



# REFLECTIONS OF A GREEN ROOF CAMPAIGNER DUSTY GEDGE -



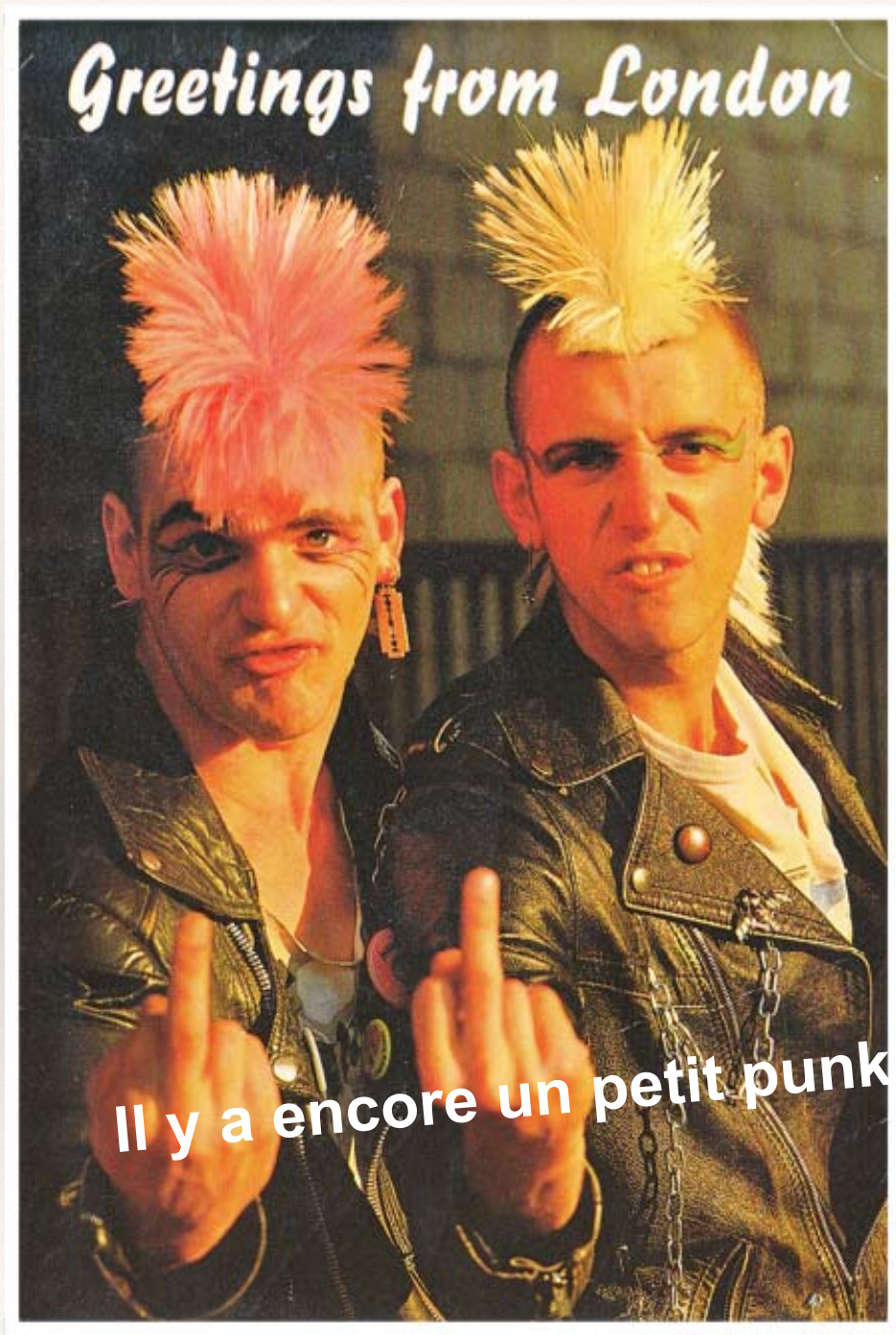


GREENER CITIES  
IN EUROPE



L'Association des Toitures  
& Façades Végétales





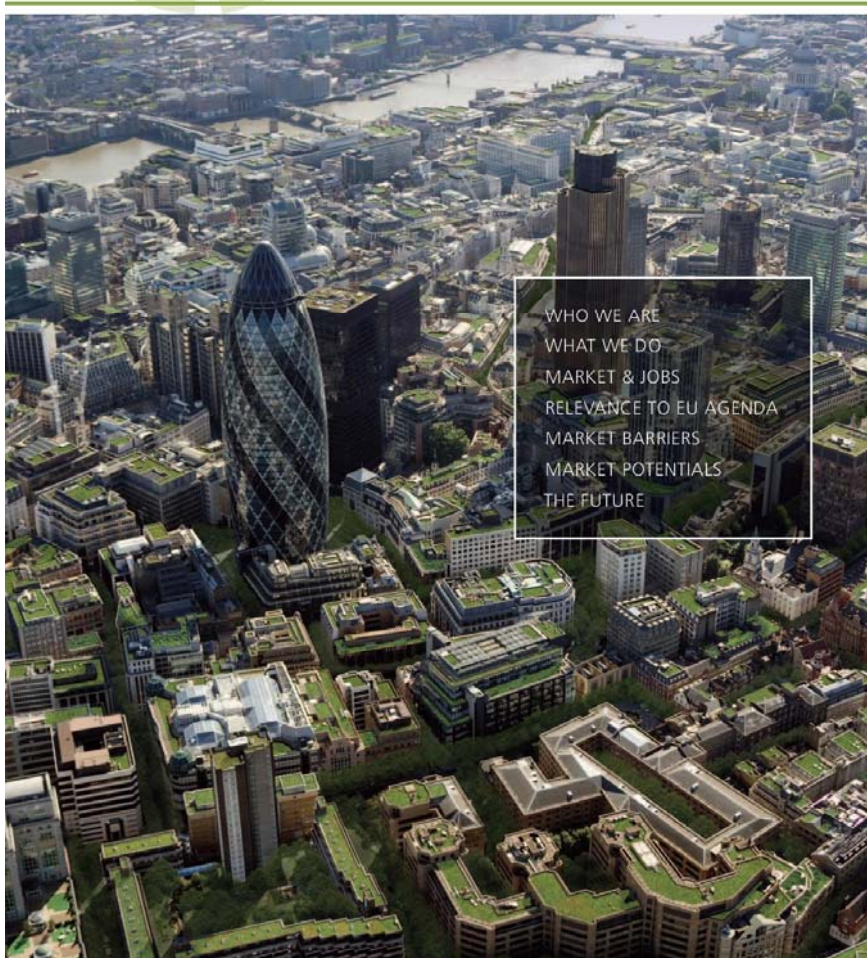


European  
Commission

# Building a Green Infrastructure for Europe



# 2015 WHITE PAPER



WHO WE ARE
WHAT WE DO
MARKET & JOBS
RELEVANCE TO EU AGENDA
MARKET BARRIERS
MARKET POTENTIALS
THE FUTURE



# EKLIPSE

Knowledge & Learning Mechanism on Biodiversity & Ecosystem Services

Developing a mechanism supporting decisions on environment on the best a knowledge.

THE DIFFERENCE WE WANT TO MAKE

HOW CAN WE MAKE A DIFFERENCE?

HOW TO GET INVOLVED?

ACTIVITIES



*As a scientist, interact, share your knowledge, and discuss emerging issues with policymakers and other stakeholders*





# EU Biodiversity Strategy to 2020

EN

## Biodiversity

In Europe, almost a quarter of wild species are now threatened with extinction



Biodiversity – the extraordinary variety of ecosystems, species and genes that surround us – is not only important in its own right, it also provides society with a wide range of ecosystem services upon which we depend, such as food, freshwater, pollination, protection against floods, etc...

Biodiversity is however in crisis. In Europe, almost a quarter of wild species are now threatened with extinction and the majority of ecosystems are degraded to the point where they are no longer able to deliver their valuable services. This degradation represents enormous social and economic losses for the EU.

Key drivers of biodiversity loss, such as habitat change, overexploitation of natural resources, the introduction and spread of invasive alien species and climate change, have increased, offsetting the positive effects of actions to stem biodiversity loss.

In May 2011, the European Commission adopted a new strategy that lays down the framework for EU action over the next ten years in order to meet the 2020 biodiversity headline target set by EU leaders in March 2010.

The strategy is built around six mutually supportive targets which address the main drivers of biodiversity loss and aim to reduce the key pressures on nature and ecosystem services in the EU. Each target is further translated into a set of time-bound actions and other accompanying measures.



LA CRAU - SOUTH OF FRANCE - RARE DRY GRASSLAND













 NATIONAL  
GEOGRAPHIC





It's what they do

We don't think it's incredible  
that a bee can fly

220 metres between flower rich habitat



220 metres

How do they get to the top of a tower bl

# Take the lift?

156 metres



156 metres



# Bees can FLY!!!!

220 metres

156 metre

156 metres



# For a bee surely

220 metres



220 metres

The distance is the same





Gyongyver Kadas

## Green roofs and biodiversity

Can Green Roofs provide habitat for invertebrates in an urban environment?



