



Air Quality

Reducing Roadside NO₂ Emissions
Preferred Option Announcement

Introduction

Derby City Council is proposing a package of measures to help address roadside NO₂ air quality issues in the city. The Council is required by government to develop a local air quality plan to deliver compliance with the legal limits for roadside nitrogen dioxide (NO₂) emissions.

Following an eight week public consultation Derby City Council have given the feedback careful consideration, along with other technical evidence in order to select and refine our preferred option.

This document explains the preferred option, how the Council have assessed the options, carried out stakeholder engagement and consultation, as well as what will happen next.

Why do we need this proposal?

In 2015 Derby City Council was identified by DEFRA, along with four other cities (outside London), to take early action to improve roadside nitrogen dioxide (NO₂) emissions. Initially, the government direction required local authorities to implement chargeable clean air zones, by 2020.

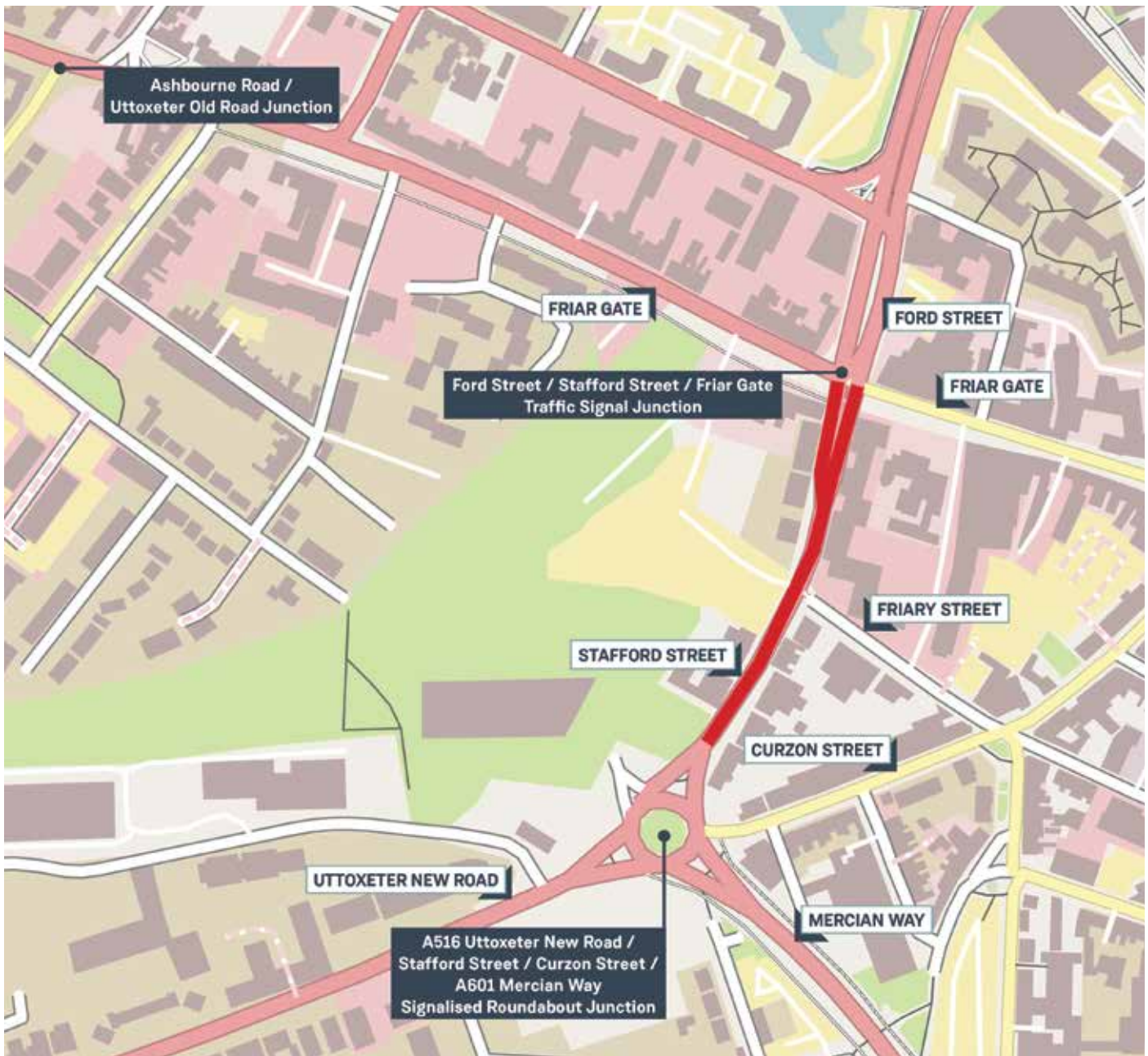
There is a requirement to reduce the level of NO₂ in the air to below 40µg/m³ as soon as possible in line with EU and UK statutory regulations. Once the legal limit is reached, Derby City Council want to continue to lower the amount of NO₂ in the air, as far as possible.

