

A decorative graphic consisting of several overlapping, wavy, translucent bands of color. The colors include shades of blue, green, yellow, orange, and red, creating a vibrant, fluid effect that spans the width of the slide.

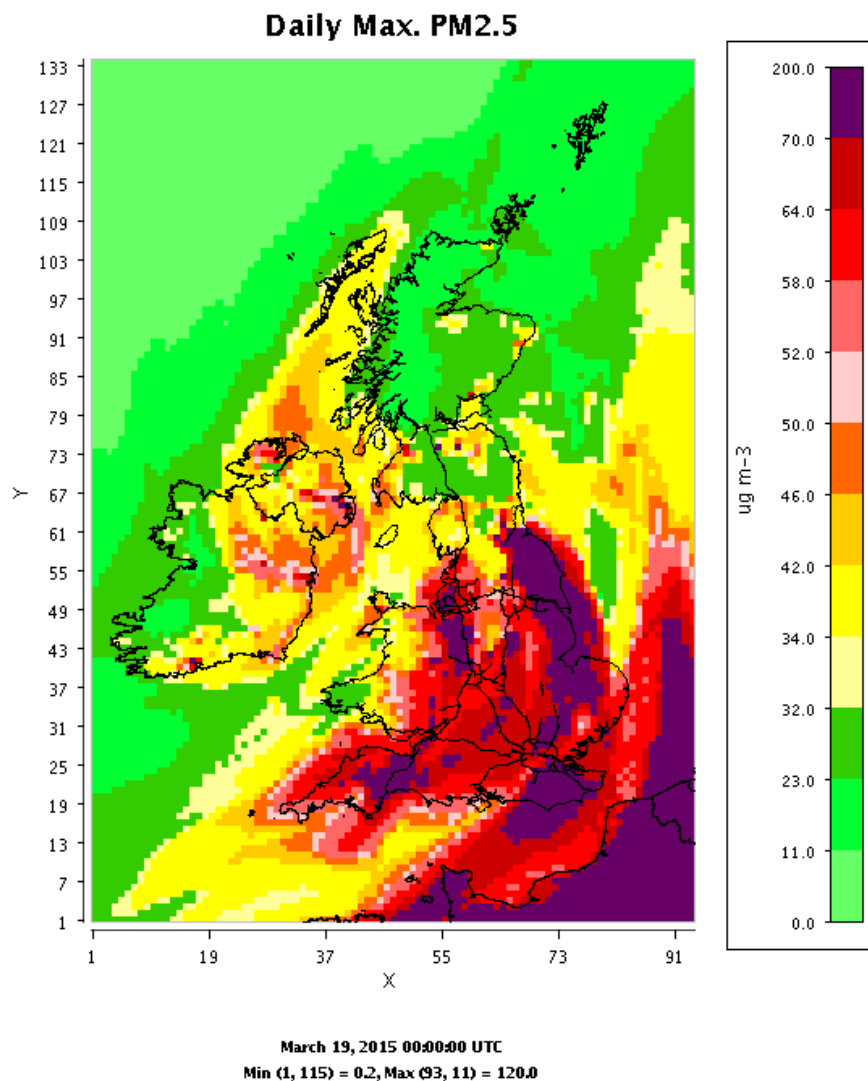
# **SAQD Annual Seminar 2015**

## **- Improvements to Scottish Air Quality Forecasts and the Know and Respond Alert Service**

26<sup>th</sup> March 2015

**Paul Willis – Air Quality Business Manager**

# Why do we need to Improve Scottish Air Quality Forecasts and Alerts? 18<sup>th</sup> March 2015



- The CMAQ Air Quality Forecast Model predicted High and Very High Pollution over all of England and Wales with pockets of High pollution over Scotland and Northern Ireland
- The Met Office Model and Forecasters predict Low everywhere with no facility to include more local information or advice.
- Using the SAQD measurements, local experience and interpretation we are able to provide an improved forecasting and alert service for Scotland.



