



2024-2029

Air Quality Strategy

Version 1: February 2024

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1. Introduction

This document is the Air Quality Strategy for East Staffordshire Borough Council and sets out the overarching framework through which we manage air quality within our borough.

This strategy updates the previous 2015-2020 strategy with a continued focus to improve air quality across the borough, in line with the Council's Air Quality Action Plan.

The strategy aims to guide and inform Council policy, ensuring a coordinated and consistent approach for the effective management and enforcement of air quality. The Council has a diverse role in relation to air quality management, directly influenced through statutory requirements and indirectly through other policy and legislation. We also recognise the relative impact we have through our own emissions to air.

To guide the strategy an overall aim has been defined, along with a series of objectives which have been drawn up to include the main areas of air quality covered by the Council.

This strategy is supplemented by our latest Air Quality Action Plan which contains a revised set of measures drawn up to address air quality exceedances within any Air Quality Management Areas (AQMAs) in the borough.

The strategy is also supplemented by the Council's Air Quality Policy for Development Control for the assessment of air quality.

The strategy has been developed having regard to current legislation, in addition to national policy and various other current best practice guidance documents which relate to air quality.

This information and guidance is aimed at various stakeholders ranging from internal Council departments to external stakeholders such as developers, businesses, other local authorities, government agencies and the public.

2. Aims & Objectives

The Air Quality Strategy updates the previous 2015-20 Strategy and details how we will strive to improve air quality across the borough.

The aim of the Air Quality Strategy is:

“To monitor and improve local air quality to reduce the detrimental impacts that poor air quality can have on human health and the environment.”

This Strategy supports the Council’s Corporate Plan Priorities for *“Standing up for our Communities”* by improving the health and wellbeing of our communities, protecting our environment and tackling health inequalities.

Lead by example. Reducing our own emissions and ensuring that all relevant Council policies positively integrate air quality in a consistent manner.

The main objectives are:

