Bramford 400kV Substation
Bramford, Ipswich, Suffolk

AMS Joint Venture (Alstom, Mott MacDonald, Skanska) - SEESA

BIG Challenge 2015 submission category: Large scale permanent

Project overview

The project costs in the region of £107 million, and is located in the rural setting of Bramford, Suffolk.

During the badger setts replacement, landscaping works and creation of the bug hotel and bird boxes an estimated figure of over 300 personal were involved.

Badger setts were made from reused material where possible and bug hotel and bird boxes were made using recycled construction material on site.

Landscaping works have had community involvement with local residents visiting the site to oversee the planting works and access for bridleway. Works at Bramford involved infrastructure of new GIS compounds, shunt reactors and over head lines.

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

The site and the surrounding area was of greenland status. No landscaping works were on site however badger setts were vacating the area.

Photo: Bug Hotel

Were there any specific conditions that led to you carrying out this work?

Planning permission for the project was granted in 2007 and construction began in 2010.

Work on site includes the relocation of badger setts, diversion of a bridleway, clearance of existing structures on site, relocation of services, ground levelling and the construction of the new gas insulated switchgear substation.

What were the biodiversity measures taken?

An extensive population of badgers surrounds the SEESA Bramford site, a total of 18 badger setts were initially discovered in 2008.

As part of the substation extension works SEESA successfully relocated part of the badger community to three newly built artificial setts to the south west of the substation in 2009.

As badgers and their setts are protected a licence was required from Natural England. As works were required which would directly affect the sett during this “off season” the ecology team had to devise a way around the problem. In this case monitoring data, which for this particular sett indicated that since 2009

badger signs had only been recorded on two occasions.

Therefore Natural England were contacted and a suitable monitoring strategy devised in order to show badgers were not using the sett, so it could be destroyed without the time consuming process of waiting until June and then applying for a licence.

It was agreed that a remote night vision camera would be set up for a week to ensure no badgers were using the main sett. If no evidence of occupancy was found the sett could be destroyed immediately.

A remote trail camera with an infra-red flash was set up on a cone approx 5 m from the sett and concealed with brash left for one week. One badger was caught on camera, however this was at 1.30am and it was not seen again - most likely it was passing by whilst foraging and did not emerge from the sett, nor return to it.

Therefore due to the low activity the licence was approved and the main sett was closed. The badger population continues to be monitored and both artificial setts are being used successfully, proving that large scale construction works can be undertaken whilst protecting Protected Species and enhancing their natural environment.

Photo: Badger sign

How would you best describe the project?

An enhancement.

Further information

Landscaping – all drawings and specification are complete and a licenced contractor completed works with maintenance for the upcoming 5 years to begin in 2015. A landscape architect will visit site on a monthly basis to oversee that specification and drawing requirements are met.

The 5 years maintenance with the responsibility of the current landowner with the same landscape contractor carrying out landscape maintenance visits. Site completed improvement works to the artificial badger

setts to the south west of the site. The artificial badger setts are to be raised using material excavated from the site to ensure they do not become flooded in the winter months.

Once the area is raised the setts will be re-built and landscaped. The badger population continues to be monitored and both artificial setts are being used successfully, proving that large scale construction works can be undertaken whilst safeguarding Protected Species and enhancing their natural environment.

The Suffolk Biodiversity Action Plan aims to ensure that BAP species and protected species associated with wood-pasture and parkland are protected; the historic and ongoing mitigation measures at Bramford are ensuring that this is fulfilled.

The Regulatory body, Natural England, are actively involved with the badger relocation and mitigation works. As badgers and their setts are protected, a licence was required from Natural England.

An initial licence was required in 2009 for relocation of the badger setts around the site, a total of 10 required removing. This was mitigated by the site team coming together and building three artificial badgers setts using recycled materials in accordance with Natural England guidelines.

Photo: Bramford badgers using their new home

This was the largest licence that Natural England had approved at the time. Monitoring and a visit by Natural England of the artificial badger setts indicated that they were being used successfully.

Additional ecological mitigations at Bramford include installing bat boxes made from recycled wood from site. The creation of the bug hotel and bird boxes was made from recycled material further enhancing the biodiversity of the area.

What was your personal motivation for carrying out the enhancement?

In the role of Environmental Advisor involvement begins at the planning and design stage of the project.

Project managing design and specification to suit the local area and planning requirements was where the interest began.