

## Exeter Western Corridor Bus Service Improvement Plan Upgrades

### Report of the Director of Climate Change, Environment, and Transport

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Please note that the following recommendations are subject to consideration and determination by the Committee before taking effect.

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#### **1) Recommendation**

That the Committee be asked to:

- (a) Approve the implementation of Western Corridor Bus improvements at an estimated cost of £235,000, subject to DfT funding approval;
- (b) Approve the advertisement of traffic regulation orders for the extension of the Cowick Street bus lane operating hours and the associated loading and waiting restrictions needed to facilitate the changes on the opposite side of the bus lane area as detailed in Appendix 2, and to make and seal the order if no objections are received; and
- (c) give delegated authority to the Director of Climate Change, Environment and Transport in consultation with the Cabinet Member for Highway Management, Cabinet Member for Climate Change, Environment and Transport, and local Members to approve minor amendments to the scheme.

#### **2) Background**

In 2021 the UK Government published its National Bus Strategy, which aimed to launch a revolution in bus services. The National Bus Strategy required local transport authorities to form Enhanced Partnerships with bus operating companies, and to publish a Bus Service Improvement Plan (BSIP). Devon County Council's BSIP was developed and subsequently approved by Cabinet on 13 October 2021 and an enhanced partnership was formed.

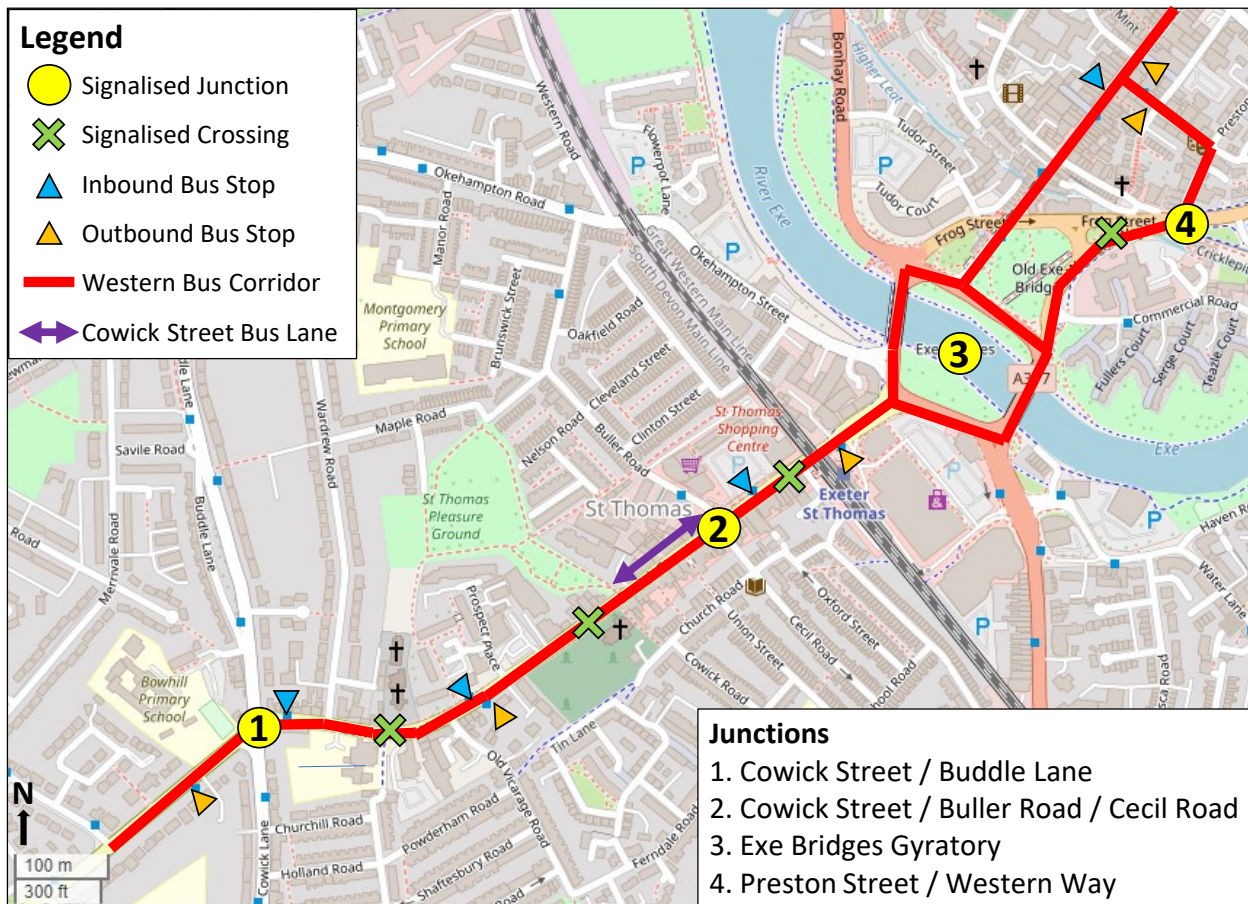
A key expectation of both the national strategy and the local BSIP was to support more ambitious bus priority schemes so that services could run faster, be more reliable and more attractive to passengers, and through this success help make buses cheaper to run.

