



## School Boundary Treatment



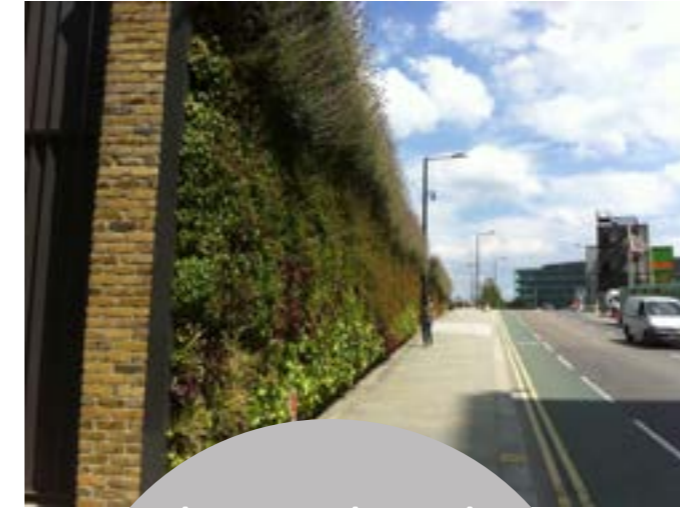
Living walls  
are an effective  
roadside pollution  
barrier <sup>1</sup>....



....and  
improving  
health <sup>3</sup>



....removing  
dangerous air  
pollutants (NO<sub>2</sub>,  
particulates) <sup>2</sup>



Plants absorb,  
diffract and  
reflect sound  
reducing the noise  
from traffic <sup>4</sup>



Green walls  
provide a refuge for  
biodiversity in inner  
city habitats <sup>5</sup>



Evapotranspiration  
provides relief from  
urban heat <sup>6</sup>

## In the School Grounds



Connecting with nature reinforces the value of respect and care for the environment <sup>7</sup>



