

# Impact Assessment

Assessment of: Exeter Central and Eastern Bus Corridor Improvements

Service: Planning - Climate Change, Environment and Transport

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Assessment carried out by (job title): Graduate Trainee Transport Planner

## 1. Description of project / service / activity / policy under review

A number of interventions are proposed along two of Exeter's main bus corridors:

The **Exeter Central Bus Corridor** is approximately 3km (1.9 miles) in length between Paris Street Roundabout and Middlemoor Roundabout, predominantly along Honiton Road and Heavitree Road. Between May 2023 and May 2024, 447,000 passenger journeys were made along the Exeter Central Bus Corridor.

The **Exeter Eastern Bus Corridor** is approximately 3.4km (2.1 miles) in length between Sidwell Street and Pinhoe Sainsbury's predominantly along Pinhoe Road (B3212). Between May 2023 and May 2024, 336,000 passenger journeys were made along the Exeter Eastern Bus Corridor.

The schemes are part of a package of bus service improvements outlined in Devon County Council's Bus Service Improvements Plan (BSIP). This document is required by the UK Government's National Bus Strategy, which provided a pathway to help improve bus services following the Covid-19 pandemic.

## 2. Proposal, aims and objectives, and reason for change or review

### *Proposals*

#### Technological improvements

#### **Bus Priority Intelligent Corridor Signal Upgrades**

There are a number of technology-based measures that are proposed to help improve bus priority, signal efficiency and monitoring of both the Exeter Central and Eastern Bus Corridors. These technology solutions include:

- **Linking signal-controlled sites** – Coordinating the operation of signalised crossings and junctions to ensure buses progress smoothly, and, reduce the number of stops and associated vehicle emissions, providing the potential to significantly reduce journey times for bus users.
- **Bus priority technology** – Upgrading signal-controlled sites with bus priority technology will extend the green signal phase when a bus is detected on the approach, or it can adjust signal timings to reduce waiting times of queueing buses. There are nine sites along the Central Corridor and five along the Eastern Corridor that would benefit from this technology. Whilst the technology prioritises buses at certain junctions, there is a risk that the same buses are held back at pedestrian crossings. For this reason, at four crossing locations on the Central and Eastern corridor, it would be beneficial to de-prioritise those pedestrian crossings when buses are detected. The delay to pedestrians will only be seconds, and therefore hardly noticeable. A departure from policy has been agreed with the relevant members as our current policy prioritises people walking, wheeling and cycling at the top of the hierarchy, followed by public transport, with motorists generally further down the hierarchy.
- **CCTV** – Installation of CCTV cameras along the bus corridors to allow DCC's Network Operation Control Centre to monitor and manage corridor operation.
- **Urban Traffic Control (UTC) upgrades** – Upgrading signal-controlled sites will enable the Network Operation team to take control of signals and operate reactively to demands from all modes of transport to help manage and reduce journey times.
- **Variable Message Signs (VMS) upgrades** – Upgrading the five existing VMS signs on the eastern and central corridors to show a greater range of messaging to corridor users. Congestion, events, incidents information and positive bus travel messaging can be displaced to help improve traffic flow and encourage modal shift.

These solutions will contribute to upgrading the routes into 'Intelligent Corridors' providing DCC with the ability to monitor and manage the co-ordination of signal-controlled sites and bus priority.

### Infrastructure improvements

A number of civil works are proposed to improve the bus infrastructure along the Central Corridor. These are situated at Heavitree Road (Livery Dole), North Street and upgrades of the existing bus lanes.

### **Heavitree Road Outbound Bus Lane Priority Bypass**

Outbound buses heading towards Barrack Road are often delayed waiting for gaps to

move into the right turn lane to continue their onward journey. Up to 9 buses an hour make this movement. This proposal extends the bus lane at Livery Dole by approximately 20 metres towards the Barrack Road junction, supported with signals at the end of the bus lane to give buses signal-controlled access over general traffic. When a bus is exiting the bus lane, other outbound traffic will be signalled to stop in coordination with the junction signal control, thereby creating an opening in the traffic for the bus to proceed more easily into the right turn lane. Therefore, reducing conflict between buses moving into the right turn lane and vehicles moving into the left turn and straight-ahead lane as well as benefiting all outbound buses irrespective of their turning movement at the junction.