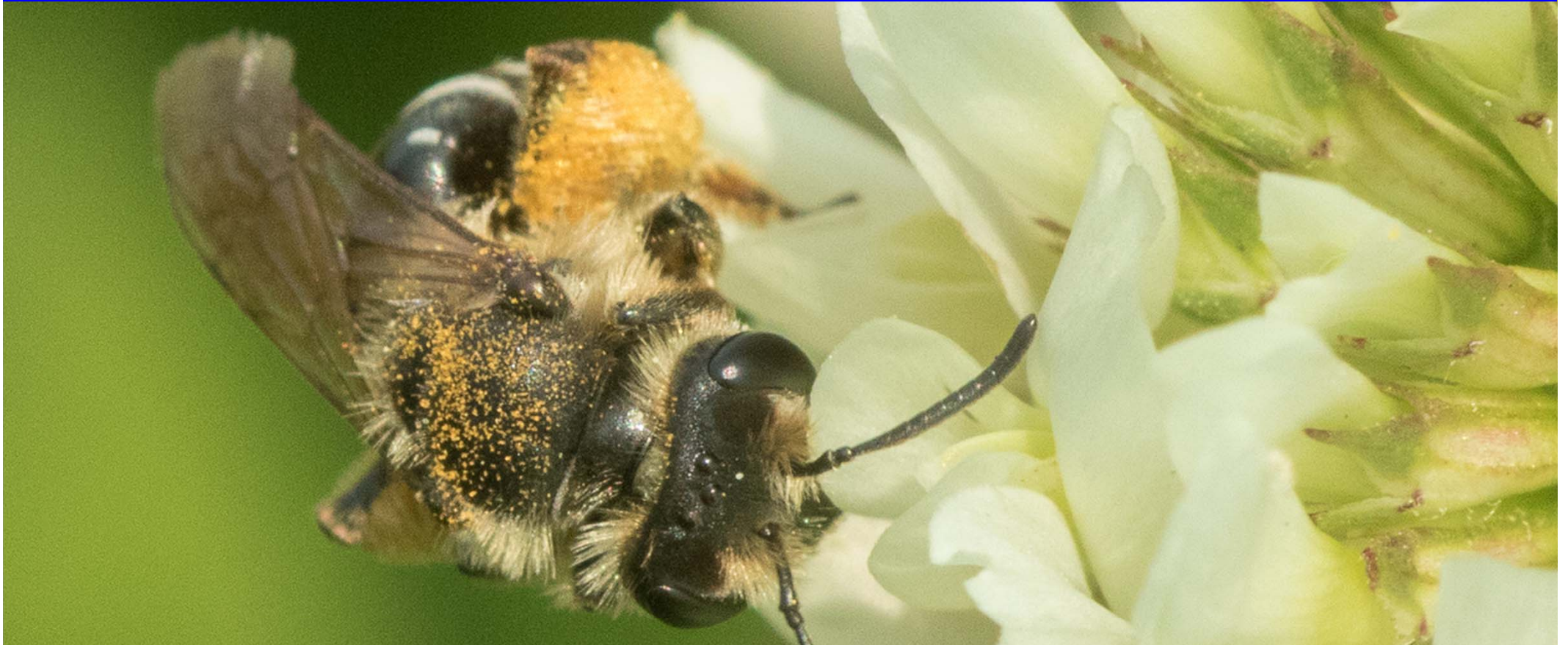
## CREATING GREEN ROOFS FOR INVERTEBRATES

A BEST PRACTICE GUIDE



# Green roof research

[livingroofs.org/wild-buzz-green-roof-res](http://livingroofs.org/wild-buzz-green-roof-res)



THEME OF GREEN ROOF RESEARCH	THE PERCENTAGE OF PAPERS ON THIS THEME
General aspects of environment and ecology	40%
Engineering	37%
Biodiversity	3%

# Living Roofs and Walls

Technical Report: Supporting London Plan Policy



*Published 2006*

Technical report to  
support London Plan  
2008

Available from  
[www.london.gov.uk](http://www.london.gov.uk)



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# Condition

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Original - topographic variety 50mm-150mm, mix of native wildflowers and sedums with other features - wood, stone etc

