

Birmingham's clean air zone

Birmingham City Council

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Summary

Birmingham's clean air zone is a key part of the city council's commitment to addressing the health inequalities reinforced by poor air quality. It is using the zone to focus on the movement of people rather than motor vehicles to create a more sustainable and attractive city. Just under a year after it launched in 2021, initial reports indicated NO₂ levels had fallen by an average of 13%.

Councillor Liz Clements, Cabinet Member for Transport at Birmingham City Council, said: "Since the introduction of the clean air zone, the percentage of the highest polluting vehicles entering the city has reduced by around 50%. This dramatic drop highlights the effectiveness of our efforts to improve air quality in the city.

"We're committed to building on this encouraging progress by supporting people to make positive changes to the way they travel. Proceeds from the clean air zone are being reinvested in walking, cycling, public transport, and air monitors for schools. The rollout of air quality monitors to schools across the city also help to build awareness of the issues associated with poor air quality, the sources of the issue, and to encourage lifelong behaviour change."

The problem

Public Health England has described air pollution as the single biggest environmental risk to public health. Toxic air contributes to between 28,000 and 36,000 premature deaths across the UK every year through conditions such as cancer and heart and lung disease.

In Birmingham, it is estimated that there are about 1,000 premature deaths per year as a result of air pollution. Here the air pollutant of greatest concern is nitrogen dioxide. About 80% of it is created by internal combustion engines.

Poor air quality disproportionately harms the young, the old, and people living in deprivation. As the youngest city in Europe, with 40% of its population under 40, and ranked as the third most deprived English core city, tackling this issue is of critical importance to the council.

The single biggest challenge to addressing the pollution produced by motor vehicles is the sheer volume of vehicles that travel through the city centre every day. On average, this accounts for close to 100,000 unique vehicles every month. Over the last half century or so the city and its road network have been designed to support the needs of motor vehicles.

The solution

In Birmingham, we at the city council are committed to building a greener, more sustainable future. Changing the way people in the city travel is a fundamental part of this objective. Our clean air zone, which came into operation in June 2021, is a key part of our commitment to make significant improvements to the air we breathe. Through the clean air zone, we are also supporting a broader shift in the way we approach travel in the city; focusing more on the movement of people – rather than the movement of motor vehicles – to create a more sustainable and attractive environment for all people in the city.

We had begun to explore the feasibility of some kind of low-emission zone in the city centre in 2016. This work accelerated the following year when the UK government placed a ministerial direction on the council. It instructed the city to bring forward a plan to comply with the legal limit for nitrogen dioxide in the shortest possible time. The most effective way of achieving this objective was through the introduction of the clean air zone.

Unlike a congestion charge, which charges every single vehicle to pass through a certain area, a clean air zone only charges the most polluting vehicles. Birmingham's scheme is a 'category D' clean air zone, which includes all categories of motor vehicles except motorcycles.

The zone, which encompasses the city centre, aims to improve air quality in the city by requiring drivers of the most polluting vehicles to pay a daily fee.

We run several incentives to encourage individuals and businesses who own such vehicles to upgrade to lower-emission vehicles or turn to active travel. For example:

- individuals can choose to receive a £2,000 credit to use towards the purchase of a new vehicle or a public transport pass
- businesses looking to upgrade their fleets can apply for a grant

These measures are helping to achieve long-term improvement to the air we breathe.

Timeline

2016 to 2017: early stages and ministerial direction

Birmingham City Council explored options for a low-emission zone in the city centre in 2016. In 2017, the UK government placed a ministerial direction on the council to bring forward a plan to comply with the legal limit for nitrogen dioxide in the shortest possible time.

2018: developing the business case

Public consultation on Birmingham's clean air zone took place in summer 2018. The response received close to 11,000 responses from individuals, businesses, and other key stakeholders. The feedback was particularly helpful in finalising the level of the daily fee, the suite of local temporary exemptions, and the financial grants.

On 10 September 2018 the council's cabinet approved the submission to the UK government of its 'preferred option business case.' The council then submitted the final 'full business case' for the scheme to government in December 2018.

When preparing the business case, we found that there were few comparable projects to benchmark the clean air zone against. Birmingham and Leeds were set to be the first cities to adopt such an initiative. The planning period predated London's ULEZ, but the capital's congestion charge offered a case study for us to consider. The council's own experiences in bus lane enforcement also offered some insight in terms of what challenges could be expected.

