

**Enterprise Zone Infrastructure Phase 2
Washington, Sunderland**
Esh Construction Limited & Sunderland City Council

BIG Biodiversity Challenge Award category: Temporary Award

Project overview

The A19 Enterprise Zone is an infrastructure project aimed at improving access to the Nissan and Vantech factories in Washington, Sunderland. The scheme, which is designed to build upon the success of the low carbon automotive and manufacturing sectors, started June 2016 and is due to complete in Feb 2018 at a cost of £7.5m.

Split into three phases, the project involves the construction of a 530m carriageway, converting a 660m section to dual carriageway as well as 120m of paths. The scheme has involved major utilities diversion works, provision of new highways, sewer, gas, water and electrical systems. Esh Construction worked closely with Sunderland City Council (SCC), Natural England and ecologists Aecom to ensure the scheme was implemented with sustainability at its core. Protective measures for wildlife, carefully planned phasing

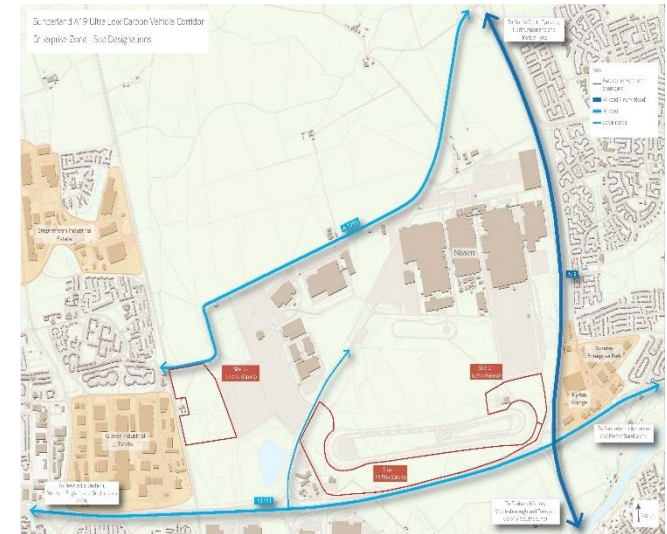
and vehicle movements, and recycling of site materials in conjunction with geotextiles helped to look after the ecosystem.

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

The general site area is located within predominantly open farmland belonging to Hillthorn Farm, immediately west of the proposed construction site. The site has several habitats including grasslands, arable and wetlands, which are identified in the Durham Biodiversity Action Plan, along with areas of hard standing associated with Nissan, Sunderland.

Were there any specific reasons that led to this project?

The key objective of the scheme was to build upon the success of the Low Carbon Automotive and Advanced Manufacturing sectors and to promote and secure further expansion within the local area.



Enterprise Zone Sites -close to A19, Sunderland

Due to the presence of Great Crested Newts within the site, there were planning constraints, which led Esh Construction to work with a team of Ecologists and Sunderland City Council to deliver the scheme with no impact to the amphibians. As the project is high profile for both Esh Group and Sunderland City Council, the decision was made to make the site compound of an exemplar standard.

What were the biodiversity measures taken?

Due to the ecological sensitivity of the project location, several biodiversity measures were implemented. Temporary measures, including **Newt Fencing** and **Wildlife Stop-grids**, which enclose the habitat, and the use of licensed **ecologists** to monitor their effectiveness, ensured construction activities did not impact the fully protected species. Permanent features, including 90 **Wildlife Kerbs**, **Newt Ladders** and the creation of new habitats via two **ponds** and five **hibernacula**, will help meet the objective to maintain the current range of Great Crested Newts in the **Durham Biodiversity Action Plan Area**.

To help **engage the site staff**, the temporary site compound was made as ecologically friendly as possible. Measures included; using **recycled railway ballast**, rather than primary stone for the compound hard standing; engagement with suppliers to provide **planters** made from **re-used plastic piping** and stocked with shrubs; installation of a **kestrel box** by sub-contractors to provide a nesting area for the birds, which are often seen in the area.

The Site Agent, Kris Crookes, also produced a **wildlife checklist** in the site cabin, which documented sightings of local wildlife, including a Marsh Harrier.

