

# Impact Assessment



Assessment of: Newton Abbot Town Centre Bus Corridor – Bus Service Improvement Plan Upgrades

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

The Newton Abbot Town Centre Bus Corridor scheme will use funding made available through the Bus Service Improvement Plan to improve the operation of buses through Newton Abbot Town Centre. A range of technological interventions at existing signalised junctions and crossings within the corridor will help to improve junction operation and capacity to reduce the journey time and delay for bus services using the town centre corridor.

This scheme is part of a package of bus service improvements outlined in Devon County Council's Bus Service Improvement Plan (BSIP). This document is required by the UK Governments' 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

### ***Reason for Change or Review***

An operational review was undertaken of the key traffic signal-controlled sites in the Newton Abbot Town Centre Bus Corridor using Urban Traffic Control data, site operation details, junction data files and as-built drawings.

The review found that the existing technology operation along the bus corridor meant that in many instances, the junctions were not working as efficiently as possible for buses. In some cases this was due to the signal phasing (i.e. how much 'green' time is given to each

arm of the junction), a lack of co-ordination between signals, and frequent demand for pedestrian crossings.

### **Proposals**

It is proposed to deliver a range of technological interventions at existing signalised junctions and crossings within Newton Abbot Town Centre, to improve bus priority, corridor capacity and reduce bus journey times and delay.

The corridor for improvement extends throughout Newton Abbot Town Centre, from Penn Inn Roundabout on the A381, along Torquay Road, to Halcyon Road / Kingsteignton Road towards Balls Corner Roundabout. The corridor services 28 different bus services, totalling over 200 buses per a day on Kingsteignton Road and approximately 40 buses a day across Torquay Road.

Technology improvements include:

- Bus priority – Bus priority technology will extend the green signal when a bus is detected on the approach to the signals or adjust the signal timings to reduce the waiting time of a queuing bus. A bus arriving towards the end of green signal phase is likely to benefit from approximately 60 seconds of delay at signalised junctions and 20 seconds of delay at signal controlled crossings. A departure from standards is proposed at signalised pedestrian crossings to facilitate bus priority of late running buses in peak times, which may extend wait times for pedestrians during limited periods. This is considered a proportional approach in order to secure benefits for buses.
- Urban Traffic Control (UTC) upgrades – Upgrading signals will enable the Network Operations team to take control of signals at the site and operate reactively to demands from all modes of transport to help manage and reduce journey times and delays.
- Webcams – The installation of webcams will provide the Network Operations team with the capability to monitor and manage the co-ordination of signals and bus priority to ensure minimal impact to pedestrians.

The specific scope technological interventions varies between signalised junctions and controlled crossings, summarised in the table below.

**TABLE 1 TECHNOLOGY UPGRADE LOCATIONS**

	Location	Signalised Junction	Signalised Crossing	Bus Priority	Webcam	UTC Upgrade
1	Kingsteignton Road / Cricketfield Road	✓		✓	✓	
2	Kingsteignton Road / Halcyon Road	✓		✓	✓	
3	Halcyon Road		✓	✓	✓	✓
4	Highweek Street / Halcyon Road	✓		✓		
5	A382 / Asda	✓		✓	✓	
6	Wolborough Street / Back Road	✓		✓		
7	Newfoundland Way, near Highweek Way		✓	✓	✓	✓
8	Newfoundland Way, near Powderham Road		✓	✓	✓	✓
9	East Street / Powderham Road	✓		✓	✓	✓
10	East Street, near Union Street		✓	✓	✓	✓
11	East Street, near Beaumont Road		✓	✓	✓	✓
12	Torquay Road / Brunel Road	✓			✓	

### ***Aims and Objectives***

By reducing bus journey times and increasing bus reliability through bus priority, the proposals are aligned with national and local policy to increase bus patronage and support the decarbonisation of transport.

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

- Grow bus patronage across Devon
- Facilitate a positive step change in bus provision across the area
- Create a 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

In Newton Abbot, 28 different bus services and routes use the corridor multiple times a day. These proposals will help reduce delay and journey time for Town Centre services, improving the overall reliability and attractiveness of bus services for Newton Abbot's residents and visitors.

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

#### **Limitations**

A departure from standards is proposed at signalised pedestrian crossings to facilitate bus priority of late running buses in peak times, which may extend wait times for pedestrians during limited periods. When active, pedestrians who arrive and place a demand at the start of the junction main road stage may be delayed by 10-15 seconds to allow the main road traffic to clear. However, it is likely that pedestrians who arrive later in the main road stage may not notice any difference.

#### **Options**

**Do Nothing** – Maintaining the existing situation in Newton Abbot will continue to provide bus services with unnecessarily long and unreliable journey times. Maintaining this current service will do nothing to improve patronage, and therefore fail to meet the aims of the BSIP.

