

Derbyshire County and Derby City

# AIR QUALITY STRATEGY 2020-2030

Refreshed May 2023

# Air pollution in Derbyshire?

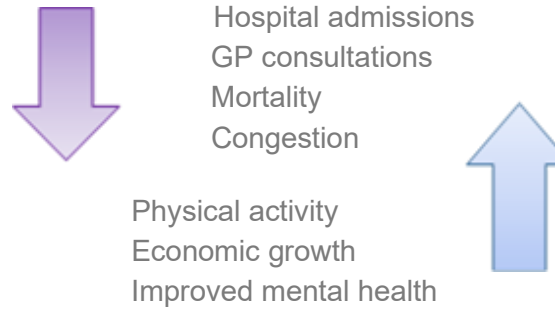
**Air pollution is the biggest environmental health risk**, contributing to an estimated 530 deaths and 5400 life years lost in Derbyshire County and City, and an economic cost to the UK of around £20 billion a year<sup>1</sup>.

Studies demonstrate long-term exposure to air pollution (over years) can reduce life expectancy, mainly due to cardiovascular and respiratory diseases and lung cancer. Short-term exposure (over hours or days) to high levels of air pollution can also cause a range of health impacts, including exacerbation of asthma, increases in respiratory and cardiovascular hospital admissions and mortality<sup>2</sup>.

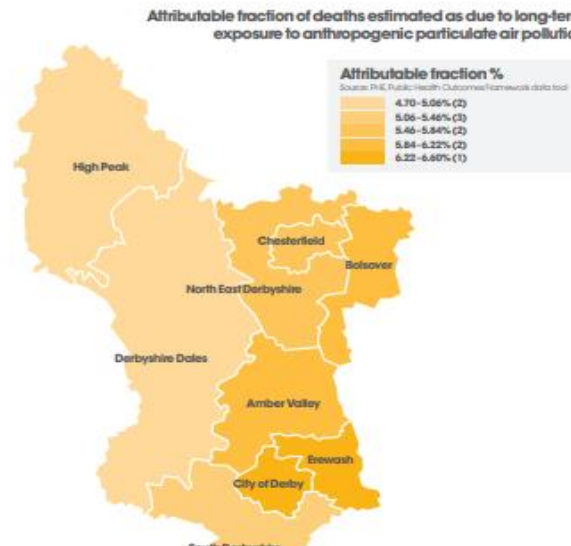
The impact of air pollution often disproportionately affects the young, older people, those with underlying health conditions and the most disadvantaged within our communities. This unequal impact can be a combination of higher levels of exposure and more susceptibility to air pollution<sup>3</sup>.

Reductions in air pollution require both global, national and local action.

Even modest reductions in air pollution levels could have significant direct and indirect benefits<sup>4</sup>, including:



**Sources of air pollution** from human activity include transport sources, combustion from heating, industrial activities, and certain farming activities<sup>2</sup>. The 2022 Chief Medical Officer report highlighted the impact of solid fuel burning on indoor air quality<sup>3</sup>.



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**Air pollution levels** vary across the County and City due largely to the proximity to sources of pollution. Information regarding air quality forecasts can be found here:

<https://uk-air.defra.gov.uk/>



The partners of the Derby and Derbyshire Health and Wellbeing Boards alone cannot improve air pollution in Derbyshire. As partners we are however well placed to use our individual and collective influence as employers, providers and commissioners, to reduce our own contribution to local air pollution, facilitate change, influence others and protect health.

# OUR VISION

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Together we will reduce the health impact of poor air quality for the people of Derbyshire County and Derby City.

# How will we make this happen

Working together as partners of the Derby and Derbyshire Health and Wellbeing Boards, we will seek to reduce the health impact of poor air quality for the population of Derbyshire.

The cumulative effect of a range of interventions has the greatest potential to reduce local air pollution and improve population health. Annual action plans will utilise the available evidence and best practice.

