

The Living Roof



The Landmark | Living Roof



The Clear Channel Living Roof

In partnership with The Royal Society of Wildlife Trusts, the Clear Channel Living Roof is a visible innovation specifically designed to exist atop a bus shelter – developed with experts to aid biodiversity.

It will also contribute to sustainable urban drainage by absorbing rainwater, help alleviate the urban heat island effect, contribute to absorbing air pollution and drive the associated benefits of urban greening for the wellbeing of citizens.

Carefully selected sedum and wildflower mixes provide native habitat and food for bees, other pollinating insects and birds. The design is fully compliant with GRO Green Roof Code 2021 and FLL Green Roof Guidelines 2018.

Living Roof benefits include:

Stunning Elevated Gardens Beautiful flowers and lush colours help with urban greening.

Real biodiversity benefits with 13 wildflower species for bees/pollinators, unlike traditional sedum-only blankets.

Other Environmental Benefits

Absorbs rainwater, contributes to improved air quality and combatting the urban heat island effect.

Reliable & low maintenance pre-grown in deep substrate for healthy roots/longevity of life; built in drainage.

Built to last, using sustainable materials

Plants sit within purpose-designed, integrated roof/tray system using local recycled materials.

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Urban Greening

Meadows and other species-rich grasslands now cover less than 1% of the UK.

Over 97% of all flower-rich grasslands have been lost in England since the 1930s, (and this is mirrored in other parts of Britain) reducing pollen and nectar sources and leading to a serious decline in the wildlife depending on wildflower-rich habitat. It has been predicted that 40-70% of species could go extinct if action is not taken to enable species to move through the landscape.

Recommendations from the latest ecological research have long called for the creation of a healthy ecological network operating across the landscape as a whole, not in isolated reservoirs. This approach is now being taken forward widely across the UK, and elsewhere in the world, and is integral to the current Environment Bill.

The Living Roof has been purpose designed with expert ecologists to support native biodiversity and contribute to building our Nature Recovery Networks across Britain as part of the Government's 25 year Environment Plan.

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Encourage biodiversity

In partnership with The Wildlife Trusts, our Living Roofs will support the restoration of biodiversity in the urban areas where it is needed most.

A Nature Recovery Network as a joined-up system of places important for wild plants and animals, on land and at sea. It allows plants, animals, seeds, nutrients and water to move from place to place and enables the natural world to adapt to change.

As outlined in the Environment Bill, the whole of England will be covered by Local Nature Recovery Strategies that identify opportunities for recovering or enhancing biodiversity.

120mins a week exposure to natural greenery has also been shown to improve mental health. Recent studies have shown the relative value of mental health benefits was calculated to be 7% of the total economic benefits of London parks (amounting to ca. £6.8 billion over 30 years).

The flower mix in the Living Roof has been carefully considered to meet this challenge while maximising other climate resilience and sustainability objectives. The design was developed with a member of the steering group of the latest GRO Green Roof Code 2021.

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Climate resilience

In the fight against climate change, our city's street furniture must have the capability to do more. The Clear Channel Living Roof will also benefit the wider environment through their positive impact on sustainability, reducing urban heat and the attenuation of storm water.

50-80% of rainwater will be absorbed by the Living Roof with the aim to contribute to building UK capacity for resilience to climate variability and change – in line with the UK Government's Climate Resilience Programme.

Mainstream research has shown that perhaps the greatest overall benefit of green roofs comes in tackling the "urban heat island" effect. A modelling scenario undertaken by the New York Heat Island Initiative found that providing 50% green roof cover within the metropolitan area would lead to an average 0.1- 0.8°C reduction in surface temperatures. Further, for every degree reduction, roughly 495 million KWh of energy could be saved

The species mix and substrate depth in the Living Roof has been purpose designed to maximise these characteristics to be able to make a meaningful contribution to a city's climate resilience toolbox and help face the challenges of the future.

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Local and Sustainable

From project conception, the design of the Living Roof has been driven by principles of sustainability at its core.

