Essex Highways

Chelmsford City Growth Package

Public Consultation Document

Volume 4 Parkway Corridor

RINGWAY JACOBS
integrated expertise

Essex County Council

July - August 2017

Contents

Introduction: Parkway Corridor

Where are the schemes?

Chelmsford's 'Parkway' is the key corridor through the heart of the city, providing an east-west route for traffic and access to retail, employment, leisure, residential destinations and the railway and bus stations. Parkway extends from the Army and Navy roundabout at the eastern end through to the Broomfield Road junction at the western end.

There are a number of schemes included within the Parkway corridor that have been prioritised for inclusion in this package. These will be at the following locations:

- Baddow Road approach to Army and Navy roundabout;
- Parkway westbound from the base of the Army and Navy flyover to the Odeon roundabout;
- Manor Road junction with the Odeon roundabout;
- New London Road junction with Parkway; and
- Parkway eastbound – Odeon Roundabout/High Bridge Road/ Baddow Road west.

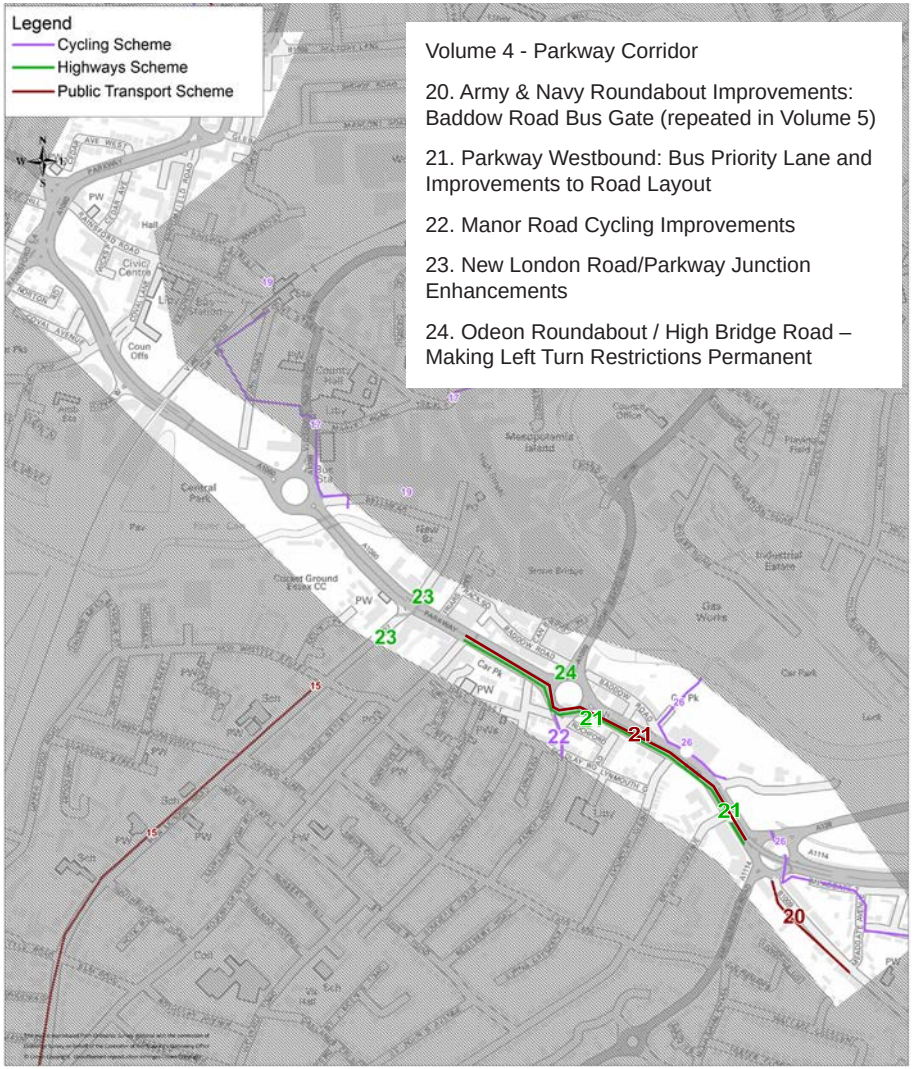
What is the proposal for Parkway?

Traffic accessing the centre of the city from routes including New London Road, Roxwell Road, Springfield Road, Waterhouse Lane, Broomfield Road, and Chelmer Road usually ends up travelling along Parkway to reach their destination. As a result the Parkway corridor experiences significant congestion during peak periods, particularly in the city centre and at key junctions along the route.

There are a significant number of buses which use Parkway (approximately 45 per hour in each direction) and which also suffer from increased journey times and poor journey time reliability as a result of the congestion along the corridor.

The proposal is to carry out a series of improvements along Parkway that will result in a number of benefits for all types of transport along this corridor.

