

### The Preferred Option – Full Description

#### 1 A50 Victoria Road Bus Gate

A bus gate will be installed on the A50 Victoria Road exit of the King Street/City Road/Victoria Road junction. Traffic will be restricted to buses, cyclists, taxis and emergency service vehicles between Monday and Friday from 7am to 10am and 4pm to 7pm.

The splitter island will be widened and the kerbs re-aligned to provide a single lane bus gate. An ANPR camera will be located at the bus gate to monitor compliance and two rotating prism signs will be installed at the entrance to the bus gate. The prism signs will enable the display of multiple messages and will be blank when the bus gate is not in use.

Bus gate advanced direction signing will be provided on the local highway network on all approaches to the Victoria Road/City Road and A50/King Street junctions, including Prism and Variable Message Signs.

The scheme costs include installation, the Traffic Regulation Order, ten-years of maintenance, monitoring and operation, and decommissioning at the end of the project. It is expected that the cameras may need to be replaced after five years.

A ULEV exemption, allowing ultra-low emission vehicles to drive through the bus gate will be assessed and if considered deliverable will be added to the scheme in the Full Business Case (FBC).

#### 2 A53 Etruria Road Bus Gate

A two-lane bus gate will be installed on the A53 Etruria Road westbound exit of the A53/A500 roundabout, with appropriate amendments to the existing road markings at the bus gate and on the circulatory carriageway. Traffic will be restricted to buses, cyclists, taxis and emergency service vehicles between Monday and Friday from 7am to 10am and 4pm to 7pm. Two rotating prism signs will be installed at the entrance to the bus gate to enable the display of multiple messages and will be blank when the bus gate is not in use. Two ANPR cameras will be installed to manage compliance.

Advanced direction signing will include prism signs on all approaches to the A500/A53 Etruria Road roundabout. Changes to destination signs on the A500 mainline carriageway in both directions are also proposed. This will include appropriate re-routing to the hospital and will also include variable message signs.

The scheme costs include installation, the Traffic Regulation Order, ten-years of maintenance, monitoring and operation, and decommissioning at the end of the project. It is expected that the cameras may need to be replaced after five years.

A ULEV exemption, allowing ultra-low emission vehicles to drive through the bus gate will be assessed and if considered deliverable will be added to the scheme in the Full Business Case (FBC).

### **3 Traffic Management East and West of Victoria Road**

Traffic management measures will be required on roads to the east and west of Victoria Road in order to ensure that the adjacent local communities are not adversely impacted by traffic re-routing through these areas when the bus gates are in operation.

The following measures will be required to the East of Victoria Road:

- Replace existing worn and ineffective road humps in Beville Street, Stanier Street, Wileman Street, Philip Street, Elliot Road, Wedgwood Road, Warrington Street and Vivian Road and enhance the impact of the scheme by providing additional humps and carriageway re-surfacing.
- Provide new road humps and carriageway re-surfacing along Park Street, Minerva Road, Frederick Street, Cumberland Street and Clarence Street.
- Introduce one-way operation (direction of travel west to east) in Wileman Street (part) and Stanier Street (part).
- Provide an environmental weight restriction on the traffic calmed routes to prevent inappropriate large vehicles travelling through the area.
- Extend 20 mph zone to cover the whole traffic calmed area.

The following measures will be required to the West of Victoria Road:

- Replace existing worn and ineffective road humps in Manor Street, George Street, Edward Street and Hitchman Street and enhance the impact of the scheme by providing additional humps and carriageway re-surfacing.
- Provide new road humps and carriageway re-surfacing in Maud Street, Fountain Street and William Street. This includes two raised tables to improve safety at Christ Church C of E Primary School.
- Enhance signage to improve the enforcement of the existing environmental weight restriction in Manor Street.
- Closure of Hitchman Street at its junction with Victoria Road, maintaining access for pedestrians and cyclists.
- The existing western footway along Victoria Road at Hitchman Street will be extended to enhance the pedestrian environment.
- A 20mph zone to include the whole traffic calmed area.

