Z HOUSE
Salford, Manchester
Barratt Developments

BIG Biodiversity Challenge Award Category: *Habitat Creation: Project of the Year award (<5ha)*

Project overview

In 2020, Barratt committed to building zero carbon homes from 2030. The first step was to create a concept – the Z House, constructed at University of Salford. This exemplar eco-friendly home needed a garden to match, so Barratt planned a wildlife-friendly, biodiversity-enhancing garden scheme that could be rolled out nationally.

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

The Z House was constructed at the University of Salford on a brownfield site with extremely limited biodiversity. The area was previously occupied by four buildings that were demolished in 2017, and since then it had comprised gravel and hardstanding that was used by the University's Autonomous and Automotive Vehicle Technology Laboratory. Sandwiched between Salford Crescent station and existing university buildings, with the busy A6 road adjacent, this was certainly a challenging environment to create a haven for wildlife. Barratt felt it was important to create a home that actively improved the environment, and the garden was a vital aspect.

What were the reasons behind this project?

Barratt set up a partnership with wildlife and conservation charity RSPB in 2014 and is publicly committed to protecting wildlife and achieving Biodiversity Net Gain (BNG) on all its developments. Awarded Sustainable Housebuilder of the Year 2021, Barratt pledged that all its homes would be zero carbon by the end of the decade, so the Z House research project majors on improving materials and construction to achieve that. As an addition to the research, Barratt worked with RSPB and Landscape architects Golby + Luck to design an aesthetically pleasing, accessible wildlife garden to the RSPB's Gold Show Home Garden Standard.

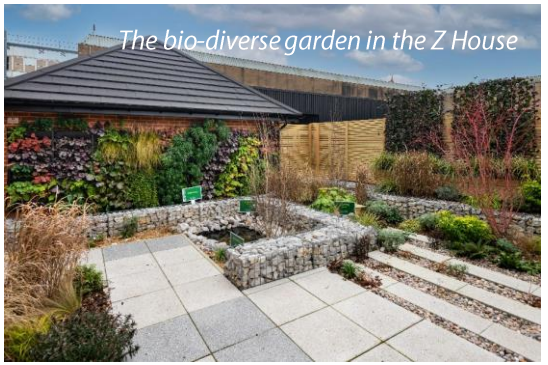
A doll-house illustration of the Z House; a culmination of a partnership with more than 40 leading supply chain partners.

What were the biodiversity measures taken?

The garden design is being rolled out nationally, is sustainable in construction, accessible, simple to maintain by homeowners, capable of withstanding drought and able to attract, feed and house wildlife:

- The design uses recycled materials.
- Plants, sourced locally, are native and non-invasive to maximise diversity and mainly drought-tolerant to reduce watering.
- An integral Bat Brick was fitted to the house.
- An integral Manthorpe Swift Nesting Brick was installed. Swifts are a priority species for the RSPB with numbers having declined by 53% between 1995 and 2016. Barratt has purchased 3,800 swift bricks for use across its developments.
- Bird feeders hang from the pergola and a bird box is fixed to the fence – a "bed and breakfast opportunity" as recommended by RSPB.
- A native hedgerow was planted to provide nectar and berries for wildlife and opportunities for sheltering and nesting birds.
- The front lawn was turfed with a mix of plant species that flower, providing nectar and pollen for insects between mows.
- Bee boxes are provided for Solitary bees, responsible for a significant proportion of pollination. The garden includes plants selected to provide for pollinators across all seasons.
- Hedgehog highways have been installed to improve the 'permeability' of the garden to wildlife; to the rear of the wildlife pond is a hedgehog home.
- The green environment and wildlife habitat has been extended with green walls and ivy screens. These are easy to care for, drip-fed by rainwater collected by the smart water butt.
- The smart water butt empties itself prior to predicted heavy rainfall, capturing useful water and protecting against flooding. Excess water flows into the pond first, and then into the rain garden, planted with appropriate species.
- Patio paving and jointing are permeable.
- Kitchen waste is turned into compost in a hotbin, keeping plants healthy without peat or chemical fertilisers.

An external image of the Z House



The bio-diverse garden in the Z House

Close ups of the bio-diverse garden in the Z House

Further information

The garden at the Z House was designed to show how a truly wildlife-friendly garden could be created even in a relatively compact space, and how easy it would be to maintain and manage by non-experts. As part of the zero-carbon project, Z House has been occupied by academics analysing every aspect of how the house runs, including maintaining the garden which has remained attractive all year round and has visibly tempted wildlife back into this barren area. Visitors from local and central Government, and the construction industry, come to the site to learn best practice, so interpretation boards ensure they learn about the design and its elements, Barratt's long-standing partnership with RSPB, and about measures they could take within their own gardens to benefit wildlife.

Salford City Mayor, Paul Dennett [centre], Deputy Mayor, Tracy Kelly [left] visited the Z House with Robert Holbrook, Managing Director at BDW North West.

The success of the garden will help Barratt to educate homeowners about how best they can support wildlife, and new and helpful literature has been developed to help spread the word. In addition, the lessons learned here are being scaled-up and used to inform Barratt's larger green spaces and wildlife areas within its developments, partly inspired by the partnership with RSPB but also because Barratt recognises the wider benefits that this has for its homeowners, its developments and the country's precious native wildlife.
Wildlife spaces, including gardens, play a part in helping to mitigate and adapt to the impacts of climate change, and success on a small scale will inspire and encourage a roll-out not just by Barratt but by other housebuilders and homeowners.

What was the motivation for carrying out the enhancement?

"As responsible housebuilders, Barratt Developments has always cared for nature. Our **Building Sustainably Framework** measures multiple aspects of our performance, from biodiversity to waste, and we are constantly upgrading our targets. We already create all our show home gardens to RSPB Gold standard, but with the Z House garden, we wanted to create a green space that was genuinely achievable for the ordinary homeowner to recreate and maintain. This space was just concrete and gravel – now there are birds, bees and bugs – and some day soon we hope there will be bats too!"