**Highweek St / Halcyon Road Junction Improvements** – As originally identified in the Devon BSIP, a redesign of Highweek Street / Halcyon Road signalised junction was considered as part of scheme development. This scheme would have remodelled the junction, delivering bus priority signals and improved crossing provision / footways for pedestrians crossing Halcyon Road / A382 and Highweek Street to reach the nearby Sherborne Road bus interchange. However, detailed junction modelling failed to demonstrate meaningful benefits for bus journey times without significantly increasing delay for other road users.

**Retain existing pedestrian crossings priority** – Currently, the signal-controlled pedestrian crossings on the route operate in isolation and are not coordinated with the signal-controlled junctions. Where signal-controlled sites, crossings and junctions are in close proximity, co-ordinating the operation of the crossings with the junction operation ensures vehicle progression, reduces the number of stops and associated vehicle emissions, and has the potential to significantly improve journey times across the route. Retaining the current operation of pedestrian crossings along the corridor, to minimise delay to pedestrians in limited circumstances, would reduce the benefits of the scheme for buses.

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

The people potentially affected by the proposals are principally people living or working in the Newton Abbot area, as well as bus passengers who are travelling in and out of the town from the surrounding district and county area. Therefore, the diversity profile for Teignbridge (the district), and Devon is presented below with England overall used a comparator. Data extracted from the 2022 National Travel Survey<sup>1</sup> is used to understand how different groups in society utilise bus services, and therefore may experience a greater level of benefit from the proposed improvements to the Newton Abbot Town Centre Bus Corridor.

### Age

	% Age 0-19	% Age 20-39	% Age 40-59	% Age 60 -79	% Age 80+
<i>Teignbridge</i>	19.5	19.5	31.8	27.1	7.3
<i>Devon</i>	20.3	21.1	36.5	25.7	7.1
<i>England</i>	23	26.3	40	19.3	4.9
<i>% of personal trips made by bus<sup>2</sup></i>	13%	5%	4%	8%	

The National Travel Survey indicates that young people (0-19 years) and older people (age 60+) make the highest proportion of their trips by bus compared to other age groups. In the local area, these groups make up over 26% of the total population, meaning a significant portion of the population is likely to particularly benefit from improvements to bus service journey times and reliability.

### Sex

	<i>Male</i>	<i>Female</i>
<i>Teignbridge</i>	48.5	51.5

<sup>1</sup> <https://www.gov.uk/government/statistics/national-travel-survey-2022>

<sup>2</sup> [https://www.nomisweb.co.uk/sources/census\\_2021](https://www.nomisweb.co.uk/sources/census_2021)

<i>Devon</i>	<i>48.5</i>	<i>51.5</i>
<i>England</i>	<i>49</i>	<i>51</i>
<i>% of personal trips made by bus</i>	<i>2%</i>	<i>3%</i>

Females make marginally more of their personal trips by bus compared to males. This means that while both sexes will benefit from the bus service improvements, females, who make up a slightly largely proportion of the local, regional and national population, will particularly experience the benefits of the scheme.

***Ethnicity***

	<i>Asian, Asian British or Asian Welsh</i>	<i>Black, Black British, Black Welsh, Caribbean or African</i>	<i>Mixed or Multiple ethnic groups</i>	<i>White</i>	<i>Other ethnic group</i>
<i>Teignbridge</i>	<i>0.7</i>	<i>0.2</i>	<i>1.2</i>	<i>97.7</i>	<i>0.3</i>
<i>Devon</i>	<i>1.5</i>	<i>1.5</i>	<i>1.4</i>	<i>96.4</i>	<i>0.5</i>
<i>England</i>	<i>9.6</i>	<i>4.2</i>	<i>3</i>	<i>81</i>	<i>2.2</i>
<i>% of personal trips made by bus<sup>3</sup></i>	<i>3</i>	<i>7</i>	<i>6</i>	<i>4</i>	<i>5</i>

Ethnic diversity in Teignbridge is lower than that of Devon and England as a whole. The National Travel Survey highlights that (for a 5 year average 2015-2019) bus use was highest amongst people in ‘Black’ or ‘Mixed’ ethnic groups, meaning the positive impacts of the improvements to bus services would be particularly experienced by these minority groups across the local area.