Improvements

★3 Boroughs ask for a full **biodiversity management plans**

★4 Boroughs



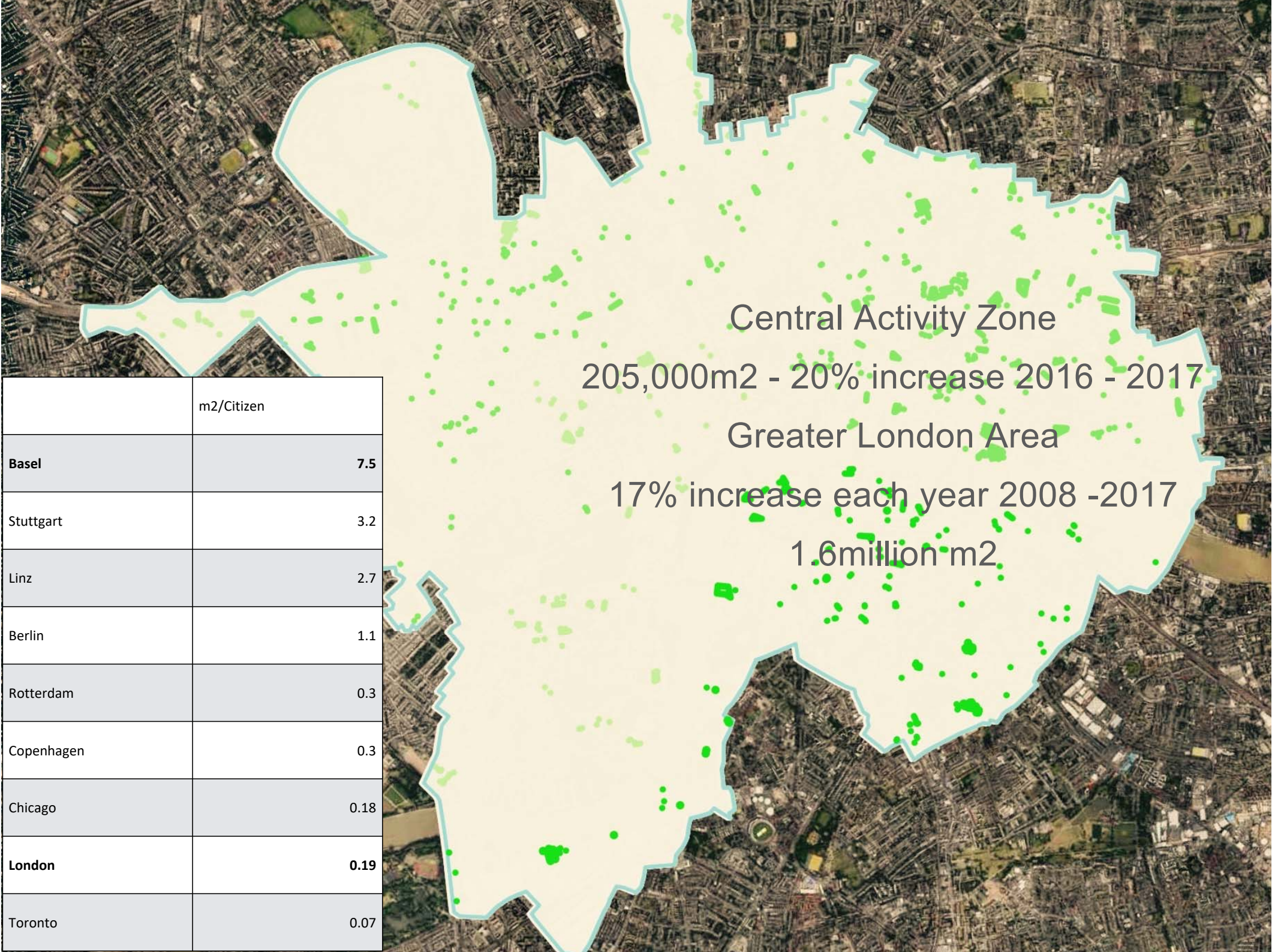
# Detailed local condition

Original - topographic variety 50mm-150mm, mix of native wildflowers and sedums with other features - wood, stone etc

Improvements

- ★3 Boroughs ask for a full **biodiversity management plans**
- ★4 Boroughs now require **inspection by a independent qualified person**
- ★1 Borough requires a **5 year monitoring programme**





	m <sup>2</sup> /Citizen
<b>Basel</b>	<b>7.5</b>
Stuttgart	3.2
Linz	2.7
Berlin	1.1
Rotterdam	0.3
Copenhagen	0.3
Chicago	0.18
<b>London</b>	<b>0.19</b>
Toronto	0.07

# LONDON, EUROPE AND BEYOND - GREENER CITIES



## CELEBRATING 10 YEARS OF LONDON AND POLICIES FROM AROUND EUROPE

GREENER CITIES  
IN EUROPE



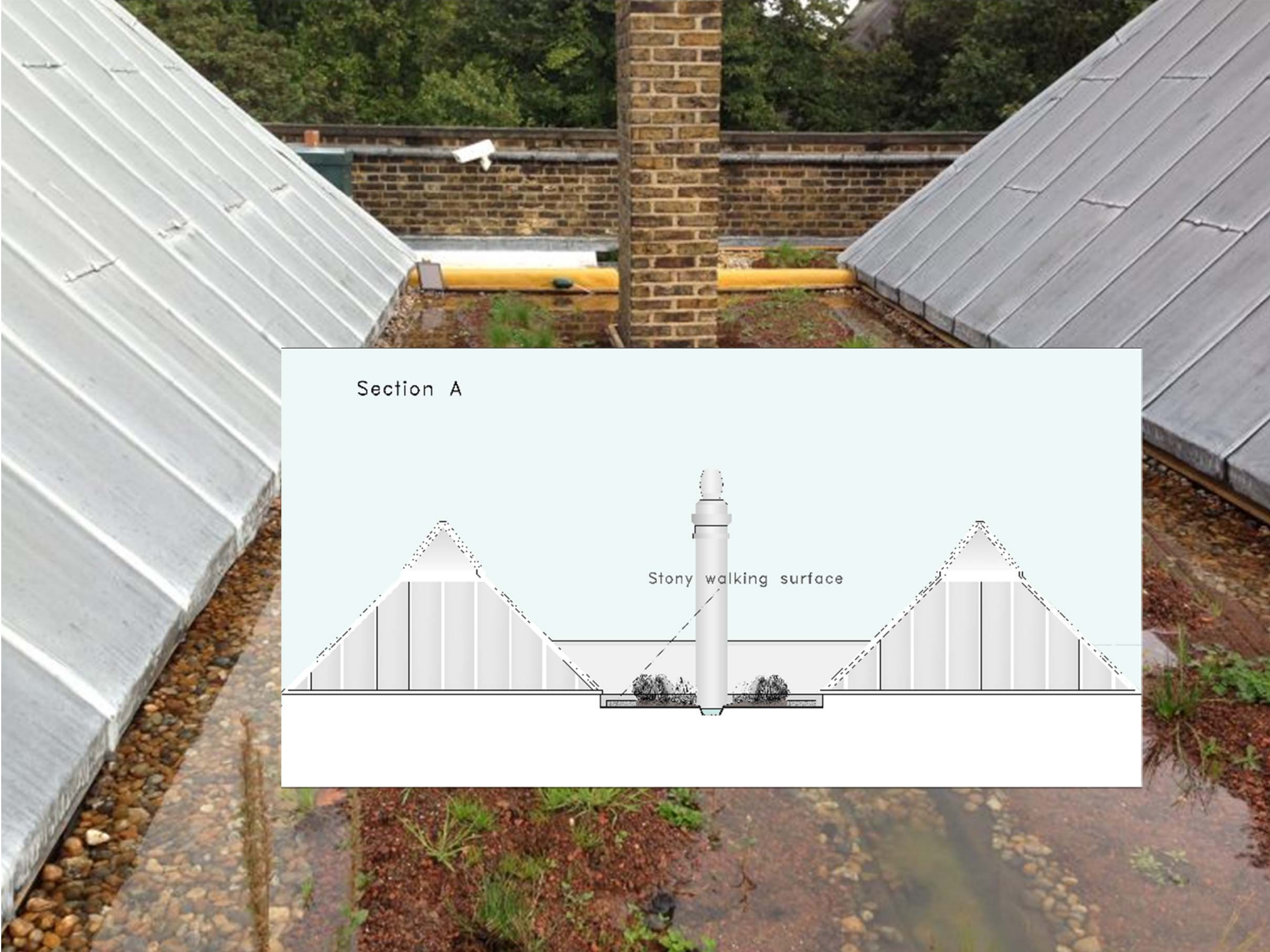
EUROPEAN  
FEDERATION  
GREEN ROOFS  
& WALLS

