

Baddow Road Bus Gate

Frequently Asked Questions

May 2018

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Key Information:

1. **What is the Baddow Road bus gate?** [Watch our Information Video 1](#)

a. **How will the bus gate work?**

During weekday peak hours (7am-10am and 4pm-7pm), the bus gate will use a camera to prohibit northwest bound Baddow Road traffic from travelling past the junction with Meadgate Avenue and only allow buses, taxis, motorcyclists and cyclists to pass this point. All vehicles leaving the Army & Navy roundabout, travelling southeast bound along Baddow Road will be unaffected. Residents who live between Meadgate Avenue and the Army & Navy roundabout will still be able to access the roundabout as they do now.

The bus gate will only be in operation between 0700-1000 and 1600-1900 on weekdays. The road will operate as normal outside of these times.

b. **When is the bus gate proposed for?**

The bus gate trial will not begin until Summer 2020. Essex County Council is using this time to offer further engagement with residents, businesses and stakeholders, and will continue to investigate longer term alternatives. The bus gate will be installed for an initial trial period of 12 months under an experimental traffic regulation order.

c. **What is an 'Experimental Order'?**

An experimental order sets out a trial process to allow the effects of a scheme to be closely monitored. Baddow Road bus gate is proposed for a 12-month trial period to allow drivers to adjust and then the true effects to be monitored. Any complementary schemes can then be identified if required by the changes in the way the network operates. The success of the scheme will be assessed after 12 months and then a decision will be made on whether the scheme is made permanent.

2. **Why do we need a bus gate?** [Watch Our Information Video 2](#)

- **Reduce congestion by improving the operation of the Army & Navy roundabout**
- **Improve the speed and reliability of buses using Baddow Road**
- **Improve local air quality**

a. **How will the bus gate improve the operation of the Army & Navy roundabout?**

Currently the traffic exiting Baddow Road holds up the, far larger, traffic flow exiting Van Diemens Road. Equally, as vehicles jostle for position on the roundabout, delays are experienced for vehicles accessing from the other arms (Baddow Bypass, Chelmer Road and Parkway).

By effectively removing one arm of the roundabout during peak hours (the hours with the worst congestion) the roundabout works more efficiently as traffic on Baddow Bypass and Van Diemens Road can get onto the roundabout more easily.

b. *How will the bus gate improve the quality of public transport?*

One of the fundamental principles of Chelmsford's Future Transport Network and the Chelmsford City Growth Package is to make sustainable transport a realistic and credible choice for all residents of Chelmsford. On Baddow Road buses are experiencing average delays of 6-7 minutes in the morning peak and it is known to be far greater. The bus gate will give buses priority, reduce journey times and improve reliability, and facilitate improved service provision. Thereby increasing their attractiveness for users.

c. *How will the bus gate improve Air Quality?*

Baddow Road is currently within a designated Air Quality Management Area (AQMA) and we must continue to build upon the recently observed improvements in air quality for the many residents who live along the road, and plan for future increasing demands on the network. The bus gate will significantly reduce the number of vehicles queuing along Baddow Road in peak hours. Further information is available [here](#).

3. *What alternatives to the bus gate were considered?* [Watch our Information Video 3](#)

a. *Why is the flyover not being replaced or upgraded?*

We have looked at replacing the tidal fly-over at Army and Navy Roundabout with an elevated link road in both directions, but upgrading the flyover would be a large undertaking and the funding for a scheme of this size is not readily available, meaning that this potential long-term solution is outside of the scope of the Chelmsford City Growth Package. Further work to identify a preferred long-term solution is still required and will need to give consideration to the objectives of our Chelmsford Future Transport Network.

