

#brumbreathes

Improving the air we breathe

A Clean Air Zone for Birmingham

Birmingham City Council



Making a positive difference everyday to people's lives

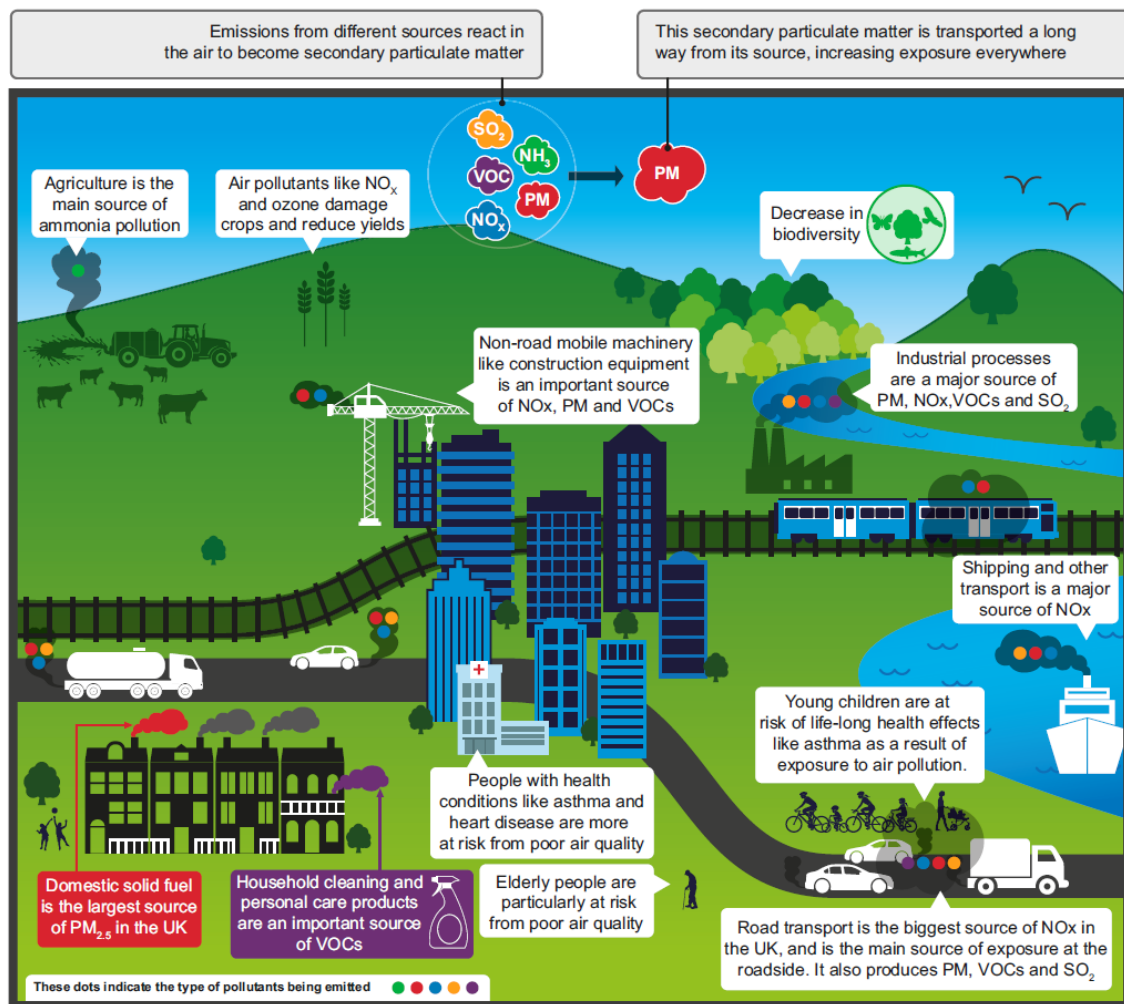
Background

- Poor air quality is a major public health burden
 - Up to 900 deaths per year in Birmingham are linked to man made air pollution
- Transport is the biggest source of pollution
 - Contributing on average to approximately 80% of nitrogen oxides (NOx)
- UK Government has obligations under EU and domestic legislation to set out a national strategy and plans to improve air quality to meet legal limits

