

Scaffolding Living Wall
Mayfair, London
 ARUP & Grosvenor

BIG Biodiversity Challenge Award category: Temporary Award

Project overview

Arup partnered with the developer Grosvenor to install the first full-scale Living Wall Lite in Mayfair in June 2016, and it's already proving popular with residents both human and local fauna. Arup's Living Wall Lite, the first system of its kind (patent application has been filed), brings the benefits of green walls to construction sites. It encourages more nature into cities and eases the negative effects of building work. High pollen wildflower meadow seeds and wild strawberries are sown into the wall fabric and grown in situ. Grosvenor's first Living Wall Lite project covers 80m2 of scaffolding on the Grade I-listed former St Mark's church, which is being redeveloped into retail, restaurant and community space.

What were the biodiversity conditions on site, prior to the enhancement?

Previously there were a few plants and shrubs in front of the site which were removed prior to construction.

Were there any specific reasons that led to this project?

ARUP & Grosvenor are committed to making better cities so were keen to trial this new system with the intention to make a step change in how we develop buildings in our communities. This also forms an integral part of Grosvenor and Arup's commitment to Wild West End helping to encourage birds, bees and bats back into this iconic area of London, and create greater connections with nature for residents, visitors and workers to enjoy. Wild West End demonstrates the positive impact of urban green infrastructure, and with clear measurement strategies in place, it also offers great research potential.



The living wall on the scaffolding, Mayfair Credit: Arup

What were the biodiversity measures taken?

The aim of this project was to demonstrate at a large scale the ease and simplicity of this new Vertical Meadow Living wall system. Functioning in a very similar way to traditional meadows it is installed in spring following the natural cycle before growing to full bloom in spring summer attracting lots of bees and other insects before browning off in Autumn Winter. It is now in its second year before being removed at the end of the year when the construction ends. The system needs very little management.

The wall is untouched with no physical maintenance on the wall during the year. Nature has been allowed to do what it does through the seasons providing different habitats for local fauna depending on the season. This has substantially enhanced the local habitat providing 80m² of new wildflower habitat in the centre of the city. This wall will then be moved on to another construction site across the road thus providing continuity of habitat. The aim is then to roll the system out across the city providing significant amounts of new habitat.

The workers on the site working for contractor Grangewood have actively engaged with the management of the irrigation system reducing it when necessary. Feedback from the local community includes this, from Sarah-Jane Kavanagh of Patronus Partners: *“Our office is directly opposite the living wall and it has been a welcome change to see green plants and flowers sprouting from the scaffolding rather than the usual plastic cover, or worse still, nothing but the scaffolding.”* Arup is also conducting a year long Air Quality monitoring of the wall with sensors to assess what the benefits are. Arup continues to actively monitor the wall and will be running an ecology audit on the wall.



Living wall in full growth Credit: Arup

What were the biodiversity measures taken?

The selection of seeds by Professor Nigel Dunnnett from Sheffield University was aimed at encouraging biodiversity

How would you best describe the project?

Enhancement

Further information

Currently as we speak the wall is buzzing with bees and other insects who are feasting on the blooming wildflowers. The system is designed to be easily installed with minimal embodied energy impact through the use of natural and recycled materials. Produced from a layered mat attached to standard flame retardant scaffolding sheet it was installed by the scaffolding contractor with only the irrigation system being installed by the specialist living wall contractor Green Fortune.

Installed exactly as per traditional scaffolding sheeting it was up and running within two days. Once the water is turned on the seeds start to germinate, before turning in to a beautiful thriving wildflower meadow. One surprise was the addition of wild strawberries which provide an additional attraction for local fauna.

The long term benefits if widely adopted could be to provide a new park on temporary scaffolding/ hoarding around our cities turning what is often a nuisance in to an attractive functional meadow supporting nature. This is providing habitat on previously unused space, a lost opportunity. Objectives have been surpassed. By participating in the award we hope to encourage other developers and contractors on the potential of using our system and thus creating a more harmonious relationship between construction and the natural environment.



Wild Strawberry & Daisies on wall Credit: Arup

What was your personal motivation for carrying out the enhancement?

"I would like to turn construction sites everywhere in to beautiful meadows" System inventor, Arup, Alistair Law.
"We're keen to try and push the boundaries on how we can improve the historic fabric of the London Estate by trying new technologies and products," Grosvenor's Project Director, Mark Tredwell.