Some junctions will be upgraded to improve traffic flow, cycling facilities will be improved, and buses travelling along the corridor will see improved journey times and reliability, making the bus service more attractive.



There are five schemes proposed for the Parkway corridor which are further explained in this volume.

Up to 45 buses use Parkway every hour in each direction

Army and Navy Roundabout Improvements: Baddow Road Bus Gate

Where is the scheme?

The Army and Navy roundabout is a key gateway to the city and is a key point on the network where five roads meet at the junction. The Baddow Road approach to the junction is a primarily residential access onto the junction and suffers severe congestion during peak periods.

Baddow Road falls within the Air Quality Management Area (AQMA) around the Army and Navy junction.

What is being proposed?

Queuing traffic along Baddow Road adds to poor air quality - this needs to be addressed.

There are a significant number of buses which use Baddow Road, however the traffic delays along the corridor increases journey time for buses by an average of 7 minutes in the morning peak. This is known to be significantly higher at times. In order to improve the air quality at this location, and to encourage people to use the buses, improvements are required.

An Air Quality Management Area is designated by a local authority when it considers that national air quality objectives will not be met.

The proposal is to install a 'bus gate' on the Baddow Road arm of the Army and Navy roundabout. A westbound bus gate between Meadgate Avenue and the roundabout would be in operation 24 hrs per day and 7 days per week. Cameras would be in place to enforce the bus gate.

Access into Baddow Road from the roundabout would remain as it is.

The bus gate is expected to improve the operation of the Army and Navy roundabout by removing one of the approaches for regular vehicle movements but without the disbenefit of attracting significant additional traffic to the junction or Parkway. This would help to create a faster and more reliable sustainable transport corridor for over 15 buses per peak hour travelling on Baddow Road, making these bus journeys an attractive alternative to car journeys as cars would need to travel on alternative routes.

Modelling of the bus gate indicates overall reductions in delay on the approach from Van Diemans Road to the roundabout, especially in the evening peak - it becomes easier for traffic on this arm to enter the roundabout. Overall there is no significant increase in congestion on other arms of the junction as traffic naturally redistributes itself across the network. Existing part-time signals can be used to balance flows entering the Army and Navy roundabout from Baddow Bypass and Chelmer Road to ensure both have opportunities to exit onto the roundabout as traffic redistributes from Baddow Road.

Initial assessment suggests that the scheme is likely to improve air quality on Baddow Road by reducing general traffic and associated queuing.

In peak hours, vehicles sit in queues travelling between 0 and 5 mph westbound from the junction with Beehive Lane until onto the Army and Navy Roundabout

The Baddow Road bus gate scheme will also be supported by complementary measures that have been included in the overall package of proposals. These include:

- Beehive Lane and Loftin Way cycle scheme (see Volume 5 document);
- Gt Baddow High School cycleway (see Volume 5 document);
- Gt Baddow to City Centre cycleway (see Volume 5 document); and
- Parkway Corridor improvements (described in this document).

The bus gate will be implemented for an 18 month trial to monitor the impacts on both local traffic and the traffic using the Army and Navy roundabout. Further options to optimise operation at the Army and Navy will be assessed during this period once traffic has settled into the new travel patterns.

There is a separate proposal in this volume, part of which relates to the provisions for people who cycle around the Army and Navy Roundabout. The Great Baddow to City Centre Cycle Route proposal can be found on page 12 of volume 5.

15 BUSES travel along Baddow Rd in the AM peak hour.

One full bus can take 40 passengers - that's 40 fewer cars on the road.

If each of these buses were full, there could be up to 600 fewer cars on the road.

Other Options

Other options were considered for this area prior to choosing the bus gate but were discounted for the following reasons:

- Full signalisation of the roundabout was discounted because of the lack of queuing space on the roundabout which caused the junction to 'lock up';
- Replacing the flyover with a two-way structure was discounted in the short term due to cost and land issues. This option is being considered as a potential longer-term scheme; and Restricting all general traffic into and out of Baddow Road at the Army and Navy roundabout by creating a two way bus gate was discounted due to significant impacts of Baddow Road traffic re-routing onto the local road network.

You said: *buses should have priority on the network over other motorised vehicles*

It can take an additional 6.5 minutes to travel 650 metres from Beehive Lane to the Army and Navy Roundabout during the AM peak hour compared to the free-flow journey time

Benefits:

Improvement in air quality at the Baddow Road junction with the Army and Navy roundabout, which is identified as an Air Quality Management Area. The reduction in queuing traffic along Baddow Road is expected to reduce pollution in the area and improve air quality with benefits for the health of residents of the local area.

Improve congestion by removing the majority of traffic exiting from Baddow Road, and improve the overall operation of the roundabout.

Improve bus journey times and reliability: Reducing bus journey times and improving journey time reliability on Baddow Road is likely to make local bus services much more attractive as an alternative to travelling by car into the city centre.