In July 2017 government launched a revised National Air Quality Plan for NO₂ emissions. This plan sets out that local authorities should develop measures to achieve compliance in their areas. The locally developed scheme (the local air quality plan) has to be submitted to the Secretary of State for approval. If approval is given, then the Council will be legally obliged to implement the scheme.

Derby City Council have undertaken work to predict the NO₂ roadside emission levels (as per the requirements for modelling set out by government). This has identified that there would be one exceedance location if no action is taken.

Location	Level of NO ₂ in 2020 <i>(if no action is taken)</i>
Stafford Street, near to its junction with Friar Gate	49.4 g/m ³

Location plan of site of exceedance



The overall objectives of the local air quality plan are to:

- implement a scheme or package of measures to deliver compliance with roadside NO₂ limits in the shortest possible time period
- address any unintended consequences of the scheme or package of measures with a range of supporting activities and / or mitigation measures to ensure that impacts are addressed
- deliver a scheme or package of measures that is appropriate for Derby that:
 - addresses the exceedance issues with a sustainable solution
 - helps to deliver the aim of improving air quality throughout Derby
 - supports existing work to facilitate the early uptake of low emission vehicles, the encouragement of active travel and the opportunities to reduce the need to travel.

Public Consultation

In order to ensure that the Council understands the views of local people and other key stakeholders, an eight week public consultation took place between 30 July and 24 September 2018.

The consultation was primarily conducted through an online survey, with paper versions and translations available on request, supplemented with meetings with key stakeholders. In addition to the online survey, information on the consultation was sent directly to around 50 key businesses and stakeholder groups to encourage both them and their employees to respond. The stakeholders included bus operators, taxi associations, emergency services, businesses, the freight haulage representatives, active travel groups and other relevant bodies. Along with the consultation information, links were provided on the council website to various supporting and technical documents with further information on the air quality project.

Options taken to the consultation

As part of the ongoing development of the proposals to address the issue and meet the government requirements, the Council undertook significant research and modelling and considered a wide range of potential measures, which were refined into three options that formed the basis of the public consultation.

The three options that were consulted on are:

Option 1	Traffic management measures
<p>Significant signal, network and traffic management initiatives in the vicinity of the Stafford Street exceedance and wider affected area</p> <ul style="list-style-type: none">• Specific / targeted signal and network management affecting site of NO₂ exceedance• Signal and network management reviews to prioritise air quality agenda, queue relocation, manage traffic flows / vehicle types. <p>Targeted - Clean Air Incentive Scheme (CAIS)</p> <ul style="list-style-type: none">• Targeted accelerated fleet renewal to vehicles with greatest adverse impact on areas on NO₂ exceedance• Incentives to upgrade or switch to low emission• Mobility credits for switching to low emission / sustainable modes. <p>Low Emission Strategy measures</p> <ul style="list-style-type: none">• Electric vehicle infrastructure - further roll-out of charging infrastructure• Initiatives for businesses (delivery goods and services).	

Option 2

Chargeable Clean Air Zone within the Inner Ring Road

Signal, network and traffic management initiates in the vicinity of the Stafford Street exceedance

- Specific / targeted signal and network management affecting site of NO₂ exceedance.

More significant - Clean Air Incentive Scheme (CAIS)

- Accelerated fleet renewal aimed at vehicles with greatest adverse impact on areas on NO₂ exceedance
- Graduated incentives to upgrade or switch to low emission / sustainable modes
- Mobility credits for switching to low emission / sustainable modes.

