

# Science, Art and Smartphone Apps – New ways of Engaging the Public

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# The Environmental Audit Committee

“The costs to society from poor air quality are on a par with those from smoking and obesity. A public awareness campaign would be the single most important tool in improving air quality. It should be used to inform people about the positive action they could take to reduce emissions and their exposure.”

<http://www.publications.parliament.uk/pa/cm201012/cmselect/cmenvaud/1024/102406.htm#a11>

# Contents

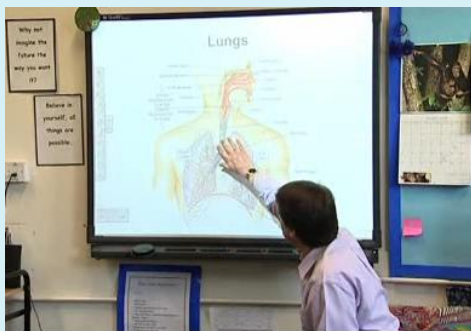
- Exhale project - schools
- London Air website
- London Air apps
- What next

# Exhale Project



- 4 Year study (ongoing)
- Respiratory health of year 4
- 20 schools each year in winter
- ~2500 children reached
- Teaching session science & art

# Exhale Project





# London Air website

Today

The screenshot shows the London Air website interface with several annotations:

- Redes**: Located near the top right navigation area.
- Short videos**: Annotated over the main map area.
- Better guide**: Annotated over the map area.
- YTD hosted 42,796 visitors**: Annotated over the map area.
- 12,249 visits**: Annotated over the map area.

The website content includes:

- Header:** "The London Air Quality Network" and "Welcome to the London Air Quality Network".
- Navigation:** PUBLIC, POLICY, SCIENCE, HELP.
- Main Content:**
  - Peak air pollution levels in London are currently: **LOW**.
  - London's latest pollution map
  - Friday's pollution map
  - Or view your local map: Enter a postcode or select a borough (All of London).
  - Latest hourly air pollution indexes (Map)
  - Recent episode: PM10 and Ozone Mid May 2012
  - Current video: Air pollution, health and actions
  - Air quality objectives for 2011 - does London pass or fail?
  - Local Authorities: Barking and Dagenham, Bexley, Brent, Brentwood, Camden.
  - News: LAQN Seminar 28th June 2012, Air Mail May 2012, 3.5 Year PhD Studentship.
- Footer:** Pollution, Monitoring, Information, Tools, Access, Website.

# London Air website - videos



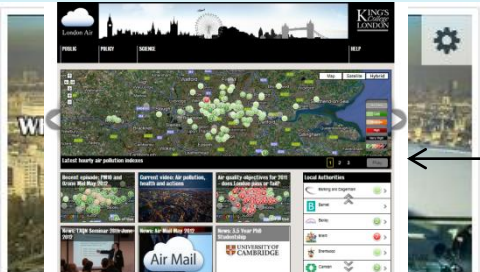
What Is Air Pollution?



What Is Wintertime Smog?



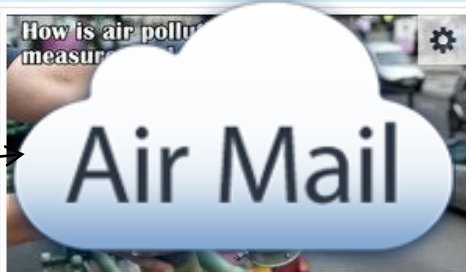
What Can Be Done To Reduce Air Pollution?



Wha



Should I Worry About Air Pollution?



How Is Air Pollution Measured In London



History Of Air Pollution In London



How To Avoid Air Pollution?



Fireworks and Air Pollution

# London Air – iPhone App



- Released March 2010
- Push notifications
- Currently 6422 active subscribers
- Contextual health advice
- Predictions – New Daily Air Quality Index



# London Air – iPhone App

Welcome to the London Air Quality Network

Home Nowcast Bulletins Sites Statistics Episodes Local Authorities Guide Tools Reports Download Data

You are on this page: Nowcast

### Nowcast - Current Pollution Maps

Enter postcode or area:

Map Satellite Hybrid

Estimated current PM10 air pollution index levels, based on measurements taken up to 09:00 on Thursday 21st April.

