



Schools Air Quality Programmes – overview, outcomes and learnings

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Learnings from schools' air quality work



- In-depth 1 year programme
- Technical and behavioural solutions in 3 Lambeth schools
- International campaign, calling on the UNCRC to acknowledge a child's right to clean air.



Lambeth Schools Air Quality Programme

global
action
plan

Lambeth Schools - programme overview

Main aims of the programme:

- Build understanding of factors affecting air pollution in schools
 - Implement technical and behavioural solutions in 3 Lambeth schools
 - Ensure scalability so that benefits & learnings are realised by other schools across the UK
-
- **Project team:**
 - Impact on Urban Health – programme funder
 - Global Action Plan - behavioural interventions, schools' engagement, overall programme management.
 - Arup - technical advice, support with design & implementation of the physical interventions and modelling of impacts
 - University of Surrey - air quality measurements to measure the impact of some of the interventions

Impact
on **Urban
Health**



ARUP



Results

- Project team worked with **3 Lambeth schools** between September 2020 and September 2021.
- A combination of **22 education, behavioural change and technical interventions** were implemented across all 3 schools.
- Interventions **improved air quality and individuals' knowledge** benefitting the health of **700+ children**, as well as school staff and the wider school community.



"The children were really excited about exploring the street outside the school in a different way - with space to enjoy games and activities rather than staying safe from lots of vehicles! It was great to see the whole school community come together, and Car Free Day was a great way to build on the other clean air initiatives the children and school have been driving."

Mrs Coward, Head of School at St Andrew's C of E School



"The spaces where repairs have occurred now feel safer, fresher and staff and pupils using them are much more able to concentrate."

– Rachel Harrison, Assistant Headteacher



"One of the children thinks that the air quality is better and her asthma has improved. Others said the smell of the air had improved."

– Sola Ingram, Headteacher



The school are now very happy with their new green screen. Mrs Coward, Head of School at St Andrew's C of E School said "We've wanted to put a green screen in for a long time, so we were very excited to finally see it in place! The staff, parents and children all love the new addition - it's not only improved the air quality at our school but the greenery also gives the school community a nicer playground environment, more privacy and gives us more learning opportunities too."



A temporary road closure (similar to a school street) for [Car Free Day](#) reduced the concentrations of airborne particulate matter by up to **36%**.

[Repairing windows](#) at Henry Fawcett School allowed an increase in window opening and hence in ventilation rate of 12.5%. This improved indoor air quality by reducing carbon dioxide by up to **40%**.

The use of [air cleaning devices](#) during school hours at St Mark's CoE School reduced the in-class concentrations of particulate matter by up to **57%**.

Installing a [green screen](#) at the front boundary of St Andrew's CoE School close to a busy road gave reductions in the concentrations of particulate matter of up to **44%** during cross-wind conditions.

Outputs & scalability:

X7 educational resource packs, x2 evidence based toolkits and x7 case studies - free via Transform Our World.
Peer reviewed academic research published by the University of Surrey in the journal Atmospheric Environment.

Clean Air Campaign resources

A collection of action-focused teaching resources covering a broad range of clean air campaigns to help your students bring clean air to your school.



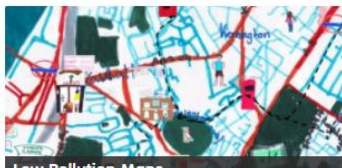
Raising awareness on active travel
This resource is designed to teach your students about active travel and how they can encourage others to participate.



Anti-idling campaign
This resource is designed to teach your students about idling and why it is dangerous.



Car Free Day
This resource is designed to help your students learn about Car Free Day and help raise awareness of it in the school community.



Low Pollution Maps
This resource is designed to help your students learn about low pollution routes to school and create their own low pollution map to support healthier journeys to and from school.



Walk to School Week
This resource is designed to teach students about Walk to School Week and how can they raise awareness about it through designing posters.



Walking bus
This resource is designed to educate your students and the school community about walking buses, and to encourage their parents and families to help them run a walking bus.



Clean Air Vision resources
In this lesson, students will use their voices, and their creativity, to share their knowledge of solutions to air pollution with key decision-makers.

Contents lists available at ScienceDirect
Atmospheric Environment
journal homepage: www.elsevier.com/locate/atmosenv

Investigation of air pollution mitigation measures, ventilation, and indoor air quality at three schools in London
K.V. Abhijith, Vina Kukadia, Prashant Kumar^{*}
Global Centre for Clean Air Research (GCARE), Department of Civil and Environmental Engineering, Faculty of Engineering and Physical Sciences, University of Surrey, Guildford, GU2 7XH, United Kingdom

HIGHLIGHTS

- Green screen at school boundary reduced outdoor particle levels by up to 44%.
- Air purifiers in classroom reduced indoor particle concentrations by up to 57%.
- School street reduced outdoor particle concentrations by up to 36%.
- High occupancy levels significantly increased PM₁₀ and CO₂ in classrooms.
- Effective ventilation is essential to flush out indoor air pollution.