# Air Quality in Scotland

[Home](#)
[Latest & Forecasts](#)
[About air quality](#)
[What can I do?](#)
[Data & Maps](#)
[LAQM](#)
[News & Reports](#)
[Stay Informed](#)
[Know & Respond](#)
[Education](#)

## Latest & Forecasts

### Monitoring site summary

### Local search

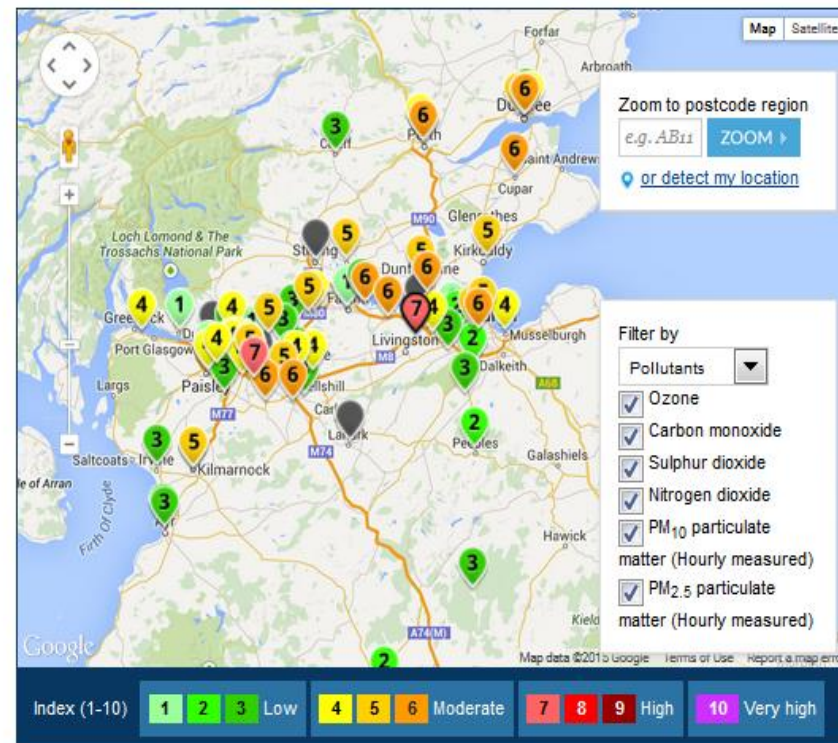
Current levels

## 24 Hour summary

### Pollutant graphs

### Regional forecasts

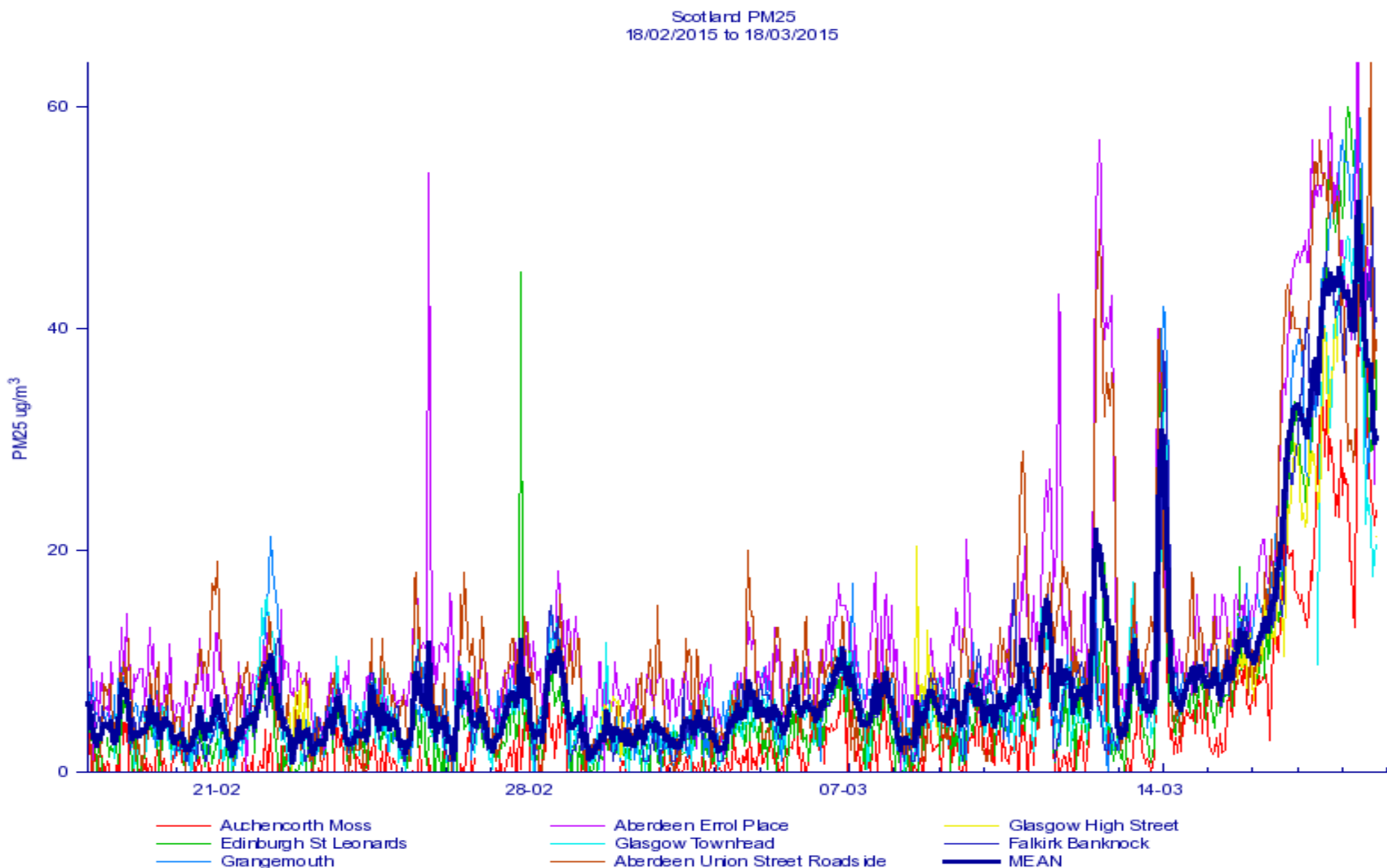
## Latest pollution map



[Latest Data](#)
[Graphing](#)
[Statistics](#)
[Site Information](#)
[Site Photos](#)

[Switch to 30 day graph](#) | [View Larger version \(new window\)](#)

West Lothian Broxburn  
12/03/2015 - 18/03/2015



## High Air Pollution Episode Analysis

In this short video, Dr Scott Hamilton describes some of the potential reasons for the elevated particulate concentrations in Scotland on March 18th



In this video, Scott explains the reasons why the particulate episode in Scotland around March 18th was short lived, lasting only a few days. Ricardo-AEA undertakes this air quality monitoring as part of its **Air Quality in Scotland** work.