In 2022, Devon County Council was allocated £14.1 million BSIP funding by the Department for Transport, which is split into capital (£8.8 million) and revenue (£5.3 million) across a three-year period from 2022/23 to 2024/25 with all schemes subject to final approval from the Department for Transport.

One of the routes identified in Devon County Council's BSIP is the Exeter Western Bus Corridor which connects St Thomas with the City Centre along Cowick Street, Exe Bridges, Fore Street/Preston Street and Western Way. This connects passengers between residential areas and key employment, education and leisure opportunities in the city centre

and is one of the busiest public transport corridors in the city with approximately 12 buses each hour in both directions. A map of the Western Corridor is shown in Figure 1.

Most buses in the outbound direction embark on Western Way via Fore Street. Alternative outbound bus route (via the Preston Street/Western Way junction) is used mainly when delays are identified on Fore Street.



**Figure 1: Exeter Western Bus Corridor**

There are four traffic signal junctions within the corridor, two of which have been identified as the locations with largest delays for buses in discussions with Stagecoach. These are Cowick Street/Cecil Road/Buller Road Junction, and Preston Street/Western Way Junction.

A review of the Cowick Street/Cecil Road/Buller Road junction showed that despite the site generally operating within capacity, site observations and video recordings identified exit blocking in the morning and evening peak periods. In the inbound direction, exit blocking is observed due to slow moving traffic queueing back from Exe Bridges and traffic being held at the signalised crossing by St Thomas shops. In the outbound direction, exit blocking is observed to be caused by queueing back from Cowick Street/Cecil Road/Buller Road junction and the two signalised junctions at St Thomas Church and near Barton Road.

Two main issues were identified at the Preston Street/Western Way junction. The existing right turn bus lane is currently configured to only detect buses when they are already on the bus lane. If a bus is queueing further back, it won't be detected and the demand only bus

signal stage will not be triggered, resulting in a delay. In addition, once the bus receives a green light to turn right onto Western Way, it may be unable to progress due to exit blocking by traffic queueing back from Exe Bridges and/or the toucan crossing on Western Way. Buses require both westbound traffic lanes to be free to make the turn onto Western Way or risk having to obstruct the eastbound traffic. This can be seen in Figure 2.



**Figure 2: Buses turning right from Preston Street when Western Way exit blocked with queueing traffic**

### **3) Proposals**

After reviewing the existing operation of the corridor and working with stakeholders, a number of interventions are being proposed in order to improve journey times and reliability for buses along this corridor through technological and monitoring solutions. These solutions are relatively low cost, low carbon options and could offer significant improvements to bus journey times, making it a more attractive alternative for travel and encouraging mode shift with associated benefits to the environment.

The BSIP estimates enhancements on this corridor could achieve a 2-minute journey time saving per bus, representing a 33% reduction in bus journey times during the peak hour and benefitting significant numbers of passengers using these services.

The proposals can be split into five parts:

#### *Preston Street/Western Way Junction*

Early bus detection installed at the junction will help reduce waiting times for buses. Existing software to be used to detect queueing of westbound traffic on Western Way. When a bus and queueing are detected, a new signal stage or timing delay can be triggered to reduce exit blocking on Western Way that contributes to bus delays. The toucan crossing on Western Way will be linked to the junction operation to further improve junction coordination.

### *Cowick Street/Buller Road Junction*

Technology upgrade to introduce bus priority on Cowick Street inbound approach during the AM peak period (7am to 9am weekdays, 9:30am to 12:30pm Saturdays) and outbound approach during the PM peak period (3pm to 6:30pm Monday-Thursday, 1:30pm to 6:30pm Fridays, and 1:30pm to 4pm Saturdays). This will also include a linking operation with the puffin crossings on Cowick Street by St Thomas Shops and St Thomas Church.

