

Clean Air for Schools Air Quality Audits

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**ONE
HOUNSLOW**

Air Quality Audits in London Schools

- Mayor of London's School Air Quality Audit Programme launched in January 2017
- Aimed to reduce emissions and primary school children's exposure to polluted air
- Started with 50 audits at schools in London's most polluted areas, funded by the Mayor's Air Quality Fund
- Made bespoke recommendations to schools to help reduce pupils' exposure
- Offers a toolkit for use by schools and local authorities to replicate the audits at other sites
- Some recommendations require funding to implement but many are free and easy to implement



Hounslow's Clean Air for All Programme

- An evolution of our existing five-year Air Quality Action Plan (AQAP, 2018)
- An injection of capital funding to support our work on monitoring and reducing air pollution in Hounslow
- An opportunity to invest in our existing air quality monitoring network
- And expand with a network of new sensors at key locations, including schools
- Improved communication with residents, schools and businesses about the risks of air pollution
- Grants for schools to implement audit recommendations to reduce exposure to poor air quality



Clarity / Breathe London



South Coast Science

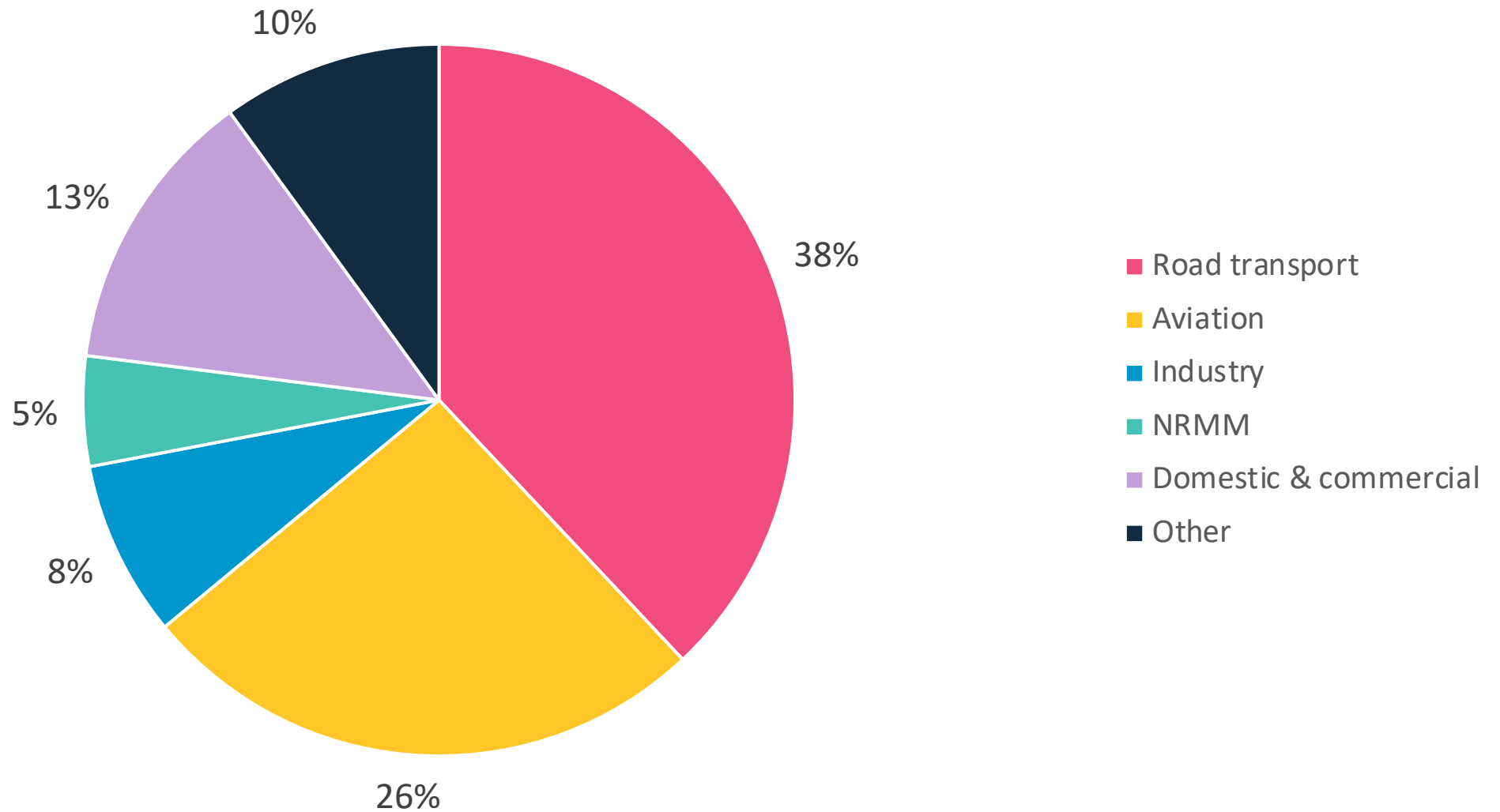


Vortex 10T / LB H&F

Our Proposal: Air Quality Audits for Hounslow Schools

- We propose using the framework and toolkit established by the GLA to replicate these audits across Hounslow
- Audits will be totally free for schools, arranged and conducted by council staff
- We aim to conduct the first audits in the new year, with a view to making our first recommendations in the spring
- Audit work will be supplemented by the installation of new air quality sensors, to be procured and set up in the coming months
- Funding of £5,000-£10,000 will be available to all schools participating in the audit programme, to aid the delivery of pollution mitigation recommendations
- Additional support will be available by way of classroom sessions on pollution, idling, active travel etc