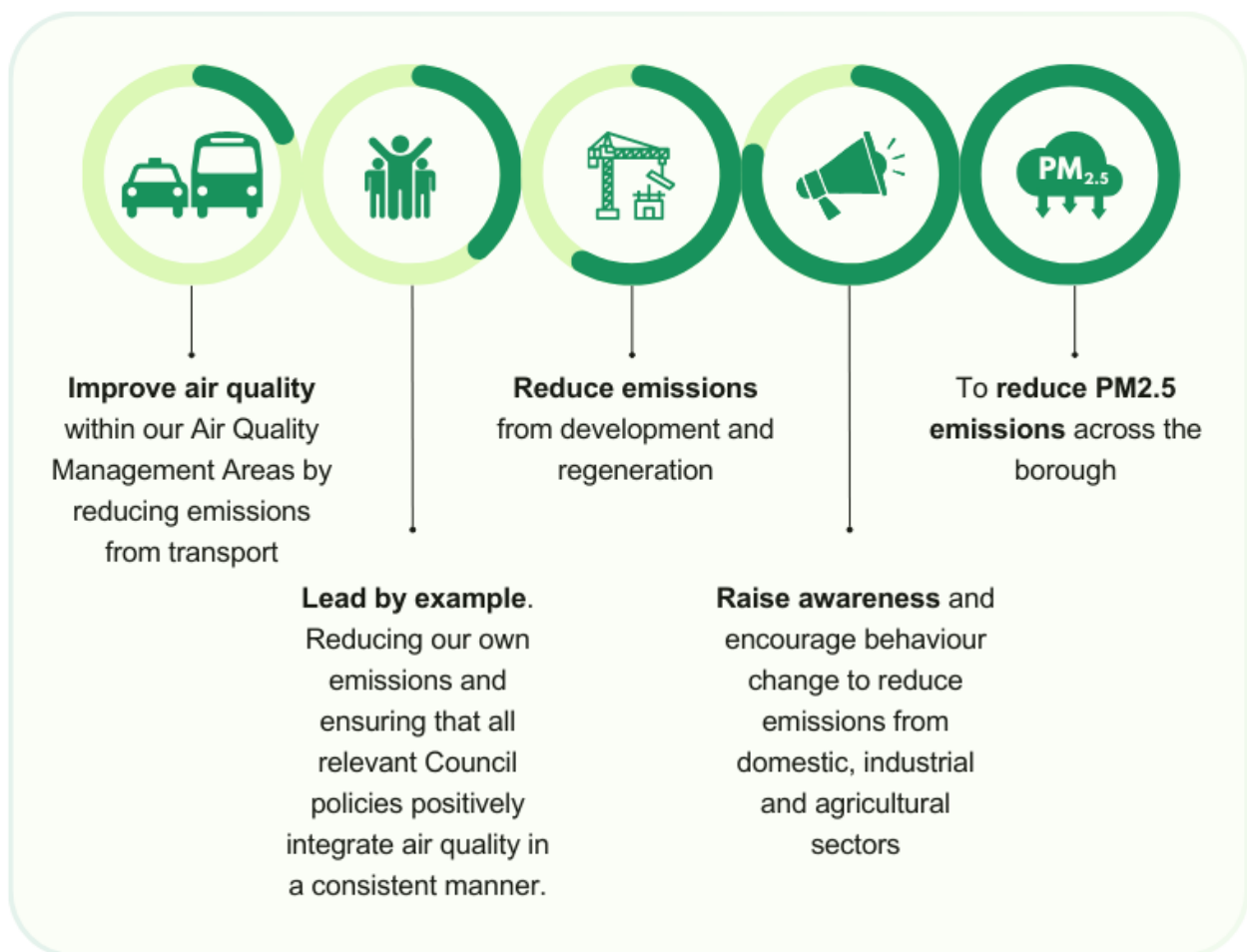


Figure 1: Main objectives

To meet these Objectives the Council will:

- 1** Define our role within the National Air Quality Strategy and the rationale for having an Air Quality Strategy.
- 2** Implement the Air Quality Action Plan (AQAP) for the Council.
- 3** Follow our documented process for the assessment of planning applications for air quality, in the context of the National Planning Policy Framework (NPPF) and the National Air Quality Strategy.
- 4** Use qualified competent officers for the assessment of air quality issues.
- 5** Work with other stakeholders, including neighbouring local authorities where possible to achieve the objectives of this Strategy.

3. Air Quality and Health

Clean air is vital for people’s health and well-being and has implications for the natural environment and the economy. Poor air quality is still the largest environmental risk to public health and remains a key priority for the UK¹.

Air pollution can cause and worsen health effects in all individuals, particularly society’s most vulnerable populations. Long-term exposure to air pollution can cause chronic conditions such as cardiovascular and respiratory diseases as well as lung cancer, leading to reduced life expectancy.

The annual mortality burden of air pollution in England is roughly equivalent to between 26,000 and 38,000 deaths every year.² It is estimated that between 2017 and 2025 the total cost to the NHS and social care system of air pollutants (fine particulate matter and nitrogen dioxide), will be £1.6 billion.³

Within Staffordshire the impact on adult mortality directly attributable to PM_{2.5} in particular is a public health issue.

This is revealed in data obtained from the UK Health Security Agency (UKHSA) used to inform the Public Health Outcomes Framework indicator D01. The percentage estimated number of deaths attributable to PM_{2.5} in adults over 30 has been translated into the estimated number of attributable deaths for each local authority area within Staffordshire, and are shown in Figure 1.

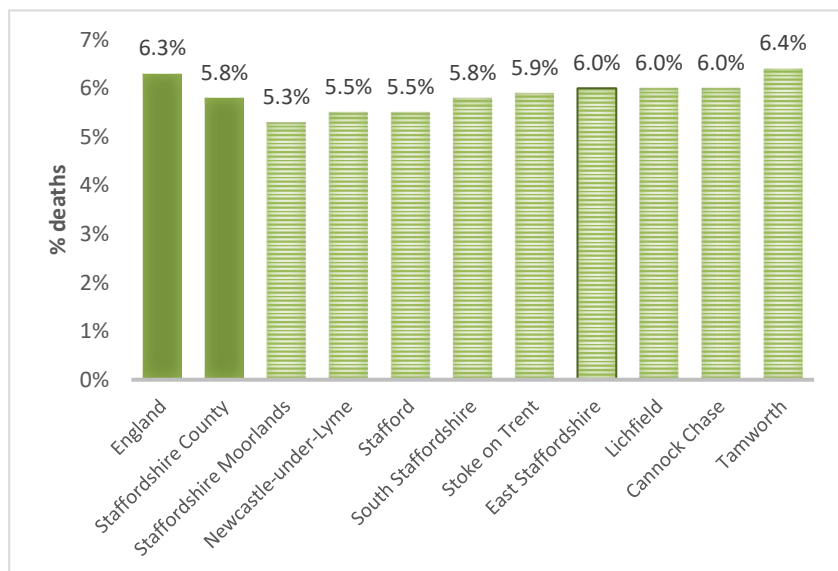


Figure 1: The estimated average number of deaths by local authority area attributable to PM_{2.5} within Staffordshire for adults over 30 (2018 to 2021)

¹ [air_pollution_uk_2021_issue_1.pdf \(defra.gov.uk\)](https://www.defra.gov.uk/air-pollution-uk-2021-issue-1.pdf)

² [Chief Medical Officers Annual Report 2022 Air Pollution](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/107111/Chief-Medical-Officers-Annual-Report-2022-Air-Pollution.pdf)

³ [Air pollution: applying All Our Health - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/107111/Air-pollution-applying-All-Our-Health-GOV.UK.pdf)

Approximately 5.8% of deaths from 2018 to 2021 within the County can be attributed to PM_{2.5}. In East Staffordshire this figure was estimated to be 6.0%, which is below the national average but above the Staffordshire county average.⁴

There are large differences in air pollution across communities, with deprived areas often the worst affected. Children, the elderly and individuals with pre-existing cardiovascular and respiratory conditions are particularly vulnerable to the effects of poor air quality⁵.