***Health and Disability***

	<i>Disabled under the Equality Act</i>	<i>Not Disabled under the Equality Act</i>
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<sup>3</sup> <https://www.ethnicity-facts-figures.service.gov.uk/culture-and-community/transport/travel/latest/#by-ethnicity-number-of-trips-and-mode-of-transport>

<i>Teignbridge</i>	<i>20.3</i>	<i>79.7</i>
<i>Devon</i>	<i>19.5</i>	<i>80.5</i>
<i>England</i>	<i>17.3</i>	<i>82.7</i>
<i>% of personal trips made by bus<sup>4</sup></i>	<i>4%</i>	<i>2%</i>

A larger proportion Teignbridge's population are recognised as disabled under the Equality Act than in Devon and England as a whole. The National Travel Survey highlights that people with disabilities on average make less trips than those without disabilities (an average of 774 vs 911 trips per person per year in 2022), however of those trips, they make a larger proportion by bus. This suggests that improvements to bus services are likely to particularly benefit those recognised as disabled, which in the local area, is over a fifth of the population.

### **Socio-economic**

<i>Index of Multiple Deprivation Decile</i>	<i>Number of LSOAs</i>	<i>% of LSOAs</i>
<i>1 (most deprived 10%)</i>	<i>0</i>	<i>0%</i>
<i>2</i>	<i>3</i>	<i>4%</i>
<i>3</i>	<i>7</i>	<i>8%</i>
<i>4</i>	<i>8</i>	<i>10%</i>
<i>5</i>	<i>11</i>	<i>13%</i>
<i>6</i>	<i>14</i>	<i>17%</i>
<i>7</i>	<i>16</i>	<i>19%</i>
<i>8</i>	<i>7</i>	<i>8%</i>
<i>9</i>	<i>12</i>	<i>14%</i>
<i>10 (least deprived 10%)</i>	<i>6</i>	<i>7%</i>

<sup>4</sup> <https://www.gov.uk/government/statistical-data-sets/nts07-car-ownership-and-access>

The indices of multiple deprivation measure levels of deprivation in the Lower-layer Super Output Areas in England. Data from 2019<sup>5</sup> shows that in Teignbridge, 35% of LSOAs rank in the bottom 50% in the country in terms of deprivation. The National Travel Survey<sup>6</sup> indicates that households in the most deprived 10% of households make less trips per person per year (644 in 2020) than those in the least deprived 10% (743 in 2020). NTS data indicates that the most deprived households make a higher proportion of their trips by bus (7.1%) compared to the least deprived households (1.5%), and therefore stand to benefit most from bus service improvements.

## 5. Stakeholders, their interest and potential impacts

A number of stakeholders are likely to be impacted by this scheme, including:

- For **local bus companies**, a less congested network and priority at key junctions and crossings will improve the reliability and journey times of their services into, within and out of Newton Abbot. These improved services are likely to increase the attractiveness of their offering, positively impacting their business.
- For **employers** whose workers travel by bus, improvements to the bus journey time and reliability are likely to improve the accessibility and punctuality of their workers. Improved services may encourage staff who currently travel by the private car to shift modes, consequently contributing to organisational sustainability objectives.
- For **educational institutions** whose staff and students travel by bus, improvements to the bus journey time and reliability are likely to improve the accessibility and punctuality of their staff and students. Improved services may encourage staff and students who currently travel by the private car to shift modes, consequently contributing to the institutions sustainability objectives.
- Improved bus service reliability and journey times is likely to both enable and encourage visitors, from the local and wider area, to visit Newton Abbot's **shops and businesses**. Increased regular bus patronage is likely to increase footfall and bring economic benefits to local businesses.

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

- 2021 Census Data
- National Travel Survey Data
- National Statistics Indices of deprivation data

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<sup>5</sup> <https://www.gov.uk/government/statistics/english-indices-of-deprivation-2019>

<sup>6</sup> <https://www.gov.uk/government/statistical-data-sets/ad-hoc-national-travel-survey-analysis>



- Devon Bus Service Improvement Plan

## 7. Description of consultation process and outcomes

The Devon BSIP underwent a thorough consultation with key local stakeholders from all tiers of local government, bus operators, user groups and public bodies in 2021, identifying an ambition to improve bus service provision. A proportional approach to scheme engagement has been adopted, recognising that proposals do not make any physical changes to the alignment or regulation of the highway.

Engagement briefing sessions on the details of the proposals have been held with the relevant Devon County Council Local Members, setting out the locations and premise of the technology improvements. Cabinet Member approval for a departure from standards concerning proposed bus priority at signalised crossings has also been obtained. The project team has worked closely with internal colleagues in Network Operations and Transport Coordination Services to ensure the proposals the robustness of the proposals.

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## 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**

Residents using the bus services that travel along the Newton Abbot Town Centre Bus Corridor will be positively impacted by the scheme since increased bus priority at junctions and crossings will improve bus journey times and reliability. Passengers using services that utilise the entire bus corridor, i.e. travelling along the B3195 and the A381 will benefit from cumulative journey time savings by passing through all of the junctions and crossings being upgraded.

Other road users travelling along the Newton Abbot Town Centre Bus Corridor may also experience some benefit 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 with fewer cars on the corridor.

