

PLANTING HEALTHY AIR IN SCHOOLS - FULL PROGRAMME REPORT



PROJECT SUMMARY

Our award-winning Planting Healthy Air in Schools programme supports primary schools in London to take positive action to help improve the quality of air in their playgrounds. Throughout each project we consult and engage the whole school community through school assemblies and educational and planting workshops. Working in partnership with Mapping for Change and Lancaster University we plant trees and vegetation, and where beneficial install green screens, to help combat harmful air pollution. Through this approach, every pupil at the schools involved in each project will be able to learn more about air pollution and how to take action to prevent it or reduce it.

The new green infrastructure provides learning and engagement which fits with the school curriculum. Following the completion of each project, teachers are able to take lessons outside and teach the children the value of trees, wildlife and nature. As the next generation, it is vital that children are empowered from a young age to understand and engage in tackling poor air quality at source.



The heavily polluted A406 North Circular Road where Tudor Primary School is situated

WHY THE PROGRAMME IS SO IMPORTANT

Increasing the green infrastructure in school playgrounds has a positive impact on the environment of the playground and we are confident that this will help to reduce pupil's exposure to pollution levels. Trees and vegetation provide an array of ecosystem services such as cleaning and cooling ambient air. The urban heat island effect regularly increases air temperatures in cities by 3-4°C higher than surrounding areas. Asphalt heats up 10-20°C higher than the air, and yet many school playgrounds are without shade. Research shows that trees can help to absorb harmful carbon monoxide, sulphur dioxide and nitrogen oxides, helping to avoid possible respiratory problems later in life.

With increased temperatures year on year, the trees will also offer much-needed shade for the children as well as create new habitats for wildlife and learning. Children are one of the groups most at risk from the impacts of air pollution because of their smaller lung capacity and higher respiration rate (Tonne et al. 2018). In addition, many studies show that when people take part in nature-based activities this can help to reduce depression and anxiety levels (A review of nature-based interventions for mental health care, Natural England 2016). During 2019/20 we worked with 3 schools in London for Year 1 of the programme, read on for further details of our work at each school: Tudor Primary School in Barnet, Christ Church Bentinck in Westminster and Woolmore Primary School in Tower Hamlets.

TUDOR PRIMARY SCHOOL, BARNET

Tudor Primary School in Barnet sits alongside the heavily polluted A406 North Circular Road and the school grounds back directly onto a BP petrol station. According to the Ofsted report most pupils at the school are from a wide range of minority ethnic backgrounds. Three quarters of pupils speak English as an additional language and the proportion of pupils supported by funding through the pupil premium is above average. 34% of pupils have free school meals, indicating higher than average levels of deprivation (the national average is 25%). (Please note that unfortunately we have limited photographs of the pupil engagement workshops due to permissions at each of the three schools we worked with).

"Thank you again for this fantastic project, which will also have an uplifting effect on the community as a whole above and beyond the environmental impact of the trees". Simon Jebreel, Headteacher

WHAT WE DID

During September and October 2019 we carried out school assemblies and staff briefings. We engaged the school's 251 pupils through educational and planting workshops, one of each per each class. During early November, 18 Corporate Volunteers helped to mulch the newly planted whips, install protective fencing and help to create the re-wilding area along with Trees for Cities' staff. In total we have planted 4 standard trees and 500 whips (17.5m of hornbeam hedge) as well as installing 20.3m of ivy screens. On 20th February, the green screen planters (ivy) were installed with the help of corporate volunteers, bringing the total to 14 planters. With our partners, Mapping for Change, pupil's helped to install diffusion tubes around the school to monitor harmful NO₂. Pupil's will send the tubes to the lab once a month, for the next 12 months, and have created a map to plot the results.



"The day was well organised and staff from Trees for Cities made the day informative and enjoyable." Corporate Volunteer



TUDOR PRIMARY SCHOOL



**251 PUPILS
ENGAGED**



**TWO WORKSHOPS FOR
EVERY CLASS**



**15 TEACHERS
ENGAGED**



**4 STANDARDS, 500
WHIPS PLUS GREEN
SCREENS INSTALLED**

"I think that it's a good thing that they're doing it, because it's taking out pollution and it's saving our world. I like being an Eco-Warrior because it's really fun!"

"I think the school will be a better place, because the trees will suck the pollution up."

Tudor Primary School pupils



The newly planted whips at Tudor Primary School



CHRIST CHURCH BENTINCK, WESTMINSTER

Christ Church Bentinck is an Ofsted 'Outstanding' school situated close to the heavily polluted A501 (Marylebone High Road). Around 56% of pupils at the school have free school meals indicating higher than average levels of deprivation (the national average is 25%). According to the 2019 Ofsted report the proportion of disadvantaged pupils is well above average. The proportion of pupils who are from minority ethnic groups is also well above average.