Improve cycling access by allowing people who cycle to use the existing subway under the roundabout through Great Baddow to city centre cycle route improvements.

Improve response time for emergency vehicles by enabling them to use the bus gate. They will also benefit from the reduced congestion along the route.

Impacts:

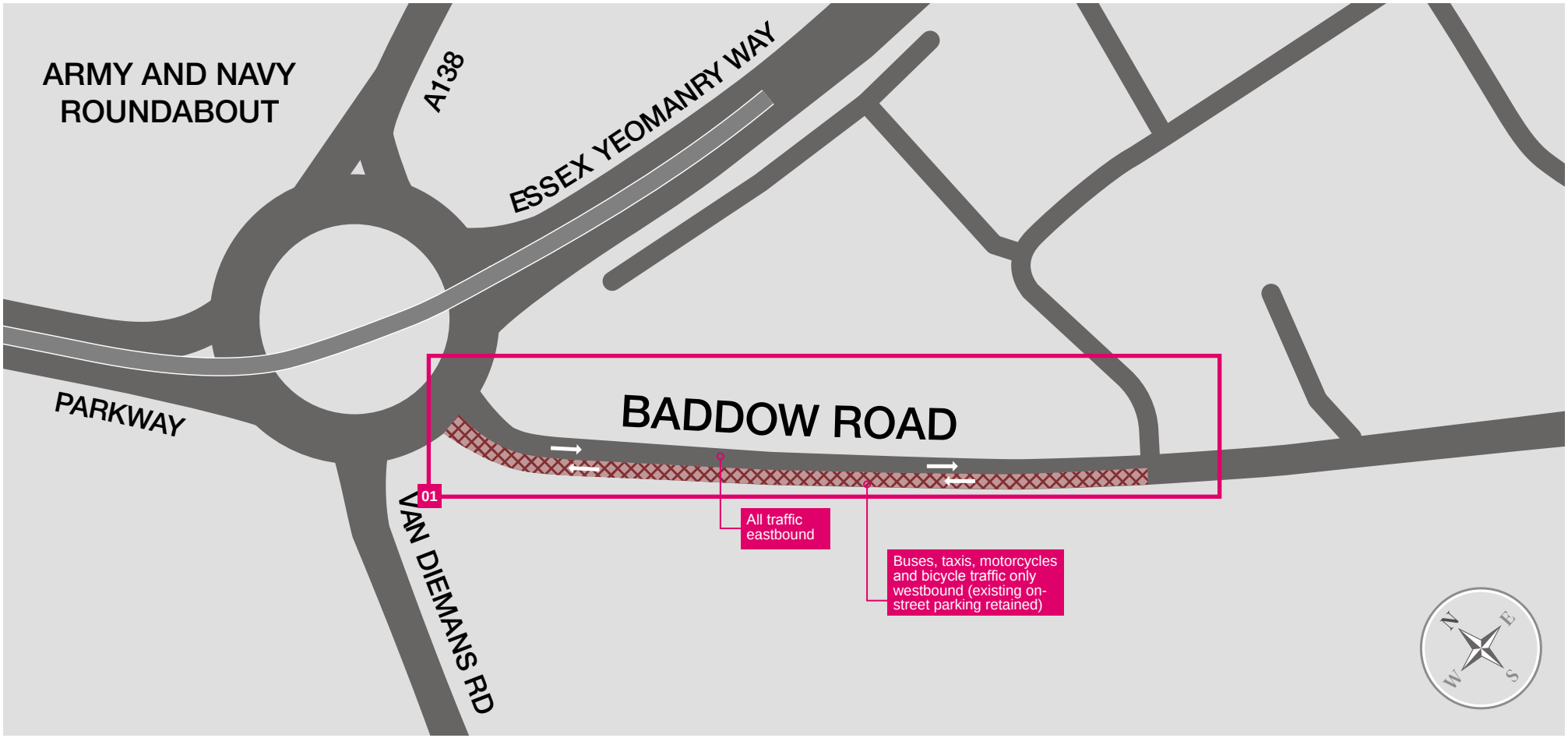
Traffic: General traffic using Baddow Road onto the Army and Navy will need to change routes or choose another mode of travel such as bus, cycling or walking. There is likely to be additional traffic routing east via Great Baddow to the Maldon Road junction with the Baddow Bypass and traffic switching to Wood Street and London Road.

Access: Access to residential properties and businesses west of Meadgate Avenue may only be possible from the Army and Navy roundabout.

Access for delivery vehicles and council services such as refuse collections will be considered during the detailed design phase.

Heavy goods vehicles: An alternative route will be identified to enable large vehicles that have reached the bus gate, but are not permitted to exit, to safely turn back. This may be via Meadgate Avenue and is likely to result in some additional heavy goods vehicles on this road.

