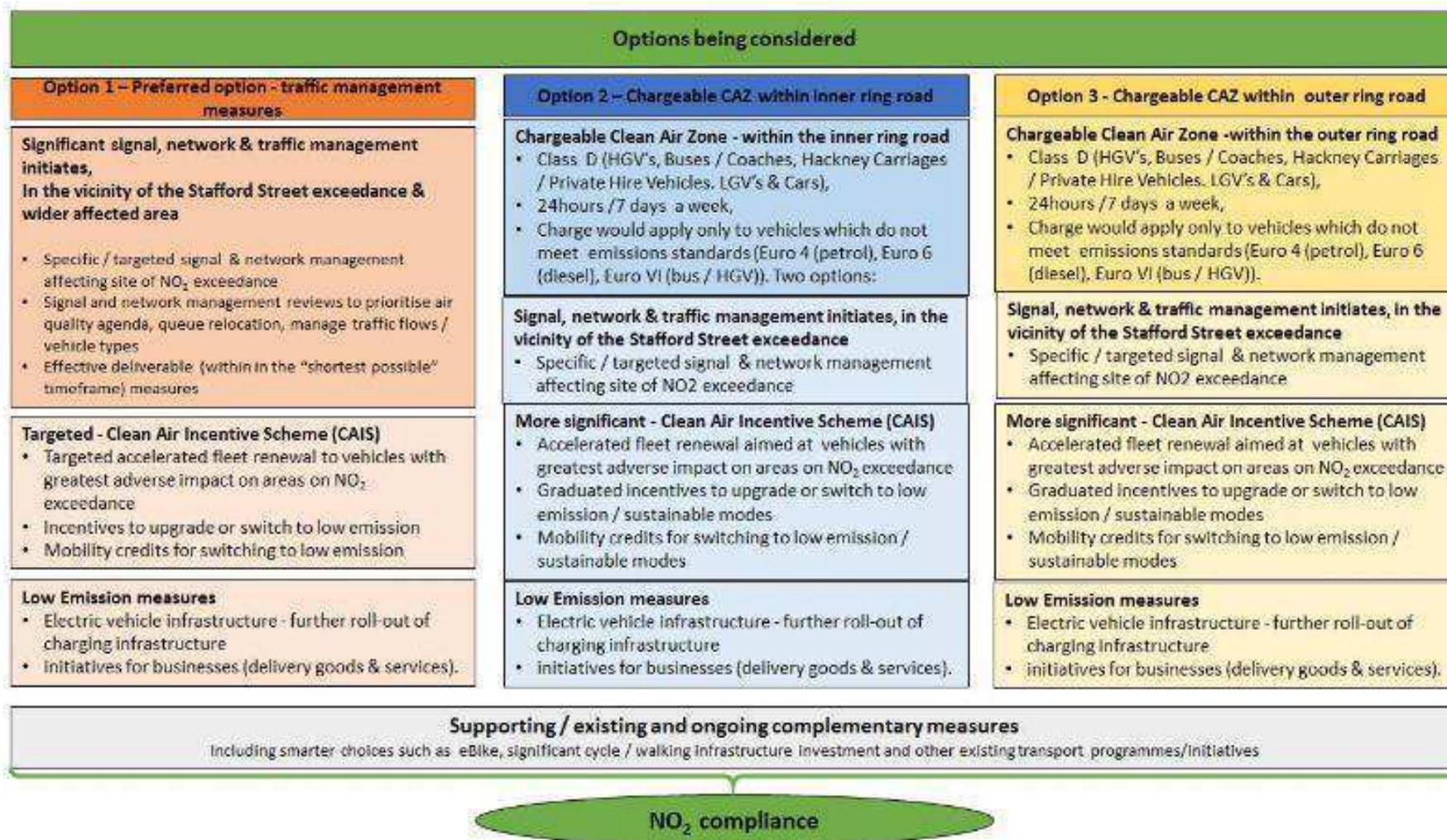


## Appendix 1 - Derby City Air Quality Options



## Option 1 – Traffic Management Measures

A 'significant' **traffic management / signal scheme** which will reduce the traffic flows through Stafford Street to help address the air quality issues that have specifically been identified in that location.