## Guiding principles:

- Partners of the boards will work collaboratively through the Air Quality Working Group to improve air quality, sharing best practice, driving change, and supporting and influencing national policy and strategy.
- Partners will reduce the impact services have on local air pollution levels.
- Partners will act as a champion within their own organisation, to ensure organisational practice seeks to reduce the impact on Derbyshire's air quality.

The strategy has three key priorities; facilitate travel behaviour change, reduce sources of air pollution, and mitigate against the impacts on health. Due to the nature of the rapidly changing evidence base and likely change in air quality over the next 10 years, the Air Quality Working Group will review evidence and data to support the Health and Wellbeing Boards in reviewing the Strategy as required to ensure this continues to support its guiding principles. We will also follow the strategic framework<sup>5</sup> published by DEFRA in April 2023.



# What will success look like and how will this be monitored?

The Derby and Derbyshire Health and Wellbeing Boards cannot alone improve air quality; however, the partners will use individual and collective influence to reduce our own impact on local air pollution, facilitate change and influence others. The strategy therefore aims to support improvements in the following Environmental Indicators and Overarching Population Health Indicator.



Monitoring of the strategy will be undertaken through the Derbyshire Air Quality Working Group, reporting annually to the Joint Derby and Derbyshire Health Protection Board. This will include providing oversight of Population Indicators and Performance Indicators for each of the three strategy priorities and progress on the annual the action plan

## **Environmental Indicators:**

1. Annual average concentration of nitrogen dioxide in the air
2. Highest recorded annual concentration of nitrogen dioxide in the air
3. Percentage of monitoring sites with a concentration of nitrogen dioxide in the air above 40µg/m<sup>3</sup>
4. Annual average concentration of fine particulate matter (PM<sub>2.5</sub>) in the air at monitoring sites
5. Modelled annual average concentration of fine particulate matter (PM<sub>2.5</sub>) in the air

The Air Quality Standards Regulations 2010 set a limit of 40µg/m<sup>3</sup> for the average concentration of nitrogen dioxide over a year. The Environmental Targets (Fine Particulate Matter) (England) Regulations 2023 has set out Annual Mean Concentration of PM<sub>2.5</sub> levels across England to be 10 µg/m<sup>3</sup> or below by 2040.

## **Population Health Indicator:**

1. Fraction of mortality attributable to particulate air pollution

*Further information about the indicators can be found in the appendix.*

# THREE STRATEGIC PRIORITIES

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## Facilitate travel behaviour change

Shifting everyday travel away from private car usage, towards walking and cycling and public transport and provide sustainable solutions can reduce air pollution locally. Promotion of walking and cycling can also provide additional health benefits.

**Objective:** Partners will increase the number of people using sustainable and active travel options, amongst the workforce and wider population.



## Reduce sources of air pollution

The most effective interventions will involve reducing sources of air pollution. Across Derbyshire the main sources of air pollution include transport and heat sources.

**Objective:** Partners will reduce their own contribution to local air pollution and facilitate change to reduce sources of air pollution locally.



## Measure, produce plans and mitigate against the health impacts of air pollution

Air pollution has health impacts and there is a need to mitigate against this across the population. Furthermore, air pollution does not affect all individuals equally. Exposure to air pollution depends upon where people live, and work and individual susceptibility can also differ. Therefore, inequalities also need to be considered.

**Objective:** Partners will seek to reduce the impacts of air pollution on health.

# Facilitate travel behaviour change



## Background

Shifting everyday travel away from private car usage, towards walking and cycling and public transport and provide sustainable solutions can reduce air pollution locally. Promotion of walking and cycling can also provide additional health benefits increasing physical activity, improving mental health, and reducing obesity.

Interventions to facilitate travel behaviour change can include awareness campaigns, infrastructure improvements, schemes which incentivise sustainable travel options.

## Objective

Partners will increase the number of people using sustainable travel options, amongst the workforce and wider population.