In order to accommodate the civils work for the bus pre-signals, it is proposed to consolidate the two inbound bus stops (Livery Dole & Grendon Road), located 140m apart, to one shelter. In addition, 12 parking spaces will need to be suspended on the southern side of Heavitree Road. This loss is partly mitigated by the consolidation of bus stops enabling 6 new parking spaces to be introduced closer to the Barrack Road junction.

### **North Street Junction Two Lane Advance Extension**

The length of the two-lane advance on North Street, at the junction with Heavitree Fore Street, will be extended. A slight change to the lining would allow two cars to stack at the junction side by side. This would enable more traffic to feed through the green time signals, which in turn would aid buses turning right into Heavitree Fore Street and allow more buses to get through the first signal phase. To facilitate the length increase, three parking spaces on the west side of North Street need to be removed. The car club space will be relocated to the remaining car parking spaces. Whilst the car club system is not currently operating, the system is currently being procured, and therefore this space may be needed in future.

### **Bus Lane Operation Time Extensions and Legibility Improvements**

It is proposed to extend the operational hours of both the Eastern and Central Bus Corridors. Extending the bus lane times to times shown in the table below will enable more buses to make use of operational bus lanes, particularly at peak times when buses experience the most delay. Inbound buses on Heavitree Fore Street were also found to be experiencing delays not only during the peak but also during the interpeak period, therefore a 12-hour operation (7am-7pm) is proposed.

<b>Bus Lane</b>	<b>Existing Operation Times</b>	<b>Proposed Operation Times</b>
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<b>Honiton Road Inbound</b> – Hill Barton Road Overbridge to Ringswell Avenue	Mon to Fri, 8am to 9:15am	Mon to Sat, 7am to 10am
<b>Heavitree Fore Street Inbound</b> – Butts Road to Church Street	Mon to Fri, 8:30am to 9:30am and 4pm to 6:30pm	Mon to Sat, 7am to 7pm
<b>Pinhoe Road Inbound</b> – Whipton Community Hall to Widgery Road	Mon to Fri, 8am to 9:30am	Mon to Sat, 7am to 10am
<b>Pinhoe Road Inbound</b> – Tarbet Avenue to St Marks Avenue	Mon to Fri, 8am to 9:30am	Mon to Sat, 7am to 10am

It is also proposed to improve the road markings of existing bus lanes to improve legibility and road user compliance. Combined with the introduction of zero emission buses in 2025, part of the Zero Emissions Bus Regional Areas (ZEBRA) scheme, improvements to these corridors should make travelling by bus a more obvious and attractive option to members of the public.

### **Bus Stop Real Time Information**

It is also proposed to install electronic real time information signs, where possible, at bus shelters and stops along both corridors. This will provide bus users with up to date “real time” information, giving a clear indication of how long they are expected to wait at the shelter for their bus. The signs can also be used to supply other messages and key information about buses. At locations where it is not possible or feasible to add a physical sign, we will display a QR code which users can use with a smartphone or other internet connected device, to view real time online for the location.

### **Bus Journey Time Savings**

Overall, the technological measures together with the improved infrastructure is proposed to offer a significant journey time saving for bus users travelling on the Central and Eastern Corridors. The combined measures could save approximately 4 minutes per bus on the central corridor and 3 minute 20 seconds per bus on the eastern corridor. However, this will fluctuate depending on the bus services, and congestion levels, and direction of travel along the corridor.

### *Aims & Objectives*

By reducing bus journey times and increasing bus reliability through bus priority, the proposals are aligned with national and local policy to encourage mode shift and support decarbonisation of transport. The local policy is enshrined in the BSIP's aims to improve bus services and attract more people to buses.

The aims of Devon's Bus Service Improvement Plan are the following:

- Grow bus patronage across Devon County Council
- Facilitate a positive framework to regularly consult bus users, and use this information to influence bus service provision in the future
- Ensure information regarding bus services is of the highest quality and accessible to all
- Ensure the bus is considered equally alongside other modes of transport

### 3. Risk assessment, limitations and options explored (summary)

#### *Risk Assessment*

The Heavitree Road outbound bus priority bypass has been subject to Stage 1 Road Safety Audit (RSA 1). The only issues raised highlighted that the new traffic island needed for the signals could obstruct/cause difficulties for vehicles turning right into/out of the adjacent private accesses. In response to this, the location was amended to ensure the island did not inhibit standard access requirements to or from these properties in either direction. The proposals will be subject to further stages of the RSA process at the appropriate time with further required changes to the designs being possible subject to RSA recommendation.