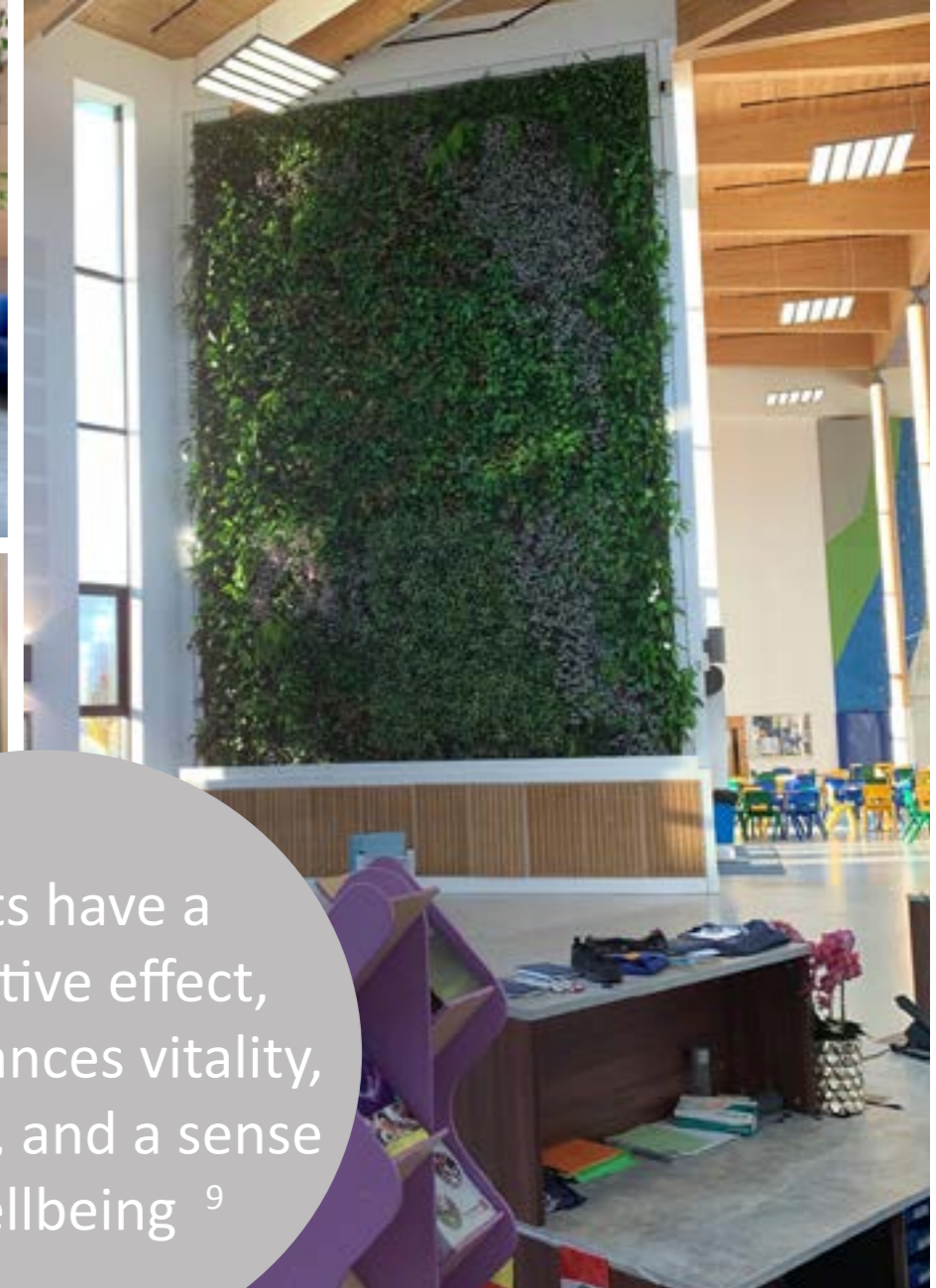
## Inside the School



Cleaner air can improve children's working memory <sup>8</sup>



Plants have a restorative effect, that enhances vitality, positivity, and a sense of wellbeing <sup>9</sup>



# References

1 Living walls can be a more effective roadside pollution barrier than either trees, hedges, or solid barriers. (Vos et al, 2013; Gallagher et al, 2015; Baldauf, 2017; Abhijith et al, 2017).

2 Green walls can remove air pollutants e.g. up to 40% of nitrogen dioxide and 60% of particulates. (Pugh et al, 2012)

3 Health problems resulting from exposure to air pollution, such as respiratory and cardiac related illnesses, cost the UK over £20 billion a year and cause around 40,000 premature deaths (Royal College of Physicians, 2016). A UK Study estimated that up to 38% of all childhood asthma cases in Bradford were due to traffic related air pollution (Khreis et al, 2018).

4 Our walls have been classified as a Class C Acoustic Material. Sound Absorption Coefficient tested in 2016 in accordance with British Standard BS EN ISO 354. Noise reduction coefficient (NRC) of 0.70; Sound absorption average (SAA) of 0.71.

5 As well as introducing an abundance of plants, walls provide a refuge for biodiversity in inner city habitats e.g. they provide food, shelter and a nesting opportunity for birds and a home for invertebrates. (Lorimer and Francis, 2011; Chiquet et al, 2012)

6 During hot summers, evapotranspiration from living walls provides relief from urban heat (Alexandri and Jones, 2008)

7 Being surrounded by a more natural environment helps us to connect with nature and reinforces the value of respect and care for the environment (Heerwagen, 2009).

8 Results from modelling undertaken by the Global Action Plan, Philips Foundation and the University of Manchester suggest that maintaining lower air pollution levels could improve the development of a child's working memory by up to 6.1%, the equivalent of four weeks extra learning time per year (Munford et al, 2020).

9 The connection with nature delivered by living walls provides a restorative effect, enhancing vitality, positivity, and a sense of wellbeing in as little as 10 minutes (Mayer et al, 2009; Capaldi et al, 2014; Allen et al, 2016; Crossan and Salmoni, 2019; Bourrier et al, 2019)

# Contacts



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