## Strategic Actions

- Participate in engagement campaigns
- Facilitate sustainable travel choices for service users and employees
- Utilise policy to promote sustainable travel
- Utilise schemes to support and incentivise sustainable travel

## Population Indicators

*(What is happening at the population level?)*

1. Percentage of adults walking for travel at least three days per week
2. Percentage of adults cycling for travel at least three days per week
3. Percentage of Primary School children travelling actively to school
4. Percentage of Secondary School children travelling actively to school
5. Number of publicly available Electric vehicle Charging Points per 100,000 population

## Performance Indicators

*(What is happening at the partner level?)*

1. Percentage of partners offering a cycle to work scheme
2. Percentage of staff taking up the cycle to work scheme where partners offer a cycle to work scheme
3. Number of schools with a school street

*Further information about the indicators can be found in the appendix.*

# Reduce sources of air pollution



## Background

The most effective interventions will involve reducing sources of air pollution. Across Derbyshire the main sources of air pollution include transport and heat sources (including solid fuel burning). There are several ways partners can support local reductions in air pollution, including increasing the uptake of lower emission vehicles, reducing travel and reducing emissions from heating

## Objective

Partners will reduce their own contribution to local air pollution and facilitate change to reduce sources of air pollution locally

## Strategic Actions

- Participate in engagement events to promote awareness of the sources of air pollution
- Facilitate the uptake of ULEVs amongst employees and within own fleet
- Utilise policy to reduce sources of pollution including mileage reduction, solid fuel burning and uptake of ULEVs.
- Work collectively to help de-carbonise transport and contribute to a D2 Low Carbon Growth agenda.
- Explore opportunities to promote low-carbon heating options such as district heating schemes or heat pumps

## Population Indicators

*(What is happening at the population level?)*

1. Annual number of vehicle miles travelled on roads
2. Number of licensed vehicles
3. Percentage of licensed vehicles that are Ultra Low Emission Vehicles (ULEV)
4. Percentage of homes that have solid fuel as their main fuel source
5. Percentage of homes with EPC rating C or above
6. Total domestic gas consumption

## Performance Indicators

*(What is happening at the partner level?)*

1. Annual road mileage undertaken by partner organisations
2. Percentage of annual road mileage undertaken by partner organisations by electric vehicles
3. Annual gas consumption by partner organisations
4. Annual operational carbon emissions from partner organisations

*Further information about the indicators can be found in the appendix.*



# Measure, produce plans and mitigate against the health impacts of air pollution



## Background

Air pollution has health impacts and there is a need to mitigate against this across the population. Furthermore, air pollution does not affect all individuals equally. Exposure to air pollution depends upon where people live, and work and individual susceptibility can also differ. Therefore, inequalities also need to be considered.

Interventions to mitigate the impact of air pollution may include utilising planning policy, providing advice to individuals with long term conditions and utilising mitigation measures.

## Objective

Partners will seek to reduce the impacts of air pollution on health.

## Strategic Actions

- Monitor air pollution levels locally with particular reference to vulnerable sites
- Utilise policy to reduce exposure to air pollution
- Provide advice to individuals with long term conditions around the impacts of air quality
- Utilise schemes to mitigate the impact of air pollution on health

## Population Indicators

*(What is happening at the population level?)*

1. Number of homes within Air Quality Management Areas (AQMAs)
2. Annual number of complaints relating to smoke from domestic or commercial/industrial chimneys and bonfires

## Performance Indicators

*(What is happening at the partner level?)*

1. Percentage of Local Plans with specific air quality policies
2. Percentage of Local Plans with Supplementary Planning Documents (SPD) with specific reference to air quality
3. Percentage of Air Quality Annual Status Reports submitted on time
4. Percentage of Air Quality Management Areas (AQMAs) with an action plan.
5. Number of fine particulate matter (PM<sub>2.5</sub>) monitoring sites
6. Number of schools with on-site air quality monitoring capable of measuring PM<sub>2.5</sub> levels at peak traffic times

*Further information about the indicators can be found in the appendix.*

# Appendix

The indicators for the strategy were chosen by a subsidiary group of the Derby and Derbyshire Air Quality Working group. It was recognised during the process that no indicator is perfect, and the indicators will need to be interpreted as a whole picture rather than being definitive of a situation. It was also recognised that data is not available or easily accessible in all the areas that the group considered important. Where appropriate, the group tried to include other indicators that indirectly describe the priority area, however this has not always been possible. The indicators will need to be reviewed during the 10 years that the strategy covers, as more data may become available, or legislation or evidence changes around air quality. Examples would be to update 'Number of schools with on-site air quality monitoring' to 'Air quality at school sites' and possibly capture data on solid fuel burning, 'Green screens', air filtration and air pollution notification for patients.

