

Transport for Greater Bristol's Plans for Bristol – A review

Introduction

Transport for Greater Bristol is developing an Integrated Transport Strategy for Bristol. Having undertaken its own work and adopted plans on Traffic Management, Parking, Buses, and Rapid Transport, this plan will be overarching, bringing this work together in a clear vision. As part of this work, Mobility Lab UK have undertaken a review of the existing plans that Transport for Greater Bristol have adopted as their plans for future transport in Bristol. These are as follows:

- Bus Plan (Draft)
- Parking Plan
- Rapid Transit Plan
- Traffic Management Plan

This note summarises the outcomes of this review.

Methodology

The purpose of this review was to review Transport for Greater Bristol's plans against established best practice in transport planning for the development of transport policies. Accordingly, the method chosen was a review of literature.

Transport planning is a necessarily wide field of expertise, with a variety of approaches adopted as best practice whether you are developing policy or establishing the case for a scheme. Additionally, what is good practice is not only driven by the outcome, but by the process. The background studies, policies, and technical work to deliver a road scheme or airport expansion can be as good transport planning as similar work to deliver a light rail scheme or cycle network.

The Transport Planning Society sets out outcomes of what it considers to be good transport planning¹. These are as follows:



Maximise connectivity for people and businesses while minimising the need to travel –thus reducing cost for users and non-users alike

¹ Transport Planning Society (2018) The principles of transport planning: the outcomes sought. Link: <https://tps.org.uk/public/downloads/EKZwT/TP%20principles%20May%202018.pdf>

Manage demand as an end in itself, for example by:

- a) working with spatial planners to minimise the need for movement of people or goods
- b) supporting options that encourage the least damaging alternatives, such as non-motorised modes, sustainable goods transport and digital connectivity



Meet the key quality of life objectives of:

- a) environmental, economic and social sustainability
- b) health and wellbeing, safety and security for all users and non-users
- c) equality of access for all members of society to the connectivity they need
- d) respect for the needs of local communities



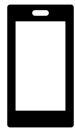
Are integrated and provide a range of choices to people on how and when they can travel



Are adaptable and flexible for a range of possible future scenarios, and resilient to major shocks and events, such as extreme weather, attacks and disruption



Innovate and work creatively with new technologies so that they benefit the whole of society.



The Department for Transport has established the Transport Analysis Guidance (WebTAG) as best practice for the delivery of an appraisal process through which policies and interventions are developed. Meanwhile, POLIS has identified the Sustainable Urban Mobility Plan (SUMP) process for developing new policies.



The logic supporting this approach is that sensible policies and schemes will result from following this process, that commences from a position that there is



no set preferred option. Given the voluntary capacity of the group, it would be unreasonable to expect the TfGB plans to have followed all steps through to strategy creation in detail and to the letter. But evidence of adopting key elements of this approach would be useful.

Accordingly, this assessment will not focus solely on the merits of individual proposals and ideas, but will instead judge each plan in accordance with the following:

- Whether the plans meet the outcomes of good transport planning as identified by the Transport Planning Society, plus
- Evidence is shown of analysing the current transport situation in Bristol
- Evidence is shown of considering some different ideas and scenarios for how transport could be in Bristol
- Evidence of a clear vision and strategy

Key conclusions

The plans as set out contain a significant amount of detail on potential initiatives, that have clearly been subject to considered thought, and link with a very strong vision that focusses on reducing the number of car trips in Bristol. As a consequence, the negative externalities associated with car dominance such as climate change and air pollution are tackled.

Overall, the plans themselves generally accord with the principles of good transport planning. But as the plans themselves concede, they are by no means comprehensive nor are they a complete integrated strategy. Common gaps that were identified, that if tackled could result in the plans being more robust against challenge.



Establishing the ‘strategic case’ for specific types of schemes. This is an essential first step of sound transport planning. The main purpose of a strategic case is to demonstrate why it is worthwhile proceeding along the lines of particular options based upon a common agreed knowledge among stakeholders of the nature of the challenge, what is driving the need for investment, and defining what a good outcome looks like. Many of the current plans focus on the specific benefits of different interventions before setting out this case.



Demonstrating that alternative options have been considered. What was notable about these plans is how narrative-driven they are as policy documents. This makes for an engaging read, but this could benefit from demonstrating that thought has been given to other options to achieve the same outcomes intended by the preferred schemes set out in these plans.