SUPPORTED BY

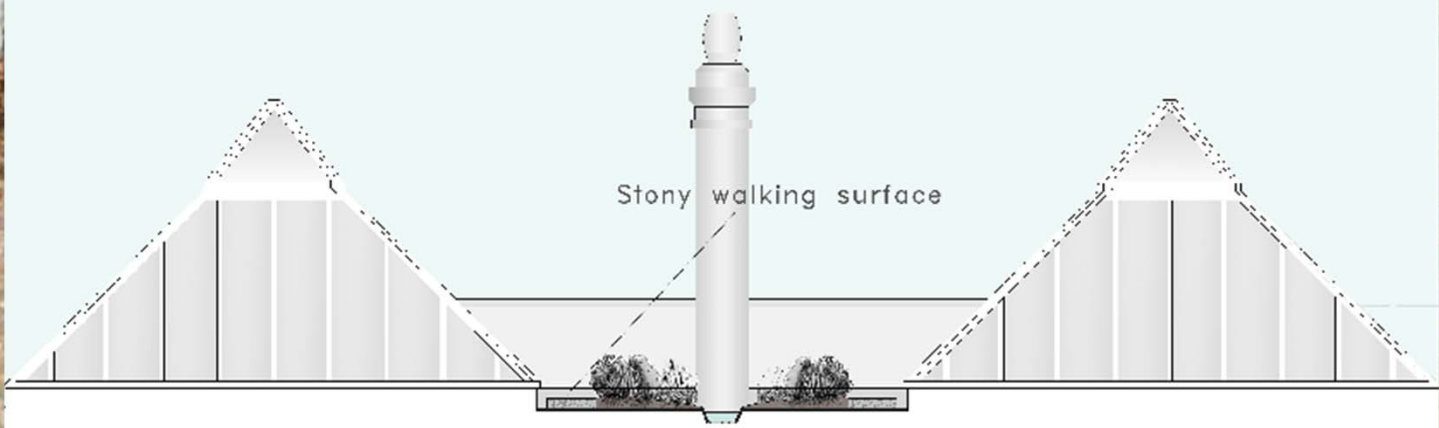
**MAYOR OF LONDON**







Section A







# Green Roof Shelters Ltd



Cycle Parking



Bin Stores



Community Rooms



*"Green Roof Shelters incorporate habitat and biodiversity into everyday structures that we use and see all around us, in a way that is successful, totally functional, and very beautiful. They pioneered the idea, and still lead the field!"*

Nigel Dunnatt  
Professor of Planting Design & Urban Horticulture,  
Co-designed the Olympic Park's flower meadows.

Bank of Canada  
Basildon Borough Council  
Kier Construction  
Bron Afon Community Housing  
London Borough of Islington  
Newington Big Local Partnership  
RSPB Mnsmere  
London Borough of Tower Hamlets  
East End Homes

Mulalley Construction  
RSPB Walasea  
London Borough of Redbridge  
TrustLinks - Growing Together  
London Borough of Lambeth  
Essex Wildlife Trust  
RHS Hampton Court  
Chelsea Flower Show  
Widfowl & Wetlands Trust

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www.greenroofshelters.co.uk



<https://construiresontoitvert.com/>



# London Olympics

Targets for green roofs

Targets for biodiversity:

Beetle - *Olibris flavocornis*

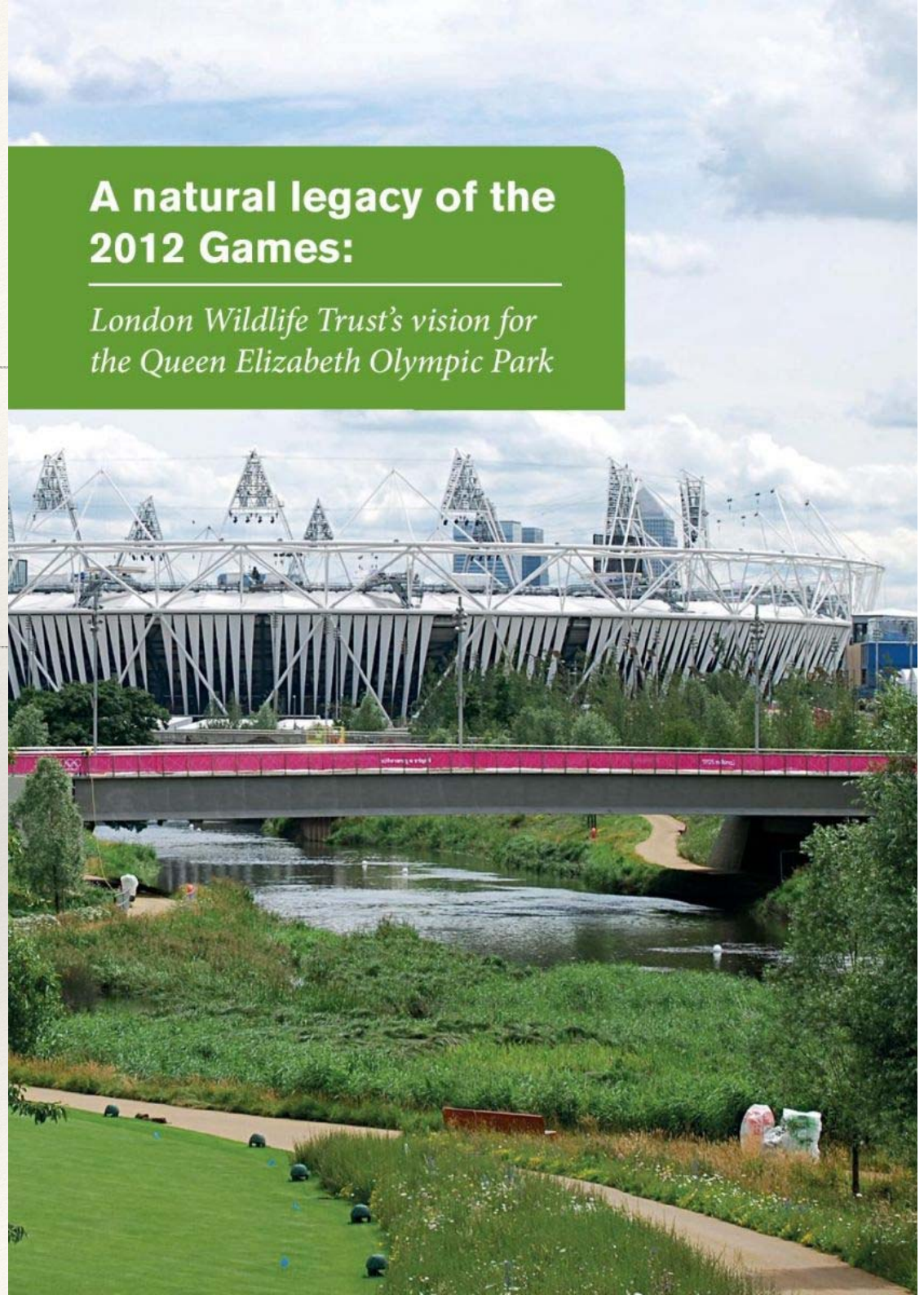
Bee - *Bombus humilis*

Moth - *Calophasia lunula*

Bird - *Phoenicuros ochruros*

## A natural legacy of the 2012 Games:

*London Wildlife Trust's vision for  
the Queen Elizabeth Olympic Park*



# The largest green roof in the Olympics The legacy of the London 2021





**Paris 2024**  
**Let's make biodiversity a legacy of the games too**

# Tension - brick and biodiversity



# TENSION

## Construction Industry

- \* Homogeneity
- \* Simple
- \* Static
- \* Standard
- \* Quantifiable

## Nature/Ecologists

- \* Heterogeneity
- \* Complex
- \* Dynamic
- \* Special
- \* Variable

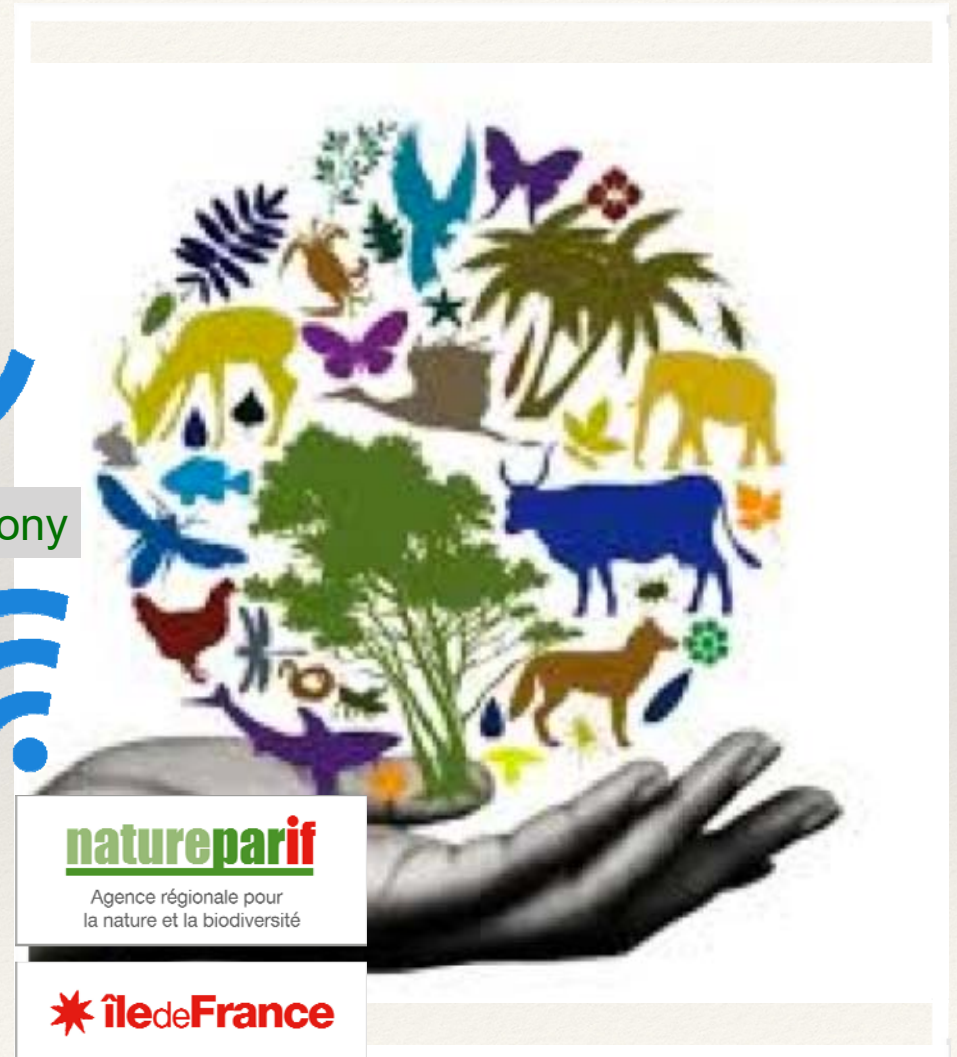




# Tension - brick and biodiversity



Harmony



A vibrant, stylized illustration of a tropical ecosystem. It features a variety of animals including a yellow deer, a blue cow, a brown dog, a red chicken, a purple butterfly, and a blue butterfly. There are also green trees, a palm tree, and a blue fish. The scene is set on a grey rock formation.

