

## The Pollinator Project, Urban GreenUP

Liverpool, Britain

Liverpool City Council, Mersey Forest, University of Liverpool

### Award Category: Habitat Creation: Project of Year Award (Small scale up to 0.5ha)

#### Project overview (50 words max)

The Pollinator Project was implemented to increase plant, insect and wildlife biodiversity across several typical urban wasteland sites. Designed site-specific planting, responsive to existing substrates, both prolonged flowering seasons and created vibrant habitats. This transformative, science-based approach, created a year-round wildlife resource bank and radically enhanced biodiversity across the sites.

Completed 2023

#### What were the biodiversity conditions on site prior to the enhancement? (100 words max)

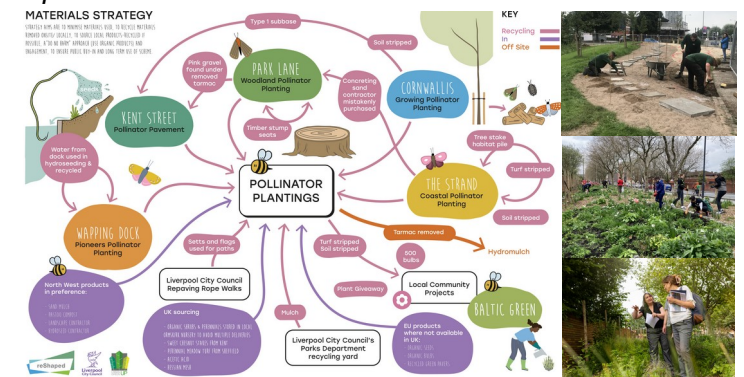
Project sites were the most nature depleted/difficult to develop, including tightly mown amenity grass verges, shaded patchy grass strips, concrete and gravel embankments and fly tipped wasteland. These small, often neglected pocket sites in the city represented the worst of the worst urban sites and were characterised by low biodiversity, (with just grass monocultures or weed species), a paucity of pollinating insects (in both numbers and diversity) and simple, truncated food webs (with low numbers of visiting birds). However, they provided an opportunity for environmental improvement and the creation of habitat stepping-stones through tight forgotten urban areas.

#### What were the reasons behind this project? (100 words max)

The Pollinator Project is part of a pioneering Urban GreenUp initiative across Liverpool (UK), Valladolid (Spain), and Izmir (Turkey). This global experiment developed, implemented and assessed the impact of retrofitting over 40 nature-based solutions (NbS) in economically deprived and nature-depleted urban areas over a 5-year period to address climate change risks and enhance city resilience. The results [www.urbangreenup.eu/resources](http://www.urbangreenup.eu/resources) are openly available to assist decision-makers in selecting the most appropriate NbS for maximum environmental, social and economic benefits. We focused on boosting pollinator populations citywide by exploring innovative vegetative solutions, adopting sustainability principles, avoiding chemicals and providing whole-habitat, whole-lifecycle solutions.



*Biodiverse planting design, habitat creation, pollinator evidence*



*Pollinator Planting Habitat/construction strategy, Implementation, community maintenance and training* [www.bigchallenge.info](http://www.bigchallenge.info) | [bigawards@ciria.org](mailto:bigawards@ciria.org)

### What were the biodiversity measures taken? (300 words max)

The project surpassed current UK Landscape practices, rethinking traditional methods, conducting extensive investigation into plant/pollinator dynamics and analysed the deliverables for low-carbon 'do no harm' methodologies. Detailed research, incorporating UWE's pollinator analysis, informed dynamic site-specific naturalistic planting schemes to support whole-habitat, whole-lifecycle resources for a diverse range of pollinators to thrive, positively enriching the ecological chain from plant source up to insect recipient.

Inspired by Sefton Coastal habitats and vegetational observations, the design created a beautiful network of interconnected biodiverse habitats. Resilient low-maintenance plants, suited to local conditions have extended foraging seasons/habitat opportunities, with careful management to encourage winter hibernation. These efforts resulted in a remarkable 930% increase in pollinator populations.