Low (1-3)	Moderate (4-6)	High (7-9)	Very High (10)	

Select species: PM10 Particulates and visibility: 75%

### What is a Nowcast?

This map shows a pollution "nowcast", which is a pilot service to show current pollution levels in detail across London in comparison with Government's Air Pollution Index. It is created by combining readings within the last hour and air pollution modelling in London. As you zoom the map you will see which areas are currently experiencing higher levels than others, usually those areas close to busy roads. More information about the Air Pollution Index and health advice associated with each index level can be seen [here](#).

#### More Information

- Why nowcast?**

Measurements from monitoring stations are only available to report quality at that particular place. The nowcast combines these measurements with our detailed model to show a prediction of quality like across the whole of Greater London.
- Why do you show only two pollutants?**

The two pollutants chosen are ones which are known to have an impact on health within London and are able to be predicted with this model. Levels of carbon monoxide (CO) are now below those considered harmful to health, and emissions of sulphur dioxide (SO<sub>2</sub>) are unpredictable to create a map using this method. We hope to include ozone (O<sub>3</sub>) in future nowcasts, but are still evaluating the accuracy of our ozone model. Each pollutant has different sources and behaviour, so try seeing each pollutant in turn to get a full picture of air quality at your location.

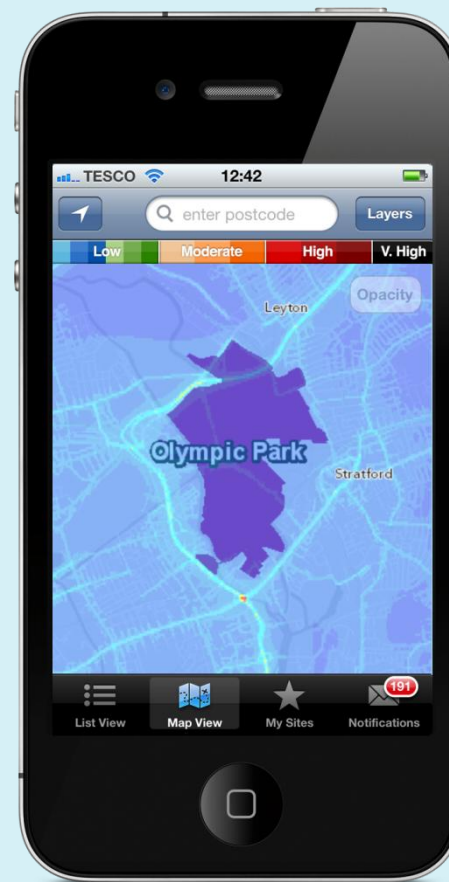
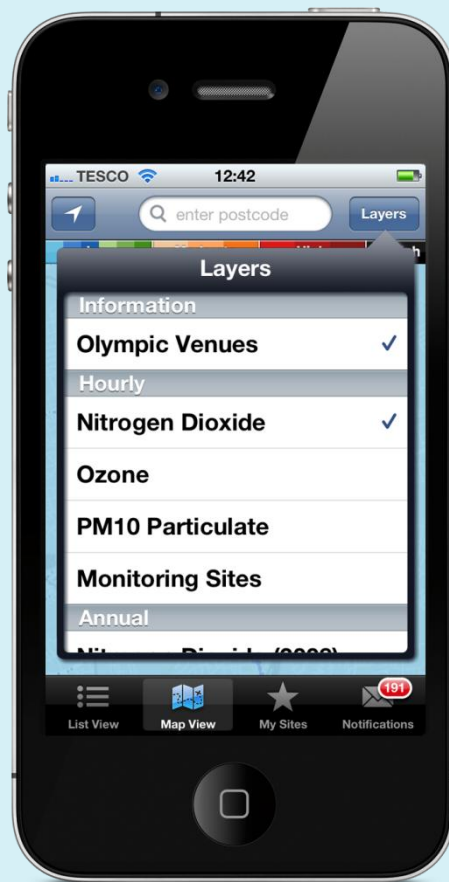