# HARMONY

\*City Policy

\*Regional Policy

**delivery of biodiversity  
must be central to the policy**

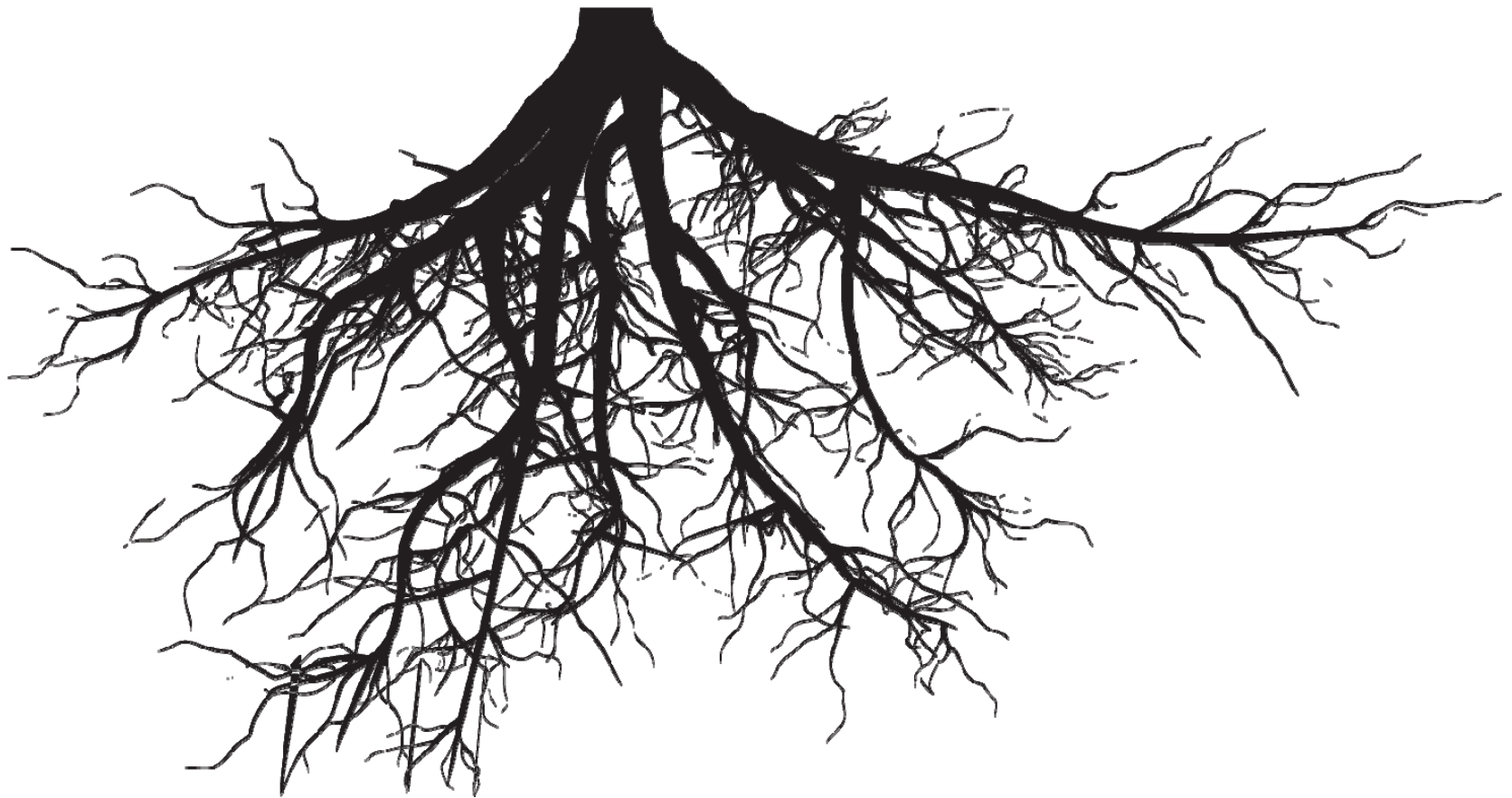


**WE NEED TO MAKE THE CONCRETE SMALLER AND NATURE BIGGER**





**On a roof we need a diversity of roots**





**On a roof we need a diversity of microb**

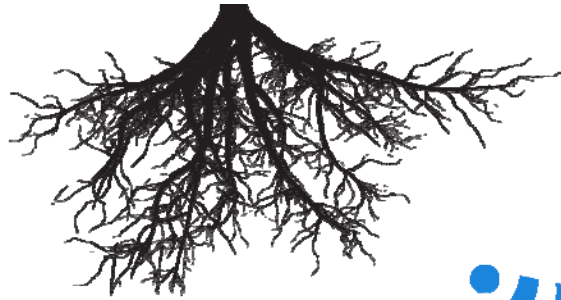
1 a roof we need a diversity of microb





# Diversity of flora





**Diversity makes Nature  
the engineer**



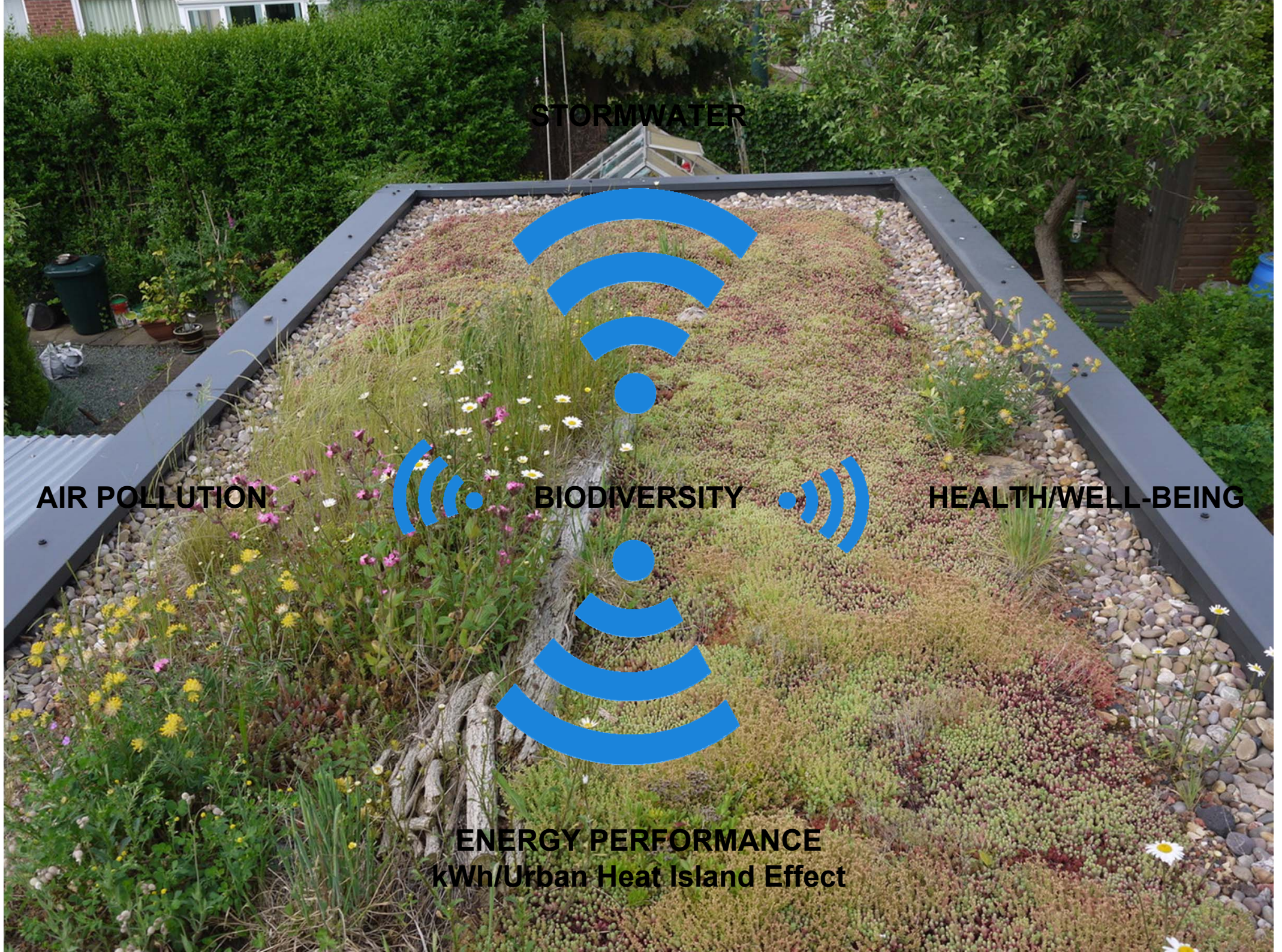
**STORMWATER**

**AIR POLLUTION**

**BIODIVERSITY**

**HEALTH/WELL-BEING**

**ENERGY PERFORMANCE**  
**kWh/Urban Heat Island Effect**



# #GreeningManchester



Diversity delivers the best green infrastructure

**BIO-diversity does it even better.**

A photograph of a rooftop garden. In the foreground, there are solar panels on the left and a variety of colorful flowers, including red poppies and yellow daisies, growing in a raised bed. Three men are standing in the middle ground, looking at the plants. The background features a city skyline with several tall skyscrapers under a blue sky with scattered white clouds.

# Merci bien

[www.livingroofs.org](http://www.livingroofs.org)

[www.greeninfrastructureconsultancy.co.uk](http://www.greeninfrastructureconsultancy.co.uk)

@greenroofsuk

@worldgreenroof

[dusty@dustygedge.co.uk](mailto:dusty@dustygedge.co.uk)