The bus gate will improve flows around the roundabout, as well as improving public transport reliability and local air quality, therefore the bus gate will complement any long-term solution at the junction.

b. *Why is fully signalling the Army & Navy roundabout not a viable option?*

Full signalisation of the Army and Navy Roundabout was considered as a potential option to improve capacity at the roundabout, with signals added to the other arms of the roundabout to control traffic flows. However, when this was looked at in further detail it became clear that the lack of queuing space on the roundabout itself would cause traffic to be gridlocked. Signalisation of the roundabout would not solve the

capacity problem, and may even result in more severe congestion in the area. It would also not support the encouragement of sustainable transport options. Nor would it solve the congestion and air quality problems along Baddow Road.

Existing signal timings will however be reviewed as part of the Chelmsford City Growth Package programme, to ensure that existing traffic signals are optimised to keep traffic flowing as efficiently as possible.

c. *Why is a bus link through Meadgate Terrace not a viable alternative to improve bus flows?*

One suggested alternative was the creation of a bus link from Meadgate Avenue onto the Baddow Bypass. The bus link would have the effect of re-routeing westbound buses away from the western end of Baddow Road via Meadgate Avenue and the Baddow bypass to join the Army and Navy Roundabout from a different arm.

Due to level differences between the bypass and the surrounding land, this option would be very costly. This would also not actually solve the existing congestion and air quality problems along Baddow Road. Buses would still be left to navigate long queues making it a less attractive option, there would be an impact on the operation of the bypass and bus lane, and there would be no improvement to the operation of the Army and Navy roundabout.

d. *Why are new slip roads on the Army & Navy roundabout not a viable option?*

Additional Left turn slips have been suggested as a way of adding capacity at the Army and Navy roundabout and adding capacity for left-turners. These would cost a substantial amount to implement, requiring additional land, and would have an impact on local businesses on the western side of the roundabout and on the flood plain of the river Chelmer to the east.

e. *Why is simply moving the crossing on Van Diemens Road not a viable option?*

It has also been suggested that the pedestrian crossing on Van Diemens Rd could be moved further away from the roundabout to avoid queuing vehicles blocking roundabout flows. Due to space constraints, this would however need to be moved so far south that pedestrians would be discouraged from using it, and may attempt to continue to cross at the existing spot. This would be a major safety concern and would, as such, be an unviable option.

4. *What are the wider impacts of the bus gate?* [Watch our Information Video 4](#)

a. *What will the impact be on the main roads in the area?*

Traffic modelling has indicated that, based on a modelled flow of 390 vehicles, following the installation of the bus gate:

- 34% (132 vehicles) will reroute to Baddow bypass;
- 27% (107 vehicles) will reroute to Wood St, splitting onto various routes from there;
- 11% (43 vehicles) will reroute onto the A12 Northbound; and
- The remainder of the vehicles will choose other routes over the wider network.

Due to the relatively small amount of traffic on Baddow Road, when redistributed, this is only a minor increase in traffic on those roads. For example:

- 132 extra vehicles on Baddow bypass is a 5% increase
- 107 extra vehicles on Wood St is a 9% increase

The Baddow bypass is expected to be able to accommodate the additional traffic highlighted above. Both the A1114 and Van Diemens Road will benefit from the improved flows at the Army and Navy roundabout (achieved by reducing the number of vehicles entering one of the 5 arms of the roundabout).

Due to the challenges in precisely modelling how drivers will react to the bus gate, it is proposed to be installed for a 12-month trial period under an experimental order, in order to allow monitoring of the proposal.

For further information on modelling please click [here](#).

b. What will the impact be on the local roads in the area?

We do not predict increases in traffic on Meadgate Avenue in the peak hours. Traffic going towards the Army and Navy will no longer use Meadgate Avenue to avoid the queues in Baddow Road, and while some will travel towards Maldon Road instead, most traffic will divert via other routes. There is likely to be some increase in traffic on Maldon Road towards the bypass and a reduction of traffic travelling towards Baddow Road during the hours of operation of the closure.

Many vehicles will not reach the Meadgate Avenue / Baddow Road junction as new advanced direction signage will inform them when and where the restriction will affect their journey, allowing them to divert from further away. For example, traffic approaching Baddow Road from Beehive Lane will be directed towards the A1114 when the Baddow Road bus gate is in operation. There will be additional signage further afield which will intercept through traffic.