Background

- In 2015 Client Earth took the Government to the Supreme Court over its inaction to address air quality.
 - As a result the Government were instructed to develop an air quality plan to achieve reductions of NO₂ in the shortest possible time in line with legislative requirements.
- National Air Quality Plan issued in December 2015
 - Identified five cities including Birmingham as being non-compliant beyond 2020.
- Ministerial Direction issued in December 2017
 - Required the council to submit a business case for a scheme in September 2018

The causes and types of air pollution



Source: Clean Air Strategy 2018 (DEFRA)

The types of air pollution

Nitrogen oxides (NO_2)

80% Polluting vehicles are the biggest source of NO_2

46% With diesel vehicles creators of NO_2 in Birmingham biggest

Ammonia (NH_3)

Sulphur dioxide (SO_2)

Primary Particulate Matter ($\text{PM}_{2.5}$)

Volatile organic compounds (NMVOCs)

The effects of air pollution on Birmingham's citizens

Up to
900 DEATHS



per year linked to man-made air pollution

LINKED TO

Heart disease

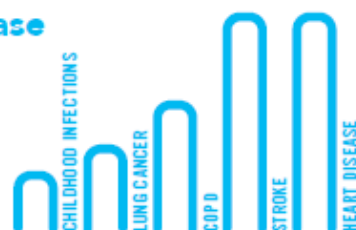
Diabetes

Asthma

Obesity

Cancer

Dementia



Deaths due to air pollution worldwide per year

LINKED TO

Still births

Infant deaths

Low birth weight

Organ damage

Premature deaths



CHILDREN IN
HIGH POLLUTION AREAS

x4



more likely to have reduced lung function when they become adults



61% OF JOURNEYS TO WORK ARE BY CAR OR VAN

Exposed to **21%** higher levels of pollution



Affects the

VULNERABLE & DEPRIVED

areas most



BUS & TAXI DRIVERS

are exposed to

3x



more pollution than anyone else

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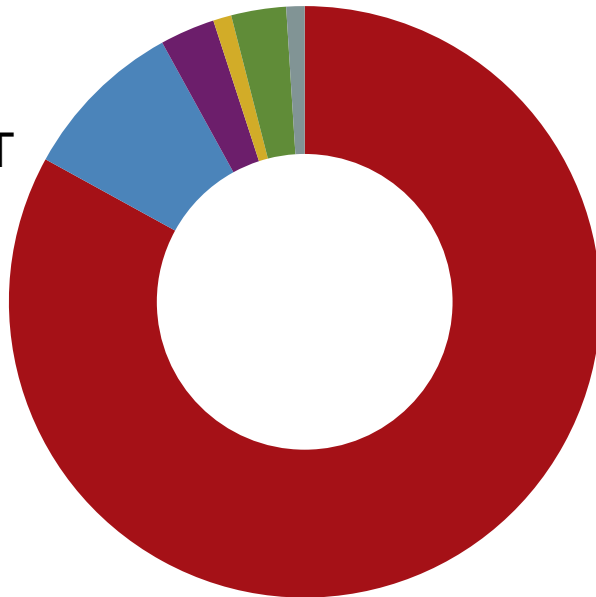
The challenge for Birmingham

The composition of our vehicle fleet and the emissions created provide Birmingham with a significant challenge

83%

The majority of Birmingham's vehicle fleet are cars

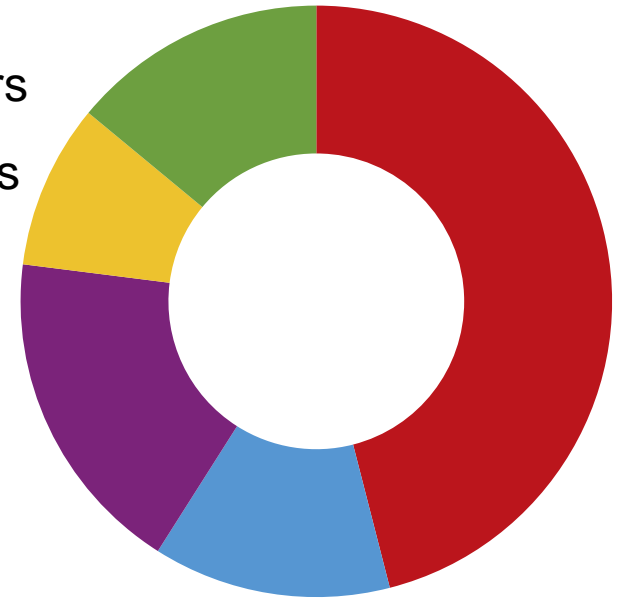
- Car
- LGV <3.5T
- OGV
- Taxi
- Bus
- Other



