

## PLANTING HEALTHY AIR IN SCHOOLS LONDON 2019-20

**Planting Healthy Air in Schools (PHA)** is a programme delivered by **Trees for Cities** in partnership with **Mapping for Change** and **Lancaster University**. PHA engages the full school community to raise awareness of the problem of air pollution and the ways that vegetation can help to reduce exposure. We work with the schools to design and plant green infrastructure (GI) - trees, ivy screens, hedgerows - to screen against pollution source(s), and monitor improvements in air quality around the playground. We spotlight changes in behaviour that can further reduce an individual's exposure to air pollution.

### WHY IS PLANTING HEALTHY AIR SO IMPORTANT?

Increasing the green infrastructure in school playgrounds has a positive **impact on the environment** of the playground and with the aim of helping **reduce pupils' exposure to pollution levels**. Trees and vegetation provide an array of ecosystem services such as cleaning and **cooling ambient air**. 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. 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).

**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

### CHRIST CHURCH BENTINCK PRIMARY SCHOOL, WESTMINSTER



*Located near the highly polluted Marylebone Road (A501); of the 213 pupils, 52% receive free school meals. This school was concerned about the level of exposure to harmful airbourne articles and was looking for ways to combat some of the challenges it was facing around keeping children safe and educating the school community around the potential dangers of harmful pollution caused by nearby heavy traffic.*



213 PUPILS ENGAGED



TWO WORKSHOPS FOR  
EVERY CLASS

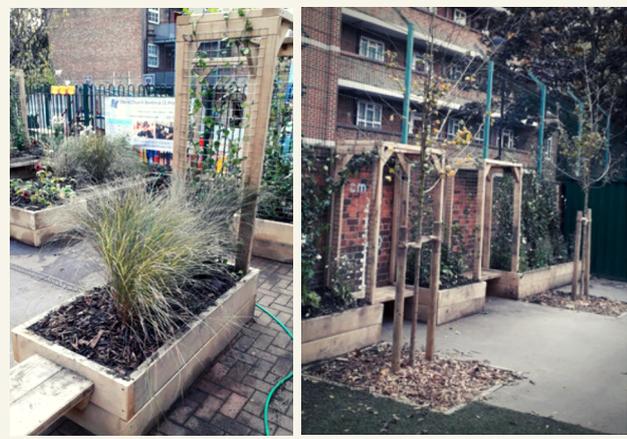


14 TEACHERS  
ENGAGED



121 PLANTS, 2 STANDARDS  
PLUS IVY SCREENS INSTALLED

At Christ Church Bentinck **two mature field maple trees** were planted by breaking concrete in the playground and **ivy screens** were installed along the outer fence; with the aim of helping to **filter the polluted air** coming from Marylebone Road. One hundred and twenty one plants, including jasmine, echinacea and lavender, went into **new wooden seating planters**. The new seating areas are designed to encourage pupils to spend time in the area of the playground furthest from the road. Two workshops were delivered to **every class** on the subject of air quality, as well as, teaching the children about the properties of the trees and plants going into their playground. **Every child in the school** was able to take part in the planting and was able to identify some of the diverse plants and flowers now in their school grounds.



Grasses, two new field maple trees and ivy screens at Christ Church Bentinck

Facilitated by our partners **Mapping for Change** the children were given the opportunity to do some **data collection** looking at the **NO2 levels** in their playground and around the school gates. Despite COVID19 preventing us from completing all our data collection (the labs closed) the children were still able to learn from the scientists themselves at **Lancaster University**. Below is a photograph of the children taking some **Particulate Matter measurements** (PM) with Dr Kirsti Ashworth from Lancaster University to further understand the challenges around air pollution in their school.



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

“ **SINCE THE PLANTING HAS TAKEN PLACE, THE AIR THAT WE BREATHE SEEMS MORE HEALTHY** ”  
**YEAR 6 PUPIL AT CHRIST CHURCH BENTINCK**

“ **THE PROGRAMME HAS MADE A HUGE DIFFERENCE TO THE WAY THE PLAYGROUND LOOKS, IT HAS TRANSFORMED IT. THE CHILDREN ARE ABLE TO SIT AND APPRECIATE THE ENVIRONMENT - WE DIDN'T HAVE THAT BEFORE** ”  
**SCHOOL STAFF AT CHRIST CHURCH BENTINCK**



The children planted lavender and jasmine at Christ Church Bentinck.

## FUNDERS

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## PARTNERS