2021: the soft launch

On 1 June 2021, the council introduced the zone with a 'soft launch' of the scheme. Drivers were issued with a penalty charge notice but also given another opportunity to pay the daily fee.

The aim of this soft launch was to provide drivers with a little extra time to get ready, review the support available, and consider the alternatives to driving through the zone. Enforcement began 2 weeks later, on 14 June.

Birmingham's clean air zone was initially set to launch in January 2020 but a delay in developing the UK government's vehicle checker saw this pushed back to the summer. With preparations well underway, the arrival of Covid-19 forced a further delay. At this stage, the council informed UK government ministers of its intention to postpone the launch. With restrictions being relaxed in 2021, a decision was made to go live on 1 June of that year.

2022 to present

The clean air zone continues to operate in Birmingham, with Birmingham City Council running regular marketing campaigns that:

- raise awareness of the zone for drivers entering the city
- underline the council's wider clean air strategy driving the initiative

Monitoring and evaluation continues constantly: you can find a live dashboard and other resources on our [clean air zone data webpage](#).

Ultimately, the primary objective of the clean air zone is to reduce the levels of nitrogen dioxide to within the legal limit in the shortest possible time. Modelling for the full business case suggested that this would start to happen around 2 years after the launch of the scheme. Once that point of compliance is reached, Birmingham City Council will need to provide the government with additional data over 2 to 3 years to demonstrate that the air quality issue would not return in the event of the zone being removed.

Birmingham City Council's current focus is to understand why a small number of locations continue to see high levels of air pollution. The contributing factors could be traffic volumes, vehicle types, or the built environment. Based on that analysis, the council can develop additional schemes to help achieve the scheme's objective.

Stakeholders

Engagement with stakeholders and partners began in the earliest stages of the scheme and continues to this day.

Shaping the proposal

Detailed consultations with a range of organisations and groups helped Birmingham City Council to shape a proposal that:

took account of the feedback from a wide range of stakeholders
delivered on the ambition of creating change in a relatively short period of time

The groups the council engaged at this stage included:

- UK government
- NHS
- local chambers of commerce
- business improvement districts
- the UK government's Joint Air Quality Unit
- key local stakeholders including local and regional politicians, community groups, and faith groups within the zone

Delivering the clean air zone

As the project moved into the delivery stage, a broader engagement plan saw consultation directly with people who live and work in the zone, and faith centres and businesses in its boundary. This ensured that the voices of those impacted most by the introduction of the zone could be heard.

The process of building relationships with stakeholders began as early as 2016, when the council first considered the possibility of a solution to reduce vehicle emissions. From this point, we instigated meetings, hosted events, and proactively engaged with key organisations, including chambers of commerce and the NHS. As the process accelerated and plans were firmed up, we hosted engagement sessions with businesses, and held a major consultation that helped to fine tune the proposal.

Inevitably, the council saw opposition from a broad range of people with concerns about the impacts it may have on them. This required clarity in the way that we communicated our plans, particularly where it was necessary to allay any unfounded fears. This process also saw adaptations made to the proposal where appropriate and possible, based on the feedback given.

This engagement continues to this day, with the council:

- sharing data freely
- holding ongoing conversations with organisations like the chambers of commerce on issues surrounding the zone
- holding ongoing conversations with partners such as the NHS on shared priorities regarding public health

The initiative also demands partnership with a range of other council services including the:

- parking services team for enforcement
- customer services call centre for managing customer complaints and enquiries
- IT, finance, communications, and procurement teams for essential business infrastructure

Impact

Since the clean air zone began operating, the percentage of the most polluting vehicles entering the city centre every day has reduced from just over 15% in June 2021 to 7.3% in November 2022. This reduction has helped reduce the levels of the pollutant nitrogen dioxide. An interim impact assessment published in March 2022 indicated that levels of nitrogen dioxide in the zone had reduced by an average of 13%.

The clean air zone is a fundamental part of Birmingham City Council's transport plan, representing our vision for a zero-carbon, resilient transport system that will help to 'level up' the city and remove the barriers that sustain inequality. To help work towards these objectives, all funds generated by the zone's fees are being reinvested to support the delivery of several transport projects delivered by the council and Transport for West Midlands. These projects include investing in the trial of hydrogen-fuelled buses, the rollout of fast and rapid electric vehicle charging points, and further pedestrianisation of the city centre.