### *Intelligent Corridor Upgrade*

In addition to the individual junction technological improvements, the bus services will benefit from a whole corridor Intelligent Transport System strategy which will allow upgrades to improve bus journey times. These include adaptive traffic control solutions to monitor junctions and corridor operation with CCTV cameras, measure journey times, co-ordinate operation of signal-controlled sites and technology upgrades to offer bus priority across the corridor to help improve traffic progression, reduce vehicle stops, and reduce bus journey times.

CCTV cameras and bus priority detectors will be installed at the following locations:

- Cowick Street/Buddle Lane Junction
- Cowick Street puffin crossing near Barton Road
- Cowick Street puffin crossing near St Thomas Church
- Cowick Street puffin crossing by St Thomas shops

Devon's Urban Traffic Control (UTC) System requires upgrading for technology-based priority systems to function in the city. A contribution towards this cost will be taken from all of the Exeter BSIP corridors. The cost to each scheme will be based on the number of traffic signal junctions across the corridor.

### *Variable Message Signs upgrade*

There are a number of existing Car Park Guidance (CPG) and Variable Message Signs (VMS) around Devon used to inform car drivers about real-time traffic conditions and car park data to help route choice and car park decision making. As part of the intelligent corridor proposals, upgraded CPG and VMS can help with proactive messaging, i.e. to communicate to drivers comparable bus journey times which may help encourage mode shift towards taking the bus. Two existing signs linked to the corridor are proposed to receive an upgrade, as these are likely to see the greatest benefit in promoting greater uptake of bus travel:

- Holloway Street on approach to Magdalen Street/Western Way gyratory
- Cowick Street (inbound) by St Thomas shops

### *Cowick Street Bus Lane Proposals*

Two options to extend the operation hours of the inbound bus lane on Cowick Street to improve bus priority and future proof the bus corridor have been explored. These options lengthen the operating periods in the AM and PM peaks to give buses more of an advantage in the busiest traffic periods. Alterations to parking, loading, and waiting restrictions would also be needed to facilitate the time changes.

These proposals can be seen in Appendix 1 (Proposal 1) and 2 (Proposal 2) and are also explained below.

	<b>Bus Lane Operational</b>	<b>Parking</b>	<b>Loading Restrictions</b>
<b>Existing</b>	Mon - Fri 8.00 - 9.15 am	<b>Inbound:</b> Limited Waiting 30 mins Mon – Sat 9.15am – 6.00pm  <b>Outbound:</b> Limited Waiting 30 mins Mon – Sat 9.00am – 6.00pm	<b>Inbound:</b> Mon – Fri 8.00 - 9.15am
<b>Proposal 1 (Plan ref. 70102428- CWS-01) Appendix 1</b>	<b>First Section:</b> Mon - Sat 7.00 –10.0am and 4.00 – 7.00pm  <b>Second Section:</b> Mon - Sat 7.00am – 7.00pm	<b>Inbound:</b> <b>First Section:</b> Limited Waiting 30 mins Mon – Sat 10.00am – 4.00pm  <b>Second Section:</b> No daytime parking First part (single yellow): No Waiting Mon-Sat 7.00am - 7.00pm Second part (double yellows): No Waiting At Any Time  <b>Outbound:</b> Opposite Bus Lane Limited Waiting 30 mins Mon – Sat 10.00am – 4.00pm Adjacent Church Limited Waiting 30 mins Mon – Sat 7.00am – 7.00pm	<b>Inbound:</b> <b>First Section:</b> No Loading Mon-Sat 7.00 - 10.00am and 4.00 – 7.00pm  <b>Second Section and up to Buller Road:</b> No Loading Mon-Sat 7.00am - 7.00pm  <b>Outbound:</b> No Loading Mon – Sat 7.00 – 10.00am and 4.00-7.00pm (does not apply to layby adjacent Church)

	<b>Bus Lane Operational</b>	<b>Parking</b>	<b>Loading Restrictions</b>
<b>Proposal 2</b> <b>(Plan ref. 70102428-CWS-02)</b> Appendix 2	Mon - Sat 7.00 – 10.00am and 4.00 – 7.00pm	<b>Inbound:</b> Limited Waiting 30 mins Mon - Sat 10.00am – 4.00pm  <b>Outbound:</b> Opposite Bus Lane Limited Waiting 30 mins Mon – Sat 10.00am – 4.00pm  Adjacent Church Limited Waiting 30 mins Mon – Sat 7.00am – 7.00pm	<b>Inbound:</b> Within parking areas; No Loading: Mon-Sat 7.00 – 10.00am and 4.00 – 7.00pm  Outside parking area; No Loading Mon-Sat 7.00am – 7.00pm  <b>Outbound:</b> Between Cecil Road and parking bay: No Loading: Mon to Sat 7.00am – 7.00pm Parking bay to church: No loading: Mon-Sat 7.00 – 10.00am and 4.00 – 7.00pm

