

Nottingham City Council
Air Quality Action Plan (draft)

In fulfilment of Part IV of the
Environment Act 1995
Local Air Quality Management

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Foreword

Clean air is essential for good health.

Burning fossil fuels in air generates carbon dioxide and a range of air pollutants, including nitrogen oxides and particles. Particles are also generated by brake, tyre and road surface wear and agricultural practices.

Long-term exposure to air pollution at the levels experienced in many Cities in the UK is now known to cause respiratory and cardiovascular disease and lung cancer. Short-term exposure to episodes of elevated air pollution also worsens symptoms for those with existing asthma, respiratory or cardiovascular disease, and can trigger acute events such as heart attacks in vulnerable individuals. Recent studies also show a relationship between air pollution and children developing asthma, and older people developing dementia. They also show adverse health impacts occur at concentrations below the air quality objectives, and that there are no safe levels for particles.

There is also scientific consensus that the carbon dioxide emitted when fossil fuels are burned is contributing to climate change and ocean acidification. These environmental changes are having an increasingly adverse impact on us e.g. through increasingly frequent extreme weather events and meteorological conditions that allows air pollution to build up.

The Nottingham Declaration on Climate Change in October 2000 and the Work place Parking Levy in 2004 demonstrated that Nottingham City Council was at the forefront in reducing polluting emissions and carbon dioxide:

In 2018 we demonstrated that our investment in public transport, active travel and other energy efficiency schemes meant we did not need to introduce a ‘Clean Air Zone’.

In 2019 we announced our most challenging goal: to be Carbon Neutral by 2028.

To protect and improve our Citizen’s and visitors’ health Nottingham City Council wants to go further than just meeting the Air Quality Objectives. Reducing levels of air pollution further will be a challenge, but in Nottingham, we believe that concerted and sustained action by the Council, NHS and other public partnerships, businesses and most importantly our Citizens will deliver further reductions in emissions, and improve air quality for everyone.

Executive Summary

This Air Quality Action Plan (AQAP) has been produced as part of our statutory duties required by the Local Air Quality Management framework. It outlines the action we will take to improve air quality in Nottingham City Council's area (and potentially that of the Greater Nottingham conurbation) and specific actions planned between 2018 and 2023.

This action plan replaces the previous action plan which was integrated into the Local Transport Plan 2010 and primarily focussed on reducing congestion and traffic growth by providing alternative transport solutions to encourage people to switch from their cars to public transport (buses, trams and trains), cycling and walking (active travel) thus reducing emissions from road traffic. Projects delivered through the LTP from 2010 to 2016 include:

- Nottingham City Deal and Creative Quarter Programme
- Nottingham Bus Strategy and Quality Bus Partnerships
- Tram lines 2 & 3 introduced
- Nottingham Station 'transport hub/interchange' completed
- Improvements to pedestrian and cycle routes infrastructure
- Safer routes to school programme - 'Footprints'
- Car clubs
- Ring road improvements to reduce congestion
- Real time public transport information

For more detailed information please see all LTP Delivery reports from 2011 to 2016 at : http://www.nottinghaminsight.org.uk/search?q=local+transport+plan

The Nottingham Local Transport Plan now encompasses 2011 to 2026:

https://www.nottinghamcity.gov.uk/transport-parking-and-streets/transport-strategies-funding-bids-and-current-consultations/

Air pollution is associated with a number of adverse health impacts and recognized as a contributing factor in the onset of heart disease and cancer. Additionally, air pollution particularly affects the most vulnerable in society; children and older people, and those with heart and lung conditions. There is also often a strong correlation with equalities issues, because areas with poor air quality are also often the less affluent areas[1,2].

[1] Environmental equity, air quality, socioeconomic status and respiratory health, 2010
[2] Air quality and social deprivation in the UK: an environmental inequalities analysis, 2006

The annual health cost to society of the impacts of particulate matter alone in the UK is estimated to be around £16 billion[3]. Nottingham City Council is committed to reducing the exposure of people in its area to poor air quality to improve health.