Providing the evidence to support assertions made. In many of the plans, strong assertions are made about the current situation (such as stating bus plans have been a dismal failure) without evidence to support these assertions. Where this is simply the considered opinion of the group, this should be stated. There are plenty of open data sources that can provide good quality data in support of some of the assertions made.



Expansion of some of the frameworks to deliver. The plans do an excellent job in considering how people move. But transport fits within a wider context, and so in some areas it is worthwhile expanding the proposed frameworks away from simple matters of movement. This can include thinking of streets as places, and the consideration of mobility hubs.

More detailed commentaries on individual plans are now provided.

The Bus Plan

It should be noted that as of the time of this review, sections on fares and integrated ticketing have not been completed. So these areas have not been assessed, although some general commentary is provided as part of comments on good transport planning.

The outcomes of good transport planning

The plan itself generally aligns with the principles of good transport planning, most specifically in terms of how its planned solution (more regular bus services). But there are some specific aspects of the plan that require further consideration in order to present the best plan that is possible.

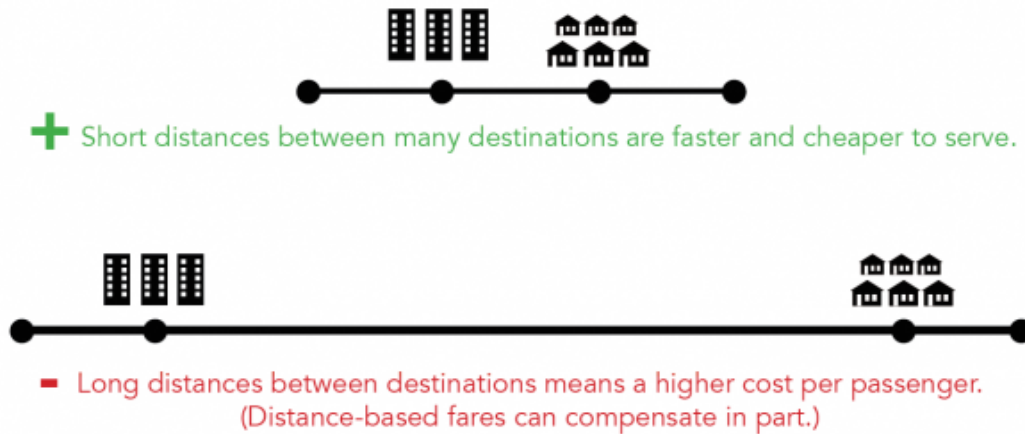
One matter that the plan covers is the balance between providing direct routes that are fast and at high frequency and services that are easily reachable and accessible. Or as the plan puts it 'wanders around the suburbs.' The plan seeks to provide a compromise through the development of orbital bus routes, and favouring the use of limited stop services on the key radial routes. This implies a favour towards faster, more direct services.

Public transport best practice in making networks that are attractive to users is that there is a necessary balance between ridership and coverage. By covering more areas you make services more easily accessible, but your ridership decreases, and vice-versa. There is no right or wrong choice here, incidentally. But it is a trade-off that must be made. This plan indicates that it is favouring greater ridership over coverage.

But when you focus on ridership, frequency matters. If passengers need to walk further, they wish to spend less time at stops waiting for buses to turn up. More frequent services also make it easier to connect, and mitigate delays for passengers if services are running late.

The plan focussing on providing limited stop services should be reconsidered. Bus services within cities should seek to serve as many destinations on the routes it operates as feasible. Operationally, these services are likely to cost a similar amount even if they ran as limited stop services, with the only benefit being a slight improvement in journey time (likely only a few minutes). All whilst serving fewer passengers, as some passengers are now required to walk further to access local bus services. Wider research indicates an optimal bus stop spacing in urban areas of around 550 metres. This may be a standard worth considering for urban routes in Bristol.

PROXIMITY *Does transit have to traverse long gaps?*



JARRETT WALKER + ASSOCIATES

Figure 2 - The link between gap length and ridership (from Jarrett Walker and Associates)

When considering feeder services and demand responsive services as a means of ‘filling the gaps’ in the service, the plan considers these operations in a traditional manner. For example through the use of Community Transport services and Taxi Cards. The demand responsive space has attracted much interest in recent years from new companies such as ViaVan, PickMeUP and Chariot, who have sought to provide new services using technology as a booking interface, and to better manage fleets. It has proven challenging for them to operate as a purely commercial model, indicating that a supported and integrated approach may hold promise in the future.

