

Case Study: One Wood Street - London



IMAGE: The top of St Paul's is visible from the green roof at One Wood Street

International law firm Eversheds recently moved into its new state-of-the-art headquarters at One Wood Street, London. One of its most distinctive features is the 1650sq m sedum 'green roof' – the largest in the City – which was specified by architect, Fletcher Priest alongside developer Land Securities.

The thermal-insulation characteristics of the roof will reduce heating and cooling loads on the building in winter and summer (respectively) thereby reducing its energy consumption.

Further benefits of the green roof include reducing rainwater run-off, extending the roof life by protecting it from weather conditions, helping to cleanse the air of some of the dust and pollutants and moderating the urban heat island effect. Research from around the world indicates that green roofs reduce annual run-off from roofs by at least 50 per cent – and more usually by 60-70 per cent – contributing to urban drainage and flood alleviation schemes.

Eversheds is also considering ways of maximising the environmental benefits provided by the roof,

such as improving biodiversity by installing bird boxes and insect habitats. Eversheds is working closely with well-known urban ecologist Dusty Gedge, who is a member of the London Leaders programme, to ensure that it makes the most of this green space in the heart of the City.

The building has been awarded a BCE Award as a result of the collaboration with Land Securities to reduce the building's environmental impact and is set to achieve a BREEAM Excellent rating.

Cornelius Medvei, Senior Office Partner at Eversheds in London, comments: "We wanted to ensure our new London headquarters was environmentally-friendly as possible, and we chose One Wood Street because Land Securities was providing a building which was designed to be at the forefront of sustainable building techniques. The green roof is an essential part of helping us achieve our environmental targets and we are currently assessing further opportunities to increase the ecological and nature benefits of the roof."

The Environment Agency's view

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Our climate is changing, and we need to change with it. It is clearly a big challenge, and so the Environment Agency has prioritised the areas of work that we need to focus on to

create a better place. These are to manage flood risk, influence sustainable development, improve the water environment and to manage our waste as a resource.

Green roofs can help us achieve these goals and adapt our cities to meet the challenge of climate change.

"Green roofs will play a part as we adapt our cities to a changing climate. They are good for the environment, good for the developer, and good for the property owner – and our role in planning means we can make a real difference in greening London's rooftops," says Robert Runcie, Regional Director of the Environment Agency ahead of the launch at the World Green Roof Congress of the Agency's new green-roofs toolkit – the latest addition to the *Guide for Developers* pack

"London is leading the way and not only are we now providing a toolkit to enable developers to produce quality green roofs, we are also helping to change national policy to incorporate this technology into London's sustainable future.

"But we can't do it alone. One of the most important outcomes of this conference is to build relationships between the private and public sector. Only with a joint focus can we help set the standard for world-class cities."

The Environment Agency has already worked with local authorities and developers across London to incorporate 14ha of green roofs. Its staff is talking to local authorities and developers early in their planning, so green roofs are incorporated at the design stage – including recent plans to green the roof of the Battersea Power Station.

But Greenwich Peninsula is the highlight of the work to green London's roofs so far. The development of 12,900 homes, providing 24,000 permanent jobs, will be the largest green-roof development in the world.

This is a flagship illustration of how partnership working can deliver a sustainable design to the benefit of both society and the environment.



Case Study: The Muse, Poets Road, Islington - Bere Associates

The Muse, located between Newington Green and Poets Road, sits immediately behind a row of Grade I Listed Heritage houses thought to be the oldest terrace in England. Built close to Passivhaus ecological and energy standards, it was conceived by Justin Bere both as a wildlife sanctuary and as an oasis for neighbouring taller buildings to look down on, transforming what had previously been a dusty backyard containing some derelict workshop buildings.

The roof spaces have been split into four distinct areas, with 20t of soil sustaining the all-native planting scheme. A hawthorn and a hazel garden make up two of the levels, both underplanted with native bulbs and seeded with hedgerow flower mix to create 'rocky outcrop' and 'native woodland' habitats respectively. At the base of the garden wall at first-floor level, honeysuckle has been planted to provide nectar for insects and cover for the bird and bat boxes that are built into the wall. A meadow of native wildflowers, cornflower and

calcareous herb seeds has been created on the roof overlooked by a mezzanine study. On the roof above, a dry extensive green roof of native sedums, hare's foot clover and rock rose has been created around the solar panels.

The water from an underground rainwater-storage tank is available to settle the planting in during its first year and it is anticipated that the meadows and other plants will not need more than occasional watering from the tank after that time.

Dusty Gedge of Livingroofs.org advised on the wildflower meadow as well as the soil for the whole project, and the scheme includes accommodation for insects, such as stag beetles, bumble bees and others. Many birds and insects already visit and feed on the native planting, including house sparrows which are an endangered species. With the help of a couple of ponds, Justin's plans create a wildlife oasis in the heart of London.