It is recommended to proceed with Proposal 2 (Appendix 2). Proposal 1 (Appendix 1) is more restrictive for drivers and access for loading and would be a complex arrangement, which may be confusing to drivers. Its hybrid approach with restrictions changing part-way down the bus lane with the associated complicated signage may be difficult for drivers to interpret and could create additional road safety risk with drivers suddenly needing to pull back into the main carriageway. Proposal 2, by contrast, has a consistent approach and is also less restrictive in terms of maintaining access for local businesses along Cowick Street, whilst still presenting an enhanced benefit over the existing situation to passengers using buses during the busiest travel times.

#### 4) Alternatives

##### Do Nothing

Maintaining the existing situation would continue to delay bus services with long journey times due to congestion, exit blocking and signal-controlled junctions, which are not optimised. Maintaining the current level of 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 grant funding.

To do nothing would be a missed opportunity to support the aims to tackle the Climate Emergency and reduce the transport impact on carbon emissions, by delivering public transport infrastructure upgrades and encouraging mass transit of people through mode shift away from private vehicles.

### No Bus Lane Amendments

Retaining the status quo on the bus lanes would mean that the traffic system would continue to operate as present. The bus lanes at present are only kept clear of parking and loading between 8:00am and 9:15am Monday to Friday. The Exeter Western Corridor would therefore not deliver on the more ambitious plans set out in the BSIP and creating a network future proofed to support development growth and increases in bus services across peak travel times.

## **5) Consultations**

The proposals form part of the suite of capital schemes identified in the Devon Bus Service Improvement Plan (BSIP), which itself underwent a thorough consultation with key local stakeholders from all tiers of local government, bus operators, user groups and public bodies in 2021.

Consultation for the signal changes and intelligent corridor proposals has been undertaken with key internal and external stakeholders including Stagecoach. On 5 October 2023, a technology briefing was held for HATOC Members presenting more detail on how the bus priority system works and its benefits.

For the Cowick Street bus lane proposals, an informal local consultation was held with the businesses and residents either side of the bus lane. The consultation was held in October 2023, and included a letter drop and a library drop-in session. Consultees could respond either via a letter, email or via the questionnaire.

17 responses were received to this consultation: 3 responses from bus operators, 2 from local businesses, 11 responses from a local resident group and one response from a bus user attending the library drop-in session. The bus operators all had differing views about the proposals. One of the bus operators preferred option 1, a second bus operator preferred option 2 and a third bus operator wanted to see the street closed to through traffic, allowing only buses and taxis. In terms of the resident and business responses, all opposed both options, except for the bus user who supported the 12-hour operation.

It is noted that there was not a consensus emerging from the informal consultation and the sample size of responses is limited. This has been considered on balance alongside wider benefits and the constraints described regarding Proposal 1 and it is recommended that the traffic regulation orders for Proposal 2 are advertised to gauge wider views on the proposals. This option seeks to balance the range of users of the highway. It will improve priority and future proof the bus lane by extending its operation in the peak hours, contributing to the aspirations of the BSIP and seeks to minimise impacts on local businesses and users of those services during times outside the congested periods. Following advertisement of the traffic regulation orders, it will allow views to be received ahead of any final decision to implement changes to the bus lane.

## **6) Strategic Plan**

The proposals are well aligned with the Strategic Plan's priorities and actions; facilitating and encouraging increased use of public transport. The proposals will support Devon residents' access to employment, education, and leisure opportunities.

The table below summarises how the proposals would impact the achievement of relevant Strategic Plan actions according to a seven-point scale, whereby -3 represents a large negative impact and a +3 represents a large positive impact.

<b><i>Strategic Plan Priority</i></b>	<b><i>Strategic Plan Action</i></b>	<b><i>Alignment</i></b>
Responding to the climate emergency	Support a green recovery from covid-19	+3 (Large positive)
Responding to the climate emergency	Prioritise sustainable travel and transport	+3 (Large positive)
Responding to the climate emergency	Encourage sustainable lifestyles	+2 (Moderate positive)
Responding to the climate emergency	Support transition to low emission vehicles	+2 (Moderate positive)
Investing in Devon's economic recovery	Secure investment in transport infrastructure	+3 (Large positive)
Investing in Devon's economic recovery	Maintain and, where necessary, improve our highway network and improve sustainable transport options	+2 (Moderate positive)
Helping communities to be safe, connected and resilient	Enable a range of transport options, including public transport	+3 (Large positive)

## **7) Financial Considerations**

The cost of the Western Corridor package is estimated at £235K, with £125K BSIP funding currently allocated for this scheme. Subject to the outcomes of the advertisement of the bus lane-related traffic regulation orders and the Department for Transport approving the transfer of BSIP funding from underspend elsewhere in the programme, the technological upgrades, junction improvements, the VMS sign upgrades and bus lane elements can be delivered in 2024/25 as per the grant funding requirements.

