

Clean Air Zones Project Case Study: Botwell House RC Primary School

BOTWELL PRIMARY SCHOOL is located on Botwell Lane within an air quality focus area in Hayes Town, Hillingdon. Hayes is one of the more polluted areas of the borough. Modelling undertaken in 2011 indicated the nitrogen dioxide (NO₂) levels in the area were exceeding the annual limit value. In partnership with *Healthy Hillingdon*, we approached the school about undertaking the project. The school were particularly enthusiastic about Greening, which was lacking, and getting the Children's School Council involved in the implementation of the project, which has been key to its success. They were also interested in energy conservation.

GREEN INFRASTRUCTURE - The need for greening was identified at the front of the school adjacent to the Infants playground, located next to a main road and close to a junction. It is hoped denser planting in this location will reduce PM (particulate matter) exposure.

Whether these measures also help with reducing exposure to NO₂ is unclear, therefore monitoring was undertaken to determine the actual NO₂ levels at the front of the school using NO_x tubes. The monitoring is ongoing, but early indications are that it is just below the EU limit value adjacent to the infants playground even though there is exceedance on the roadside. It is very likely at the facade of the school building NO₂ levels will be below the EU limit value of 40 µg/m³.

A new 'quiet area' was created at the back of the school with greening measures forming part of it, including along the boundary of the school. The greening was managed by Groundwork South and the landscaping work was undertaken by Hickman Brother's Landscape Ltd. The children got involved in planting on 'planting day' and came up with designs for screens to go in the planters.

ENERGY CONSERVATION - In addition to the Energy Audit already available for the school the Council undertook an audit with members of the Children's School Council and the site manager. Measures identified to reduce energy consumption included solar film for use on windows in a particularly hot part of the school due to solar gain and power down timer switches for the computer room, which also had a server cabinet serving a number of schools. The school were of the opinion this was sufficient to reduce their energy use and improve their building energy

efficiency rating. The school's energy efficient operational rating was 101 in band E. Department of Energy & Climate Change (DECC) indicate 100 would be typical for a building. Just these simple measures have reduced the school's operational rating to 83 in band D.



EDUCATION & ENGAGEMENT - The children have been actively involved in the project through the Children's Council and the school has kept people up to date on progress of the project with their newsletter. Some teachers also used the *Clean Air 4 Primary Schools toolkit* to highlight the importance of air quality in lessons. Before the official opening day for the 'quiet area' in September 2014 the children put on a wonderful assembly about air quality and the project, sharing what they had learnt and achieved. Following this the Bigwheel Theatre Company ran 6 fun filled interactive workshops called the *Pollution Solution!* for Year 3, which was all about what we can all do to improve air quality, and avoid air pollution.



CERC whole borough NO₂ modelling 2011



BEFORE

AFTER

