



ENCOURAGING BIODIVERSITY

2010

CONTRIBUTING TO LOCAL BIODIVERSITY

A NEW STUDY SHOWS THAT, OVER THE LAST FEW YEARS, OUR DEVELOPMENTS IN CENTRAL LONDON HAVE POSITIVELY CONTRIBUTED TO LOCAL BIODIVERSITY. IT ALSO IDENTIFIED OPPORTUNITIES FOR US TO PROVIDE MORE WILDLIFE SPECIES WITH SUITABLE HABITATS FOR FORAGING AND SHELTER, AND SUPPORT MORE NATIVE PLANT SPECIES.

GREEN ROOFS REPRESENT ONE OF THE MOST EFFECTIVE MEANS TO ENHANCE BIODIVERSITY AT MANY OF OUR PROPERTIES. THEY CAN ALSO IMPROVE WATER RETENTION, REDUCE DUST, SMOG AND NOISE LEVELS, INCREASE THE LIFE EXPECTANCY OF A ROOF AND IMPROVE THERMAL INSULATION. WE HAVE INCLUDED GREEN ROOFS ON ALL OUR RECENT MAJOR DEVELOPMENTS, AS WELL AS RETROFITTING THEM TO SOME EXISTING BUILDINGS.

60,000

SQ FT GREEN SPACE

We created more than 60,000 sq ft of green space on our Central London developments.



BLACK REDSTART

Wildlife sighted on our green roofs includes bees, spiders and urban bird species, such as black redstarts.

75

NATIVE PLANTS

Over 75 native plant species present on our green roofs.

Sustainable Developments Executive at British Land,
Sarah Cary, comments:

“Improving biodiversity around our properties brings value to our occupiers and, more importantly, contributes to the survival of the variety of life on Earth, something that is so essential to our way of life and the ability of our business to operate. The world’s diverse ecosystems do a wonderful job of purifying the air that we breathe and the water we drink, as well as renewing soil fertility and pollinating plants. It may not be possible to value this in the way we do land and other commodities, but it is priceless, and this is why we will contribute positively to biodiversity wherever we build a property.”

President of the European Federation of Green Roof Associations and Director of livingroofs.org, **Dusty Gedge**, comments:

“British Land’s approach to encouraging biodiversity through green roofs is absolutely exemplary. Rather than adopting off-the-shelf solutions, they have worked in partnership with Arup to design mosaic-style green roofs that provide a carefully considered array of habitats with real ecological integrity. These will offer shelter and foraging territory in Central London to a range of birds, beetles and bees, important species whose habitats are alas all too often wiped out in urban areas. Hats off to British Land.”

WHAT WE'VE LEARNT...

Our approach to biodiversity is constantly evolving as we learn from our own projects and those of others. We also work in partnership with Arup, specialist consultants, benefiting from their considerable expertise. Their recent review of our green roofs has provided us with a number of useful tips which we are pleased to share here.

Good design

Create opportunities to encourage biodiversity at the same time as providing amenity value, through careful design.

Start early

Consider biodiversity as early as possible in the property cycle, and then at every stage from acquisition, design, development and management, through to refurbishment or sale.

Work together

Landscape architects and ecologists need to work together at all stages of the project, designing and planting with both appearance and biodiversity in mind.

Habitat mix

Locate varied habitats close together, such as bare substrates and short vegetation, to encourage invertebrates which form the building blocks of wildlife presence.

Go native

Choose native plant species and appropriate wildflower mixes, particularly those of benefit to invertebrates and other forms of wildlife.

Build nests

Provide nesting boxes in undisturbed locations to encourage birds, bats and invertebrates to take up residence.

Keep your eyes open

Monitor biodiversity on an ongoing basis, keeping the building management team informed.

Encourage others

Encourage occupiers to get involved in biodiversity initiatives, as many will value the opportunity to enjoy nature on their doorstep, and may also be happy to help monitor what wildlife and plants appear.