## **8) Legal Considerations**

When introducing new traffic schemes, it is the County Council's responsibility to ensure that all relevant legislation is complied with. This included Section 122 of the Road Traffic Regulation Act 1984, which states that it is the duty of the local authority, so far as is practicable, to secure the expeditious, convenient, and safe movement of traffic and provision of parking.

With reference to the above regulation, the schemes presented in this report enable to expeditious, convenient, and safe movement of buses in Exeter. In addition to buses, the proposals may benefit other modes of traffic using the road in the same direction as the bus. Where minor changes need to be made to the signal timings of toucan crossings to prioritise oncoming buses, these decisions have been made in discussions with the Cabinet Member for Highways Management and for Climate Change, Environment and Transport.



## **9) Environmental Impact Considerations (Including Climate Change, Sustainability and Socio-economic)**

The scheme meets the objectives of Devon County Council's declaration of a Climate Emergency. Improvements in bus reliability and quicker journey times will help attract more people to use buses operating along the Exeter Western Bus Corridor, opting for a more sustainable, less polluting mode of transport than alternatives such as the private car.

Improved flow facilitated by the bus priority signals will help to reduce unnecessary acceleration and deceleration, thus improving the fuel efficiency of the prioritised bus and reducing particulate pollution from brakes.

The implementation of physical interventions, such as CCTV cameras, will have very limited impact on the environment. Cameras will be mounted on existing signal columns to reduce the need for new posts.

Overall, the proposal will help achieve a balance of reduced delays between active travel and public service usage, all contributing towards reduced carbon and improved air quality.

## **10) Equality Considerations**

Where relevant, in coming to a decision the Equality Act 2010 Public Sector Equality Duty requires decision makers to give due regard to the need to:

- eliminate discrimination, harassment, victimisation and any other prohibited conduct;
- advance equality by encouraging participation, removing disadvantage, taking account of disabilities and meeting people's needs; and
- foster good relations between people by tackling prejudice and promoting understanding

in relation to the protected characteristics (age, disability, gender reassignment, marriage and civil partnership (for employment), pregnancy and maternity, race/ethnicity, religion or belief, sex and sexual orientation).

A decision maker may also consider other relevant factors such as caring responsibilities, rural isolation or socio-economic disadvantage.

In progressing this particular scheme/proposal, an Impact Assessment has been prepared which has been circulated separately to Cabinet Members and also is available on the Council's website at <https://www.devon.gov.uk/impact/published>

Members will need to consider the Impact Assessment for the purposes of this item/meeting.

The impact assessment undertaken for these proposals highlights that the interventions will provide improved sustainable transport options for all users, and that no person on account of their protected characteristics, are negatively impacted by the proposals. The proposals will particularly benefit groups who make a greater proportion of their trips by bus, such as people under the age of 30 or aged 70 and over, lower income households, and people

who identify as Black or of mixed ethnicity. Quicker bus journey times facilitated by the bus priority system will help improve reliability. This will particularly benefit people opting to use the bus for time sensitive activities such as education or employment. A number of services on the corridor connect Exeter City Centre to more rural areas in Devon which may have more limited education and employment opportunities.

## **11) Risk Management Considerations**

As there are no infrastructure changes proposed within this report, a Road Safety Audit is not required. Safe working practises under CDM requirements will be adhered to when installing equipment on the highway. This will also include the application of the relevant traffic management required for the installation of such equipment.

## **12) Summary**

The proposals align well with the Devon Carbon Plan and Strategic Plan and have been designed to support improvements to bus reliability and reduce delays, to help attract higher bus patronage and encourage reduced reliance on the private car. More reliable, faster journey times for will help reduce the costs of running bus services to the benefit of the wider public transport network. A well co-ordinated set of traffic signal sites and pedestrian crossings along the corridor is essential to reduce the number of vehicle stops required, associated queues and delays which results in unreliable journey times.

Approval of the recommendations in this report will enable the implementation of an intelligent corridor, technology improvements and traffic signals on the Exeter Western Bus corridor linking the St Thomas area to Exeter City Centre. It will also enable advertising of the Traffic Regulation Order to extend the operation hours of the inbound bus lane on Cowick Street as detailed in Appendix 2. The proposals provide a low cost, low carbon improvement, providing significant improvements to bus journey times and benefits from external capital grant funding from the BSIP programme.