Eco-Warriors tackle idling at St Andrew's CE Primary School
Posted by: Lambeth Schools Air Quality Programme
St Andrew's CE Primary School, London

At St Andrew's CE Primary School in Lambeth, Mrs Caswell, Head of School said "Idling has been an ongoing issue outside the school gates. This was worrying the school staff and parents, as the children and school community were being exposed to unnecessary air pollution. The vehicles were also creating a road safety risk, especially when vehicles stopped on yellow lines or in other busy areas."

Clean Air for Schools Framework

Welcome to the Clean Air for Schools framework!
Create your own bespoke clean air plan by choosing from the recommended air pollution tackling actions and using the suggested advice and resources to help your school become a clean air school.

The Framework will support you to:

- 1) Reduce air pollution from your own operations.
- 2) Tackle air pollution at the school gate, including the school run next generation to help them and their families make cleaner air choices.
- 3) Educate the next generation to help them and their families make cleaner air choices.
- 4) Become a local leader on air pollution, working with local partners to improve air quality in the local area.

How does it work?
Create your bespoke clean air action plan in three simple steps. We estimate it will take about 25 minutes to complete.

Air Quality in Schools An Interventions Toolkit

February 2022

ARUP

Case Study - Green Screen
St Andrew's Church of England Primary School

Green Screen
A green screen improved air quality at St Andrew's CE Primary School. The school installed a green screen at the school gates to reduce air pollution from idling vehicles. This was a successful intervention as it reduced outdoor particle concentrations by up to 44%.

Category	Intervention	Impact
Cost for air	Plant 100 trees	£1000
	Plant 100 shrubs	£500
	Plant 100 flowers	£200
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Key lessons learned



- Ensure all key stakeholders are project partners or consulted to ensure realistic project deliverables.
- Include time (~6-12m) for scoping and project set up, to ensure maximum benefits can be realised and the most efficient use of resources.
- Assign a temporary part time role for the project manager to work within the schools on a weekly basis. This would reduce pressures on the schools and delivery team as it would help streamline all the activities and communications.



Freedom to breathe

OUR FUTURE
IS IN YOUR
HANDS!

I WANT
CLEAN
AIR



WE ARE THE
FUTURE

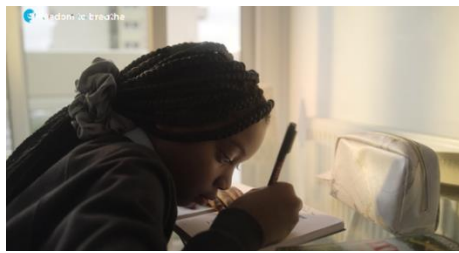
IT'S
YOUR

Freedom to breathe



Empowering & educating children call on the UNCRC

Supported by a joint letter to UNCRC (62 signatories), whitepaper & communications



A child's right to clean air

- To her excellency, Ms. Mikiko Otsu, Chair of the United Nations Committee on the Rights of the Child
- To their excellencies, members of the United Nations Committee on the Rights of the Child

Excellencies,

- We, civil society organisations, academics and businesses from around the world are pleased to support the call of children to the UN Committee on the Rights of the Child, to see their right to clean air elevated within the UNCRC system.
- Through the **Freedom to breathe** campaign, children in India, China, United Kingdom and United States have been learning about the harmful effects of air pollution and are calling on members of the UN Committee on the Rights of the Child to articulate a child's right to clean air, within the forthcoming General Comment No. 26, on children's rights and the environment, with a special focus on climate change.
- We, the undersigned, support their call and believe children have the right to breathe clean air, based on the disproportionate impact children face from exposure to harmful

- Signatories**
- | | |
|---|--|
| 1. Blumar | 27. Friends of the Earth England, Wales and Northern Ireland |
| 2. Global Action Plan | 28. Global Alliance on Health and Pollution (GAHP), Geneva, Switzerland |
| 3. Coalition for Clean Air | 29. Great Ormond Street Hospital for Children NHS Foundation Trust |
| 4. Centre for Engagement Education | 30. Green Schools Project |
| 5. Royal Society for Public Health | 31. Habitat, UK |
| 6. Action for Conservation | 32. Humanium |
| 7. Alder Hey Children's NHS Foundation Trust | 33. Institute for Public Policy Research (IPPR), UK |
| 8. The Asthma UK and British Lung Foundation Partnership | 34. Living Streets, UK |
| 9. Breathing California of the Bay Area, Golden Gate, and Central Coast | 35. Mitsubishi Electric UK & Ireland |
| 10. Breathing California Sacramento | 36. Mokuoff, UK |
| 11. Breathing DC Inc. | 37. Mums for Lung |
| 12. Breathing Pennsylvania | 38. National Association of Headteachers (NAHT), UK |
| 13. Breathing Southern California | 39. National Education Union (NEU), UK |
| 14. Care for Air India | 40. Planip |
| 15. Children on the Edge, UK | 41. Paul Undern, Department of Applied Mathematics and Theoretical Physics, University of Cambridge, England, UK |
| 16. Choked Up, UK | |
| 17. Clean Air Cebu, UK | |
| 18. Clean Air Fund | |
| 19. CleanAirHub | |