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If you are interested in the solutions we offer, please contact:

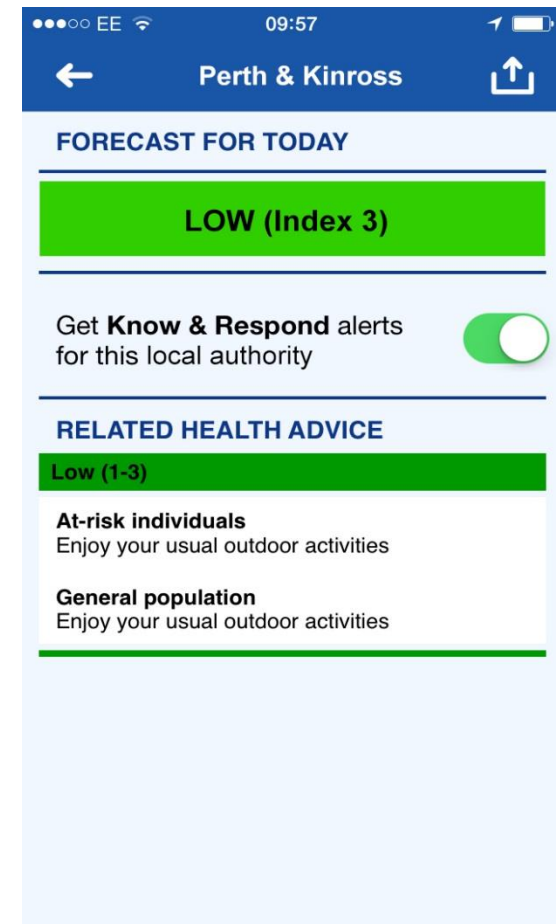
Tel: +44 (0) 1235 75 3000

Email: [enquiry@ricardo-aea.com](mailto:enquiry@ricardo-aea.com)



## Challenge: Forecasting at Local Authority Area – necessitates changes in:

- [Forecasting pages and associated forecasts](#)
- Know & Respond Registration Pages
- Email alerts
- SMS alerts
- Voicemail alerts
- Updates to AQ in Scotland App (including IOS updates)
- Twitter





- Provided by the R-AEA duty forecaster each day.
- Based on the UK Air Quality Forecast provided by the Met Office.
- Includes information from daily regional pollutant and weather forecast models.
- Considers latest pollutant measurements and trends from the SAQD
- Descriptive text and tweet based on expert judgement and experience of the forecaster.
- Populates the K&R alert service



\* Based on the most recent reported full year results of Ricardo PLC and the acquired business of Ricardo-AEA