Act on results

Use what you find out through monitoring to shape your future actions for biodiversity, modifying measures where these are not working.

7

GREEN ROOFS

We have created extensive green roofs on seven buildings since 2004.



AWARD

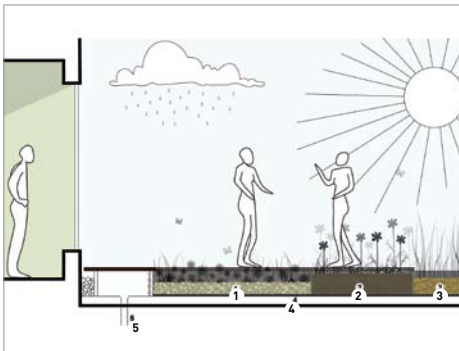
Our two-year green roof trial with Arup won a National Green Apple Award in 2007 for environmental best practice.

60%

GREEN ROOF

At Ropemaker Place, winner of Estates Gazette's Green Office Development of the Year 2008, 60% of available roof space is green roof and terrace.

We plan our green roofs carefully, in partnership with specialist consultants



Far left: **Regent's Place green roof concept drawing (not to scale)**

- 1 Sparsely-vegetated ground and sedum
- 2 Wildflower mix and organic substrate for birds and butterflies
- 3 Border plants and shrubs for garden areas
- 4 Roof structure including waterproof layer and drainage
- 5 Rainwater pipe draining to basement collection tank for landscaping irrigation

Left: **Ropemaker Place green terrace**
(Photo: Townshend Landscape Architects)

By considering biodiversity from the early stages of development we are contributing positively to local biodiversity



Above: **The green roof at 201 Bishopsgate offers a range of habitats**

SUSTAINABILITY BRIEF FOR DEVELOPMENTS PUBLISHED – INCLUDING GUIDANCE ON BIODIVERSITY



2004

Green roofs planted at **Plantation Place**.

Biodiversity Action Plan published for **Teesside Shopping Park**.



5,000 sq ft of green space was created at **Plantation Place** in London EC3 when the development was completed in 2004, and so the landscape has had time to develop and stabilise. At the time, plant species were selected for appearance rather than biodiversity, with green terraces both visible and accessible to occupiers. The planting of non-native species has limited the biodiversity contribution of the scheme, informing our approach on subsequent developments. However, the landscaping is still of value to wildlife, with bees, hoverfly and snails all sighted.

The team at **Teesside Shopping Park** in Stockton-on-Tees works with Tees Valley Wildlife Trust to ensure that the on-site nature reserve provides a suitable environment for a range of species. Roosting and nesting areas include dozens of boxes for birds and bats, as well as six kingfisher perches and six floating islands. At the same time as benefiting the surrounding wildlife, several nature projects are encouraging children to become more environmentally aware, seeing how wildlife can thrive near to major retail areas. Sightings of wildlife include kingfishers, herons and ruddy ducks, as well as great tits, blue tits, robins and wrens.

BIODIVERSITY PROGRAMME PUBLISHED



2005



GENERIC BIODIVERSITY ACTION PLANS FOR URBAN AND SOFT LANDSCAPES DEVELOPED



2006

Start of green roof trial with **Arup**.



In partnership with environmental consultants, Arup, we **tried a green roof system** that could be retrofitted to existing buildings. The award-winning trial identified how to successfully establish biodiverse green roofs in less than 18 months. Biodiversity can be optimised by laying out substrates in a mosaic pattern, comprising several different growing media, seed mixes and plant species, as well as arranging these according to sunlight and shading influences. The trial roof was seeded with cornflower and London-based wildflower meadow mixes, with a small number of plug plants providing instant greening. It was tailored to enhance local ecological value, for instance offering foraging opportunities for black redstart, a protected bird species present locally. Over 30 species were recorded, including Deptford Pink, a rare and specially protected plant.