Evidence of analysis of the current transport situation in Bristol

There is a general commentary provided of the current bus operations and plans in Bristol. This commentary is mainly confined to the nature of current services provided and the politics associated with the operations, particularly the relationship between First Bus and the local authorities. This commentary appears to be a reasonable summation of the current situation in this regard, but there are notable gaps in the current assessment.

Of most note is the lack of assessment of user needs, both of existing users and potential users of the service. Wider evidence indicates that public transport needs to be the following to cater for the needs of as wide a user base as possible:

- Accessible, both in terms of the physical accessibility of the vehicle, and how accessible the service is to vulnerable users (for example, the attitudes of bus drivers may discourage use by disabled persons);

- Frequent services, ideally to the point where services are ‘turn up and go’ frequencies of less than every 10 minutes between services;
- Reasonably priced fares that give a sense of good value for money for the service offered (it should be noted that the concept of value for money is not necessarily linked to how cheap the ticket is);
- A comfortable on board environment within the vehicle itself. Increasingly, items that were previously considered luxuries – such as leather seating and on-board wifi – are now being offered as standard on many public transport services
- Clear information and guidance that makes using public transport intuitive. This is as much as making the information and interchanges useful and relevant to the passengers, as it is just providing timetables

At present, the plan as written infers these user needs through its policy ideas. This link between user needs and the policy ideas needs to be made more explicit.

One criticism of the plan as presented is that it makes statements about how current bus operations have failed or are not succeeding, without much in the way of evidence to support it. For instance, it mentions that the MetroBus “arguably (has) been a colossal waste of money,” which may be borne out by evidence but is not presented here. In fact, with evidence indicating that bus use in Bristol has doubled over the last decade, this evidence of failure needs to be made all the more explicit.



The bus hubs plans as described appear sound from an operational perspective. However, they are arguably not ambitious enough. The concept of Mobility Hubs should be applied to these hubs. This is where a variety of services, supported by clear information and quality infrastructure, are provided in a single location for all modes. Within the context of bus hubs, this should be expanded to include cycle stands and e-scooter parking area, electric vehicle charging points, and delivery drop-off points. This could also include the provision

of shops and public services in the vicinity of the hub itself, such as pharmacies, cafes, and supermarkets.

Not every facility will be appropriate for every hub. So what the plan could usefully do is establish a hierarchy of facilities for different types of hub across the city as a minimum standard, based upon anticipated service levels and passenger demand.

Evidence of the consideration of other different ideas and scenarios for how transport could be in Bristol

In common with the other plans, this plan does not appear to consider alternative proposals for how transport could be in Bristol in the future. Nor does it adequately

articulate how changes in the context within which transport in the city is situated, and how the plans could mitigate the associated risks, and take advantage of potential opportunities. This should include, but not be limited to, the following:

- How changes in the demographic profile of the city could affect the demand for transport overall, for example those aged over 60 years old are making up an increasing percentage of drivers and car owners;
- The impact of technology both on overall travel demand, on the passenger experience, and on the business model of transport operations. For example, more working from home may result in less commuting trips from people with professional services jobs, but can increase demand for trips from delivery services and more demand responsive transport services;
- The impact of planned developments on the distribution of trips across the city, not just in terms of where additional trips are generated from. For example, will new business parks and premises lead to a significant shift in trip distribution away from existing business parks?
- How wider economic changes and shifts will impact on the total demand for, and distribution of, trips. For example, the decline in High Streets as retail destinations, and a corresponding rise in online shopping.

The rationale for this is not because the current plans are incorrect or lack evidence. But it is to ensure that current proposals can be seen to be robust against a variety of future possibilities. To demonstrate that the logic underpinning these plans has been tested against a variety of possibilities will make them more robust and increase their credibility as plans.

Evidence of a clear vision and strategy

Similar to the other strategies, the Bus Plan ties into a wider vision for the city of reducing car use across the city. Much like the other strategies, the plan is more contemplative than a traditional strategy would otherwise be. So in many areas the link between the wider vision and individual ideas and concepts, that would usually be facilitated by setting objective setting, is lacking.

The Parking Plan

It should be noted that this plan currently constitutes 3 pages. Whilst quantity is no assessment of quality, it not being as comprehensive as other plans assessed here does limit the conclusions that can be drawn about the quality of the strategy itself.

The outcomes of good transport planning

In principle, the policy ideas presented in the plan have the potential to result in good transport planning outcomes. However, due to the lack of detail it is difficult to come to any firm conclusions outside of this.

