



# ROUTE TO NET ZERO ANNUAL REPORT

January 2025

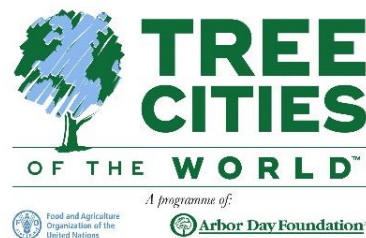
Group Memberships and Awards



West Midlands  
Combined Authority



Birmingham





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Contents

Chapter 1: Introduction .....	9
Chapter 2: The Council’s Greenhouse Gas Emissions .....	10
The Council’s Approach to Greenhouse Gas Accounting .....	10
The Council’s Greenhouse Gas Emissions.....	10
The Council’s Scope 1 and 2 Greenhouse Gas Emissions .....	11
Corporate Estate .....	11
Highways and Streetlighting .....	13
Fleet Vehicles .....	13
The Council’s Scope 3 Emissions.....	15
Procurement .....	15
Council Housing.....	16
Energy from Waste .....	17
Other Council Scope 3 Emissions .....	18
Chapter 3: The City of Birmingham’s Greenhouse Gas Emissions .....	19
City Territorial and Consumption Greenhouse Gas Emissions .....	19
The City of Birmingham’s Territorial Emissions .....	20
Tackling Birmingham City’s Territorial Emissions .....	23
Cross Sector City Wide Decarbonisation Enabling Activities .....	24
Tackling Domestic Emissions .....	25
Tackling Transport Emissions .....	26
Tackling Industrial, Commercial and Public Sector Emissions .....	29
Tackling Waste Emissions .....	31
Chapter 4: Natural Environment and Climate Adaptation .....	32
Local Nature Recovery Network and Biodiversity Net Gain .....	32
Urban Forest Master Plan .....	33
City of Nature Plan for Birmingham.....	33
East Birmingham Inclusive Growth .....	34
Natural Rivers and Green Corridors – Phase 2 .....	34
Flood Alleviation and Defence .....	35
Climate Risk and Vulnerability Assessment .....	35
Climate-Resilient Development Pathways in Metropolitan Regions of Europe .....	35
Chapter 5: Enabling Activities .....	36
Climate Change, Nature and Net Zero Governance .....	36
Carbon Disclosure Project Reporting .....	36
Climate Change Engagement Framework.....	36
Environment and Sustainability Assessments .....	36
Carbon Literacy Training .....	37
Engaging & Empowering Schools.....	37
Major Event Sustainability .....	37
Digital Birmingham.....	37
Chapter 6: Summary and Next Steps .....	38

## Figures

Figure 1. The Council’s Scope 1 and 2 GHG Emissions.....	11
Figure 2. The Council’s Corporate Estate Scope 1 and 2 GHG Emissions by Source .....	12
Figure 3. The Council’s Highways Scope 1 and 2 GHG Emissions by Source .....	13
Figure 4. The Council’s Fleet Vehicles Scope 1 and 2 GHG Emissions by Source .....	14
Figure 5. Bromford Whole House Retrofit and EQUANS Team at National Energy Efficiency Awards	17
Figure 6. Structuring Birmingham City Council’s Net Zero Challenge.....	19
Figure 7. City of Birmingham Territorial Greenhouse Gas Emissions, 2005-2022.....	21
Figure 8. City of Birmingham Territorial Greenhouse Gas Emissions by Sector, 2005-2022.....	21
Figure 9. Core Cities Total Emissions, 2005 – 2022 .....	22
Figure 10. Core Cities Per Capita Emissions, 2022 .....	22
Figure 11. Core Cities Per Capita Emissions, 2005 – 2022 .....	23
Figure 12. City of Birmingham Greenhouse Gas Emissions by Sector, 2022 .....	23
Figure 13. Birmingham Delivery Plan Key Typologies.....	27
Figure 14. Birmingham Transport Infrastrure Projects .....	27
Figure 15. Map of Birmingham’s Potential Heat Network Zones .....	30
Figure 16. Forecast Outcomes from Grant Programmes for SMEs In Birmingham / Region .....	30
Figure 17. Birmingham's Draft Nature Recovery Network .....	32
Figure 18. Heartlands Mapping from East Birmingham Green Infrastructure Masterplan.....	34
Figure 19. Re-naturalisation of the River Rea Following a Weir Removal .....	34
Figure 20. Schools Model Cop, 2024.....	37

## Glossary

Term	Definition
<b>Adaptation</b>	Action that helps cope with the effects of climate change - for example construction of barriers to protect against rising sea levels, or conversion to crops capable of surviving high temperatures and drought.
<b>Carbon Dioxide (CO<sub>2</sub>)</b>	Carbon dioxide is a gas in the Earth's atmosphere. It occurs naturally and is also a by-product of human activities such as burning fossil fuels. It is the principal greenhouse gas produced by human activity.
<b>Climate Change</b>	Climate change refers to a large-scale, long-term shift in the planet's weather patterns and average temperatures.
<b>Carbon Dioxide Equivalent (CO<sub>2</sub>e)</b>	Each greenhouse gas has a different global warming potential. The overall warming effect of a mixture of these gases is often expressed in terms of CO <sub>2</sub> equivalent - the amount of CO <sub>2</sub> that would cause the same amount of warming.
<b>Fossil Carbon</b>	Carbon derived from fossil fuel or other fossil sources.
<b>Biogenic Carbon</b>	Carbon derived from biogenic (plant or animal) sources excluding fossil carbon.
<b>Global warming</b>	Global warming is the long-term heating of Earth's surface observed since the pre-industrial period (between 1850 and 1900) due to human activities, primarily fossil fuel burning, which increases heat-trapping greenhouse gas levels in Earth's atmosphere.
<b>Greenhouse Gases</b>	Greenhouse gases (also known as GHGs) are gases in the earth's atmosphere that trap heat. The gases act like the glass walls of a greenhouse – hence the name, greenhouse gases. Greenhouse gases consist of carbon dioxide, methane, ozone, nitrous oxide, chlorofluorocarbons, and water vapor.
<b>Mitigation</b>	Action that will reduce man-made climate change. This includes action to reduce greenhouse gas emissions or absorb greenhouse gases in the atmosphere.
<b>Net Zero</b>	Net Zero is about reducing and removing greenhouse gases to mitigate against increasing climate risk. The term net zero means achieving a balance between the greenhouse gas emitted into the atmosphere, and the greenhouse gases removed from it. This balance – or net zero – will happen when the amount of carbon we add to the atmosphere is no more than the amount removed. To reach net zero, emissions from homes, transport, agriculture and industry will need to be cut.
<b>Scope 1</b>	The direct emissions from council activities, for example the emissions from the combustion of fossil fuels in council buildings' boilers and council fleet vehicles.
<b>Scope 2</b>	The indirect emissions arising from the generation of purchased energy, which includes the emissions caused by council consumption of purchased electricity, heat, steam, and cooling.
<b>Scope 3</b>	The other indirect emissions (not in Scope 2) from sources that the council does not own or control, such as those from the procurement of goods and services, and our leased assets.

## Executive Summary

Birmingham City Council (the 'council') must play a leading role in reducing emissions and improving the city's resilience and ability to adapt to a changing climate. We continue to make good progress in tackling our own greenhouse gas (GHG) emissions, working with and supporting the city to reduce its emissions, and improve the city's resilience. Since declaring a climate emergency in June 2019 our Route to Net Zero team has developed our ability to calculate and report on the council's corporate GHG emissions, in accordance with the Greenhouse Gas Protocol standards, and has been working with directorate, services and teams across the council to reduce our organisation's emissions.

Birmingham City Council's Scope 1 and 2 emissions for the 2023/24 financial year were approximately 38,000 tCO<sub>2</sub>e, which represents a 5% reduction when compared to 2022/23. During 2023/24 roughly 58% of our emissions arose from our corporate estate (our buildings), 28% arose from Highways (primarily streetlighting), and the remaining 14% arose from our fleet vehicles (primarily bin lorries). We continue to improve our understanding of our scope 3 emissions, which are much greater than our scope 1 and 2 emissions and remain dominated by three activities: procurement of goods and services; council housing; and the emissions to air from the city's energy from waste plant.

We report on the city of Birmingham's GHG territorial emissions using the UK local authority and regional greenhouse gas emissions national statistics (which have a 2-year publication lag), and the City of Birmingham's territorial emissions for 2022 were 4,316 ktCO<sub>2</sub>e. This represents a 40.2% reduction since 2005, and a 3.7% reduction when compared to 2021. A similar reduction in emissions occurred in 346 out of the 361 local authorities from across the UK, which is consistent with the decrease in overall UK emission of 5% during 2022, which was largely due to a reduction in fuel use to heat buildings.

To support the delivery of our natural environment and climate adaptation goals we have been reviewing our local plan's policies, and our green infrastructure evidence base has been updated to reflect emerging legislation and the increasing availability of climate change data. We have secured funding to deliver a range of projects to improve our highways and waterways, will harness Biodiversity Net Gain to enhance biodiversity and open spaces across the city, and are excited to start our new partnership with the University of Birmingham and the UK Met Office on the EU Climate-Resilient Development Pathways in Metropolitan Regions of Europe (CARMINE) project.

The initiative and activities underway to tackle the above climate change, nature and net zero challenges are presented within the relevant sections of this report. However, some of our most significant achievements to over the last year include:

- Delivering our £24.8m of Social Housing Decarbonisation Funding (SHDF) to improve the energy efficiency of 2,076 council homes.
- Winning the Retrofit National Multi-Measure Project of the Year at the National Energy Efficiency Awards for our Social Housing Decarbonisation Fund activities.
- Completing over 50 Environment and Sustainability Assessments (ESA) over the last year to ensure council proposals align with its climate change, nature and net zero commitments.
- Collaborating with Solihull Metropolitan Borough Council and International Synergies to deliver circular economy support for small and medium sized enterprises (SMEs).
- Delivering our Sustainable Supply Chains for Birmingham & Solihull project with Solihull Metropolitan Borough Council to support SMEs to decarbonise their businesses.
- Bringing the number of electric vehicle charge points installed across the city to 266, including a 100kW charger (Livery Street) which can charge two cars in 30 minutes.

- Commissioning a new retrofit partnership with 3 ECO4 concession partners to deliver energy efficiency improvements to over 3,000 citizens' homes per year.
- Supporting members of the Birmingham faith covenant through sharing learning and securing £200,000 of grant funding for faith-led climate action.
- Awarded, with University of Birmingham, the Special Recognition award at the SEE Global Sustainability Summit for our Climate Risk and Vulnerability Assessment for Birmingham
- Delivering, in partnership with Low Carbon Homes and other stakeholders from across the city, the annual Birmingham Retrofit Summit in May 2024
- Hosting the second Schools Model Conference of Parties (COP) event to increase our engagement with local schools and pupils on climate change.

The Route to Net Zero team has been successful in securing almost £2m in funding, of which about £0.9m was used to support external bodies, and the remaining roughly £1m funded the council's programme of activities. The team has also arranged, attended and/or presented at numerous local, regional and national events, and hosted international delegations from Leipzig (Germany) and Ulsan (South Korea) to showcase our activities and experience.

We are proud of our successes to date, are building momentum and are excited about the year ahead. We look forward to continuing to work across the council and with our city's stakeholders and citizens in delivering our climate change, nature and net zero programme, reducing our greenhouse gas emissions and improving our resilience to climate change.

We will continue to share and celebrate our successes.



*Bromford Pocket Park Opening*



*Cabinet Member for Environment and Transport at Active Travel Launch*

## Chapter 1: Introduction

Birmingham City Council (the 'council') continues to make good progress in tackling its own greenhouse gas emissions, working with and supporting the city and its citizens to reduce emissions, and improving the city's resilience to the impacts of climate change.

[The Council declared a climate emergency in June 2019](#), with a commitment to take action to reduce the city's greenhouse gas emissions, and to do so in a way which brings communities with us and reduces inequalities across the city. The [Council's Corporate Plan](#) sets a vision for improving the quality of our environment, through increasing the cleanliness of our streets, improving the quality of the air we breathe, driving up recycling rates, reducing our greenhouse gas emissions, and increasing our access to a high-quality natural environments. The Corporate Plan guides our activities to ensure positive climate and nature action is at the heart of council decision-making, and enable all directorates, departments and services to support delivery.

The [2015 Paris Agreement](#) saw world governments commit to curbing global temperature rises to well-below 2°C above pre-industrial levels - and increase efforts to limit warming to less than 1.5°C. In 2018 the [Intergovernmental Panel on Climate Change](#) warned that global warming must not exceed 1.5°C to avoid catastrophic impacts to our wellbeing. Achieving net zero is about reducing and removing greenhouse gases from across our society which contribute to global warming, including those emissions from our homes, transport systems, agriculture activities and industrial processes. We will achieve net zero when we reach a balance between the greenhouse gases emitted into the atmosphere, and those removed from it, in line with the 2015 Paris Agreement.