#### *Limitations*

One limitation is the physical space available along the corridors. In order to keep the schemes within the highway boundary, some concessions have to be made such as the reduction in parking and consolidating the Livery Dole bus stop with the bus stop at Grendon Road (on Heavitree Road).

A potential limitation of the technology proposals is that pedestrians waiting to cross at signalised crossings, and road traffic on minor arms joining the corridor may experience slightly longer journey times. This is because when a bus is detected along the corridor, traffic signals will prioritise the bus over traffic on minor arms and crossings, which may delay those users. However, this is not expected to be of significant detriment to other road users and may not be noticeable by pedestrians. Some road users travelling in the same direction as the bus may also benefit from the priority given to buses.

## Options

During the initial design phases, a number of high level infrastructure improvements were prepared for the corridors, to include:

- **Sidmouth Road / Honiton Road junction:** dismissed due to constraints related to highway space, overall scheme cost and perceived benefits to buses.
- **Sweetbrier Lane / Rifford Road:** dismissed due to constraints related to highway space, overall scheme cost and perceived benefits to buses.
- **Barrack Road / Heavitree Road junction:** A design taken to public engagement proposed an additional northbound traffic lane and bus lane on Barrack Road, facilitated by removing the eastern footway. Following engagement with the public and stakeholders, this proposal will not be progressed to detailed design due to the public feedback received stating that this road layout could be confusing and bus operators stating that the short length of bus lane would only have limited benefit to buses.

**Alternative bus lane operation times** were also considered during development of the proposals. Proposals presented during the engagement period, focused on peak periods when buses experience the most delay and the Central Corridor at Heavitree Fore Street also included a 12-hour option. A 24-hour bus lane operation was dismissed at the earliest stage due to the minimal benefit this would provide buses as the roads in Exeter are generally quieter at night time.

**Do nothing.** Maintaining the existing situation would continue to provide services with long journey times due to congestion, exit blocking, conflicts between buses and other traffic, and signalled junctions that are not working to the optimum performance. Maintaining current service will do nothing to improve patronage or future proof against any increase in demand, and will likely increase running costs to the detriment of the wider bus network. It would fail to meet the aims of the BSIP, would not match the County Council's ambitions around decarbonisation of transport and could potentially result in loss of funding.

In order to meet aspirations to reduce the transport impact on carbon emissions, in line with the Climate Emergency declaration and Devon Carbon Plan, public transport infrastructure needs to be upgraded in order to encourage mass transit of people and mode shift away from private vehicles.

## 4. People affected, diversity profile and analysis of needs

The people potentially affected by the proposals are principally people living or working in the Exeter area, as well as bus passengers who are travelling in and out of Exeter to other

parts of Devon along the Exeter Central and Eastern Bus Corridors. Therefore, the diversity profile for Exeter, and Devon as a whole is presented below with England overall used as a comparator. The propensity for certain demographic groups to use buses is also discussed to inform assessment of the potential differential impacts of the proposals.

### Age

Table 4 illustrates that the population of Exeter is slightly younger than the national average, with population of 0–64-year-olds 2% lower than England as a whole. However, Devon as a whole is comparatively older than the national average. 65-year-olds and over make up 8% larger proportion of the county’s population than the national average.

<b>Geography</b>	<b>Total</b>	<b>% Age 0-19</b>	<b>% Age 20-64</b>	<b>% Age 65+</b>
Exeter	130,712	23%	60%	17%
Devon	811,638	20%	54%	26%
England	56,490,045	23%	58%	18%

Table 4: Age (Census, 2021)

As highlighted by the 2022 National Travel Survey<sup>1</sup>, people aged under 30, and people aged 70 or older make the highest proportion of trips by non-London bus compared to other age groups. Particularly individuals ages 17-20 who make 10.4% of trips by non-London bus. Therefore, these age groups may benefit most from improvements to bus services.