## Environmental Indicators

1	Annual average concentration of nitrogen dioxide in the air (Derby and Derbyshire)	<p>This is the annual average concentration (<math>\mu\text{g}/\text{m}^3</math>) of nitrogen dioxide in the air across Derby and Derbyshire. There are approximately 270 monitoring sites in Derby and Derbyshire. A single data point is obtained for each monitoring site each month and an annual average is calculated for each monitoring site. The annual average for each site is 'bias corrected' in accordance with a methodology published in national guidance (LAQM TG22). An annual average is then calculated across all sites. The location of sites varies each year with approximately 80% remaining constant.</p> <p><b>Source:</b> Derby City and Derbyshire District and Borough Councils</p>	<p>The Air Quality Standards Regulations 2010 set a limit of <math>40\mu\text{g}/\text{m}^3</math> for the average concentration of nitrogen dioxide over a year.</p>
2	Highest recorded annual concentration of nitrogen dioxide in the air (reported separately for Derby and Derbyshire)	<p>This is the annual average concentration (<math>\mu\text{g}/\text{m}^3</math>) of nitrogen dioxide in the air at the monitoring site in Derby/Derbyshire with the highest concentration of nitrogen dioxide during that year. There are approximately 70 monitoring sites across Derby and 200 across Derbyshire. A single data point is obtained for each monitoring site each month and an annual average is calculated for each monitoring site. The annual average for each site is 'bias corrected' in accordance with a methodology published in national guidance (LAQM TG22).</p> <p><b>Source:</b> Derby City and Derbyshire District and Borough Councils</p>	<p>A decreasing value suggests an improvement.</p>
3	Percentage of monitoring sites with a concentration of nitrogen dioxide in the air above $40\mu\text{g}/\text{m}^3$ (Derby and Derbyshire)	<p>This is the percentage of monitoring sites across Derby and Derbyshire that have an annual average nitrogen dioxide concentration in the air above <math>40\mu\text{g}/\text{m}^3</math>. There are approximately 270 diffusion tubes across Derby and Derbyshire. A single data point is obtained for each monitoring site each month and an annual average is calculated for each monitoring site. The annual average for each site is 'bias corrected' in accordance with a methodology published in national guidance (LAQM TG22). The percentage of sites with an annual average above <math>40\mu\text{g}/\text{m}^3</math> is calculated.</p> <p><b>Source:</b> Derby City and Derbyshire District and Borough Councils</p>	
4	Annual average concentration of fine particulate matter ( $\text{PM}_{2.5}$ ) in the air at monitoring sites in Derbyshire	<p>Fine particulate matter, also called <math>\text{PM}_{2.5}</math> refers to individual particles with an aerodynamic diameter less than 2.5 micrometres.</p> <p>This is the annual average concentration (<math>\mu\text{g}/\text{m}^3</math>) of fine particulate matter (<math>\text{PM}_{2.5}</math>) in Derbyshire obtained from monitoring sites. As of 1<sup>st</sup> January 2023, there were two <math>\text{PM}_{2.5}</math> monitoring sites in Derbyshire and none in Derby. The monitoring sites are operated by Department for Environment, Food and Rural Affairs (DEFRA). A data point is obtained for each site every 15 minutes and an annual average concentration is calculated across both sites.</p> <p><b>Source:</b> DEFRA - AURN Interactive monitoring networks maps <a href="https://uk-air.defra.gov.uk/interactive-map">https://uk-air.defra.gov.uk/interactive-map</a></p>	<p>The Environment Act 2021 has set out Annual Mean Concentration of <math>\text{PM}_{2.5}</math> levels in England to be <math>10\mu\text{g}/\text{m}^3</math> or below by 2040</p>
5	Modelled annual average concentration of fine particulate matter ( $\text{PM}_{2.5}$ ) in the air (reported separately for Derby and Derbyshire)	<p>Fine particulate matter, also called <math>\text{PM}_{2.5}</math> refers to individual particles with an aerodynamic diameter less than 2.5 micrometres.</p> <p>This is the estimated annual concentration (<math>\mu\text{g}/\text{m}^3</math>) of fine particulate matter in Derby/Derbyshire adjusted to account for population exposure. It is calculated from modelled data and calibrated by measured concentrations. Caution should be used when interpreting trends as variation due to weather of <math>\text{PM}_{2.5}</math> is generally greater than year to year variation in emissions and methods and data inputs for pollution modelling are continually being updated and improved.</p> <p><b>Source:</b> DEFRA &amp; Air Quality and Public Health - UK Health Security Agency via OHID Fingertips (ID93867 – <a href="#">Full definition</a>)</p>	<p>A decreasing value suggests an improvement.</p>