The main air quality pollutants of concern in the UK are:

> Particulates (PM)

A mixture of solids and liquid droplets suspended in the air which affect more people than any other pollutant. It is the smaller particles which can get breathed deeper into the lungs causing health effects such as cardiovascular and respiratory diseases and even cancer. These are categorised by aerodynamic size and include:

- PM₁₀ – Course particles less than 10 microns in diameter
- PM_{2.5} – Finer particles that are less than 2.5 microns in diameter
- PM_{0.1} – Ultrafine particles that are less than 0.1 microns in diameter

Although some particulates are naturally occurring, a large majority are from human activity such as combustion processes associated with industrial and commercial sources, including the energy generating sector, and in particular from vehicle emissions.

Towns and cities are often subject to higher concentrations of particulates, but large isolated sources can also be a problem, such as quarries and large industrial installations.

A large proportion of the finer particles (PM_{2.5}) comes from regional and often transboundary (non-UK) sources.

⁴ Public Health England. Public Health Outcomes Framework 5th May (<https://fingertips.phe.org.uk/profile/public-health-outcomes-framework/data>)

⁵ [Air quality: policies, proposals and concerns - House of Commons Library \(parliament.uk\)](#)

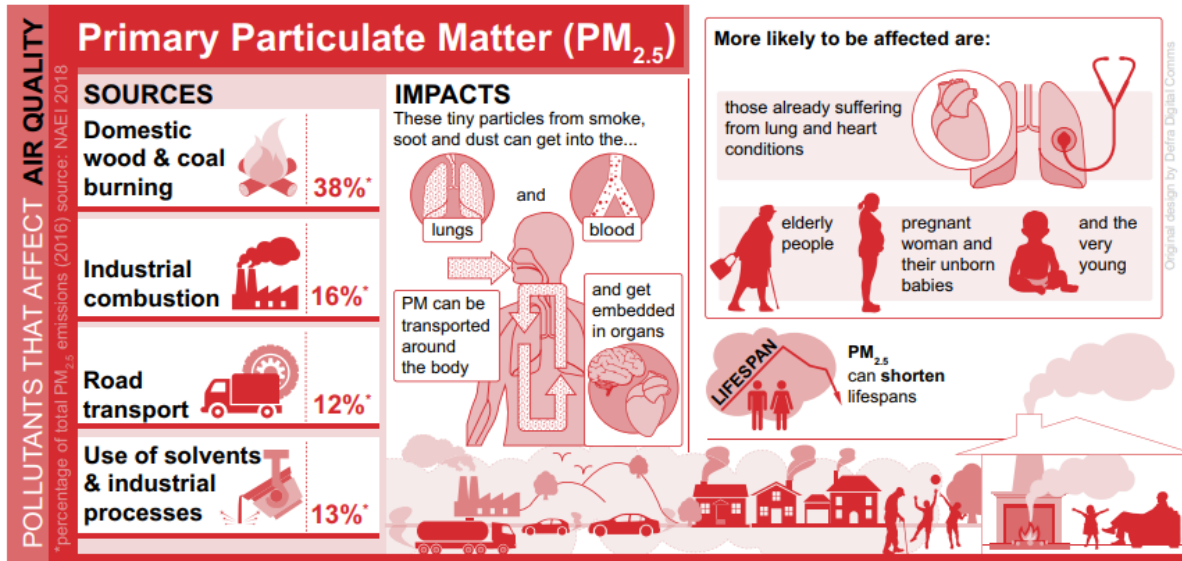


Figure 2: Air pollutants, sources and potential health impacts of PM2.5

> Nitrogen Oxides (NO_x)

A group of gases that include Nitrogen Dioxide (NO₂) that can commonly affect health, predominately through respiratory problems.

The sources for this pollutant include combustion from vehicle engines and industrial activity, including the energy generating sector.

Although particulate pollution is considered the most significant in terms of health effects, NO₂ exceedances are the most widespread within the UK.