### **Meg Booth**

Director of Climate Change, Environment and Transport

### **Electoral Divisions: All in Exeter**

### **Local Government Act 1972: List of background papers**

Background Paper Nil

### **Contact for enquiries:**

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Telephone: 01392 380000

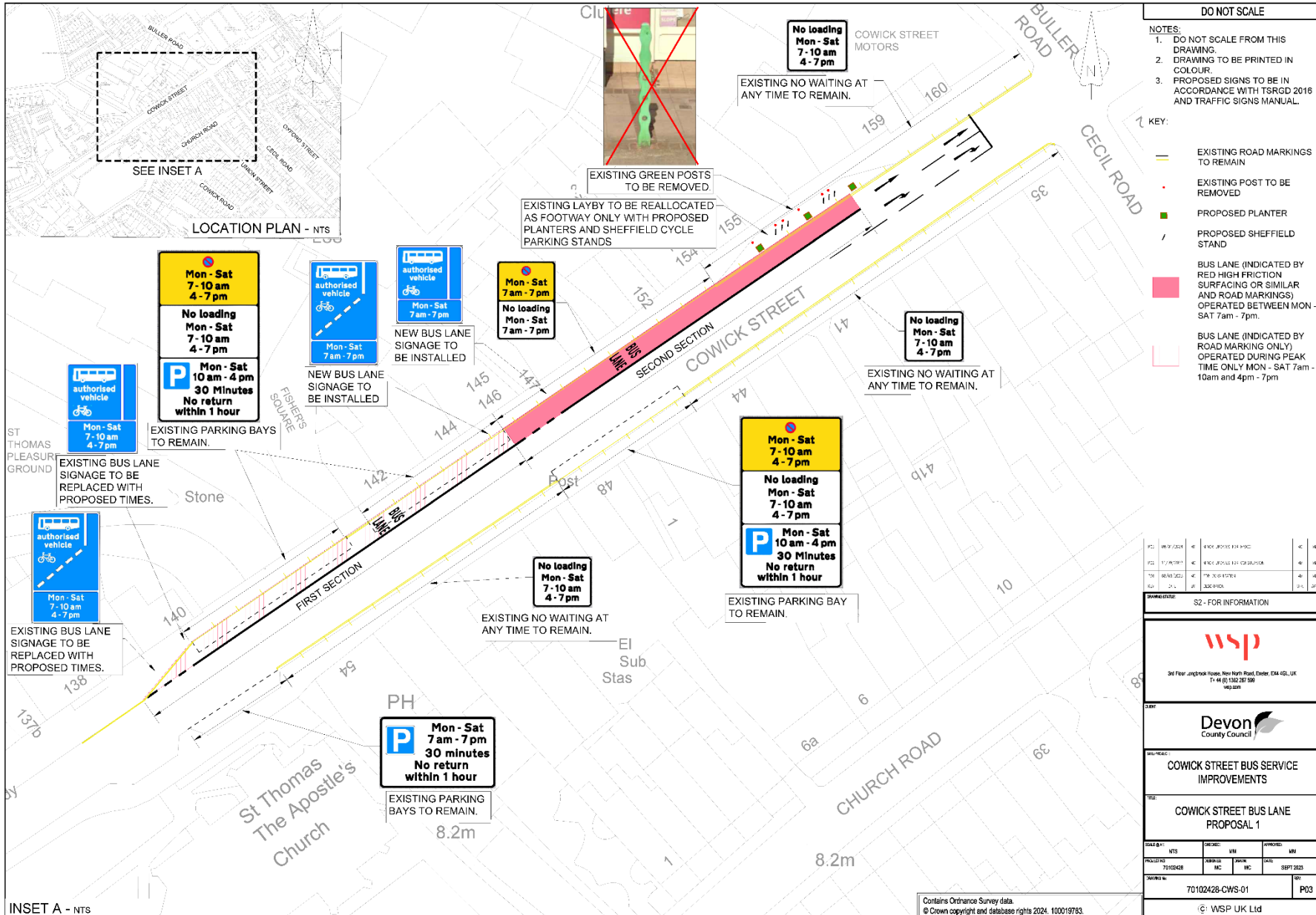
Address: Transport Planning, County Hall, Topsham Road, Exeter, EX2 4QD

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sc/cr/Exeter Western Corridor Bus Service Improvement Plan Upgrades

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# Appendix 1 to CET/24/5



DO NOT SCALE

- NOTES:
- DO NOT SCALE FROM THIS DRAWING.
  - DRAWING TO BE PRINTED IN COLOUR.
  - PROPOSED SIGNS TO BE IN ACCORDANCE WITH TSRGD 2016 AND TRAFFIC SIGNS MANUAL.