# Air Pollution Forecast

This forecast was last updated at 1pm on 25th March 2015

Today	>	<b>Scotland air pollution forecast for Tomorrow, 26th March 2015</b>  <b>Low</b> air pollution across Scotland  <a href="#">View full forecast summary »</a> <a href="#">Get alerts with Know &amp; Respond »</a>
Tomorrow	>	
Outlook	>	



Latest & Forecasts
Monitoring site summary
Local search
Current levels
24 Hour summary
Pollutant graphs
Air Pollution Forecast
Forecast 5-day summary

# Scotland air pollution forecast

## Latest forecast summary

This information was last updated: 12pm on 24th March 2015

Today	Tomorrow	Outlook
<b>Low</b> air pollution across Scotland	<b>Low</b> air pollution across Scotland	<b>Low</b> air pollution across Scotland

## 5-day air pollution forecast map

The map shows the air pollution forecast for each local authority in Scotland.

» [View a full forecast summary for each local authority](#)

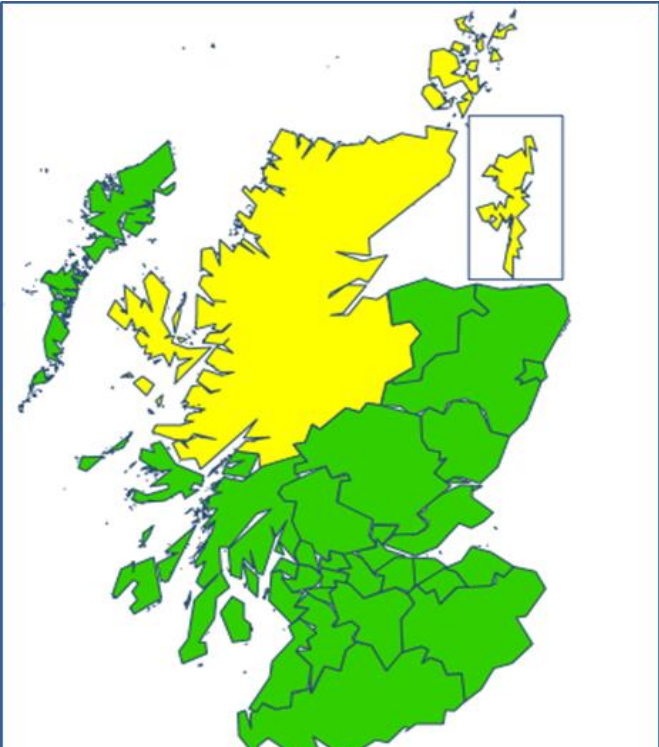
The following days are available to view:

« Previous Day

Next Day »

- Today (24th March 2015)
- Wednesday (25th March 2015)
- Thursday (26th March 2015)
- Friday (27th March 2015)
- Saturday (28th March 2015)

Today (24th March 2015)



Latest & Forecasts

Monitoring site summary

Local search

Current levels

24 Hour summary

Pollutant graphs

Forecast summary

Forecast map

Scotland air pollution forecast summary

The table below shows the air pollution forecast for up to 5 days in advance for each local authority in Scotland.

» [View a map of local authorities showing this forecast](#)


Local Authority	Today 10th Dec	Thu 11th Dec	Fri 12th Dec	Sat 13th Dec	Sun 14th Dec
Aberdeen City	Low (3)	Low (3)	Low (2)	Low (2)	Low (3)
Aberdeenshire	Low (3)	Low (3)	Low (3)	Low (3)	Low (3)
Angus	Low (3)	Low (3)	Low (3)	Low (3)	Low (3)
Argyll and Bute	Low (3)	Low (3)	Low (3)	Low (3)	Low (3)
Clackmannanshire	Low (3)	Low (3)	Low (2)	Low (2)	Low (3)
Dumfries and Galloway	Low (3)	Low (3)	Low (3)	Low (3)	Low (3)
Dundee City	Low (3)	Low (3)	Low (2)	Low (2)	Low (3)
East Ayrshire	Low (3)	Low (3)	Low (3)	Low (2)	Low (3)
East Dunbartonshire	Low (3)	Low (3)	Low (2)	Low (2)	Low (3)
East Lothian	Low (3)	Low (3)	Low (2)	Low (3)	Low (3)
East Renfrewshire	Low (3)	Low (3)	Low (2)	Low (2)	Low (3)
Edinburgh, City of	Low (3)	Low (3)	Low (2)	Low (3)	Low (3)
Eilean Siar	Low (3)	Low (3)	Low (3)	Low (3)	Low (3)
Falkirk	Low (3)	Low (3)	Low (2)	Low (2)	Low (3)
Fife	Low (3)	Low (3)	Low (2)	Low (2)	Low (3)
Glasgow City	Low (3)	Low (3)	Low (2)	Low (2)	Low (3)
Highland	Moderate (4)	Low (3)	Low (3)	Low (3)	Low (3)

Know & Respond

Health advice

Sign up to receive alerts

Terms & Conditions



Sign in with username or email

Password ([Forgotten?](#))
 

Sign In

## Know & Respond - Scotland, the free air pollution alert messaging system

Sign up for free alerts now!

