

# Designing for buses

**National and local policies seek to reduce the reliance on the private car, in the interests of delivering safe, accessible and sustainable development. This can only be achieved where public transport infrastructure is of high quality.**

For major developments, we would expect to see direct and uncongested routes for public transport, to minimise bus journey times in preference to convenient access for general traffic. In some developments we would require bus priority measures such as bus lanes or bus only links through the site, and/or public transport interchanges within the site.

Therefore, it is essential that we are involved early enough in the master planning process to ensure that this can be built into developments.

## Bus lanes

Bus lanes in Bristol are generally operational for peak hours or in constant operation (24 hours), although consideration is also given to other hours of operation as appropriate.

Peak hour bus lanes can be used where there is less congestion during out of peak hours and buses are able to run in general traffic without delay.

24 hour bus lanes are implemented in busier locations to allow for improved reliability and shorter and more consistent journey times, and also encourage greater public transport use throughout the day and support the evening economy. 24 hour bus lanes are implemented with a red surface dressing.

In Bristol, we allow taxis, motorcyclists and cyclists to use most bus lanes.

*Fig 1: Bus stop, North Street*



## Bus route design

We would recommend designers refer to the CIHT guidance [Buses in Urban Developments](#) (CIHT Jan 2018), which gives more detailed advice about the design of bus routes. The following information outlines our specific requirements, based on our experience of providing of bus facilities in Bristol.

Bus lanes should be a minimum of 4.5m wide to allow for buses to safely pass cyclists where there is no alternative provision for the cyclists. The absolute minimum width for a bus lane, where there are few cyclists, is 3m. Bus lanes should never be a width between 3m and 4.5m to avoid conflict with cyclists.

On bus routes without bus lanes, the carriageway width should be no less than 6.5m, or 6.2m where speeds are below 20mph, on straight roads – swept path analysis will be necessary to confirm road widths are appropriate. Swept paths should be provided for a 15m tri-axle coach unless otherwise agreed.

Car parking should be designed such that it does not obstruct bus movement. Parking bays of 2.5m width and loading bays of 2.75m width will be required adjacent to the running lanes.

Footways alongside bus routes should have a minimum effective width of 2.5m, but may need additional space where the carriageway is narrow. See *Designing for Walking* section.

Additional space will also be required where bus stops are located, particularly if a build out is required.

Buses should not be expected to encroach onto the opposite side of the carriageway when turning. This is not only a safety consideration, but can also cause unnecessary delays to buses as they would otherwise need to wait for both lanes of traffic to be free in order to make the turn.

Any traffic calming measures proposed or deemed necessary on a bus route will need to be agreed with us and the bus operators. Vertical traffic calming measures may be acceptable provided tables are of a minimum length of 12m with 1:15 maximum ramp slopes.

## Enforcement

The council can enforce bus – only measures to keep them free from traffic so that bus travel is easier and more reliable. Any physical measures such as bus gates will need to have means by which to control or enforce them, and the design of this will need to be included in any proposal. We would seek to secure such infrastructure through a planning condition or financial obligation.

Fig 2: Peak hour bus lane



## Bus stops

The type and layout of bus stops and shelters will depend on the location of the stop along the route, the service using the route and passenger demands. Shelters should be installed at bus stops wherever physically practical.

Proposed bus stops and bus shelters will need to be agreed with us and advice should be sought from us about the most relevant provision.

## Design of bus stops

To ensure high quality, accessible and attractive facilities, all bus stops should be provided with a raised kerb, safe haven paving, Real Time Information (RTI) display – mounted on a pole or within the shelter if one is to be installed - with a flag, timetable cases, a bin and road markings in accordance with [Traffic Signs Regulations and General Directions \(TSRGD\)](#). The design of bus stop safe havens can be found in our standard details.

Where it is not possible to install a bus shelter, the alternative options of either a pole-mounted RTI display (with timetable cases) or a bus stop pole (specified by BCC Public Transport Team) with flag and timetable cases, should be provided.

Sufficient footway provision will be required to allow passengers to wait at the shelter and other pedestrians to pass without conflict. In the case of heavily-used stops (i.e. city centre locations, and outside educational establishments), serving high frequency and/or numerous routes it is common for us to require longer raised kerbs (at least 20 metres in length), larger shelters, and for the stop to be served by a large, standalone RTI display positioned close to the shelter.

Bus stop markings to be undertaken in accordance with [TSRGD](#) and red surface dressing at stop.

Heavily used stops will require a reinforced concrete pad within the carriageway to prevent deterioration of the carriageway.

Bus stop laybys or build-outs may be required depending on the local road network and nature of the development. Suitable facilities should be discussed with us at early pre-app stage.

**Fig 3: inside of bus shelter with real time information screen (RTI)**



## Design of bus shelters

Designers should be aware that where raised kerbs are to be installed, an existing shelter may need to be replaced as part of the works if the shelter has become out of date. Older shelters can be damaged beyond repair, and a replacement shelter should therefore be factored into any costs.

Shelter design will depend upon the available existing footway. Any new roads will need to ensure sufficient footway provision is provided to accommodate a shelter, particularly if shelters with end panels are to be provided. This may require extra land take from the development site, particularly on larger development schemes.

Gradients will need to be considered and levels provided to ensure appropriate leg heights for the shelters.

We will advise on the most suitable type of shelter that would need to be provided, for example the type and size of the shelter and whether end panels should be provided.

It is preferable for shelters to face the front edge of the footway to ensure passengers can easily embark and disembark without conflict with other pedestrians passing the stop. However, this requirement can sometimes be altered due to local environmental conditions, for instance where a stop is exposed and there is a need to protect passengers from the elements.

Shelters will have in-built provision for Real Time Information (RTI).