Cost estimate:
Less than £500,000


ARMY AND NAVY ROUNDABOUT
A138
ESSEX YEOMANRY WAY
PARKWAY
BADDOW ROAD
01
VAN DIEMANS RD
All traffic eastbound
Buses, taxis, motorcycles and bicycle traffic only westbound (existing on-street parking retained)
N
E
W
S


BADDOW ROAD
All traffic eastbound
Enforcement Cameras
Existing double yellow lines to be retained along this section
Buses, taxis, motorcycles and bicycle traffic only westbound (existing on-street parking retained)
Existing double yellow lines to be retained along this section
MEADGATE AVE
BADDOW ROAD
Existing bus stop
Start of bus gate westbound to Army & Navy roundabout
01

Parkway Westbound: Bus Priority Lane and Improvements to Road Layout

What is being proposed?

By reconfiguring the traffic lanes, the existing road space between the Army and Navy roundabout and the Odeon roundabout can be better managed, with the aim of improving traffic flow, improving safety and giving priority to buses.

The proposals are to provide three traffic lanes from the Army and Navy roundabout around the Odeon roundabout onto Parkway west.

- Flyover traffic will enter the offside lane of Parkway, rather than entering into two lanes of traffic as it does at the moment
- Traffic exiting from the Army and Navy roundabout would join Parkway in the centre lane
- A bus lane would then run along Parkway westbound in the inside lane from the base of the flyover to just before the Odeon roundabout
- At the Odeon roundabout, minor changes to the central splitter island are proposed to allow westbound traffic on Parkway to exit the roundabout in three lanes, rather than the existing two lanes.

Benefits:

Improve the safety of the existing merge at the western end of the flyover where cars exiting the Army and Navy roundabout are currently cutting across or are forced across the hatchings in front of traffic exiting the flyover.

Improve use of the existing road space and reduce weaving by allowing traffic to travel round the Odeon roundabout in three lanes.

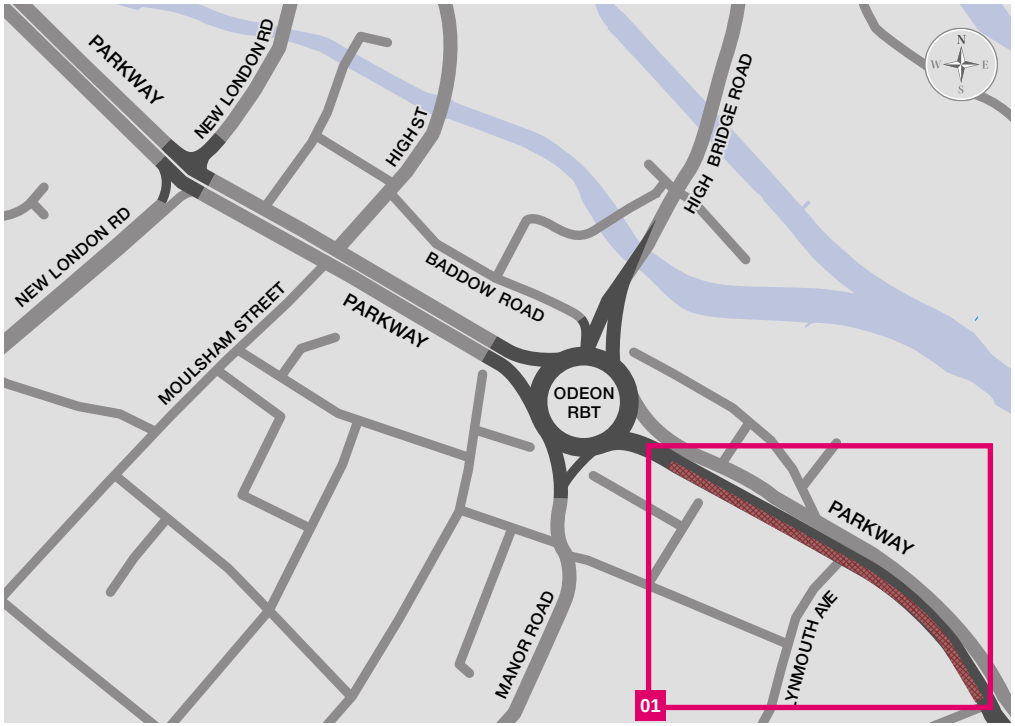
Smooth traffic flow for the straight ahead movement on Parkway across the Odeon roundabout.

Provide priority for buses, including Park and Ride services, along a key corridor into Chelmsford to improve bus journey times and reliability and to encourage the use of public transport as a mode of transport to access Chelmsford city centre.

Impacts:

Reduction in overall traffic lanes from 3 to 2 over the section of Parkway from the flyover up to the Odeon Roundabout. However, as the existing right turn lane is currently under-utilised, modelling suggests that, as traffic would still be able to travel round the Odeon roundabout in two full lanes with the scheme in place, this is likely to smooth the flow of traffic along this section without having significant impact on congestion.