In addition to reducing emissions, we also need to respond to our changing climate. Data shows that our historic emissions are already significantly influencing our climate locally, with the [spring of 2024 being UK's warmest on record](#), and globally, with the [summer of 2024 being the Earth's warmest on record](#). The [Met Office's Local Authority Climate Report](#) forecasts that we will experience warmer and wetter winters, hotter and drier summers, and more frequent and intense weather extremes. The West Midlands Combined Authority's [Summary of Climate Change Impacts](#) highlights several direct risks to Birmingham and its citizens, including the increased risk of fires, floods and damage to property and infrastructure. The impact of flooding alone is significant, with the current [annual cost of flood damage across the UK exceeding £700m](#), and the [repairs for a flooded home costing £30,000 on average](#). To mitigate these impacts and costs we need to prepare for these changes and ensure that our current projects and policies embed resilience into our built and natural environments so they can best respond to our changing climate and the needs of our citizens.

### **Case Study: University Hospitals Birmingham**

*A warming climate will have a [variety of impacts on human health](#), including an increased risk of pregnancy complications and respiratory illnesses, a rise in new patterns of vector-borne illnesses and an increase in mental health conditions linked to the impact of extreme weather events, as well as increasing anxiety about climate change impacts.*

*Health inequalities are likely to widen as those who are already affected by social deprivation are also the most likely to be impacted by climate change.*

In summary, the council recognises its role in tackling climate change through reducing emissions and increasing the city's resilience and ability to adapt to a changing climate. In our role as a civic leader, as a major local employer, and a partner with the local community, we are striving to do all we can to address the net zero, nature and biodiversity challenges. This Annual Report presents an update on our progress across these activities and our ambitions for the years ahead.

## Chapter 2: The Council's Greenhouse Gas Emissions

We are committed to delivering net zero and demonstrating leadership in tackling our organisation's emissions, as well as those of the wider city. The Route to Net Zero team prepares, calculates and reports on the council's greenhouse gas (GHG) emissions annually. The following section summarises our 2023/24 emissions, how they compare to our 2022/23 emissions, and the steps we are taking to reduce our emissions.

### The Council's Approach to Greenhouse Gas Accounting

Greenhouse gas (GHG) accounting is how organisations quantify their greenhouse gas emissions<sup>1</sup>, and because these emissions are usually presented as CO<sub>2</sub> equivalents (CO<sub>2</sub>e), based on their global warming potential, their emissions are often referred to as an organisation's carbon footprint. The [Greenhouse Gas \(GHG\) Protocol reporting guidance and standards](#) are the world's most widely used greenhouse gas accounting standards and provide the requirements and guidance for organisations preparing and calculating their greenhouse gas emissions. In adopting these standards, we categorise our emissions into three scopes:

- **Scope 1:** the direct emissions from sources which are controlled by the council, including emissions from the combustion of fossil fuels in council buildings' boilers and vehicles.
- **Scope 2:** the indirect emissions arising from the generation of purchased energy, which includes the emissions caused by council consumption of purchased electricity, heat, steam, and cooling.
- **Scope 3:** the other indirect emissions (not in scope 2) from sources that the council does not own or control, such as those from the procurement of goods and services, and its leased assets.

While the council has control over its direct emissions, it has influence over its indirect emissions, and we have defined our organisational boundary for GHG accounting purposes using the 'Operational Control' approach. We have calculated our emissions using the UK Government Conversion Factors for greenhouse gas reporting. These emissions factors are updated annually and more information on how these are generated and can be applied is available on the [Department for Energy Security and Net Zero](#) website.

### The Council's Greenhouse Gas Emissions

The following sections outline our scope 1, 2 and 3 emissions for the 2023/24 financial year and outlines how these have changed since our first reporting cycle in 2022/23. We've been able to quantify our scope 1 and 2 emissions, because the activities which contribute to these emissions fall under our immediate control and accessing timely and good quality data on these activities is relatively straightforward. For example, we calculate our energy related emissions (i.e., electricity and natural gas) based on how much energy we have consumed through our energy framework agreement with West Mercia Energy. However, quantifying our scope 3 emissions is more challenging, and this is because the activities which contribute to our scope 3 emissions fall outside of our immediate control and are often shared with third parties (e.g., suppliers) making it much more difficult to obtain high quality emissions data. Nevertheless, we have conducted a high-level screening of our scope 3 emission activities and are taking steps to improve our understanding of these emissions, identified some initial priorities, and are commencing activities to tackle these emissions.

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<sup>1</sup> These emissions usually include all six greenhouse gases covered by the Kyoto Protocol - carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulphur hexafluoride (SF<sub>6</sub>).

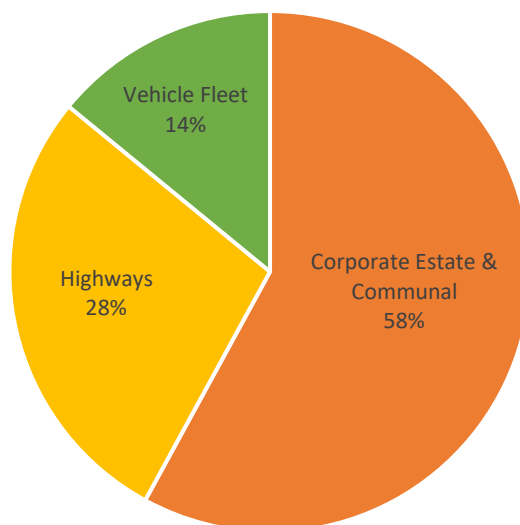
## The Council's Scope 1 and 2 Greenhouse Gas Emissions

Birmingham City Council's Scope 1 and 2 emissions for the 2023/24 financial year were approximately 38,000 tCO<sub>2</sub>e, which represents a 5% reduction when compared to our 2022/23 emissions of 40,000 tCO<sub>2</sub>e.

During 2023/24 roughly 58% of our emissions arose from our corporate estate and the communal areas we are responsible for within our housing and commercial estate (energy for buildings), 28% arose from Highways (primarily streetlighting), and the remaining 14% arose from our fleet vehicles (primarily bin lorries). Approximately 47% of our 2023/24 emissions were scope 1, arising from the combustion of fossil fuels, primary gas in our buildings and diesel in our fleet vehicles, and the remaining 53% were scope 2, arising from the consumption of electricity by our buildings and the city's streetlights.

Whilst the council's reduced its overall consumption of natural gas, electricity and vehicle fuel in 2023/24, the emissions from the consumption of electricity increased. This is because the '[UK Electricity CO<sub>2</sub>e factor](#)', which regularly sees a 9-10% reduction year on year as the national grid decarbonises, increased by 7% in 2023 - compared to 2022 - due to an increase in natural gas use in electricity generation and a decrease in renewable generation. This impact was most pronounced for our streetlights, where a roughly 5% reduction in electricity consumption in 2023/24 compared to 2022/23, resulted in a 2% increase in emissions.

**Figure 1. The Council's Scope 1 and 2 GHG Emissions**



### Corporate Estate

Our corporate estate accounts for roughly 58% of our scope 1 and 2 emissions. These emissions arise from across our corporate estate, which includes our offices, libraries, leisure centres, crematoria, depots, and parks, and the communal areas in our council houses and commercial estate (e.g., heat networks, hallways, stairwells and lifts).

The council is taking several actions to reduce its corporate estate emissions, including improving how it manages its buildings, increasing their energy efficiency, whilst reducing their reliance on gas boilers for space heating, and exploring options to source high quality renewable electricity.

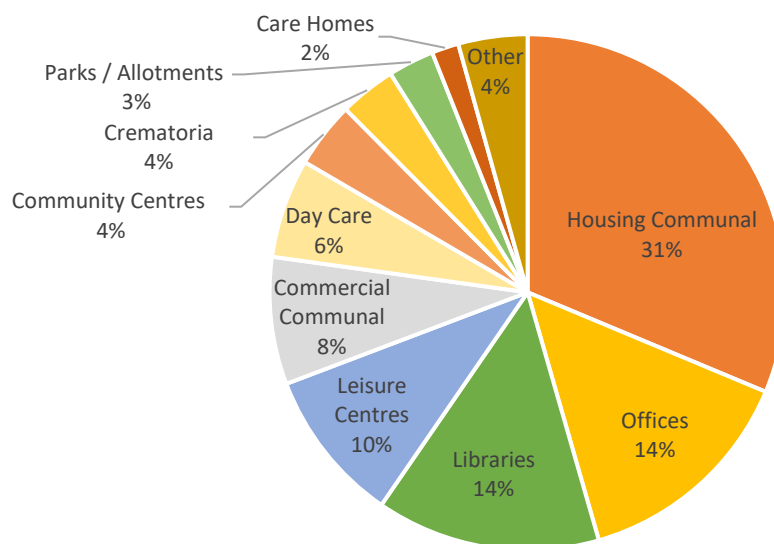
### Managing our Corporate Estate:

The creation of the Corporate Landlord function represents a significant evolution in the management of the council's estate, which currently comprises of more than 700 assets. The

centralised and professionalised property function will strategically manage the council's operational and community facing property assets, delivering a higher quality estate, reducing duplication of property management activity, and through working across the council to identify opportunities for service co-location, relocation and asset rationalisation, reduce the overall size of the estate and delivering operational efficiencies.

The Route to Net Zero team will continue to support the Corporate Landlord function to inform and shape future asset strategies, ensuring that net zero is at heart of our asset maintenance and management programmes. The provision of technical and advisory support to guide estate energy management and decarbonisation activities will result in a more sustainable and net zero aligned council asset profile. Instrumental in delivering these outcomes is improving our management of energy, increasing the energy efficiency of the council's assets, and reducing their energy consumption.

**Figure 2. The Council's Corporate Estate Scope 1 and 2 GHG Emissions by Source**



#### Improving Energy Management:

The consumption of energy (natural gas and electricity) by our corporate estate and streetlighting accounts for 86% of the council's scope 1 and 2 emissions. To oversee and optimise this consumption of energy the council is establishing a Corporate Energy Management Function. This centralised function will be responsible for: improving energy metering, billing and consolidating energy contracting; raising awareness about the council energy consumption and its consumption profile; supporting services across the council to improve energy management; and, through better management, reducing demand and delivering financial savings for the council.

The function will also play a key role in the development of a comprehensive integrated energy management and decarbonisation strategy for the council. This strategy will span sourcing and procuring high-quality renewable energy aligned to the council's net zero ambitions<sup>2</sup>, through to the retrofitting our buildings and streetlighting to reduce their energy consumption and emissions and exploring other energy management/reduction and decarbonisation opportunities. These activities

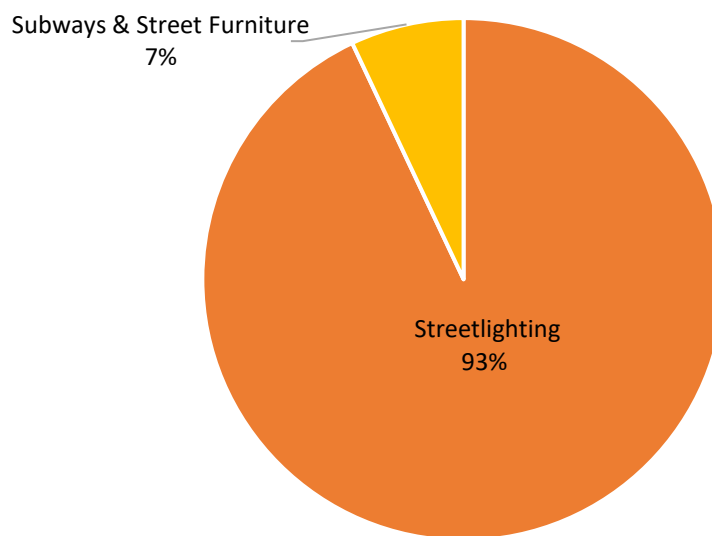
<sup>2</sup> The council's current electricity is supplied with 'unbundled' Renewable Energy Guarantees of Origin (REGOs) certificates, and there is a risk that the REGO certificates may have been purchased independently from electricity generation, which may misrepresent the true emissions associated with the electricity supplied, and may also not support the development of new renewable electricity projects.

will leverage capital grant funding where available, and we will explore other innovative commercial delivery and investment opportunities to facilitate and accelerate delivery (e.g., [National Wealth Fund](#)).

### Highways and Streetlighting

Birmingham’s highway network includes 2,500km of roads, 100,024 streetlights (116,420 lamps), and over 850 highway structures, such as bridges and subways, across the city. The electricity consumed by our Highways accounts for roughly 28% of the council’s scope 1 and 2 emissions (because they consume electricity, they contribute to our scope 2 emissions), and streetlights are responsible for 93% of these emissions, with subways and other street furniture making up the remaining 7%.

**Figure 3. The Council’s Highways Scope 1 and 2 GHG Emissions by Source**

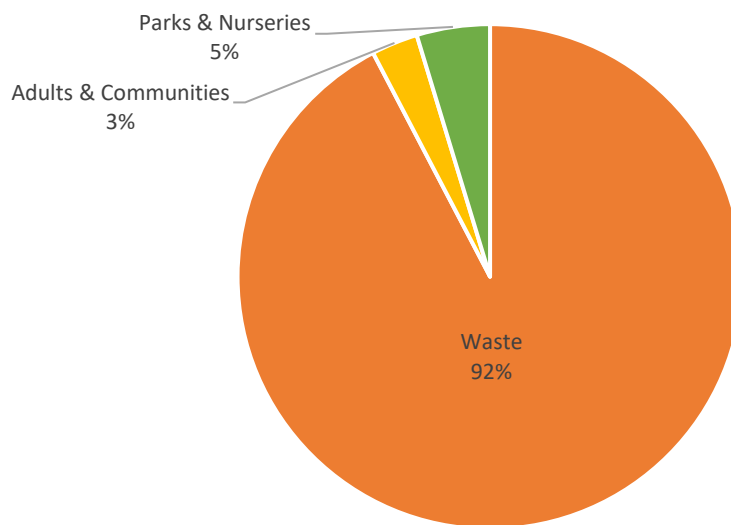


We have, through our Highways PFI contract, replaced 54,345 (47%) of our inefficient sodium lamps with more efficient LED lamps, and we are exploring opportunities to convert our remaining streetlights to LED lamps to reduce their electricity consumption. The council continues to optimise our streetlighting Central Management System (CMS), which allows the ‘dimming’ of lights and the ‘trimming’ of their operational hours, where it is safe and acceptable to do so, which reduces energy consumption further, and provides additional benefits, such as reducing light pollution and minimising the impact of streetlights on nature and biodiversity. We hope that coupling these actions with sourcing high quality renewable energy (pg. 10) will deliver significant cost and carbon savings.

