

# Public Document Pack

## NOTTINGHAM CITY COUNCIL

### OVERVIEW AND SCRUTINY COMMITTEE

**MINUTES of the meeting held at Loxley House, Nottingham on 14 March 2018  
from 2.02 pm - 3.29 pm**

#### **Membership**

##### Present

Councillor Brian Parbutt (Chair)  
Councillor Sue Johnson (Vice Chair)  
Councillor Jim Armstrong  
Councillor Anne Peach (Vice Chair)  
Councillor Azad Choudhry  
Councillor Mohammed Ibrahim  
Councillor Patience Uloma Ifediora  
Councillor Gul Nawaz Khan  
Councillor Jackie Morris

##### Absent

Councillor Josh Cook  
Councillor Carole McCulloch  
Councillor Mohammed Saghir  
Councillor Marcia Watson

#### **Colleagues, partners and others in attendance:**

Sara Ball - Principal Environmental Health Officer  
Jane Garrard - Constitutional Services  
Phil Wye - Constitutional Services Officer

#### **56 APOLOGIES FOR ABSENCE**

Councillor Josh Cook – other Council business  
Councillor Mohammed Saghir - illness

#### **57 DECLARATIONS OF INTERESTS**

None.

#### **58 MINUTES**

The minutes of the meeting held on 7 February 2018 were confirmed as a correct record and signed by the Chair.

#### **59 AIR QUALITY**

Sara Ball, Environmental Health and Safer Places, delivered a presentation on air pollution and health, smoke control areas and clean air zones, highlighting the following:

- (a) natural and human activities emit gases and particles into the air which affect our health and the environment. The most damaging of these are nitrogen dioxide,

sulphur dioxide, carbon dioxide and particulates;

- (b) elevated levels or long term exposure to air pollution can lead to serious symptoms and conditions affecting human health such as cancer and heart disease. In the UK air pollution is estimated to shorten life expectancy by an average of 7 months. Air pollution is often invisible and goes unnoticed by most people, but is estimated to cause early death for 40,000 people worldwide annually;
- (c) the UK consistently misses the EU objectives for air quality, which were originally intended to be met in 2004/5 and then extended to 2010;
- (d) the Clean Air Acts of 1956, 1968 and 1993 introduced smoke control areas, including Nottingham City. This reduced levels of sulphur dioxide and made the air visibly cleaner;
- (e) the Environment Act 1995 identifies areas where the nitrogen dioxide annual mean air quality objective will not be met. Two of these were identified in Nottingham, one at Lace Street and a larger one covering the city centre. These Air Quality Management Areas (AQMAs) are contained in the Local Transport Plan. Since 2012, the Lace Street AQMA has consistently met the objectives and is likely to be revoked although there are now other areas where levels are exceeded;
- (f) the Nottinghamshire Air Quality Strategy is being reviewed, and the new strategy will be launched in summer 2018. The Local Transport Plan includes the 'Go Ultra Low' programme for promotion of electric vehicles, and the Workplace Parking Levy which funds public transport improvements;
- (g) DEFRA has identified two Clean Air Zones (CAZs) in Nottingham on the ring-road and Lower Parliament Street/London Road, where clean air targets will not be met by 2020 unless there is no intervention. In these areas consultants have been appointed, specialising in traffic and air quality, to model and inform the CAZ so that it can be formalised by the Secretary of State by Autumn 2018;

The following points were raised by Committee members during the discussion which followed:

- (h) air quality recommendations can be integrated into planning applications for new developments, such as parking levels, chimneys and air intake positions;
- (i) citizens should not only use smokeless fuel or approved appliances to heat their homes. Enforcement action can be carried out where this does not happen;
- (j) whilst it would be ideal for all new taxis to be electric, this would be unreasonably expensive for taxi operators and there is low levels of manufacture of electric taxis currently in the UK. The current aim is for taxis to switch to Euro 6 standard engines;
- (k) if approved this year, the Nottingham CAZ would come into place soon after as it is intended to reach required targets by 2020. The Council is already working on

procedures and methods for the CAZ;

- (l) Nottingham is one of the UKs exemplar cities for clean transport, and receives high levels of funding. Infrastructure improvements are important but there also needs to be behaviour change amongst citizens;
- (m) The Council should set a good example by changing its own vehicle fleet to electric vehicles.

**RESOLVED to**

- (1) thank Sara for the information provided;**
- (2) explore possible changes to Council policy for improving air quality at a future meeting.**

**60 FLY-TIPPING IN NOTTINGHAM RESPONSE TO RECOMMENDATIONS**

Councillor Brian Parbutt introduced the report updating the Committee on the response to the recommendations it made at its meeting on 6 December 2017 regarding fly-tipping in Nottingham.

**RESOLVED to**

- (1) approach Area Committee Chairs with a view to considering an item on the next agenda to look at individual ward needs/issues in regard to waste management;**
- (2) investigate the possibility of fly-tipping hotspots being available in NOMAD to inform Councillors.**

**61 WORK PROGRAMME 2018/19 DEVELOPMENT**

Councillor Brian Parbutt introduced the report asking Committee members to identify suggestions for reviews during 2018/19.