As **Esh Construction** now has experience of using innovative products, such as the Wildlife Kerbs and Stop Grids, the approach on this scheme could be replicated on future projects. It would also be possible to replicate the supplier and sub-contractor engagement on future schemes, as this project is effectively a template for action.

Engagement with the **local community** was achieved through the Esh Construction **Added Value Team**, who arranged for **site visits** from two local schools, with **30 students**, and who delivered 6 engagement sessions in local schools, attended by **668 students**. The Added Value approach is entirely replicable, as all tender commitments are monitored by the team to ensure they are delivered against.



Clockwise from top left: Examples of Hibernacula; Hibernacula at Enterprise Zone; Kestrel Box installed in Site Compound; Added Value Site Visit to Enterprise Zone

How would you best describe the project?

Mitigation

Further information

Prior to construction starting, habitats containing the Great Crested Newts were enclosed using a Newt Fence and Wildlife Stop Grids, which prevent Newts from entering the construction site via access roads and the site boundary. Ecologists then undertook trapping and re-locating activity at the site boundary, to ensure no Newts entered the site. During construction, excavated materials were used to re-grade open land, forming landscaping areas and carriageway batters. The recycled aggregates were then used to backfill trenches and build footpaths. During the construction of the roads, the Wildlife Kerbs, Newt Ladders, Hibernacula and ponds were installed.

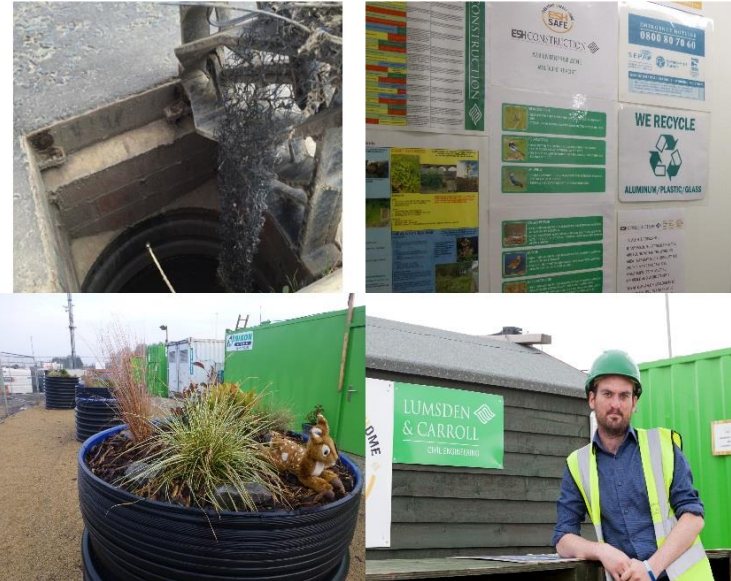
In 2012, Perth and Kinross Countryside Ranger Service surveyed 607 road gully pots, finding **70% contained frogs, toads or newts**, a total of 1007 animals. By installing the **Wildlife Kerbs**, to reduce the number of animals that fall into the gully's, and the **Newt Ladders**, which help animals escape and avoid death by starvation, the A19 Enterprise Zone project will greatly reduce the number of amphibian fatalities for years to come.

In terms of advice for similar schemes, it is recommended the ecologists check the type of license they are applying for at the start of the job. If an incorrect license is applied for, this can cause delays in the project, which the application is processed.

Taking the BIG Biodiversity Challenge has helped the project team to focus on the environmental benefits of the scheme, capturing all the good work done and creating a benchmark for excellence within Esh Construction.

<http://nelnp.co.uk/natural-environment/durham-priority-species/great-crested-newt-action-plan/>

<http://www.arguk.org/info-advice/survey-and-monitoring/220-amphibians-in-drains-project-2012-perth-and-kinross-ranger-service/file>



Clockwise from top left: Newt Ladder; Kris Crookes' Wildlife Report in Site Cabin ; Kris Crookes, Site Engineer; Planters using recycled pipes in Site Compound

What was your personal motivation for carrying out the enhancement?

Kris Crookes, Esh Construction's Site Engineer, is keen to introduce biodiversity measures, which create a better working environment and help maintain morale amongst the construction staff.

Sunderland City Council which to create a low carbon enterprise zone, whilst also creating an opportunity to enhance the biodiversity of the site.