Low Emission Strategy measures

- Electric vehicle infrastructure - further roll-out of charging infrastructure
- Initiatives for businesses (delivery goods and services).

Class D Vehicles

Charge would apply only to vehicles which do not meet emissions standards (Euro 4 (petrol), Euro 6 (diesel), Euro VI (Bus / HGV).



HGV's / LGV's



Buses / Coaches



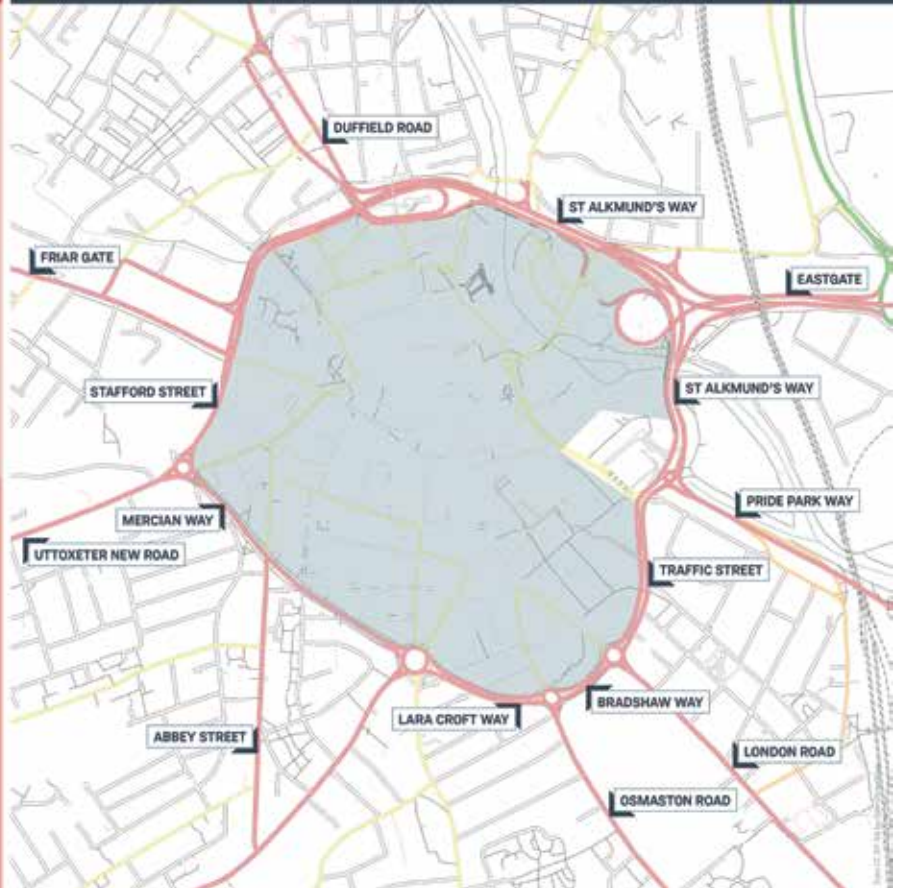
Cars



Hackney Carriages / Private Hire Vehicles



24 hours / 7 days a week



Option 3

Chargeable Clean Air Zone within the Outer Ring Road

Signal, network and traffic management initiates in the vicinity of the Stafford Street exceedance

- Specific / targeted signal and network management affecting site of NO₂ exceedance.

More significant - Clean Air Incentive Scheme (CAIS)

- Accelerated fleet renewal aimed at vehicles with greatest adverse impact on areas on NO₂ exceedance
- Graduated incentives to upgrade or switch to low emission / sustainable modes
- Mobility credits for switching to low emission / sustainable modes.

Low Emission Strategy measures

- Electric vehicle infrastructure - further roll-out of charging infrastructure
- Initiatives for businesses (delivery goods and services).

Class D Vehicles

Charges would apply only to vehicles which do not meet emissions standards (Euro 4 (petrol), Euro 6 (diesel), Euro VI (Bus / HGV).