## Population Health Indicator

1	Fraction of mortality attributable to particulate air pollution (reported separately for Derby and Derbyshire)	<p>This indicator estimates the fraction of annual all-cause mortality attributable to particulate air pollution (measured as <math>\text{PM}_{2.5}</math>). It can be viewed as the mortality burden associated with long-term exposure to particulate air pollution at current levels, expressed as the percentage of annual deaths from all causes in those aged 30 and over. Caution should be used when interpreting trends as variation due to weather of <math>\text{PM}_{2.5}</math> is generally greater than year to year variation in emissions and methods and data inputs for pollution modelling are continually being updated and improved.</p> <p><b>Source:</b> DEFRA &amp; Air Quality and Public Health - UK Health Security Agency via OHID Fingertips (ID93861 – <a href="#">Full definition</a>)</p>	<p>A decreasing value suggests an improvement</p>
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Priority I Indicators (Facilitate travel behaviour change)

Population Indicators

1	Percentage of adults walking for travel at least three days per week (reported separately for Derby and Derbyshire)	This indicator presents the number of respondents aged 16+ with valid responses who walked for travel in bouts of 10+ minutes on 12 days over the previous 28 days, expressed as a percentage of the total number of respondents. As this is self-reported survey data it is subjective and there may be reporting bias.  <b>Source:</b> Active Lives Adult Survey, Sport England via OHID fingertips (ID 93439 – <a href="#">full definition</a> )	An increasing value suggests an improvement
2	Percentage of adults cycling for travel at least three days per week (reported separately for Derby and Derbyshire)	This indicator presents the number of respondents aged 16+ with valid responses who cycled for travel on 12 days over the previous 28 days, expressed as a percentage of the total number of respondents. As this is self-reported survey data it is subjective and there may be reporting bias.  <b>Source:</b> Active Lives Adult Survey, Sport England via OHID fingertips (ID 93440 – <a href="#">full definition</a> )	An increasing value suggests an improvement
3	Percentage of Primary School children travelling actively to school (Derbyshire)	Active travel refers to modes of travel that involve a level of activity (Department for Transport Active Travel: Local Authority ToolKit 2022 <a href="https://www.gov.uk/government/publications/active-travel-local-authority-toolkit/active-travel-local-authority-toolkit">https://www.gov.uk/government/publications/active-travel-local-authority-toolkit/active-travel-local-authority-toolkit</a> ). Data is currently collected yearly for local authority schools taking part in Modeshift Stars in Derbyshire but not in Derby. As signing up to Modeshift Stars is voluntary there is a risk of reporting bias. Improved methods of data collection would include regular council surveys or inclusion of questions in the School Census.  <b>Source:</b> Modeshift Stars, Derbyshire County Council	An increasing value suggests an improvement
4	Percentage of Secondary School children travelling actively to school (Derbyshire)		
5	Number of publicly available Electric vehicle Charging Points per 100,000 population (Derby and Derbyshire)	Number of publicly available Electric vehicle Charging Point of any speed per 100,000 population (July Statistic)  <b>Source:</b> Department for Transport, Electric vehicle charging device statistics - <a href="https://www.gov.uk/transport/low-emission-and-electric-vehicles">https://www.gov.uk/transport/low-emission-and-electric-vehicles</a> <a href="https://www.gov.uk/government/statistics/electric-vehicle-charging-device-statistics-january-2023">https://www.gov.uk/government/statistics/electric-vehicle-charging-device-statistics-january-2023</a>	An increasing value suggests an improvement