# London Air – iPhone App

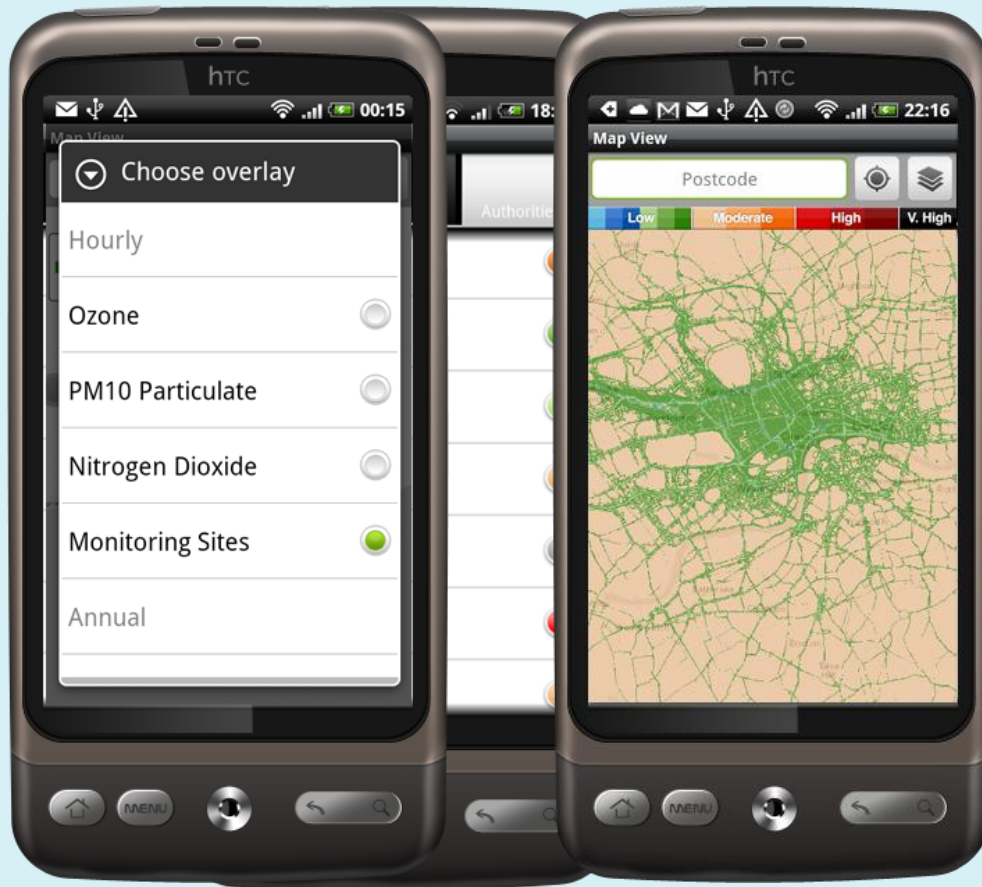


- Completely Interactive zoom/pan
- Hourly & Annual maps
- Greyscale basemap
- Opacity control