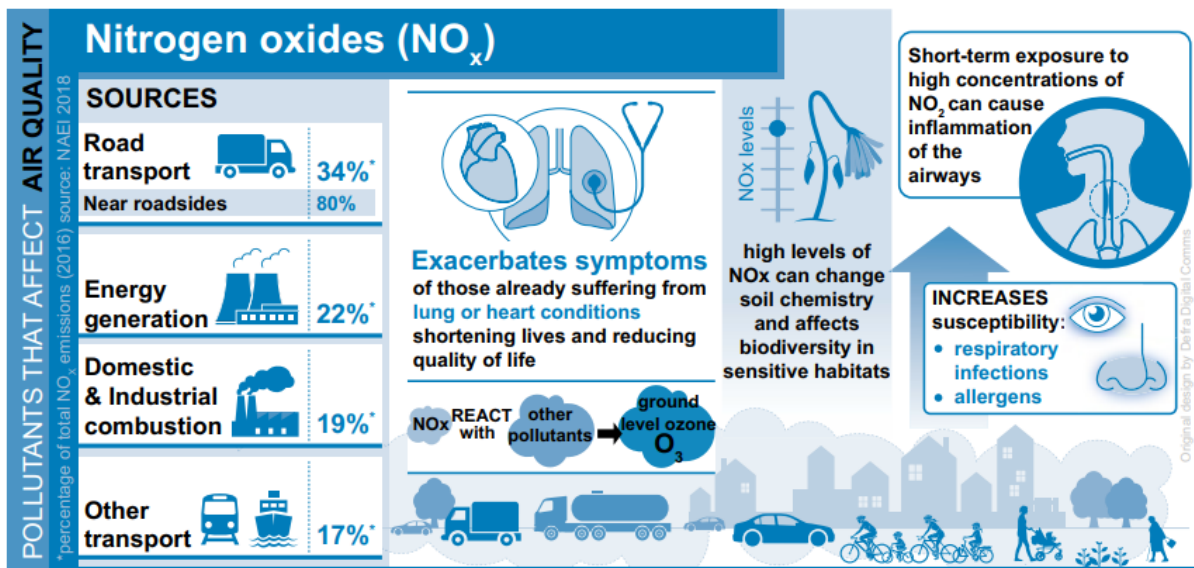


Figure 3: Air pollutants, sources and potential health impacts of NOx

Figure 3 outlines the main sources of NO_x and their associated health impacts. Any reduction in pollutant exposure will therefore have a positive impact on public health.

Walking, cycling and other forms of active travel are good for improving health and reducing air pollution, however levels of adults walking (16%) or cycling (1%) for travel are typically lower than average in Staffordshire⁶.

Reducing air pollution could therefore have several co-benefits e.g., increasing active travel and consequently physical activity, whilst also helping to tackle health inequalities experienced by children, the elderly, our more deprived communities, and those with chronic conditions such as asthma and other respiratory diseases.

⁶ <https://www.staffordshire.gov.uk/Observatory/insights/Health-and-wellbeing/Joint-Strategic-Needs-Assessment/Joint-Strategic-Needs-Assessment-2021/Staffordshire-as-a-place-to-live/Indicators/Air-quality.aspx>

4. Air Quality Legislation

> The Air Quality Strategy for England

The revised Air Quality Strategy for England 2023 provides air quality standards and objectives for key air pollutants which Defra expects local authorities to make our air healthier to breathe, protect nature and boost the economy.

The strategy sets out the action that is required across all parts of government and society and updates the legislative framework that applies at a local level, in order to help reduce local concentrations of air pollution.

> Local Air Quality Management Framework

The strategy describes the Local Air Quality Management (LAQM) framework, whereby every authority is required to carry out regular reviews and assessments of air quality in its area to identify if government targets have or will be achieved at relevant locations.

Where pollutant targets are not being achieved, the authority must declare an AQMA and prepare an AQAP which identifies appropriate measures that will be introduced in pursuit of meeting the objectives/targets.

Action plans must be reviewed every five years if exceedances are still occurring. AQMAs are formally recognised and are material considerations in planning and can influence the type or extent of development in affected areas.

AQMAs can be 'revoked', but only after at least three years of no exceedances to allow for any annual variation in meteorological conditions, which can affect air quality. Legislative updates in 2022 have set out clearer requirements for district and county-tier Councils to work together to ensure air quality is improved.

> Environmental Permitting Regulations 2016 (as amended)

The Environmental Permitting Regulations 2016 (as amended) cover England and Wales and apply to a range of different industrial sectors designed to control impact on the environment and human health.

The Environmental Permitting Regulations require that certain industrial installations obtain a Permit or in some cases an exemption in order to deliver national legislation and policy in order to meet environmental targets through best practice.

Permits are based on Process Guidance Notes for each sector and for both Part B and A2 installations, which are based on ‘best available techniques’ and set emission limits for the various types of processes. For new installations, permit applications often go hand in hand with planning applications, and the air quality assessment process.

