C4 process will enable the project team to refine the scope and determine what services will need to be diverted according to detailed design.

## 5.8 Communications and Stakeholder management

Stakeholder and public engagement has been a key part of the scheme development from option appraisals, through to public consultation. Once the scheme has secured statutory consents, communications will be tailored to support key businesses, local employees and residents so they are aware of the project timeline and key milestones within the construction phasing.

Whilst contractors are carrying out the mobilisation phase the engagement team will ensure key businesses, local employees and residents are aware of the project timelines and understand the project benefits which will help reduce negative concerns during the build. The other key activity is about maintaining those who already travel sustainably and encouraging people to switch modes to more sustainable options such as walking, cycling, wheeling and public transport. This is why we operate a behaviour change programme alongside the build to offer incentives through mobility credits to get people to try the new infrastructure and remove any barriers that they may have.

During construction we also work with the bus operators, contractors and the highway network team to ensure where possible the traffic management plans prioritise public transport services through the roadworks and pedestrians and cyclists have safe routes to travel along. Once construction is complete the Engagement & Active Travel team will continue to speak to the public

and key stakeholders to help pull together case studies and learning from the project as part of the M&E to feed into other projects.

## 5.9 Traffic and Construction Management

### 5.9.1 Managing the impact of construction

Traffic across the network will be affected as the CRSTS projects move into the construction phase. These disruptions are a necessary part of improving the network. This has been communicated to the Transport and Connectivity Policy Committee.

As a Highway Authority, Bristol City Council must:

- Ensure public safety and maintain safe road conditions – roads, footpaths and cycleways are safe and usable, potholes and defects are repaired quickly and undertake regular inspections and risk assessments.
- Manage traffic and congestion – implement measures to minimise disruption during roadworks and manage flow through signage, traffic lights, diversions and speed limits
- Comply with legal standards – meet statutory obligations under legislations
- Provide clear communication – inform public and stakeholders about roadworks, closures and delays.
- Accessibility and inclusion – ensure road networks are accessible to all users and provide safe routes for pedestrians and cyclists.

The City Council has various strategies and processes to achieve the above objectives.

### 5.9.2 Operations Centre

- Central hub for CCTV and traffic monitoring – unique to the region. All the cameras feed into the centre giving operators real time oversight of the road network, traffic flow and congestion hotspots.
- Control room for major incidents. When collisions, road closures or emergencies occur the team coordinate the necessary response e.g. divert traffic, liaise with emergency services, activate signage and manage operations until the issue is resolved.
- 24/7 operational capability. The centre functions continuously managing both routine and unexpected events 24/7.
- Stakeholder liaison. There is space in the centre for transport providers, emergency services and other stakeholders who may be required. First Bus used to have an operator in the Operations Centre – this approach should be restarted with potential for CRSTS funding to be explored.

### 5.9.3 Construction phasing & resource

Managing the impact of highway projects, utility companies, developments etc is BAU for the Highway Authority. There are set processes in place to manage the road network, inform users such as transport providers, emergency services etc who may be affected and keep the traffic moving.

Regional impacts are included in these processes so where changes on the motorway network are scheduled feeding into the local city network diversions.

Emergency and unplanned works will always factor along with traffic collisions that will close roads and affect diversions, but this is nothing new and is handled by an experienced network management team.

The CRSTS programme and the expansion of the District Heat Network present additional pressures on the Network Management function of the Transport Service. To ensure the team can manage the CRSTS and Vattenfall programmes on top of BAU work, we have combined existing and additional resource:

- Construction Manager
- Highway Network Programmer and 4 senior officers

The Construction Manager is responsible for the following activities:

*Planning*

- Develop master schedule across all projects
- Review buildability of each project and input into works info and quality questions in tenders
- Oversee traffic management specialist to review TM plans for the programme
- Align mobilisation schedules across contractors to ensure workforce and materials are available
- Ensures coordinated sequencing, avoids overlaps and maintains the network resilience with Highway Network lead

*Delivery*

- Oversees site activities and works with NEC4 PM and site supervisors
- Coordinates across contractors and stakeholders
- Ensures traffic management plans are phased to avoid bottlenecks and deal with changes to schedules and impacts from other projects

The Highway Network Programmer is responsible for the following activities:

*Planning*

- Road space booking and coordination/programming– manages Major work requests from Utility companies, developers, BCC internal schemes etc and approve/reject applications. Uses Highway Network Management Works Programme 2025-28 (HNMWP28), Street Manager and One.network to track, plan and coordinate major schemes/ roadworks
- Reviews buildability phasing with Construction Manager to set out constraints for tenders to avoid clashes on the network
- Reviewing TM plans at tender stage for each project

*Delivery*

- Construction oversight – review and consult on alterations to TM plans/ TTROs and works programme changes.
- Advise project teams on acceptable works durations in line with HNMWP28.

In addition to the above, as part of BAU activities the Highway Network Programmer holds working groups for different highway users to align work programmes. These include:

- Utility providers (planned and emergency works)
- Vattenfall (HEAT network)
- National Highways (M32 Viaduct)
- Regional Highway Authority meetings
- Emergency Service requirements
- City Events / Major projects

The CRSTS programme feeds into the BAU approach to manage competing requirements on the local and regional network.

### 5.9.4 Procurement and Design Buildability Review

The project is undergoing a PCI process, which includes:

- Step 1 – Buildability Review – carried out by the Construction Manager, Principal Engineer, PM and Highway Network Programmer.
- Step 2 – Draft Traffic Management Plan (TMP) - Traffic Management Plan could potentially include modelling options for preventative traffic management.
- Step 3 – Finalise PCI / tender pack - Stipulate constraints, agree on the Option for the contract. Information with tender packs is guidance **only.** Contractors will produce tenders with their own documentation, phasing and traffic management plans that will need to be reviewed by Network Management and the project teams.
- Step 4 – Appoint NEC PM and Site Supervisor - Roles agreed during tender pack info process to ensure readiness for when contracts are awarded. This can involve external NEC4 project management support.