The Option would also include a **Clean Air Incentive Scheme (CAIS)** targeted at local residents designed to encourage the scrapping of vehicles that are older and non-emission compliant and provide instead:

- 'mobility credits', which could be used for free public transport, cycling, or the City's car club
- A larger amount of money towards a vehicle which is ultra-low emission for example, an electric vehicle; or
- A smaller amount of money towards a lower emission petrol/diesel vehicle (petrol - euro 4 standard or better/diesel - euro 6 standard)

The Option would also include **low emission measures**, including:

- A range of measures to encourage the early uptake of ultra-low emission vehicles;
- various initiatives to help support businesses to use more low emission vehicles for things like deliveries,



## Option 2 – Inner Relief Road Clean Air Zone

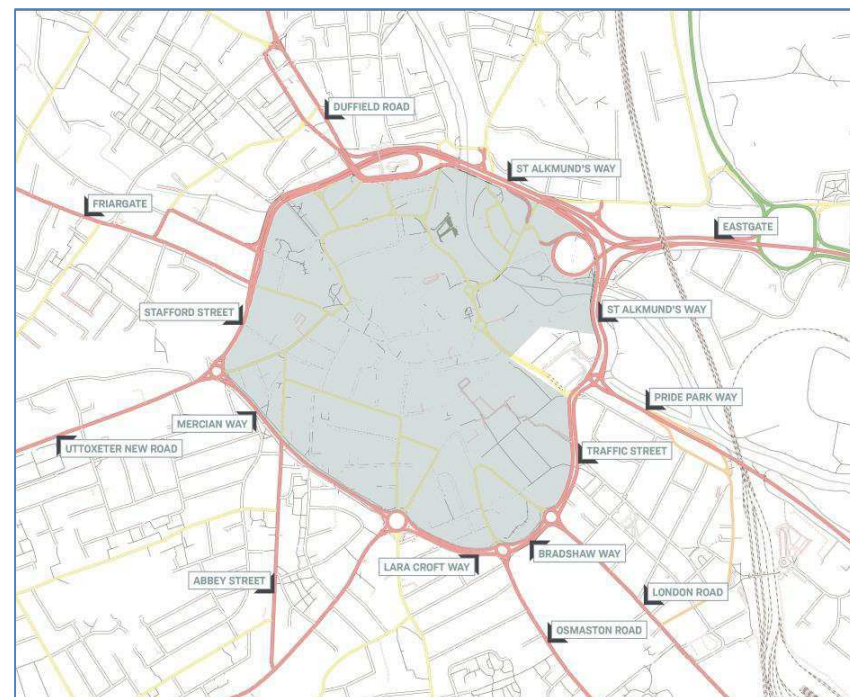
**Clean Air Zone** where the most polluting vehicles would have to pay to drive in a specified area, in this case an area inside the inner ring road in Derby. Cleaner vehicles would be able to drive within the zone without a charge.

Charges would apply to vehicles where the engine does not meet a specific emission standard (a Class D Clean Air Zone)

Again, the Option includes **traffic measures** to Stafford Street

A more comprehensive **Clean Air Incentive Scheme** than Option 1 targeted at residents, people who travel to work in Derby and small businesses based in Derby

The same package of **low emissions measures** identified in Option 1.



### Option 3 – Outer Relief Road Clean Air Zone

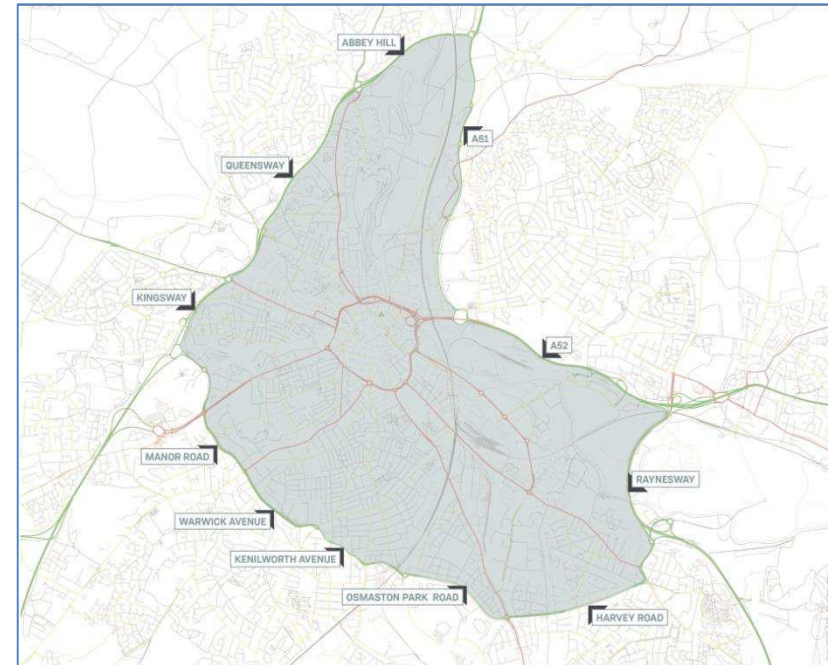
A proposal for a class D **clean air zone** covering the area within the whole of the outer ring road in Derby.