The Committee identified the following possible areas for review:

- (a) revisit the outcomes and impact of the previous scrutiny review resulting in insourcing of bailiffs and council tax collection;
- (b) property management and the potential for a property asset register;
- (c) homebuilding targets in Nottingham in the public and private sector;
- (d) homelessness;
- (e) support for young people on the edge of crime, including knife crime and grooming for drug dealing, who are disengaged from mainstream services.

**62    WORK PROGRAMME 2017/18**

**RESOLVED to note the work that is currently planned for the remainder of the 2017/18 municipal year.**

# Air Pollution and Health, Smoke Control Areas, Air Quality Management Areas, and Clean Air Zones

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Richard Taylor  
Community Protection: Environmental Health and Safer Places Team  
Nottingham City Council

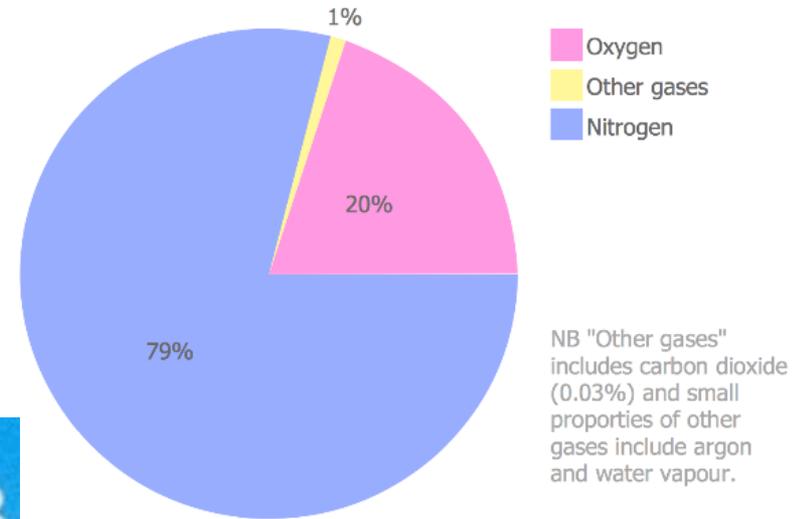
Minute Item 59

# The Air we all breathe

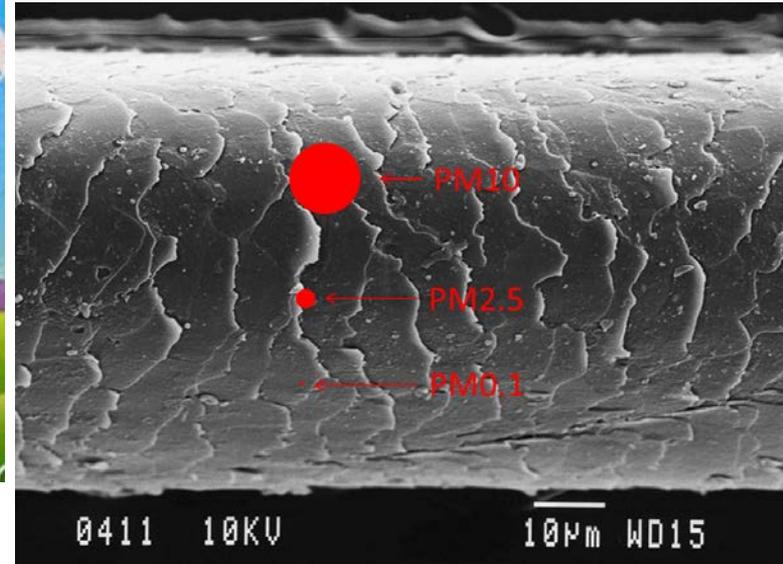
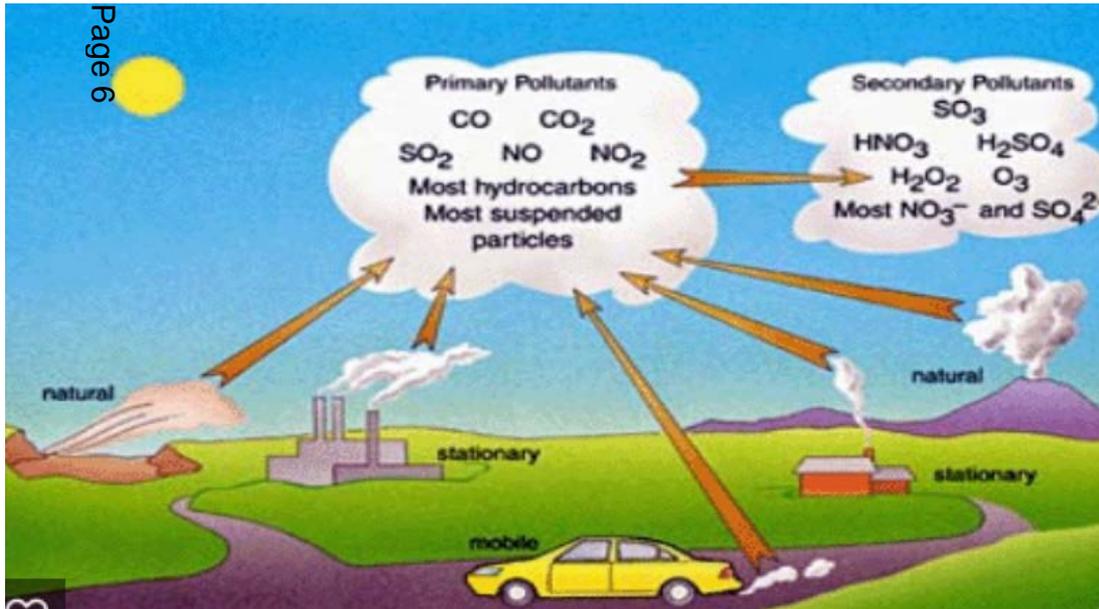
is mostly nitrogen, oxygen and water vapour.