Nottingham City Council and partners have developed actions that can be considered under 5 broad topics:

- Emission reduction
    - Reduce energy demand/emissions by improving energy efficiency in buildings with passive measures and alternative low energy technologies
    - Council supported programme to replace old gas fired boilers with higher efficiency lower NOx boilers
    - Trialling the replacement of gas fired boiler plant with alternative non-combustion technology – e.g. fuel cells (DEFRA grant funded)
    - Environmental Permitting – regulation and identification and promotion of switch to lower emission technologies and processes
- Promoting low emission transport
    - Promotion and investment in infrastructure for zero and ultra-low emission vehicles
    - Taxi strategy and licensing policy to encourage and support transition to zero and ultra-low emission vehicles
    - Long term programme replacing older buses with zero and low emission buses
- Promoting travel alternatives
    - Promotion of active travel: walking, cycling
    - Promotion of public transport including further expansion of Nottingham Tram network,
- Exposure reduction and mitigation
    - Journey planning walking/cycling/public transport
    - Tree planting programme
- Transport planning and infrastructure
    - Expansion of Tram (NET line 4)
- Traffic management
    - Southern Relief Route to ease congestion in the City Centre
- Vehicle fleet efficiency
    - Introduction of EV street cleaning and refuse collection vehicles and
- Education, awareness and achieving sustained behavioural change
    - Themed air quality and health communications plan
    - Promotion/Participation National Clean Air Day
    - Nottingham ‘Clean/Safe’ promotions
    - Promotion of active/zero emission travel, public transport alternatives to private motor vehicles

[3] Defra. Abatement cost guidance for valuing changes in air quality, May 2013

Following completion of the action plan to reduce road side NO2 levels ‘additional measures’ our priorities are to continue to encourage, promote and facilitate modal shift to active travel, the use of public transport, and the use of Ultra-Low and Zero Emission vehicles in the City and across the conurbation.

In this AQAP we outline how we plan to effectively tackle air quality issues within our control. However, we recognise that there are a large number of air quality policy areas that are outside of our influence (such as vehicle emissions standards agreed in Europe), but for which we may have useful evidence, and so we will continue to work with regional and central government on policies and issues beyond Nottingham City Council’s direct influence.

Responsibilities and Commitment

This AQAP document was prepared by the Commercial and Operations Department (Environmental Health and Safer Places team) of Nottingham City Council with the support and agreement of the following officers and departments:

Commercial and Operations: Community Protection: Environmental Health, Taxi Licensing. Energy Services.

Planning: Transport Projects, Planning and Building Control, Public Transport Services

Public Health

This AQAP is a summary of measures already approved, and either implemented fully, partially, or planned. Progress each year will be reported in the Annual Status Reports (ASRs) produced by Nottingham City Council, as part of our statutory Local Air Quality Management duties.

If you have any comments on this AQAP please send them to the Environmental Health and Safer Places team at:

Nottingham City Council, Loxley House, Station Street, Nottingham NG2 3NG

Email pollution.control@nottinghamcity.gov.uk

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1 Introduction

This report outlines the actions that Nottingham City Council plans to deliver between 2018-2023 (and beyond) in order to reduce concentrations of air pollutants and exposure to air pollution; thereby positively impacting on the health and quality of life of residents and visitors to Nottingham.

It has been developed in recognition of the legal requirement on the local authority to work towards Air Quality Strategy (AQS) objectives under Part IV of the Environment Act 1995 and relevant regulations made under that part and to meet the requirements of the Local Air Quality Management (LAQM) statutory process, and to fulfil the Ministerial Direction of November 2018.

It draws on the most recent guidance and research and particularly information and best practice detailed in 'Air pollution: outdoor air quality and health' NICE guideline June 2017, 'Spatial planning for health: an evidence resource for planning and designing healthier places' Public Health England June 2017 and 'Air Quality: A briefing for Directors of Public Health' DEFRA/PHE/LGA March 2017.

This Plan will be reviewed every five years at the latest and progress on measures set out within this Plan will be reported on annually within Nottingham City Council's air quality Annual Status Report (ASR).

2 Summary of Current Air Quality in Nottingham City Council's area.

Please visit https://www.nottinghaminsight.org.uk/f/63682/Library/Environment/Air-Quality/ for reports and other information about air quality in Nottingham and Nottinghamshire.

Please click on link below to download the Nottingham City Council Local Air Quality Management Annual Status Report 2020
https://www.nottinghaminsight.org.uk/d/aaxcfkbI

3 Nottingham City Council's Air Quality Priorities

3.1 Public Health Context

It is estimated that 5.7% of all adult deaths (equivalent to more than 410 deaths) in Nottinghamshire County (i.e. excluding the City of Nottingham), and 6.3% [2] of all adult deaths (equivalent to 146 deaths) in Nottingham City, were attributable to long term exposure to human-made particulate air pollution based on 2016 figures. When the effects of NO2 are included the number of attributable deaths is estimated to increase to more than 450 in Nottinghamshire County and 181 in Nottingham City.