The product specification ensures it fits perfectly on our standard bus shelter range with minimal impact to prevent any over-design of the bus shelter structure.

The species and substrate mix is optimised for the regional climate to minimise maintenance required and thus improve operational and thus overall lifecycle sustainability on top of the natural biodiversity benefits.

As many of the materials are sourced locally from UK as possible including:

- The plastic trays which are UK sourced recycled plastic,
- The soil substrate which is UK compost from garden waste,
- The gravel substrate which is UK waste carbon slag from power plants,
- The timber surround which is FSC-sourced timber from UK or EU with a non-toxic treatment and water-based timber stain.
- The coconut coir is the only material from outside the UK, sourced from India, which are made from waste coconut fibres and fully biodegradable.

To integrate with circular economy principles, all materials in the Living Roof and the shelter as a whole are biodegradable or recyclable so nothing needs to go to landfill.

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Key information

Sustainable Materials

Trays: Recycled and recyclable plastic (UK)
Coir (coconut mesh): Coconut husk waste (India)
Compost: Recycled green waste (UK)
Gravel: Recycled carbon slag waste from power plants (UK)

Scalable

Modular design to fit almost any configuration
Common parts throughout for easy manufacture
Easy assembly process for quick installations
Stock can be shifted and reallocated to different configurations
Compatible with existing cabling, battery and components

Maintenance/Installation

All living components mixed / assembled / hydraseeded off site.
Simple installation of the plants on our purpose designed shelters.
Fortnightly inspection as part of PCO visit.
Two annual visits for fertilising, weeding and trimming.
Watering required during droughts of 6 weeks or more.
Modular system allows quick replacement of plants if required.



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The flower mix comprises 13 native UK wildflowers and 5 sedum species which was developed with expert ecologists to provide the maximum benefits for biodiversity (supporting bees and pollinators) as well as climate resilience and low maintenance for overall sustainability.

The wildflowers benefit from enhanced substrate depth and were chosen to be tolerant of dry conditions. Flowers up to a height of 50cm will contribute to spectacular colours and greening during Spring and Summer and also support bees, butterflies and other pollinators. The mix is made up of a wide range of native flowering species and grasses to maximise ecological structural diversity. Some wildflowers are annual and biennial so new seeds should be broadcast regularly.

Thrift

Flowering period:
May to September
Approx. height 25cm

Common Daisy

Flowering period:
May to July
Approx. height 25cm

Wild Strawberry

Flowering period:
Summer
Approx. height 5cm

Kidney Vetch

Flowering period:
June to September
Approx. height 30cm

Poppy

Flowering period:
Spring-Summer
Approx. height 60cm

Pansy

Flowering period:
May to October
Approx. height 20cm

Thyme

Flowering period:
May to September
Approx. height 15mm

Birdsfoot Trefoil

Flowering period:
May to September
Approx. height 10cm

Wild Marjoram

Flowering period:
Spring / Summer
Approx. height 10cm

Sea Campion

Flowering period:
June to August
Approx. height 10mm

Cathusian / Pink

Flowering period:
Spring / Summer
Approx. height 20cm

Cowslip

Flowering period:
March to May
Approx. height 25cm

Selfheal

Flowering period:
June to September
Approx. height 20cm

The sedum species provide a comprehensive layer of cover all year round with a mixture of colours, leaf structures and flowers selected to appear at different intervals to encourage bees, butterflies and other pollinators and also provide significant water retention and climate resilience benefits to the roof.

Biting Stonecrop

Flowering period: June-July
Approx. height 10mm

Czar's Gold

Flowering period:
May to August
Approx. height 10mm

Sedum Hispanicum

Flowering period:
very little flowers
Approx. height 6mm

Sedum Album

Flowering period:
June to August
Approx. height 10mm

Sedum Pullchellum

Flowering period:
May to July
Approx. height 10mm



The soil and seed mix has been designed to enable a flowering period across the species from May-September.