Again, the Option includes **traffic measures** to Stafford Street

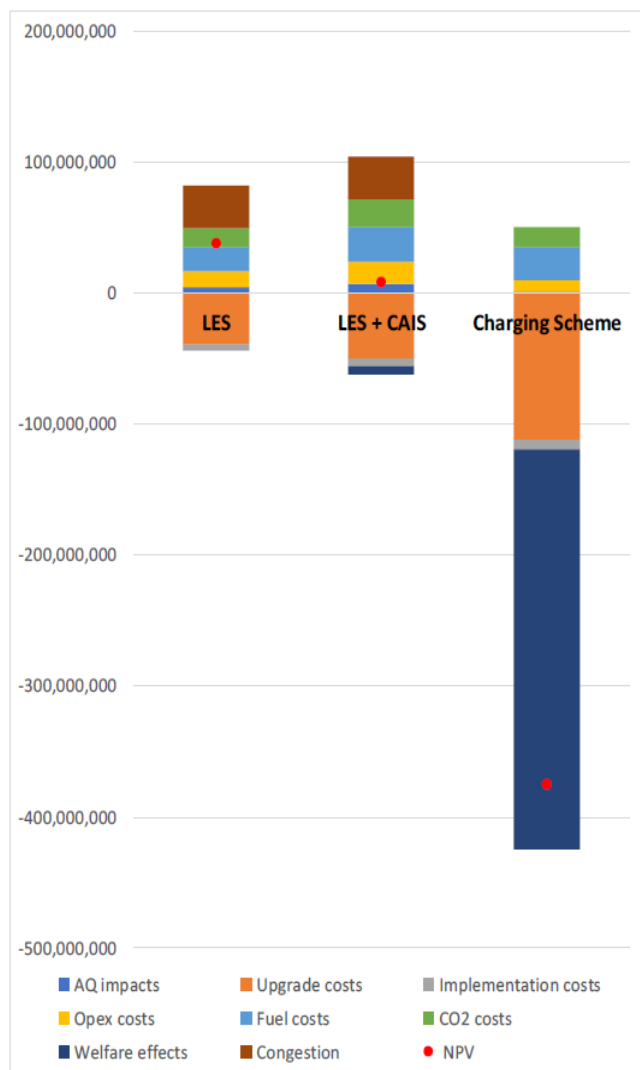
A more comprehensive **Clean Air Incentive Scheme** than Option 2 in order to help more people to upgrade their vehicles. This is because a significantly greater number of people would be affected by the charge, including many people who could not afford to purchase a new vehicle or may be unable to change their travel choices.

Again there would be various levels of grant available to further encourage the early uptake of the scheme, the purchase of ultra-low emission vehicles, and support those where the financial barrier to change is greatest.

The same package of **low emissions measures** identified in Option 1.



## Summary of the Evidence from the Economic Assessment



Impact category	LES	LES + CAIS	Charging scheme
AQ impacts outside modelling domain (NOx and PM, not coaches)	✓	✓	✓✓
AQ impacts associated with alternative responses of coaches in response to charging CAZ	-	-	✓
Wider GHG/congestion impacts associated with alternative responses to a charging scheme	-	-	✓
Noise / accidents / infrastructure effects associated with the options	✓	✓	✓
Transaction costs: associated with upgrading vehicles	✗	✗	✗✗
Welfare (utility) loss associated with upgrading vehicles	✓/✗	✓/✗	✓/✗
Active travel effects.	✓	✓✓	✓✓

Key: Each impact is assigned a scoring – this attempts to judge the size and direction of impacts between different options, and the overall size / importance of impact relative to other impacts assessed both qualitatively and quantitatively. '✓✓' denotes large benefit associated with option; '✓' denotes small benefit; '-' denotes no significant impact; '✗' denotes small cost; '✗✗' denotes large cost; '✓/✗' denotes where there are costs and benefits, with no discernible overall net effect.

Note: Bars represent present value (PV) of impacts; dots represent aggregate net present value (NPV) of all impacts associated with CAZ option; all impacts are assessed relative to 'do nothing' baseline; NPV is also presented with congestion costs as a sensitivity to the central NPV estimate; all impacts presented in 2018 prices.