Please follow the link below for the Nottingham and Nottinghamshire Air Quality Strategy which further details the statistics.

https://www.nottinghaminsight.org.uk/d/aaJK0SBf

and the link below for the Air Quality and Health chapter of Nottingham City Council's Joint Strategic Needs Assessment which further details the health impacts of air pollution.

https://www.nottinghaminsight.org.uk/d/aXx6DuH

3.2 Planning and Policy Context

Policy IN2 of the Local Plan states Nottingham City Council's policy with respect to air pollution. https://documents.nottinghamcity.gov.uk/download/7574

Nottingham City Council is part of the East Midlands Air Quality Network which has developed an Air Quality and Emissions Mitigation Guide for Developers.

https://www.nottinghaminsight.org.uk/d/aavR2kmH

The guide is currently being reviewed with the intention of its principles being adopted by Nottingham City Council.

3.3 Source Apportionment

The AQAP measures presented in this report are twofold:-

i. one specific measures targeted at the sources of nitrogen dioxide that were predicted to contribute the likely breach of the EU annual mean NO_2 limit value on a small number of road links in the City Centre, and

ii. a number of general measures to reduce emissions from road transport originating travelling in and travelling around the City and road transport travelling into the City or through traffic.

Source apportionment was undertaken in 2018 in order to model air quality and calculate the emission reductions required to meet the EU annual mean limit value on a number of 'at risk' roads, as part of Nottingham's evaluation of the need for, and type of, Clean Air Zone Air (Environment Act 1995 (Nottingham City Council) Air Quality Direction 2017).

The methodology and calculation can be downloaded from:

https://www.nottinghaminsight.org.uk/Document-Library/Document-Library/aBFPtuZ

3.4 Required Reduction in Emissions

The required and predicted reduction in emissions are detailed in the Nottingham Clean Air Zone – Air Quality Report (AQ3)

https://www.nottinghaminsight.org.uk/d/aBFPuFP

3.5 Key Priorities

Nottingham City Council's key air quality priority is to address the predicted infraction of the annual mean NO2 EU limit value of 40 ug/m3 by implementing the measures identified in the Local Plan to Improve Air Quality in Nottingham – Business Case.

https://www.nottinghaminsight.org.uk/d/aBFPtBx

These are:-

- Priority 1 – Complete phased transition to Bio-gas buses and the retrofit of Euro IV/V buses to Euro VI standard (competed April 2020),
- Priority 2 – taxi Licensing Strategy and age policy partially/fully implemented.

  https://www.nottinghaminsight.org.uk/d/aBFPtrI
- Priority 3 – Promotion of ULEV and provision of charging facilities for EV Taxis and other vehicles throughout conurbation

  https://www.nottinghaminsight.org.uk/d/aBFPsPp

  https://www.nottinghaminsight.org.uk/d/aBFPtpc

See https://www.nottinghaminsight.org.uk/Document-Library/Document-Library/aBFyzqe#

4 Development and Implementation of Nottingham City Council AQAP

4.1 Consultation and Stakeholder Engagement

The Local Plan to Improve Air Quality in Nottingham was developed to address the predicted infraction of the EU NO2 annual mean limit value on a number of road links in Nottingham's City Centre, and required public consultation prior to its submission to DEFRA/the Minister for approval and implementation.

Nottingham City Council was required to implement the submitted and subsequently approved plan by Ministerial Direction dated November 2018.

4.2 Steering Group

Please refer to the LAQM ASR 2020 for details:
https://www.nottinghaminsight.org.uk/d/aaxcfkbI

5 AQAP Measures

Please refer to the LAQM ASR 2020 for details:
https://www.nottinghaminsight.org.uk/d/aaxcfkbI

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Glossary of Terms

Abbreviation	Description
AQAP	Air Quality Action Plan - A detailed description of measures, outcomes, achievement dates and implementation methods, showing how the local authority intends to achieve air quality limit values'
AQMA	Air Quality Management Area – An area where air pollutant concentrations exceed / are likely to exceed the relevant air quality objectives. AQMAs are declared for specific pollutants and objectives
AQS	Air Quality Strategy
ASR	Air quality Annual Status Report
Defra	Department for Environment, Food and Rural Affairs
EU	European Union
LAQM	Local Air Quality Management
NO_2	Nitrogen Dioxide
NO_x	Nitrogen Oxides
PM_{10}	Airborne particulate matter with an aerodynamic diameter of 10µm (micrometres or microns) or less
$PM_{2.5}$	Airborne particulate matter with an aerodynamic diameter of 2.5µm or less

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AEA Technology (2005)
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Nottingham City Council Website **http://www.nottinghamcity.gov.uk**