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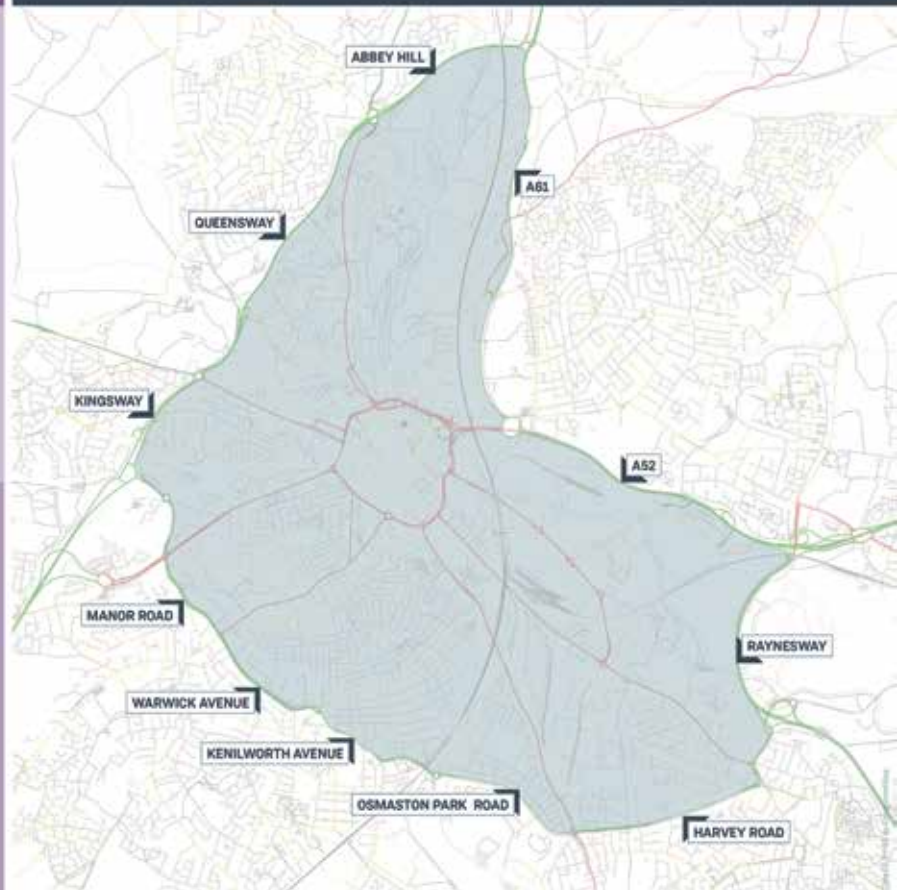
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Response to the public consultation

Over 2,500 responses were received along with additional feedback from a range of stakeholders including residents, local businesses, public transport operators, taxi/private hire operators and HGV operators, which has helped identify and develop further the best scheme for Derby.

Consultation responses

Source of comment	Number of responses
Online responses	2,521
Paper responses	16
Additional letters and emails	33

The results have been used to inform the further work we have undertaken to help us determine the most appropriate solution for Derby.

Of the three options set out in the consultation document the overwhelming support was for option one - the traffic management solution and the Council's preferred option.

Just under three quarters of respondents (73.6%) agreed with the main measures set out in option one, compared to just 27.5% for option two (charging zone within the inner ring road) and 17.1% for option three (charging zone within the outer ring road).

Key comments about the options related to:

- **Option one:** statements of support or opposition to the proposal; traffic management including signalling and traffic flow; concerns about displacement; and the economic impact on particular businesses, individuals or groups.
- **Option two:** impact on business/economy in the city as a whole; the financial impact on people; the need for investment and improvements in infrastructure/public transport; displacement outside the zone; and suggestions for different charging/timing in the proposed zone and support.
- **Option three:** financial impact to people, businesses and the city as a whole; the potential impact on people living within the proposed zone; statements of opposition to the proposal; the suitability of the zone area proposed and the improvements needed to public transport.

A number of comments stated that they would need to see more detailed information on the proposals in order to make an informed comment. In addition, feedback suggested that there should be an increased emphasis on modal shift, active travel and reducing the number of vehicles in order to tackle congestion in the city centre rather than a substitution of vehicles for cleaner versions.

Selection of the preferred option and its refinement

The various options for consideration have continued to be assessed against the objectives of the local air quality plan in light of the further information emerging from the feasibility study and the consultation results.

