DRAFT

Derbyshire County and Derby City

AIR QUALITY STRATEGY

2020-2030

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[1].

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[2].

The impact of air pollution often disproportionately affects the young, older people, those with underlying health conditions and the most disadvantaged within our communities.

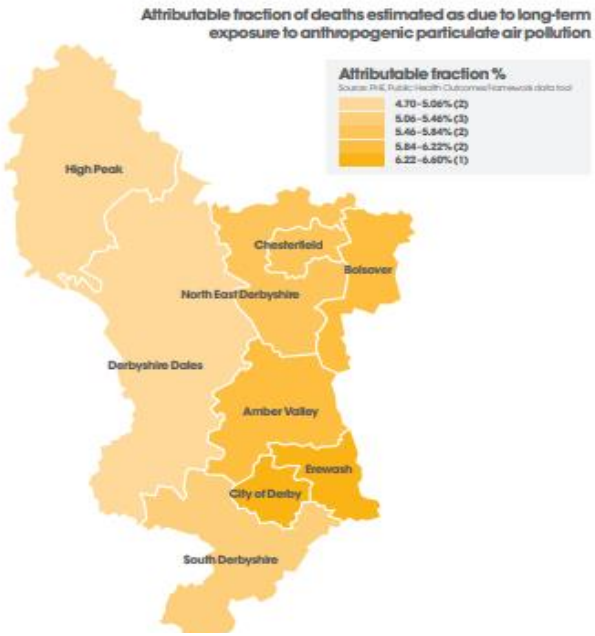
Reductions in air pollution require both global, national and local action.

Even modest reductions in air pollution levels could have significant direct and indirect benefits[3], including;

Hospital admissions
GP consultations
Mortality
Congestion

Physical activity
Economic growth
Improved mental health

Sources of air pollution are predominantly the result of human activity, and include transport sources, combustion from heating, industrial activities and certain farming activities[4].



Air pollution levels vary across the County and City due largely to the proximity to sources of pollution. Information regarding local air quality levels can be found at;

Derbyshire County mapping portal
Derby City mapping portal

The partners of the **Health and Wellbeing Board** 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

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 Health and Wellbeing Board, 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. The board will develop an annual action plan which will utilise the available evidence and best practice.

Guiding principles;

- Partners of the board 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 will utilise three key priorities; Seek to reduce the sources of pollution, prioritise those interventions which offer additional health benefits, and mitigate 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 Board in reviewing the Strategy as required to ensure this continues to support its guiding principles.

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

The Health and Wellbeing Board cannot alone improve air quality, however its partners will use its individual and collective influence to reduce our own impact on local air pollution, facilitate change and influence others. The strategy therefore aims to support reductions in the following population outcomes.

Monitoring of the strategy will be undertaken through the Derbyshire Air Quality Working group, reporting at least annually to the Health and Wellbeing Board. This will include providing oversight of key population outcomes, performance against the strategic priorities and progress on the annual the action plan.

Population Outcomes;

Outcome	**Baseline (2017)**
Fraction of mortality attributed to particulate matter air pollution* (source; PHOF 3.01[7])	4.5%
Average annual average concentrations of nitrogen dioxide and range (source; local air pollution monitoring data)	28.19µ/m3 City upper limit 61.9µ/m3 County upper limit 49.9µ/m3
Average particulate matter (PM2.5)* (source; PHOF[7])	9.2µ/m3
Number of air quality monitoring sites. Number of air quality monitoring sites with Particulate matter 2.5 above 10µ/m3 annual average and Nitrogen Dioxide above 40µ/m3 across Derbyshire** (source; local air pollution monitoring data)	272 Data unavailable PM2.5 13 Nitrogen Dioxide

Number of Air Quality Management Areas	8

Reference; * https://fingertips.phe.org.uk ** World Health Organisation Air quality guidelines for particulate matter, ozone, nitrogen dioxide and sulfur dioxide (2005)

STRATEGIC PRIORITIES

Priority	Facilitate travel behaviour change	Reduce sources of air pollution	Mitigate against the health impacts of air pollution
Outcome	Partners will increase the number of people using sustainable and active travel options, amongst the workforce and wider population.	Partners will reduce their own contribution to local air pollution and facilitate change to reduce sources of air pollution locally.	Partners will seek to reduce the impacts of air pollution on health.

Population Outcome measures*	% of adults walking and cycling for travel at least three days per week % of children travelling sustainably to school	Number of public electric charge points Number of registered ULEVs Population living within a smoke control zone Number of ULEV public transport units	Number of air quality management areas Number of schools, care homes and health settings with air pollution levels above WHO thresholds.