29,674
children have now called for their right to clean air

Freedom to breathe

MORE VIDEOS currently not stipulated as a child, right, as the UN Convention on the rights of the Child developed and educate.

3:06 / 1:01:22

A child's right to clean air

July 2021

Freedom to breathe



UNCRC acknowledges that children have a right to clean air

Freedom to breathe

#Freedomtobreathe

“We need an **air quality revolution...**
and I will do everything
I can with my colleagues to
support you in what you
are doing”

- Mr Philip D Jaffé,
Vice-Chair of the UN Committee on the
Rights of the Child



在过去的半年中，来自英国、美国、中国和印度的儿童通过“自在呼吸计划”表达了对于呼吸洁净空气的强烈期盼。该计划由Blueair、全球行动计划(Global Action Plan)、清洁空气联盟(the Coalition for Clean Air)、环境教育中心(Centre for Environment Education)以及全球儿童安全组织(Safekids Worldwide)共同发起，目前已汇集了29,674名儿童的呼吁。

参与到这项计划中的儿童先是通过在校开展的教育活动，了解到洁净健康空气的重要性，以及如何从我做起改善空气质量，并进而了解到可以通过参与此项计划为自己呼吁相关权利。



包括联合国儿童基金会、联合国和全球健康和污染防治联盟等在内的62家社会团体、学术和商业机构也向联合国儿童权利委员会递交了联名信函，表达了他们支持“儿童呼吸洁净空气”的权利应被纳入《公约》的态度。

全球90%的儿童都在呼吸着达不到安全标准的有害空气，对他们的器官发育造成影响。由于儿童较低的体重和更快的呼吸频率，他们的身体会对空气污染更为敏感。联合国儿童基金会曾预测，到2050年，空气污染会成为导致儿童死亡的“头号杀手”。世界卫生组织也曾估算，单在2016年一年，就有60万名儿童死于空气污染导致的急性呼吸道感染。



世卫组织目前也在加速推进相关举措，并于近期重新评估全球空气质量指南，鉴于对空气污染危害越来越深入的认知，今年9月世卫组织将空气质量指南中对于PM2.5的可接受含量收紧至原先的一半，二氧化氮的可接受含量变为原先的四分之一。



Nov 17, 2021, 06:08am EST | 451 views

Victory For Campaign To Recognise A Child's Right To Clean Air



Jamie Hailstone Contributor

Sustainability

I write about air quality and the environment.

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UN Acknowledges Children's Campaign for Right to Clean Air

Following a nearly 30,000 children globally calling on the United Nations Committee on the Rights of the Child



Next phase: campaigning for children's right to clean air to be included in the UN Convention on the Rights of the Child

General Comment 26: Children's Rights and the Environment with a Special Focus on Climate Change

General Comment [Home](#) [General Comment No. 26](#) [Get involved](#)

**Unite for children's
environmental rights**

Protect children's rights and our planet

The United Nations Committee on the Rights of the Child is taking a significant step to hold governments accountable for ensuring children live in a clean, green, healthy and sustainable world. They are inviting people from around the world to inform the General Comment 26 - official United Nations guidance on how children's rights are impacted by the environmental crisis and what governments must do to uphold these rights.



Key lessons learned

Local expertise is critical in an international context:

- Working with schools varies hugely in different parts of the world. Working with local experts who understand the context and have experience in doing so is key.
- Air quality is perceived very differently in different parts of the world – and needs to be communicated accordingly for the message to be well received. Local expertise is key – both for schools/ curriculum messaging and wider comms.

Common themes / learnings

- 1. Recognise the pressures schools face** (staff time, physical resources, financial):
 - Make it easy
 - Add value
 - Understand their context –e.g. admissions, no mandate for schools to act on air pollution, no central funding to support schools to take action etc.
- 2. Consider M&E more broadly**, to help with:
 - Comms / school recruitment
 - Raising schools' voices in campaigns
- 3. Communication is key:**
 - Be consistent, persistent and patient
 - Be clear on the offer & benefits
 - Leverage your networks / multiple stakeholders

Adding value



Education / student involvement



Parent / families' involvement



School infrastructure & resource



Technical expertise



Wider community



Pollution sources & level of control to influence these





Thank you!

Any questions or reflections?



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