Any measures or package of measures that passed the initial assessments were further assessed to determine their performance with regards to:

- ability to meet roadside NO₂ limits in the shortest possible time
- whether the option maximises benefits and minimises costs for government, the local authority and wider society
- whether the option is deliverable within the timescale
- if there are contractors willing and able to provide the service (i.e. are the vehicles available and innovative technology available)
- if the available funding will cover the costs of implementing the preferred option and on-going revenue costs
- whether the impact of the scheme or package of measures needs to be implemented in conjunction with supporting projects and / or mitigation measures

These assessments, combined with the stakeholder and public engagement have enabled the Council to determine which option performs the best overall.

The preferred option

The assessments show that the traffic management option is the best option for Derby. Further refinement of this option has been undertaken following the consultation process to ensure it is the best option for the aims of the project.

Derby City Council are proposing to introduce **traffic management measures** to manage the flow of traffic in and around Stafford Street including the roads closest to the exceedance location:

- changes to the junctions at either end of Stafford Street to restrict traffic flow in the most sensitive area
- changes to improve capacity at the Ashbourne Road / Uttoxeter Old Road junction to help provide alternative route choices
- traffic management measures to support alternative routes such as Uttoxeter Old Road

These will be supported by **wider network management measures** to ensure we get the best possible benefits for the package of measures and to limit any negative impacts including:

- Improvements to the network management control system that manages traffic signals in Derby to help ensure we have a better system that can manage the traffic flows and the road network to support the air quality agenda.



Supporting measures

The local air quality plan will also propose schemes to help with the early uptake of low emission vehicles and to provide greater encouragement of the use of sustainable and active travel choices. This includes further promotion of sustainable and active travel options and other supporting schemes to help the public make informed travel choices.

These include:

- **Clean air incentive scheme** - targeted accelerated fleet renewal, incentives to upgrade or switch to low emission vehicles, or an alternative form of transport through the use of mobility credits, or community car clubs
- **Electric vehicle charging infrastructure** and other measures to support electric vehicle uptake

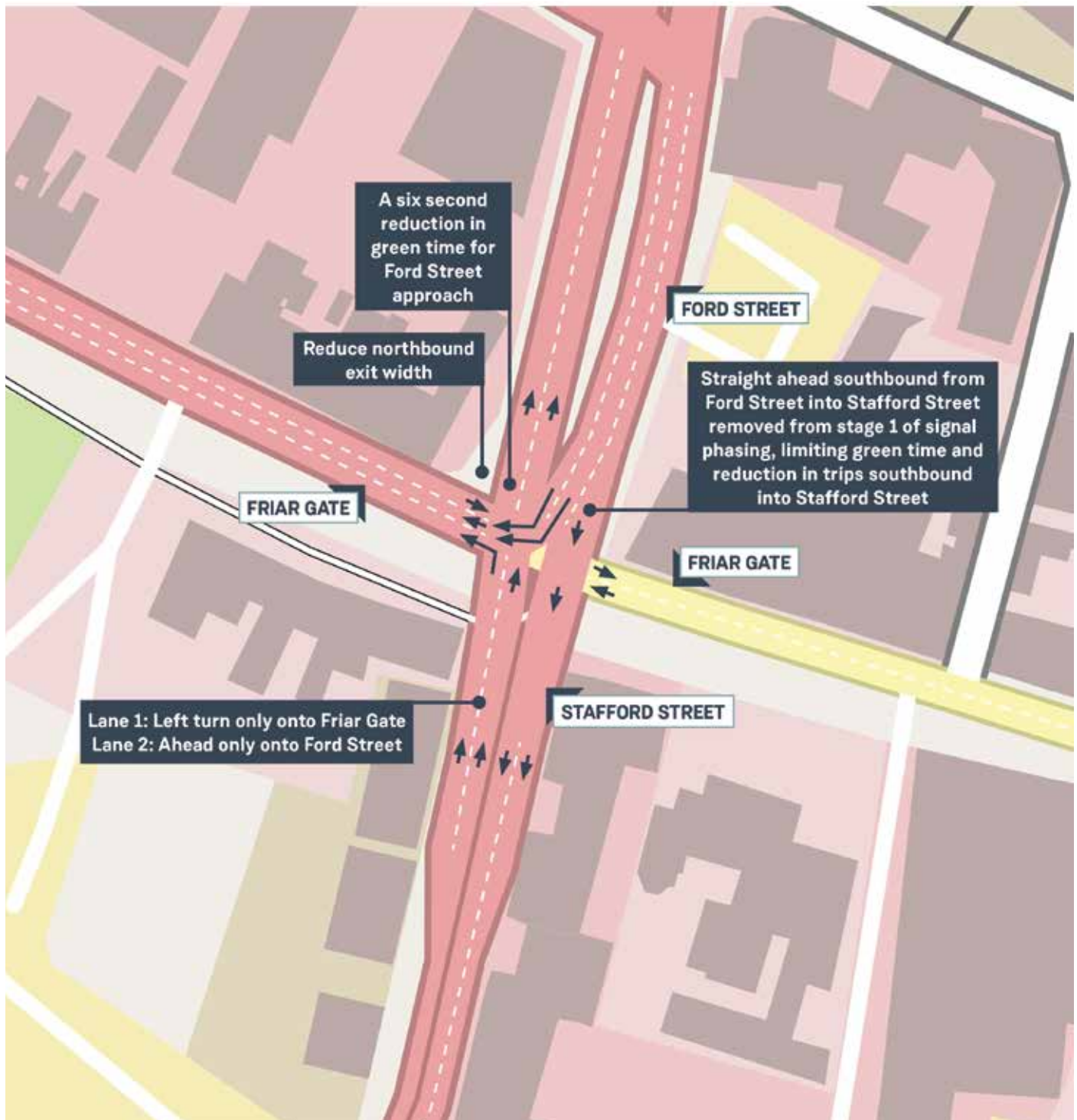
The proposal does not include a clean air zone or any form of charging. It is considered that the package of measures proposed for the preferred option can achieve the aims of the project without the need for a clean air zone.

