

Connecting hospitals with nature

14 locations in Wales

Mott MacDonald for Aneurin Bevan University Health Board and Powys Teaching Health Board

BIG Biodiversity Challenge Award Category: **Multi Benefits**

Project overview (50 words max)

Mott MacDonald worked with two Welsh Health Boards to improve biodiversity across 14 hospital sites. We went further by developing a holistic approach that not only protects and enhances biodiversity but is climate resilient, boosts wellbeing and includes tailored measures to connect hospital users with nature. Project completed May 2023.

What were the biodiversity conditions on site prior to the enhancement? (100 words max)

The Aneurin Bevan and Powys Teaching Health Boards have a duty under the Environment (Wales) Act 2016 to maintain and enhance biodiversity. We undertook desktop and site surveys to evaluate the broad biodiversity baseline at each site, which ranged from low value hardstanding and amenity grassland to large high value sites with ancient woodland, orchards and parkland. We identified features requiring safeguarding, including habitats, bats and reptiles, as well as the landscape and heritage value. We also looked at the hospital function – some were mental health hospitals, some children’s hospitals – before recommending tailored improvements.

What were the reasons behind this project? (100 words max)

To help meet their biodiversity duty under Section 6 of the Environment (Wales) Act 2016, the Health Boards had secured funding for a pilot scheme to see how biodiversity across the different estates could be protected and improved through management or interventions. We recognised that the Wales Net Benefits for Biodiversity (NBB) policy promotes a holistic approach and saw an opportunity to support the Boards to meet their mandatory biodiversity duty in ways that cultivated a deeper appreciation and understanding of nature, bringing benefits for patients, staff, visitors and the public.



Examples of existing biodiversity conditions across the 14 sites, including hardstanding, ponds and woodland



Wildflower meadow development works to maximise biodiversity

What were the biodiversity measures taken? (300 words max)

Seeing and being surrounded by nature can greatly boost people's health and wellbeing, which is particularly important in a hospital setting. Studies show that incorporating biophilic design elements (those that use or mimic nature) contributes to more positive health outcomes, better pain and stress management and improved staff performance and wellbeing.

With this in mind, our ecologists sought advice from the biophilic design, landscape, heritage, climate resilience and carbon teams at Mott MacDonald, as well as from the grounds people at the Health Boards, to understand the opportunities unique to each site. We then created tailored Biodiversity Action Plans detailing the biodiversity and wellbeing improvements for each site. These complement the therapies and patient recovery programmes at each site, and build on existing initiatives, such as a wildflower meadow creation scheme and 'minute mile' wellbeing walks.

Examples of biodiversity measures include:

- Accessible paths, in keeping with existing habitats, to promote wellbeing
- Brass rubbing trails and activity packs to educate and engage people in good ecological estate management
- Restoration of historic orchard, parkland and ancient woodland habitats to safeguard heritage and improve biodiversity
- Strategic hedgerow and landscape planting to screen views, strengthen ecological connectivity for wildlife and increase biodiversity value
- Community planting initiatives
- Information boards to aid public education and engagement
- Long-term habitat management plans with climate resilience measures

A key success of this project is the innovative biodiversity solutions to deliver enhancements on even the smallest, urban estates, such as repurposing spoil heaps to integrate invertebrate niches or incorporating drain-fed miniature rain gardens to filter water and diversify habitats.

The clients have confirmed that this pilot project can be replicated at any hospital estate, regardless of scale, and can act as evidence of the value of the scheme for future grant funding, not just in Wales, but across the UK.

Further information (250 words max)

Our clients are already implementing community measures, such as orchard enhancements in Bronllys Hospital, which have, and will continue to, increase biodiversity. We also did a follow up project in Powys to design landscape management sheets to guide implementation of the proposed measures, as well as a GIS platform to help the Boards understand constraints and consider biodiversity when making decisions. This will ensure nature remains high on their agendas.

Our client specifically recognised how the project team went ‘beyond the brief’ to achieve incredible outcomes for health, wellbeing and the environment, saying: **“The project exceeded expectations in so many ways. The quality of the work was exceptional and allows the boards to really understand the ecological value of our estate. We can fully utilise the [reports] to enhance the natural environments of the hospitals to benefit the health and wellbeing of our patients, staff and visitors.”**

The success of the project has attracted interest from other Health Boards; Cardiff Health Board, for example, has since contacted us about running a similar project across its estates. If other Health Boards follow suit, rolling out this initiative further would improve biodiversity across the whole of Wales.

Project Team

- Clients - Aneurin Bevan University Health Board, Powys Teaching Health Board
- Design team members – Will Haigh, Alex Morley and Lorraine Woolley with input from Mott MacDonald ecology, nature services, biophilic design, landscape and heritage teams

What was the motivation for carrying out the enhancement? (100 words max)

We want to work with our clients to identify solutions that not only boost biodiversity but also integrate wider societal and environmental benefits through connecting people with nature.

This project was part of a long-term vision to see biodiversity and wellbeing working cohesively to deliver benefits for people and planet. The hospital estates offer a wealth of existing and potential habitats which could provide a vital haven for wildlife, connectivity through the wider landscape and ecosystem resilience. Connecting people to this natural environment brings health and wellbeing benefits and supports nature through increased engagement and education – creating a lasting legacy.