Enviro
Technology Services Ltd

AQ Case Study - UK

Newport City Council

Scope Newport City Council chose Zephyr Air Quality Sensors to monitor pollution levels at several hotspots within the town.

Overview

Like many reasonably large towns, Newport has its share of air quality issues. Being situated partially within the confines of the M4 and other main arterial routes from Southwest Wales to England, it is an unavoidable thoroughfare for heavy traffic.

With several air quality management areas (AQMAs) in place, the council are working hard to identify measures which will bring areas experiencing breaches of the nitrogen dioxide annual air quality objective closer to compliance.

The aim

The council have identified 6 locations that regularly exceeded permitted levels within 6 of their AQMAs.
Using data from the Zephyr sensor measuring; NO_2, O_3, NO, PM_{10}, $PM_{2.5}$, and PM_1, they can correlate times of day and activities with pollution levels observed. Through observations of the graphical trends provided by the Zephyrs, the council are able to make informed decisions on how to bring the pollution curve down.

Being very committed to driving change, AQ community groups have been formed that serve the 6 AQMAs in question. These are key to understanding people's ideas and attitudes regarding air quality monitoring and measures.

One of the locations being monitored is at a busy stretch of road near the Brynglas Tunnels. The tunnels serve to divert traffic travelling between Wales and England from having to pass directly through the centre of Newport. Originally designed to take a load of up to 30,000 vehicles a day, the tunnels have long since surpassed this figure.

Sensor choice

Having researched the Market, Newport chose the Zephyr over other sensors because they required a reliable solution.

Steve Manning, Senior Scientific Officer at the council remarks,

"Being totally committed to fully understanding the contributing factors to the pollution levels in the city meant we needed a suite of sensors we could really rely on; we felt the Zephyr offered that assurance.

We know they are tested and calibrated against reference method technology in Derby where they are manufactured so this gave us confidence in their accuracy and reliability."

Wider plan

The network of Zephyrs will form part of a wider plan of measures to cut pollution and contribute towards improving health and wellbeing in the wider Newport area.

To date, Enviro Technology supplied Zephyrs are now helping over 30 combined authorities monitor urban pollutants.

A Zephyr air quality sensor in a street in Caerleon, Newport.