Know & Respond - Scotland is a free service to subscribers in Scotland that sends registered users an alert message if air pollution in their area is forecast to be moderate, high or very high. The description of the level of pollution is based upon the Air Quality Banding System.

The alert service is provided for anyone wishing to know about the quality of the air they breathe. It will be of particular benefited to people with medical conditions that may be affected by pollution, such as asthma, bronchitis and emphysema. It may also benefited people whose breathing gets worse when air pollution increases. This early warning service allows you to make [informed decisions and take action](#) if necessary to minimise the effects of pollution episodes.

The Know and Respond System is not designed to report on levels of pollen. For further information on levels of pollen please visit the [pollen forecast](#)

### How does it work?

Every day around 2 pm, our air quality forecasters at Ricardo-AEA issue a detailed pollution forecast for the following day. Under the scheme, anyone who lives or works in the Scotland can sign up to receive free air pollution alerts by mobile phone text message, voicemail or email. You will get a Know & Respond alert whenever air pollution levels are forecast to be MODERATE, HIGH or VERY HIGH. Guidance outlined by health professionals is provided with each alert to enable you to make informed decisions and take any precautions necessary.


Due to the restricted content of SMS, an abbreviated alert will be sent to SMS subscribers with further details available on the website. In order to receive alerts in full, please select Voicemail or email options when subscribing.

Air Pollution Alert	Associated Health Guidance
Moderate	If you have a pre-existing heart or lung condition you may notice some mild effects, however, these are unlikely to require any action.
High	If you have a pre-existing heart or lung condition you may notice significant effects.  If this happens and you suffer from a lung disorder, you may need to change your treatment in the usual way to increase its effectiveness or reduce the time you spend outdoors. If these steps don't help, consult your doctor or ring NHS 24 on 08454 242424.
Very High	If you suffer from a heart condition and you notice a change in your symptoms, do not try to change your treatment yourself, but seek medical advice as you normally would or ring NHS 24 on 08454 242424.

Alerts will be dispatched on the evening before a high pollution day

[More information on the potential impact of air quality on health](#)

### How to sign up

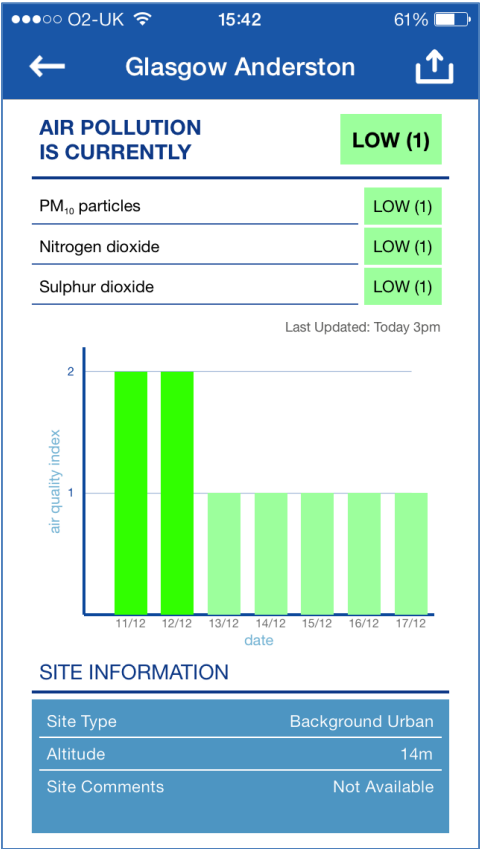
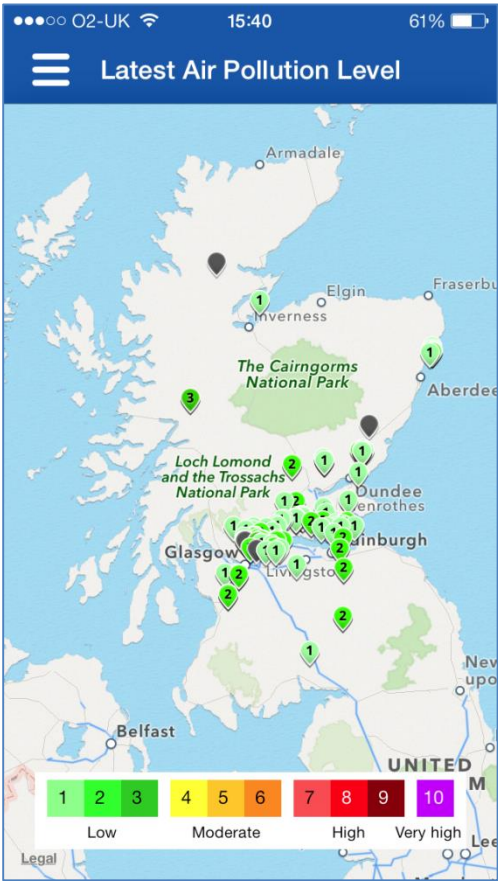


