



**the BIG  
Biodiversity  
Challenge**  
*do one thing*

**Cadent Gas High Pressure Pipeline Diversions HS2 Phase 2a (HP27 & HP29)  
HP27: Great Haywood, Stafford (UK) and HP29: Ingestre, Stafford (UK)  
Cadent Gas, United Living Energy and High Speed 2**

**BIG Biodiversity Challenge Award Category:** *Habitat Creation: (Small scale biodiversity enhancement of up to 0.5ha)*

**Project overview**

The diversion of four sections of existing underground high-pressure gas pipeline to facilitate the construction of Phase 2a of the HS2 railway line. This submission relates to two diversions known as HP27 (approx. 1km length) and HP29 (approx. 700m length). Construction start date: January 2023. Expected completion: September 2023.

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

The HP27 and HP29 diversion routes including site compounds, access tracks and working areas predominantly pass through agricultural fields bordered by hedgerows. Part of the HP29 site is on a golf-course.

At HP27, a stream containing Sticklebacks passes through the site. Little Covert (a 1.2 ha mixed plantation woodland), 5 hedgerows qualified as Habitats of Principal Importance (HoPI) and trees with bat roosting potential are present within the working area. At HP29, two trees confirmed as active bat roost sites and 12 hedgerows qualified as HoPIs are present within the working area.

European hedgehog has been recorded at both sites.

**What were the reasons behind this project ?**

The final layout of the diverted gas pipelines (all underground) ensures there is sufficient distance and crossing angles between the pipeline and any HS2 infrastructure. Once works are complete, all land is restored to its original use. No overground structures remain. This presents limited opportunities to enhance the working areas.

There are no contractually established biodiversity requirements and the initiatives on this project are driven by the desire of the project team to minimise the biodiversity related impacts of our works and deliver benefits wherever possible. The measures implemented strengthens our relationship with landowners and support good community relations.



*HP27 Site Layout. Image taken by Serge Marzolo.*



*HP29 Site Layout. Image taken by Serge Marzolo.*

### What were the biodiversity measures taken?

At HP27, 3 semi-mature trees and at HP29, c.120 trees of various size (e.g., large Cyprus spruce to small 2" diameter birch) needed to be removed to carry out our works. The working areas were minimised as much as possible and individual trees were reviewed and 'descoped' from removal in order to retain as many trees as possible. The timber from larger branches was cut into lengths and smaller branches made into woodchip.

The timber lengths and woodchip from HP27 were donated to a local Nature Kindergarten nursery which is a local nursery close to our work site. The local children's nursery has a field that they use for 'Forest School' adventures and activities where the timber will be used for educational purposes. The nursery also has a maintenance team who will be using the timber to create seating, dens etc for the children. We were told by the nursery that this is an ongoing project for them that is full of ideas and needs resources such as the ones we were able to provide. A member of Cadent staff's child attends the nursery, and it is nice to know that they will benefit from our donation.

The timber lengths and woodchip from HP29 were given to the HS2 Early Environmental Works (EEW) contractor whose remit includes the creation of new environmental habitats along the HS2 Phase 2a route including woodland and wetlands. Our donation of timber lengths and woodchip has been used to create reptile hibernacula close to our work site. Reusing this material locally means that EEW will not have to source material from further afield and helps to reduce the projects overall carbon footprint. The newly created hibernacula will be managed by EEW and we look forward to seeing how it becomes inhabited and evolves over time.



*Donation day of timber from HP27 to a local Nature Kindergarten nursery.*



*Creation of reptile hibernacula by EEW contractor from HP29 donated timber.*



### Further information

All tree felling was undertaken following pre-approved RAMS which included step-by-step instructions on how to carry out the work. Both of our enhancements are easy to replicate and have low costs but a high impact.

Donation of the timber lengths and woodchip from HP27 to the local children's nursery for educational purposes and to create seating, dens etc for the children has created a positive legacy from our works and strengthened our relationship with the local community. The fact that a member of Cadent staff's child attends the nursery is an additional benefit. Donation of the timber lengths and woodchip from HP29 to the HS2 Early Environmental Works contractor to create reptile hibernacula close to our work site has positive benefits for the HS2 project as a whole helping to reduce the projects overall carbon footprint through reducing new material use and reduced vehicle delivery journeys.

The main lessons learnt is to engage with the client and local communities as early as possible. This will give you the time you need to make the relevant enquiries and identify as many opportunities as possible. We have a limited resource and early engagement gives us the time to decide where we want to donate our materials to provide the maximum impacts, schedule the timing of works and plan logistics more efficiently.

The project team have a changed mindset. Rather than seeing felled timber as a waste, they see it as an opportunity to engage with and help benefit the wider community.

### Project Team

- Client / funders: Cadent Gas Limited and High Speed 2 (HS2) Limited
- Other design team members: United Living Energy, RSK, Costain, Camargue & Dalcour Maclaren
- Volunteer organisations: N/A

### What was the motivation for carrying out the enhancement?

Nationally Significant Infrastructure Projects take place over many years with activities to enable main works contractors such as utility diversions like Cadents high-pressure gas pipeline diversions occurring several years beforehand. During this time, stakeholders including landowners and the local community will be affected by the ongoing construction works. Our philosophy of trying to avoid/minimise our impacts on biodiversity and enhancement wherever possible ensures that affected parties can enjoy their local environment for as long as possible. This has become even more relevant with the pause on Phase 2a of HS2 recently announced in the news.



*HP27 felled timber prior to donation to local Nature Kindergarten nursery.*



*HP29 felled timber prior to donation to EEW contractor.*