



New strategy for Renaturing Cities
through **Nature Based Solutions**

Interventions in Liverpool



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Introduction

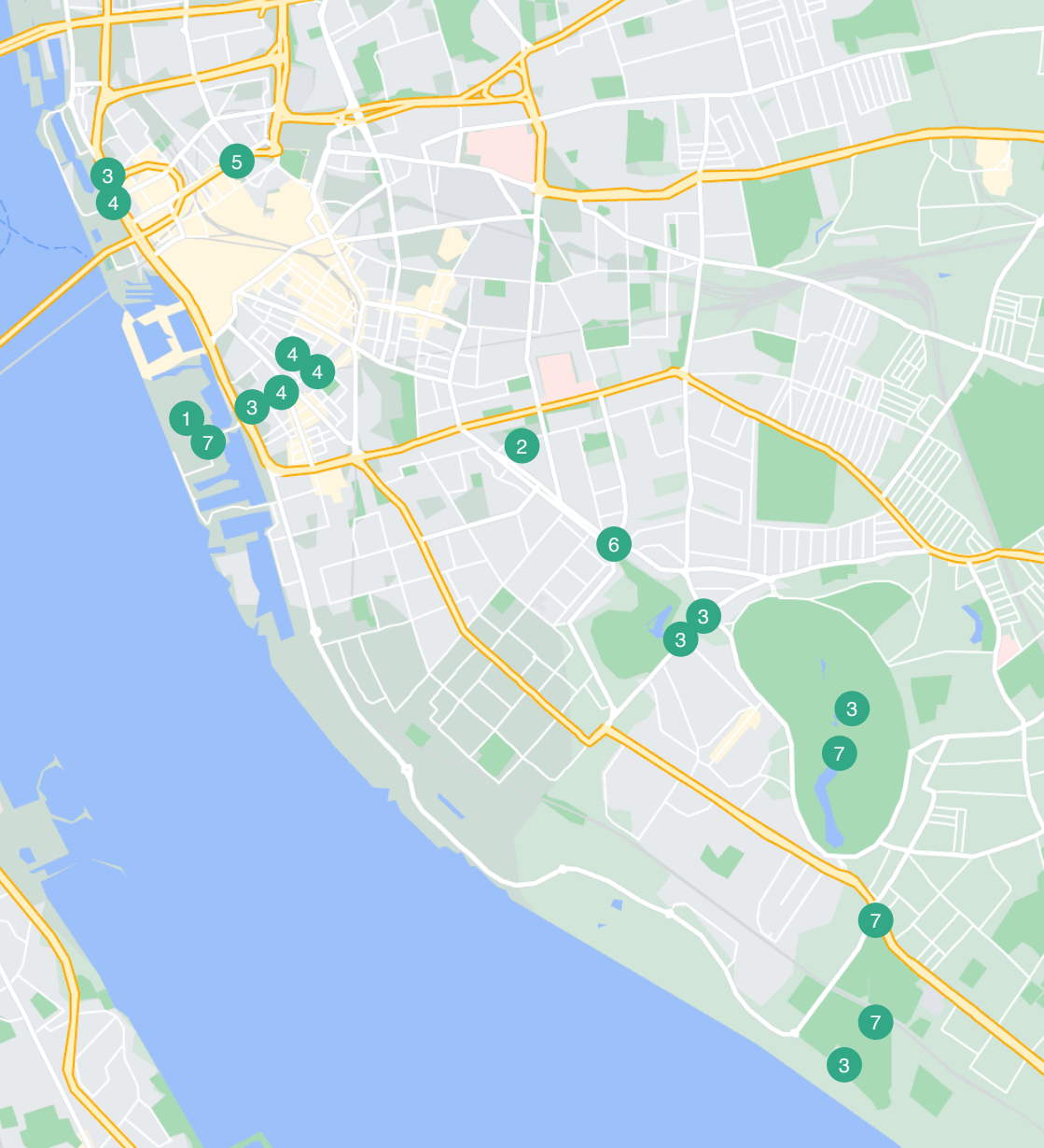
Like other cities worldwide, Liverpool faces future climate related threats such as high temperatures, air pollution, floods and biodiversity loss. To tackle these problems and bring nature back into the city, Liverpool has implemented over 40 innovative Nature-based Solutions (NBS), which you can discover in the next pages.