Natural and human activities emit other gases and particles into the air which affect our health and the environment

Approximate composition of the air



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# The health effects of the ‘pollutants of concern’ and Local Air Quality Management

## Health Effects

Generally if you are young and in a good state of health, moderate air pollution levels are unlikely to have any serious short term effects. However, elevated levels and/or long term exposure to air pollution can lead to more serious symptoms and conditions affecting human health. This mainly affects the respiratory and inflammatory systems, but can also lead to more serious conditions such as heart disease and cancer. People with lung or heart conditions may be more susceptible to the effects of air pollution.

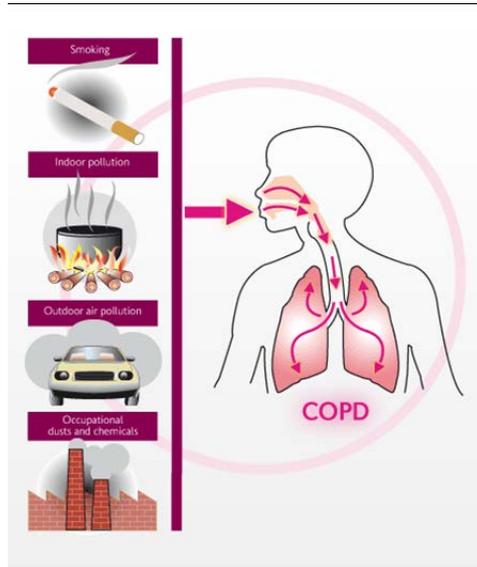
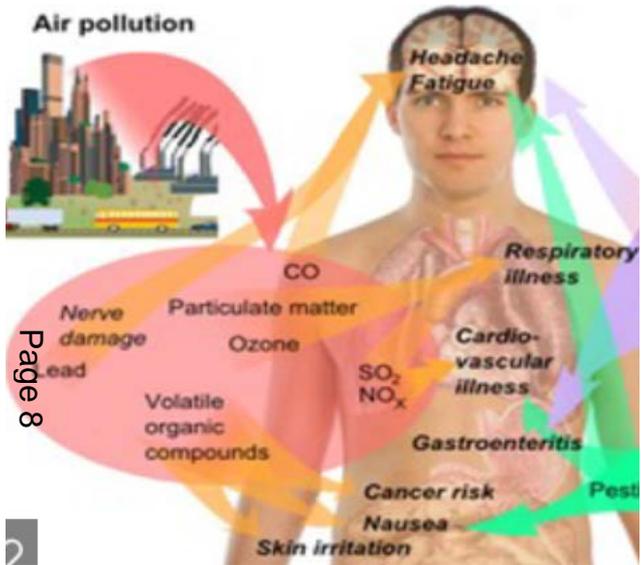
The table below shows the types of health effects experienced by the most common pollutants at elevated levels:

Pollutant	Health effects at very high levels
Nitrogen Dioxide, Sulphur Dioxide, Ozone	These gases irritate the airways of the lungs, increasing the symptoms of those suffering from lung diseases
Particles	Fine particles can be carried deep into the lungs where they can cause inflammation and a worsening of heart and lung diseases
Carbon Monoxide	This gas prevents the uptake of oxygen by the blood. This can lead to a significant reduction in the supply of oxygen to the heart, particularly in people suffering from heart disease

In the UK air pollution is estimated to shorten life expectancy by an average of 7 months – this means just a few weeks for some to **11 years for others...**

# Air Pollution shortens lives

1952 – it was estimated 12000+ ‘died early’ due to ‘the great smog’  
2008 - it was estimated 29,000 ‘died early’ from **invisible air pollution**  
**Jan 2016 – 29,000 revised upward to 40,000**



## Air pollution: Rise in 999 calls for breathing problems



People with lung and heart problems are advised to avoid strenuous activity outdoors

High levels of air pollution are continuing to affect parts of the UK, as a rise in emergency calls over related health problems is reported.