- KEY:
- EXISTING ROAD MARKINGS TO REMAIN
  - EXISTING POST TO BE REMOVED
  - PROPOSED PLANTER
  - PROPOSED SHEFFIELD STAND
  - BUS LANE (INDICATED BY RED HIGH FRICTION SURFACING OR SIMILAR AND ROAD MARKINGS) OPERATED BETWEEN MON - SAT 7am - 7pm.
  - BUS LANE (INDICATED BY ROAD MARKING ONLY) OPERATED DURING PEAK TIME ONLY MON - SAT 7am - 10am and 4pm - 7pm

NO	REF	DATE	BY	REVISION
01	WSP/2304	04	WSP	FOR JERVIS PH 4-7 PM
02	17/01/2024	04	WSP	FOR JERVIS PH 7-10 AM
03	04/03/2024	04	WSP	FOR PH 10 AM - 4 PM
04	21/08/2024	24	WSP	FOR PH 7 AM - 7 PM

WORKSHEET: S2 - FOR INFORMATION

3rd Floor, Langbrook House, New North Road, Exeter, EX4 4GL, UK  
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www.wsp.co.uk

PROJECT: COWICK STREET BUS SERVICE IMPROVEMENTS

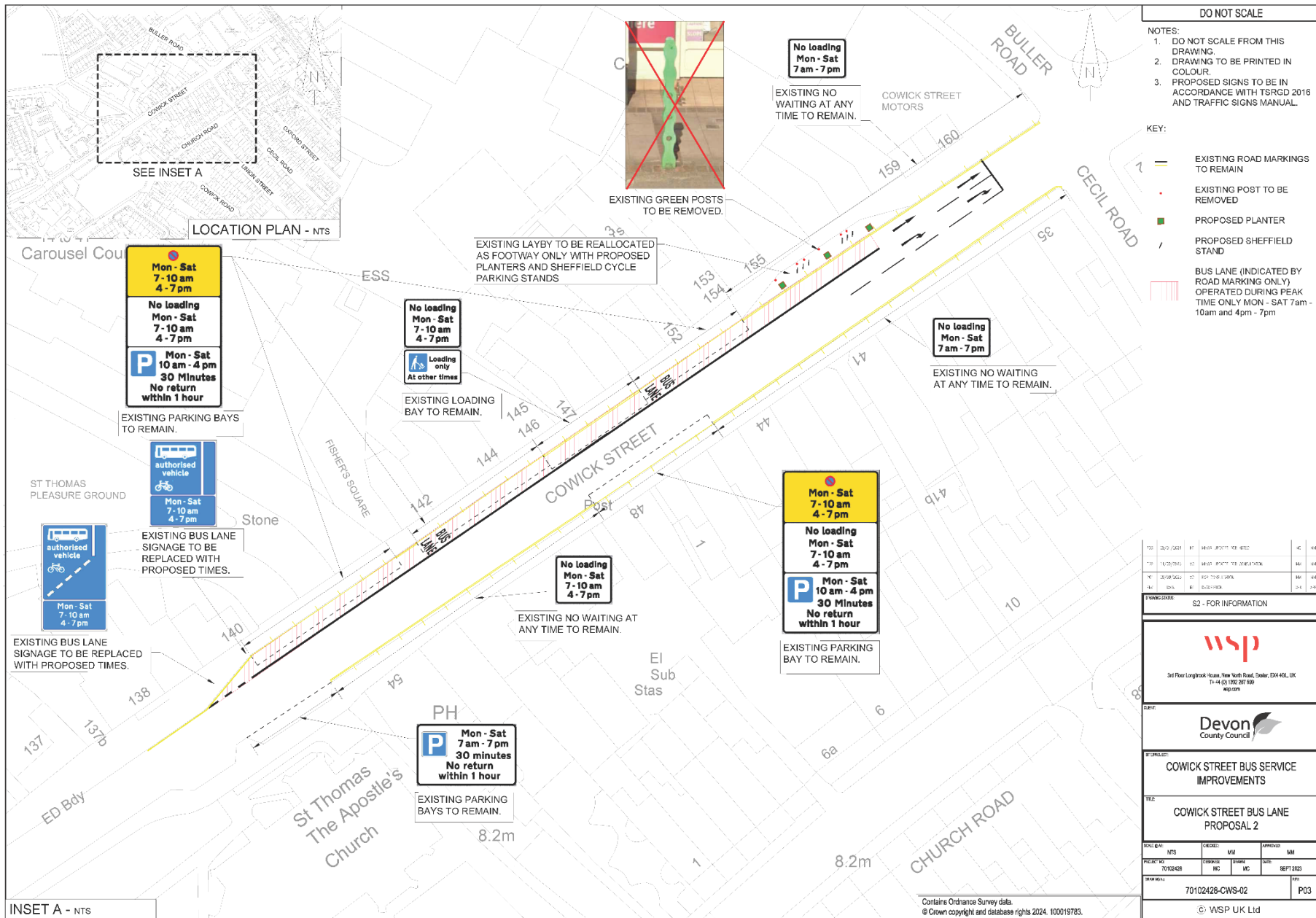
TITLE: COWICK STREET BUS LANE PROPOSAL 1

