



Liverpool  
City Council



UNIVERSITY OF  
LIVERPOOL



Dr Juliet Staples

## Singular Greening

1. Interactive Green Living Wall
2. Other Vertical Greening
3. Pollinator Roof and Pollinator Planting
4. Early Assessment Data



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 730426



## Interactive Living Wall

Located in an urban area  
On exterior of Parr Street Garage  
Unexpected location  
Covers 132m<sup>2</sup> vertical space  
Soil based system  
Transformed the area





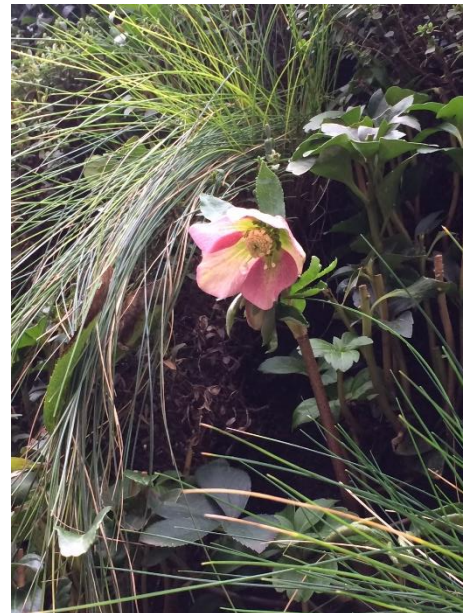
# Wall Planting

12,000 number of plants

19 species of plant

Monthly 'discovery' planting

Interactive element (pick strawberries)







# Green Wall Landmark



- Forms part of a green corridor route
- Featured in many city and city region promotions
- Visitor attraction
- Photographed regularly
- Subject to lots of interest and enquiries



## Other Vertical Greening

### Smart Pollinator Pillars

Solar powered for irrigation with a mobile app for refilling the water reservoir

Choice in planting function:  
biodiversity/colour/air pollution

Can include insect homes or bird boxes

Act as route markers and provide biodiversity stepping stones in urban areas

Create discussion and raise awareness



## Other Vertical Greening



### **St Johns Shopping Centre, Living Wall**

200m<sup>2</sup> of planting; 14,000 plants, 24 different species; 65m long



### **Liverpool ONE, Free standing green fence**

Customised planting back and front; air quality and biodiversity



# Pollinator Roof

## Royal Court Theatre



Container pollinator planting onto an open balcony in the city centre  
A repurposed cabinet as a bug hotel  
Featured on a TV programme



# Other Pollinator Work





## Examples of Sustainable Techniques

Organic seeds/plants  
Reused materials between sites

Used flame thrower and deep turf removal to get rid of grass and weed seed bank rather than herbicide or chemicals

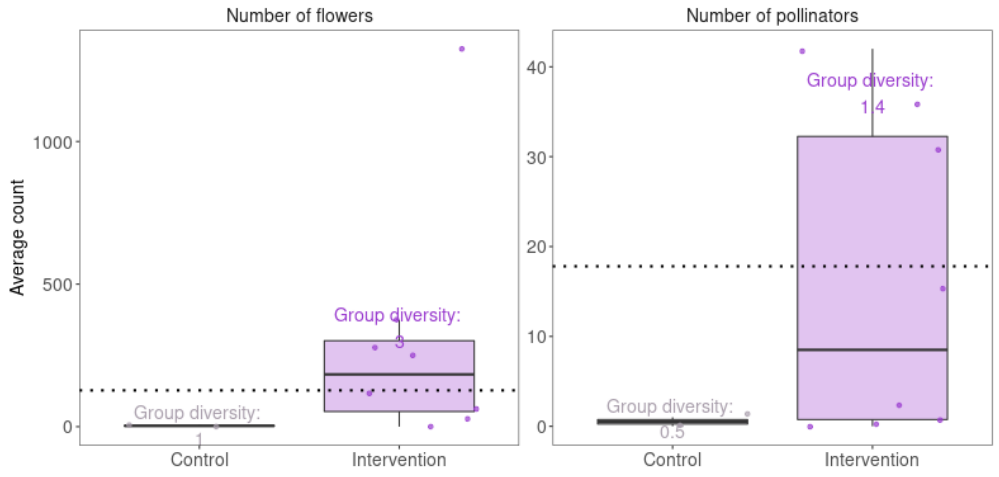
Tested acetic acid mixes on weed clearance