Related Stories

Air pollution ‘episodes’ – prolonged periods of high concentrations have the most noticeable effect



# LAQM: Air Quality Objectives to protect health

Pollutant	Air Quality Objective		Date to be achieved by
	Concentration	Measured as	
<b>Nitrogen dioxide</b>	200 $\mu\text{g}/\text{m}^3$ not to be exceeded more than 18 times a year	1-hour mean	31.12.2005
	40 $\mu\text{g}/\text{m}^3$	Annual mean	31.12.2005
Page 9 <b>Particles (PM<sub>10</sub>) (gravimetric)</b>	50 $\mu\text{g}/\text{m}^3$ , not to be exceeded more than 35 times a year	24-hour mean	31.12.2004
	40 $\mu\text{g}/\text{m}^3$	Annual mean	31.12.2004
<b>Sulphur dioxide</b>	350 $\mu\text{g}/\text{m}^3$ , not to be exceeded more than 24 times a year	1-hour mean	31.12.2004
	125 $\mu\text{g}/\text{m}^3$ , not to be exceeded more than 3 times a year	24-hour mean	31.12.2004
	266 $\mu\text{g}/\text{m}^3$ , not to be exceeded more than 35 times a year	15-minute mean	31.12.2005

# Meteorology and pollution episodes

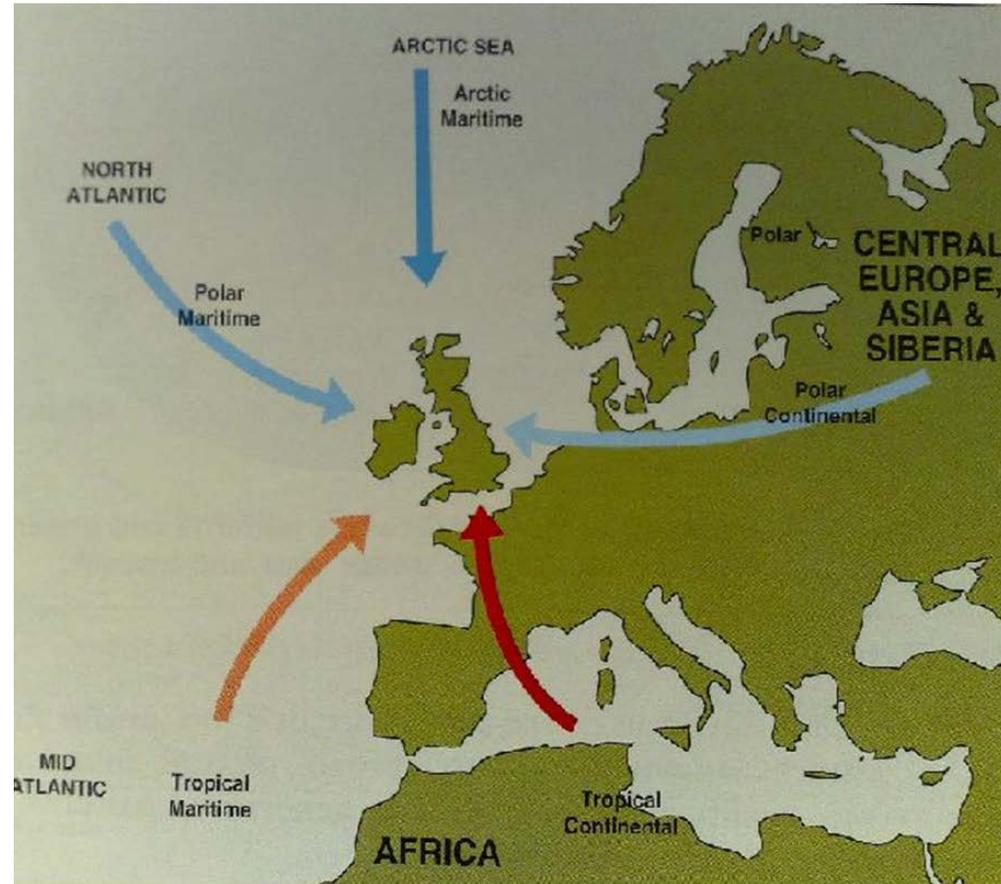
Air pollution knows no boundaries.

Generally global air masses and weather systems disperse and dilute air pollution as they move and mix.

Under certain conditions air masses don't mix much, they simply carry the pollution within them from one place to another (e.g. Saharan dust/smoke from scrub fires in Portugal/Spain carried in the Tropical Continental Air Mass to the UK (2015 & 2017), or Icelandic volcanic dust carried in the Polar Maritime Air Mass to the UK (2016)),

Alternatively an air mass can remain over an area for a few days/week, allowing air pollution levels to increase,

both of these situations can lead to 'air pollution episodes'.



# Air Pollution episodes (seasonal)

UK-AIR data: 03/04/2014 (View Latest)  
Summary from 129 monitoring sites



## Index Bands



You should follow the 3 steps below to use the Daily Air Quality Index.