The final arrangements feed into the master schedule and the Project Manager will update project paperwork and schedules to reflect what has been agreed.

### 5.9.5 Mobilisation

Once a contractor has been appointed, the Project team will hold pre-start construction meeting to establish roles, programme expectations and reporting (including NEC PM and site supervisor). The various steps included within this process include:

- The Contractor submits detailed phasing plans (inc. TRA, milestones, traffic management).
- The relevant permits are applied for, and plans are reviewed by the NEC4 PM, Construction Manager and Highway Network Programmer.
- Stakeholder consultation is embedded within the works to mitigate impacts on stakeholders such as bus operators, emergency services, micromobility providers. This helps to forewarn stakeholders of any potential disruption.
- Traffic Management Plans are finalised e.g. partial road closures, off peak / night works.
- The relevant TTROs are applied for. This process has a 10-week lead in.
- Where possible, the project team and contractor will aim to maintain access for buses and active travel modes.

### 5.9.6 Construction

The construction phases will follow a structured sequence, for example: site setup, groundworks, utilities, surfacing, furniture/ signals and inspections.

The Construction Manager /Network Management Programmer coordinates phasing across schemes, resolving real time conflicts and adjusting phasing as needed.

The integrated master schedule ensures overlapping projects in adjacent areas do not cause cumulative disruption. Seasonal and citywide events e.g. Christmas, Harbour Festival are factored into planning with particular attention to mass events such as Bristol Half Marathon.

**Unavoidable works and flexibility -** Emergency or immediate highway works may disrupt programmed activity. Construction Manager and Highway Network lead will jointly respond, adjust schedules and traffic management as required and communicate with stakeholders.

### 5.9.7 Traffic Management Phasing

Phasing of and traffic management for the EBLN scheme will be decided by the contractor in due course. It will be informed by the constraints identified by the Council (which will be shared with contractors ahead of them bidding for the contract), but ultimately such information will be for guidance only – contractors will need to produce their own phasing and traffic management plans, that will then be reviewed by the Council.

## 5.10 Project Assurance

The project team will provide project assurance for the whole project. The project has been and will continue to be subject to BCC's own internal audit processes as well as WECA's audit processes in accordance with the funding requirements. BCC's Chief Financial Officer will administrate the S151 arrangement.

To assess the project progress at key stages in its development, the Gateway Review process has been undertaken in line with the principles set out in the Project Control Handbook. Gateway Reviews are the responsibility of the Project Board who are independent project managers from outside the project delivery team. Each gateway review is managed as a go/no-go decision and considers the ongoing viability of each project and its readiness to proceed to the next stage.

Regular reviews of the risk register have been undertaken.

### 5.10.1 Benefits Realisation

Intervention Logic Maps were developed as part of the Strategic Case of this Outline Business Case to show the Theory of Change alongside the scheme objectives and identify the expected outcomes and benefits of the different scheme interventions. The likely short/medium term and longer-term benefits are summarised below:

Table 5-3: Summary of EBLN Benefits

| Short/medium term benefits | Longer term benefits |
|---|---|
| • Increased physical activity | • Improved health and well-being outcomes and associated indirect health benefits from |

| | |
|---|---|
| • Improved journey quality for walking, wheeling, and cycling<br>• More walking, wheeling, and cycling journeys<br>• More trips to the high street and higher spending with local businesses<br>• Reduced car dependence and fewer, shorter car trips<br>• Reduced social isolation<br>• Local areas perceived to be an attractive place to live an residents become more engaged in local issues and opportunities<br>• Improvements to actual and perceived safety<br>• More Liveable Neighbourhoods schemes are able to be delivered<br>• Reduction in pumping and water treatment costs (if SuDS implemented)<br>• Increased capacity for sewer network (with SuDS) Improved water quality (with SuDS)<br>• Enhanced biodiversity (with SuDS) Reduced flooding risk (with SuDS) | reduced absenteeism, increased productivity, and savings to the NHS<br>• Reduced vacancy rates<br>• Reduced crime<br>• Increased property values – this is a benefit or disbenefit depending on the view of the stakeholder impacted<br>• Heat resilience to climate change<br>• Flood resilience (with SuDS)<br>• Economic costs avoided from flooding (with SuDS) |

To ensure these project benefits are successfully realised, several systems are in place. These systems are largely not project-specific, as the Council has several different projects focusing on improvements to sustainable travel provision. For instance, through the Engagement team, officers are employed to engage with businesses, communities, and schools to communicate improvements to sustainable travel infrastructure, as well as encouraging its use. These officers provide on-site roadshows, door knocking of associated businesses, and printed materials to raise awareness of completed schemes. This will help to raise awareness of the new walking, wheeling, and cycling infrastructure post-construction.

Beyond these well-tested methods, continuous improvement is also underway to ensure we realise the benefits of each of our schemes. Going forward, the Council has formalised a new engagement approach that increases the importance of both early engagement and benefits realisation, two key areas that result in higher resident satisfaction, greater likelihood of project success, and can always be improved.

### 5.10.2 Monitoring & Evaluation

A Monitoring & Evaluation Plan has been prepared in line with WECA CRSTS guidance for Monitoring and Evaluation, adopting a proportionate approach to measuring the outcomes of the scheme.

The full Monitoring and Evaluation plan can be found in **Appendix F**.

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# Appendix A EBLN Monitoring Report

# Appendix B EBLN Engagement Report

# Appendix C Co-Develop Engagement Report

# Appendix D Options Selection Process

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