

Heathlands
Buckley, North Wales
Redrow Homes

BIG Biodiversity Challenge Award Category: *Biodiversity legacy Award*

Project overview

Heathlands is a 300 house development on a former claypit at Buckley, North Wales. Redrow Homes designed and implemented a detailed restoration scheme to enable the infilling of an unsafe lagoon, the re-vegetation of the “moonscape” and conversion to a multi-pond nature reserve, financed by the creation of the new family homes.

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

The site had been abandoned and was unsafe, notably with the presence of a 1ha steep-sided lagoon. Great crested newts (GCN) had colonised whilst the site was still in active use for brick-making in the 1990’s. The site had been designated as a Special Area of Conservation (SAC) but there was no viable restoration plan and no obvious means of bringing the site back into beneficial use.

What were the reasons behind this project ?

The aim was to fulfil a Council identified housing need in Buckley, whilst also enhancing the Biodiversity of the designated SSI area. KPI’s were established (audited by independent geologists and ecologists) to demonstrate compliance with the Habitats Regulations, GCN licence and planning conditions. These were GCN translocation; Pond water levels; Settlement; Pond occupancy; Habitat quantity and quality. Post-completion monitoring and reporting contributes to the long-term monitoring and protection of the SAC/SSSI. The project principles are reflective of the wider Redrow sustainability strategy, which is based on three key principles : Building Responsibly, Thriving Communities and Valuing People.



View over Lane End Nature Reserve to the Heathlands residential development

What were the biodiversity measures taken?

The SAC has been enhanced through the creation of 45 new ponds in the Lane End Nature Reserve, together with pond restoration and habitat management in the adjacent Knowl Hill reserve. Habitat creation and management operations have been consistent with Natural Resources Wales's Core Management Plan and Conservation Objectives for the Deeside and Buckley Newt Sites SAC (CCW, 2008).

Redrow's upfront investment and residents' annual payments support long-term security for the Nature Reserve and SAC. A new green-roofed base has been created for Wild Ground, a local wildlife charity. Wild Ground is responsible for implementing the management plan for the site, which includes both management activities and ecological monitoring. The ongoing wildlife surveys continue to build the evidence base for the success of this scheme and will be a valuable resource for similar projects. The base affords opportunities to engage locals in nature conservation and provide outdoor education which has resulted in successful grant application for Wild Ground. Community orientated activities centred on the Nature Reserve include a weekly volunteer group; regular school visits; ecological training for Wild Ground volunteers and staff; and newsletters for residents.

There is also a full time warden employed and based at Heathlands. This enables Wild Ground the opportunity to instigate conservation benefits further afield than the development site. The warden is working with the local community to identify and map heritage assets in the Knowl Hill Nature Reserve, typically including relicts of Victorian era clay quarrying and brick-making that have now become overgrown with scrub. Furthermore, the area adjoining the SAC has also been enhanced. The Lane End reserve is divided from the adjacent Knowl Hill reserve by the Buckley Tramway, a Scheduled Ancient Monument, dating to the late 1700's. This is part of the Buckley Heritage Trail and is included in the management plan funded by Redrow's Heathlands scheme.



Dragonfly training at the base, funded by the scheme



Guided walk through the Nature Reserve

Further information

The project embodies and advances the principles of sustainable development. As well as meeting a demand for housing the Heathlands development has bought 60ha of derelict un-vegetated land into beneficial use. The water cycle is complete within the site through rainwater harvesting, feeding interlinked ponds connected to a central soakaway. Earthworks involved no removal or import of bulk fill. Significantly, the project also evidences Biodiversity gain. Previously, the GCN population had been largely reliant on a single lagoon with limited emergent or bankside vegetation. The Nature Reserve now contains 45 ponds, bringing the number of waterbodies within the SSSI to 90, smashing the SSSI target figure of 75 waterbodies. The Heathlands also supports five amphibian species, thus complying with SSSI targets and 2018 monitoring confirmed a count of 1,173 GCN from the reserve; twice the target for the entire composite SSSI. Pond habitats within the terraced basin are varied (from 50m² to 3,000m²) delivering a 0.27ha increase in water surface. The project highlights the importance of collaborating with ecologists to overcome technical, planning and legislative obstacles. Furthermore the scheme has highlighted the importance of long term management and monitoring arrangements to secure the ecological success of the regeneration.

Project Team

Redrow Homes, Natural Resources Wales , TEP, Wild Ground and Flintshire Council.

What was the motivation for carrying out the enhancement?

Redrow wanted to showcase a good example of how housebuilders can respond to the challenges of the natural environment and produce a commercially-viable attractive development. The scale of dereliction, geological and ecological constraints required significant vision and investment just to remediate the site, let alone deliver a management legacy. Nevertheless the scheme demonstrates a clear long term vision and it is accompanied by extensive management and monitoring arrangements to secure the ecological success of the regeneration.



2008: amphibian exclusion fencing before earthworks and pond creation



2017: pond creation and housing complete