**Step 1:** Determine whether you (or your children) are likely to be at-risk from air pollution.

Information on people who may be affected is provided on the [Additional information on the short-term effects of air pollution](#) page. Your doctor may also be able to give you advice.

**Step 2:** If you may be at-risk, and are planning strenuous activity outdoors, check the air pollution forecast.

**Step 3:** Use the health messages below corresponding to the highest forecast level of pollution as a guide.

## Recommended Actions and Health Advice

Air Pollution Banding	Value	Accompanying health messages for at-risk individuals*	Accompanying health messages for the general population
Low	1-3	Enjoy your usual outdoor activities.	Enjoy your usual outdoor activities.
Moderate	4-6	Adults and children with lung problems, and adults with heart problems, <b>who experience symptoms</b> , should <b>consider reducing</b> strenuous physical activity, particularly outdoors.	Enjoy your usual outdoor activities.
High	7-9	Adults and children with lung problems, and adults with heart problems, should <b>reduce</b> strenuous physical exertion, particularly outdoors, and particularly if they experience symptoms. People with asthma may find they need to use their reliever inhaler more often. Older people should also <b>reduce</b> physical exertion.	Anyone experiencing discomfort such as sore eyes, cough or sore throat should <b>consider reducing</b> activity, particularly outdoors.
Very High	10	Adults and children with lung problems, adults with heart problems, and older people, should <b>avoid</b> strenuous physical activity. People with asthma may find they need to use their reliever inhaler more often.	<b>Reduce</b> physical exertion, particularly outdoors, especially if you experience symptoms such as cough or sore throat.

\*Adults and children with heart or lung problems are at greater risk of symptoms. Follow your doctor's usual advice about exercising and managing your condition. It is possible that very sensitive individuals may experience health effects even on Low air pollution days. Anyone experiencing symptoms should follow the guidance provided below.

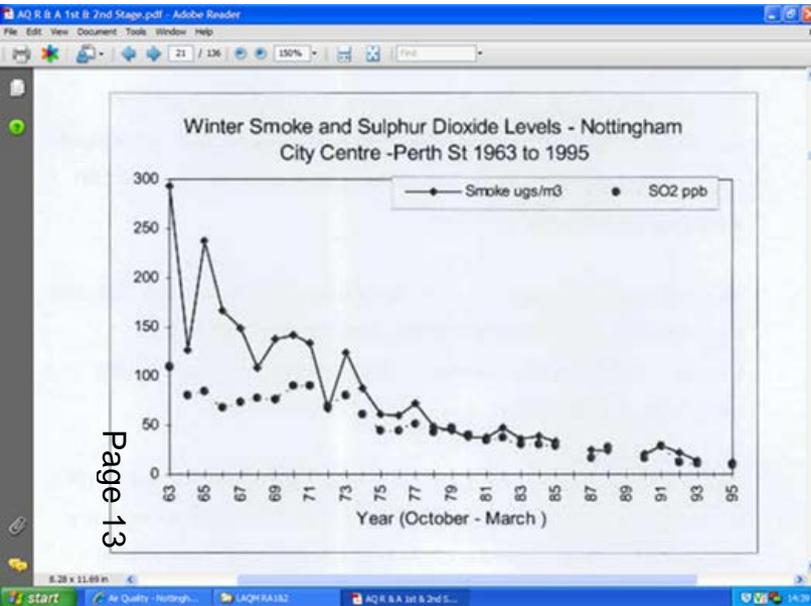
# Clean Air Acts 1956, 1968, 1993

- Introduced smoke control areas better known as smokeless zones and made the air visibly cleaner (most of the time) and significantly and dramatically reduced concentrations of sulphur dioxide (acidic toxic gas produced by burning coal) and visible/black smoke