46%

Diesel cars account for almost half of the NOx emissions in the city

- Diesel cars
- Petrol cars
- Vans
- Buses
- HGVs



The 'hotspots' where the problems are worst

Location

Level of NO₂ expected in 2020 if we take no action

A4540 Lawley Middleway
to Garrison Circus

46.9µg/m³

A4100 Digbeth

46.4µg/m³

A38 Lancaster Circus to
Dartmouth Circus

46.6µg/m³

Suffolk Street Queensway
near Beak Street

48.8µg/m³

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A CLEAN AIR ZONE FOR BIRMINGHAM



The purpose of a Clean Air Zone

- An area where targeted action is taken to improve air quality, by discouraging the most polluting vehicles from entering the zone
- A Clean Air Zone (CAZ) should achieve compliance with defined air quality standards by focusing on three specific outcomes

1

Reduce

The amount of journeys that need to be made – or at least that travel through locations with the poorest air quality

2

Shift

Journeys to public transport, walking and cycling.

3

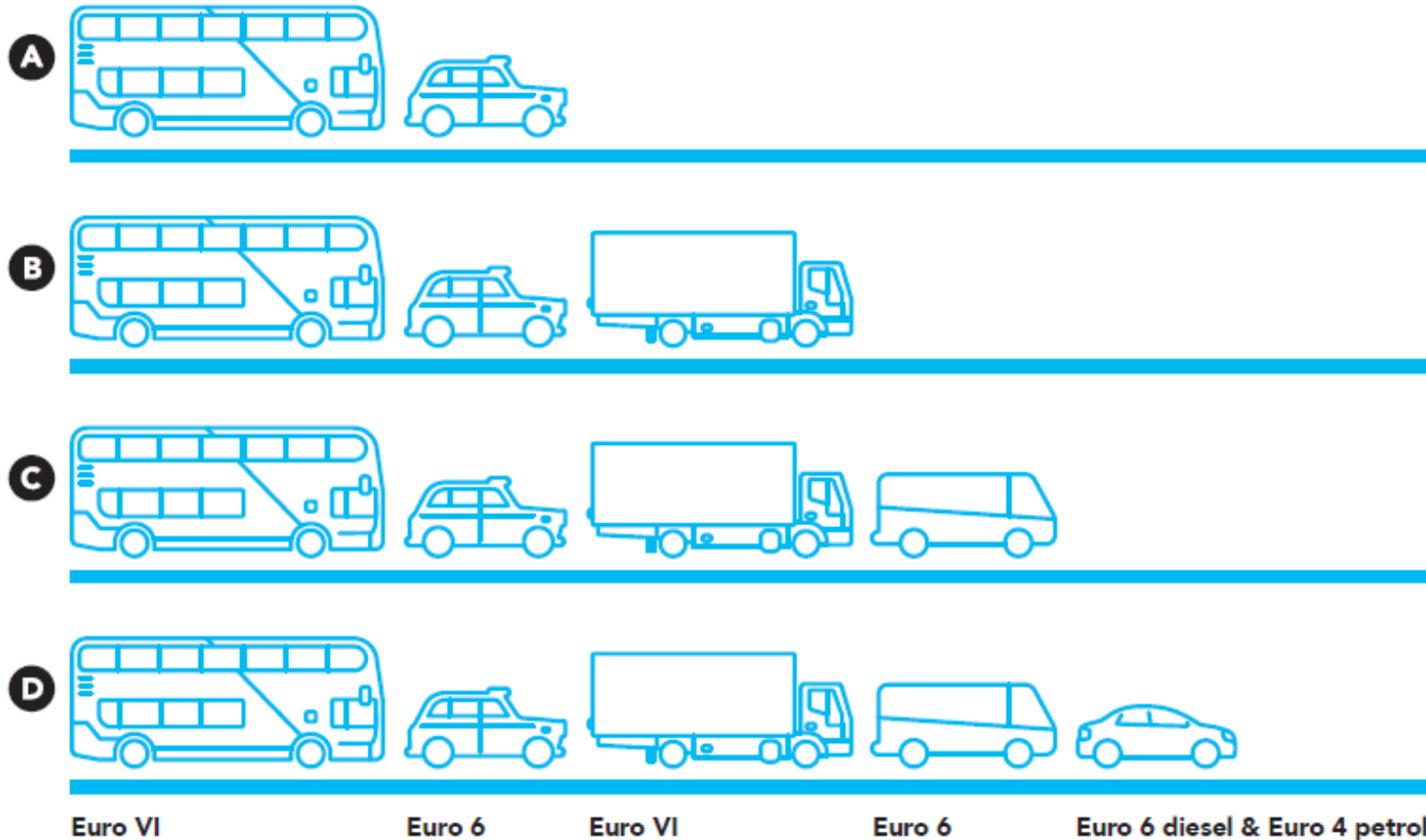
Improve

Clean up the emissions of the trips which are essential – stimulating take up of cleaner vehicles

The types of Clean Air Zone (CAZ)

- The class determines which vehicles are affected by the CAZ
- Travel through a CAZ would incur a charge/fine for non-compliant vehicles
- CAZs can be designed differently to suit the local circumstance