To register, you need to provide us with some information about yourself. You can choose how you would like to receive your alerts (via email, SMS or voicemail). You may also register on behalf of someone else or a group of people who are susceptible to the effects of air pollution.

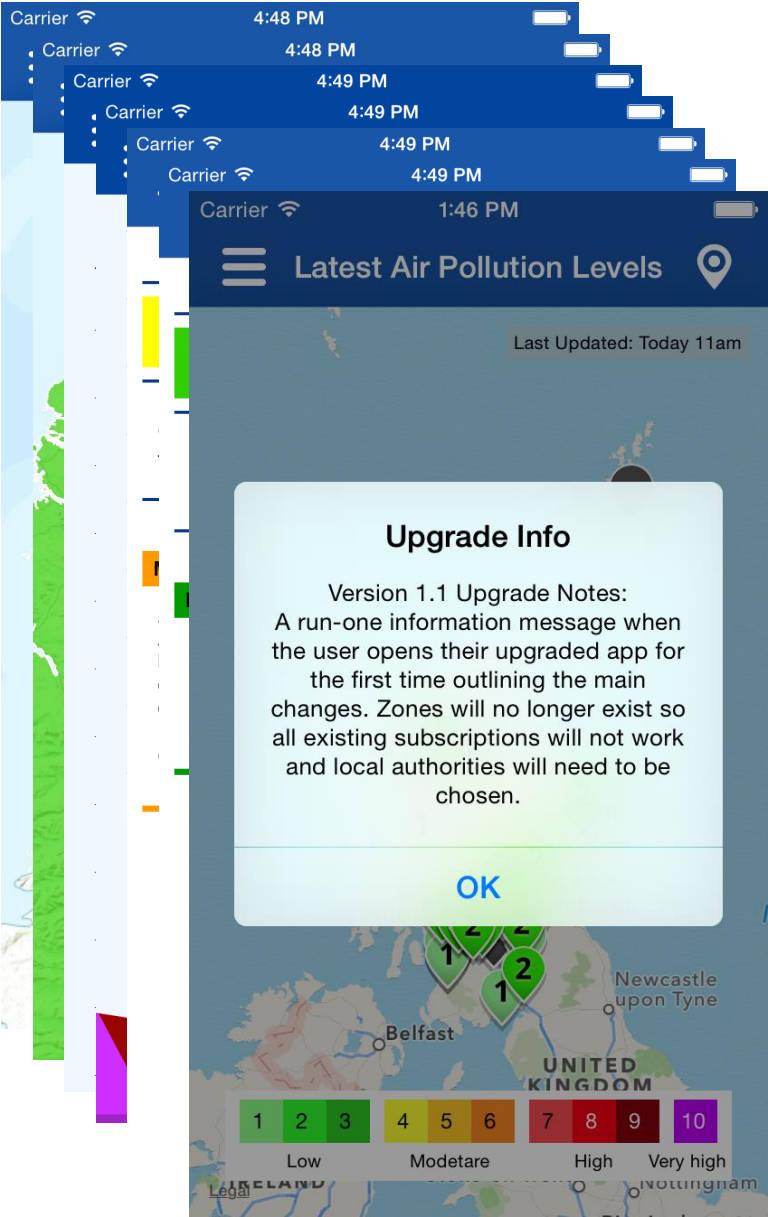
Sign up to Know & Respond now!

