

**Biodiversity Net Gain Opportunity Creation
M11/A120 Birchanger Services, East of England Region
National Highways and Atkins Ltd**

BIG Biodiversity Challenge Award Category: *Biodiversity Legacy Award*

Project overview - Implementing a biodiversity project at Birchanger Services, which served as a pilot study, to unlock the biodiversity and landscape potential at other service stations throughout the East of England Region, resulting in a significant Biodiversity Net Gain for National Highways (NH) while benefiting road users. This provides an inspiring legacy, because the enhanced habitats will be visible to the road users and managed for the lifetime of the site itself and because the approach will be rolled out to other service stations to give similar benefits.

What were the biodiversity conditions on site, prior to the enhancement? - Birchanger Services is located off the Birchanger Green Roundabout at Junction 8 of the M11, east of Bishop's Stortford, Essex. It comprised approximately 2.09 ha of poor condition grassland surrounded by existing scrub and woodland.

The NH East of England network consists of over 2,000km of road, with extensive areas of vegetation on verges and other soft estate areas. Such an extensive network provides exceptional opportunities to improve habitat through creation or enhancement.

What were the reasons behind this project? - NH are committed to achieving no net loss of biodiversity across their activities by 2025, as a step on the pathway towards biodiversity net gain. To meet this target, NH has a budget set aside within its Biodiversity Designated Funds.

This would be delivered by habitat creation and enhancement, within the NH Estate in collaboration with supporting partners and the wider community. Increasing social value and positively impacting the local community as well as the wider region was seen as crucial, and so a committed team with a passion for the natural world were committed to accomplishing this goal.



*National Highways (previously Highways England)
Designated Funds Plan 2020-2025:
<https://nationalhighways.co.uk/media/lh2ll0ao/designated-funds-plan-2020-2025.pdf>*

What were the biodiversity measures taken?

Habitat creation and enhancement opportunities within the Birchanger Services Scheme were identified and designed to deliver biodiversity net gain as measured using Defra’s Biodiversity Metric 2.0.

The design for biodiversity enhancements was completed in 2021/22. The design was implemented on site at Birchanger Services in autumn 2022 and included providing species rich grassland and woodland edge/ scrub habitat around the perimeter of the site, as well as enhancing the existing woodland belt. These interventions support local biodiversity strategies. At a landscape level, the design improves the connectivity of woody species within the area and makes the services more visually appealing and sheltered by the planting. Sowing native wildflowers, which are host to many valuable pollinators and other species, encourages a species-rich grassland brimming with life. Woodland enhancement and scrub habitat creation around the perimeter of the site contributes to the diversity of habitats and provides landscape benefits.

The design has formed a model to replicate throughout the region. A screening assessment of all the motorway service areas and rest areas within the entire East Region was completed in early 2023. The screening assessment identified ten of the 45 sites could be enhanced for biodiversity and achieve significant habitat units, based on the same design used for Birchanger Services. This may result in over 90 habitat units being achieved, over half of the annual regional unit target. Three of these service stations are managed by Extra who are very keen to collaborate with NH and are committed to managing the habitats in the long term. In this way NH can compensate for the environmental impacts of operations, thereby minimising the long-term impacts and they can enhance the quality of the natural environment on sites managed by partners.



Birchanger Services proposed biodiversity enhancement works.



Mowing and scarification to prepare the Site for enhancement to species rich grassland.



Further information

Atkins undertook an exceptionally rewarding project in supporting NH with enhancing biodiversity at Birchanger Services, and forming a pilot study which is now being used to increase the biodiversity and landscape potential of other service stations throughout the East Region. The enhancement works also benefit local animal species including foraging bats, badger, nesting birds, insects etc. The planting may also slow the flow of any surface water runoff, encourage carbon sequestration once established, lead to air quality attenuation and erosion prevention.

The project team worked collaboratively across several organisations (Atkins ecology, landscape, GIS and transportation colleagues within England and India, Ground Control habitat contractors, Chevron traffic management contractors, Carnell principal contractors, Welcome Break site managers and National Highways project managers) drawing on the interdisciplinary expertise to develop a safe and sustainable design. Herbicides were avoided, ensuring biodiversity was not lost and there are no harmful side effects to people. Resources were minimised, with reduced planting of scrub, allowing natural processes to unfold and resulting in spare scrub plants. Added social value was achieved as spare native scrub plants were donated to Essex Wildlife Trust’s first ever Nature Reserve, Fingringhoe Wick. An Atkins artist helped create a bespoke information board to share the details of the biodiversity work with the public, who have been observed reading it.

Project Team

- National Highways East of England Region: Simon Baldrey, Lucy Robinson-Smith, Taylor Young-Chambers, and Darren Hudson.
- Atkins Ltd: Veronica Barrand, Amir Khan, Rob McCartney, Ric Belt, Claire Wansbury, Lewis Mould, Angela Wade, Mark Coskie, Paul Fuller, and Shakthi Sritharan.

What was the motivation for carrying out the enhancement? - This project was inspired by NH’s commitment to work towards biodiversity net gain including achieving no net loss of biodiversity across their activities by 2025. NH & the Department of Transport have been visionary in creating the ringfenced national fund, and our motivation was to make the East of England region an exemplar of its use through developing a pilot study at Birchanger Services, that is now being used to enhance biodiversity across the NH network in the region.



National Highways East of England network opportunity search area.



Information board explaining the biodiversity enhancements and giving the public a link to read more and discover how to create their own wildflower areas.