### Ethnicity

As shown in Table 5, Exeter and Devon as whole are lower in ethnic diversity than the national average.

<b>Geography</b>	<b>Total</b>	<b>% White</b>	<b>% Mixed / multiple ethnic groups</b>	<b>% Asian / Asian British</b>	<b>% Black / African / Caribbean / Black British</b>	<b>% Other ethnic group</b>
Exeter	130,707	90.3%	2.5%	4.9%	0.9%	1.4%
Devon	811,642	96.4%	1.4%	1.5%	0.3%	0.5%
England	56,490,048	81%	3%	9.6%	4.2%	2.2%

Table 5: Ethnicity (Census, 2021)

<sup>1</sup> National Travel Survey Table NTS0601a: Average number of trips by sex, age and main mode (trips per person per year)

The National Travel Survey (5-year average between 2015-2019<sup>2</sup>) highlighted that bus use was highest amongst people who identify as 'Black' and of 'mixed ethnicity', with non-London bus use making up 7% and 6% of trips made respectively, therefore positive impacts of improvements to bus services would be expected for these groups.

### *Health and Disability*

Although people with mobility difficulties make fewer trips overall, the proportion of their trips made by bus is higher compared to groups with no mobility limitations, 5.1% of trips compared to 2.6%<sup>3</sup>, thus may disproportionately benefit from bus improvements. In the 2021 Census, a larger proportion of Exeter's population were considered to have good or very good health compared with Devon as a whole. However, Exeter and Devon have a slightly larger proportional population of people considered disabled under the Equality Act.

<b>Geography</b>	<b>% Activities limited a little by disability</b>	<b>% Activities limited a lot by disability</b>	<b>% Not disabled under the Equality Act</b>	<b>% Very good and good health</b>	<b>% Fair health</b>	<b>% Very bad and bad health</b>
Exeter	11.6%	7.3%	81.1%	82.2%	12.6%	5.2%
Devon	11.8%	7.7%	80.5%	81.4%	13.5%	5.1%
England	10.0%	7.3%	82.7%	82.2%	12.7%	5.2%

Table 6: Disability and General Health (Census, 2021)

### *Sex and Gender*

In all geographies considered, females make up a slightly larger proportion of the population than males. The National Travel Survey 2022<sup>4</sup> reported that females make a larger proportion of trips by bus (non-London) than males; 3.1% compared to 2.3%.

### *Socio-economic*

Compared to England as a whole, Exeter and Devon are slightly less deprived with 49.8% and 49.6% of households not deprived in any dimension, compared to England's 48.4% (As shown in Table 7). The National Travel Survey suggests that lower income households tend

<sup>2</sup> [Travel - GOV.UK Ethnicity facts and figures \(ethnicity-facts-figures.service.gov.uk\)](https://www.gov.uk/ethnicity-facts-figures)

<sup>3</sup> National Travel Survey Table NTS0709a: Average number of trips by mobility status and main mode, aged 16 and over (trips per person per year).

<sup>4</sup> National Travel Survey Table NTS0601a: Average number of trips by sex, age and main mode (trips per person per year)



to make a larger proportion of trips by bus (non-London) than higher income households. The survey reported households in the highest income quintile who make 1.5% of trips by bus<sup>5</sup>. Therefore, improvements to bus services may benefit lower income households more.

<b>Geography</b>	<b>% Household is not deprived in any dimension</b>	<b>% Household is deprived in one or two dimensions</b>	<b>% Household is deprived in three or four dimensions</b>
Exeter	49.8%	46.5%	3.6%
Devon	49.6%	47.6%	2.8%
England	48.4%	47.7%	3.9%

Table 7: Household Deprivation (Census 2021)

## 5. Stakeholders, their interest and potential impacts

- The local bus companies who run services along the impacted bus route. Improved bus services should have a positive impact on their business.
- Employers whose workers travel by bus. Improvements will help enhance access to work and punctuality.
- Educational institutions whose staff and students commute by bus. Improvements will help increase access and punctuality.
- Businesses which bus services provide access to, including for shopping and leisure. Increased bus patronage on bus services may also increase exposure of businesses along bus routes to passing bus passengers.
- Community organisations, such as bus user groups and environmental groups, who may advocate for bus service enhancements.