These interventions are spread all over the city and divided into four groups:

- » **Re-naturing urbanisation:** solutions covering vast urban areas and mitigating the effects of climate change.
- » **Singular green infrastructures:** tackling environmental problems in specific urban areas.
- » **Water interventions:** reducing the effects of heavy rains and floods.
- » **Non-technical interventions:** to engage people with Liverpool's green mission.

The NBS have been implemented as part of the EU-funded project URBAN GreenUP. This project has carried out similar initiatives in the cities of Valladolid (Spain) and Izmir (Turkey) and also developed a methodology to help cities worldwide design their own “renaturing urban plan”.

Want to know more about our work towards a more liveable Liverpool? Visit the URBAN GreenUP website and social media or get in touch with us!



Map data ©2022 Google

- 1 Pedestrian route
- 2 Cycle and pedestrian routes
- 3 Shade trees
- 4 Cooling trees
- 5 Green travel route
- 6 Road junction improvements
- 7 Urban carbon sink

Renaturing urbanisation



Coastal pollinator planting at Wapping

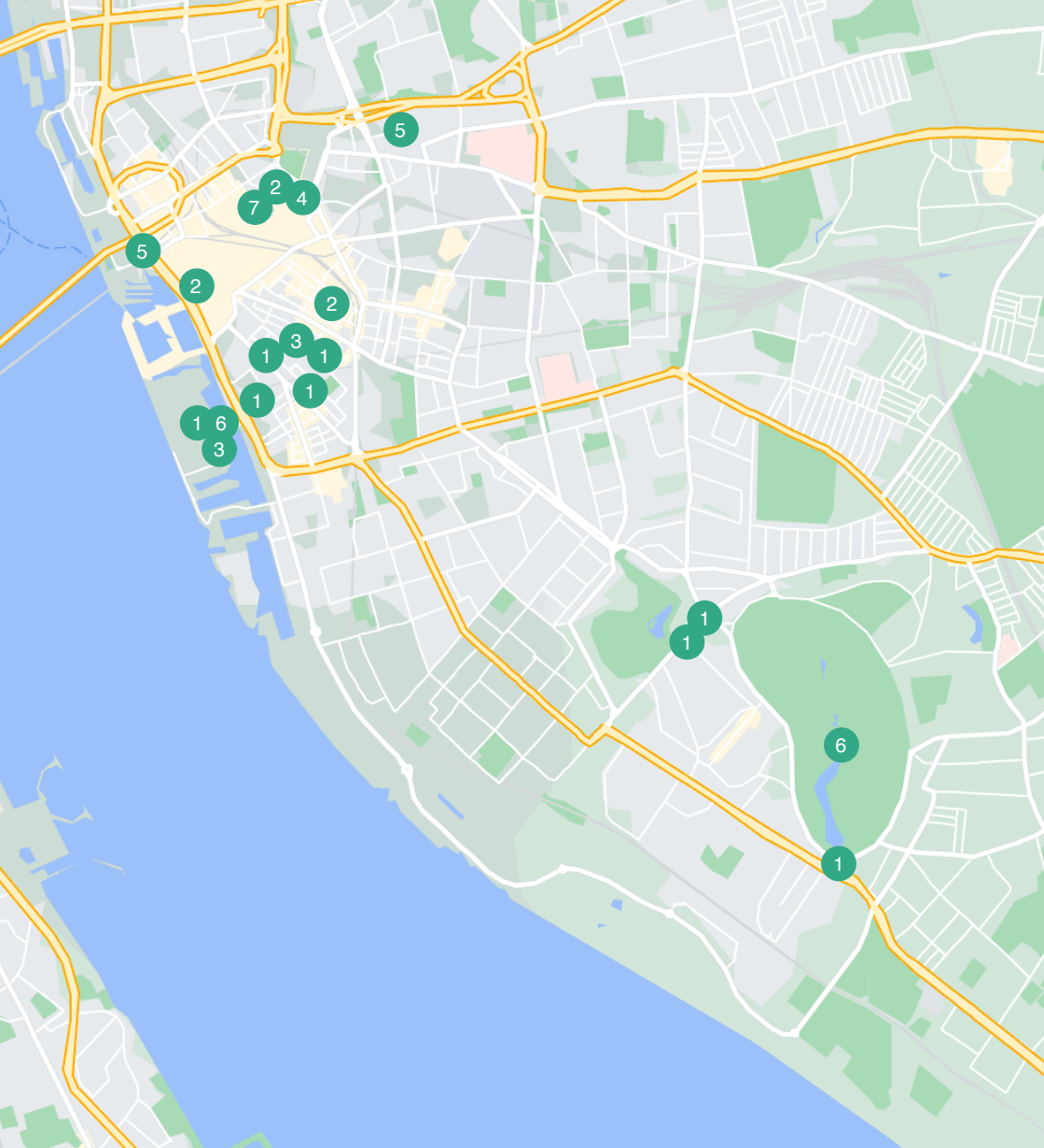
Photo: Juliet Staples

KEY FEATURES

- » Improved accessibility, connectivity, air quality and safety on green routes.
- » Introduction of shade and cooling trees across multiple city sites, working with a wide range of stakeholders and landowners.
- » Urban sink sites include a diverse array of aquatic planting (submerged, emergent and peripheral species) with supplementary woodland and pollinator sowings at additional sites.

HIGHLIGHTS

- » The Princes Avenue site on the Otterspool corridor was the winner of a 2020 Local City Region Culture Impact Award for Environmental Sustainability.
- » A number of shade trees in the orchard are fruiting species including less common ones.
- » The 4.3 km Green Travel Route will make use of both existing green infrastructure and the URBAN GreenUP interventions to establish a route that is as green as possible in the city.



Map data ©2022 Google

- 1 Pollinator verges
- 2 Pollinator walls
- 3 Smart pillars
- 4 Pollinator roofs
- 5 Green filter areas

- 6 Floating gardens
- 7 Mobile gardens
(temporary structure)