However, in prioritising specific measures on the highway network to address the exceedance, there will be some redistribution of traffic flow.

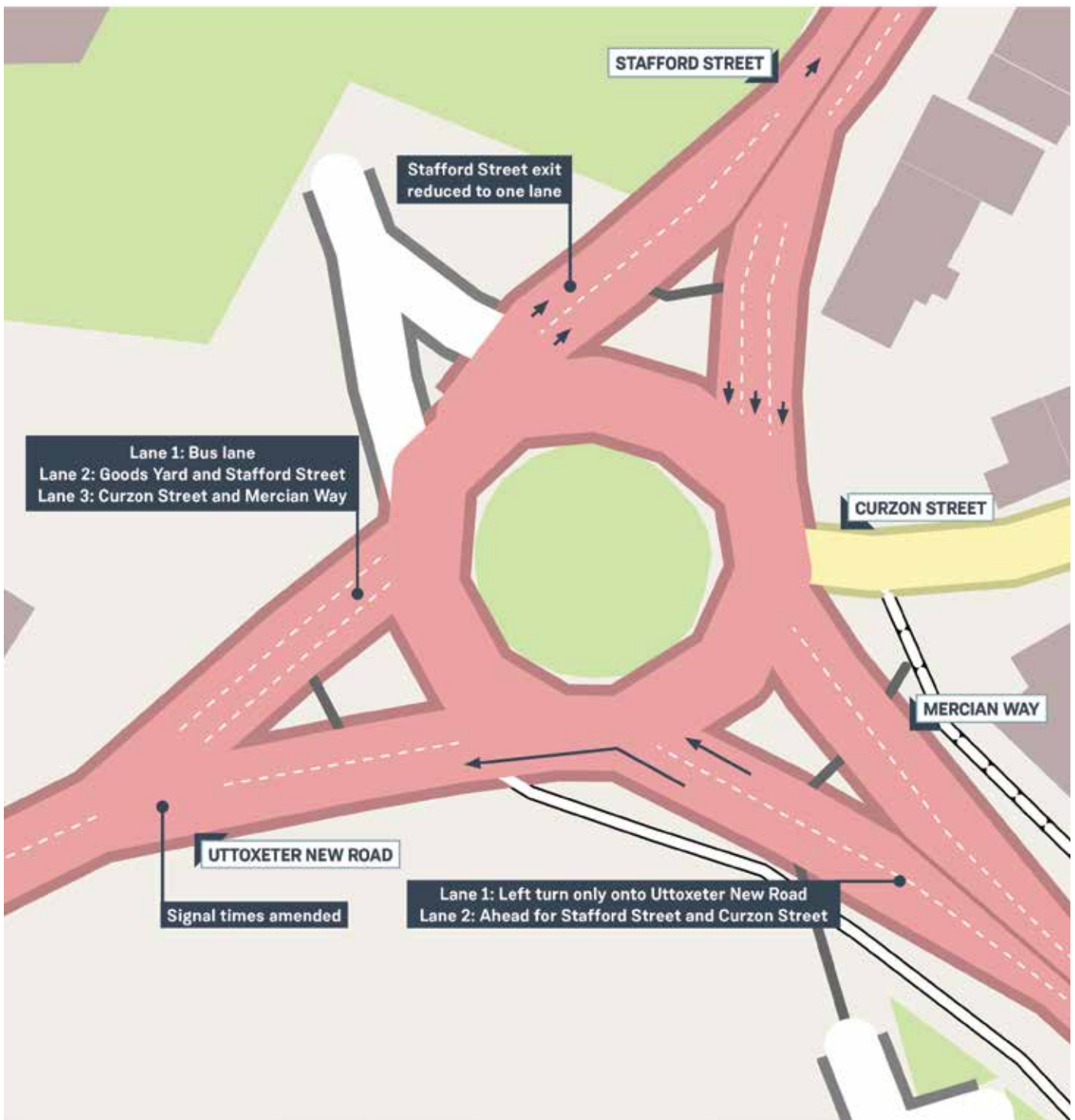
Further details on the measures proposed