> The Clean Air Act 1993 (as amended)

It is estimated that domestic burning accounted for 27.3% of total PM_{2.5} emissions across England in 2021. The Environment Act 2021 has amended the Clean Air Act 1993, which introduces new provisions for the enforcement of smoke emissions in a Smoke Control Area thus helping local authorities to reduce particulate pollution in their areas.

Most of Burton upon Trent, excluding Branston and parts of Stretton are in a Smoke Control Area designated in phases, as shown in figure 4:

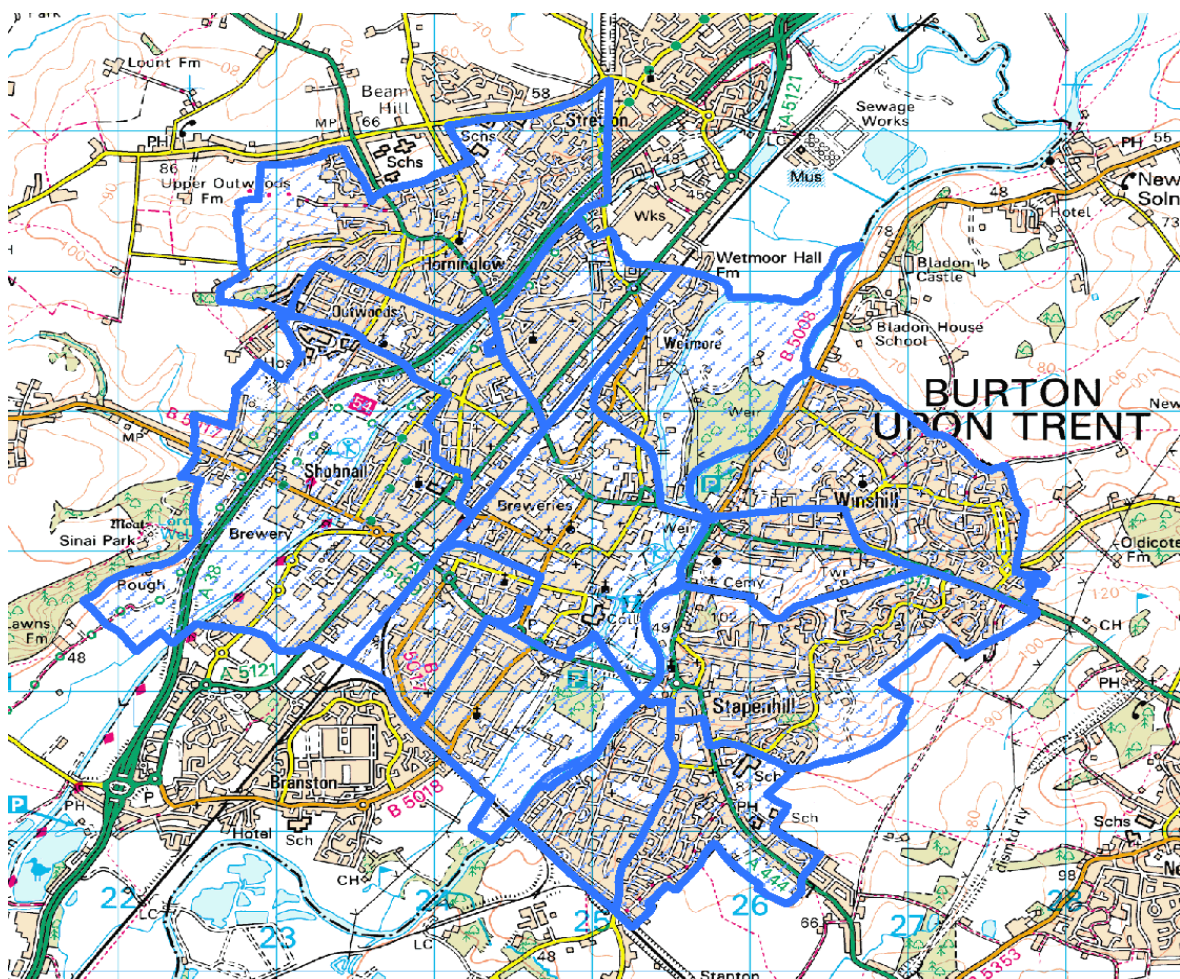


Figure 4: Designated Smoke Control Areas

These legislative changes enable local authorities to issue civil penalties with respect to emissions of smoke coming from any building, chimney for furnace of any fixed boiler and even stacks from moored vessels if the latter are included in the scope of a Smoke Control Area.

It is also now an offence to buy or sell unauthorised fuels for use in a smoke control area unless they are used on a Defra-approved (i.e. exempt) appliance and contain the correct certification labelling on the packaging.