After implementation of the bus gate local roads (in the AM peak hour) will experience changes in the way traffic uses them. Key changes to local roads are as follows:

- Meadgate Avenue: 27 less vehicles westbound and 34 more vehicles eastbound
- Baddow Road: 61 less vehicles westbound and 68 more vehicles eastbound
- Beehive Lane: reduction of 129 vehicles which is 25% of existing flows
- Gloucester Ave/Loftin Way: 30 less vehicles eastbound and 56 more vehicles westbound

It is important to note that it is difficult to predict precisely how people will react and adapt to the bus gate. This is why we have offered to run this as a trial so that it can be monitored and the effects of any unexpected impacts can be addressed. For more information on the trial see above.

Additional Information:

1. How have you modelled the effects of the bus gate?

The Army and Navy roundabout is counted on an annual basis as a part of the monitoring of the growth of traffic at key junctions on the Essex network. The count is for one day and provides a snapshot of the current situation.

Baddow Road traffic makes up 7% and 8% of the total traffic on to the Army & Navy roundabout in the AM and PM peak respectively. However, by shutting off the least trafficked arm, we are in effect reducing the conflict that all drivers are facing in trying to access the roundabout, including those who are using Baddow Road.

The count used in modelling the Baddow Road bus gate assumes a flow of 390 per hour during the morning peak hour (08:00 to 09:00), based on average flows (excluding school holidays) counted between 2011 and 2016. Whilst this figure is lower than the June 2017 count of the Army and Navy, it is still higher than the annual average weekday (excludes bank holidays) peak hour flow of 382 recorded at a permanent traffic count site located on Baddow Road for the whole of 2017. The flows we have used represent a more realistic account of the flows we expect to see on Baddow Road during peak times.

As the Army and Navy junction and roads nearby are considered to be at capacity in the peak periods, and therefore demand is suppressed; we do not anticipate significant increases to flows due to population growth in the next few years. This would reflect the trend over the past few years.

2. What are you doing about the cost and quality of the bus service?

Most bus services in Chelmsford are operated on a commercial basis by First Buses, who decide what services to operate and what fares to charge. They made some changes to services serving the Great Baddow area earlier this year and constantly keep their services under review.

The proposed bus gate will reduce bus journey times during peak periods which have been extended in the past due to increased traffic congestion, hopefully enough to match the off peak journey times. This will also make them more reliable and will reduce the number of service disruptions caused by congestion. This will allow First Bus to consider improved services in the area, and Essex County Council will continue to work with them to ensure that this happens.

First Group currently operate 20 Euro VI vehicles (the latest standards) within Chelmsford, four of which are currently using Baddow Road. First Group are always looking at ways to

improve the efficiency of their vehicles either by bringing in new ones or retrofitting old ones so they emit less harmful gases.

3. How have residents been consulted?

Extensive engagement and consultation events were held throughout the Spring and Summer of 2017 regarding Chelmsford's Future Transport Network and the Chelmsford City Growth Package (which includes the bus gate proposal for Baddow Road). These were widely publicised in the local press and on social media. This included a local event in Great Baddow Parish Hall on 7th August from 1pm to 8pm which was very well attended.

We are now holding more events to provide more detailed information on the bus gate. There will be 12 ticketed sessions held at Hamptons Sport and Leisure on the following dates:

- Thursday 31 May, between 1400 - 2000
- Tuesday 5 June, between 1500 – 2100

Information on ticketing for these events can be found here:

<http://www.essex.gov.uk/baddowroadbusgate>

4. How will the bus gate be enforced?

Automatic number plate recognition cameras will be used to ensure that only permitted vehicles can use the bus gate on weekdays from 7am to 10am, and from 4pm to 7pm.

