

February 2022 Newsletter

AIR POLLUTION THEME OF THE MONTH: TREES & AIR POLLUTION



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Join us in planting trees at the Balaji Temple

The [Shri Venkateswara](#) Balaji Temple in Tividale, Oldbury, have over 500 trees ready to plant that they received from the Woodland Trust community planting scheme. They would really welcome your help on **Wednesday 9th March 2022**, from **10am to 3pm** to start planting them.



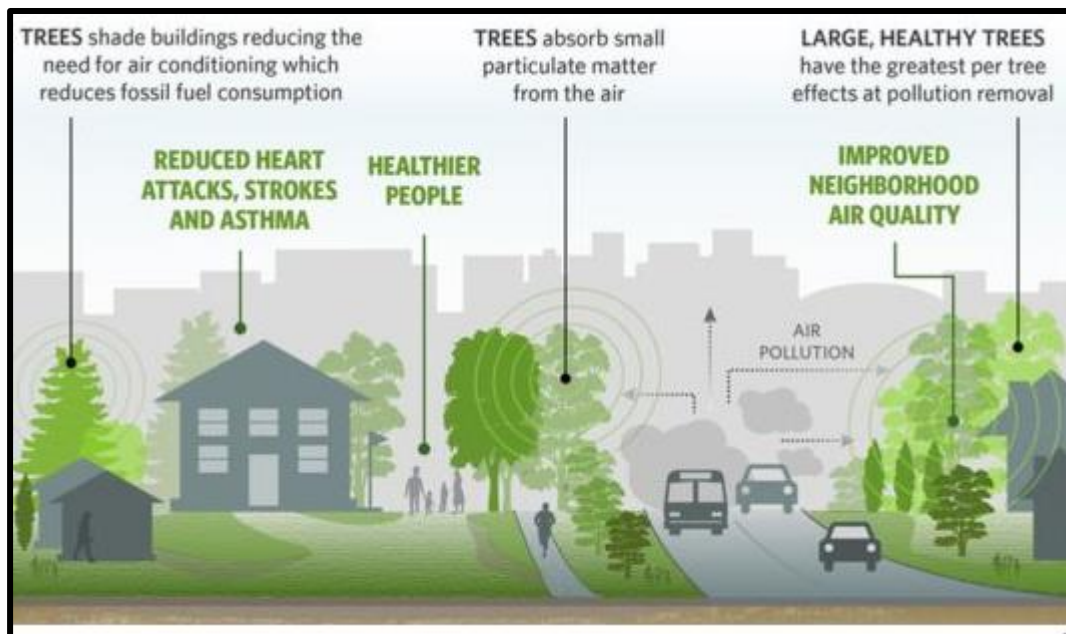
Trees are an integral part of reducing both air pollution and adapting to the effects of climate change.

Trees and Air Pollution FAQs

Q: Do trees help remove air pollution?

A: Yes, trees help remove air pollutants from the air, although some are better than others. Particles, odours and pollutant gases such as nitrogen oxides, ammonia and Sulphur dioxide will all settle on the leaves of a tree. Trees absorb some of these toxic chemicals through their stomata, or 'pores' effectively filtering these chemicals from the air or trap particles in their canopy. In general, the trees with bigger canopies whose leaves are large, rough, rugged and hairy are the best filters for particulate matter. This is because the hairs on their leaves act like Velcro and capture the tiny, ultrafine particles of air pollution. These are the most dangerous air

pollutants as they penetrate lung tissue and can enter the bloodstream. Trees are also important for reducing the greenhouse gas effect, by trapping heat, absorbing carbon dioxide, reducing ground level ozone and releasing life-giving oxygen. In the right place they also can form an important barrier between places where people live, and areas of high pollution, like busy roads.



Q: Do more trees help protect public health?