5. Air Quality in East Staffordshire

> Air Quality Management Areas & Air Quality Action Plan

East Staffordshire Borough Council declared two Air Quality Management Areas (AQMAs) for exceedances of the annual mean NO₂ objective relating to road traffic emissions back in 2007. AQMA 1 is centred on Derby Turn and covers:

- Derby Rd
- Derby St
- Part of Princess Way roundabout
- Horninglow St
- Horninglow Rd
- Bridge St
- Wellington St
- Part of Borough Road
- Part of Wellington St roundabout
- Part of Waterloo St and part of Byrkley St

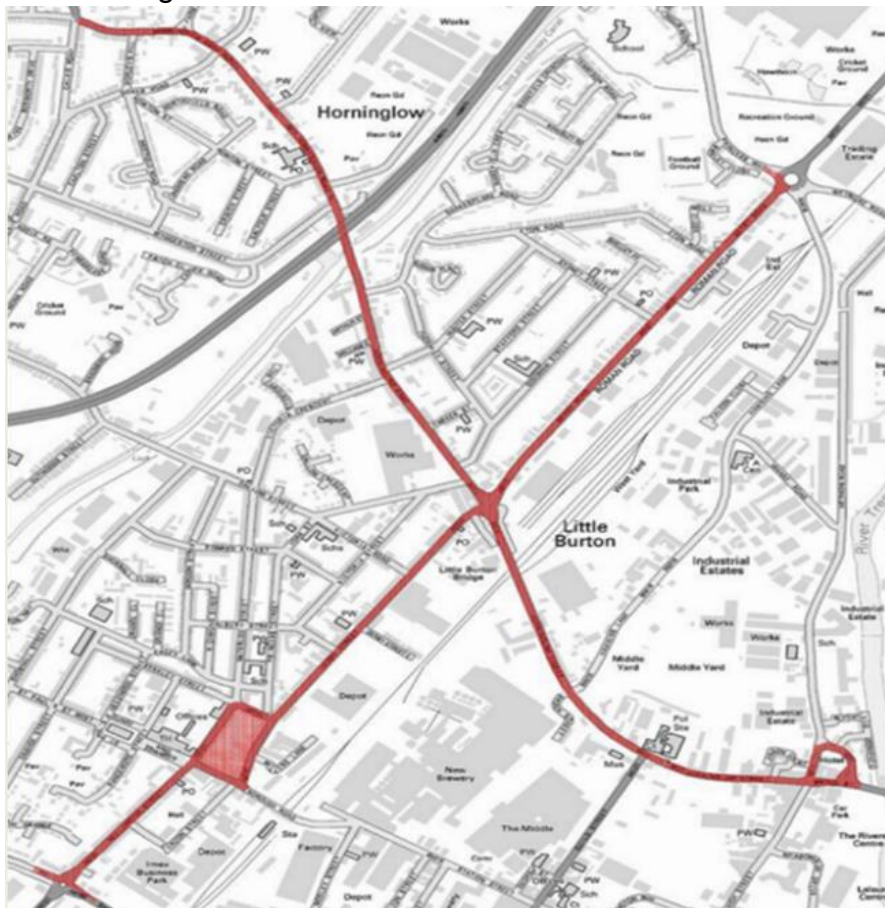


Figure 5: AQMA 1 (© Crown copyright and database rights [2024] Ordnance Survey [100010575]. You are permitted to use this data solely to enable you to respond to or interact with, the organisation that provided you with the data. You are not permitted to copy, sub-licence, distribute or sell any of this data to third parties in any form.)

AQMA 2 is much smaller centred on St Peters Bridge roundabout in Stapenhill:



Figure 6: AQMA 2 (© Crown copyright and database rights [2024] Ordnance Survey [100010575]. You are permitted to use this data solely to enable you to respond to, or interact with, the organisation that provided you with the data. You are not permitted to copy, sub-licence, distribute or sell any of this data to third parties in any form.)

The Council drafted its first AQAP in 2009 which set out how it would maintain and improve air quality within the AQMAs and their surrounding areas.

Prior to the first AQAP, a detailed source apportionment modelling exercise was undertaken, which identified that road transport accounted for between 94.5% and 99.4% of total NO_x, while industrial contributions were very small.

Given the local impact of traffic on air quality, the main focus of the AQAP related to traffic control and management with a large proportion of measures at that time coming from the Burton Urban Area Transport Study (BUATMS), which related to Staffordshire County Council's second Local Transport Plan.

The AQAP was reviewed in 2015 with new revised measures that ran from 2015 to 2020. The AQAP 2015-2020 formed a Technical Document 1 to the first Air Quality Strategy for East Borough Council. Alongside this an Air Quality Policy for Development Control formed the second technical document to the Air Quality Strategy. Although NO₂ concentrations had declined by the time of this review, exceedances were still being recorded at some monitoring locations within the AQMAs.