### Fleet Vehicles

Our fleet vehicles account for roughly 14% of our scope 1 and 2 emissions, and this is primarily driven by the consumption of diesel by these vehicles. The emissions arising from our waste collection vehicles (i.e., bin lorries) are the greatest contributor to fleet vehicle emissions, with emissions from other fleet vehicle vehicles and users (e.g., Parks and Conservation, and Adult Social Care) making a much smaller contribution. We are taking several actions to understand and reduce our fleet vehicle emissions

**Figure 4. The Council’s Fleet Vehicles Scope 1 and 2 GHG Emissions by Source**



#### **Integrated Transport Unit:**

A council project is underway to explore establishing an Integrated Transport Unit (ITU) to proactively manage and optimise the council’s vehicle fleet. However, as the Street Scene vehicle fleet is currently undergoing its own fleet transformation activity as part of the Waste Service Transformation Programme, it is currently out of the ITU’s scope of work. Nevertheless, creating a single centralised fleet management function, with a dedicated specialist team, could work with and support service areas to improve fleet management, increase fleet co-ordination, drive efficiencies in fleet utilisation, deliver financial savings and reduce emissions. The project will review ‘tried and tested’ best practice fleet management practices, drawing on the expertise and experience of other organisations, including local authorities, government departments, executive agencies and the private sector. The centralised management of the council’s vehicle fleet would also support the council’s longer-term decarbonisation activities and other priorities through, for example, the centralised management of infrastructure development (e.g., charging infrastructure for electric vehicles), ensuring fleet replacement responds to council needs - informed by comprehensive knowledge of the council’s fleet makeup and its utilisation, and through consolidating purchasing and leasing arrangement to deliver value for money.

#### **Waste Collection Vehicle Fleet:**

The council is taking several steps to reduce the emissions arising from our waste collection vehicles as they collect waste from across the city. The [UK Environment Act 2021](#) will drive changes in how we collect waste and we are taking steps to optimise our waste collection service to ensure it delivers value for money for the city and achieves high waste recycling rates through increased segregation of waste at source<sup>3</sup>. The council’s ‘Waste Service Transformation Programme’ will oversee the phased waste collection service transition to the fortnightly collection of residual waste from April 2025<sup>4</sup>, and the phased introduction of weekly food waste collection by April 2026. We

<sup>3</sup> The Environment Act 2021 places new obligations on the city council, including: the collection of core material streams (paper and card; plastic (excluding plastic film); glass; metal; food; and garden waste from all household by 31<sup>st</sup> March 2026; the collection of food waste from all households by 31<sup>st</sup> March 2026; the collection of plastic film by 31<sup>st</sup> March 2027; and to halve the waste per person that is sent to residual treatment by 2042.

<sup>4</sup> The [Council received a £6.825m capital grant from DEFRA](#) for the purchase of vehicles and containers to support the introduction of weekly food waste collections.

expect these changes to waste collection will reduce our overall vehicle fuel consumption leading to a reduction in the emissions arising from our refuse collection vehicle fleet.

Changes to our [waste fleet vehicle configuration](#) will support this transition, reducing the current vehicle fleet from 241 to 172 vehicles (whilst extending collections), introducing Euro 6 standard vehicles, significantly reducing the average vehicle age, and delivering improved efficiency, increased productivity, and lower emissions. The changes to our vehicle fleet will be accompanied with an [upgraded mobile IT system](#) which will increase the efficiency of the waste collection service, aid route planning and scheduling following the most efficient routes, facilitate communication between operational staff and back-office operations, and improve the quality of service, whilst reducing fleet mileage and further reducing emissions. Where practical, and cost effective to do so, HVO<sup>5</sup> fuel will be utilised as an alternative to conventional diesel, delivering a [significant reduction in greenhouse gas emissions](#).

### The Council's Scope 3 Emissions

Our scope 3 emissions are much more difficult to determine, because they occur up and down our supply chains, fall outside of our immediate control, and are often shared with other parties (e.g., contractors and suppliers). Whilst this makes gathering data on these activities challenging, and whilst we are currently unable to provide accurate figures for all our scope 3 emissions, we're continually improving our understanding of these emissions. We have used the [GHG Protocol Corporate Value Chain \(Scope 3\) Standard](#) to screen our scope 3 emission sources, and our most recent analysis reinforces that the council's scope 3 emissions are significantly greater than our scope 1 and 2 emissions, and remain dominated by three activities: procurement of goods and services (the products and services we purchase to deliver our services); council housing (which we use to provide homes for our citizens); and the energy from waste plant (which we use to manage our citizens' / city's waste).

### Procurement

The council's procurement of goods and services is a significant contributor to the council's scope 3 greenhouse gas emissions. This is common for most public (and many private) sector organisations. Tackling these GHG emissions is challenging, but also a huge opportunity due to the council's scale and influence to drive net zero and sustainability through our procurement and commissioning supply chains, encouraging greater co-operation with our suppliers, and delivering better outcomes for the council, the city and the wider region.

### Supporting Sustainable Supply Chains:

Birmingham City Council, in partnership with Solihull Metropolitan Borough Council, have secured £290k [UK Shared Prosperity Funding](#) to deliver our '[Sustainable Supply Chains for Birmingham & Solihull](#)' (SSCBAS) project, which will work with our Small and Medium Enterprises (SMEs) and support them to decarbonise their operations. Since commencing this activity, and working across both councils, we have improved our understanding of the councils' procurement spend profile and GHG emissions, engaged with our suppliers about their net zero commitments, activities and performance, and delivered targeted support for our SME suppliers with the transition to net zero.

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<sup>5</sup> Hydrotreated vegetable oil (HVO) is alternative to fossil diesel which made from organic material, often wastes, such as used cooking oil and animal fats, but occasionally palm oil which can drive rainforest deforestation. Whilst the use of HVO reduces the tail pipe greenhouse gas emissions from vehicles, care should be taken to ensure it is sourced sustainably.

Our ambition is for this activity to provide training and non-financial support to almost 60 SMEs, and work with a third of these to support them develop decarbonisation plans.

We have maximised the reach and impact of these activities through collaborating with the UKSPF Circular Economy in Birmingham and Solihull (CEBAS) programme, which is being delivered by International Synergies (see pg. 29 for more information).

#### **Integrating Net Zero into Contracts:**

In addition to supporting our SMEs, we have also reviewed our procurement policies, frameworks and contracts to identify opportunities where they can better facilitate net zero delivery and our wider climate emergency priorities. This includes embedding sustainability and greenhouse gas accounting requirements into council contracts, including the '[Birmingham Highways Maintenance and Management Services Private Finance Initiative](#)' and the '[Veolia Waste Management Contract](#)' where we have asked suppliers to provide a greenhouse gas emissions baseline for the contracted activities, which enables the council to better understand the contracts' impacts and identify opportunities where we can work with our suppliers to reduce their emissions.

#### **Council Housing**

Birmingham City Council is the largest Local Authority social landlord in Europe, with a stock profile of just under 60,000 properties - 13% of the city's total homes ([457,934 in 2024](#)). Preliminary analysis suggests that the emissions arising from heating and lighting these properties makes a significant contribution to the council's scope 3 emissions. This makes developing strategies and plans (e.g., 'Housing Sustainability Strategy and Delivery Plan') to maximise opportunities to improve the energy efficiency of these properties a key priority.

#### **Improving Asset Data and Insights:**

We are taking a data driven approach to council housing decarbonisation and are making good progress in gathering, generating and improving data on our housing stock. An important step forward is the completion of 1200 asset condition reports with accompanying EPC surveys each year. Having more comprehensive and detailed data on council housing assets and their condition will underpin our decision-making and inform a more strategic approach to asset improvements and decarbonisation of Birmingham City Council owned housing stock.

#### **Social Housing Decarbonisation Fund:**

After our [successful application](#) to Wave 2.1 of the Social Housing Decarbonisation Fund (SHDF)<sup>6</sup> our Housing Asset Management team have been making significant progress in decarbonisation of our council housing stock, with the aim of retrofitting 2,078 Birmingham City Council owned social homes by September 2025. The programme includes the [Whole House Retrofit Project](#) which has implemented multiple measures to improve the energy and thermal efficiency of 300 homes in Bromford, East Birmingham, including external wall and roof insulation, and the installation of solar panels and air source heat pumps. Overall, these activities will save 1.5 tonnes of carbon dioxide (tCO<sub>2</sub>) per property per year, on average, leading to a total annual saving of over 3,000 tCO<sub>2</sub> per year.

Our success delivering our SHDF wave 2.1 activities has been recognised nationally, with the council and our delivery partner, EQUANS Regeneration Ltd., being awarded the [Retrofit National Multi-Measure Project of the Year](#) at the [National Energy Efficiency Awards](#).

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<sup>6</sup> The Department for Energy Security and Net Zero (DESNZ) invites social housing landlords to apply to the Social Housing Decarbonisation Fund to improve the energy performance of social housing.

**Figure 5. Bromford Whole House Retrofit and EQUANS Team at National Energy Efficiency Awards**



#### Council Housing Sustainability Team and Strategy:

Building upon our previous retrofit activities and experience, the council's City Housing team, supported by Route to Net Zero, is proactively developing plans to improve the sustainability of the council's social housing stock. A 'Sustainability Team' is being established within the council's Asset Management team, who will have responsibility for driving the decarbonisation of our housing stock. This team will lead development of the council's 'Housing Sustainability Strategy and Delivery Plan'. However, building on these activities, it will also clarify and define longer term ambitions for net zero council housing and set ambitious targets, create the programmes to deliver these targets, and identify the necessary resources required to support delivery.

#### Gressel Lane - Energy Saving Technologies Pilot

The council constructed 36 housing units at Gressel Lane, Shard End, and secured European Regional Development Fund (ERDF) funding to install and test energy efficiency technologies in 30 units. Working with tenants and other partners, the council will assess the impact of the technologies and conduct post occupancy monitoring. The findings will be published and inform future sustainable housing developments plans and research to support the Future Homes Standard.

#### Energy from Waste

The [Tyseley Energy Recovery Facility \(ERF\)](#) is operated by Veolia under an integrated waste management contract with Birmingham City Council to manage the domestic waste arising from the city of Birmingham. The ERF processes approximately 340,000 tonnes of waste produced by the city annually to produce electricity, of which 25MW is fed into the National Grid, after providing for on-site needs. The facility is a significant emitter of carbon dioxide (CO<sub>2</sub>) in Birmingham and is a key contributor to the council's scope 3 greenhouse gas emissions<sup>7</sup>. Whilst recent investment in the plant has modernised its operations and the ERF maintains its R1 status, meaning it is classified as an efficient recovery option by the Environment Agency, the UK Government announcement that the emissions from Energy from Waste (EfW) facilities will be included in the [UK Emissions Trading Scheme](#) (ETS) from 2028 will likely bring greater scrutiny of EfW emissions<sup>8</sup>.

The [expansion of the UK ETS to include waste incineration](#) and EfW facilities marks a significant regulatory intervention in the UK waste sector, and coupled with the [UK Environment Act 2021](#)<sup>9</sup>, will play a crucial role in aligning the waste and recycling industry with the UK's net zero targets and

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<sup>7</sup> Further information on the facility's annual emissions can be found on the UK's [National Atmospheric Emissions Inventory](#) which reports fossil 'carbon dioxide as carbon', and the UK government's [Pollution Inventory](#) which reports the facility's 'fossil' and 'biogenic' carbon dioxide (CO<sub>2</sub>) emissions.

<sup>8</sup> The UK ETS is a cap-and-trade system that sets a limit on emissions from particularly carbon intensive industries. Participating companies must obtain allowances for each tonne of CO<sub>2</sub> they emit, encouraging them to cut emissions by buying, trading or surrendering allowances.

<sup>9</sup> The Environment Act 2021 aims to halve the waste per person that is sent for residual treatment by 2042.

accelerating the country's transition to a more sustainable economy. Whilst there is no obligation for organisations to purchase or surrender UK ETS allowances until 2028, there is a two-year transition from 2026 where emissions from facilities are required to be monitored, reported, and verified. In preparation, fossil carbon measurement equipment will be installed at the facility during 2025, which will provide definitive reporting on the facility's fossil carbon emissions from 2026.

The current management and future for the Tyseley ERF falls within the wider plans for city decarbonisation, which are discussed and outlined further in the 'City Emissions' section of this report.

### Other Council Scope 3 Emissions

In addition to tackling our three-priority scope 3 emissions, described above, we are also taking steps to improve our understanding of other activities which contribute to our scope 3 emissions, and how these can be reduced. Some of these activities are elaborated upon briefly below.