Emissions of nitrogen oxides (NO_x inc. NO₂) by source

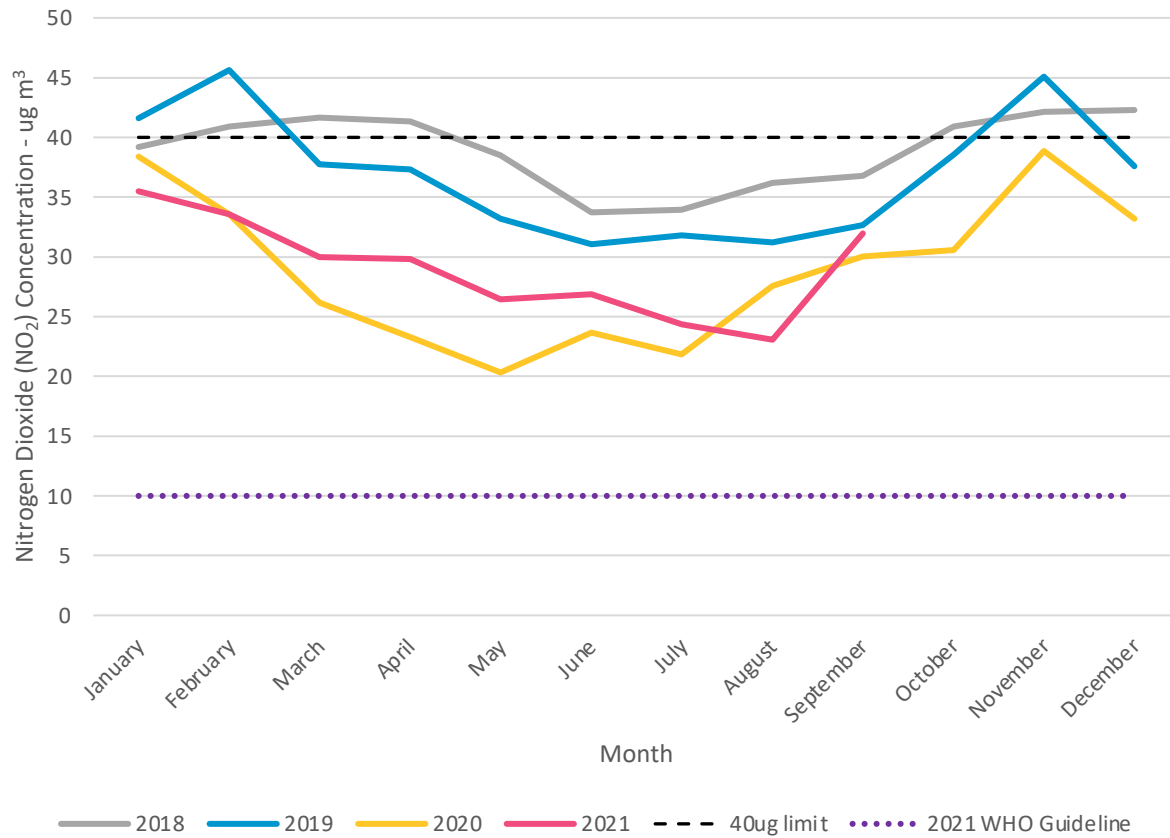


Background: Air Pollution in Hounslow

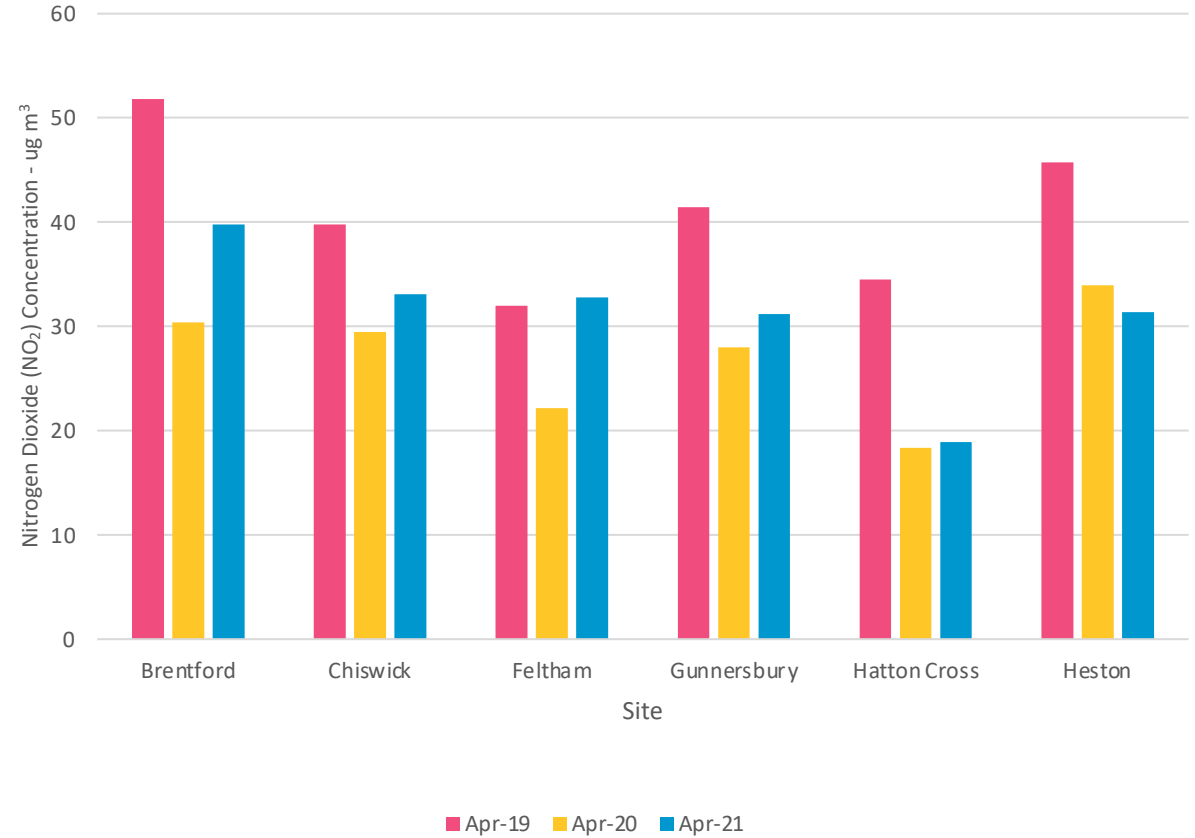
- Transport is the most significant source of nitrogen oxides (NO_x) and particulate matter (PM) in Hounslow
 - It accounts for 38% of NO_x emissions (aviation is 26%)
 - 54% of PM₁₀ (aviation is just 2%)
 - 60% of PM_{2.5} (aviation 3%)
- These emissions come from the tailpipe of petrol and diesel cars, as well as from tyre and brake wear – this includes electric vehicles (EVs)
- City Hall analysis has found 98% of London schools are in areas exceeding WHO guideline pollution limits
- Many of Hounslow's schools are positioned close to major roads, compounding the issue of poor air quality

Background: Air Pollution in Hounslow

Borough-wide NO₂ trend 2018 - 2021



Automatic monitoring station data: NO₂



Active Travel at Schools

- School Streets across London have seen a measured reduction in NO₂ levels of up to 23% at morning drop-off
- The average journey to school for a child in London is less than 1km, around a 10 minute walk but approx. 25% of traffic in the morning is doing the school run
- School Streets create low traffic areas outside the gates. There are currently 28 schools in Hounslow that benefit from such schemes
- 36 schools are accredited via TfL's STARS programme which encourages active and sustainable travel as well as promoting road safety
- Campaigns run throughout the year such as Walk to School Week, Clean Air Day, Bike Week, Car Free Days and more