Cost estimate:
Less than £500,000


PARKWAY
NEW LONDON RD
HIGH ST
HIGH BRIDGE ROAD
NEW LONDON RD
BADDOW ROAD
MOULSHAM STREET
PARKWAY
ODEON RBT
PARKWAY
MANOR ROAD
YNMOUTH AVE
01


PARKWAY
B&M Store
PARKWAY
Army and Navy roundabout
Westbound bus lane in inside lane
01

Manor Road Cycling Improvements

What is being proposed?

This scheme will provide a safer, direct east-west route for people who cycle between Rochford Road east and Rochford Road west. New directional cycle signage will be installed, kerbs realigned and a central refuge on Manor Road, next to the Odeon roundabout will be constructed. This will allow safer crossing for the existing cycle route across Manor Road whilst having minimal impact on traffic approaching the roundabout.

This scheme will improve links to the Moulsham Street shopping area and the Odeon Roundabout subway as well as connecting to the National Cycle Network 1 along the riverside at Kings Head Walk.

Benefits:

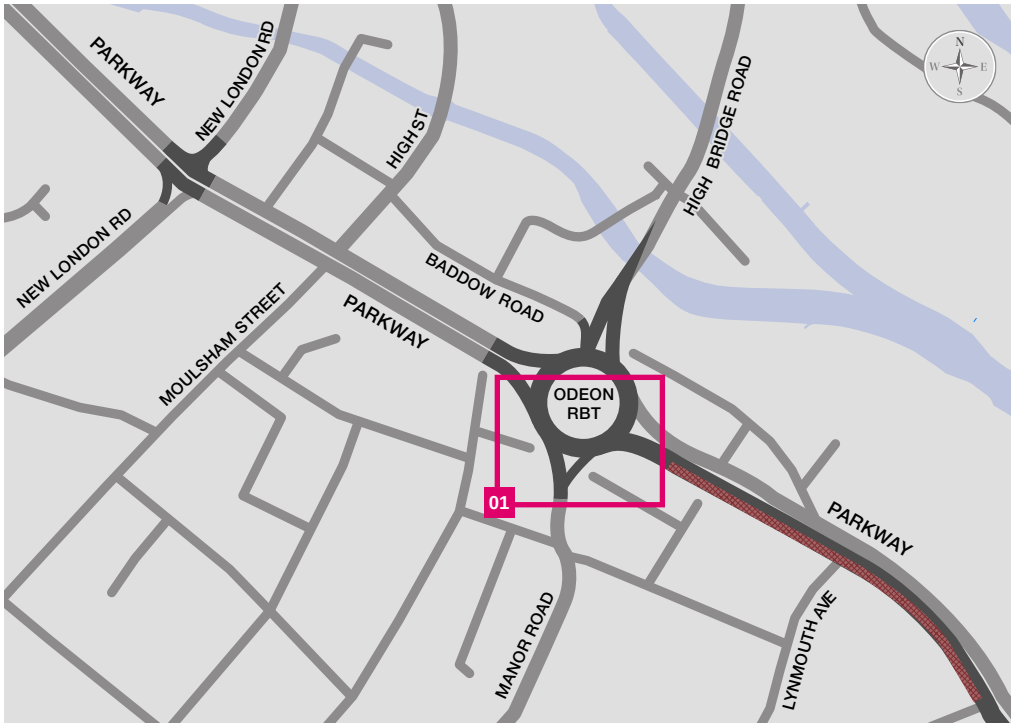
Improvements for people who cycle across Manor Road will improve safety when crossing this road for both people who cycle and pedestrians.

Improve connectivity in the cycle network particularly as this is a key route and part of National Cycle Network Route 13.

Impacts:

No significant impacts are envisaged as part of this scheme.