#### Schools

We have been working with climate charity Ashden, and their newly recruited [West Midlands Schools' Climate Action Advisors](#), to support their [Let's Go Zero Campaign](#) to decarbonise schools across Birmingham<sup>10</sup>. Acivico Group, the council's building consultancy, is also providing support and has developed a [school roadmap to decarbonisation](#), is delivering sessions for parents on energy efficiency, and working with schools to help them to decarbonise. The council is also extending engagement on school decarbonisation through the Spotlight newsletter for School Governors, and delivering carbon literacy training for governors, clerks and head teachers.

#### Commercial Estate

The City Council is the single largest owner of property in Birmingham. The council provides opportunities for business tenants, prospective landowners and developers across Birmingham, through the management and letting of council-owned commercial land and buildings, including shops, offices, industrial units, warehouses, business parks and car parks. We are continuing to better understand the contribution our commercial property portfolio makes to our scope 3 emissions profile and investigate how we can better quantify and tackle these emissions.

#### Leisure Centres

Having successfully secured and utilised £296,550 of revenue support for utility and chemical cost pressures across our swimming pools from phase I of Sport England's [Swimming Pool Support Fund](#), the City Council has subsequently been awarded a further £250,000 under phase II, match funded with £118,643 from the [UK Shared Prosperity Fund](#), totalling £368,643. The funding will be used to provide new efficient gas boilers and pool covers at Handsworth Wellbeing Centre<sup>11</sup>.

#### Council Companies

We have been working to better understand and quantify the greenhouse gas emission arising from council companies. Our activities have focused on two companies, [Acivico Group](#) (the council's building consultancy) and [Shelforce](#) Ltd. (the council's window and door manufacturer), and we continue to work with these organisations and explore opportunities to support them to better understand, quantify, and ultimately reduce their GHG emissions.

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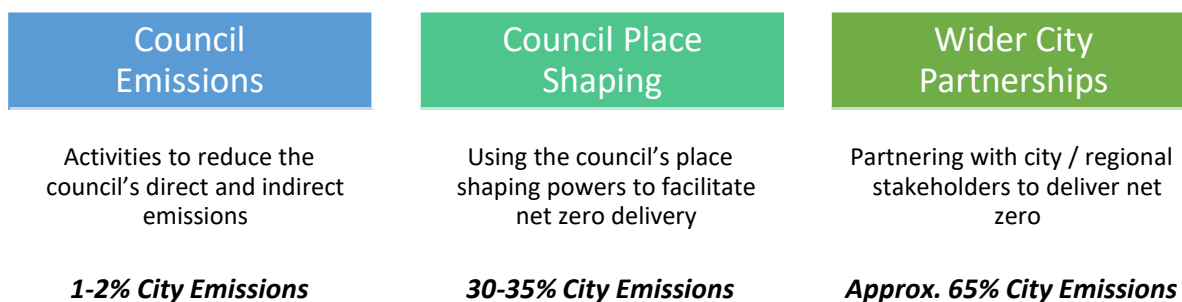
<sup>10</sup> 40 schools from across Birmingham have signed up to the Let's Go Zero campaign and are in the process of completing Climate Action Plans to reduce their emissions and encourage nature at their schools.

<sup>11</sup> Note: this funding will cover some leisure centres which are operated as concessions by third parties, which is why it is included in this section on our scope 3 emissions.

## Chapter 3: The City of Birmingham’s Greenhouse Gas Emissions

In addition to tackling our own emissions, we are also playing a key role in working with stakeholders and citizens across Birmingham and the wider region to tackle our city’s greenhouse gas emissions. We are doing this in the following ways: 1) by tackling our own scope 1, 2 and 3 emissions, we will contribute to reducing the city’s emissions; 2) by using our ‘place shaping powers’ and leading activities which will support the decarbonisation of the city, with our ability to influence planning policy, city transportation and district heat networks, being three obvious examples; and, 3) by acting as a convenor, bringing together different city stakeholders to share knowledge, expertise and experience, and explore opportunities to collectively take action to tackle our city’s emissions.

**Figure 6. Structuring Birmingham City Council’s Net Zero Challenge**



The Route to Net Zero team has continued working with the council’s Insight, Policy and Strategy team to make data on the city more easily accessible. We have renamed the 2023 [Climate Change Briefing Book](#) as the ‘*Birmingham Environmental Data Handbook*’, are including updates to the original data sets (e.g., the city’s greenhouse gas emissions, housing stock and their energy performance, waste management and recycling) and including additional data sets (e.g., air quality). We will publish the updated report in early 2025 through the [Birmingham City Observatory](#), and review and update it annually to demonstrate and communicate our city’s progress towards net zero - and other outcomes.

The following section of the report provides an overview of our city’s emissions by source and outlines our activities underway and progress tackling these emissions.

### City Territorial and Consumption Greenhouse Gas Emissions

The City’s emissions can be categorised and calculated as ‘territorial’ and ‘consumption’ emissions. Territorial emissions include all the direct emissions arising from the domestic, industry, commercial, transport and other activities which occur within the city boundary. Consumption emissions take a wider view by including the emissions embodied in the manufactured goods (e.g., appliances, electronics, foods and clothes) and services (e.g., cloud computing and music streaming services), which are imported into and consumed within the city, regardless of where in the world these emissions occur. The ‘territorial’ and ‘consumption’ approaches are complementary and when used alongside each other, provide a richer picture of our city’s greenhouse gas emissions.

Whilst the UK government publishes standardised territory emissions data for local authorities (DESNZ), there is no standardised government publication of consumption emissions data for local authorities. This is because consumption greenhouse gas accounting is a relatively new and evolving discipline, and there are different accounting approaches emerging which apply different scopes and

methodologies and produce different results<sup>12</sup>. Rather than selecting an approach and using it to report the city's consumption emissions annually, we are assuming that the consumption greenhouse gas accounting field will develop, and that the different tools will provide important and complementary insights. Consequently, we will continue to review the emerging approaches and how they can improve our understanding of consumption emissions. We will use our findings to identify and explore opportunities where they can help raise awareness and guide the development of strategies, policies and actions to tackle the city's wider carbon footprint.

It is for this reason that most of the following section of the report focuses on the city's territorial emissions.

## The City of Birmingham's Territorial Emissions

The Department for Energy Security and Net Zero (DESNZ) publish annual local authority and regional greenhouse gas emissions data on industry, commercial, public sector, domestic, transport, land use, land-use change, and forestry (LULUCF), agriculture and waste activities. These are the most reliable and consistent breakdown of territorial greenhouse gas emissions across the country and show annual emissions from 2005, with the 2024 publication providing data for 2022 emissions: [UK local authority and regional greenhouse gas emissions national statistics](#). As this is the most up to date local authority source of greenhouse gas emissions data, we use this data to track progress in reducing the city's territorial emissions.

During 2022 the City of Birmingham's territorial emissions were 4,316 ktCO<sub>2e</sub>. This represents a 41% reduction since 2005, and an almost 7% reduction when compared to 2021, as shown in 'Figure 7. City of Birmingham Territorial Greenhouse Gas Emissions, 2005-2022'. A similar reduction in emissions occurred in [346 out of the 361 local authorities](#) across the UK for 2022, which is consistent with the decrease in overall UK emissions of 5% during 2022. This reduction in emissions was largely due to a [reduction in fuel use to heat buildings](#) due to the warmer temperatures in 2022 compared to 2021, and its impacts can be seen in the reduced emissions from Birmingham's 'Domestic' (-13%), 'Commercial' (-2%), 'Public' (-5%) sectors. Higher energy prices may have also been a factor in reducing demand for fuels, particularly towards the end of the year.

Birmingham's 'Transport' sector emissions increased in 2022 (+2.5%), and [59% of local authorities \(212\) saw a similar increase](#) following the removal of the last COVID-19 restrictions. However, the city's transport emissions are almost 13% lower than 2019, the last year before the pandemic, which is also the case for 95% (342) of local authorities. Birmingham's 'Waste' sector emissions also increased in 2022 (+15%), and whilst this may be down to a combination of factors, a key contributor is likely the [DESNZ adjustment of the local authority datasets](#) to align with the new [Territorial Emissions Statistics \(TES\)](#) sectors, which, amongst other changes, reallocated emissions from household composting from the 'Domestic' to the 'Waste' sector.

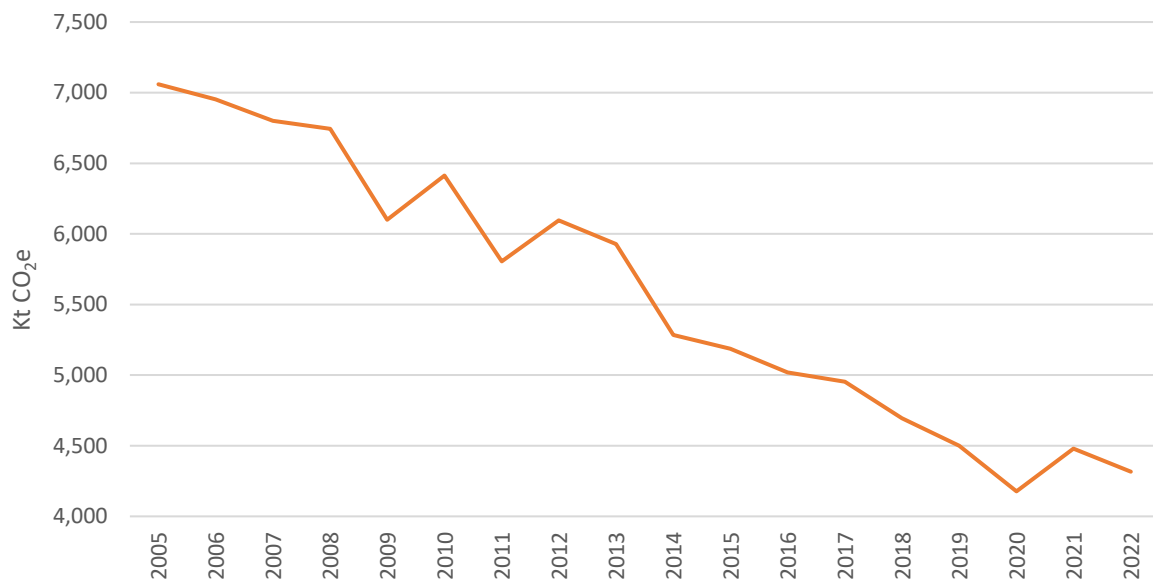
Birmingham's emissions from 'Agriculture' and 'Land Use, Land Use Change and Forestry (LULUCF)' are low, given the city's high degree of urbanisation, and year-to-year variations have little impact on the city's overall emission profile.

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<sup>12</sup> Commonly used tools to calculate local authority / regional consumption greenhouse gas emissions include:

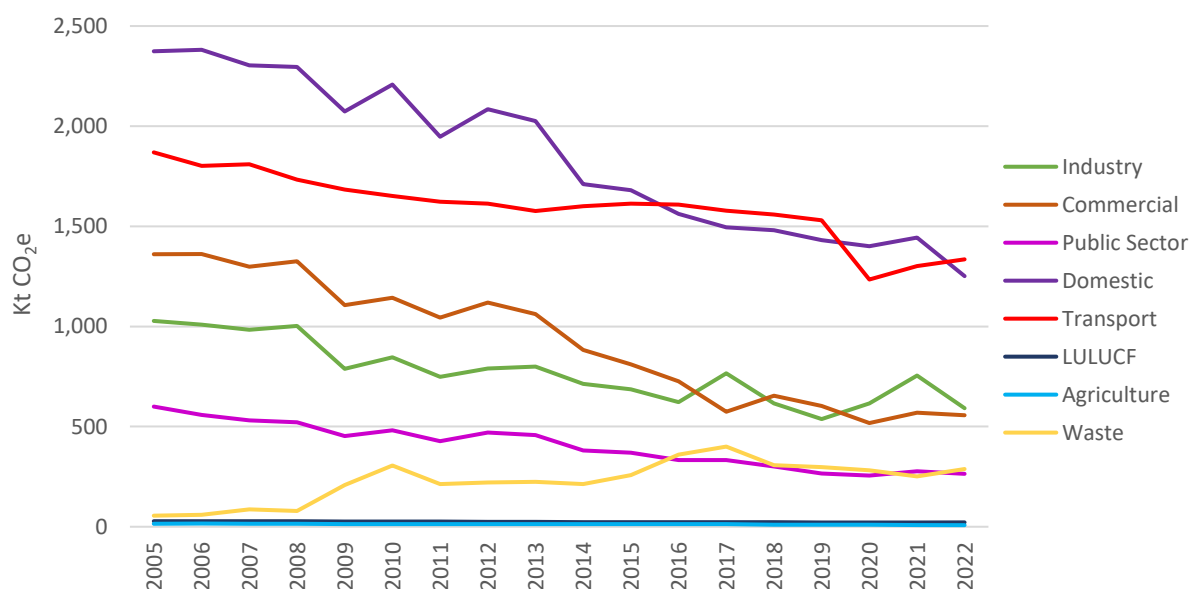
- [Local Authority Consumption Accounts \(LACA\)](#), which have been developed by University of Leeds and funded by Defra, London Councils and ReLondon.
- [Community Carbon Calculator \(Impact\)](#), which was developed by the Centre for Sustainable Energy (CSE) and the Centre for Energy and the Environment at the University of Exeter.