Junction and signal changes at either end of Stafford Street to control traffic flows through Stafford Street.

Signalised Junction at Stafford Street / Friar Gate / Ford Street



Signalised Roundabout at Stafford Street / Curzon Street / Mercian Way / Uttoxeter New Road



In order to ensure that the full air quality benefits are achieved from the proposed changes to Stafford Street traffic management, the following changes will be required at the Ashbourne Road / Uttoxeter Old Road junction to achieve:

- two general traffic lanes from Uttoxeter Old Road into Friar Gate, and;
- two lanes of general traffic from Friar Gate into Bridge Street.

Ashbourne Road / Uttoxeter Old Road Junction modifications



Supporting projects / mitigation measures

It is essential that the preferred option is fully assessed to enable the Council to address any unintended impacts. This approach has been used to develop a range of measures that the council feel are essential in supporting the preferred option. There are various funding opportunities available from government to support such schemes. As the project has developed the Council have already taken advantage of these and received funding for the following supporting projects:

- **Retro-fitting of Council's HGV fleet** with emissions reduction technology.
- **Cleaner taxis research and engagement programme** - the purpose of this project is to develop a total cost of ownership model for the use of electric and range extended electric hackney carriages. This is required so that we can assess the viability of establishing or procuring a hackney carriage leasing business or other possible options. Leasing is a potential mechanism for enabling existing drivers and owners to access an Ultra-Low Emission Vehicle (ULEV) as the high purchase price is likely to be a barrier to adoption.
- **Early Measures funding for Cleaner Taxis** - to facilitate ultra-low emission vehicle uptake by the implementation of electric vehicle hubs for hackney carriages and the implementation of changes in taxi licensing policies to support the air quality agenda.
- **Clean Bus Technology Fund** - to retro fit local buses with technology to meet emission standards in conjunction with three local bus operators.
- **OLEV Go Ultra Low City** (in conjunction with Nottingham City and Nottinghamshire County Councils) to promote the use of electric and hybrid vehicles across the region. Including the provision of electric vehicle charging hubs in various public car parks in Derby.
- **Air quality awareness and engagement campaign**, including National Clean Air Day.

There are also many other projects that the Council are already committed to that help support the aims of the project for example:

- significant investment in cycle network infrastructure
- electric bike scheme
- car club.