Cost estimate:
Less than £500,000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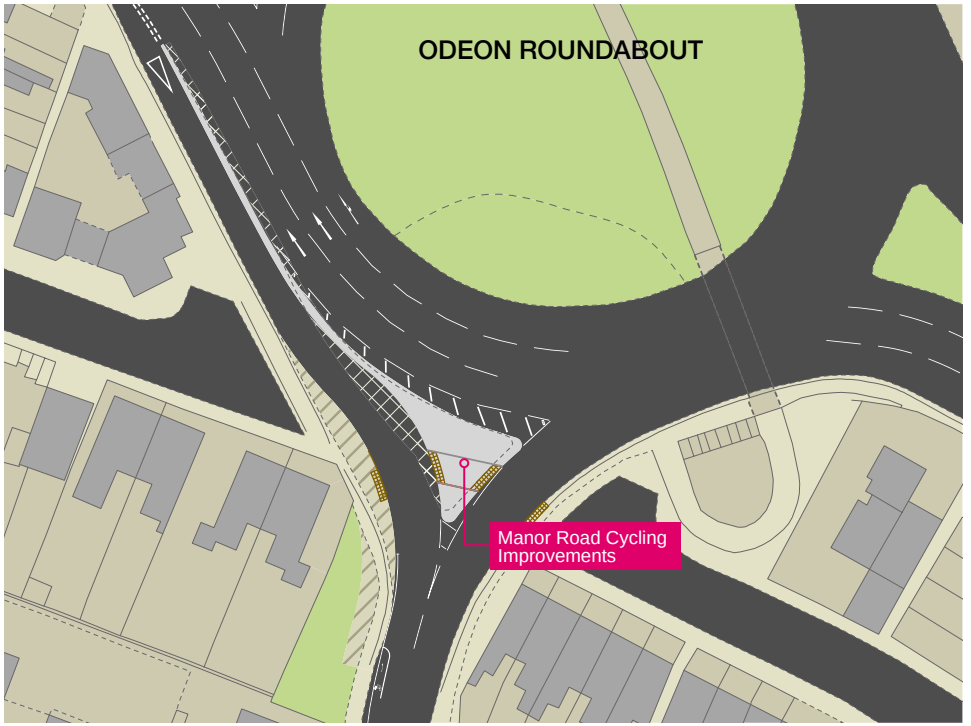

ODEON ROUNDABOUT
Manor Road Cycling Improvements

New London Road/Parkway Junction Enhancements

What is being proposed?

This scheme will reconfigure the junction of Parkway with New London Road. To reduce the time spent queuing at the signals, it is proposed that a central reserve be installed on Parkway to remove the right turn and straight ahead movements for buses exiting New London Road. This will allow the junction to operate as two separate streams of traffic which will increase the capacity of the signals (increasing the time the signals are green) to facilitate improved traffic flow and journey times for all users on Parkway.

Buses currently wait **over a minute** in each cycle to get onto Parkway from bus-only section

Approximately **20%** of existing delay during the AM peak hour and **7.5%** of delay during the PM peak hour could be saved

In addition, New London Road (northbound approach) will be widened at its junction with Parkway within the existing highway boundary, to improve capacity and traffic flow, particularly for buses as it will enable buses and other large vehicles to approach in a single lane.

- There are approximately 45 buses in each direction on Parkway every hour
- Buses currently wait for over a minute to get onto Parkway from the bus-only section of New London Road north
- Only 2-3 buses actually exit onto Parkway with every green phase

Benefits:

Improvements in general traffic and bus journey times through the junction by removing one of the existing three signal stages and running the two sides of the junction as separate streams. This could deliver a saving of approximately 20% of existing delay during the AM peak hour and 7.5% of delay during the PM peak hour including significant savings for the many buses approaching the junction from New London Road south and Parkway east.

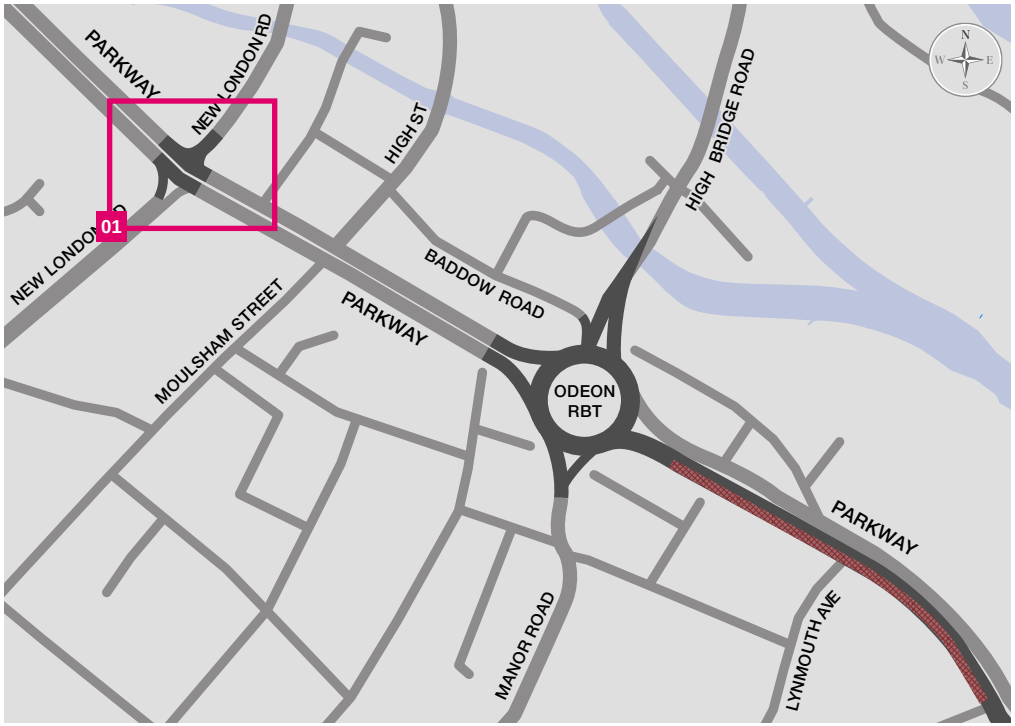
Reduce queuing for buses exiting from New London Road north onto Parkway where limited green time restricts how many buses are able to access Parkway in each cycle. A saving of up to one minute per bus is expected on this arm of the junction.