**Figure 7. City of Birmingham Territorial Greenhouse Gas Emissions, 2005-2022**

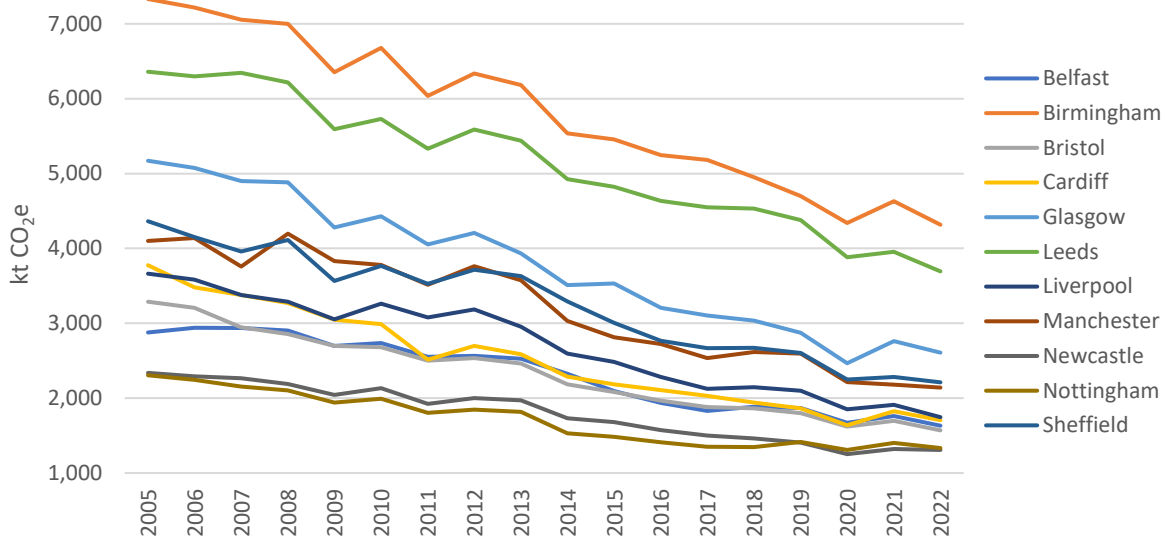


Most sectors within Birmingham have seen significant emissions reductions since 2005, as shown in 'Figure 8. City of Birmingham Territorial Greenhouse Gas Emissions by Sector, 2005-2022', and the similar downward profiles and trajectories in Core Cities emissions would suggest that the nationwide decarbonisation of electricity (and reduction in industrial combustion) has played a significant role in these emissions reductions, as illustrated in 'Figure 9. Core Cities Total Emissions, 2005-2022'.

**Figure 8. City of Birmingham Territorial Greenhouse Gas Emissions by Sector, 2005-2022**

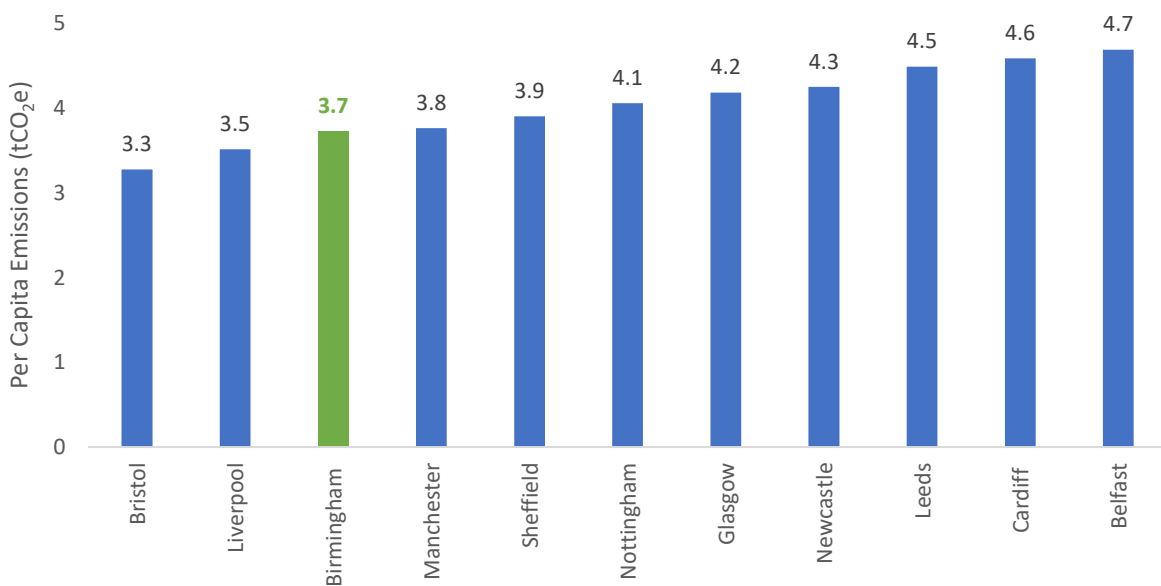


**Figure 9. Core Cities Total Emissions, 2005 – 2022**

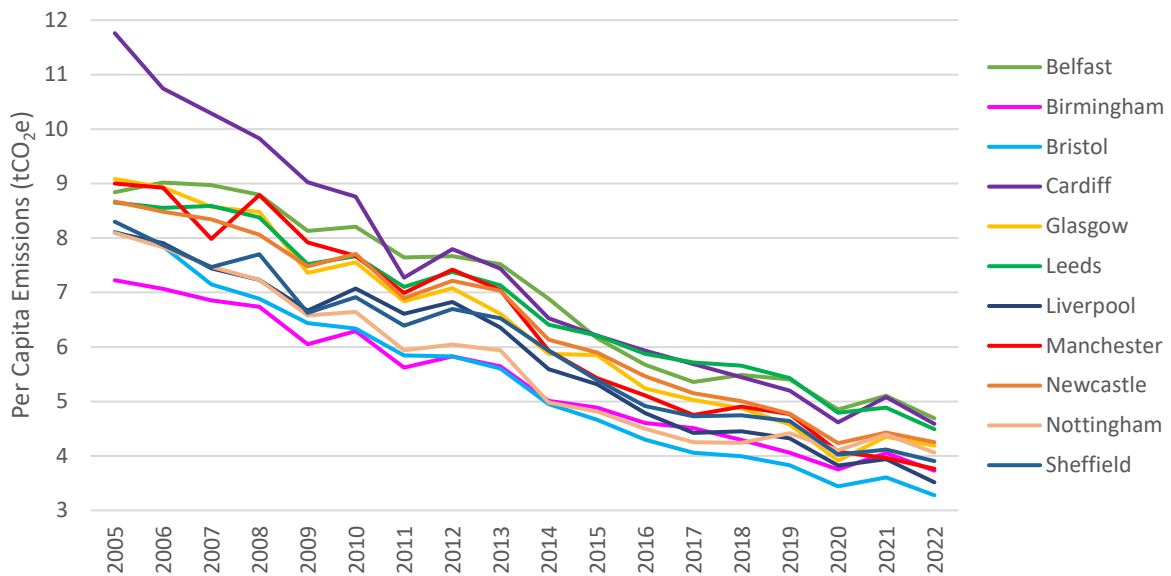


Birmingham’s per capita emissions have fallen by 48.4%, from 7.2 tonnes CO<sub>2</sub>e per person in 2005 to 3.7 tonnes CO<sub>2</sub>e per person in 2022. This represents an almost 10% reduction when compared to 2021 per capita emissions of 4.1 tonnes CO<sub>2</sub>e per person. As shown in ‘Figure 10. Core Cities Per Capita Emissions, 2022’, Birmingham (3.7 tCO<sub>2</sub>e) has the 3<sup>rd</sup> lowest per capita emissions of the core cities, after Bristol (3.3 tCO<sub>2</sub>e) and Liverpool (3.5 tCO<sub>2</sub>e). The reduction in per capita emission is broadly consistent across the core cities, ‘Figure 11. Core Cities Per Capital Emissions, 2005-2022’.

**Figure 10. Core Cities Per Capita Emissions, 2022**



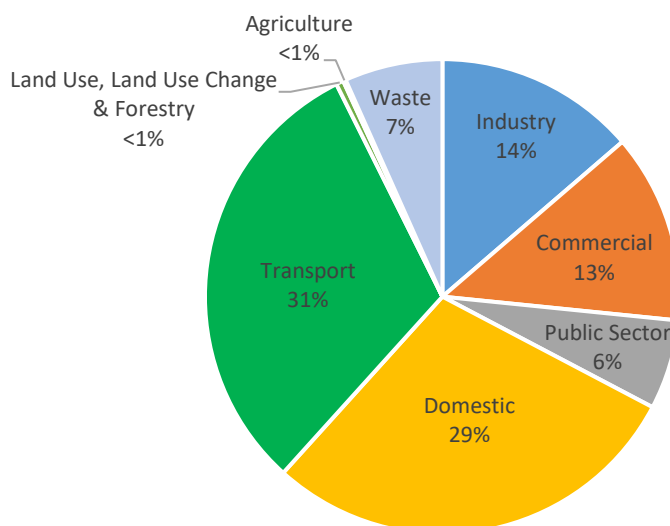
**Figure 11. Core Cities Per Capita Emissions, 2005 – 2022**



### Tackling Birmingham City’s Territorial Emissions

The transport (31%), domestic (29%) and industrial (14%) sectors make the greatest contribution to the City of Birmingham’s territorial emissions in 2022, as detailed in ‘*Figure 12. City of Birmingham Greenhouse Gas Emissions by Sector, 2022*’. This distribution of emissions is consistent with national trends, with transport being the largest emissions source in more than half of all UK local authorities. Whilst the council is not directly responsible for these city emissions, the council does have the ability to influence the emissions arising from buildings, transport systems, waste services and the natural environment, through its place shaping powers and activities.

**Figure 12. City of Birmingham Greenhouse Gas Emissions by Sector, 2022**



The council is working with and encouraging other city stakeholders to reduce and/or enable emissions reductions, for example through bringing organisations from the public, private and third sectors together to share their knowledge and expertise in reducing emissions, and by supporting community groups that wish to take climate action.

The following section outlines some of the key actions the council is leading to help tackle the city's emissions, starting with those which will benefit multiple city sectors, before focusing on actions to tackle specific emission sources.

### Cross Sector City Wide Decarbonisation Enabling Activities

The council is using its range of place shaping powers to influence the design and operation of the city, and the following activities will support, enable and encourage wider city decarbonisation activities across multiple city sectors.

#### Birmingham Local Plan Review

The Birmingham Local Plan (BLP) will support city wide decarbonisation across multiple sectors. The [Issues and Options](#) consultation took place between October and December 2022 and sought the views and inputs from a wide range of stakeholders on a variety of issues, including sustainability and net zero, along with the different policy options for addressing these issues. This feedback gathered informed the development of the evidence base and the resulting draft policies. The council worked with [Jacobs](#) to prepare a climate change evidence base for the BLP, and the resulting policies formed our 'preferred options' for our policy direction, which was consulted on summer 2024. We will utilise these consultation responses to inform our draft local plan, however changes to the [National Planning Policy Framework](#) mean the timeline for the local plan are currently being reviewed. A revised Local Development Scheme, setting out the new timetable, will be considered by Cabinet in January.

#### East Birmingham Inclusive Growth Programme

The [East Birmingham Inclusive Growth Programme](#) is a 20-year initiative to attract investment into in the East of the city. The programme forms part of wider plans for the East Birmingham and the North Solihull Growth Corridor and has established a Growth Zone (GZ), including an [Investment Zone \(IZ\)](#), which stretches from Birmingham city centre to the Airport, the NEC and what will be the new HS2 interchange at Arden Cross. The area will provide investment opportunities for projects which support decarbonisation in East Birmingham and the wider city. Working in collaboration with the Tyseley Strategic Alliance, the East Birmingham programme has been successful in supporting a range of net zero and nature aligned projects, including: establishing the Tyseley [Green Energy Innovation Quarter](#); designating Tyseley within the East Birmingham North Solihull Growth Zone; delivering local nature benefits (more info on pg. 32); supporting the creation of the [National Centre for Decarbonisation of Heat](#); and working with local businesses on a range of projects (e.g., Fast Followers and Inclusive Innovation Network element of the DIATOMIC project (pg. 35)). There are also plans to retrofit the grade 2 listed Ward End Park House for use by the Council and benefit of the local community, and the Route to Net Zero team is exploring retrofit funding opportunities.

#### Local Area Energy Planning

[Local area energy planning \(LAEP\)](#) is a relatively new process which is led by local government and developed collaboratively with defined stakeholders to translate national net zero targets into local energy system action. LAEP's are a bottom up, data driven and whole systems approach to deliver effective local decarbonisation action which will contribute to the UK's 2050 net zero greenhouse gas emissions target. To support LAEP development, the City Council has been working with the West Midlands Combined Authority and Advanced Infrastructure to integrate the City of Birmingham into their Local Area Energy Planning Plus (LAEP+) tool. The LAEP+ tool creates custom maps of local areas populated with hundreds of datasets which can be analysed to explore the suitability of different sites for low carbon energy technologies (e.g., solar panels). The council is reviewing how the LAEP+ tool can support LAEP planning and accelerate the city's decarbonisation.