11

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# Updated Apps for iPhone and Android have been released



# Twitter Improvements

- [@airqualityscotland](https://twitter.com/airqualityscotland).
- Please promote – only 100+ followers but growing steadily.
- Provides a mixture of automated and manual tweets.
- Automated tweets summarise the regional measurements and forecasts.
- Isolated High/Very High incidents are manually validated to avoid publishing possibly faulty data.
- Proactive tweeting of Scottish AQ news, reports and events.
- Tweet relevant pictures, graphs, maps of interest.







## Air Quality Scotland

@scotairquality

Official feed for Air Quality in Scotland from the Scottish Gov. Latest info on air pollution & health advice. Email [info@scottishairquality.co.uk](mailto:info@scottishairquality.co.uk) or visit

[scottishairquality.co.uk](http://scottishairquality.co.uk)

Tweet to Air Quality Scotland

2 Followers you know



Photos and videos



TWEETS 925 FOLLOWING 32 FOLLOWERS 103

Following

Tweets Tweets & replies Photos & videos

**Air Quality Scotland** @scotairquality · 4h  
Forecast Wed: Low air pollution in all areas on Wednesday [bit.ly/1hbUoN4](http://bit.ly/1hbUoN4) #scotair

**Air Quality Scotland** @scotairquality · 7h  
Latest Tue 9am: Low air pollution measured across Scotland. [bit.ly/NnLgcb](http://bit.ly/NnLgcb) #scotair

**Air Quality Scotland** @scotairquality · Mar 23  
Latest Mon 1pm: Low air pollution measured across Scotland. [bit.ly/NnLgcb](http://bit.ly/NnLgcb) #scotair

**Air Quality Scotland** @scotairquality · Mar 23  
Forecast Tue: Low air pollution across Scotland on Tuesday [bit.ly/1hbUoN4](http://bit.ly/1hbUoN4) #scotair

**Air Quality Scotland** @scotairquality · Mar 23  
Latest Mon 9am: Moderate pollution measured in N.Lanarkshire, other areas Low. [bit.ly/NnLgcb](http://bit.ly/NnLgcb) #scotair

