

Liverpool GreenUP Project



Greening the city: Promoting resilient future cities using nature-based interventions

Against the backdrop of climate and biodiversity emergencies, incorporating nature-based solutions into our work needs to become an essential component in our toolkit for creating resilient and equitable future towns and cities. Changing the way we design urban areas is crucial to ensure we have a positive impact on diversity, experience and health and well-being for inhabitants and visitors alike.

Recalibrating our relationship with nature is a step in the right direction, but further investment is needed to make change happen. Policymakers and businesses are considering how to shift investment toward nature-positive outcomes, but uncertainty and perception of risk about achieving successful outcomes is holding back progress.

THE CHALLENGE

The successful delivery of the Liverpool GreenUP project goes a long way to demonstrate the positive impact of nature-based solutions within an urban environment. As part of the EU Horizon 2020 programme, the challenge of the project was to design, build and test a range of interventions whilst monitoring environmental, health and economic impacts to determine performance against a range of defined criteria with a well-established baseline.

THE SOLUTION

This project involved the design and implementation of three green infrastructure corridors through the city, each with a range of nature based interventions installed along the route. The interventions have included green walls, floating ecosystems, sustainable drainage, tree planting, pollinator verges and an interactive sculpture trail.

A key aspect of the project was to monitor the multiple benefits of each of the projects, which included impacts on biodiversity, air quality, socio economic factors and local community perception. A year of baseline monitoring was carried out and up to 2 years of monitoring following installation and the data has been collated and analyzed.



1 Wapping Dock Floating Ecosystem

2 The Strand Pollinator Site

3 Park Lane Pollinator Site

4 Pitt Street Rain Water Garden

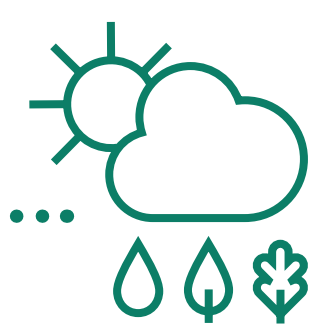
5 Parr Street Living Green Wall

THE BENEFITS

The results indicate significant environmental, economic and social benefits. In addition, community involvement has been promoted throughout the project with local people getting involved in planting and developing skills to assist with ongoing maintenance.

Data collected will be shared through an online database and lessons learnt about the delivery process is being developed into a guide to assist future projects both locally and globally. These resources will help to build confidence amongst asset owners, developers and investors about the tangible outcomes and benefits of nature-based solutions helping to unlock investment in this important area.

ENVIRONMENTAL



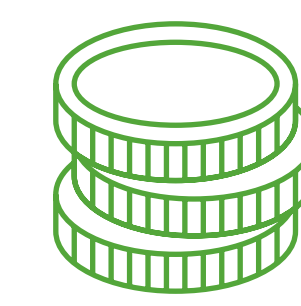
> **5032.8t CO2** sequestered by trees, pollinator sites and green walls

7.5°C reduction in surface temperature from cooling trees

928% increase in pollinator counts at one pollinator site

> **5,200,000 litres water** diverted from sewer per year.

ECONOMIC



£34,357 saved from avoided carbon emissions in demo areas

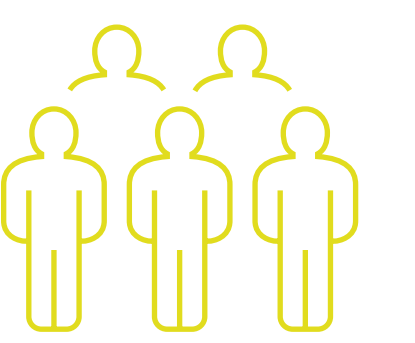
92% respondents said planting trees attracts business and people

1362 kWh/year and 681kg CO2 not emitted from shading/evapotranspiration

34 - 186 days/year less absenteeism **saving £56,700** in demo areas

£4,799 (average/Year) saved in energy and carbon emissions from reduced stormwater entering sewers

SOCIAL



817 more homes with green space view

13.9% increase in walking levels across the city

26 lives saved/year from increased walking and cycling activity

30% increase in adult physical activity from GI physical activity programmes

11,700 households and **23,500 residents** with better access to green space

77% surveyed participants valued GI as **very positive for mental health**