- CAZ framework sets out minimum Euro Standards
- Any vehicle below the standard will be charged for entering a CAZ

There are different classes of CAZ



Developing a CAZ for Birmingham

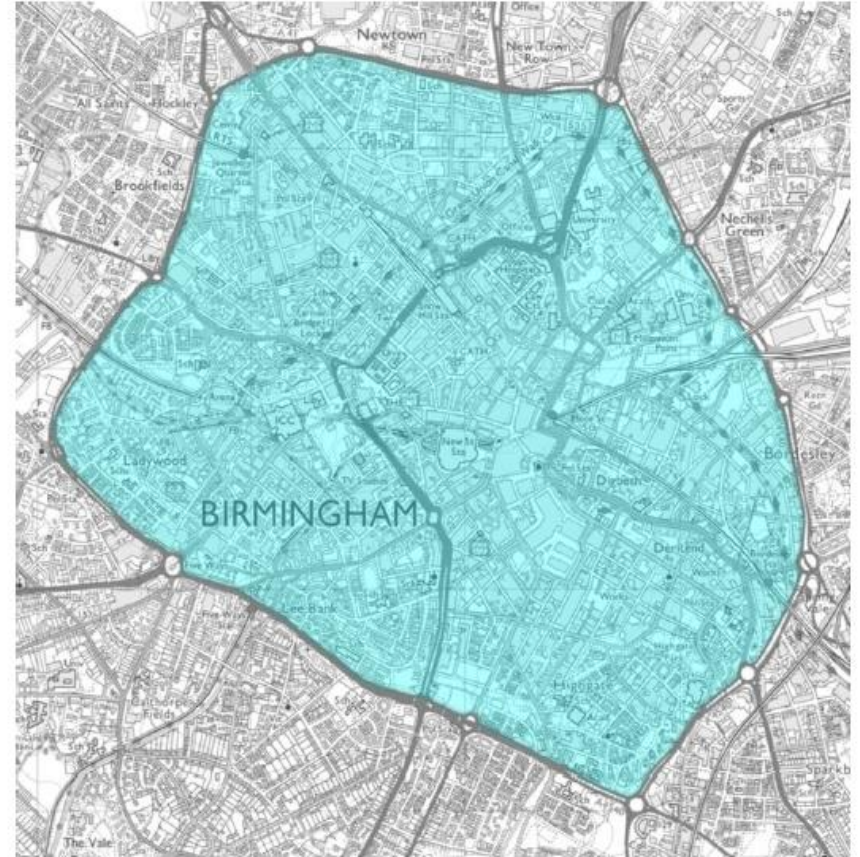
- Local transport and air quality models developed to confirm what CAZ class would achieve compliance
- Supplemented by a number of additional workstreams:
 - **Integrated Impact Assessments** (to identify the economic, health and equality impacts of the scheme)
 - **Additional Measures Study** – to identify potential measures which could be implemented alongside a CAZ in order to achieve compliance.
 - **Freight and Logistics Operators study** – targeted at city centre businesses and freight and logistics operators to look at options to support them with changes in operational practices and the transition to cleaner fleets

Developing the CAZ

- Different potential solutions have been modelled including different CAZ classes
 - The goal was to see what type of CAZ would provide the optimum solution
- Local modelling shows the air quality issues broadly align with Government's national Pollution Climate Mapping (PCM) with regard to the locations of exceedance of the **NO₂ annual mean limit value of 40 µg/m³**
- CAZ D is required for Birmingham (which includes private cars)