### **4 Transport Improvements along A53 Etruria Road**

The bus gate on A53 Etruria Road will significantly reduce traffic flows in the peak periods along this corridor and improve bus reliability. This will necessitate the review of signal timings at junctions along the corridor in order to maximise air quality benefits.

The increase in spare capacity along the corridor will create the opportunity for the provision of signalised pedestrian crossing facilities on all arms of the A53/Gladstone Street/Basford Park Road junction and the A53/Albert Street/Sandy Lane junction.

An existing bus stop along the A53 Etruria Road is located on the hill where it is observed that traffic can queue behind buses serving the stop. It is recommended that the bus stop is relocated to the east of Kingsfield Oval, opposite the New Vic Theatre where it is likely to have a reduced impact on air quality. Accessibility will be enhanced through the provision of

bus access kerbs and levelled footways. Real Time Bus Passenger Information will also be provided along the A53 corridor.

## **5 Bus Retrofit Programme**

To deliver compliance on Bucknall New Road and Victoria Road the buses that use these routes will be retrofitted to achieve Euro VI emission standards. This involves the installation of the appropriate exhaust modification depending on vehicle type and age and associated e-cooling fan to minimise ongoing maintenance. This will be an expansion of the existing bus retrofit programme being delivered on the A53 as part of the separate Newcastle-under-Lyme Borough Council Ministerial Direction.

75% of buses that travel along the Bucknall New Road corridor and all buses travelling along Victoria Road require this improvement to ensure that compliance is achieved. Funding will be required for the retrofitting of 50 buses to ensure that the appropriate number of scheduled services can continue to operate on Bucknall New Road and Victoria Road. The two main operators are First Bus and D&G, and the smaller operators include Scraggs and Stantons of Stoke.

To market the cleaner bus fleet, enhance their visibility and encourage greater bus use, it is recommended that all buses that have been retrofitted are provided with a new branding in the form of a partial bus wrap. To monitor bus operator use of retrofit vehicles, ANPR cameras will be installed on Victoria Road, Bucknall New Road, at the junction with St Ann Street, and on the A53 to the east of the junction with Albert Street/Sandy Lane.