One matter that is not considered explicitly in the current plan is the role of the pricing of parking as a demand management and behaviour change tool. The current plan presents Workplace Parking Levies, charging for parking at retail centres, and parking zones as ideas that are worthy of delivery in their own right. Which they may be within the context of Bristol. But this underplays the significance of parking charges as a demand management and behaviour change measure.

When the plan is developed further, it is worthwhile considering how parking pricing could be adapted for a number of demand management and behaviour change purposes. This could include the following:

- A potential requirement for making parking at Park and Ride sites either heavily discounted or free to offset the interchange penalty resulting from the need to change onto a bus, tram, or train;
- How pricing mechanisms in car parks and residents parking zones could encourage the uptake of electric vehicles for those people who are unable to switch modes for their travel, for example through initially discounted prices for owners of electric vehicles;
- How parking pricing could support businesses for which their operating hours are outside the core operational hours of public transport, for example through discounted parking at night.

Another notable omission from the policy is how disabled parking is best managed. Whilst other policies clearly state that improvements to public transport need to make transport accessible, this will not be the case for all blue badge holders in the city. Consequently, in order for them to maintain independence and quality of life, providing and managing parking for disabled persons should be included.

Whilst the strategy is based on the idea that if you reduce parking at your destination, you are less likely to drive, the link between this idea and the policy options identified is less clear. Many of these policy options do not reduce car parking overall, with the exception of banning parking on some main roads.

With regards to Park and Ride, it is interesting that this plan does not challenge the concept of Park and Ride more substantially. The success of park and ride sites is often not driven by their success in reducing commuter traffic (with some notable exceptions)

but their use at attracting visitors (and consequently trips) into the city. Additionally, Park and Ride sites are only successful at reducing trips into the city centre when measures are put in place to offset the ‘interchange penalty’ faced if potential passengers needed to park and take a bus. This includes higher city centre parking charges, and discouraging traffic from travelling into the city centre. This is notwithstanding the challenge of making park and ride sites financially viable, and the need to construct extra car parks in rural areas to cater for additional demand.

Evidence of analysis of the current transport situation in Bristol

The analysis presented is a general commentary on the lack of parking policy in Bristol, and that action is needed on the city’s congestion. Additional analysis with data that is likely to be publicly available (either on websites or through a Freedom of Information request) is occupancy data for public car parks, which would be useful baseline evidence of the current use of parking in the city.

Evidence of the consideration of other different ideas and scenarios for how transport could be in Bristol

No evidence is presented that alternative approaches to parking policies in the city have been considered. Whilst the suite of policy interventions suggested is broad – ranging from charging for workplace parking to banning temporary car parks – some consideration of factors that are likely to affect the availability, usability, and experience of parking would be useful to consider in future iterations of this policy. This could include, but is not limited to:

- The potential role of new technologies in dynamically managing the kerbside using digital platforms. This could include booking on street parking bays in advance, managing freight and delivery spaces in accordance with demand, and integrating payments for parking and car clubs within Mobility as a Service offerings.
- How the demand for freight and deliveries is likely to change in the future, notably the significant rise in recent years of smaller delivery vehicles and vans.
- The ongoing pressures facing local authorities for parking services to be able to cover their costs of operations through charges and fines. Meaning that the loss of parking bays could result in a loss in revenue to the authority.

Evidence of a clear vision and strategy

This strategy links into an overarching aim of reducing car dependence that results in modal shift in transport. This strategy is clearly intended to complement the more dominant strategies on buses, rapid transit, and traffic management.

The Rapid Transit Plan

As part of the work on the Integrated Transport Plan, the current plans for Rapid Transit are being reviewed. The comments provided here are based upon the current version of the plan as of 15th December 2020, and so may be out of date by the time of the publication of the Integrated Transport Plan.

The outcomes of good transport planning

Overall, the plans proposed do generally accord with the principles of good transport planning on the basis of the potential outcomes of the solution – trams. As the plan itself states in several places, trams have a number of potential benefits such as improving connectivity, and achieving environmental and economic objectives. When integrated with the plans for buses, there is a conceptual logic that what could result is a more integrated transport system.

The plan also covers many of the routes in technical detail. It is expected that the current review of this plan will cover many of the technical elements in more detail, so the commentary here is that there is a logic to much of the technical discussion. But one gap that is noticeable is one question that is unanswered by this plan:

“What is the strategic case for trams in Bristol?”