# London Air – iPhone App



# London Air – Android App



- Released September 2011
- Over 1000 users
- Functionally identical to iPhone

# AirText

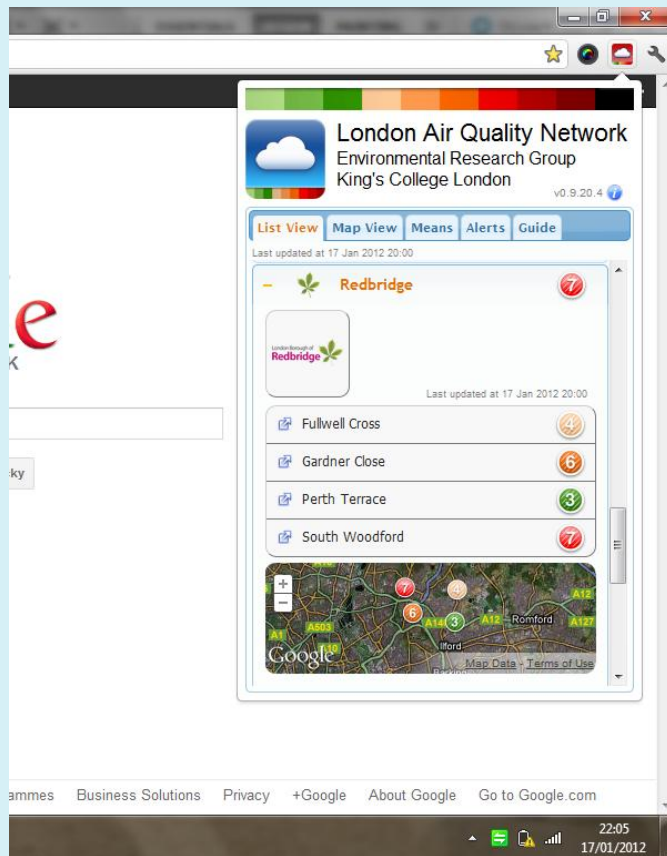




# London Air – Chrome Extension

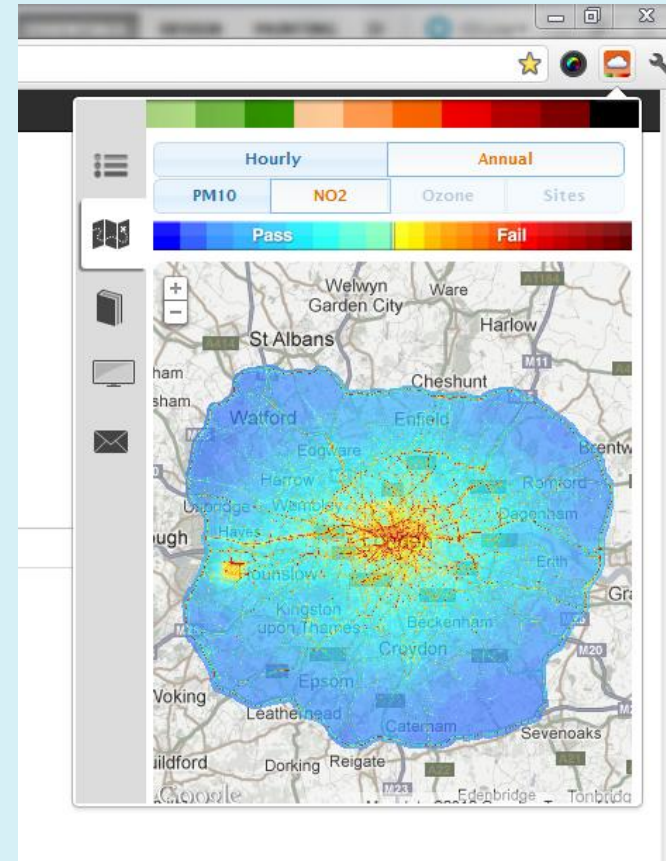
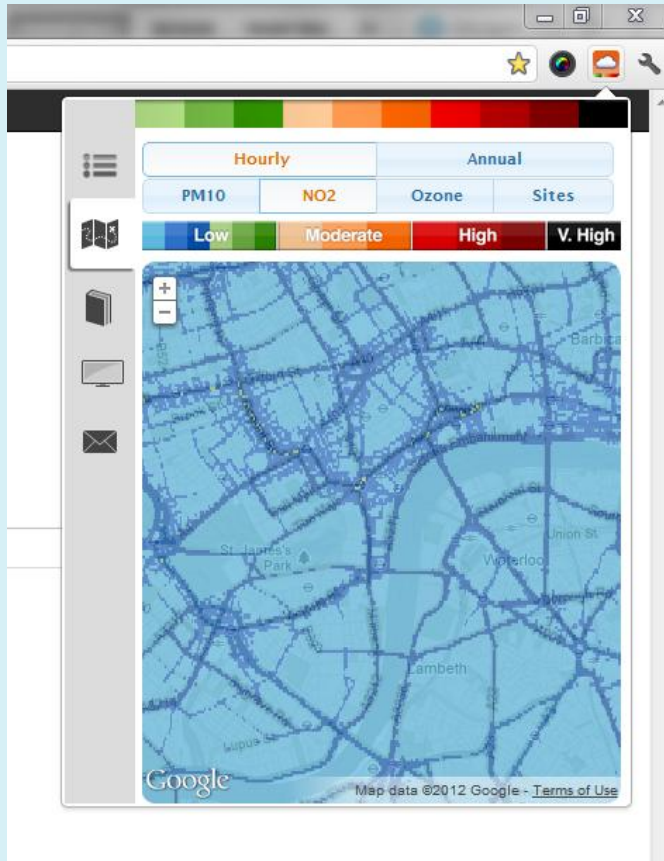
The image shows a screenshot of the Chrome Web Store interface. The main content area displays a grid of extensions. The 'London Air' extension is prominently featured at the top left, showing a large white cloud icon on a blue background with the text 'London Air' below it. To the left of the main grid is a sidebar with a search bar and a list of categories: Popular, Collections, Education, Entertainment, Family, Games, Lifestyle, News & Weather, Productivity, Shopping, Social & Communication, Utilities, Extensions, and Themes. To the right of the main grid is another sidebar with navigation options: Line, Bar, and Map. The browser's address bar shows the URL 'https://chrome.google.com/webstore/category/home'. The overall layout is clean and organized, typical of a web store interface.