Under the Local Transport Plan third revision, a wider Strategy Plan for the whole of Staffordshire was published. This outlined the objectives and policies for managing transport, infrastructure and highways in the County. Feeding into this was the Integrated Transport Strategy finalised in 2014, which set out a number of measures specifically for East Staffordshire up until 2031.

The Integrated Transport Strategy included a Burton upon Trent Local Transport Package focused specifically on mitigating the potential impacts of traffic generated

from housing and employment growth, as well as addressing traffic issues on Burton's road network.

> Where We Are Now

As air quality continues improving across the borough, we will continue work on the following actions:

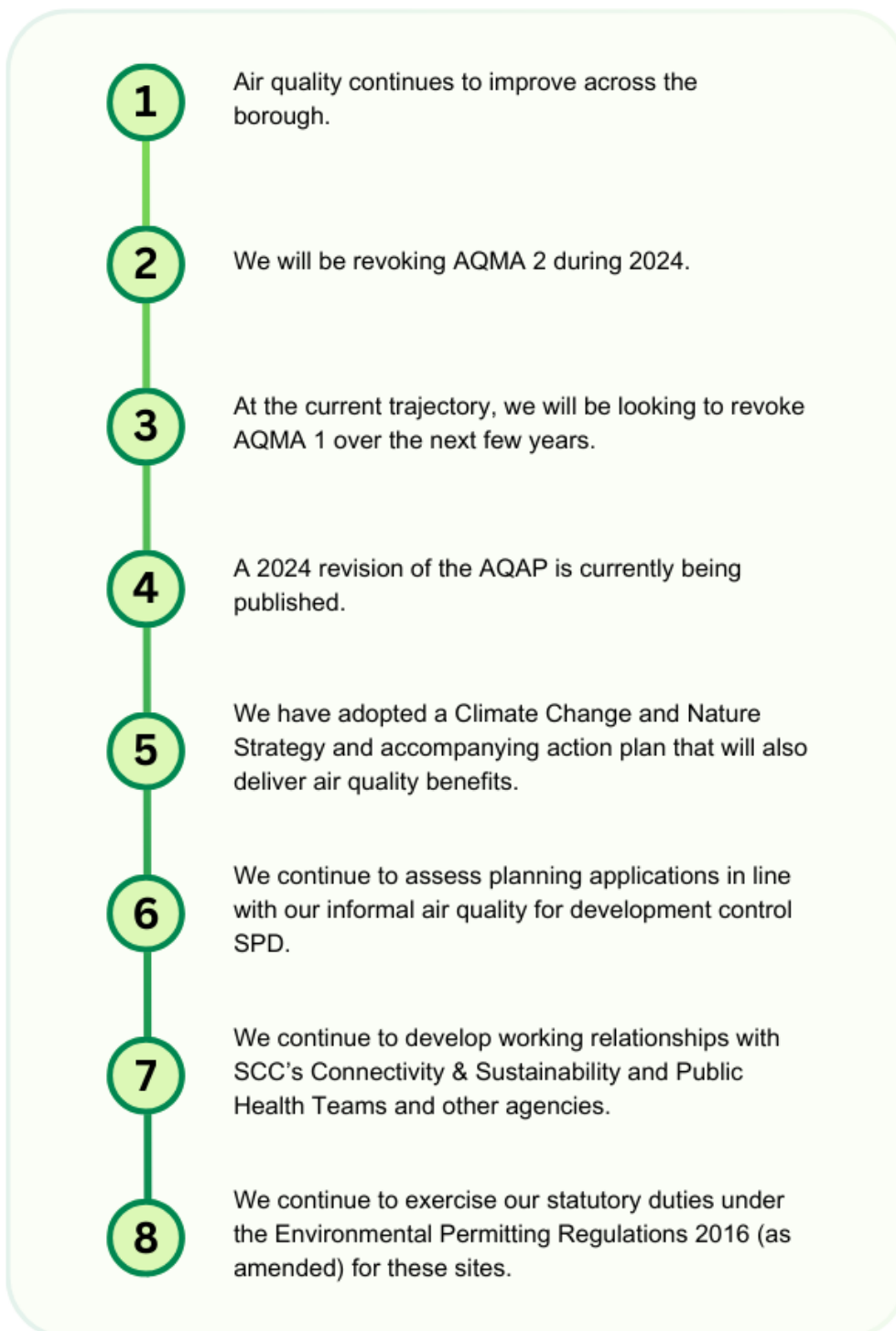


Figure 7: Where we are now

> What We Are Doing/Our Priorities

We already know road traffic is the main source of NO₂ in our AQMA, which remains the focus of action plan measures in our latest AQAP, attached as Technical Document 1: Air Quality Action Plan 2024-2029.

Measures have been developed that primarily addresses NO₂ within AQMA 1, but also addresses more strategic issues to try and reduce emissions of NO₂, PM_{2.5} and carbon dioxide (CO₂) across the borough in order to improve human health and the environment in a more equitable way.