A: A study by the University of Exeter into the impact of urban greenery on asthma suggested that respiratory health can be improved by the expansion of tree cover in very polluted urban neighbourhoods. They found residents living in polluted urban areas are less likely to be admitted to hospital with asthma when there are lots of trees in their neighbourhood.

Research has demonstrated wide reaching benefits to public health including;

- **social cohesion** – planting, maintenance and enjoyment of trees and woodlands brings people together.
- **noise reduction** – trees deflect and absorb sound which can improve the environment for those living in noisy urban areas, particularly those living on busy roads or near industrial or commercial sites.
- **reduce the impact of global temperature rises** – trees help reduce the ‘urban heat island effect’ which occurs when hard surfaces in summer act as giant storage heaters, absorbing heat during the day and releasing it a night. This can exacerbate chronic respiratory conditions like asthma and COPD. There can be a difference as much as 10°C between a city centre and surrounding countryside.

- **reduce flooding** – wetter winters and heavy rainfall are likely to become more common. Trees regulate the rate at which water falls to the ground, and contributes to run off, slowing water down as well as absorbing it through roots and reducing flood risks.
- **Reduce energy costs** – by providing shade and shelter trees help reduce a building’s energy costs. Deciduous trees in particular provide shade during hot summer months whilst allowing solar gains to buildings during the winter.
- **Reduce healthcare costs** – it is estimated that if every household in England were provided with good access to quality green space it could save £2.1 billion in health care costs. *‘The role of the natural environment in maintaining healthy lives’, Natural England* – www.naturalengland.org.uk/publications

Q: What are the best trees to plant for air quality in urban areas?

A: Although all leaves trap small amounts of air pollution, some are better than others and not all will grow successfully in urban environments where they face stresses such as compacted soil, waterlogging, droughts, pests and disease. A recent study found that silver birch, yew and elder were the most effective at capturing fine particles, whilst conifers like pines and cypresses are also particularly good at purifying air.



Silver Birch



Elder



Yew

When planting trees, it is worth getting expert advice about whether the trees will be suitable for the proposed location. Issues such as wind direction and the local landscape can affect the way pollution moves and trees need to be planted so they don’t trap pollution. In narrow streets surrounded by tall buildings airflow can trap pollutants close the ground. Planting tall trees with big canopies can also make matters worse in this situation by preventing the pollution from dispersing. Hedges or green walls are generally to be preferred to trees in narrow streets lined by tall buildings. While on broad roads surrounded by low-rise buildings, air can flow more freely

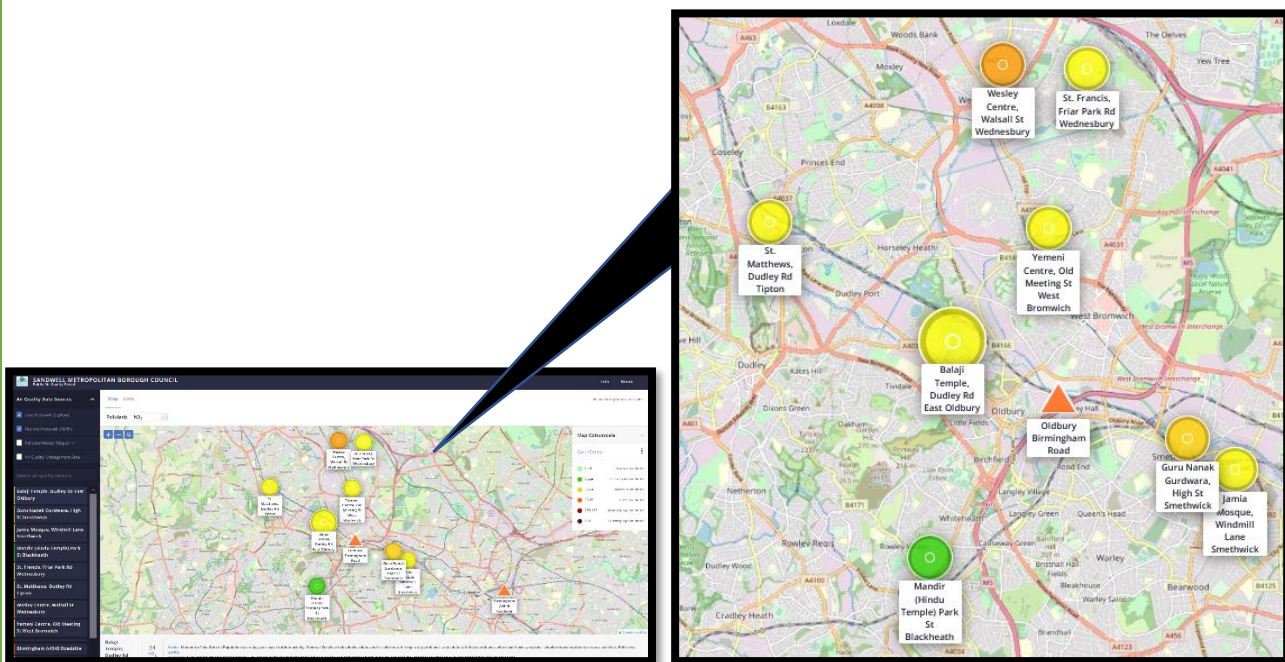
so there is less risk of trapping pollutants, making both trees and hedges suitable options.