Road users reaching junctions on the non-main road arms may experience longer waits at junctions during peak times to allow for the prioritisation of buses on main-road arms. The upgrade of the UTC system and installation of CCTV cameras at multiple sites will however enable signals to be operated reactive to traffic volumes and congestion, which will help manage and reduce journey times and delays for all road users.

At signalised crossings, by coordinating with nearby junctions, during times of high congestion, late running buses will have priority over pedestrian crossing operation. During most the day, pedestrian operation and waiting times will be exactly as the current operation or possibly improved as the co-ordination could potentially make the pedestrian demand be served quicker compared to the current fixed delay of 25-30 second waiting time. When congestion along the route is identified or when a bus is detected on the route, the co-ordination can be activated automatically through the system, to ensure the progression of traffic between the stop lines for the junctions and the crossings next to them. When the co-ordination is active, the pedestrians who happen to arrive and place a demand at the start of the junction main road stage may be delayed by 10-15 seconds to allow the main road traffic to clear, but pedestrians who arrive later may not notice any difference.

### **Age**

Reliable bus services with improved journey times will provide an enhanced travel experience for bus users of all ages along the Newton Abbot Town Centre Bus Corridor.

People aged under 20, and people aged 60 and over make a larger proportion of their trips by bus compared to other age groups. These groups are less likely to be able to drive, or own a car, and therefore are reliant on other modes to access the education, employment and other facilities. Improvements to bus services along the Newton Abbot Town Centre Bus Corridor will enable enhanced independent mobility for these age groups, in particular by improving school bus journeys for young people, and providing improved journey experience for older people.

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

Reliable bus services with improved journey times will provide an enhanced travel experience for all bus users, regardless of disability status, along the Newton Abbot Town Centre Bus Corridor.

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 provide a particular benefit to people with disabilities and mobility issues.

A more reliable bus service with consistent journey times will also benefit individuals dependent on a consistent timetable, including carers, and those benefiting from being able to keep a consistent personal routine.

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

Reliable bus services with improved journey times will provide an enhanced travel experience along the Newton Abbot Town Centre Bus Corridor for bus users of all races and cultures.

People who identify as 'Black' or 'Mixed' ethnicity make a higher proportion of their trips by bus compared to other groups. As such, improving bus service reliability and journey time will have a particularly positive benefit for people of these ethnic groups in Teignbridge and the surrounding area.

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

Reliable bus services with improved journey times will provide an enhanced travel experience along the Newton Abbot Town Centre Bus Corridor for bus users of all sexes and gender identities.

Females tend to make a higher proportion of trips by bus than males, and thus females in Teignbridge and the surrounding area may be more likely to experience the benefits of the technology upgrades.

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

Reliable bus services with improved journey times will provide an enhanced travel experience along the Newton Abbot Town Centre Bus Corridor for bus users of all sexual orientations and marital 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.

National Travel Survey data highlights that lower income households travel by bus more frequently. In 2021, 27% of people from the lowest real income households travelled by bus at least once a month compared to 18% of those from the highest real income households. An improvement to bus services across the Newton Abbot Town Centre Bus Corridor are therefore likely to provide a particular benefit for lower income groups in the area.

## **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**

No negative consequences. Where possible CCTV cameras will be located on existing signal columns to reduce the need for new posts.

### **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. No direct outcomes.

## **Minimise greenhouse gas emissions**

No negative consequences. Increased bus use and reduced use of traditional private cars will lead to lower levels of vehicle greenhouse gas emissions. By improving the flow of buses through junctions and crossings, fuel efficiency will be improved due to less frequent decelerating and accelerating.

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

No negative consequences. Increased bus use and reduced use of traditional private cars will lead to lower levels of vehicle particulate emissions, noise pollution and air pollution. By reducing the likelihood of buses stopping regularly at crossings and junctions, there will be a reduction in braking and therefore a reduction in road and tyre wear.

## **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 Councils Carbon Plan and Climate Emergency declaration. By improving bus services, a modal shift away from the private car is encouraged, resulting in lower overall emissions from transport, less traffic related noise and air pollution, and a safer, more pleasant environment for all users of the Newton Abbot Town Centre Bus Corridor.

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

Not applicable.

## **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 on services that start/stop in more rural parts of Teignbridge surrounding Newton Abbot, where education/training options are scarcer compared to the town centre.

## **Impact on employment levels**

Opportunities for people accessing employment sites will be enhanced by providing greater accessibility to key employment sites in and around Newton Abbot. 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**

Improved bus service reliability and journey times is likely to both enable and encourage visitors, from the local and wider area, to visit Newton Abbot's shops and businesses. Increased regular bus patronage is likely to increase footfall and bring economic benefits to local businesses.