What a CAZ D means for Birmingham

- To include all the roads within the Middleway Ring Road (A4540), **but not the Middleway itself**
- Charges to apply all day, everyday
- Introduce additional measures to achieve compliance
- Reduce levels of NO₂ below 40µg/m³
- To be implemented in January 2020



What a CAZ D means for Birmingham

- Improved air quality across the city
- Wider health benefits i.e. reduction in still births, deaths linked to man-made pollution
- Encourage individuals to use public transport
- Reduction in congestion and time spent sitting in traffic



VEHICLES INCLUDED

Buses, coaches, taxis, HGVs, LGVs and private cars (option to include motorbikes and mopeds)

What a CAZ D means for Birmingham

- Prices in these ranges would encourage enough people to change their travel habits or vehicle
- Payment to be made online before entering the CAZ area
- Specialist vehicles to be exempted i.e. ambulances, show vehicles
- Remember that a vehicle whose engine is clean enough will not have to pay anything

Vehicle type	Daily charge
Bus/Coach	£50 to £100
Lorries (HGVs)	£50 to £100
Taxi and private hire	£12.50
Van (LGVs)	£12.50
Private car	£6 to £12.50

Additional measures to support the CAZ

Type	Summary
Fleet Upgrades	<ul style="list-style-type: none">▪ Taxis –Support through CAF finance package for Hackney Cabs based on enabling smooth transition supported by strict age limit ; Targeted Hackney Carriage LPG retrofit programme; Support Private Hire Vehicles Upgrade to Electric. Subject to availability and realistic timeline.▪ LGV vans – support through CAF finance package to enable smooth transition. Subject to availability and realistic timeline.▪ Zero emission buses (new Hydrogen buses)
Parking	<ul style="list-style-type: none">▪ Remove all free parking from on-street areas in the city centre.
Network Changes	<ul style="list-style-type: none">▪ Closure of Moor Street Queensway between Masshouse and Park Street to general traffic, with only Public Transport, Hackneys and cycles allowed in the area.▪ Ban the route of traffic travelling northbound on Suffolk Street Queensway (A38) that exits onto Paradise Circus to then access Sandpits Parade.▪ Ban southbound traffic from Paradise accessing the A38.▪ Close Lister Street and Great Lister Street at the junction with Dartmouth Middleway except for public transport movements.
Public Transport	<ul style="list-style-type: none">▪ Improvements to bus corridors based on work by TfWM (Transport for West Midlands)

Ways we are already tackling air pollution

£2.9m

grant funding secured to support this work

- Focused on:
 - Further bus priority measures across the city core to plug gaps in existing city centre bus priority – re-allocating roadspace in key locations to improve bus journey reliability.
 - New traffic signal control strategies at four key intersections within the City Core which are closely related to key air quality locations.
 - Signing and re-routing strategy and introduction of variable messaging

Funding the CAZ and the use of the income generated

- Funding from Government's Clean Air Zone Implementation Fund to introduce the CAZ
- Income from the CAZ charges and any Penalty Charge Notices issued to cover the costs of running the CAZ
- Surplus money will be spent on activity that will further improve Birmingham's air quality
 - Such as improvements to public transport, cycling and walking and support for businesses and individuals

How we will do it

- The CAZ will be clearly signposted with road signs
- Installations of ANPR cameras to capture vehicles driving into and within the zone
- Penalty Charge Notice (PCN) of up to £120 will be issued to the registered keeper of the vehicle to be paid in addition to the CAZ charge
- No charge if your vehicle is parked within the CAZ boundary and does not move all day (e.g. because you live in the CAZ)
- Continue to monitor air quality in the city after implementation

Is your vehicle compliant?

- The engine standards which will apply to Birmingham's CAZ (Euro 4 or better for petrol, Euro 6 or better for diesel) are the same as the London Ultra Low Emission Zone (ULEZ)
- Your vehicle registration document (also known as the V5C) will help identify your vehicle's Euro emission standard
- Check your vehicle is compliant using:

tfl.gov.uk/modes/driving/ultra-low-emission-zone

<http://eurostandards.co.uk>

Next steps

- Go to complete the online consultation:

birmingham.gov.uk/caz

- You can also attend one of the drop-in sessions take place around the city
 - Information about these sessions available online and in libraries around the city
- Consultation ends: 17 August



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