

Case Study

Future Climate Info (FCI)

Client

Future Climate Info (FCI) are a consultancy firm in the UK who provide legal professionals with environmental reports about residential and commercial property, contaminated land, flooding, energy, infrastructure, mining and ground stability.

Overview

EarthSense worked with Future Climate Info (FCI) to deliver localised air quality information to home buyers through environmental reports. Using the cutting edge MappAir® air quality model, EarthSense provided annual averaged data for pollutants nitrogen dioxide (NO_2) and particulate matter ($\text{PM}_{2.5}$) for the reports, giving solicitors and home buyers insight into air quality levels within the area of prospective homes.

The Challenge

FCI became aware of growing concerns from home buyers surrounding air quality, with a particular increase in the number feeling hesitant to purchase homes situated in areas with main roads and busy urban environments. With this in mind, FCI consultants decided to offer environmental reports to solicitors on behalf of home buyers which included data about the levels of air quality at the property of interest,

together with information about the associated risks that come with exposure to unsafe air pollution.

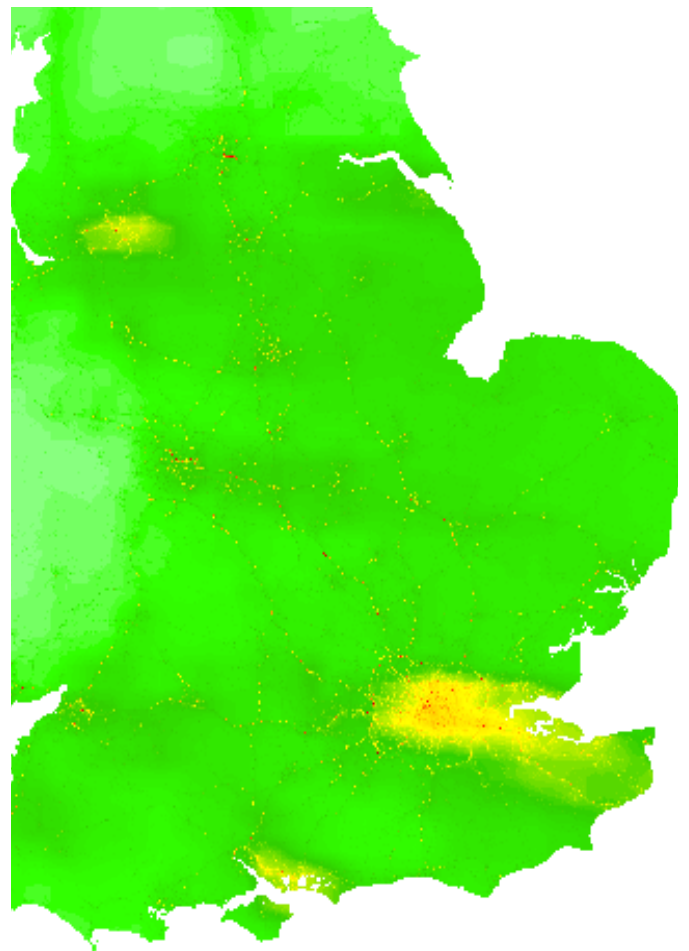


Figure 1: Mapped MappAir® national air quality data for NO_2

The Solution

FCI needed an easily integratable dataset covering the whole of the UK that could be presented in a clear and concise format within their environmental reports. This data would enable solicitors and homebuyers to identify air pollution levels at specific locations whilst searching for new properties. The reports also highlighted the importance of providing accurate and reliable guidance regarding pollution concentrations and how safe these were for potential homebuyers and their families. Amalgamating a combination of data sources including real time Zephyr® data from the EarthSense sensor network, weather data from the Met Office and traffic data from DfT, MappAir was selected as the most comprehensive and accurate tool to model NO₂ and PM_{2.5} - both pollutants being harmful to human health.



Figure 2: Property for sale signs.

The ability to extract simple, easy to understand and highly valuable data from the model is helping home buyers learn more about pollution concentrations and the associated risks of prolonged exposure to excessive levels.

Utilising EarthSense's highly detailed national

MappAir® model provided FCI with annual mean pollution concentrations for every 100m 'grid' across the UK. This ability to access granular information with blanket coverage ensured FCI received accurate pollution data at any specific location across the UK.

To showcase modelled air quality levels at specific locations within their environmental reports, FCI and EarthSense worked together to develop a simple air quality index to communicate the concentrations for prospective homes.

To assist solicitors in interpreting pollution levels on behalf of homebuyers, concentrations were banded into an easily identifiable scale between 0 – 7 for the combined air quality types and overall risk rating.

Derived from the MappAir® dataset, a rating of 6 or above was used to showcase a "polluted environment", 3 or above to communicate that an "area may see NO₂ levels exceed annual limits", increasing during peak traffic times and stagnant weather conditions which could be met with negative health implications. A rating of 2 was used for a "moderate chance of levels exceeding health levels", and 1 and below to show that the environment at the location in question was "generally clean" with very low risks of NO₂ reaching unsafe levels. Using this data, risk levels could then be clearly communicated to those involved during the conveyancing process and professional advice on future actions could be considered.

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A credible, authentic and highly innovative data partner. MappAir® allows people access to air quality information and the ability to properly interpret its impact.

Geoff Offen

Managing Director, FCI

Outcomes

The relationship between EarthSense and FCI has enabled the consultancy firm to provide solicitors and home buyers with insight into pollution levels in addition to their environmental reports and advice surrounding air quality levels for a potential new home. Since the partnership was first established in 2018, FCI have sold over 220,000 reports with integrated MappAir® air quality data as air pollution becomes a growing concern among home buyers. The success in number of sales means prospective home buyers have access to data and are able to understand the potential health risks of pollution levels when considering purchasing new property.

Long Term Health Benefits

Homebuyers, concerned parents, the elderly and people suffering with underlying health conditions such as diabetes, COPD and asthma have been able to make better informed decision about where they reside and are able to take into consideration possible health impacts, potentially saving thousands from living in locations that will worsen or create health problems.

Get in Touch

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