Used jute netting to retain moisture and suppress weeds



Pollinators

Pollinator abundance at and around Princes Av POLL

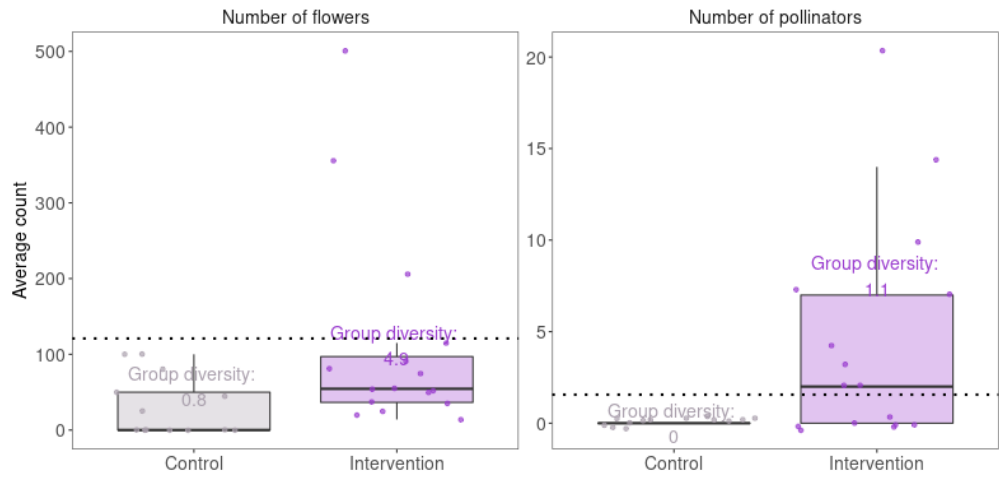


Data



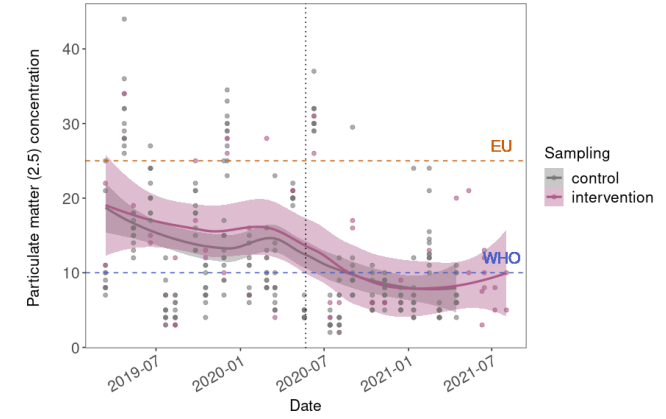
Pollinators

Pollinator abundance at and around Parr St GW



Air quality PM

Particulate matter levels at and around St Johns GW

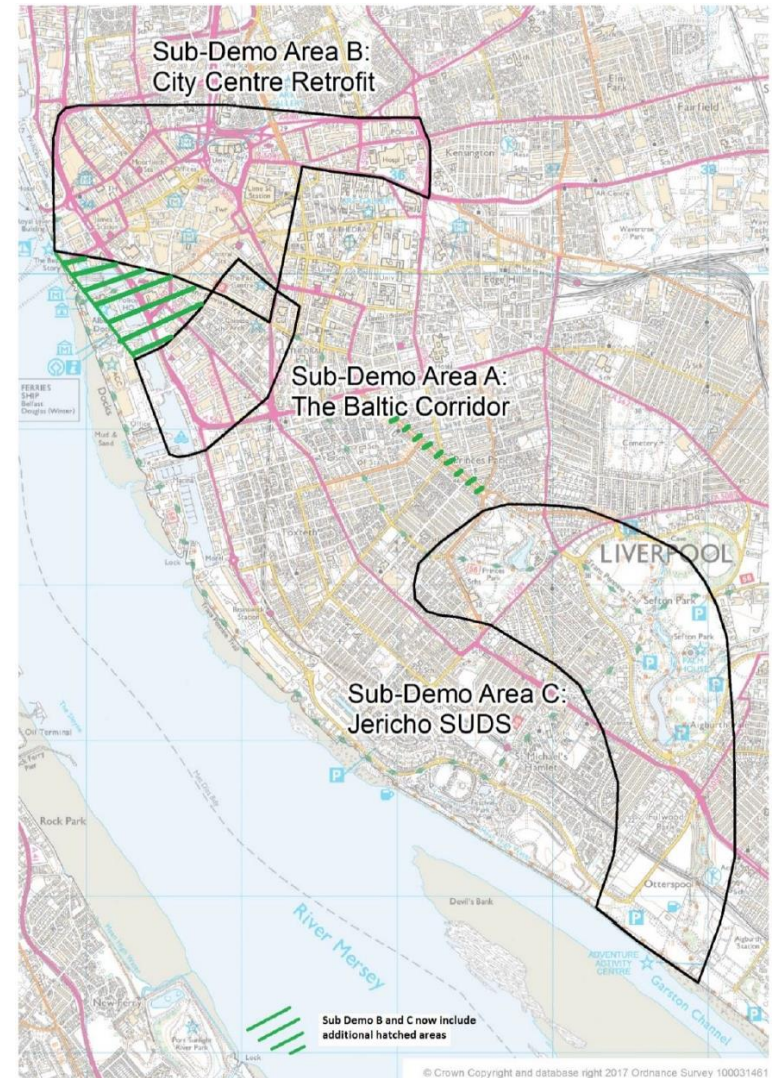


Still being evaluated ... looking good...