Performance Indicators

1	Percentage of partners offering a cycle to work scheme (Derby and Derbyshire)	Employers can put in place a cycle to work scheme to enable staff to cycle to work. The percentage of partners offering a cycle to work scheme. Partners refers to the core membership organisations of the Air Quality Working Group set out in the terms of reference.  <b>Source:</b> Core membership organisations of the Air Quality Working Group	An increasing value suggests an improvement
2	Percentage of staff taking up the cycle to work scheme where partners offer a cycle to work scheme (Derby and Derbyshire)	Employers can put in place a cycle to work scheme to enable staff to cycle to work. The percentage of staff in partner organisations who offer a cycle to work scheme taking up the offer. Partners refers to the core membership organisations of the Air Quality Working Group set out in the terms of reference.  <b>Source:</b> Core membership organisations of the Air Quality Working Group	An increasing value suggests an improvement
3	Number of schools with a school street (Derby and Derbyshire)	The number of local authority schools with a school street on the 1 <sup>st</sup> of September. A school street is defined by having a timed traffic management order that coincides with school drop off and pick up times and an enforcement regime.  <b>Source:</b> Derby City Council and Derbyshire County Council. Derby Data: <a href="https://letstalk.derby.gov.uk/hub-page/school-safe-havens-updates">https://letstalk.derby.gov.uk/hub-page/school-safe-havens-updates</a>	An increasing value suggests an improvement

Priority 2 Indicators (Reduce sources of air pollution)

Population Indicators

1	Annual number of vehicle miles travelled on roads (Derbyshire)	Estimate of number of vehicle miles travelled using data from manual traffic counts, automatic traffic counters and road lengths.  <b>Source:</b> Department for Transport, Road Traffic Statistics (TableTRA8901) - <a href="https://www.gov.uk/government/statistical-data-sets/road-traffic-estimates-in-great-britain-2021">Road traffic estimates in Great Britain: 2021 - GOV.UK (www.gov.uk)</a>	A decreasing value suggests an improvement
2	Number of licensed vehicles (Derby and Derbyshire)	Number of vehicles licensed in Derby and Derbyshire of any type (Buses and Coaches, Cars, Heavy Goods Vehicles, Light Goods Vehicles, Motorcycles and any other vehicles) and any fuel (Diesel, Petrol, Other).  <b>Source:</b> Department of Transport and Driver and Vehicle Licensing Agency, Vehicle Statistics (Table VEH0105) - <a href="https://www.gov.uk/government/statistical-data-sets/vehicle-licensing-statistics-data-tables#ultra-low-emission-vehicles">https://www.gov.uk/government/statistical-data-sets/vehicle-licensing-statistics-data-tables#ultra-low-emission-vehicles</a>	A decreasing value suggests an improvement
3	Percentage of licensed vehicles that are Ultra Low Emission Vehicles (ULEV) (Derby and Derbyshire)	Number of Ultra Low Emission Vehicles (ULEV) expressed as a percentage of total number of licensed vehicles in Derby and Derbyshire (Buses and Coaches, Cars, Heavy Goods Vehicles, Light Goods Vehicles, Motorcycles and any other vehicles). This is calculated using the Vehicle Statistics Ultra-Low Emission Vehicles Table and Total Vehicles Table.  <b>Source:</b> Department of Transport and Driver and Vehicle Licensing Agency, Vehicle Statistics (Table VEH0105 and VEH0132) - <a href="https://www.gov.uk/government/statistical-data-sets/vehicle-licensing-statistics-data-tables#ultra-low-emission-vehicles">https://www.gov.uk/government/statistical-data-sets/vehicle-licensing-statistics-data-tables#ultra-low-emission-vehicles</a>	An increasing value suggests an improvement
4	Percentage of homes that have solid fuel as their main fuel source (Derby and Derbyshire)	The percentage of residential properties where the main fuel type is described as solid fuel (coal and wood excluding biomass) in the current Energy Performance Certificate.  <b>Source:</b> Energy Performance Certificate (EPC) Database, Derby City and Derbyshire District and Borough Councils <a href="https://epc.opendatacommunities.org/">https://epc.opendatacommunities.org/</a>	A decreasing value suggests an improvement
5	Percentage of homes with EPC rating C or above (Derby and Derbyshire)	The percentage of residential properties with an EPC rating C or above. EPC ratings provide a measure of how energy efficient a building is. Ratings range from A to G, where A is the most efficient.  <b>Source:</b> Energy Performance Certificate (EPC) Database, Derby City and Derbyshire District and Borough Councils <a href="https://epc.opendatacommunities.org/">https://epc.opendatacommunities.org/</a>	An increasing value suggests an improvement
6	Total domestic gas consumption (Derby and Derbyshire)	The total amount of gas consumed in kilowatt hours allocated to domestic use in the Government's regional and local authority gas consumption statistics.  <b>Source:</b> Department for Business, Energy and Industrial Strategy <a href="https://www.gov.uk/government/collections/sub-national-gas-consumption-data">https://www.gov.uk/government/collections/sub-national-gas-consumption-data</a>	A decreasing value suggests an improvement

