Environmental Impact Assessment [version 1.0]

Proposal title: City Centre CRSTS project – Bedminster Bridges Area OBC and delivery	
Project stage and type: ☐ Initial Idea Mandate ☒ Outline Business Case ☐ Full Business Case	
☐ Policy ☐ Strategy ☐ Function ☐ Service ☒ Other Capital project	☐ New ☒ Changing ☐ Already exists / review
Directorate: Growth and Regen	**Lead Officer name:** James Coleman
Service Area: Strategic City Transport	**Lead Officer role:** Project Manager

Step 1: What do we want to do?

The purpose of this Environmental Impact Assessment is to help you develop your proposal in a way that is compliant with the council's policies and supports the council's strategic objectives under the One City Climate Strategy, the One City Ecological Emergency Strategy and the latest Corporate Strategy.

This assessment should be started at the beginning of the project proposal process by someone with a good knowledge of the project, the service area that will deliver it, and sufficient influence over the proposal to make changes as needed.

It is good practice to take a team approach to completing the Environmental Impact Assessment. See further guidance on completing this document. Please email environmental.performance@bristol.gov.uk early for advice and feedback.

1.1 What are the aims and objectives/purpose of this proposal?

Briefly explain the purpose of the proposal and why it is needed. Please use plain English, avoiding jargon and acronyms.

1. The key proposals to be delivered by the project are described below:
    a. Replacement of the roundabout layout with a light-controlled junction
    b. Dedicated bus-only lanes, shorter than current routes and which are separated from general traffic, greatly improving bus journey times and reliability.
    c. Cycle routes segregated from traffic through the area, joining up current cycle routes, improving safety for cycles and improving ease of journeys.
    d. Quicker and easier pedestrian crossings in high footfall areas, making pedestrian journeys quicker and more pleasant.
    e. Improvements to the public realm, by using higher quality materials and refreshing planting areas.
    f. Removal of the Redcliffe Hill underpass, and using the space currently occupied by ramps for new footway, cycleway and planting space.
    g. Increasing the footway width at Bedminster Parade.
    h. An increase in the total number of trees by planting more trees, with a small number of existing trees removed to enable the proposed changes to the road layout and provide a better landscape design.
    i. Changes to loading arrangements
    j. Removal of parking on Bedminster Parade and Nelson Parade, with more residents' parking space provided on adjacent roads.
    k. Banning some of the lighter general traffic movements through the junction. This enables the sustainable transport improvements, which would otherwise not be possible. All vehicles can still reach all areas they can now, but just via a different route.
    l. Introduction of a new rapid transit service.

i. In the summer 2024 public consultation a new rapid transit service was described as running from Long Ashton park and ride to the North East of the city
ii. Since the consultation discussions with WECA and bus operators have developed and the current proposal is to re-route the m2 service. The m2 currently runs every 15 minutes between Long Ashton Park and Ride and the City Centre, where it operates in a loop around the central area. It is proposed that it would be extended to UWE following the same stopping pattern of the m1 & m4, increase in frequency to every 10 – 12 minutes, and change its route through the central area to use Redcliffe Street, High St Wine Street Union and vice versa.

2. The key changes since the public consultation are:
    a. Restoring two banned general traffic movements
        i. the left turn from Redcliffe Hill into Clarence Road has been returned for general traffic to help address concerns about motorist accessibility
        ii. The 'no exit' from Guinea Street into Redcliffe Hill was also removed from the proposals, taking on board feedback received in the public consultation
    b. Bus priority and reliability improved:
        i. The inbound bus lane is extended all the way down to the start of Bedminster Parade, by providing off-peak loading bays
        ii. Adjustment of bus lane stop lines and removal of one traffic signal at the northern end of Bedminster Parade shown to reduce journey times by transport modelling
    c. Further cycle track connections:
        i. A new bi-directional cycle track at Coronation Road now connects the Bedminster Bridges junction into St John's Road, allowing cycles to reach further into Southville
        ii. The cycle track at York Road now connects into the Whitehouse Street cycle track through the introduction of a light controlled junction at Whitehouse Street and York Road, which will also help to improve safety at this junction.
        iii. A new section of cycle track connects York Road to Coronation Road to address concerns about cycles riding on pavements where the York Road cycle track ends
        iv. A small section of separation for cycles introduced on Bedminster Parade near Boot Lane to help cycles integrate back into the flow of traffic
        v. A cycle connection is introduced on the eastern side of the western bridge in the southbound direction to further provide connectivity
    d. Refinements for walking and wheeling
        i. New continuous-footway crossings installed at the junctions of Guinea Street, Redcliffe Parade, and Prewett Street
        ii. New path introduced at near Waring House parade of shops (1-11) to match pedestrian desire line, provide more waling space, and help bring passing trade to the shops.
    e. Improvements to safety with a 20 mph speed limit to connect to existing 20 mph areas, and on all approaches to the junction. The following roads will be change from 30 mph to 20 mph: Redcliffe Hill, Redcliffe Way, Wapping Road, Commercial Road, York Road, Clarence Rd, part of Coronation Road (from Dean Lane to Bedminster Bridges) and part of Cumberland Road (from Goal Ferry Steps to Wapping Road).
3. The committee paper to which this EnvIA accompanies is seeking to:
    a. To **submit the Bedminster Bridges OBC to WECA** which, if approved, would secure funding to continue development of the project up to FBC stage.
    b. Ordinarily no physical works would start until after FBC approval, however, to accelerate delivery and meeting CRSTS funding deadlines this report seeks permission to **start physical works after OBC approval in parallel to seeking FBC approval**. As such this paper is also to seek approval to accept and spend funding, procure and award contacts for the development and delivery of the Bedminster Bridges Project (part of the City Centre