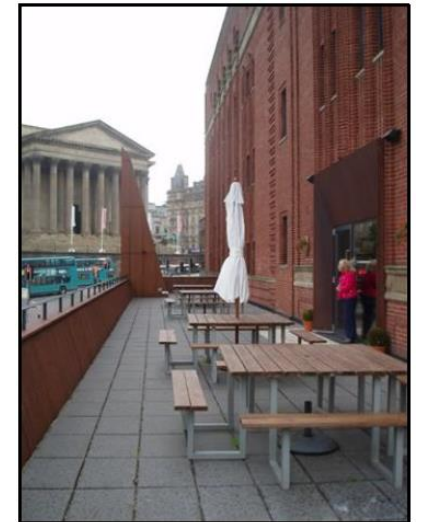
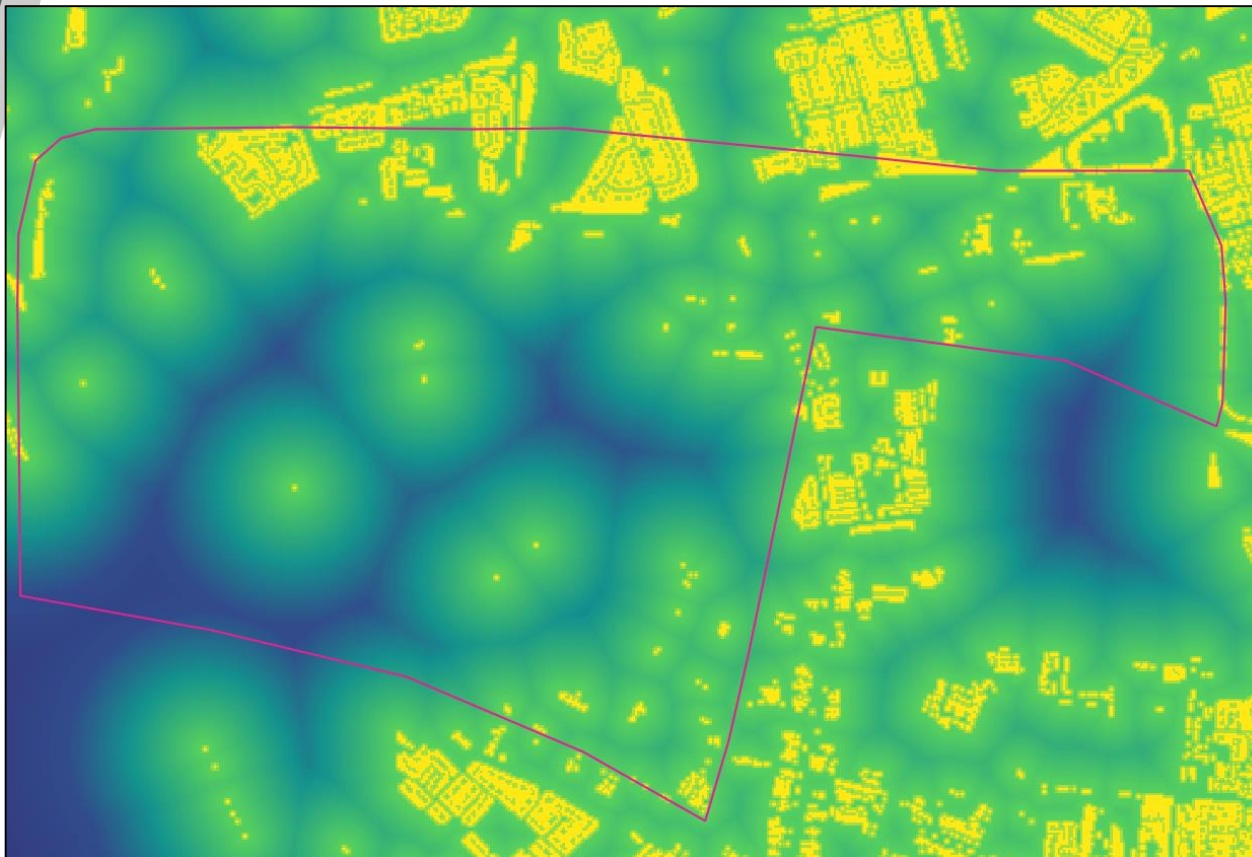
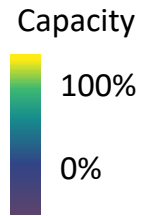
Application of the Liverpool City Region Natural Capital baseline dataset  
Change (% from baseline) after GreenUP interventions