Performance Indicators

1	Annual road mileage undertaken by partner organisations (Derby and Derbyshire)	Total mileage from business travel, whether in corporate (owned and controlled) or employee vehicles, excluding travel to work (commuting). Partners refers to the core membership organisations of the Air Quality Working Group set out in the terms of reference.  <b>Source:</b> Core membership organisations of the Air Quality Working Group	A decreasing value suggests an improvement
2	Percentage of annual road mileage undertaken by partner organisations by electric vehicles (Derby and Derbyshire)	Of the total mileage in owned and controlled corporate vehicles the percentage that is undertaken in battery electric vehicles (fully electric, rather than hybrid). Employee-owned vehicles are excluded from this analysis. Partners refers to the core membership organisations of the Air Quality Working Group set out in the terms of reference.  <b>Source:</b> Core membership organisations of the Air Quality Working Group	An increasing value suggests an improvement
3	Annual gas consumption by partner organisations (Derby and Derbyshire)	Total gas consumed for heating, hot water and other purposes as units (kilowatt hours) of energy, for sites owned and controlled by the organisation. Partners refers to the core membership organisations of the Air Quality Working Group set out in the terms of reference.  <b>Source:</b> Core membership organisations of the Air Quality Working Group	A decreasing value suggests an improvement
4	Annual operational carbon emissions from partner organisations (Derby and Derbyshire)	Total carbon emissions (greenhouse gas emissions) from operational activities, i.e. energy consumed in owned and controlled buildings, and transport in corporate vehicles (owned and controlled) and employee vehicles for work purposes. Calculated from energy bills and travel records and based on the most up to date Government carbon emissions factors and reporting procedure <a href="https://www.gov.uk/government/collections/government-conversion-factors-for-company-reporting">https://www.gov.uk/government/collections/government-conversion-factors-for-company-reporting</a> Partners refers to the core membership organisations of the Air Quality Working Group set out in the terms of reference.  <b>Source:</b> Core membership organisations of the Air Quality Working Group	A decreasing value suggests an improvement

Priority 3 Indicators (Measure, produce plans and mitigate against the impacts of air pollution)