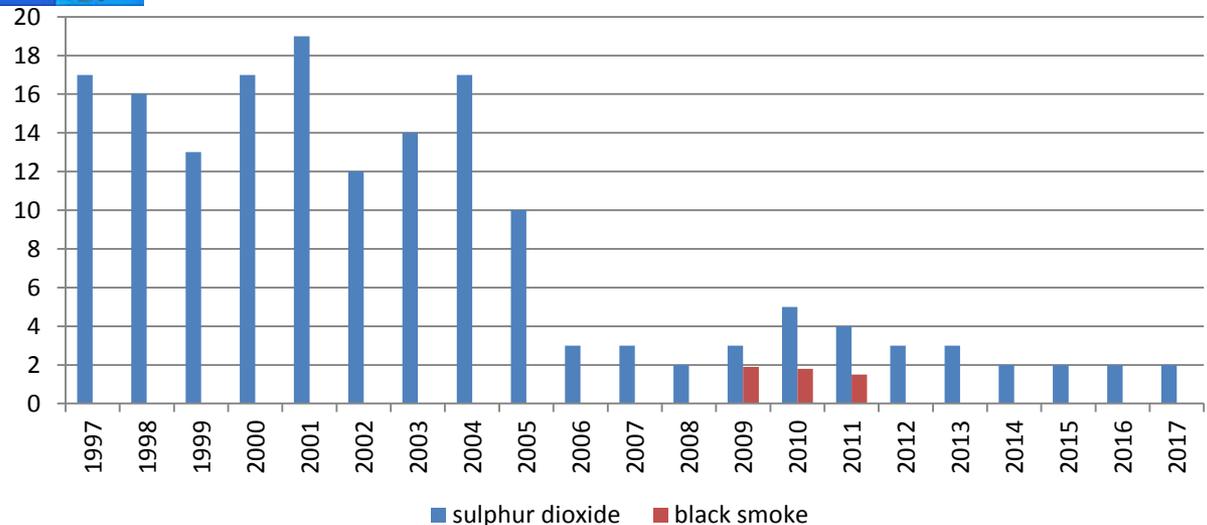


# Clean Air Act and effect on particles and sulphur dioxide in Nottingham c.1963- present

- Note black smoke particles range in size from  $<0.1$  to 100 microns.
- 1963-1995 monitoring using 8-port volumetric apparatus (reflectometer and hydrogen peroxide titration)
- 1997 onwards UV fluorescence for SO<sub>2</sub> and aethelometer for black smoke

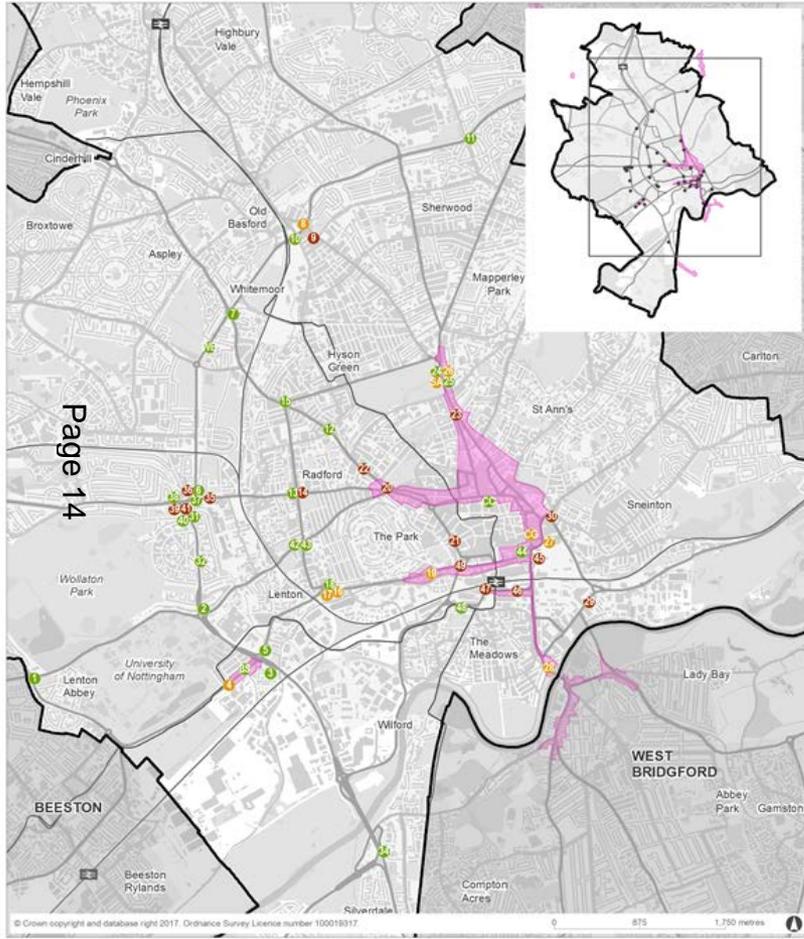


**Nottingham AURN annual mean black smoke and sulphur dioxide concentrations ug/m<sup>3</sup>**



# Local Air Quality Management

Air Quality in Nottingham - summary of nitrogen dioxide monitoring data 2012 - 2016