The outlined population outcomes seek to use recognised data collection processes where available. Baseline and trend data in relation to the outlined population outcomes can be found in Appendix 1.

Facilitate travel behaviour change

Background

Shifting everyday travel away from private car usage, towards walking and cycling and public transport and provide sustainable solutions to 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.

Strategic Action

- 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

Baseline

Data is currently unavailable which demonstrates staff and service user sustainable travel activity. Data collection mechanisms will therefore need to be developed by partners and reported annually.

Performance Measure	Baseline 2020
% of staff travelling sustainably to work within health and wellbeing board partner organisations	Unknown
% of service users travelling to provided services sustainably	Unknown

Turning the curve;

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

Baseline; Current baseline data is unavailable

Monitoring; Data will be collated by partners of the Health and Wellbeing Board through the Air Quality Working Group annually

Impact; Changes in travel behaviour are generally gradual and therefore small incremental changes are expected.

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. There are a number of ways partners can support local reductions in air pollution, including increasing the uptake of lower emission vehicles, reducing travel and reducing emissions from heating sources.

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 exchange pumps

Baseline

Data is currently unavailable which demonstrates the use of ULEVs across Derbyshire and also the mileage undertaken by partners. Data collection mechanisms will therefore need to be developed by partners and reported annually.

Performance Measure	Baseline 2020
Number of ULEV units within partner fleets	Unknown
Total mileage undertaken annually by health and wellbeing board partners	Unknown

Turning the curve;

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

Baseline; Current baseline data is unavailable

Monitoring; Data will be collated by partners of the Health and Wellbeing Board through the Air Quality Working Group annually

Impact; Changes in fleet require financial investment and for some partners alternative vehicles may not be currently available. Gradual incremental changes are therefore expected.

Mitigate against the impacts of air pollution

Background

Improvements in air quality require national and local intervention. Whilst reducing sources of air pollution is the priority to improving air quality locally, there is a need to ensure the mitigation of the health impacts where individuals may be exposed to higher levels of air pollution. 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.

Strategic Priorities

- 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 or air pollution on health

Baseline

Data is currently unavailable which demonstrates the level of mitigation measures in place locally. Data will therefore be collated through planning authority partners by the Air Quality Working Group annually.

Performance Measure	Baseline 2020
% of planning authorities within mitigations included within planning policy	Unknown

Turning the curve;

Objective; Partners will seek to reduce the impact of air pollution on health.

Baseline; Current baseline data is unavailable

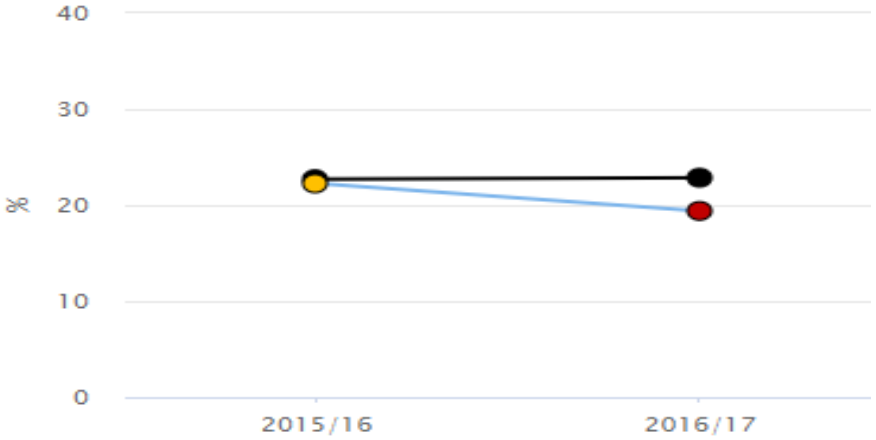
Monitoring; Data will be collated through the Air Quality Working Group annually

Impact; Changes will be dependently on stages of planning authorities within the planning policy development cycle.