Example recommendations from the toolkit

- Anti-idling signage, communications to parents, driver engagement
- Reduced drop-off activity, implementation of a scheme such as park and stride
- Improved pedestrian & active travel environment, increased bike & scooter parking
- Green infrastructure such as green screens, hedges, trees and planters
- Education and improved understanding of pollution through classroom work
- Appropriate servicing and maintenance of equipment on school premises
- Installation of air filtration units, improved classroom ventilation systems
- Reduced traffic flow, bus stop relocation

2. SCHOOL SITE MEASURES	
M	School Grounds
M1	Additional scooter/ cycle parking
M2	Staff car parking
M3	Anti-idling for deliveries
M4	Re-timing for deliveries
M5	Reduce number of deliveries, staff/visitor vehicle trips and/or use more sustainable modes
M6	Relocate pedestrian entrances
M7	Green screens
M8	Trees/ shrubs/ planters
M9	Green spaces
M10	Pupil & staff cycle parking
M11	Reduced waiting times to enter school grounds
M12	Relocate playgrounds and free flow spaces
M13	Co-ordinate start/ finish times with nearby schools
M14	Reconsider playground layouts to reduce exposure
M15	Sheltered waiting areas for parents/ guardians
School Building	
N	School boilers/ heating
N1	Upgrade aging boilers
N2	Install Optimising Compensator Control System for School Boilers
N3	Boiler flues and extraction equipment
N4	Reducing over-heating and tackling heat gain
N5	Replace aging radiators
O	Improve product choice (e.g. cleaning products)
O1	Improve product choice (e.g. cleaning products)
P	Regular service & maintenance of appliances and equipment
P1	Regular service & maintenance of appliances and equipment
Q	Improve school building insulation
Q1	Improve school building insulation
Q2	Upgrade windows
Q3	Replace temporary classrooms with permanent structures
Q4	Green Roofs
R	Ventilation / Air Filtration
R1	Installation of Air Conditioning Units
R2	Introduce Air Filtration Systems
R3	Install HEPA Filters in Air Handling Units
R4	Other air filtration systems - air purifiers
S	Other
S1	Air quality monitoring and information provision eco-monitors and walking route maps.

Case Study: St Mary's, Chiswick Oasis

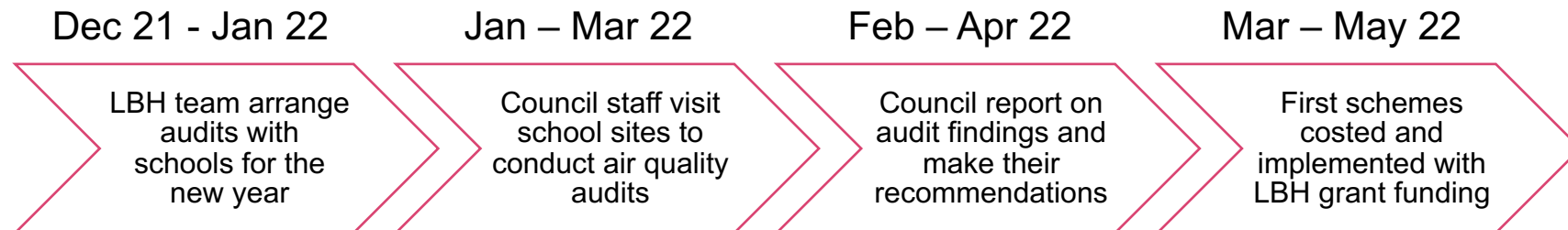
- St Mary's Catholic Primary School, Chiswick – one of the 50 schools originally audited by the Mayor of London
- Crowdfunded a huge amount of money and garnered celebrity endorsements
- Erected a green wall of over 100m along the edge of the playground which borders the A4
- Installed air purification filters in classrooms
- The council would like to learn from the amazing work done by the school community at St Mary's and help every school in Hounslow strive to achieve the same



<https://chiswickoasis.com>

Next steps

- Our goal is to audit every school - the Clean Air for Schools programme will run for at least the next 18 months and there is funding for every school in the borough
- Interested schools should contact the team, who will be in touch to arrange a visit:
 - chris.cockburn@hounslow.gov.uk
 - environmental.strategy@hounslow.gov.uk
- Audits will consist of a visit to the school site by members of council staff, best if accompanied by a staff member who knows the location well
- On site work will be supplemented by desk-based assessment to understand each school's needs



Questions

Contact: chris.cockburn@hounslow.gov.uk