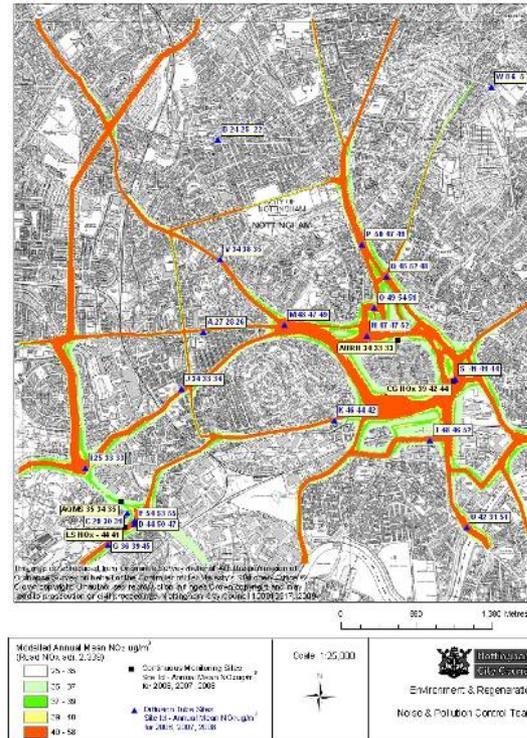
- Environment Act 1995 Part 3: Local Air Quality Management process identifies areas where the nitrogen dioxide annual mean air quality objective of  $40\mu\text{g}/\text{m}^3$  is/will not be met, requiring Air Quality Management Areas and Action Plans. Two AQMAs were declared for  $\text{NO}_2$ .
- The Air Quality Action Plan is currently contained in the Local Transport Plan
- The 2017 Annual Status Report (using monitoring data from 2016) identified several locations outside the two AQMAs where levels of  $\text{NO}_2$  exceeded the AQO of  $40\mu\text{g}/\text{m}^3$
- The Lace Street/Beeston Road AQMA has consistently met the AQO since 2012.
- This requires a further assessment that is likely to lead to the revocation of AQMA 3 (Lace Street/Beeston Road) and a variation of the spatial extent of AQMA 2 (City Centre) to encompass the new locations of exceedence.

Key  
Air quality monitoring location data points (indicative location only)  
● Air quality objective was exceeded in 2016  
● Air quality objective met in 2016 (historic exceedance at monitoring site)  
● Air quality objective met in 2016 (and all previous years monitored)  
Air quality management areas (AQMA) (pink shaded area)  
City Boundary (black outline)

A red, amber, green methodology for representing historical monitoring data has been used

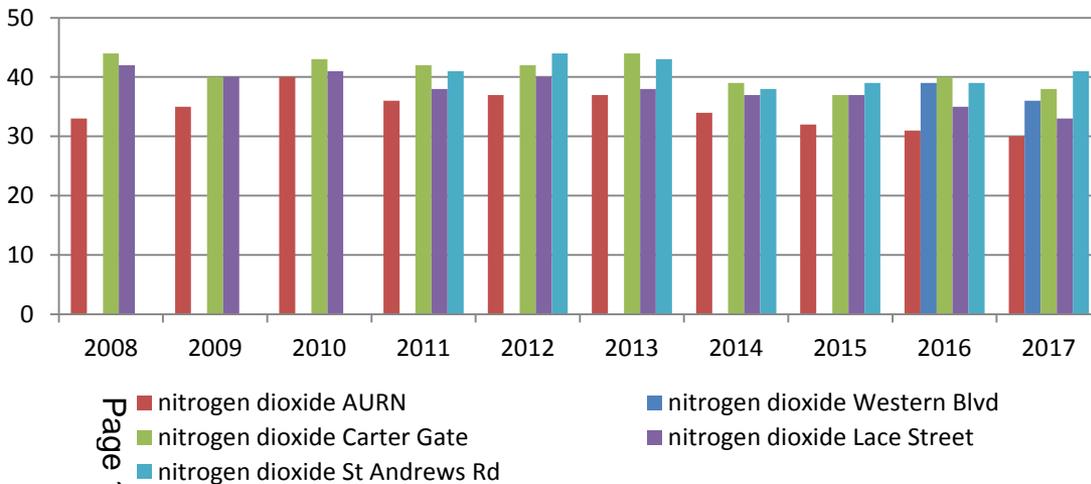
# Monitoring and Modelling to assess and predict air quality

- Monitoring and modelling air pollution are balanced to make the most of resources (time/cost), accuracy, and spatial and temporal distribution.
- Modelling is the most practicable and systematic way of predicting future concentrations over a large geographical area.
- Monitoring is required to show actual air pollution levels (for comparison with Air Quality Objectives).



# Nottingham - Monitored levels 2008 - 2017

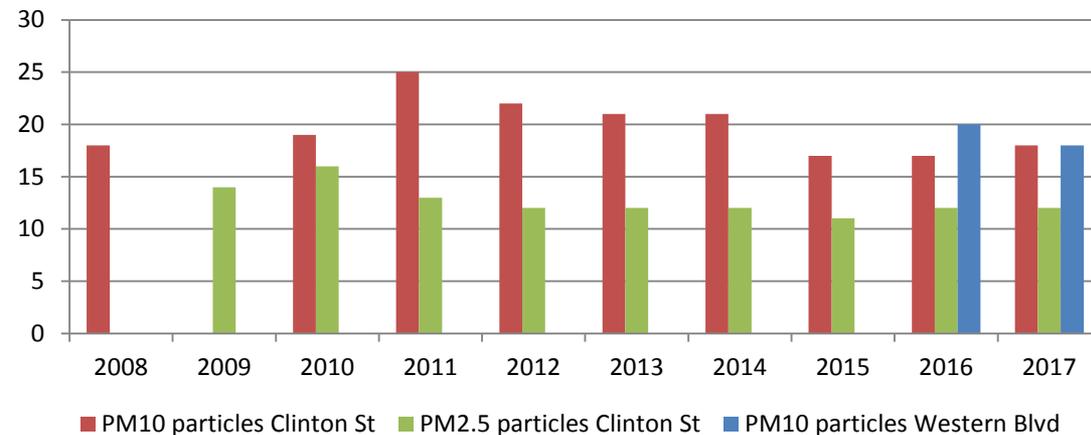
**Nottingham (real time analyser sites) annual mean nitrogen dioxide concentrations ug/m3**