This is a different question to that answered in the plan at present, which focusses on the operational benefits of trams and new thinking compared to the present situation. The main purpose of a strategic case is to demonstrate why it is worthwhile proceeding along the lines of particular options based upon a common agreed knowledge among stakeholders of the nature of the challenge, what is driving the need for investment, and defining what a good outcome looks like. All based upon a solution-neutral approach to identifying what the solution could look like. It is a sound approach to planning further investments that seeks to overcome optimism bias that can result in organisations giving favour to specific solutions despite evidence indicating that this may not be the optimal solution.

A useful way to start answering this question is to identify some of the key success factors of tram services in other cities, and give commentary on how Bristol can maximise these success factors within the city:

- Land use integration at the micro-level, where stops are best positioned to serve new developments and areas of highest density of population. Successful tram projects are both land use projects and transport projects, and so stops need to be positioned to serve the highest number of people, and to help guide the design and layout of new developments
- On-street priority, especially in city centres. This should especially be over motor traffic, and can be enabled through timings of signals and dedicated lanes
- Having integrated ticketing with other forms of local public transport. This is most notable in London, where the Croydon Tram accepts Oyster and Travelcards, while Nottingham’s

tram accepts the local integrated bus ticket at no extra charge. It should be noted that all of these schemes also have their own dedicated ticketing systems also.

- Having a single promoter of the scheme and the wider public transport network. In Nottingham, the tram scheme was initially developed by the City Council, who retained a strong interest in one of the major municipal bus companies, thus developing the tram as part of a wider network. The tram is now operated by a consortium, who through close working with the City Council are operating the tram in a similar manner.

The above is partially mentioned in terms of the need to consider this plan alongside other plans and the policies and proposals contained therein. But the link between these success factors and how proposals in these plans will maximise these success factors would be a useful addition.

Reviewing wider data on planned developments and anticipated growth in the region, the makings of a strategic case that favours trams could be there. But this is not articulated in the plan as it stands. It is recommended that as part of the plan review, the strategic case for trams is made more explicit, particularly focussing on:

- A clear articulation, with evidence, of the challenges that trams solve and how those challenges manifest themselves in Bristol
- More clearly demonstrating the links between trams and these challenges. For example, how trams could reduce the amount of carbon dioxide emitted by road traffic
- Clearly demonstrating why investing in trams represents better value for money compared to other schemes, potentially building upon evidence from previous reports into trams that are mentioned in the plan itself
- How trams could improve accessibility to key destinations across the region

On a more specific bit of detail, the plan mentions a desire to operate services at a 10-15 minute frequency of service. Tram services elsewhere in the UK run at a higher frequency than this. For example, the Edinburgh Tram operates at a frequency of every 7 minutes between 7am and 7pm, with Nottingham operating frequencies of up to every 3 minutes during the peak hours.

This is an important consideration, as the dynamics of passenger demand for public transport, and consequently the economic case, changes as service frequencies increase. Any service that operates at a higher frequency of every 10 minutes is effectively a 'turn up and go' service, that does not necessitate passengers planning their routes in great detail. There is evidence that indicates that some passengers may walk further to use services that are more frequent than services on their nearest route.

The frequency of service is driven by more than effects on passenger demand, but on available capacity of infrastructure, the return on investment needed in vehicles, staffing levels, and speed of operations. But until this is tested by a robust business case, there is the opportunity to be more ambitious with service frequencies.

There is also the potential to expand the concepts around the stops more, away from purely operational matters. This can be built upon the Mobility Hubs concept identified in the review of the bus plan stated above.

Evidence of analysis of the current transport situation in Bristol

The analysis undertaken in the Rapid Transit Plan makes mention of the fact that Bristol does suffer from traffic congestion and poor air quality, which the wider evidence base certainly indicates that this is an issue in specific areas. The plan also notes that similar sized cities in the UK and in Europe have operational tram services running.

This analysis could be improved by referencing local evidence that indicates a potential demand for better public transport, including trams. For instance:

- Evidence that shows that bus and rail use across the city has doubled over the last 10 years;
- Planned developments across city that could be successfully interlinked with the planned tram network, and the level of planned population growth that could generate additional trips;
- Results of any modal shift questions arising from the Travelwest survey, as well as attitudinal data relating to major transport issues faced by different modes of transport, for example the speed of bus services;
- Any stated preference studies and surveys that indicate potential modal shift should an extensive tram network be constructed in the city.

Providing this contextual data is critical in establishing the case for a rapid transit solution in the city. The current plan paints a picture of why trams have not been chosen as the solution for Bristol, but can be improved significantly by expanding this to why trams are the right solution for Bristol.