Singular green infrastructures



Parr Street Green Living Wall

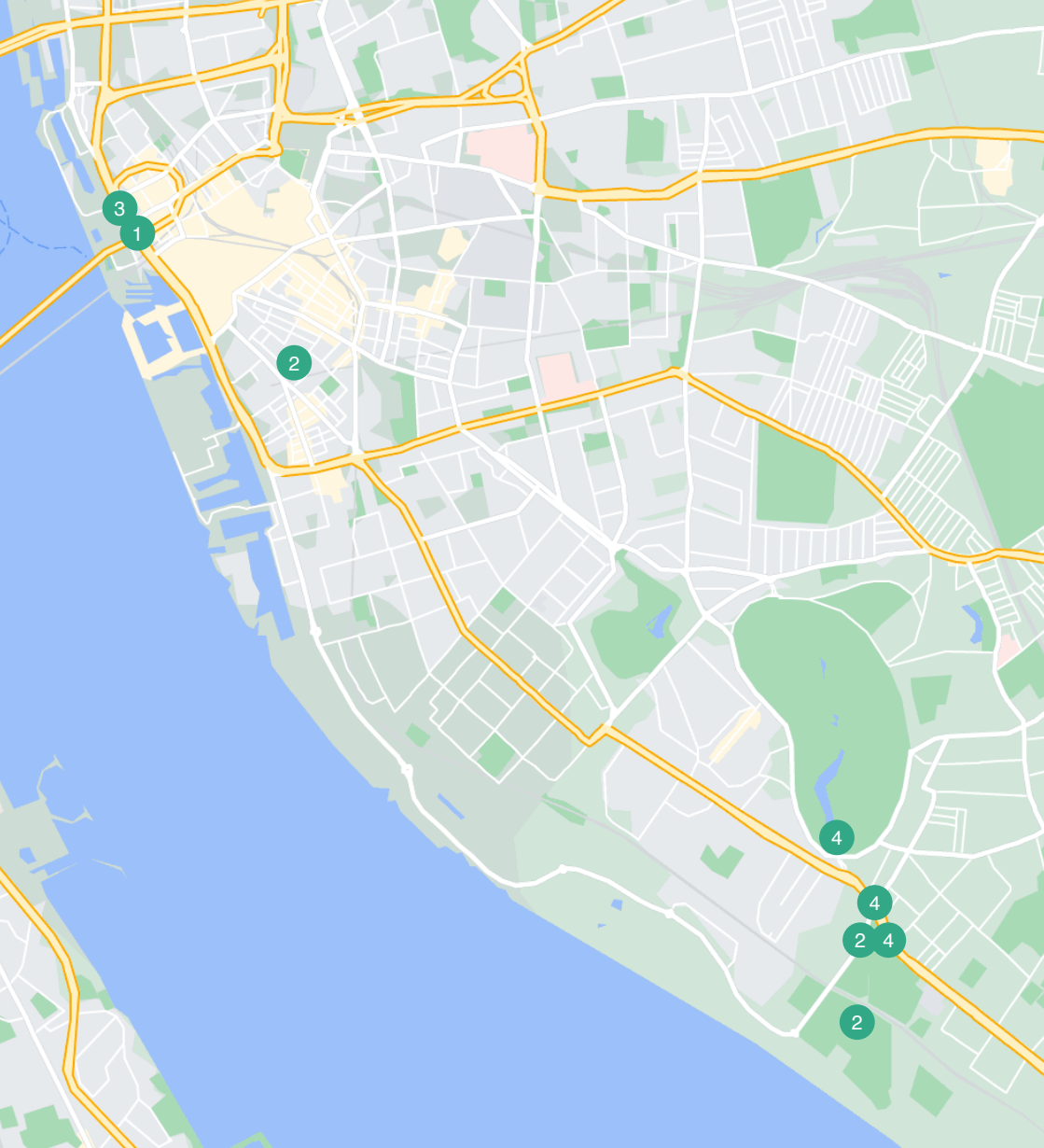
Photo: Juliet Staples

KEY FEATURES

- » The pollinator roof is complemented by a bug hotel made from a recycled cabinet.
- » The floating garden is a 63m² saltwater ecosystem island in the city docks with innovative habitat and biodiversity features.
- » The 25m² freshwater ecosystem was planted with reeds and grasses to attract pollinators and improve water quality.

HIGHLIGHTS

- » The green wall at Parr Street has a surface of 132m² and hosts 12,000 plants from 18 species.
- » The elevated green wall at St Johns has a surface of 200m² and at 65m long it is one of the longest in the UK.
- » The 2m high free-standing green wall at Liverpool ONE will improve biodiversity and air quality.



Map data ©2022 Google

- 1 Urban catchment forestry
- 2 Sustainable urban drainage systems (SuDs)
- 3 Hard drainage pavement
- 4 Hard drainage flood prevention

Water interventions



Lower water retention pond, Otterspool Park

Photo: Juliet Staples

KEY FEATURES

- » Reductions in water flow and volume during periods of wet weather as well as lowering the local flood risk.
- » Improvements in water quality and local biodiversity.
- » Improved accessibility to sites for leisure.
- » New options for educational activities.
- » Works have permitted promotion of climate change discussions and actions.

HIGHLIGHTS

- » As a part of the Urban catchment forestry, Dawn Redwood trees were planted in a series of Silva cells along the central reservation of the Strand. This provides a sustainable urban drainage function for excess highway surface water run-off.
- » Bird and bat boxes have been installed in trees close to the water retention ponds.



Map data ©2022 Google

- 1 Green art/engagement
- 2 Forest church
- 3 Green infrastructure (GI) for physical health
- 4 GI for education
- 5 Bioapp

Non-technical interventions



St Michaels in the city, Forest Church

Photo: Faiths4Change

KEY FEATURES

- » Wide engagement of local residents and partners in a variety of schemes.
- » Opportunities for direct interaction and co-creation.
- » Improved mental health and wellbeing.
- » Educational opportunities through Forest Schools
- » Increased recorded sightings for the local biological records.

HIGHLIGHTS

- » The art habitat sculptures containing seven art pieces link to form a Pilgrimage habitat trail created from everyday materials. They include information plaques with QR codes which link to short community videos.
- » Liverpool City was a solid 2nd in the City Nature International challenge for iNaturalist for Observations, Species and Number of people engaging across the city region, a rise from 5th place in 2019.



Want to know more? Visit our website:
urbangreenup.eu