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NO2 annual mean AQO = 40 ug/m3  
 BUT health effects observed at 20-25 ug/m3

**Nottingham AURN annual mean particle PM10 and PM2.5 concentrations ug/m3**



PM10 annual mean AQO = 40 ug/m3  
 WHO guide 20 ug/m3

PM2.5 indicative annual mean (England) = 25 ug/m3  
 WHO guide = 10 ug/m3

BUT no safe exposure limit

# Identifying and delivering air quality improvements to meet the air quality objectives, and protect health

**Nottinghamshire Air Quality Strategy 2008** – reviewed and revised 2016-18.

New format web based Strategy to be launched Summer 2018.

**Nottingham City Air Quality Action Plan** (new plan under development)

## **Local Transport Plan**

'Go Ultra Low' program

awareness 'try before you buy'

+ charging infrastructure improvement

Workplace Parking Levy

Public Transport

tram, electric and low emission buses, taxi strategy (ULEV)

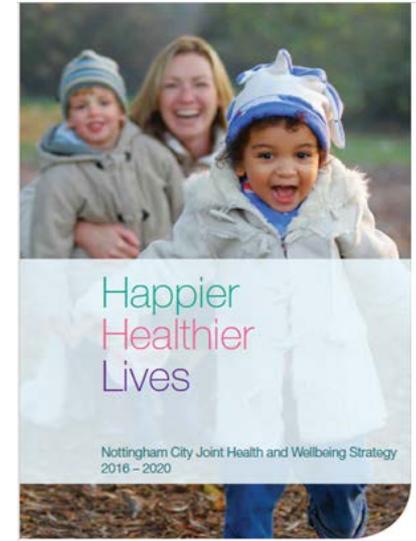
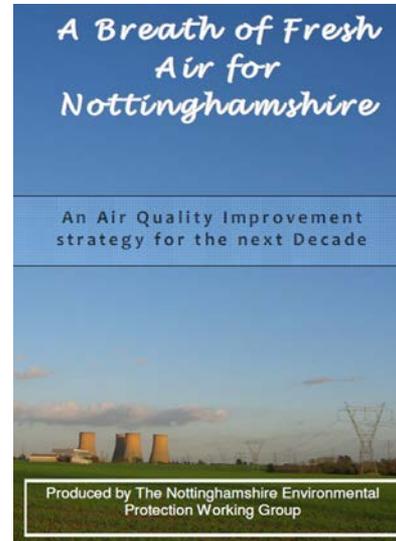
Active travel – walking and cycling

## **Joint Health and Wellbeing Strategy 2016-2020**

Environment theme

## **NHS Sustainability and Transformation Plan(s)**

**Clean Air Zones** – 2nd iteration of UK strategy successfully challenged by ClientEarth (21Feb2018). Nottingham working to original timescales/deadlines.





# CAZ – Nottingham's approach

- Working closely with the DEFRA/DfT 'Joint Air Quality Unit (JAQU)
- Consultants (specialising in traffic) model traffic flows, driver behaviour and predict traffic levels on all roads in study area for future years, and pass this information to :-
- Page 19 Consultants (specialising in air quality) model effects of:- area, point source, and existing and future traffic emissions (and changes in vehicle technology), background pollution levels, meteorology and topography to predict 2016 and 2020 NO2 concentrations across the City.
- Iterative process.
- Initial preferred 'provisional' option will be submitted to DEFRA in Outline Business Case – currently a Class B BUT Geographic extent of CAZ to be determined.

# Work plan/project programme for 2018-19

- CAZ modelling/assessment/development March-May
- LAQM Annual Status Report/Detailed Assessment
- Draft Supplementary Planning Guide: Development and Air Quality
- CAZ and air quality awareness raising - March
- British Lung Foundation Breathe Easy Week 18<sup>th</sup> -24<sup>th</sup> June
- (National) Clean Air Day 21<sup>st</sup> June
- FestEval Nottingham's Ultra Low Emission Vehicle event 29<sup>th</sup> and 30<sup>th</sup> June
- LAQM ASR/DA submission to DEFRA for 30<sup>th</sup> June
- CAZ – public consultation June-July 2018
- New Nottinghamshire Air Quality Strategy website Summer 2018
- CAZ formalized by Secretary of State (Aug-Sept 2018)
- Air Quality Management Areas (revised/revoked) Oct-Nov 2018
- Nottingham Air Quality Action Plan
- Winter 2018-19 Clean Air Act Smoke Control awareness and enforcement.