## **6 Bus Infrastructure Improvements**

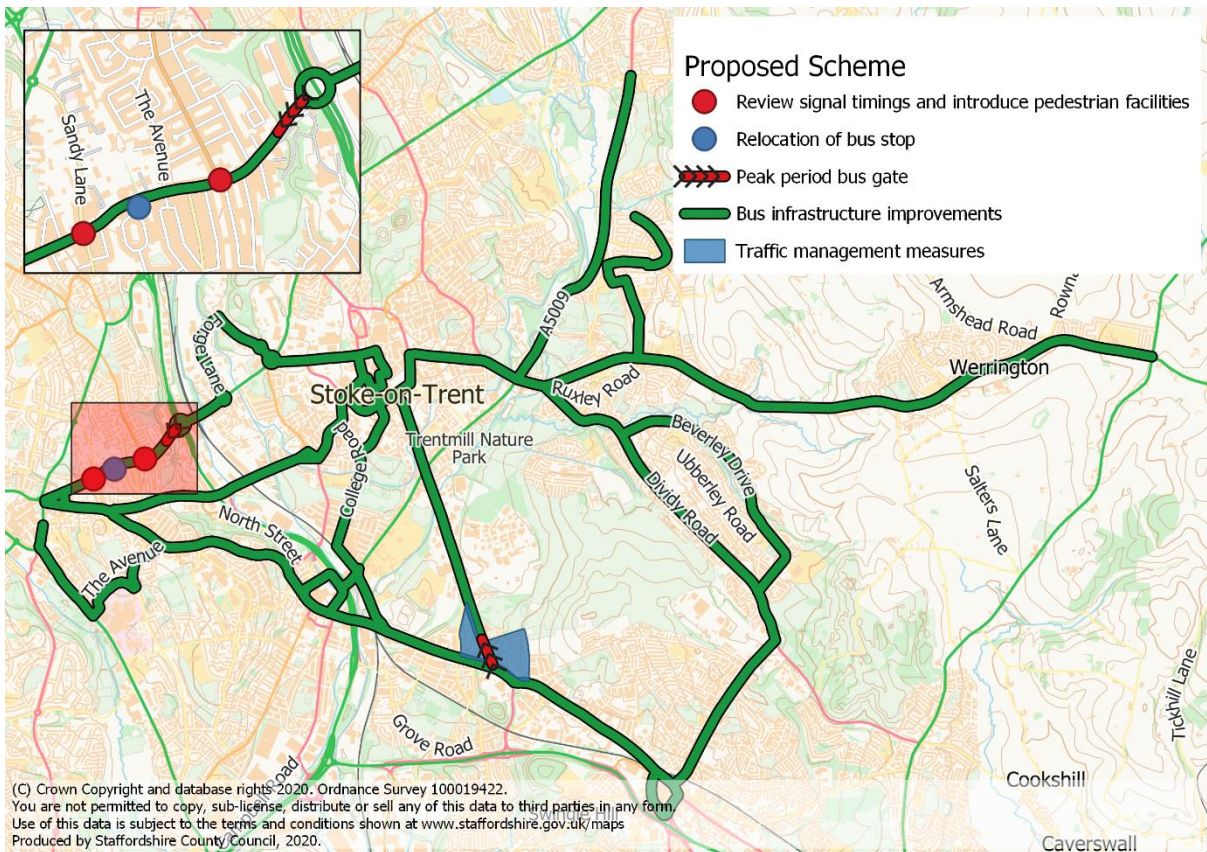
Enhanced bus infrastructure will be installed on routes that pass through or are parallel to the exceedance locations. This includes bus routes:

- To Abbey Hulton, Milton, Bentilee and Longton that converge at Bucknall New Road
- Along Victoria Road and parallel routes along College Road and A5007 City Road
- Along A53 Etruria Road between Newcastle town centre and Hanley City Centre, and parallel routes along the A52 and Shelton New Road.

The improvements are required to ensure that bus patronage is maximised along corridors that are at risk of air quality exceedances and where traffic modelling suggests that traffic flows and journey times may increase as traffic re-routes to avoid the bus gates. The cost of the package includes the installation and ten-year maintenance of:

- 89 real time bus passenger information (RTPI) screens
- 17 new bus shelters of which 8 are replacement and 9 are new facilities
- 27 accessible kerbs at bus stops
- Installation of CCTV at 71 bus stops.

Figure 1 provides a schematic summary of the key components of the preferred option.



**Figure 1 – Preferred Option – schematic summary**

## 7 Monitoring and Evaluation Package

Funding will be required to deliver the Monitoring and Evaluation Plan as there is not expected to be adequate revenue generated from the bus gates to cover the costs.

Funding will be required to collect monthly air quality data at the 664 diffusion tube locations over the ten-year period. This includes 59 new sites.

ANPR will be collected at the five locations set up to enforce the bus gates and retrofitted buses. In order to monitor network wide changes in vehicle compliance, these ANPR cameras will need to be supplemented by a one-off ANPR data collection survey covering 15 additional sites.

The aim of the preferred option is to reduce emissions below the exceedance level by re-distributing traffic away from the three exceedance locations, whilst avoiding the creation of new exceedance locations. Funding will be required to monitor the actual changes in traffic flows compared to modelled flows. 13 new permanent traffic counters will be required at the exceedance sites and along two screen lines on the local highway network that intercept the key routes that are predicted to be affected by the re-assignment of traffic.

Funding is required to measure the change in passenger numbers over the ten-year period as a result of improved bus reliability and investment in bus infrastructure. Where available, data by fare stage collected from ticket equipment will be received from the bus operators and concessions data can provide a broad indication of the number of passengers on each service each month.