## Tackling Domestic Emissions

Domestic Buildings account for 29% of the greenhouse gas emissions across the City of Birmingham ([DESNZ, 2022](#)), with most emissions resulting from the burning of natural gas for space and water heating. We are working with communities and other partners to maximise access to grants to support energy and carbon emissions reductions, as well as exploring funding and delivery approaches for large scale energy efficiency and renewable energy investment. Our update of the Local Plan policies will encourage development in the city to be more energy efficient and have lower greenhouse gas emissions, and the council is working with major developers as part of the planning pre-application process to maximise the energy performance of new buildings.

## Housing Decarbonisation Plans

To enable the council to meet net zero ambitions it is essential that we tackle the carbon emissions arising from the City's [457,934 homes](#). Driving decarbonisation across all tenures requires clear, ambitious and deliverable plans which address how the Council and our partners can support residents and social and private landlords to make their homes more efficient. We are taking steps in developing components of these plans – which are outlined below – and because the council has minimal influence over properties in private ownership our focus is on stimulating retrofit demand by supporting residents to access retrofit funding, finance and knowledge, working with the retrofit sector to overcome barriers to retrofit rollout, and pursuing grant applications and other alternative funding/finance sources to facilitate retrofit delivery.

## WMCA Single Settlement Devolution Pilot

From April 2025, funding to support retrofit is expected to be available through the [Single Settlement Devolution Pilot for the West Midlands](#). The Council has been developing a Place Based Strategy which includes an approach to area based retrofit to ensure we maximise income from devolution funding. This funding includes the [Warm Homes: Social Housing Fund](#), the [Warm Homes Local Grants](#) and [Public Sector Decarbonisation Scheme](#). Our approach for housing retrofit has focused on supporting households who are most at risk from fuel poverty to reduce their fuel bill, and maximising outcomes by targeting our most inefficient homes. The council will be engaging with stakeholders and community representatives before April 2025 on our proposals for the priority areas. We are also taking opportunities to align the place-based approach with existing and planned works in the Council Housing Asset Management Programme, which will ensure investment from the Housing Revenue Account is, where possible, supported by funding to deliver greater benefits.

## Energy Company Obligation (ECO)

The [Energy Company Obligation \(ECO\)](#)<sup>13</sup> is a government energy efficiency scheme designed to tackle fuel poverty and help reduce carbon emissions, which is currently in its 4<sup>th</sup> iteration, ECO4, running from April 2022 to March 2026. Over the last year the council has identified several opportunities and made significant progress on drawing investment for Birmingham's homes through the ECO retrofit programme. Building on our previous experience with ECO and learning from best practice examples from other local authorities, including Greater Manchester Combined Authority and Liverpool City Council, Birmingham City Council has taken the bold decision to procure three ECO installer partners to deliver home retrofit measures. The three partners will work with the council, communities and other stakeholders, to drive the delivery of energy efficiency measures to over 3,000 Birmingham homes. The initiative will harness £45m per year of private investments, achieve

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<sup>13</sup> The ECO scheme places a Home Heating Cost Reduction Obligation (HHCRO) on medium and large energy suppliers. Under HHCRO, obligated suppliers must promote measures, such as installing insulation or upgrading heating systems, that improve the ability of low-income, fuel-poor and vulnerable households to heat their homes.

estimated fuel bill savings of £1.2m, and reduce the carbon emissions from the city's homes by 4,500 tonnes per year.

### **Increasing Retrofit Skills and Capacity**

The Council has been working in partnership with East Lindsay Council and Bolsover Council, and the Midlands Net Zero Hub, on establishing a DESNZ funded housing retrofit skills pilot. The pilot has been working with stakeholders from Tyseley Energy Park (TEP), South City College Birmingham (SCCB), University College Birmingham (UCB) and Acivico to develop retrofit careers pathways and produce materials for school and college curriculums - and the installation of heat pump and solar panel training kits at the colleges will enable students to gain practical experience working with these technologies. Activities are also underway to support local small and medium enterprises (SMEs) to get started in retrofit, with a recent 'network and learn' session hosted by Acivico attended by over 30 organisations. [Videos](#) produced as part of this session are available as support tools for SMEs.

### **Retrofit Summit**

The Route to Net Zero team, in partnership with [Low Carbon Homes](#) and other stakeholders from across the city, delivered the annual [Birmingham Retrofit Summit in May 2024](#). The event brought together council officers, housing providers, community groups and local businesses, and a wide range of speakers discussed the challenges faced in retrofitting properties, alongside the opportunities to reduce fuel poverty carbon emissions. The event demonstrates the council's commitment and leadership on retrofit, and over 150 retrofit professionals registered to attend.





### **Tackling Transport Emissions**

In 2022 transport contributed 31% to the City's territorial greenhouse gas emissions. To achieve net zero, we will need to fundamentally change how people and goods move around our city. For example, the adopted [Birmingham Transport Plan](#) (BTP) identifies the need to reduce the total number of 'vehicle kms' travelled in Birmingham by around 90%. This presents a significant challenge, requiring the rapid shift away from single occupancy private car use, but it will also provide many other opportunities and benefits.

### **Birmingham Transport Plan - Delivery Plan**

The Delivery Plan sets ambitious targets for delivery of transport improvements against the key principles of the Birmingham Transport Plan. It outlines how the BTP will be delivered, quantifies the scale of the challenge, outlines the spatial framework underpinning delivery, and provides a prioritised package of transport related interventions. The Delivery Plan marks a move away from mode-based planning, towards a spatial framework with four key typologies, 'Figure 13. Birmingham Delivery Plan Key Typologies', and rather than producing a list of schemes and projects, will produce packages of demand management policies and transport interventions to transform different areas of the city to improve travel. Targets from the City's EV Charging Strategy for electric vehicle infrastructure (pg. 26) are also included in the Delivery Plan, noting that EV rollout must be carefully planned to avoid simply replacing the city's current car fleet with low emission vehicles, which will do little to reduce congestion, and fail to influence the necessary changes required in travel mode and behaviour.

**Figure 13. Birmingham Delivery Plan Key Typologies**

Typology		Future Aspirations
	<p><b>Corridors</b> are strategic routes where lots of people travel by different types of transport</p>	<ul style="list-style-type: none"> <li>- Road space reallocated:               <ul style="list-style-type: none"> <li>- Bus priority, Adequate footway and Segregated cycle facilities where space allows</li> </ul> </li> <li>- Residual road network supports freight and other journeys</li> <li>- Crossing facilities link communities and neighbourhoods</li> </ul>
	<p><b>Neighbourhoods</b> are networks of residential streets, often including parades of local shops</p>	<ul style="list-style-type: none"> <li>- Low traffic areas with Healthy Street Principles applied</li> <li>- Attractive environment for active travel</li> <li>- Links to mobility hubs and public transport</li> <li>- A space for people, not a car park</li> </ul>
	<p><b>Centres</b> are areas with a significant number of shops and local amenities</p>	<ul style="list-style-type: none"> <li>- Space reallocated to sustainable modes/ placemaking</li> <li>- Enhanced public transport accessibility</li> <li>- Decreased traffic and enhanced crossing facilities</li> <li>- Connections to local active travel networks and facilities.</li> <li>- Measured approach to freight to support local businesses</li> </ul>
	<p><b>Central Birmingham</b> is the city centre, the area inside the A4540 ring road, and close areas</p>	<ul style="list-style-type: none"> <li>- Central segments</li> <li>- Low traffic conditions - no through trips for private vehicles</li> <li>- Enhanced movement and connectivity for public transport and active travel</li> <li>- Increased public realm and reduced parking</li> </ul>

Informed by the Delivery Plan, the Transportation and Highways programme dictates ongoing delivery of projects to promote sustainable modes of travel. During 2023/4 progress has been made at a number of sites across the city, including: [Dudley Road](#); [Midland Metro Eastside Extension](#); [Digbeth High Street](#) public realm; [City Centre](#) public realm; and, the [Coventry Road](#) cycle route.

**Figure 14. Birmingham Transport Infrastructure Projects**



*Dudley Road Cycle Lane*



*Cycle Route on Bolton Road*



*Digbeth Realm and Metro Extension*

**Birmingham Transport Plan Monitoring Strategy**

The BTP monitoring strategy has been developed to measure progress in achieving the aims and objectives of the Birmingham Transport Plan. To better understand the greenhouse gas emissions from transport, an indicator for traffic flows in the city has been developed, using over 700 real time traffic sensors that have been strategically placed around the city. This data shows there were 3.69

billion vehicle miles travelled by motorised modes of travel in Birmingham during 2023. This represents an increase of 3.4% on 2022. Using the average UK vehicle emissions for 2023, we have estimated that 680,000 tCO<sub>2</sub>e were emitted by transport in Birmingham in 2023<sup>14</sup>. Over the next year this monitoring will be developed to increase our confidence in the data to create a more reliable local estimate of carbon emissions arising from transport.

### Clean Air Zone

The Council launched its first Clean Air Strategy in 2022, which builds on the Council's statutory obligations around air quality with the ambitious aim of providing clean air for everybody in the city. The Clean Air Zone (CAZ) remains the single biggest intervention to improve air quality and was introduced to specifically tackle the air pollutant nitrogen dioxide (NO<sub>2</sub>) which has been above the legal limit at a significant number of locations within the city centre. Critically, there is a growing body of evidence that links this air pollutant to several diseases and chronic health conditions. Whilst the CAZ's primary objective is to improve air quality, it is also an enabler of change within the Birmingham Transport Plan and influences transport carbon emissions.



#### **Case Study: Schools Air Quality Monitoring**

*The Council is expanding its School Air Quality Monitoring Programme to include every school across the city, and will offer an air quality monitor for each school so that they can access real time data on a range of pollutants. Aligned with Birmingham's Clean Air Strategy, this initiative will help to engage students, teachers and the public, and inform curricula and wider sustainability and climate change activities and support the Healthy Schools' Programme and active travel through Modeshift Stars.*

Progress towards improving the city's air quality is monitored and the data published regularly through the [Brum Breathes](#) website and the annual [Clean Air Zone progress report](#)<sup>15</sup>. Since the Clean Air Zone began operation in 2021, the percentage of the most polluting vehicles entering the city has dropped - from just over 15% in June 2021 to 4.5% in August 2024. There has also been a significant reduction in the daily average number of unique non-compliant vehicles from 14,873 June 2021 to 4,621 in August 2024. These changes have led to a reduction in the levels of nitrogen dioxide (NO<sub>2</sub>) in the city centre and there are now only two areas (the area around Moor Street and A38/St Chads), and three locations on the A4540 Middleway where there continue to be exceedances of the legal limit for NO<sub>2</sub>. Work is underway to improve our understanding of the sources of the exceedances in these locations and develop plans to reduce the emissions.

### EV Strategy & Electric Vehicle Charging Points:

To reduce emissions from transport there is a need to reduce vehicle usage and transition to electric vehicles (EVs). This transition will be underpinned with the provision of a comprehensive public EV

<sup>14</sup> Operational carbon only and does not include the embodied carbon involved in the construction of the vehicles, nor other pollutants (e.g., particulates) created by vehicle components.

<sup>15</sup> The CAZ scheme has generated over £82m. Under the legislation used to establish the scheme the spending of revenues generated must be aligned with the high-level spending priorities of the Clean Air Zone Charging Order, and has been used to support a range of schemes which encourage the adoption of more active and sustainable forms of transport - in line with the strategic themes of the Birmingham Transport Plan.

charging network, which spans the city and serves the needs of all users (e.g., residents, businesses, taxis, etc.). The council's [city-wide electric vehicle charging strategy](#) will support the rollout of this charging infrastructure enabling the uptake of electric vehicles. Whilst the overall number of charge points required for the city will depend on the scale of the change in people's travel behaviours and the modal shift achieved, the EV Strategy modelled the need for at least 40% modal shift in Birmingham by 2032 as an interim step towards achieving the central government's 2050 net zero targets.

The council is making good progress in rolling out [public EV charging infrastructure](#) across the city and has been working with its delivery partner [ESB](#) to install 200 fast and rapid chargers (394 connections) - of which 130 fast and rapid charging stations are already in operation - and the remainder are scheduled for completion in 2025. The rollout of residential charge points is also progressing, with a trial rollout of 560 lamppost chargers (5kw-7kw). These chargers will be installed in areas of the city where there is limited or no off-street parking - the case for roughly a third of Birmingham's households. The Council has secured £1m of [Off Street Residential Charge Point](#) scheme funding and is working with its delivery partner [Ubitricity](#) to install the chargers. An additional £14m of funding has been allocated through the Local EV infrastructure scheme to the region and the Council plan to make use of this funding to expand this network over the coming years.



#### Hydrogen Bus Pilot:

Birmingham's fleet of 20 double decker [hydrogen buses](#) continues to operate commercial bus routes across the city under the 'Clean Air Hydrogen Bus Pilot'. Whilst the operational availability and reliability of hydrogen fuel supply has been challenging, the buses represent a significant step in decarbonising our public transportation system and reducing air pollution. Birmingham's hydrogen buses, along with the buses operated in surrounding areas, see the West Midlands running the [UK's largest hydrogen bus fleet](#).