	Demo B
Accessible nature	0.28
Air purification	7.42
Carbon storage	1.35
Climate regulation	5.77
Noise regulation	0.65
Pollination	0.50
Water purification	1.95





# Pollination capacity increase BASELINE (pre-GreenUP)

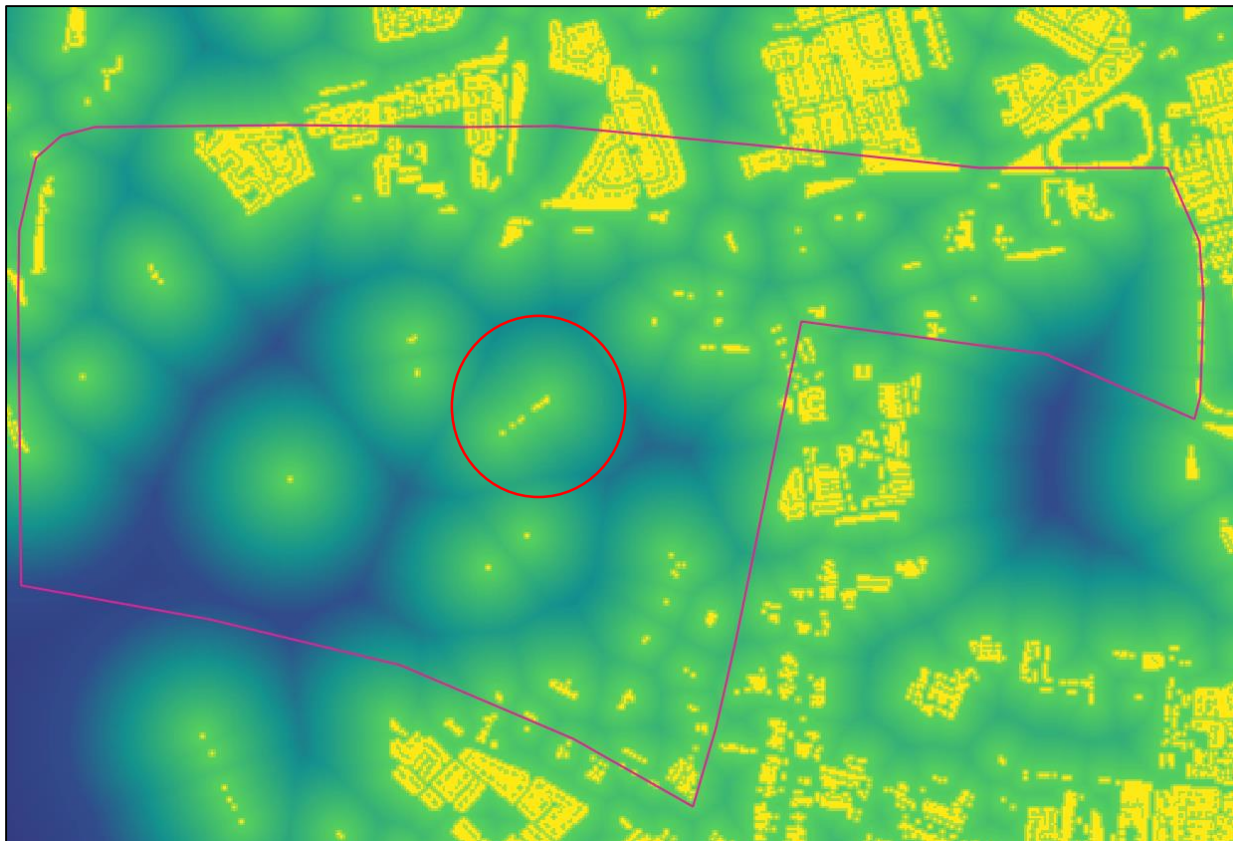
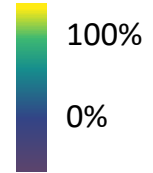




# Pollination capacity increase POST-URBAN GREENUP

## Green wall and pollinator roof (Royal Court)

Capacity





## Thank you

**Dr Juliet Staples, Senior Project Manager, URBAN GreenUP**

**Liverpool City Council**

[www.urbangreenup.eu](http://www.urbangreenup.eu)

[juliet.staples@liverpool.gov.uk](mailto:juliet.staples@liverpool.gov.uk)