Scheme).

1.2 Will the proposal have an environmental impact?

Could the proposal have either a positive or negative effects for the environment now or in the future? If 'No' explain why you are sure there will be no environmental impact, then skip steps 2-3 and request review by sending this form to environmental.performance@bristol.gov.uk

If 'Yes' complete the rest of this assessment.

☒ **Yes** ☐ **No** [please select]

1.3 If the proposal is part of an options appraisal, has the environmental impact of each option been assessed and included in the recommendation-making process?

If 'Yes' please ensure that the details of the environmental impacts of each option are made clear in the pros and cons section of the project management options appraisal document.

☒ **Yes** ☐ **No** ☐ **Not applicable** [please select]

If 'No' explain why environmental impacts have not been considered as part of the options appraisal process.

Yes, an options appraisal has been completed, and this can be seen in the Options Assessment Report (OAR) which is in an appendix to the OBC. To summarise:

Option	Description	Summary of environmental impacts
1	Leave as existing	Sustainable transport modes (bus transit, walking, wheeling, cycling) negatively impacted by general traffic. Buses delayed and unreliable due to traffic congestion. Cycles experience danger and discomfort. Pedestrians must wait for extended durations (including on traffic islands) to cross the road. All outcomes lead to sustainable modes remaining relatively unattractive compared to private car travel. Carbon emissions from private vehicles remain as existing, and local air pollution does not improve and remains above WHO recommended levels. Co-benefits to the economy from reducing congestion and reducing health impacts of inactivity also not realised.
2a	Retain roundabout layout: Convert a general traffic lane to a bus lane	Causes queuing to general traffic which extends beyond the approaches to Bedminster Bridges, and reaches other junctions and other routes where there is no bus priority (e.g. Bath Bridges). To the surrounding area, the situation remains similar to the impacts in option 1, or worse.
2b	Retain roundabout layout: Widen the existing bridges to provide the bus lane	Discounted due to cost, and does not provide a benefit to cycles and pedestrians. As a result, the benefits would be considerably lower overall. The benefit to cost ratio would be significantly worse than the current proposal.
2c	Retain roundabout layout: Remove pedestrian and cycle facilities to provide the bus lane	Removing pedestrian and cycle facilities would; likely breach the Equalities Act; be contrary to local and national policy, considerably increase road casualties.
2d	Retain roundabout layout: Re-route the M2 service onto Coronation Road	Causes an overall disbenefit to the M2 service, as there is no scope to provide bus priority on Coronation Road. No benefits to other sustainable modes or services. The situation remains similar to option 1, but with more delay to the M2 bus service, worsening environmental outcomes.
3	Change the roundabout into a junction. Provides	Allows all bus services to traverse through the junction without being delayed by general traffic. The M2 bus service can remove the fixed

	dedicated bus priority to all bus services and allows the M2 to take the direct turn into Cumberland Rd. At the same time, provide new cycleways and upgrade pedestrian routes.	delay of up to 3 minutes which is incurred when taking the right turn out of Redcliffe Hill to Commercial Road. Comfort, speed and safety is greatly improved for people walking, cycling and wheeling by upgrading footways and providing off-road cycle infrastructure. Sustainable travel becomes a more attractive mode of transport compared to the private car. People drive private cars less. Carbon emissions and local air pollution are reduced.

Step 2: What kinds of environmental impacts might the project have?

Analysis of impacts must be rigorous. Please demonstrate your analysis of any impacts of the proposal in this section, referring to evidence you have gathered. See detailed guidance documents for advice on identifying potential impacts.