# London Air – Chrome Extension



- Released September 2011
- Currently 3,722 users
- Icon changes colour
- Notifications
- Health advice

# London Air – Chrome Extension



# Facebook & Twitter

Health advice for 'Moderate' & 'High' #airpollution

Health advice for moderate and high #airpollution: vulnerable people should consider reducing strenuous activity.

Air pollution level	Value	All-UK individuals*	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, and adults who experience symptoms, should consider reducing 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 reduce strenuous physical exertion, particularly outdoors, and particularly if they experience symptoms. People with asthma may find they need to use their inhaler more often. Other people should also reduce physical exertion	Anyone experiencing discomfort such as sore eyes, cough or sore throat should consider reducing activity, particularly outdoors
Very High	10	Adults and children with lung problems, adults with heart problems, and older people, should avoid strenuous physical activity. People with asthma may find they need to use their inhaler more often.	Reduce physical exertion, particularly outdoors, especially if you experience symptoms such as cough or sore throat

71 people reached • 42%

London Air shared a link

@BBCLondonNews mentions air pollution and pollen in evening forecast <http://www.bbc.co.uk/weather/2643743>

BBC Weather - London  
www.bbc.co.uk

Application

London Air shared a link

How To Avoid Air Pollution  
Source: produced by the Environmental Research Group at King's College London.

33 people reached • 34%

London Air shared a link

@Ldn\_Ambulance reports busiest ever day yesterday citing increase in respiratory & cardiac problems. #high #airpollution [bit.ly/L7xwJ5](http://bit.ly/L7xwJ5)

LondonAir Tweets

London Air @LondonAir  
Health advice for 'Moderate' & 'High' #airpollution. [pic.twitter.com/p7iQenKC](http://pic.twitter.com/p7iQenKC)

London Air @LondonAir  
Possible 'High' #airpollution forecast valid to 12pm 25/05. 80% chance of moderate ozone & 30% chance of high PM10. [goo.gl/qXzv8](http://goo.gl/qXzv8)

London Air @LondonAir  
Possible 'High' air pollution forecast from King's College London - Google Docs [goo.gl/qXzv8](http://goo.gl/qXzv8)

London Air @LondonAir  
Quick video on how to reduce your exposure to air pollution. <http://vimeo.com/30854507>

London Air @LondonAir  
@BBCLondonNews mentions #airpollution & #pollen in evening news [bbc.co.uk/weather/2643743](http://bbc.co.uk/weather/2643743) (via @CleanAirLondon)

London Air @LondonAir  
RT @CleanAirLondon: @Ldn\_Ambulance

- Dissemination of forecasts

- Link to episode analysis

- Link to health advice during episodes

- Link to videos during episodes

- Time

- Voice

• Exposure reduction

• Emission



An Air Quality Action Day is forecast in our region for today (Monday, August 1, 2011).

**URGENT!**

Here are several simple steps to take TODAY to prevent pollution:

- Combine errands into a single trip.
- Postpone unnecessary trips.
- Take the subway, bus or train instead of driving.
- Avoid letting your vehicle idle, such as at the drive-thru.
- Forward this message to family and friends.

The New York State Department of Transportation has declared that today, **Monday, August 1, 2011**, is an **Air Quality Action Day** in the downstate metro area due to forecasted high levels of ground-level ozone pollution in parts of the region (please visit the Clean Air NY Web site for more information <http://www.cleanairny.org/LocalAirQuality/Default.aspx>). While today is still a day when people can go about most of their normal activities, such as going to work, driving may be one of the most polluting activities that people do today, and we encourage everyone to leave their cars at home if possible.

Ground-level ozone is a respiratory irritant that can trigger asthma attacks and aggravate emphysema, bronchitis and other respiratory ailments. Children, people with pre-existing respiratory or heart conditions, people doing strenuous outdoor work or exercise and the elderly are particularly vulnerable to the effects of ozone.

To learn more about improving air quality or if you were forwarded this message and want us to send updates to your own e-mail address, visit [CleanAirNY.org](http://CleanAirNY.org).

*Clean Air NY is sponsored by the New York State Department of Transportation in support of regionwide air-quality efforts.*

**511NY** is New York State's official traffic and travel info source. Whether you drive or take public transit, click [here](#) for precisely what you need, or simply dial 511 on your phone.

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