

APSE Webinar

Tiny Forests – small spaces – big benefits

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Why do we need Tiny Forests ?

Environmental issues such as flooding, heat stress and loss of biodiversity are increasingly affecting urban areas; and this is only expected to worsen in the face of climate change and increasing urbanisation.

Creating thriving and climate-resilient urban areas that support economic growth, whilst also enhancing livelihoods and wellbeing, is a considerable challenge.

Tiny Forests can play a part in facing this challenge by offering multiple co-benefits: reconnecting people with nature, raising awareness – and helping to mitigate the impacts – of climate change, as well as providing nature-rich habitat patches to support urban wildlife.



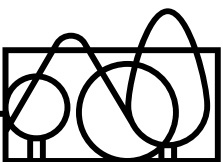
Introducing Tiny Forests



We plant dense fast-growing native woodlands, based on an established forest management method developed in the 1970s by Dr Akira Miyawaki.

We engage communities to plant, maintain and monitor each forest over time. We reconnect people with nature and raise awareness of climate change.

We collect environmental and social data relating to every forest we plant, to assess the benefits they provide over time and between forests.



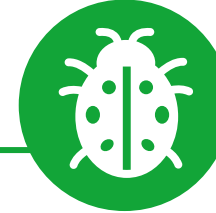
A closer look at a Tiny Forest



600 trees planted densely in a tennis-court size plot, maximising benefits per m² of land



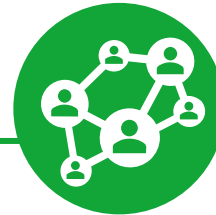
Planting method encourages **accelerated forest development** and uses **no chemicals or fertilisers**



Low management and maintenance requirements after the first two years



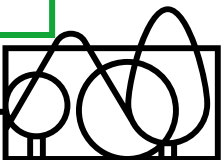
Rich biodiversity, capable of attracting over 500 animal and plant species within the first 3 years



A nature-rich **accessible green space** and inspiring **outdoor classroom** for people to reconnect with nature



Monitoring data gathered by citizen scientists to help understand how Tiny Forests develop, and quantify the **climate benefits**



Social benefits

Tiny Forests provide a publicly accessible place for people to relax, enjoy and appreciate nature in the built environment. They can support health and wellbeing through simple aesthetic value, actively watching wildlife, personal involvement in the project and as an educational resource or skills-building experience.

Each forest is expected to engage:

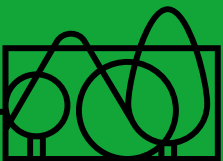
- **Up to 100 volunteers** on planting day, providing a tangible way for communities to take environmental action
- **Up to 40 people** on monitoring days, providing opportunities to learn about scientific methods and the benefits of trees
- **4-6 volunteers as a Keeper Team** to act as the forest ambassadors and support with maintenance
- The **wider community**, visitors and school children as an inspiring place to enjoy nature

Growing evidence base on the benefits of trees for **improved mental and physical health**.

Creating opportunities for people to **come together as a community** to care for and maintain their local forest.

Increasing people's connection to nature through **education, engagement and citizen science** activities.

Raising awareness of the climate crisis and the importance of nature-based solutions in urban areas.



How do we create a Tiny Forest?

Once the plot is secured there are only five steps to establish a Tiny Forest:

Step 1 Plan

We conduct a soil survey to assess soil structure and hydrology. Based on site specific insights, we determine which native species to plant to make the forest more resilient.

Step 2 Design

We work up a planting design with the optimal species composition, and bespoke features such as pathways or clearings, we create an inviting, accessible and functional space.

Step 3 Prepare

We prepare the site, and in particular the soil, to optimise growing conditions and maximise outcomes.

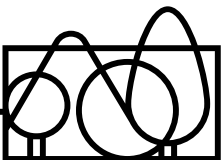
Step 4 Plant

We engage your staff and local community for a volunteering day during the planting season, and to support ongoing care and use of the forest, if required.

Step 5 Monitor

Basic care of the forest is recommended for the first two years.

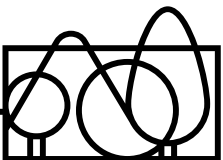
Monitoring data is collected during the growing seasons.



Monitoring the forest

With the help of citizen scientists, we are gathering data from all the Tiny Forests we plant to understand the growth and development dynamics, environmental and social benefits over time.

Thermal comfort	Using thermometers to assess the temperature difference between the inside of the forest and surrounding area along a transect.
Flood mitigation	Assessing the forest's ability to store water through assessing soil characteristics including texture, colour, moisture and compaction.
Biodiversity	Conducting species surveys focusing on pollinators and soil dwelling organisms.
CO₂ absorption	Measuring above-ground biomass through tree height and stem diameter to assess carbon capture potential.
Social	Conducting social surveys with local residents and volunteers to better understand how the community is utilising the forest and the benefits it is providing.