## 6. Additional relevant research used to inform this assessment

- 2021 Census Data
- National Travel Survey Data
- Devon’s Bus Service Improvement Plan
- Stagecoach patronage data

## 7. Description of engagement process and outcomes

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<sup>5</sup> National Travel Survey Table NTS0705a: Average number of trips by household income quintile and main mode (trips per person per year)

The public consultation was held between 19 February and 29 March 2024. Materials including details of the proposals, visualisations, technical drawings, and FAQ document were hosted on Devon County Council's 'Have Your Say' pages<sup>6</sup>. A link to an online survey as the primary method of response was also hosted on the webpage, alongside email, post, and telephone contacts provided as alternative methods to submitted feedback.

The consultation was promoted via:

- Four online pre-engagement briefings with Devon County Council HATOC members, business, operators, community group stakeholders and Exeter City Councillors.
- Postcard drop was provided to approximately 6000 addresses within 100 metres of both bus corridors on the first day of the consultation.
- Twenty posters on lampposts around the local area. Posters were also emailed to stakeholders where appropriate.
- A local press release.
- Social media posts on Devon County Council social media pages.
- Three rounds of emails to stakeholders.

Two in-person drop-in engagement events were held:

- Tuesday 19 March, 4:30pm – 7:30pm at Exeter Guildhall
- Thursday 21 March, 10:30am – 2:30pm at Exeter Library

These provided the opportunity for members of the public to find out more about the proposals and collect/view physical copies of the materials. Approximately 100 people attended the events combined.

A total of 831 surveys were completed during the engagement period. Of these, 799 were completed online, 20 were completed at the in-person events, and 12 were posted to the Transport Planning Team. 16 written responses were also received via email.

## Headline Results

A public consultation report will be available at: <https://devon.cc/exeterbsip>. The proposals showed a mix of results, with the most supported proposals being the Variable Messaging Signs, lengthening the North Street two-lane advance to junction, relocating the loading bay on Fore Street bus lane, and the renewal of bus lane markings on Honiton Road.

In addition to showing level of support to each element of the proposals, respondents were able to answer an open question regarding any other comments they had relating to the proposals. These comments were then coded into recurring themes. Note comments could be classed as multiple themes. The most common theme amongst responses related to the Heavitree and Whipton Active Streets Trail (158 comments). It should be noted that the proposals and their benefits are not dependent on the outcome of the Active Streets Trial.

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<sup>6</sup> <https://devon.cc/exeterbsip>

The second most common theme was that existing bus services should be improved in addition or instead of these proposals (145 comments), and the third most common theme was that money should be spent elsewhere such as on potholes (103 comments). The criteria for the BSIP funding is that it can only be used for bus infrastructure. The measures taken forward will help improve bus reliability and journey time, improving user confidence in the existing bus services.

A further 4 emails were received after the engagement period ended, voicing concerns regarding the reduction in parking on Heavitree Road.

### **Post engagement design changes:**

In response to comments from members of the public and stakeholders, some amendments have been made to the proposals.

#### *Heavitree Outbound Bus Priority Bypass*

- Regarding the bus priority bypass, respondents were concerned other authorised users of the bus lane would not be detected, and therefore not receive a green light. Since the consultation, signal staging has been developed in further detail including a fixed green stage that will release all authorised users in the bus lane.
- A request was made to include a 'Keep Clear' road marking outside Dove Tree House Assisted Living Residence to prevent the access from being blocked by queueing traffic. The designs have been modified and it has been possible to include the keep clear box.
- Mixed feedback was received regarding the position of the signals and bus lane. Requests were made for the pre-signals stage to be moved closure to the Barrack Road junction. Other requests were made to retain the Livery Dole bus stop, and further requests to reduce the loss of more parking spaces. These three elements conflict and therefore cannot be achieved without negatively impacting the other or the operation of the bus priority system. After revisiting the designs, it was concluded that the proposals were sufficiently balancing the three factors. The consolidation of the bus stop at Livery Dole with Grendon Road is needed to prevent blocking back of traffic across the junction. The consolidation will allow new parking spaces to be introduced, mitigating the overall loss of parking spaces in this area. The pre-signal infrastructure will remain in the position as proposed in the scheme design that formed part of the consultation package, as moving this any further toward the junction with Barrack Road will introduce a further loss of parking spaces.