#### Tackling Industrial, Commercial and Public Sector Emissions

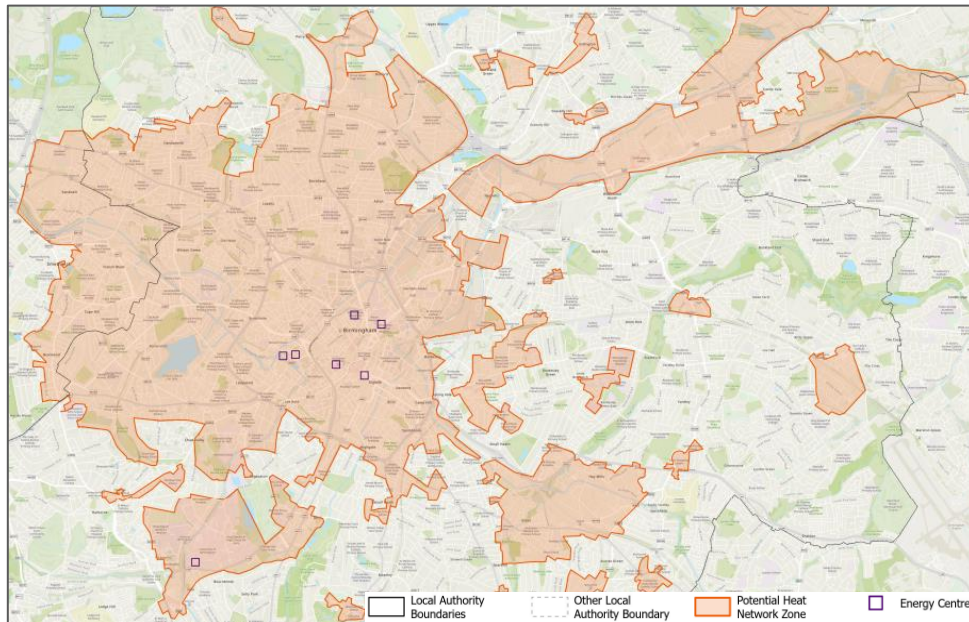
During 2022 the city's industrial (14%), commercial (13%) and public sector (6%) activities made a significant contribution to the city's territorial greenhouse gas emissions. The council continues to explore and pursue opportunities to work with businesses and other organisations to support them on their decarbonisation journey.

#### Heat Decarbonisation via Heat Networks

Heat networks are expected to provide significant emissions reductions, particularly in urban areas, through the decarbonisation of heating and cooling. The council has been working with the Department for Energy Security and Net Zero (DESNZ) on the [Advanced Zoning Programme](#) to identify locations in Birmingham where heat networks may present the most cost-effective method for decarbonising heat. [Maps showing existing energy centres supplying heat via heat networks, and potential heat network zones across Birmingham have been published by DESNZ](#), 'Figure 15. Map of Birmingham's Potential Heat Network Zone'. These maps are an output of the National Heat Network tool, which will be used to refine the boundaries of potential zones once the legislation commences. The [Energy Act 2023](#) enables government to implement heat network zoning

regulations in England and secondary legislation to formally commence heat network zoning is due to come into effect during 2025. The Council has a key enabling role to play in this energy transition and we are working with DESNZ and stakeholders from across the city to develop a heat network strategy and delivery plan for the city which identifies and realises these opportunities.

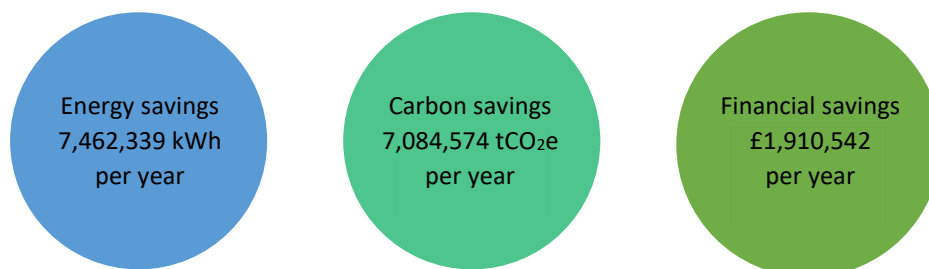
**Figure 15. Map of Birmingham’s Potential Heat Network Zones**



**Grant Programmes Support for SMEs in the West Midlands Area**

The Business Development and Innovation (BDI) Team is delivering 3 national government funded grant programmes which are available to SMEs across Birmingham and the wider region. The [West Midlands Grant Programme](#) (WMGP) supports SMEs’ growth initiatives and the [Net Zero Grant Programme](#) (NZGP) and the [Business Energy Efficiency Grant Programme](#) (BEEGP) support SMEs’ carbon reduction initiatives. All 3 programmes provide SMEs with grants of between £1,000 to £100,000 and since 2023 have delivered significant outcomes across the region, ‘*Figure 16. Forecast Outcomes from Grant Programmes for SMEs In Birmingham / Region*’.

**Figure 16. Forecast Outcomes from Grant Programmes for SMEs In Birmingham / Region**



**Net Zero Living - Fast Followers**

Our [Innovate UK Net Zero Living: Fast Followers](#) project has employed a Net Zero Innovation Delivery Officer (NZIDO) to support SME’s in the Tyseley area on their journey to net zero. The NZIDO is working with the [University of Birmingham and the Tyseley Energy Park](#) (Webster and Horsfall) to map the businesses, carry out net zero audits, complete sustainability diagnostics, and support them to apply for further funding to allow for the implementation of their action plans. Two

sessions have been held with local businesses to explore the potential for installing solar panels to reduce energy costs, and the project is progressing well, delivering grant applications, delivery plans and other investable propositions.

#### UK Shared Prosperity Fund - Circular Economy

Through our collaboration with Solihull Metropolitan Borough Council, we secured £520k from the [UK Shared Prosperity Fund](#) and have been working with [International Synergies](#) (ISL), a world leader in industrial symbiosis, to deliver tailored circular economy support for small and medium-sized enterprises (SMEs) across the region. The [Circular Economy for Birmingham and Solihull](#) (CEBAS) project is providing training, events, workshops and one-to-one support to help SMEs improve their resource and waste efficiency, and will run until March 2025.

#### Tackling Waste Emissions

The management of the city's waste accounts for 7% of the city's territorial emissions, and reducing the quantity of waste produced and increasing the recycling of waste streams across the city will support the reduction of waste system related emissions. Whilst it is difficult to tease out the specific makeup of the city's waste emissions from the DESNZ data, the management of the city's domestic waste is likely to be a significant contributor – and a contributor which grows as the city's population increases. The domestic waste arising from the city of Birmingham is managed by [Veolia Environmental Services Birmingham Ltd.](#) who operate the city's two major waste transfer stations, handling most materials collected via the council-operated kerbside collection schemes, the Tyseley Energy Recovery Facility (ERF) and the five Household Recycling Centres. The Waste Service recognises the contribution that it can make to the net zero agenda and work is underway to develop a new Waste Strategy, which will focus on increasing the city's waste recycling and resource efficiency and seek ways to reduce carbon emissions in a cost-effective manner.

#### Increasing Waste Recycling and Resource Efficiency

The [UK Environment Act 2021](#) (the 'Act') will influence our city's management of waste by setting a statutory target to cut residual waste produced per person by 50% by 2042, requiring all local authorities to provide households with separate weekly food waste collections from April 2026, and eliminating food waste from landfill by 2030. The Waste Service Transformation Programme (pg. 12) will implement optimised waste collections, which will deliver value for money, and supported by public adoption of circular economy principles, will achieve higher recycling rates through increased segregation of waste at source, in collections, and in processing. The Act also contains the framework for introducing the enhanced [Extended Producer Responsibility](#) (EPR) regime for the UK, and provisions for the introduction of a [Deposit Return Scheme](#) (DRS) for drinks containers.

#### Waste Processing & Treatment

The Tyseley Energy Recovery Facility (ERF) processes the city's waste and generates electricity, of which 25MW is fed into the National Grid, after providing for on-site needs. The energy generated during 2021 was equivalent to powering ~63,000 Birmingham households for a year. The waste service recognises the contribution that it can make to the net zero agenda and, in line with the new Waste Strategy, which is currently being developed, will focus its efforts on seeking ways to reduce carbon emissions - most pertinently in relation to waste collection (providing appropriate recycling facilities for residents), waste fleet (operating a modern vehicle and optimised service), and waste treatment technologies (harnessing proven, efficient and cost effective technology). This work will form a key part of the Waste Service Transformation Programme that is currently underway.

## Chapter 4: Natural Environment and Climate Adaptation

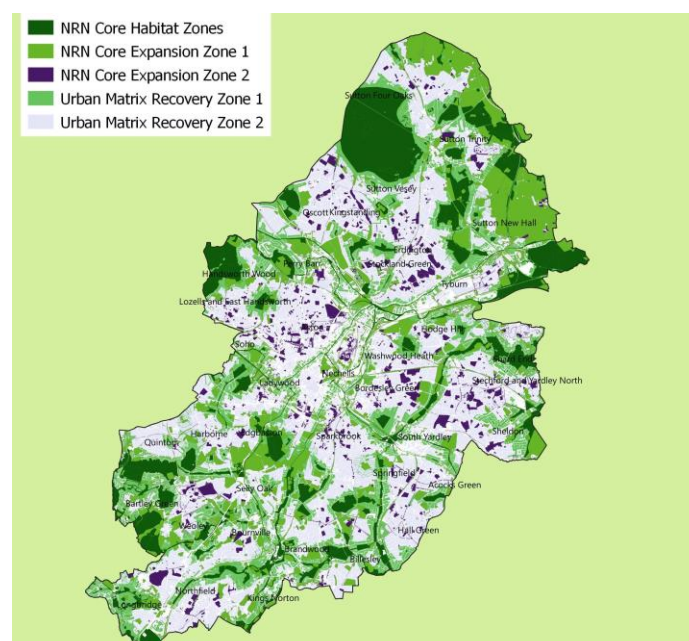
Our response to climate change requires us, in addition to taking steps to reduce our emissions, to consider how we adapt to the changing climate and support and encourage nature resilience. Adaptation and nature resilience are important for many reasons, including our need to prepare for and reduce the risk of flooding, moderate the impacts of rising temperatures, particularly in urban environments, and managing and reducing the impact of pollutants.

Clear local plan policies are key drivers in accelerating adaptation activity, and we are in the process of reviewing our local plan (pg. 22). Our green infrastructure evidence base has been updated to reflect emerging legislation and the increasing availability of climate change data. This evidence base has informed a suite of new draft policies, which consider biodiversity net gain, ecological networks and nature recovery, green infrastructure, the provision of open space, urban greening factors, flood risk management, water quality, other resources and the green belt. These revised policies and evidence base will support [The City of Nature Plan](#), which is the council's green infrastructure strategy, and [Our Future City: Central Birmingham Framework 2045](#). They will also support the aims and objectives of the UK Government's [Environmental Improvement Plan 2023](#) (EIP) which was published in January 2023 – but is [currently under review](#).

### Local Nature Recovery Network and Biodiversity Net Gain

In January 2024, the mandate set by the Environment Act 2021 came into force, which requires all applicable developments to deliver measurable increases in Biodiversity (Biodiversity Net Gain) over a predevelopment baseline. While the expectation is that all net gain will be delivered on site, if this is not possible then off-site locations must be found, and implementation and management funded for a minimum of 30 years. To identify key areas for biodiversity and opportunities for enhancement regional Local Nature Recovery Network Strategies are being drawn up. The council is working with the WMCA and their members to set these priorities, define the nature recovery network and identify opportunity sites for the delivery of biodiversity net gain. Through the Urban Nature Development programme, Birmingham's Nature Recovery Network has been defined and open spaces within that identified which could benefit from investment through the net gain process.

**Figure 17. Birmingham's Draft Nature Recovery Network**



Birmingham's nature recovery network is emerging, 'Figure 17. 'Birmingham's Draft Nature Recovery Network', and several sites across the city have been surveyed to establish ecological baselines and their potential for delivering net gain increases. Net Gain offers a major opportunity to secure funding specifically for biodiversity and the management of open spaces across the city. Prior to full mandate over £400k was secured through S106 agreements with developers for biodiversity improvements.

### Urban Forest Master Plan

The city's [Urban Forest Master Plan](#) sets the long-term strategic vision for the management of all the trees within the city boundary. Sustaining and increasing urban tree canopy cover supports the delivery of essential ecosystem services and provides increased climate adaptation benefits for local communities. Trees sequester carbon, decrease flood risks, and provide shade, which reduces the need for cooling and provides indirect carbon savings. The council partnered with the National Trust, the Woodland Trust and the Community Forest Trust to secure funding from the [Trees Call for Action Fund](#) to deliver the two-year [Urban Forest Accelerator \(UFA\)](#) Project. This project provided grant funding (alongside the Urban Nature Development Programme) for the council's Strategic Lead for Urban Forestry and Nature and two new members of staff at Birmingham [TreePeople](#) to investigate key issues affecting the delivery of urban tree planting and management. To understand the barriers to community engagement and stewardship of urban trees Birmingham TreePeople led engagement with residents to understand the impacts of climate change and the role that trees play in mitigating these impacts. The partnership worked with residents to support tree planting in Nechells, Hodge Hill, Highters Heath, and Newtown. There are plans to continue expanding engagement to other areas of the city, and work is underway to develop a 5-year strategic tree planting plan. The learning outcomes from the UFA project will be shared through a nationally available 'tool kit' and the city council will continue to pursue funding opportunities in partnership with Birmingham TreePeople.