In order to further build upon this work and ensure the preferred option is fully supported the following measures are being proposed as part of a supporting bid to government:

- **Clean Air Incentive Scheme** - targeted accelerated fleet renewal, incentives to upgrade or switch to low emission vehicles, or an alternative form of transport through the use of mobility credits, or community car clubs.
- **EV infrastructure** - further investment in extending the charging infrastructure, support for SMEs and targeted residential charging facilities, and also the expansion of the electric bike scheme.
- **Further active travel and public transport investment and promotion**
- **Additional measures** could be included following the next stage of consultation to ensure, where possible, the Council fully address the concerns raised.

Monitoring and evaluation

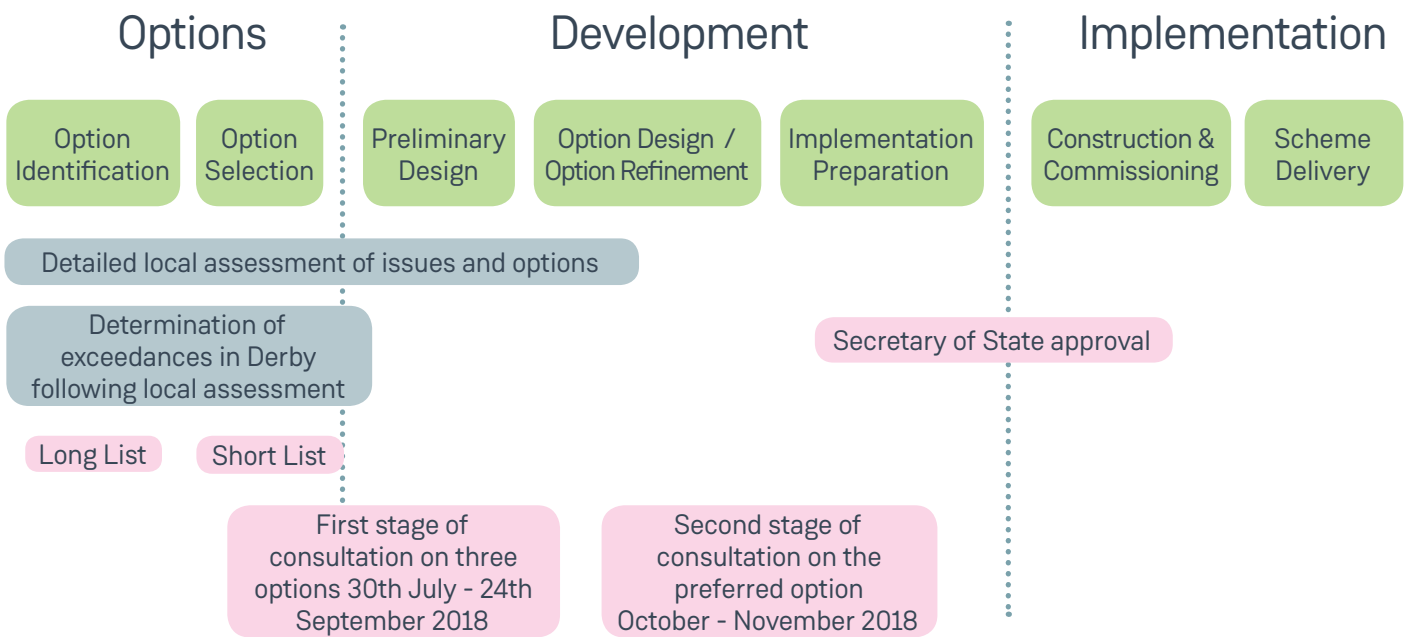
A requirement of the project is to monitor and evaluate the success of the plan once it is implemented. Derby City Council are currently determining with central government the details of this element of the project.

What happens next

The majority of the work on the options identification and assessment part of the project has been completed. We are awaiting the final information on the modelling assessment but there are strong indications that the proposed local air quality plan (subject to final detailed refinement) will be the best option for Derby.

The Council will now do more work to design the schemes in greater detail. Further consultation is now taking place; the details of the local air quality plan proposal are provided to enable you to give your views on the details of the scheme.

The diagram below shows the stages of the project and the current position.



Further information

For further information about the scheme please visit our website – derby.gov.uk/airquality. There is information on there to give you more background information and technical reports. You can also email air.quality@derby.gov.uk