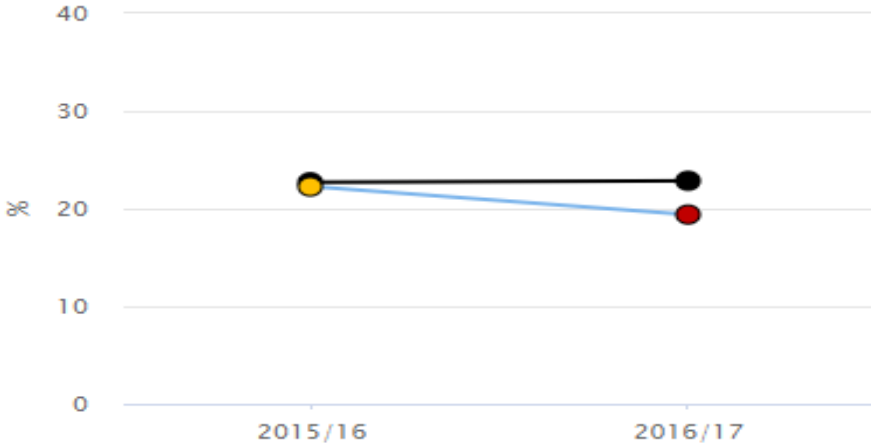
APPENDIX 1 – County baseline data

Facilitating travel behaviour change

Derbyshire County; Percentage of adults walking for travel at least three days per week (Source; Public health outcomes)



Derby City; Percentage of adults walking for travel at least three days per week (Source; Public health outcomes)



Turning the curve; Travel behaviour change requires gradual incremental change. Impact would seek to reverse the current declining trend.

Percentage of children travelling sustainably to school (Source; School travel survey)

Data is collected annually by Derbyshire County and Derby City Councils as part of the school travel survey process. Data is not complete however provides a standardised process for monitoring travel behaviours in school age children.

Reduce sources of air pollution

Number of public electric charge points (Source Goultralow)

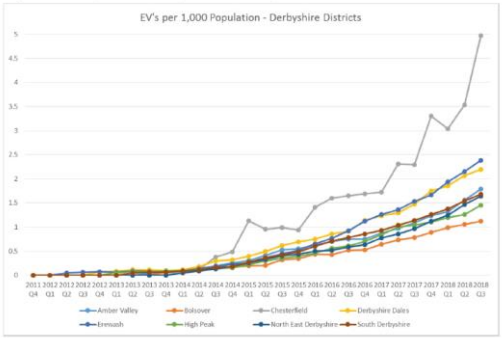
National ULEV mapping portals provide information on the number of public electric charge points. This data has not previously been analysed or monitored.

https://www.goultralow.com/how-do-you-charge-an-electric-car/charging-point-map/

Turning the curve; We would look to see an increase in the current upward trend

Number of registered ULEVs (Source DVLA VEH0132)

Figure 1: EV's per 1,000 Population – Derbyshire Districts



Department for Transport VEH0131; Plug in cars and vans and quadracycle's licensed at end of quarter.

Turning the curve; We would look to see an increase in the current upward trend

Population living within a smoke control zone (Source Borough and District Councils)

Data is currently available thorough Borough and Districts regarding

Number of ULEV public transport units (Source; Derbyshire County and Derby City Council)

Data is currently not available about the number of ULEV public

Mitigate against the health impacts

Number of air quality management areas (source DEFRA)

Data regarding air quality management areas is currently available via Borough and District Councils.

2019 - Chesterfield; 1 (Church Street, Brimington)

Erewash 2 (East of M1 in Sandiacre and Long Eaton)

Bolsover 3 (Barlborough next to the M1 and A38 in South Normanton)

Derby City 1 (Inner and Outer ring road, sections of the A52 and properties surrounding QDF foundary)

High Peak 1

Turning the curve; The Air quality management processes is overseen by DEFRA. Criteria is required to revoke and evoke AQMAs therefore changes to the current number of AQMAs is unlikely to

Estimated number of schools and care settings with air pollution levels greater than the DEFRA / WHO thresholds (Source Derbyshire County Council heat map)

The air quality working group develops a heat map showing estimated air quality across Derbyshire, using overlays for schools and care homes we can estimate the number of these sites exposed to levels potentially greater than the DEFRA and WHO thresholds.

Turning the curve; Data is based on modelling data however we would expect a gradual reduction in the number of sites as air pollution levels decline and AQMAs reduce.

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
2. Public Health England (2019) Health Matter; Air pollution https://www.gov.uk/government/publications/health-matters-air-pollution/health-matters-air-pollution
3. DEFRA (2017) A briefing for Directors of Public Health https://laqm.defra.gov.uk/assets/63091defraairqualityguide9web.pdf
4. Public Health England (2018). Health Matters https://www.gov.uk/government/publications/health-matters-air-pollution/health-matters-air-pollution
5. Public Health Outcomes Framework https://fingertips.phe.org.uk/search/air%20pollution#page/0/gid/1/pat/6/par/E12000004/ati/102/are/E06000015

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