Does the proposal create any benefits for the environment, or have any adverse impacts?

Outline any potential benefits of the proposal and how they can be maximised. Identify how the proposal will support our corporate environmental objectives and the wider One City Climate and Ecological Emergency strategies.

Consider how the proposal creates environmental impacts in the following categories, both now and in the future. **Reasonable efforts should be made to quantify stated benefit or adverse impacts wherever possible.**

Where the proposal is likely to have a beneficial impact, consider what actions would enhance those impacts. Where the proposal is likely to have a harmful impact, consider whether actions would mitigate these impacts.

Enhancements or mitigation actions are only required when there is a likely impact identified. Remember that where enhancements or mitigation actions are listed, they should be assigned to staff and appropriately resourced.

GENERAL COMMENTS (highlight any potential issues that might impact all or many categories)		
The main aim of the works are to increasing the attractiveness of sustainable travel options which reduce carbon emissions and local air pollution compared to single occupancy car use. This accords with the One City Climate Strategy however, there will also be carbon emissions associated with delivery of the project.		
ENV1 Carbon neutral: Emissions of climate changing gases BCC has committed to achieving net zero emissions for its direct activities by 2025, and to support the city in achieving net zero by 2030. Will the proposal involve transport, or the use of energy in buildings? Will the proposal involve the purchase of goods or services? If the answer is yes to either of these questions,	**Benefits**	<u>One City</u> The One City Climate strategy contains the following objectives under the 'Transport' theme: • Objective 1 - "Significant reduction in car mileage achieved through mode shift towards public transport, walking and cycling" • Objective 4 -"Significant improvements made to accessibility and service of sustainable travel infrastructure to ensure it can support carbon neutral, climate resilient transport systems." The proposals comply with all the above themes: • Objective 1 - By prioritising walking, wheeling, cycling and public transport above private car transport, this will contribute to the mode shift outlined in objective 1. • Objective 4 – The provision of dedicated bus routes segregated from general traffic congestion, dedicated cycleway off the main carriageway, and prioritised and more comfortable pedestrian infrastructure will ensure the accessibility and service of sustainable modes is improved to comply with Objective 4. All active travel modes (walking, wheeling and cycling) are carbon neutral. Public transport emits far less carbon than private cars,

there will be a carbon impact. Consider the scale and timeframe of the impact, particularly if the proposal will lead to ongoing emissions beyond the 2025 and 2030 target dates. Further guidance ☐ **No impact**		and the First bus fleet in Bristol comprises biomethane buses with fully electric buses set to be introduced in 2025. New homes The proposals help to enable further housing and development in sustainable city centre locations by providing additional capacity and utility in sustainable transport modes. For example nearby, the Bedminster Green Regeneration area will introduce approx. 4,500 new residents, and the Whitehouse Street Regeneration area will introduce 5,500 new residents. This accommodation and development can be provided with very low or no private car parking due to the improved sustainable transport provision contained in these proposals which resides nearby Outline Business Case – Economic assessment. The impact of changed travel behaviours has been extensively considered as part of the work for the Economic Dimension for the OBC (Outline Business Case). The modelling and analysis has shown there will be an increase in bus patronage. Modelling shows that: Assuming scheme opening in 2027, there will be a reduction of 365 tonnes of operational carbon emissions within the study corridor a year. Uptake in sustainable travel across the study area is forecast to provide £17,450 of greenhouse gas benefits, £1,270 in local air quality benefits and £2,850 in noise benefits (in 2010 prices). The economic assessment shows an extra 155 cyclist journeys and 79 pedestrian journeys per day resulting in a traffic decongestion benefit of £258,320.
	Enhancing actions	• The junction has been assessed using advanced transport modelling systems, both at an isolated, local, and regional context. Through this modelling activity, the impacts on all transport modes can be assessed. Bus movements have been fine-tuned both in signal staging and junction layout to ensure the maximum enhancement has been achieved through the proposed layout. • All desire lines for cycles and scooters has been assessed, and wherever possible, these routes are added through the junction ensure these modes are as attractive as they can be. • An advanced 3D Ground Penetrating Radar survey has been conducted, and this has allowed strategic placement of trees so they do not conflict with underground services.
	Persistence of effects: ☐ **1 year or less** ☐ **1 – 5 years** ☒ **5+ years**	
	Adverse impacts	The construction of the project will create carbon emissions. The main sources of carbon emission will be: • The in-fill of the Redcliffe Hill Subway will require concrete which is a carbon-intensive material • The planing and laying of new sections of road will require tarmac, and this also creates carbon emissions • Concrete slabs used on footway will also create carbon emissions • The general movement of machinery and operatives to and from the site may result in carbon emissions.
	Mitigating actions	• Carbon Management plan: The project is currently commissioning a consultant to undertake an audit of the carbon emissions associated with the current design with a view that the project can make design decisions to reduce these emissions. The consultant will also be drafting a Carbon Management Plan. • The design of the new road layout works largely within existing kerb lines and road running lanes, and this reduces the amount of tarmac required. Existing road surfaces will be re-used if possible.