Tiny Forests grow quickly: Witney



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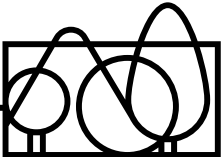


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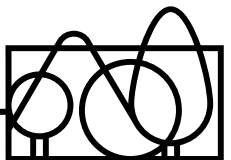
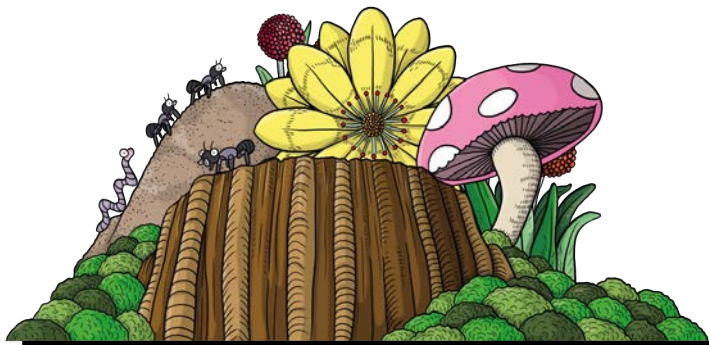
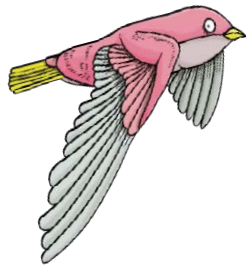
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*After two growing seasons (planted in winter 2015)



17 UK Tiny Forests to date

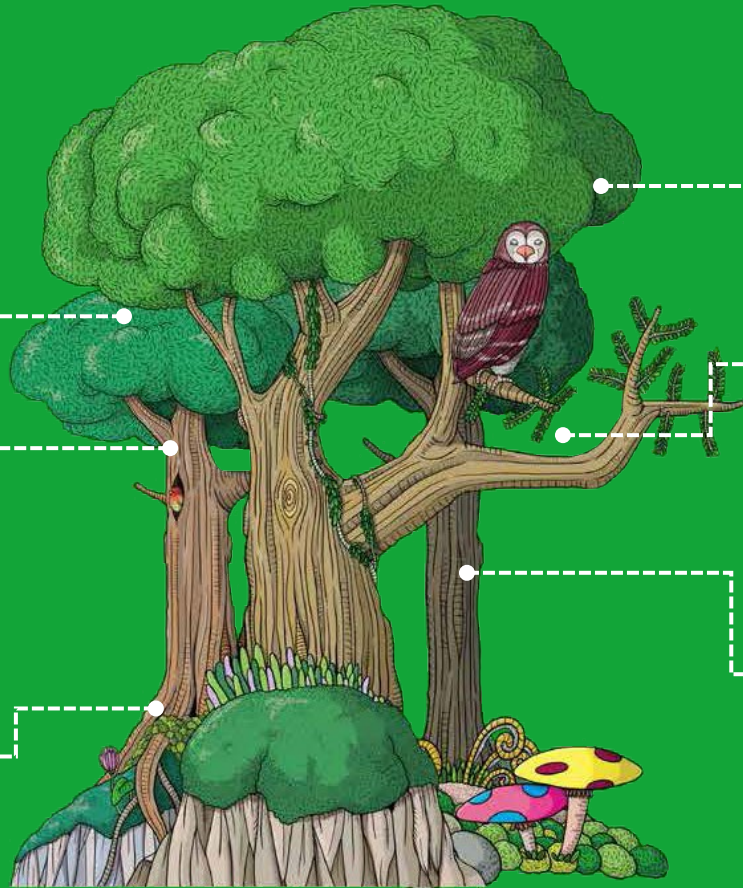


Benefit summary

A nature rich green space, for the benefit of the local community and wildlife.

Volunteer opportunities for local residents and schools.
Creates an outdoor classroom and a place for people to connect with nature.

Contributes to national and local sustainability and climate strategies.



Supports schools to develop students' understanding of the natural world, sustainability and how they can take positive environmental action

Positive environmental impact such as increased biodiversity and carbon capture

A science-based project that informs the development of nature-based solutions to climate-proof our cities





tinyforest

Powered by **earthwatch**
EUROPE

Super Tiny, Super Powerful

For more information:

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Featured in:



**The
Guardian**

ECOLOGIST
THE JOURNAL FOR THE POST-INDUSTRIAL AGE

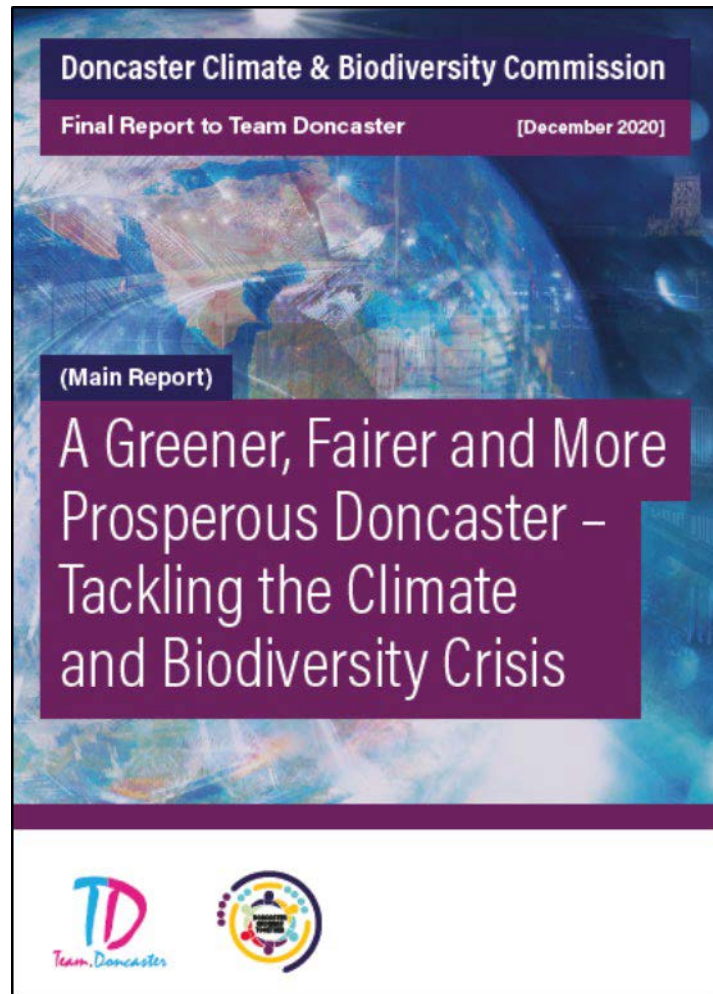
THE  TIMES

RIBA 

Royal Institute of
British Architects

The Telegraph

Doncaster context



- Climate & Biodiversity Emergency – inextricably linked
- Net-zero for 2040, with Sheffield City Region
- Environment & Sustainability Strategy into ‘Team Doncaster’ Borough Strategy
- DMBC Sustainability Unit
 - Built environment, energy & transport
 - Natural environment, community engagement & education
- Natural Capital Assessment, ‘1 million trees’ (i.e. far more than we would consider from a ‘business as usual’ perspective), high ambitions for peatland restoration, flood resilience, etc.
- Nature recovery - ‘regenerative cultures’

Climate and environmental education

Future generations will look back and realise we made the right choices in prioritising the environment in order to sustain and enhance quality of life in Doncaster.

In 2040 (Doncaster's net-zero target date)

today's primary school children aged 5 – 11 will be 24 – 30 years old

today's Secondary school children aged 11 – 16 will be 30 – 35 years old

- They will be socially active, voters, setting career paths, starting families, volunteering, etc.
- They will benefit from, or suffer, the landscapes we leave to them
- They will be connected, engaged with, or further alienated from the natural environment

Climate and environmental education

- Tiny Forest with citizen science
- Forest Schooling
- Schools Energy Management (traded service) include active Students Education Sessions – 2 day ‘classroom’ or ‘outdoor’ environmental education sessions
- Many schools have other programmes or their own approach

Tiny Forest challenges

- Clear purpose – environmental education & community engagement
- Funding to work with Earthwatch
- What does a Tiny Forest look like for real? pilot/demonstration site
- Site with community or school oversight & support – ‘keeper team’
- Managing expectations – not like ‘putting the bins out’
- Tree planting season November to mid-March, not anytime
- Site suitability
- Access for landscaping
- Landowner agreement

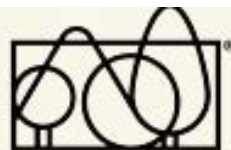




What is a Tiny Forest?

Welcome to Doncaster's first Tiny Forest planted in March 2021, here in Scawsby Saltersgate Infant School. A Tiny Forest is a dense, native woodland that helps mitigate the effects of climate change, support urban wildlife and reconnect people with nature. Sit back and enjoy the green surroundings.

tinyforest



Scawsby Saltersgate Infant School



Ground animals and mushrooms (fungi) are the forest rubbish collectors; they feed on the leaf litter and the organic matter.



Urban forests are very important for climate adaptation. Trees retain water, increase local water storage, provide thermal comfort and take up carbon dioxide.



A Tiny Forest provides natural habitats for wildlife and can attract over 400 animal and plant species. How many can you spot?

This Tiny Forest is planted using a technique developed by Japanese botanist Akira Miyawaki. It consists of a dense mix of 600 trees native to this area.



The whole school can use the outdoor classroom as a place to learn and play.



The Tiny Forest will be maintained by volunteers from the Scawsby Saltersgate Infant School and the local community. For the first two years they are responsible for watering, weeding and scientific monitoring.

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Want to know more about Tiny Forests?

Please scan this QR code or visit:

www.earthwatch.org.uk/tinyforests





Future roll-out

- Lots of interest – 11 more expressions of interest
- Link to Forest Schooling, Woodland Rangers and other education and conservation initiatives
- Develop funding pot from multiple sources, keeping costs down
- Schools asked to make small contribution, some much less able to fundraise than others
- Oversight by Learning Provision Organisations Board for transparency and fairness in the approach to funding.
- Link with Tiny Forest network