Cadent Gas High Pressure Pipeline Diversions HS2 Phase 2a (HP25 & HP32)
HP25: Common Lane (Lichfield) and HP32: Tittensor Road (Swynnerton)

Cadent Gas, United Living Energy Services and High Speed 2

BIG Biodiversity Challenge Award Category: *Construction Phase Award*

Project overview

The project involves diverting four sections of existing high-pressure gas pipeline to facilitate the construction of Phase 2a of the High Speed 2 railway line. This submission relates to two of the diversions known as HP25 (approx. 440m length) and HP32 (approx. 500m length) located in Lichfield and Swynnerton respectively.

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

Both the HP25 and HP32 diversion routes, (which include a site compound, access track and working area) pass through agricultural land bordered by hedgerows. Ecology surveys at both sites showed there to be suitable habitats for reptiles (rough grassland), nesting birds (hedgerow with mature trees), bats (trees) and Great Crested Newts (ponds) in the wider area.

At HP25, there is an active badger sett c.30m from the site entrance, an active barn owl nest site adjacent to the tie-in point, and hedgerows classified as 'Important' on site. At HP32, hedgerows, ponds and woodland along the route qualified as priority habitats.

What were the reasons behind this project ?

The HS2 related pipeline diversions are classified as non-contestable utilities work i.e., it is work that can only be carried out by Cadent Gas or its appointed agent. There are no contract specific requirements from HS2 to compensate for any biodiversity loss; responsibility is with the future Main Works Contractor(s).

Given that Phase 2a of HS2 is not planned for completion until 2032-33, the biodiversity measures described as part of this submission strengthens our relationship with landowners that are affected by the HS2 scheme and enhances our reputation. They also help towards organisational KPIs and demonstrate good Corporate Social responsibility.

HP25 Site Layout

HP32 Site Layout

What were the biodiversity measures taken?

Both projects include a site compound, access track and working areas. These were evaluated at the early design stage and wherever possible, located to avoid negatively impacting upon any known areas of biodiversity or important habitats. At HP25, the site entrance was moved eastwards to avoid disturbing a known badger sett. At HP32, there were two diversion route options. An influencing factor for proceeding with the final route was the lower biodiversity impacts including the need for less hedgerow removal.

At HP25, a barn owl box (confirmed nesting site) was present on site. To ensure nesting barn owls were not affected, works in the area were rescheduled to take place outside of the breeding season. The existing box was closed-off by a licenced ecologist once no longer in occupation and an alternative/additional nest box was erected further away along the same flight route therefore ensuring it would not be disturbed by any future HS2 work. The closed box will be reopened when works are complete and the additional box left in situ, therefore an overall net gain in habitat.

In certain places at HP25, it was not possible to avoid the pipeline crossing hedgerows and a section of hedgerow needed to be partly removed. The width of this section was reduced as much as practicably possible. Rather than total removal, approximately 8m of hedgerow were translocated instead and is being maintained before being returned to its original position post-construction. At HP32, sections of hedgerow also required removal to facilitate the diversion. The site entrance hedgerow removal has been minimised by alternatively reducing the hedgerow height to 600 mm either side of the compound entrance to improve driver visibility when leaving the compound, rather than removing additional lengths of hedgerow in total. These sections shall regrow naturally, therefore no net loss.

HP25 Hedgerow Minimisation and Translocation Rather Than Removal

HP32 Hedgerow Strimming Rather Than Removal

Further information

All surveys were conducted by licenced ecologists and easy to understand ecological constraints reports were produced. Separate specific documents including a Barn Owl Mitigation Plan, Great Crested Newt and Bat Precautionary Works Method Statements as well as RAMS for any hedgerow translocation were also put together. These included clear instructions on how to carry out the work and ongoing monitoring.

These high-pressure gas pipeline diversions are part of the wider HS2 scheme and once our work has been completed, will be handed over to HS2 or their subsequent contractors. When we introduced any enhancements such as the alternative barn owl box at HP25, one thing we were very mindful of was ensuring it would not be impacted at all by any future HS2 related work or that it would cause a problem for any future contractors. This was quite a hard task since a lot of the work areas for future HS2 work hasn't been confirmed yet! We overcame this by liaising with HS2 and other future works contractors. The additional box shall remain in situ; therefore, the local area has positively gained in terms of barn owl nesting habitat.

On the HP32 site we have encountered a lot of anti HS2 protesters. Initiatives such as hedgerow translocation or a reduction in height rather than complete removal goes some way to show that we are trying to minimise the ecological related impacts we have as much as possible.

Project Team

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

What was the motivation for carrying out the enhancement?

We carried out the biodiversity measures described simply because it was the right thing to do, not a contractual requirement. Phase 2a is not planned for completion until 2033 and during this time many agricultural landowners will be affected by the ongoing construction works. These landowners' families have farmed their land for several generations and have a real understanding of the importance of maintaining biodiversity. We wanted to show them that we truly care about the impact our works have, are prepared to listen and change how we do things even if it sometimes means extra costs, time and effort.

HP25 Additional and Alternative Barn Owl Box

HP32 Deep Dig Area During Construction