#### *Barrack Road proposal*

The Barrack Road elements of the consultation proposals are not being progressed. Feedback from the public and stakeholders indicated that the junction with Magdalen Road could be confusing for drivers to navigate. Feedback from people who walk, and wheel indicated that they wanted to retain the eastern footway and feedback from people cycling

suggested that cyclists cycling north in the Polsloe Road direction would find the junction difficult to navigate. Furthermore, the bus companies did not see the value in such a short stretch of bus lane in isolation and wanted to see more of Barrack Road included in the proposal.

#### *Bus Lane operation times Fore Street Heavitree*

A slightly greater percentage of respondents preferred Option 2 (12-hour operation) than Option 1 (extended peak hours) for Heavitree Fore Street inbound bus lane. Option 2 is proposed to be progressed as it will bring greater benefit to bus users by improving vehicle flow and subsequently improving other vehicle traffic flow. This will be particularly beneficial as the East Wonford Hill area is considered one of the worst performing air quality corridors in Devon.

## Background information

### 8. Equality analysis

Under the Equality Act 2010, the local authority must consider how people will be affected by a service, policy or practice. In so doing we must give due regard to the need to: eliminate unlawful discrimination, harassment and victimisation; advance equality of opportunity and foster good relations across protected characteristics of age, disability, gender reassignment, pregnancy and maternity, marriage and civil partnership (for work), sex, sexual orientation, race, and religion and belief. The Equality Act 2010 and other relevant legislation does not prevent the Council from taking difficult decisions which result in service reductions or closures for example, it does however require the Council to ensure that such decisions are: informed and properly considered with a rigorous, conscious approach and open mind, taking due regard of the effects on the protected characteristics and the general duty to eliminate discrimination, advance equality and foster good relations; proportionate (negative impacts are proportionate to the aims of the policy decision); fair, necessary, reasonable, and those affected have been adequately consulted.

- a) Is this group negatively or potentially negatively impacted, and in what way?
- b) What could be done or has been done to remove the potential for direct or indirect discrimination, harassment or disadvantage and inequalities?
- c) In what way do you consider any negative consequences to be reasonable and proportionate in order to achieve a legitimate aim?
- d) What can be done to advance equality further? This could include meeting specific needs, ensuring equality of opportunity and access, encouraging participation, empowering people, making adjustments for disabled people and action to reduce disparities and inequalities.

e) Is there a need to foster good relations between groups (tackled prejudice and promote understanding) and help people to be safe and protected from harm? What can be done?

### **All residents by geographic area**

Any individuals who use bus services that travel along the Exeter Central and Eastern Bus Corridors are likely to benefit from quicker and more reliable bus journey times produced by the proposals. Due to the location of the corridors, this is likely to principally benefit Exeter residents, and residents of other parts of Devon connected to these bus corridors.

Other road users may also experience some benefits when travelling along the corridor in the same direction as the prioritised buses. If bus journey times become more reliable, this could increase the attractiveness of bus travel and encourage mode shift resulting in fewer private cars on the corridor.

Road users joining the corridor from minor roads at signalised junctions and pedestrians at signalised crossings may experience some delays when a bus is being prioritised, but this is unlikely to be significant.

Residents who consistently park their vehicles on the on-street residence permit parking spaces near Livery Dole bus stop may be disadvantaged by the reduction in parking from 60 metres to 30 metres (a reduction of approximately 5 spaces at 6 metres in length each). Only the minimum number of spaces to facilitate the proposals would be removed, and this has been further mitigated by the consolidation of the Livery Dole bus stop with Grendon Road.

The addition of “real time” information at bus stops will benefit users by providing convenient and easy to access information. This will likely be especially beneficial to those who struggle to access online materials (e.g. via an app) or navigate longer timetables. However, benefit to individuals who struggle to read signs, such as people with visual impairments, may be limited.

### **Age**

People aged under 30, and people ages 70 and over make a larger proportion of their trips by bus, particularly young people aged 17-20. These age groups are less likely to be able to drive or have access to a private vehicle and may be more dependent on someone else to driver them for car travel or use alternatives such as the bus. Improvements to buses will empower these groups to be less reliant on others and be more independent.