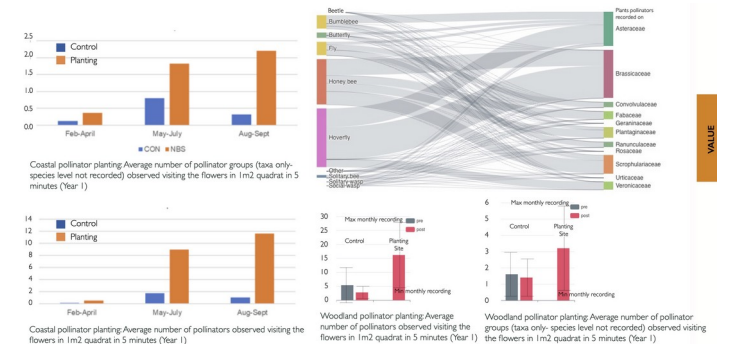
Transformed 2,000sqm 'unusable' spaces and reclaimed/waste materials into engaging biodiverse habitats with year-round presence of pollinators including rare solitary bees & wasps at all stages of their lifecycle. Plants thrived during 2022 40\* heat wave. Sand mulch has encouraged growth of deep roots, increased carbon sequestration, minimised maintenance, almost abolishing the need to water.

Deliverables:

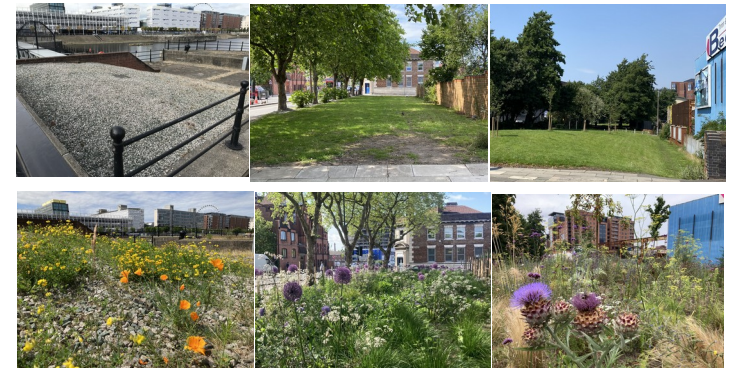
- Native plants for specialists
- Ornamental plants to extend seasonal foraging
- Grasses for habitat
- Night-scented climbers and fruit trees - moths, bats & leaf-cutters
- Sand - rare ground nesting solitary bees/wasps
- Untreated 'Standing Deadwood' stakes - Mason bees
- Tall perennials - aerial-nesters, male bee perches
- Accommodated wind blown 'weeds' beneficial to pollinators
- Encouraged predators goldfinches, thrush and foxes

Plant count & diversity, pollinator count & diversity, footfall, environmental and social indices were measured for 5 years before, during and after the project, providing verified data. After a 2 year management plan, community volunteers have assumed responsibility for pollinator plantings, 70 residents volunteering annually. McDonalds staff diligently clear litter, alongside local residents who weed regularly. GreenUP's PHME programmes have enhanced wellbeing and promoted a 30% increase in exercise amongst participants.

Our plantings and £2000 community plant giveaway provided vital stepping stones for commuting pollinators. This network will be reinforced through s106-funded habitat improvements, community projects, ESG partnerships and BNG offsetting. Demonstrates tangible benefits through BNG, delivery on BAP targets and benefits to local communities. Informed forthcoming Biodiversity British Standard, LI's Carbon guidance, prevented Canal and Rivers Trust using glyphosate on Kings Dock.



### Pollinator data recorded across sites - Mersey Forest



*Demonstrator sites - Top row before, bottom row after site specific planting interventions to increase biodiversity and pollination/foraging/habitat opportunities. Pollinator increase of 930%*

### Further information (250 words max)

Each site presented unique environmental challenges, demanding diverse approaches like hydroseeding to woodland and drought-tolerant planting. Environmental impact was mitigated through material conservation and reuse, local sourcing, glyphosate free clearance techniques and natural product use. Careful plant selection and mineral mulches reduced maintenance and plant loss. The shortage of skilled landscapers posed a challenge for project delivery, emphasising the importance of early community and contractor engagement which has enabled the projects ongoing success.