### City of Nature Plan for Birmingham

The [City of Nature](#) Plan was derived from work undertaken as part of a nation-wide Future Parks Accelerator Programme, and was adopted by Council in February 2022. It sets out the vision for the management of green space for the benefit of its residents, biodiversity, and climate change adaptation under 5 key themes, as a 'Green', 'Healthy', 'Involved', 'Valued' and 'Fair' city. Grant funding was secured to deliver the City of Nature Plan under the Urban Nature Development Programme and embed the plan within the council's operations across the city.

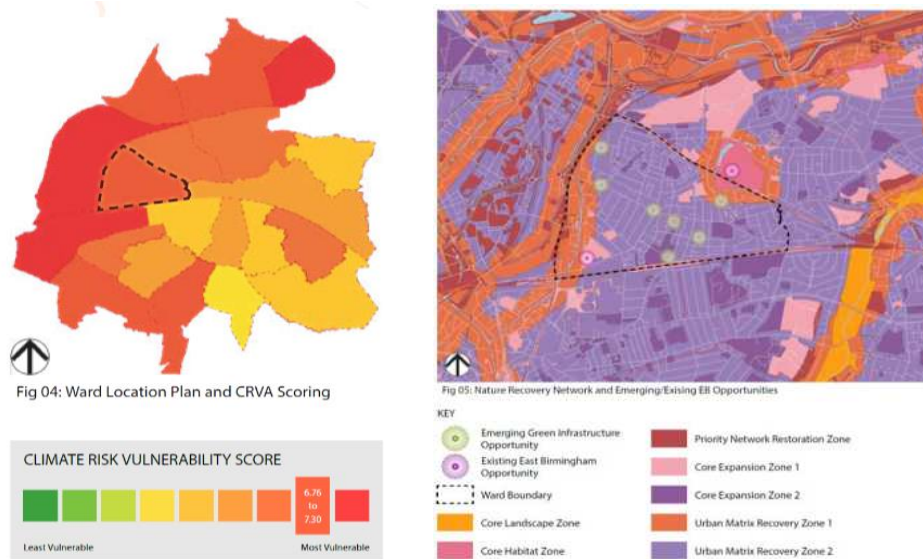
Initiatives such as the [A to Bee Roads](#) programme, which was launched in 2024, is an example of where this plan has driven changes in management to over 100km highways grass verges, delivering many benefits, including:

- Encouraging a range of flowering plants to flourish (including Hair bells for the first time in over 50 years) and allowing plants to flower which supports pollinators.
- Integrating highways into Local Nature Recovery Network to provide improved corridors for wildlife movement, which connect wildlife sites together and enhancing biodiversity.
- Retaining and slowing the flow of storm water, which provides additional rainwater storage which reduces surface water flooding.
- Reducing the time and costs of using machinery to maintain verges and reducing greenhouse gas emissions.

## East Birmingham Inclusive Growth

The [East Birmingham Inclusive Growth Programme](#) (pg. 22) has numerous initiatives and activities underway to enhance nature and biodiversity. The Urban Nature Development programme has supported the creation of the Green Infrastructure Masterplan covering East Birmingham's 20 wards. This plan combined multiple data sets including Climate Risk and Vulnerability allowing the identification of opportunities, and locations for new green infrastructure (GI), such as pocket parks (a partnership with the National Trust using UKSPF funding has established 4 pocket parks), and identifies locations where changes in management or GI composition will enhance ecosystem services and deliver community health and well-being benefits.

**Figure 18. Heartlands Mapping from East Birmingham Green Infrastructure Masterplan**



## Natural Rivers and Green Corridors – Phase 2

The Environment Agency have secured additional funds to expand the Natural Rivers and Green Corridors Programme, which will be delivered in partnership with the Environment Agency, The Wildlife Trust for Birmingham and the Black Country and the Council through late 2023 into 2025. The second phase will see the removal of further weirs and reprofiling of water courses in the River Rea catchment to improve ecological connectivity and deliver elements of flood risk alleviation, and 'Figure 19. Re-naturalisation of the River Rea Following a Weir Removal', shows the results of some of this work along the River Rea.

**Figure 19. Re-naturalisation of the River Rea Following a Weir Removal**



## Flood Alleviation and Defence

The new flood defence bund at Pebble Mill playing fields was completed in mid-2024 to protect residential properties from surface water flooding. The land surrounding the bund has been restored to a species rich meadow with additional tree planting, providing a significant biodiversity net gain when compared to the previous short amenity grassland. Re-naturalisation of the 600m of channel on the River Cole at Hay Barnes has also been completed, and delivered in partnership with the Environment Agency, University of Birmingham and the WMCA. The re-naturalisation will increase its capacity to hold more flood water, improve water quality and enhance biodiversity.

## Climate Risk and Vulnerability Assessment

The council's [Climate Risk and Vulnerability Assessment for Birmingham](#), which was developed in partnership with University of Birmingham, was presented with a Special Recognition award at the [SEE Global Sustainability Summit](#) held in Dubai.



## Climate-Resilient Development Pathways in Metropolitan Regions of Europe

The Council, in partnership with the University of Birmingham and the UK Met Office, secured £1.2m from UK Research and Innovation to participate in the EU project: [Climate-Resilient Development Pathways in Metropolitan Regions of Europe \(CARMINE\)](#). This Europe wide partnership and funding will allow us to explore the use of new satellite derived heat imaging and climate modelling in relation to seasonal patterns of plant growth and the use of nature-based solutions - over traditional methods to address climate risk and vulnerability.

## Chapter 5: Enabling Activities

The council will deliver its climate change, nature and net zero outcomes working with and through a diverse and extensive network of organisations, stakeholders and citizens. Effective stakeholder engagement is crucial, and some examples of the activities we do to encourage and support engagement include: working with the [Birmingham Faith Covenant](#) to secure £200k funding for [faith-led climate action](#); working with the retrofit sector to host the [2024 Birmingham Retrofit Summit](#); and, securing funding to support local Small and Medium Enterprises (SMEs) to improve [energy management](#) and reduce their costs and emissions. Other enablers which facilitate delivery include having appropriate governance and scrutiny of decisions, through to the educational, communication, and behaviour change programmes we deliver across the council and the wider city.

### Climate Change, Nature and Net Zero Governance

The council's Climate Change, Nature and Net Zero Programme Board (the 'Board') is comprised of senior representatives from across the council and has continued to meet quarterly. The Board sets the programme's overall strategic direction, encourages and oversees programme delivery, provides assurance, and manages emerging risks and issues. Additional oversight is provided by the Climate Change, Nature and Net Zero Advisory Committee, a cross-party group comprising of elected representatives from the city's political parties which also meets quarterly. The Advisory Committee's role is to provide political insight on the programme's strategic direction, and to work collaboratively and provide collective support to support delivery.

### Carbon Disclosure Project Reporting

The council has been declaring the city's climate change data to the [Carbon Disclosure Project \(CDP\)](#) since 2020, and in 2023 the [city scored an A](#). This is the highest rating available and recognises Birmingham as one of 119 cities across the globe that is taking bold leadership on environmental action and transparency. To achieve an 'A' requires the city, among other actions, to disclose publicly through CDP, produce a city-wide emissions inventory and provide a published climate action plan. Completing a climate risk and vulnerability assessment for the city was another key component in achieving an 'A' rating. The council will receive its 2024 score in Spring 2025.



### Climate Change Engagement Framework

Our draft 'Climate Change Engagement Framework' was created in consultation with 85 of Birmingham's residents and outlines the council's approach to climate-related communications, behaviour change, public participation, and partnership working, based on evidence and expert advice. Following the creation of the Framework, the approaches it describes have been applied to internal and external engagement activities, some of which are already completed, including the establishment of a 'climate action staff network' and delivering awareness-raising training to officers.

### Environment and Sustainability Assessments

All relevant Council and Cabinet reports require the completion of an Environment and Sustainability Assessment (ESA) to ensure proposals are compliant with the council's climate change, nature and net zero carbon commitments. Over 145 ESAs have been completed since they were introduced in 2022. We continually refine our ESA process and have worked with colleagues across the council to

update our ESA template and accompanying guidance to increase their rigour and impact. The updated ESA process will be required for all cabinet reports from early 2025.

### Carbon Literacy Training

The [Carbon Literacy Project](#) raises ‘awareness of the carbon costs and impacts of everyday activities, and the ability and motivation to reduce emissions, on an individual, community and organisational basis’. The Route to Net Zero team has been delivering ‘[Carbon Literacy Training for Local Authority Officers](#)’ to council staff (which covers the science of climate change, the local and international causes and impacts of climate change, and international, national, and local policy setting), with over 60 officers receiving training and have become accredited through the [Carbon Literacy Trust](#).

### Engaging & Empowering Schools

The council is engaging with schools across several different service areas related to climate change like [transport](#), [clean air](#), waste, and the [natural environment](#). Our ambition is to link these different schemes, campaigns, and educational resources together so that teachers and pupils can access the help and support the Council provides on climate change-related topics with ease. Building upon last year’s successful Birmingham Schools’ Model Conference of Parties (COP) event in the council chamber, we ran the event again in November 2024



Figure 20. Schools Model Cop, 2024

(figure 20) to continue our engagement with local schools and pupils. Overall, we hope that this will help encourage and raise awareness of climate change among staff, pupils, and parents.

### Major Event Sustainability

Birmingham is a welcoming, diverse and inclusive city and we have a proud history of successfully hosting [major sporting events](#), which boost our visitor economy and enhance our reputation. Building on our success embedding sustainable transport at the heart of the Commonwealth Games, we have developed the Birmingham Event Impact Framework to improve the sustainability of major sporting events. We continue to promote the [Sustainable Tourism Hub](#) which was developed with Sustainability West Midlands to provide [training and advice](#) on sustainability for businesses in tourism, and includes local case studies and information for creating [sustainability strategies](#). The council continued its participation in the [Global Destination Sustainability Index](#) in 2024, which measures and benchmarks the sustainability performance of tourism destinations. We continue to encourage local businesses to sign up to [Green Tourism](#) and receive a year’s membership funded by the West Midlands Growth Company.

### Digital Birmingham

The council is a partner in the Connected Places Catapult led [Digital Innovation Transformative Change \(DIATOMIC\)](#) Accelerator project and working with 8 [participating SME’s](#) to nurture Birmingham’s innovation ecosystem through tackling four urban challenges (data insights, performance, citizen engagement, knowledge sharing) and improving the delivery of the city's housing, adult social care and waste services. The Route to Net Zero team worked with Furbnow and Novoville to support a trial of the Novoville ‘Shared Works’ tool with the council’s housing team, to improve the retrofit journey for tenants and contractors. To date DIATOMIC has recruited 6FTE, secured £180,000 research and development funding, £47,000 public sector funding, attracted £71,000 private investment, and established 40 new collaborations with external organisations.

## Chapter 6: Summary and Next Steps

The council is making good progress in tackling our own greenhouse gas emissions, working with and supporting the city reduce its emissions, and improving the city's resilience to the impacts of climate change.

The Route to Net Zero team has been bringing together key teams working on climate change from across the council. We have advanced our internal capability to report on our greenhouse gas emissions and will continue to improve the scope, availability and quality of data on our emissions. We have calculated the council's scope 1 and 2 emissions and screened our scope 3 emissions to identify the council's greatest emissions sources. These emissions are the focus of our decarbonisation efforts, and we are working with the relevant council's directorates, departments, and services to identify emissions reductions opportunities. We will continue to report our progress in tackling these emissions annually.

We also continue to improve our understanding of our city's emissions. Since 2005 the city's territorial emissions have fallen by 41%, and there was an almost 7% reduction in the city's emissions between 2021 and 2022. This drop in the city's territorial emissions between 2021 and 2022 was largely due to a [reduction in fuel use to heat buildings](#) due to the warmer temperatures in 2022 compared to 2021. We anticipate that developments in the consumption-based emission field will provide additional data and further insights about our city's emissions. To support the city in tackling and reducing its emissions, the council is using its place shaping and convening powers, including the Birmingham Local Plan Review and the Birmingham Transport Plan, to galvanise climate action.

We are making good progress in delivering our natural environment and climate adaptation goals, and our [Climate Risk and Vulnerability Assessment for Birmingham](#) received an award at the [SEE Global Sustainability Summit](#). The Urban Forest Accelerator (UFA) Project is supporting tree planting across the city, our [A to Bee Roads](#) programme is changing how we manage highways for the benefit of nature, and the introduction of Biodiversity Net Gain presents major opportunities to continue to enhance biodiversity and open spaces across the city. We completed the installation of flood defences at Pebble Mill and are expanding the Natural Rivers and Green Corridors Programme to improve ecological connectivity and deliver elements of flood risk alleviation along the River Rea.

We will continue working across the city with our stakeholders and citizens to achieve net zero. Our Climate Change Engagement Framework will guide our work with partners to share knowledge, expertise and experience, and explore opportunities to collectively take action to respond to climate change. We also hope that increasing the availability and accessibility of environmental data about our city through the City Observatory will raise awareness and help to emphasise the role our citizens and other organisations can play to supporting the delivery of net zero.

Building upon our previous successes we will continue to pursue further funding opportunities to deliver our climate change, nature, and net zero activities. We will also explore how we can do things differently by pursuing innovative, efficient, and cost-effective means to support outcome delivery, particularly where there are other benefits (e.g. improving the comfort of citizens homes and reducing air pollution) and implement them where they are sensible and practical.

It has been a privilege to work with our colleagues across the council and with our city stakeholders and citizens in delivering our climate change, nature and net zero programme over the last year, and we are excited about the opportunities ahead.