DATE: 11/08/24	DATE: 11/08/24	DATE: 11/08/24
DESIGNED BY: WSP	CHECKED BY: WSP	APPROVED BY: WSP
DATE: 08/08/24	DATE: 08/08/24	DATE: 08/08/24

PROJECT NO: 70102428-CWS-01  
DRAWING NO: P03  
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# Appendix 2 to CET/24/5



- DO NOT SCALE**
- NOTES:**
- DO NOT SCALE FROM THIS DRAWING.
  - DRAWING TO BE PRINTED IN COLOUR.
  - PROPOSED SIGNS TO BE IN ACCORDANCE WITH TSRGD 2016 AND TRAFFIC SIGNS MANUAL.
- KEY:**
- EXISTING ROAD MARKINGS TO REMAIN
  - EXISTING POST TO BE REMOVED
  - PROPOSED PLANTER
  - PROPOSED SHEFFIELD STAND
  - BUS LANE (INDICATED BY ROAD MARKING ONLY) OPERATED DURING PEAK TIME ONLY MON - SAT 7am - 10am and 4pm - 7pm

**LOCATION PLAN - NTS**

SEE INSET A

**Mon - Sat 7-10 am 4-7 pm**

**No loading Mon - Sat 7-10 am 4-7 pm**

**Mon - Sat 10 am - 4 pm 30 Minutes No return within 1 hour**

EXISTING PARKING BAYS TO REMAIN.

ST THOMAS PLEASURE GROUND

authorized vehicle **Mon - Sat 7-10 am 4-7 pm**

authorized vehicle **Mon - Sat 7-10 am 4-7 pm**

EXISTING BUS LANE SIGNAGE TO BE REPLACED WITH PROPOSED TIMES.

EXISTING BUS LANE SIGNAGE TO BE REPLACED WITH PROPOSED TIMES.

**Mon - Sat 7-10 am 4-7 pm**

**No loading Mon - Sat 7-10 am 4-7 pm**

**Loading only At other times**

EXISTING LOADING BAY TO REMAIN.

EXISTING LAYBY TO BE REALLOCATED AS FOOTWAY ONLY WITH PROPOSED PLANTERS AND SHEFFIELD CYCLE PARKING STANDS

**No loading Mon - Sat 7 am - 7 pm**

EXISTING NO WAITING AT ANY TIME TO REMAIN.



**No loading Mon - Sat 7 am - 7 pm**

EXISTING NO WAITING AT ANY TIME TO REMAIN.

**Mon - Sat 7-10 am 4-7 pm**

**No loading Mon - Sat 7-10 am 4-7 pm**

**Mon - Sat 10 am - 4 pm 30 Minutes No return within 1 hour**

EXISTING PARKING BAY TO REMAIN.

**No loading Mon - Sat 7-10 am 4-7 pm**

EXISTING NO WAITING AT ANY TIME TO REMAIN.

**Mon - Sat 7 am - 7 pm 30 minutes No return within 1 hour**

EXISTING PARKING BAYS TO REMAIN.

NO	REVISED	BY	DATE	DESCRIPTION	BY
	1/25/2024	SD		ADDED SHEFFIELD TO COVERAGE	MM
	2/26/2024	SD		REVISED SIGNAGE	MM
	5/5/24	ME		REVISIONS	MM

DRAWING NO: S2 - FOR INFORMATION

**wsp**

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CLIENT: **Devon County Council**

PROJECT: **COWICK STREET BUS SERVICE IMPROVEMENTS**

TITLE: **COWICK STREET BUS LANE PROPOSAL 2**

SCALE: NTS	DESIGNED: MM	APPROVED: MM
PUBLISHED BY: TUDOR	DRAWN: MC	DATE: SEPT 2023
DRAWING NO: 70102428-CWS-02	REV: P03	

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INSET A - NTS

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