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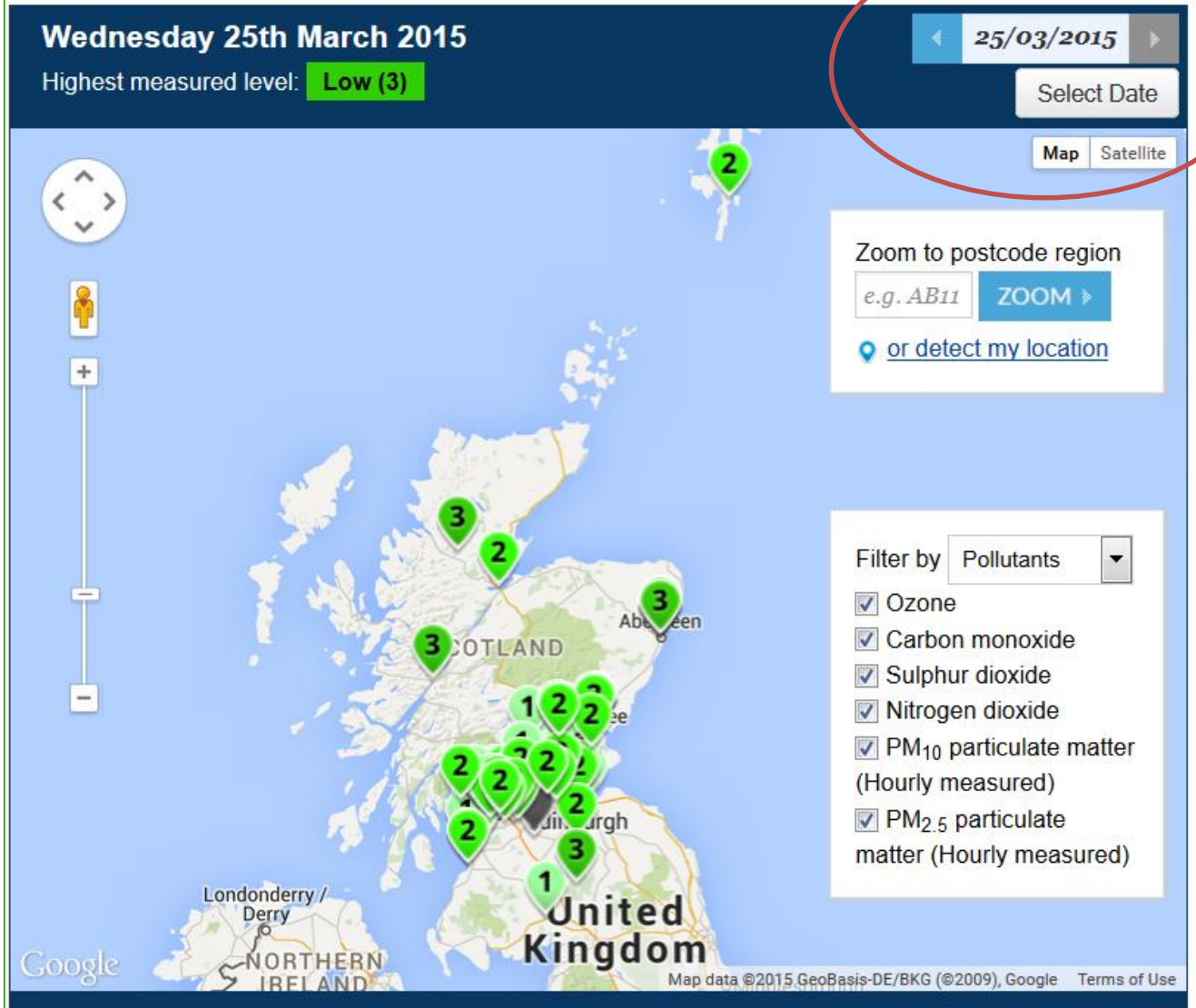
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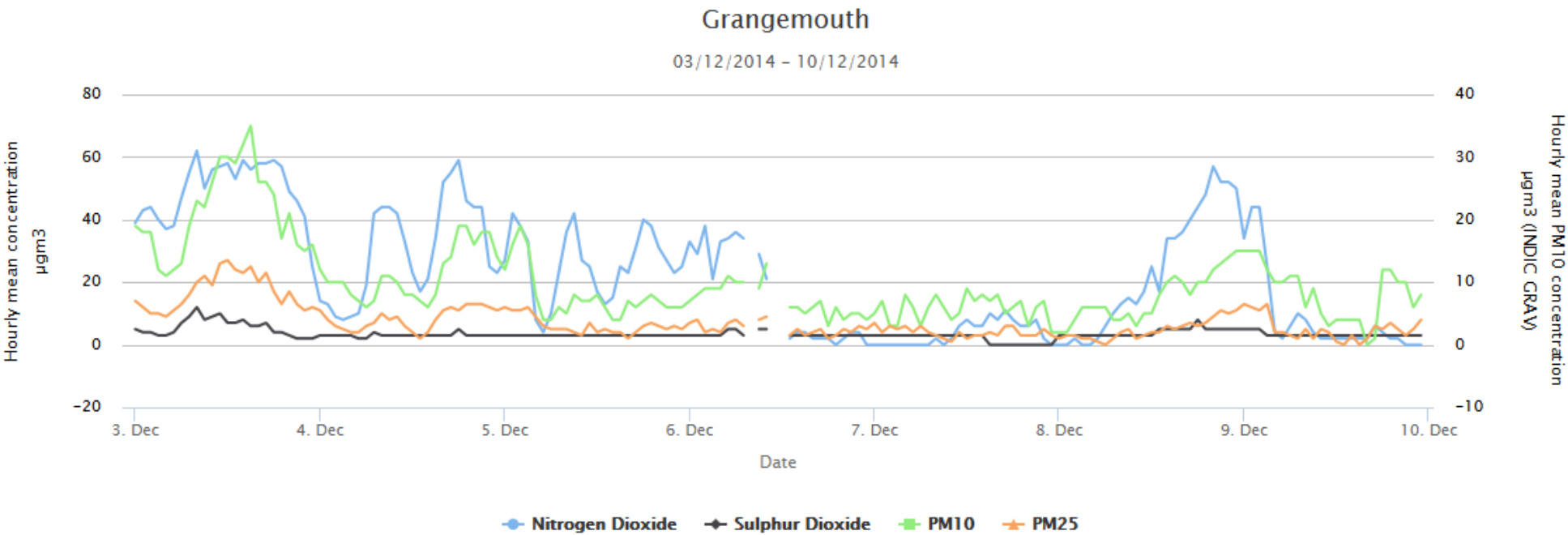
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- Lil Chris
- Angelina Jolie
- Dead Inside

### Latest pollution map



For comparison purposes and to allow additional investigation of the summary for previous days.

[7 Days](#) | [30 Days](#) | [Custom Date Range](#)



Highcharts.com

Many Thanks for Your Time.



## Questions & Discussion

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