The proposals will deliver passengers to Exeter City Centre quicker, enabling younger people better access to education and early career employment.

## **Disability (includes sensory, mobility, mental health, learning disability, neurodiversity, long term ill health) and carers of disabled people**

Although people with disabilities and mobility issues tend to make fewer trips, they make a larger proportion of trips by bus than people without disabilities or mobility issues. Thus, improvements to buses will benefit groups who use buses more. People with some disabilities may not be able to drive, or walk/wheel longer distances and therefore are reliant on others for travel. Improvements to buses will help empower these groups to be less reliant on others and be more independent.

Improvements to bus journey times and reliability will benefit individuals who are more likely to experience higher levels of discomfort and anxiety from poor punctuality.

People with disabilities such as visual impairments may find it harder to adjust to changes such as the consolidation of the Livery Dole bus stop with the stop on Grendon Road. However, the stops are very close (approx. 140 metres) and the Grendon Road Bus stop will receive the bus shelter that is currently located at Livery Dole. Other benefits are that the Grendon Road bus stop has step free access on the bus whereas the Livery Dole bus stop required people to step down (or up) to access the bus, which would have been inaccessible for someone in a wheelchair.

## **Race and culture: nationality/national origin, ethnic origin, skin colour, religion and belief, asylum seeker and refugee status, language needs**

Bus services which are for all to use are encouraged.

It is not considered that there is the potential for any adverse impacts on the basis of race and culture. Although, people who identify as Black or of mixed ethnicity, make a greater proportion of trips by bus compared with White ethnic groups, therefore improving bus priority may have a particularly positive benefit for these ethnic minority groups.

## **Sex and gender identity and reassignment (including men, women, non-binary and transgender people), and pregnancy and maternity (including women's right to breastfeed)**

Bus services which are for all to use are encouraged.

It is not considered that the proposals would have a negative impact on anyone based on their sex, gender identity, pregnancy, or maternity status. Although, females tend to make a higher proportion of trips by bus than males, thus there may be a greater benefit to females in terms of improving access to locations along the bus corridor. The national travel survey does not provide data on non-binary and other gender's travel patterns.

## Sexual orientation, and marriage/civil partnership if work related

Bus services which are for all to use are encouraged.

It is not considered that there is the potential for any adverse impacts on the basis of sexual orientation and/or marriage/civil partnership status.

## Other relevant socio-economic factors and intersectionality

This includes:

- people on low incomes, children in care and care experienced people, armed services veterans, family background (size/single people/lone parents/family carers etc.), sub-cultures, refugee status, asylum seeker no recourse to public funds.
- housing quality and tenure, education and skills, language and literacy skills, health and wellbeing.
- rural isolation, access to services and transport, access to ICT/Broadband, social connectivity.

Also consider intersectionality with other characteristics.

It is not considered that the proposals have the potential for any adverse impacts on the basis of socio-economic factors.

Bus usage is higher among lower income groups who in general may have less access to alternative transport modes, such as private cars. Providing bus priority along corridors leading into Exeter City Centre may particularly advance access to employment and services for people in lower income groups, as well as improving a more affordable transport mode than the private car.

## 9. Human rights considerations:

We need to ensure that human rights are protected. In particular, that people have:

- A reasonable level of choice in where and how they live their life and interact with others (this is an aspect of the human right to 'private and family life').
- An appropriate level of care which results in dignity and respect (the protection to a private and family life, protection from torture and the freedom of thought, belief and religion within the Human Rights Act and elimination of discrimination and the promotion of good relations under the Equality Act 2010).
- A right to life (ensuring that nothing we do results in unlawful or unnecessary/avoidable death).

No direct implications, however, enhancements to bus services may enable individuals to exercise certain human rights more easily, such as the right to employment or the right to

education (both enshrined in the Universal Declaration of Human Rights) by improving access to employment/education. Bus services are open to everyone.