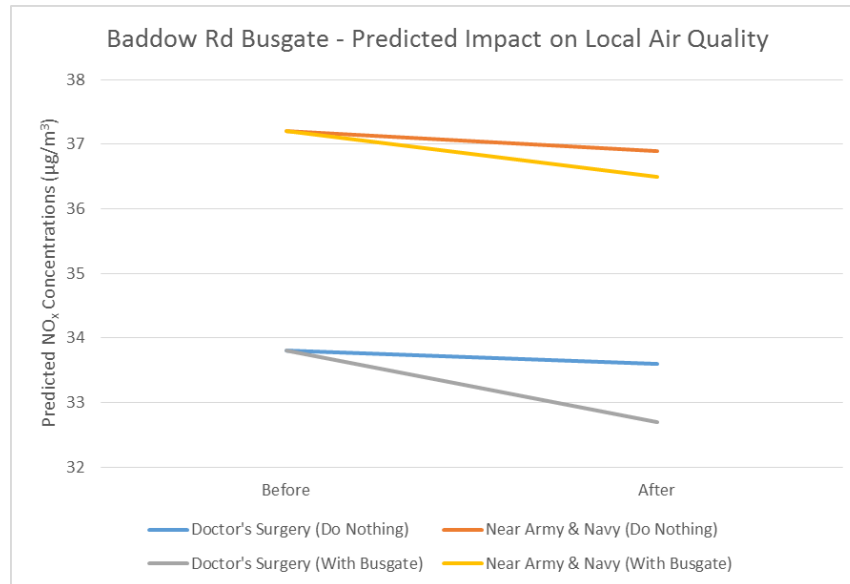
5. What is the impact on local businesses and schools?

As stated above, we do not envisage any overall significant increases to journey times as a result of the bus gate due to the improved traffic flows on alternative routes, nor do we anticipate significantly increased levels of traffic, although some flows may change direction, and therefore the impacts are expected to be minimal. However, we are implementing the bus gate on a trial basis so that it can be removed should any unanticipated impacts warrant this.

6. What is the impact on Air Quality with the Air Quality Management Area (AQMA)?

It is true that there has been a decline in nitrogen dioxide emissions in recent years at the Army and Navy roundabout and on Baddow Road, which is a positive step. However, the area still remains an Air Quality Management Area and as such, until the point that it is de-declared, it remains an area of focus for improvement. As it stands Chelmsford is set to achieve official compliancy by 2019 but this does not mean residents are not still at risk from the consequences of long term exposure to air pollution. We must maintain at the very least or, ideally, reduce concentration levels of nitrogen dioxide at the Army and Navy roundabout and along Baddow Road due to the number of people living in close proximity to the road.

The following graphs shows the predicted effect of the bus gate on nitrogen dioxide concentrations at receptors located on the Army and Navy roundabout and adjacent to the doctor's surgery on Baddow Road:



The expected saving in nitrogen dioxide as a result of the bus gate is equivalent to removing some 60,000 vehicular kilometres from our roads.

Particulate Matter is caused mainly by the braking of tyres. For people who are exposed to this matter and over a long period of time it can have adverse effects. Although there is nowhere in Chelmsford that exceeds the EU directive and standards, there is actually no safe level of exposure to Particulate Matter (PM).

Public Health England has estimated that long term exposure to particulate matter contributes towards 72 premature deaths each year in Chelmsford. To put this in to context there has been no more than 7 people dying as a result of road traffic collisions on Chelmsford's roads since 2012.

7. **How does the bus gate fit into the County Council's wider plans for Chelmsford?**

The Baddow Road bus gate is part of 16 proposals that form the Chelmsford City Growth Package (CCGP). The CCGP sets out a package of measures to help improve transport choices for people in Chelmsford. The aim is that they will all complement each other to keep the city moving. Further information can be found here:

www.essex.gov.uk/chelmsfordtransport

8. *Where can I find out more information?*

For further information, please refer to the Baddow Road bus gate website to watch our set of information videos, or to apply for a free ticket to a 'Meet the Team' information event: www.essex.gov.uk/BaddowRoadBusGate

If you do not have access to the internet and wish to attend an information event, then please contact Essex County Council's Helpdesk on 0345 743 0430.