Although the Integrated Transport Strategy runs until 2031, many of the measures have now been completed. The Strategy will be reviewed by Staffordshire County Council when East Staffordshire's Local Plan is next reviewed.

The Connectivity & Sustainability Team at Staffordshire County Council are however undertaking additional projects on the local road network, many of which will help contribute to improving air quality and are included as measures within the revised AQAP.

Finally, amendments to the Clean Air Act 1993 will require East Staffordshire Borough Council to develop a policy and charging regime for enforcing the new smoke control laws aimed at reducing PM_{2.5} levels in its area. This is also included as a measure in the revised AQAP.

6. Working in Partnership

Air quality is impacted by many partner organisations and communities within East Staffordshire and it is therefore important that we work to engage our partners to focus on the delivery of collectively agreed priorities to improve air quality.

There are numerous strategies and initiatives within the Council that impact air quality locally along with wider national and regional strategies as detailed in Figure 8 below.

Bringing this work together with our partners will enable us to maximise the impact we can have on air quality to ensure that the air we breathe is the cleanest air possible, whilst avoiding any negative trade-offs.

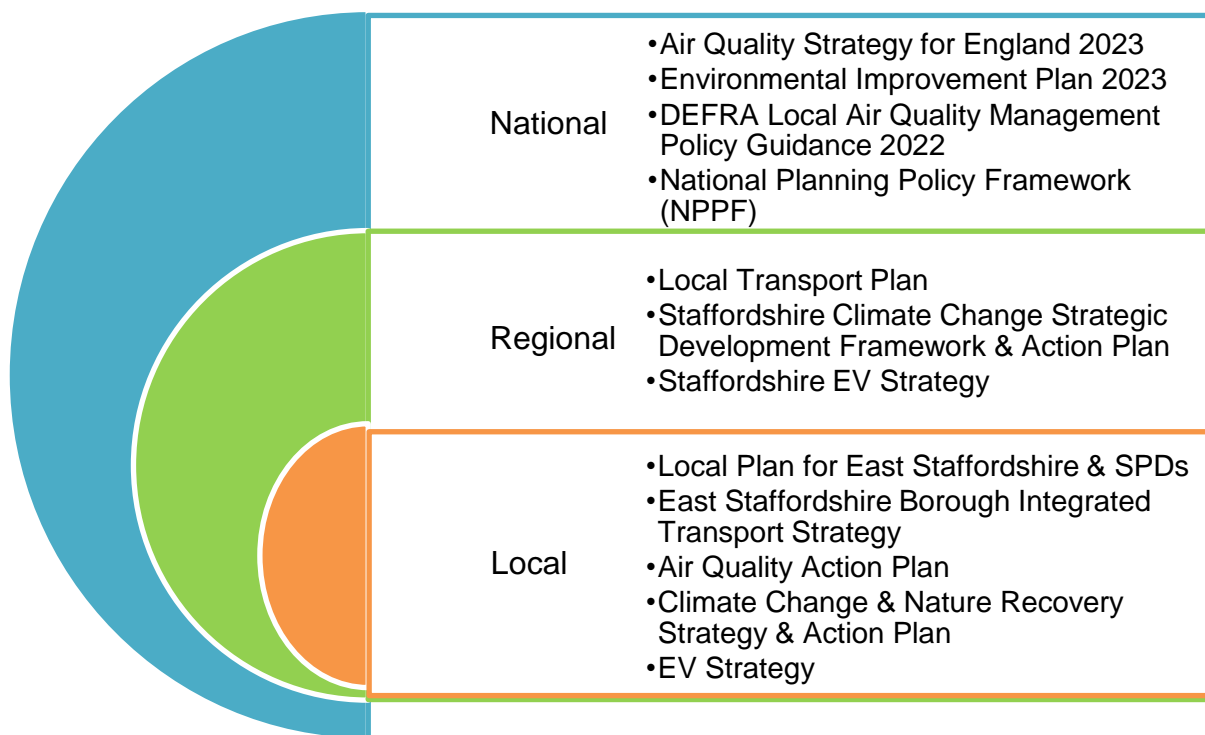


Figure 8: Wider national and regional air quality strategies

7. Glossary

AQMA	Air Quality Management Area
AQAP	Air Quality Action Plan
BUATMS	Burton Urban Area Transport Management Study
CO₂	Carbon dioxide
LAQM	Local Air Quality Framework
NO₂	Nitrogen dioxide
NPPF	National Planning Policy Framework
PM	Particulate Matter
PM₁₀	Course particles less than 10 microns in diameter
PM_{2.5}	Finer particles that are less than 2.5 microns in diameter
PM_{0.1}	Ultrafine particles that are less than 0.1 microns in diameter