Q: Can I get free trees for my community group or school?

A: The Woodland Trust are offering free trees for schools and communities. Applications for the next planting season open in March 2022 for planting in November 2022. To apply, all you need is the six-digit grid reference for the land you wish to plant, have permission from the landowner and read their quick FAQs! You can find more details about the Woodland Trust free trees on their web page www.woodlandtrust.org.uk/plant-trees/schools-and-communities/.

Remember Sandwell's Air Quality Dashboard is showing real-time air pollution data from a Faith Centre near you!

The network of air quality sensors are all live on Sandwell's online Air Quality Dashboard and show the air quality levels outside the 8 faith centres taking part in the project across Sandwell.



You can access this dashboard yourself by going to this webpage:

<https://portal.earthsense.co.uk/SandwellPublic>. The link is also available on Sandwell's Faith Centre Air Quality [project webpage](#). Each faith centre also has a TV screen to display the dashboard for everyone to see when entering their building.

USE THE AIR QUALITY INDEX TO PROTECT YOURSELF

IF YOU ARE PLANNING OUTDOOR ACTIVITIES CHECK SANDWELL'S AIR QUALITY DASHBOARD AND USE THIS AIR QUALITY INDEX TO HELP PROTECT YOURSELF AND OTHERS FROM THE EFFECTS OF LOCAL AIR POLLUTION.

UK Air Pollution Band	Action to take for individuals*	Action to take for general population
Very Low	Enjoy your usual outdoor activities.	Enjoy your usual outdoor activities.
Relatively Low		
Moderate	Adults and children with lung problems, adults with heart problems, who experience symptoms, should consider reducing strenuous physical activity, especially outdoors.	Enjoy your usual outdoor activities.
High	Adults and children with lung problems, and adults with heart problems should reduce strenuous physical exertion outdoors. People with asthma may find they need to use their reliever inhaler more often. Older people should also reduce physical exertion.	Anyone experiencing discomfort such as sore eyes, cough or sore throat should consider reducing activity particularly outdoors.
Relatively High	Adults and children with lung problems, adults with heart problems, and older people, should avoid strenuous physical activity. People with asthma may find they need to use their reliever inhaler more often.	Reduce physical exertion, particularly outdoors, especially if you experience symptoms such as cough or sore throat.
Extremely High		

Adults and children with heart or lung problems are at greater risk of symptoms. Follow your doctor's usual advice about exercising and managing your condition

If you have any questions about the content of this newsletter, please contact a member of the Air Quality team via pollution_control@sandwell.gov.uk. The content of this email is correct at time of circulation.