Cost estimate:
Less than £500,000

Impacts:

Transport: Bus services travelling directly from New London Road north to New London Road south will be diverted around the Odeon roundabout. This will affect a number of frequent bus services including the 42, 47, 100, and 351 with up to 11 buses making this movement in each of the AM and PM peak hours. People who cycle will no longer be able to make this movement. Therefore access arrangements associated with the nearby subway will need to be reviewed.

You said: *more reliable bus services and quicker journey times would encourage you to use the bus*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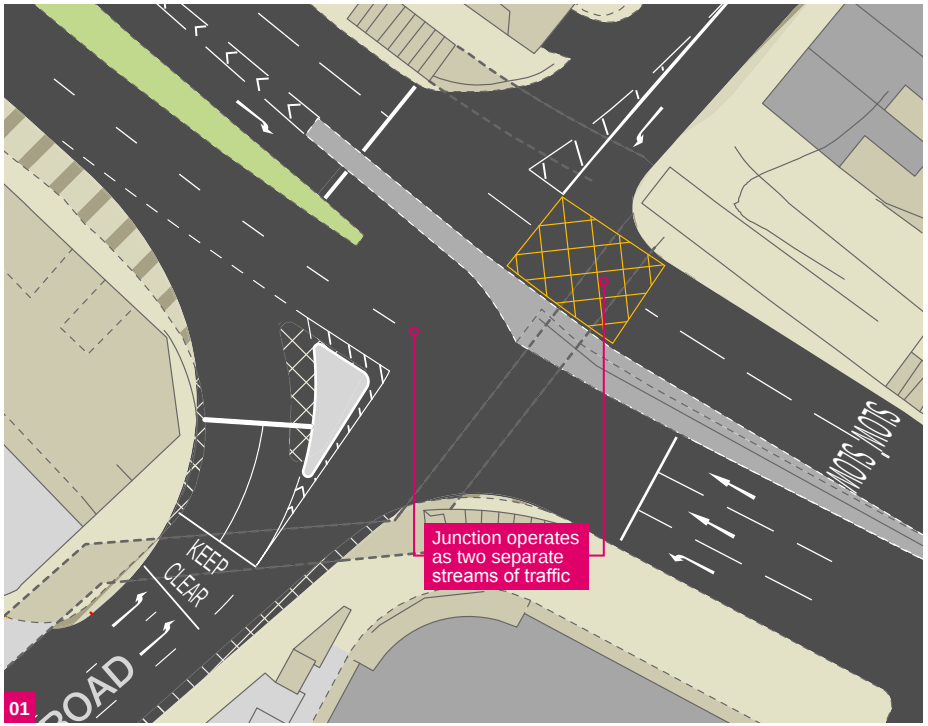

SLOW
SLOW
KEEP
CLEAR
ROAD
Junction operates as two separate streams of traffic
01

Odeon Roundabout / High Bridge Road - Making Left Turn Restrictions Permanent

What is being proposed?

Since 2011, there has been a trial to restrict the left turn at Odeon roundabout, stopping access to Baddow Road west. This proposal is to make this change permanent.

This will prevent access to Baddow Road west from all directions, except from Parkway west. To access Baddow Road west from a westbound direction on Parkway, traffic will continue to the Market roundabout, U-turn and join a filter lane to turn left into Baddow Road west. This prevents Parkway through-traffic being blocked in peak periods by cars wanting to get to the car parks.

As an additional safety improvement, this scheme will also prevent the movement from the left turn lane straight onto High Bridge Road. Currently the temporary layout allows traffic in the left turn lane to exit onto High Bridge Road. This causes conflict with traffic exiting Baddow Road west and exiting the roundabout onto High Bridge Road from the outside lane. In addition this turn is located next to a pedestrian crossing which raises safety concerns. The proposal will stop this movement by extending the kerb island and only allowing traffic to access the car parks from the left turn lane.