		• Concrete slabs selected will be manufactured in the UK. Concrete slabs have a long design life, and can be lifted and replaced many times for utility/underground works, whereas tarmac is usually discarded every time the footway is excavated. • In footway areas, recycled materials will be used to form the base layers of this construction. This will reduce the carbon impact of using virgin materials and helps to re-use material that could otherwise be sent to landfill. • The construction tender will be partially scored on environmental competency. Factors such as sustainably powered welfare units or machinery operating on alternative fuels will provide a better scoring.
	Persistence of effects:	☐ **1 year or less** ☐ **1 – 5 years** ☒ **5+ years**
ENV2 Ecological recovery: Wildlife and habitats BCC has committed to 30% of its land being managed for nature and to halve its use of pesticides by 2030. Consider how your proposal can support increased space for nature, reduced use of pesticides, reduce pollution to waterways, and reduce consumption of products that undermine ecosystems around the world. If your proposal will directly lead to a reduction in habitat within Bristol, then consider how your proposed mitigation can lead to a biodiversity net gain. Be sure to refer to quantifiable changes wherever possible. Further guidance ☐ **No impact**	**Benefits**	• There are a already a large number of trees in the project area, and significant areas of mown grass. • These proposals at Outline Business Case stage have detailed an overall increase in the number of trees. • A full landscaping proposal will be developed in the next stage (for Full Business Case). This will provide more detail on trees and other planting proposals for the mown grass areas.
	Enhancing actions	• To increase the number of trees, which this project has committed to. • To introduce a bug hotel • To provide planting which is more ecologically valuable and diverse (to be included for FBC, with the full landscaping proposal)
	Persistence of effects:	☐ **1 year or less** ☐ **1 – 5 years** ☒ **5+ years**
	Adverse impacts	• A small number of trees will require removal to realise the benefits of the scheme. Some of these are within existing structures that will be removed e.g. the trees in the sub-terranean Redcliffe Hill subway system. • Light, noise, dust pollution could cause adverse impacts during the construction stage.
	Mitigating actions	• Although not a requirement for a highway project, the proposals will comply with the Bristol Tree Replacement Standard, ensuring that new trees will be planted to replace those lost. • The landscape proposals (when developed for the FBC) will present a landscape which works harder both for the ecology and appearance of the area. There is considerable scope to increase biodiversity above the mown grass which is currently in many areas. • Construction Management Plan to be produced prior to construction phase that will outline the environmental controls for noise & vibration, and air quality & dust control, and light.
	Persistence of effects:	☐ **1 year or less** ☐ **1 – 5 years** ☒ **5+ years**
ENV3 A cleaner, low-waste city: Consumption of resources and generation of waste	**Benefits**	• In footway areas, recycled materials will be used to form the base layers of this construction. This will reduce the carbon impact of using virgin materials and helps to re-use material that could otherwise be sent to landfill. • The industry will already re-use tarmac removed from roads (planed) in base and binder courses of new roads.