The clean air zone and the Birmingham 2022 Commonwealth Games

The clean air zone is an enabler for broader change and the ambition we have for movement of people. It is one of many cogs in the system that is powering Birmingham City Council's wider transport plan.

Its progress to date was put to its biggest test yet as the city welcomed the world to the Birmingham 2022 Commonwealth Games.

Birmingham City Council's vision was simple: to deliver a clean and green games with public transport at its heart.

To prepare the city for the games, the council undertook capacity, efficiency, reliability, and accessibility improvements across different transport modes. In this way, the games provided a catalyst for investment in the region, promoting the delivery of several transport schemes, including the introduction of the:

- Sprint priority bus corridor
- £50m 'Birmingham Cycle Revolution' programme

- West Midlands Cycle Hire Scheme across the region in the 12 months before the games

The results spoke for themselves.

Statistics released by the Department of Culture Media and Sport show that more than 5 million people visited Birmingham during the 2 weeks from 25 July: a 200% increase on the same period in 2021.

While visitor numbers were up, the number of people arriving by non-compliant vehicles was significantly down. Birmingham's clean air zone statistics showed that an average of 7,608 vehicles entering the city centre each day were required to pay the daily fee in July and August 2022. This was a significant reduction from the average of 11,086 seen a year earlier.

The summer proved that the car does not need to be the first choice for every journey. Major cities such as Birmingham can welcome the world without compromising on a green vision. The onus now is to use this as a launchpad for continued investment and collaboration with partners to meet the ambitions of our transport plan and clean air strategy, with the clean air zone at its heart.

Lessons learned

Birmingham's clear air zone was inspired by a clear need for a solution to the fact that air quality has a direct impact on public health in the city.

However, this need also demands that the council:

- engages in clear engagement and consultation that has openness and honesty at its heart
- is willing to give frank answers to tough questions and the inevitable challenges that come with such an initiative

The aims of the zone have been backed by strong political leadership and advocacy, and, through engagement, a constructive relationship with stakeholders.

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Funding for the implementation for the scheme came from the UK government. In order to access this funding, the council had to submit a business case that set out how it would achieve legal air quality limits in the shortest available time.

This business case requested funding for:

- infrastructure to deliver the scheme
- financial incentive programmes for residents, workers, and businesses

When we submitted the business case for government approval, we received a ministerial direction to deliver the scheme as per the full business case. This meant any changes to the scheme would require us to go back to the government for approval.

The government has allocated Birmingham City Council:

- £14.2 million from its implementation funding for the delivery of signs, cameras, and other infrastructure
- £38 million from its clean air fund to support a package of mitigation measures to support businesses and individuals likely to be impacted

Beyond this initial funding, the scheme is self-supporting, funded by the income it generates. Any net surplus revenues must be invested into local transport policies that support improvements in air quality or active travel.

Next steps

The council is reinvesting all proceeds from the clean air zone into transport projects that support our aim of a greener future. A Birmingham City Council cabinet report in January 2022 revealed that £44m of proceeds from the clean air zone have helped to fund the:

- trial of hydrogen-fuelled buses
- rollout of fast and rapid electric vehicle charging points
- development of a pedestrianised city centre
- expansion of the city's cycling infrastructure and car-free school streets programme

In addition, we have committed to providing air quality monitors to all of Birmingham's schools. The revenues generated from the clean air zone will help to enable longer term change – especially in encouraging more people to choose to walk, cycle, or use public transport as their primary mode of moving around the city.

The clean air zone will deliver further benefits to communities around Birmingham later in 2023 with the launch of the city's clean air fund. This will invite local organisations to apply for grants to contribute towards local initiatives focussed on air quality and sustainability.

Birmingham City Council's goal remains the reduction of emissions to within the legal limit in the shortest possible time. When this level is reached, the council must be able to demonstrate to the UK government that the removal of the scheme would not lead to air pollution levels breaching the legal limit once more.

It's important to note that the clean air zone is an enabler of broader change, and our ultimate goal is to reduce the number of vehicles on the road. The success of this project sits alongside other major infrastructure schemes that are delivering against the council's transport plan and contributing towards its wider 'Big City Plan'.

Beyond Birmingham, the council regularly engages with other local authorities who are planning their own clean air zone schemes. By sharing experience and expertise, the council is committed to achieving a greener future.

Links, contacts, and credits

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