## 10. Environmental analysis

An impact assessment should give due regard to the following activities in order to ensure we meet a range of environmental legal duties. The policy or practice does not require the identification of environmental impacts using this Impact Assessment process because it is subject to (please mark X in the relevant box below and proceed to the 11, otherwise complete the environmental analysis information below):

<b>Devon County Council's Environmental Review Process</b>	
<b>Planning Permission</b>	
<b>Environmental Impact Assessment</b>	
<b>Strategic Environmental Assessment</b>	

- a) Description of any actual or potential negative consequences and consider how to mitigate against these.
- b) Description of any actual or potential neutral or positive outcomes and consider how to improve as far as possible.

### **Reduce, reuse, recycle and compost**

Where possible the intelligent corridor upgrades will utilise existing infrastructure such as signal poles, and traffic monitors to reduce the need for ground works. The bus stop at Livery Dole will be relocated to Grendon Road.

### **Conserve and enhance wildlife**

No negative consequences. No direct outcomes.

### **Safeguard the distinctive characteristics, features and special qualities of Devon's landscape**

No negative consequences. No direct outcomes.

### **Conserve and enhance Devon's cultural and historic heritage**

No negative consequences. Improved access to leisure and cultural activities such as in Exeter city centre, by bus contributes to more sustainable and culturally rich lifestyles.

### **Minimise greenhouse gas emissions**



No negative consequences. Increase bus use and reduced use of private cars leads to lower emissions. Improving the flow of buses and reducing stopping will result in improved fuel efficiency due to less decelerating and accelerating. Benefits will be further experienced when electric buses (ZEBRA) are rolled out on the 4 service along Heavitree Road in 2025. The combination of providing a 12-hour bus lane on Fore Street and the introduction of ZEBRA buses on this corridor will significantly improve the air quality along that corridor, particularly in East Wonford Hill where there is a known air quality issue.

#### **Minimise pollution (including air, land, water, light and noise)**

No negative consequences. Increase bus use and reduced use of private cars leads to lower emissions. Improving the flow of buses and reducing stopping will result in improved fuel efficiency due to less decelerating and accelerating. As well as reducing particulate matter pollution from brakes due to a reduction in decelerating. Benefits will be further experienced when electric buses are rolled out on the 4 service along Heavitree Road in 2025. The combination of providing a 12-hour bus lane on Fore Street and the introduction of ZEBRA buses on this corridor will significantly improve the air quality along that corridor, particularly in East Wonford Hill where there is a known air quality issue.

#### **Contribute to reducing water consumption**

No negative consequences. No direct outcomes.

#### **Ensure resilience to the future effects of climate change (warmer, wetter winters; drier, hotter summers; more intense storms; and rising sea level)**

No negative consequences. This scheme meets the objectives of Devon County Council's declaration of a Climate Emergency. For example, it will encourage an increase in bus usage and reduced use of the private car, resulting in less traffic noise and GHG pollution.

#### **Other (please state below)**

## 11. Economic analysis

- a) Description of any actual or potential negative consequences and consider how to mitigate against these.
- b) Description of any actual or potential neutral or positive outcomes and consider how to improve as far as possible.

#### **Impact on knowledge and skills**

Opportunities for people to access education and training will be enhanced by providing greater accessibility to educational campuses and training sites, providing more

opportunities and unlocking more potential, thus increasing knowledge and skills in Devon. This will be particularly beneficial to people travelling into Exeter on services that start/stop in more rural parts of Devon, where education/training options are scarcer compared to the city centre.

### **Impact on employment levels**

Opportunities for people accessing employment sites will be enhanced by providing greater accessibility to key employment sites such as Exeter City Centre.

A more punctual and reliable bus service supported by the bus priority system, may improve buses viability as a commuting option for time sensitive activities such as employment. This is expected to increase an individual's area of potential employment, particularly if they currently do not have good alternatives for medium to long distance travel.

### **Impact on local business**

The proposed extension of bus lane operating times would result in shorter periods of time allowed for parking/loading in bus lanes that allow parking outside of operating times. Businesses situated directly on these bus lanes whose customers/distributors frequently use these parking/loading bays may be disadvantaged. There are car parks nearby that customers can use to park.

A more reliable and punctual local bus service may lead to more reliable and punctual staff for businesses.

Improved bus services are likely to attract higher patronages therefore businesses near these bus services may experience higher footfall as well as increased exposure from passing buses services for businesses along the route.