Consider what resources will be used as a result of the proposal, how they can be minimised or swapped for less impactful ones, where they will be sourced from, and what will happen to any waste generated Further guidance ☐ **No impact**	**Enhancing actions**	• The above materials can be sourced locally, or may even arise from the same construction site, so little or no transport is required. • The construction tender will be partially scored on environmental competency. Factors such as full recycling of materials, or evidence of other sustainable disposal will provide a higher scoring.
	Persistence of effects: ☐ **1 year or less** ☒ **1 – 5 years** ☐ **5+ years**	
	Adverse impacts	• Construction sites will generate waste, though section above details where much of this is already re-used and recycled in the industry.
	Mitigating actions	• Contractors to provide a waste management plan ensuring legal disposal of waste adhering to the waste hierarchy. This will be outlined in the construction management plan.
	Persistence of effects: ☐ **1 year or less** ☒ **1 – 5 years** ☐ **5+ years**	
ENV4 Climate resilience: Bristol's resilience to the effects of climate change Bristol's climate is already changing, and increasingly frequent instances of extreme weather will become more likely over time. Consider how the proposal will perform during periods of extreme weather (particularly heat and flooding). Consider if the proposal will reduce or increase risk to people and assets during extreme weather events. Further guidance ☐ **No impact**	**Benefits**	The One City Climate strategy contains the following objective under the 'Transport' theme: • Objective 5 – "Existing transport infrastructure enhanced to withstand future climate projections with the effect that the transport network continues to function well during severe climate events." The proposals comply with the above theme: • 1) The project will increase the total number of trees in the area and create tree canopy cover where currently there is none. This will help create shade and shelter for extreme heat events and will help to mitigate the urban heat island effect. • 2) Parts of the project area reside within flood zone 3 and are adjacent to a man-made water course (the New Cut). A thorough drainage survey has been conducted to ensure the proper functioning and resilience of the existing surface water drainage network. If there are opportunities to re-route some of this water out of the foul sewage network and into water courses, this will be explored to help reduce sewer overflow discharges. • 3) Light coloured concrete slabs are proposed on footways to reflect light away and reduce heat-absorption of surface materials. Resilient tarmac surfaces will also be used to ensure these do not quickly degrade or deform during heatwave events.
	Enhancing actions	• An increased number of gullies will be installed in the road, and this will help the road to drain effectively during extreme rainfall events. • Gullies will also be strategically placed such that if one becomes blocked, the amount of ponded water will not be excessive.
	Persistence of effects: ☐ **1 year or less** ☐ **1 – 5 years** ☒ **5+ years**	
	Adverse impacts	N/A

	Mitigating actions	N/A
	Persistence of effects: ☐ **1 year or less** ☐ **1 – 5 years** ☐ **5+ years**	
Statutory duty: Prevention of Pollution to air, water, or land Consider how the proposal will change the likelihood of pollution occurring to air, water, or land and what steps will be taken to prevent pollution occurring. Further guidance ☐ **No impact**	**Benefits**	See response to ENV1 and ENV2. In summary the outcomes of the project should reduce the occurrence of air pollution by encouraging people to make use of sustainable transport modes and allowing them to live in sustainable locations.
	Enhancing actions	The construction tender will be partially scored on environmental competency including site management plans for controlling dust and noise pollution.
	Persistence of effects: ☐ **1 year or less** ☐ **1 – 5 years** ☒ **5+ years**	
	Adverse impacts	
	Mitigating actions	
	Persistence of effects: ☐ **1 year or less** ☐ **1 – 5 years** ☐ **5+ years**	

Step 3: Action Plan

Use this section summarise and assign responsibility for any actions you have identified to improve data, enhance beneficial, or mitigate negative impacts. Actions identified in section two can be grouped together if named responsibility is under the same person.

This action plan should be updated at each stage of the project. Please be aware that the Sustainable City and Climate Change Service may use this action plan as an audit checklist during the project's implementation or operation.

Enhancing / mitigating action required	Responsible Officer	Timescale
Continue Design development incorporating enhancing measures where possible.	James Coleman and Jon Sawyer	Through to October 2025.
Produce a Carbon Management Plan and calculate carbon during construction	James Coleman	By Q2 2025
Construction Management Plan to be produced	Civils contractor	Before construction commences approx. December 2025
Monitoring and Evaluating the outcomes of the scheme against the project aims and objectives	James Coleman	From April 2027 for 3 years

Step 4: Review

The Sustainable City and Climate Change Service need at least five working days to comment and feedback on your impact assessment. Assessments should only be marked as reviewed when they provide sufficient information for decision-makers on the environmental impact of the proposal.

Please seek feedback and review by emailing environmental.performance@bristol.gov.uk before final submission of your decision pathway documentation[1].

Where impacts identified in this assessment are deemed significant, they will be summarised here by the Sustainable City and Climate Change Service and must be included in the 'evidence base' section of the decision pathway cover sheet.

Summary of significant beneficial impacts and opportunities to support the Climate, Ecological and Corporate Strategies (ENV1,2,3,4):
The modelled impacts of the proposal project modal shift to active and public transport, and reduction in car journeys, both of which are essential for achieving Bristol's pathway to Net Zero, improving air quality, and a range of public health co-benefits. The modelled impacts consider the proposal area in isolation, but the improvements to bus services and active travel safety will have additional positive impacts on these modes of travel across the wider transport network.
Summary of significant adverse impacts and how they can be mitigated:
N/A

Environmental Performance Team Reviewer:	**Submitting author:**
Daniel Shelton	James Coleman
Date: 19/02/2025	**Date:** 30/01/2025

[1] Review by the Sustainable City and Climate Change Service confirms there is sufficient analysis for decision makers to consider the likely environmental impacts at this stage. This is not an endorsement or approval of the proposal.