Performance Indicators

Population Indicators

1	Number of homes within Air Quality Management Areas (AQMAs) (Derby and Derbyshire)	Air Quality Management Areas (AQMAs) are legally required to cover all geographical areas with pollution levels above statutory Air Quality Objectives (Technical Guidance has been set out <a href="#">LAQM-TG22-August-22-v1.0.pdf (defra.gov.uk)</a> . This represents the population who are experiencing air quality which does not meet UK Air Quality Objectives.  <b>Source:</b> Derby City and Derbyshire District and Borough Councils	A decreasing value suggests an improvement
2	Annual number of complaints relating to smoke from domestic or commercial/industrial chimneys and bonfires (Derby and Derbyshire)	Annual total number of complaints relating to smoke from chimneys and bonfires.  <b>Source:</b> Derby City and Derbyshire District and Borough Councils	A decreasing value suggests an improvement
1	Percentage of Local Plans with specific air quality policies (Derby and Derbyshire)	Local plans are prepared by local planning authorities (Derby city and each of the Derbyshire District and Borough Councils). Local plans must be reviewed at least every 5-years. There are 8 District and Borough Councils and one city council. Therefore, the denominator for the percentage calculation will be 9.  <b>Source:</b> Derby City and Derbyshire District and Borough Councils	An increasing value suggests an improvement
2	Percentage of Local plans with Supplementary Planning Documents (SPD) with specific reference to air quality (Derby and Derbyshire)	Local plans are prepared by local planning authorities (Derby city and each of the Derbyshire District and Borough Councils). Local plans must be reviewed at least every 5-years. Supplementary Planning Documents (SPD) provide more detailed advice and guidance on specific matters. There are 8 District and Borough Councils and one city council. Therefore, the denominator for the percentage calculation will be 9.  <b>Source:</b> Derby City and Derbyshire District and Borough Councils	An increasing value suggests an improvement
3	Percentage of Air Quality Annual Status Reports submitted on time	Derby City and Derbyshire's District and Boroughs must regularly review and assess air quality within their area. There is a legal requirement to submit an Air Quality Annual Status Report each year to DEFRA. This report includes information regarding the monitoring undertaken and identifies if there have been any breaches to the air quality limits. This can lead to Air Quality Management Areas being declared and action plans put in place to improve air quality. There are 8 District and Borough Councils and one city council. Therefore, the denominator for the percentage calculation will be 9.  <b>Source:</b> Derby City and Derbyshire District and Borough Councils	An increasing value suggests an improvement
4	Percentage of Air Quality Management Areas (AQMAs) with an action plan.	Air Quality Management Areas (AQMAs) are legally required to cover all geographical areas with pollution levels above statutory Air Quality Objectives (Technical Guidance has been set out <a href="#">LAQM-TG22-August-22-v1.0.pdf (defra.gov.uk)</a> . There is a requirement for each AQMA to have an associated action plan. The percentage of AQMAs with an action plan is calculated from the total number of AQMAs in Derby and Derbyshire.  <b>Source:</b> Derby City and Derbyshire District and Borough Councils	An increasing value suggests an improvement
5	Number of fine particulate matter (PM <sub>2.5</sub> ) monitoring sites (Derby and Derbyshire)	Fine particulate matter, also called PM <sub>2.5</sub> refers to individual particles with an aerodynamic diameter less than 2.5 micrometres. The number of monitoring sites with PM <sub>2.5</sub> monitoring.  <b>Source:</b>	An increasing value suggests an improvement
6	Number of schools with on-site air quality monitoring capable of measuring PM <sub>2.5</sub> levels at peak traffic times (Derby and Derbyshire)	Fine particulate matter, also called PM <sub>2.5</sub> refers to individual particles with an aerodynamic diameter less than 2.5 micrometres. The number of school sites with PM <sub>2.5</sub> monitors that can indicate real time level of PM <sub>2.5</sub> at peak traffic flow times.  <b>Source:</b> Derby City and Derbyshire County Council	An increasing value suggests an improvement

## References

1. Public Health England (2014) Estimated local mortality burdens associated with particulate air pollution [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/332854/PHE\\_CRCE\\_010.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/332854/PHE_CRCE_010.pdf)
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