"The ivy screening at the front of the school looks beautiful and has a very positive impact."
Headteacher, Christ Church Bentinck

WHAT WE DID

During mid-September 2019 we carried out school assemblies and staff briefings. We engaged the whole school community through seven educational workshops as well as seven planting workshops.

During late October 2019 we carried out planting day workshops. In total 2 standard trees, ivy screens and 121 plants in wooden seating planters have been installed. The new seating area has been designed to encourage pupils to spend time in the area of the playground furthest from the road. The new trees will provide much needed shade and the newly installed ivy screens provide a vital screen between the front of the school and the road where the school sits. With our partners, Mapping for Change, pupils helped to install diffusion tubes around the school to monitor harmful NO₂. Pupils will send the tubes to the lab once a month, for 12 months, and have created a map to plot the results. Throughout the project at Christ Church Bentinck we engaged 213 children and 14 adults. **One Year 6 pupil said,** "Since the planting has taken place, the air that we breathe seems more healthy."



CHRIST CHURCH BENTINCK



213 PUPILS ENGAGED



TWO WORKSHOPS FOR EVERY CLASS



14 TEACHERS ENGAGED



121 PLANTS, 2 STANDARDS AND IVY SCREENS INSTALLED



Pupils from Christ Church Bentinck engage in an air pollution workshop with Kirsti from Lancaster University



“The plants and seating in the main playground have transformed the space and have made our playground more welcoming.”
Year 6 pupil

WOOLMORE PRIMARY SCHOOL, TOWER HAMLETS

Woolmore Primary School sits next to the heavily polluted Blackwall Tunnel Northern Approach. According to the most recent Ofsted report, the proportion of pupils from minority ethnic groups is well above the national average, as is the proportion of pupils supported by the pupil premium. In addition, the vast majority (91% in 2014) of pupils speak English as an additional language.

"Let's say a huge thank you to Trees for Cities, I learnt a huge amount myself today"
Adam, Year 4 Teacher

WHAT WE DID

During February 2020 we carried out school assemblies and workshops to every class in the school. We engaged the school's pupils and teachers through both educational and planting workshops. Planting workshops took place during the middle of March. In total, 2 standard trees and 4 fruit trees have been planted as well 3.6m of Euonymus screen. Green spaces, including seating areas, have been created around the playground to encourage outdoor learning and play, including natural log seating and raised beds within the nursery area and chestnut arbours providing evergreen shade in the junior playground. During educational workshops, pupils were provided with different plant smells which would be part of the new planting, and they had to try and identify each of the plants through the smell. **One child in Year 3 said**, "This smell (jasmine) reminds me of my holidays to Bangladesh."

With our partners, Mapping for Change, pupils helped to install diffusion tubes around the school to monitor harmful NO2. Pupils will send the tubes to the lab once a month, for 12 months, and have created a map to plot the results. Throughout the project at Woolmore Primary School we engaged 509 children and 50 adults. On 21st February, 16 corporate volunteers helped with the planting and commented how rewarding they found it. Tracey Argent, **the Headteacher at Woolmore Primary School said**, "Your team - and the volunteers last week - have all worked so hard and we are delighted with what we see. Just now I saw the final mulching happening. They have been a pleasure to have around school. Thank you to everyone for giving our playground an incredible face-lift - it's beyond what we could have wished for and we can't wait to start using the new areas."



"I can't wait for the Liquidambar and Rowan tree to arrive!" Year 5 pupil

WOOLMORE PRIMARY SCHOOL



509 PUPILS ENGAGED



TWO WORKSHOPS FOR EVERY CLASS



50 TEACHERS ENGAGED



PLANTS, 3.6 METRES OF GREEN SCREEN AND 6 TREES PLANTED



Corporate volunteers help with the planting at Woolmore Primary School



Educational workshops to engage pupils

FUTURE PLANS

All three schools will continue to be supported for their NO2 monitoring and their maps to showcase the NO2 levels can be found [here](#). Lancaster University will collate all results and will help us to form conclusions at the end of the monitoring. We will return to each school in Spring/Summer 2020 to deliver sessions on using the outdoor space to help deliver the curriculum. Trees for Cities will continue to care for the new standard trees for three years and the new whips for one year, care will then be handed to the school. Through whole school engagement we are confident that pupils and teachers at each school will continue to care for their new green space. We will be working with up to four more primary schools in London during 2020/21 for year two of the programme. There have been a number of articles published about the Planting Healthy Air in Schools programme including in the Countryside Classroom, Council for Learning Outside the Classroom, Pro Landscaper and Horticulture Week.