Benefits:

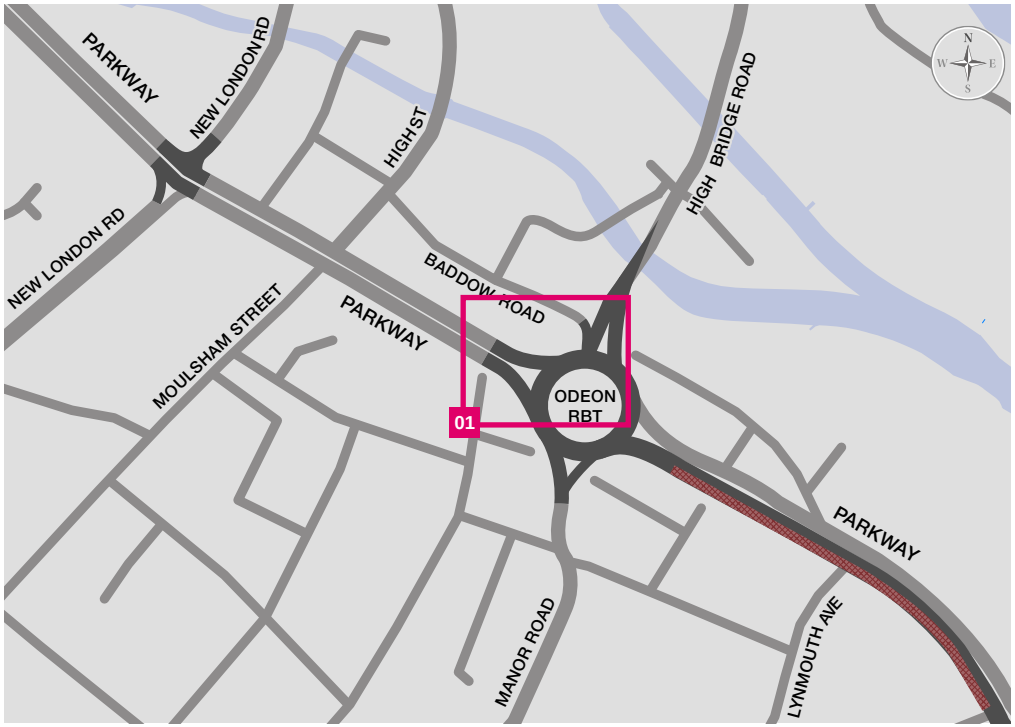
Continued reduction of congestion on the Odeon Roundabout which was the result of vehicles accessing the car parks on Baddow Road west, by formalising the existing experimental scheme.

Safety improvements from the removal of existing conflict between vehicles misusing the left turn lane to a High Bridge Road, the zebra crossing and vehicles exiting Baddow Road west.

Impacts:

Traffic: Vehicles which currently misuse the left turn lane to access High Bridge Road will have to continue to the junction and access High Bridge Road from the roundabout.

Cost estimate:
Less than £500,000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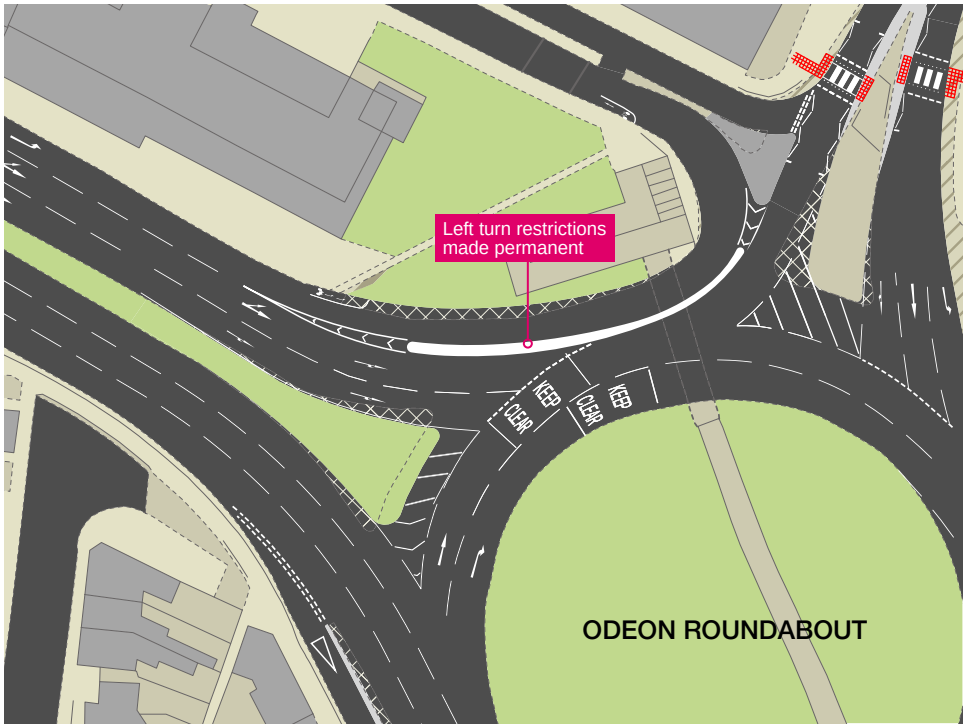
Left turn restrictions made permanent
KEEP CLEAR
KEEP CLEAR
ODEON ROUNDABOUT

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