The impact of the project has enabled Mersey Forest's shift towards chemical-free practices, inspiring city-wide adoption of conservation methods by LSSL. It transformed landscape management with low-carbon, herbicide free techniques, promoting biodiversity and sustainable water use. Community engagement has flourished, with ongoing support and active participation in pollinator planting maintenance. The plantings facilitated 5-8°C cooling during 2022 heatwave, expanded walking routes increase walking 13.9%, reduced absenteeism and decreased pollution. Mersey Forest confirmed 930% rise in pollinator biodiversity across our sites which attracted various members of the food web - ground feeding birds, detritivores and foxes.

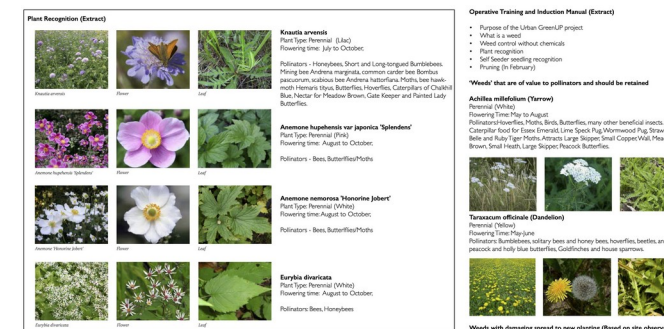
The outcomes exceeded the clients expectations and outperformed costlier product-based interventions like green walls. Pollinator verges proved cost effective at £2-£50/m2 with maintenance, compared with green wall costs of £750-1000/m2. The legacy will advance NbS with demonstrator projects offering valuable learnings, a blueprint to extend and replicate. Climate resilience insights have informed new policies through an free open-source portal, offering NbS decision tools and research papers. <https://www.urbangreenup.eu/resources/>

### Project Team

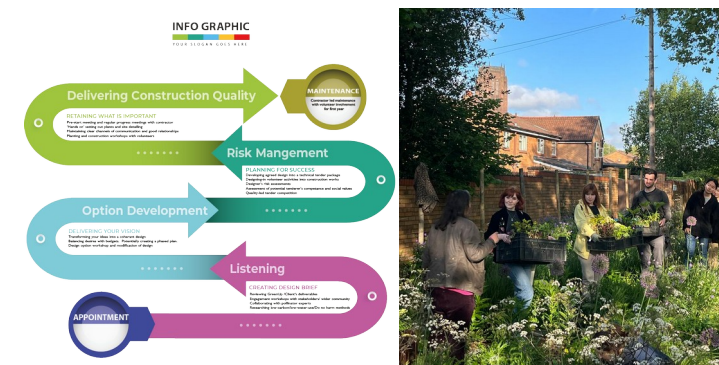
- Client - Urban GreenUP, Liverpool City Council, Mersey Forest, University of Liverpool
- Designers - Flavia Goldsworthy, reShaped
- Volunteers - Good Gym, Faith for change, McDonalds, Liverpool architecture foundation

### What was the motivation for carrying out the enhancement? (100 words max)

The motivation stemmed from recognising the urgency of biodiversity loss and a desire to exemplify a shift from carbon-heavy, traditional commercial landscaping to an innovative, climate-resilient approach. The goal was to demonstrate the feasibility of increasing biodiversity while enriching the human experience in dense urban environments. Through dynamic planting schemes and experimentation, the pioneering initiative sought to create tangible ecological change and cultivate abundant pollinator habitats. Extreme conditions provided an opportunity to explore new urban greening approaches, aiming to showcase practical, low maintenance environmental solutions that simultaneously surpassed biodiversity expectations and created aesthetically pleasing spaces for humans.



### Pollinator plant manual for maintenance and community volunteer training



### Construction process, Nurture nature community engagement training