

Holbein Gardens

7 Holbein Place, London

Grosvenor / Blenheim House Construction / Vertical Meadow

BIG Biodiversity Challenge Award Category: *Construction Phase Award*

Project overview

The installation of a Vertical Meadow Wrap along the gantry facing the street to enhance biodiversity during construction. Vertical Meadow wrap is a living wall system that grows from native wildflower meadows from seed. Seeds have been chosen to support local pollinators and invertebrates.

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

The baseline biodiversity of the site prior to construction included some low level shrubs where the Vertical Meadow was placed (see adjacent photo). This was all removed prior to the start of construction to make way for a gantry to enable the site works. The objectives of the Vertical Meadow was to provide a construction phase source of biodiversity prior to completion of the main works. This is to align with Grosvenor's strategic policy of improving biodiversity.

What were the reasons behind this project ?

The main reason for the installation of the Vertical Meadow was to respond to the need for providing a continuity of biodiversity pre and post construction. This is a priority for Grosvenor which is currently targeting a 200% Biodiversity Net Gain for the completed project. They are also introducing new greening equivalent of 11% of total floor area. This intervention has significantly helped with providing additional points for the Considerate Constructors scheme and BREEAM. The Considerate Constructors scheme site assessors were highly impressed with it. It also provides significant improvements for neighbours and passers-by reducing the negative impacts of construction.



Hoverfly on an Oxeye Daisy on site



Baseline Condition pre-construction (in red)

What were the biodiversity measures taken?

The project included the introduction of 38m² of native UK calcareous grassland meadow along the handrail of the gantry during construction using the Vertical Meadow Wrap. The Vertical Meadow Wrap is an innovative new way of growing wildflowers vertically from seed which is unheard of in the living wall industry. Placed in a 1m high strip, it extended along the entire length of the gantry. It uses a water recirculation system to ensure that every drop of water was re-used with minimal loss. It also is made from predominantly reused materials (old clothing).

The seeds were chosen by expert ecologist/ horticulturalist Professor Nigel Dunnett, and the London Wildlife Trust to enhance biodiversity in the urban environment. This biodiversity enhancement including the introduction of approximately 25 native UK wildflower species including both day and night flowering species to support pollinators and moths. From close inspection it was very clear to see the types of insects that had made its way on to the wall from traditional pollinators such as bumble bees, honey bees and hoverflies to a wealth of other invertebrates crawling around the very dense mixed sward.

The value of the additional habitat is similar to that of a more traditional calcareous grassland wildflower meadow of a similar scale. There is an exchange of seeds with the surroundings that includes self seeding plants on the wall and seed distribution after flowering from the wall.

The site team has significantly engaged with the wall both from the site leadership to the individual workers. The site team have been in charge of maintaining the wall and owing to the growing from seed on site it has built up a sense of excitement and anticipation. This has led to significant interest and pride from workers to be doing something innovative and special.



Vertical Meadow Wrap following installation



Recent photo of the wall in full growth

Further information

The Vertical Meadow Wrap was brought from the Vertical Meadow depot in North London by bicycle courier in order to reduce the carbon during transport of the product. The installation was very simple and was carried out by the existing site team. The mat was hung by the site scaffold team and the irrigation unit was installed by the plumbers on site. The meadow has been monitored by Vertical Meadow team remotely and via site visits to check on growth and on the variety of flora and fauna. At the end of the project we will see whether the mat can be moved to another site on the estate. The legacy is that Grosvenor is looking to introduce vertical greening solutions during construction and this project helps them to understand some of the benefits and challenges of using similar systems. It also aligns with the requirements of the Westminster Council Code of Construction for greening of site works. From the invertebrates observed on the wall the biodiversity enhancement is evident. The complexity and learnings from applying vertical greening solutions during construction is that water security which is essential and can be a challenge. It requires robust monitoring remotely and by the site team. Taking part in the BIG Biodiversity Challenge has allowed the team to analyse the real benefits gained from the intervention and also plan better installations in the future..

Project Team

Grosvenor, Blenheim House Construction, Vertical Meadow

What was the motivation for carrying out the enhancement?

The motivation of carrying out the intervention was to offer an opportunity for the construction site to give back to the local area both in terms of aesthetic appeal but also to provide new habitats for local biodiversity during the construction phase. So often the construction phase is ignored whereas it is important to provide a bridge between the before and after.



Early flowering of the wall in sunny area:



Bladder campion and mixed sward: