



Air Quality Challenge

Clean and green for seventeen

Information for entrants



**City
Gardens**

The air quality challenge

Your mission

Air quality in the City is amongst the worst in the UK, with Nitrogen dioxide levels on major roads consistently above the safe limit for health and fine particle concentrations often breaching EU standards. Research has shown that street level planting can have a positive effect on pollution levels - as well as enhancing our local environment. The **Clean and green for seventeen** Challenge asks you to make a difference to your local street by designing and installing a planting scheme.

The Challenge is free to enter. The installation can be as small or expansive as you wish - a window box, planter, raised bed, green wall or front garden. It can be as cheap and cheerful or as glitzy and glamorous as you like. It should be eye-catching, informative and include plants that help improve air quality (we can help you with that).

The aim is to:

- Help reduce air pollution
- Green our Grey Streets
- Raise awareness of air quality

What we will do

Every entry will be professionally photographed and every entrant will receive a copy of the photo book we will publish to record everyone's achievement.

At Open Gardens Weekend on 17/18th June, your installation will be part of a new Guided Walk. You might like to be there to explain your thinking.

Team up

If you want to team up with someone else - community group, school, local business or resident let us know and we can put you in touch with a partner.

Key dates

By 31 March	Get in touch to register an interest and receive free advice and guidance on sites and plants.
1 April to 1 June	Build and plant your installation
1 June to 30 June	Photographs
17/18 June	Open Garden Squares Weekend walks
1 September	Photo-book sent to all entries

What happens next

Depending on the site of your installation you can continue to maintain it, or relocate it elsewhere, donate it to someone else, or dismantle it.

Some ideas for street level planters



Powder-coated oil drums



Planters on wheels



Purpose-built air quality installation



Green wall



Giant flower pots



Ivy screen for a building site

Some ideas for air quality enhancing plants

Evergreen plants with many small, hairy leaves are good for trapping particulates - this includes many plants that are also great for pollinators such as lavenders, hebes, silver bush and perennial wallflower. Ivy, a vigorous, hardy climber is a champion plant for screening where street trees are not viable.



See our handout for some more suggestions based on 2012 research by Imperial College.

If you want to read more about the science supporting the benefits of green screening here are some links to research papers.

Research

Impact of Roadside Tree Lines on Indoor Concentrations of Traffic Derived Particulate Matter by Barbara A. Maher, Imad A. M. Ahmed, Brian Davison, Vassil Karloukovski, and Robert Clarke. 2013.

Green Walls for Clean Air by Katrin Gölsdorf, Hans Müller, Marcus J. Collier. School of Geography, Planning & Environmental Policy, University College Dublin. 2013.

Effectiveness of Green Infrastructure for Improvement of Air Quality in Urban Street Canyons by Thomas A. M. Pugh, A. Robert MacKenzie, J. Duncan Whyatt, and C. Nicholas Hewitt. Lancaster Environment Centre, Lancaster University. Environ. Sci. Technol., 2012, 46 (14), pp 7692–7699

Quantifying the deposition of particulate matter on climber vegetation on living walls by Marc Ottelé, Hein D. van Bohemen, Alex L.A. Fraaij. Delft University of Technology, Faculty of Civil Engineering and Geosciences. 2008.

Review on urban vegetation and particle air pollution – Deposition and dispersion by Sara Janhäll. Swedish National Road and Transport Research Institute-VTI, Sweden. 2014.

The role of shrubs and perennials in the capture and mitigation of particulate air pollution in London by Kyle Shackleton, Hannah Smith, Linda Davies, Nigel Bell. Centre for Environmental Policy, Imperial College London. 2012.