SUSTAINABILITY BRIEF FOR DEVELOPMENTS UPDATED – INCLUDING INFORMATION ON THE GREEN ROOF TRIAL



2007

Biodiversity Action Plan published for Meadowhall Shopping Centre.



At **Meadowhall Shopping Centre** in Sheffield, biodiversity measures focus on the River Don which flows alongside the Centre. Cleaning up the river bank makes the area around the Centre a more attractive place and helps local people to get closer to nature. A new riverside park will be created as part of our River Don District masterplan, which received planning permission in 2008. Once completed, there will be eight hectares of new parks, species-rich grassland, open spaces, recreational areas, green roofs and wetlands, as well as extensive tree planting.



2008

Green roofs planted at 201 Bishopsgate, The Broadgate Tower, Ropemaker Place and York House.

201 Bishopsgate and The Broadgate Tower in London EC2 provide over 8,000 sq ft of high quality green roofs and 1,000 sq ft of green wall. 23 mature trees have been planted and more than 30 native urban plant species were present during summer 2009. The green roofs are not generally accessible to occupiers and so offer suitably undisturbed areas for wildlife, with a rare black redstart already foraging, and numerous invertebrates sighted, including bees, hoverflies and large white butterflies. The overall biodiversity contribution of the development is high.

Ropemaker Place in London EC2 offers 20,000 sq ft of green roofs, as well as trees and shrubs at ground level. These provide attractive areas for occupiers, at the same time as making a small contribution to local biodiversity, for instance bees and orb-weaver spiders have been sighted. We are looking at opportunities to plug plant more local species retrospectively to enhance biodiversity value further. Learning from this scheme, we now encourage landscape architects and ecologists to work together from early on in the development process, designing and planting with both appearance and biodiversity in mind.

At our Head Office, York House, close to Hyde Park in London W1, we retrofitted a 1,300 sq ft green roof and seeded it with 30 plant species. This was informed by our green roof trial with Arup. This roof is not generally accessible to occupiers, with the entire focus on biodiversity. Common urban bird species have already been sighted, with other species expected to benefit as it matures, including bats, black redstarts, house martins and swifts. This relatively small area of roof is already contributing to biodiversity, with ecological value expected to grow as the roof matures and additional features are added, such as small log piles, banks of sand, temporary pond areas, and nesting boxes for birds present locally, such as blue tits and great tits.

INDEPENDENT REVIEW OF BIODIVERSITY



2009

Green roofs planted at Regent's Place.

Regent's Place, close to Regent's Park in London NW1, features 27,000 sq ft of high quality green roof space on 10 and 20 Triton Street and One Osnaurgh Street. These green roofs, which comprise a mosaic of different substrates and habitat types, were developed to encourage biodiversity at the same time as providing attractive outdoor spaces for occupiers. Planting across the estate includes hedging, climbers, and lawn, as well as 182 trees and over 60 native plant species. Once mature, these are expected to provide foraging and shelter for bats, bees, black redstarts, house sparrows and house martins. The overall biodiversity contribution is likely to be high.



At Glasgow Fort Shopping Park, 200 children and volunteers planted 3,000 pot-grown wildflowers in a 43,000 sq ft meadow. Local children learnt about wildflower meadows and their wildlife, before creating their own wildflower meadow. Plants such as betony, cowslips and ox-eye daisies were chosen for their biodiversity value and sheer attractiveness. Climbers that have been planted will also provide screening for 260 metres of security fencing.

OUR BIODIVERSITY PROGRAMME

We consider biodiversity at each stage of the property lifecycle, protecting and enhancing habitats and species. We plan, implement and record measures to manage and enhance biodiversity at our properties through Biodiversity Action Plans. We have generic plans for hard and soft landscaped areas, as well as site-specific plans for properties with varied habitat or species requirements.

britishland.com/crdownloads

- Biodiversity Programme
- Biodiversity Action Plan for Soft Landscapes
- Biodiversity Action Plan for Urban Areas



If you would like to get a copy of our full Biodiversity Review 2010 contact:

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