Evidence of the consideration of other different ideas and scenarios for how transport could be in Bristol

No evidence is presented that alternative approaches to trams in the city have been considered. Additionally, there is no consideration of what different future scenarios for transport in the city could mean

Whilst the suite of policy interventions suggested is broad – ranging from charging for workplace parking to banning temporary car parks – some consideration of factors that are likely to affect the availability, usability, and experience of parking would be useful to consider in future iterations of this policy.

Evidence of a clear vision and strategy

This strategy links into an overarching aim of reducing car dependence that results in modal shift in transport. This strategy is clearly intended to complement the more dominant strategies on buses, rapid transit, and traffic management.

The Traffic Management Plan

The outcomes of good transport planning

As a general package of measures, the Traffic Management Plan constitutes a comprehensive package that, in general terms, has the potential to achieve the principles of good transport planning. There are a number of areas where the current plan could be improved upon.

The current plan does an excellent job of articulating its vision in terms of movement, where through movements are concentrated onto key routes in the city and discouraged from using alternative routes. The plan should also articulate the vision for streets in terms of their functions as places – for interactions, commerce, casual conversations, and their intrinsic value as public spaces.

In its simplest form, all streets in cities have both a place and movement function. There are countless frameworks for classifying streets within cities based upon a simple matrix of place and movement role. This includes Manual for Streets and the Roads Task Force Street Type Matrix adopted in London. The value that this way of thinking adds to planning is to move away from planning streets simply as places where movement is accommodated, and within the context of this plan to add the notion that high quality places can be achieved on key roads whilst ensuring that they are also quality places that are attractive to people.

When it comes to the detailed design of streets there will inevitably be trade-offs, that may be guided by a user hierarchy. But by classifying different streets in the city by the current types of streets they are on a place / movement matrix, and the types of streets they should be on the same matrix, it sets out what different routes should be achieving in a much more holistic manner.



The plan also makes note of the roles that different forms of public transport could play as determined by the distance of the trip. For example longer distance trips favouring rail travel, and short trips by bicycle and on foot. It is worthwhile noting that for some modes of travel, a good quality transport network that facilitates them can result in them playing roles across a variety of distances.

For example, cycling can be enabled by a comprehensive cycle network for trips of up to 5 miles, and still be a competitive mode of transport within a city setting.

This could have benefits for public transport in freeing up capacity for those trips where public transport is essential or presents the only realistic option.

Much of the plan focusses on reducing unnecessary through trips through neighbourhoods through a mixture of closed roads and bus gates. Reducing such trips are welcome, and need to be mindful of the local context and of the need for supporting measures on parallel routes. Additionally, complimentary measures are likely to be needed in other areas so that traffic is not displaced during delivery of the schemes. This could take inspiration from the concept of Superblocks, adopted in Barcelona, where a series of interventions are planned within a single area of the city, with the purpose of routing traffic around the periphery of the blocks and to discourage car use within.

Evidence of analysis of the current transport situation in Bristol

The plan as it is currently constituted could stand to benefit from a robust understanding and presentation of data on the current transport situation within Bristol. A notable omission is the lack of up-to-date data on traffic flows on key routes into and out of the city. Traffic count data is publicly available and free to download from the Department for Transport's Road Traffic Data website (note that some of this data is estimated), as well as traffic count data from Bristol City Council itself.

A similar statement could also be made for data on the number, location, and severity of road traffic collisions in Bristol. This analysis is being undertaken as part of the data collection exercise for this project, but data is publicly available on road traffic collisions from sources such as Crash Map and the Department for Transport. This should supplement the commentary that is given on the nature of road traffic collisions in the city that is present in the plan.

A similar road safety matter that should be considered is that of subjective safety. This is the 'feeling' that particular areas or sections of street are unsafe, even if the evidence indicates that there are few road safety issues in that area. There is some wider evidence that feeling subjectively unsafe can result in more vulnerable people limiting their social activities, or choosing not to use a specific mode of transport. No local evidence has been found that can quantify areas where subjectivity safety is a specific issue, but this issue should be recognised in the strategy itself.

Evidence of the consideration of other different ideas and scenarios for how transport could be in Bristol

No evidence is presented that alternative approaches to traffic management in the city have been considered. Additionally, there is no consideration of what different future scenarios for transport in the city could mean for the interventions that have been identified.

Evidence of a clear vision and strategy



This strategy links into an overarching aim of reducing car dependence that results in modal shift in transport. This strategy is clearly intended to complement other strategies on buses, rapid transit, and traffic parking.