

A Safe Haven for Great Crested Newts, Reptiles, Insects, Birds and Hares

Bristow SAR UK Hanger St. Athan Airfield St. Athan Vale of Glamorgan South Wales

Balfour Beatty Construction Services UK (assisted by Waterman IE – Ecologists)

BIG Challenge 2015 submission category: Small scale permanent

Project overview

Balfour Beatty were employed by Bristow Helicopters Ltd to construct 7 new search and rescue (SAR) facilities at commercial and MOD airports and refurbish two others between early 2014 and 2017.

Sustainability is central to the delivery of the facilities. Our client, Bristow, has a long history of attentiveness to environmental concerns with high compliance rates that are above average for the industry.

The launch of their Target Zero program includes a pledge to Zero harm to the environment.

One of the new facilities is located at St. Athan airfield in South Wales and was constructed over 10 months between September 2014 until July 2015.

The development site is approximately 1.41 hectares (ha) in area and is part of the MODs airfield. Approximately 60m² was used to create a safe haven for local fauna.



Photo: Digging of hibernaculum via spade

The biodiversity project cost £5,000 and approximately 10 people were involved in its construction.

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

The ecologist described the biodiversity conditions, prior to enhancement, as a mixture of species poor semi-improved tussocky grassland and amenity grassland.

This type of grassland is common within the locality. It was believed that this grassland could have been used by Great Crested Newts and other reptiles.

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

Our ecologist had raised the potential for Great Crested Newts and reptiles on the site and Balfour Beatty wanted to target several ecological enhancements in order to achieve the BREEAM 'Very Good' Rating.

These factors, in addition to our own Blueprint biodiversity objectives, led to the production of our innovative biodiversity strategy.

The credits targeted under BREEAM meant that we went above and beyond any general landscaping and habitat maintenance conditions implemented by the Local Planning Authorities.

What were the biodiversity measures taken?

The aim was to deliver an initiative to enhance local biodiversity however due to the site's existing use as an airfield, our biodiversity strategy needed to be agreed with the airfield operators e.g. the location and size of the enhancements could potentially cause problems with flight paths and wind directions if not sympathetically planned.

An innovative design was therefore used to overcome the site constraints. This included a series of five new and ecologically valuable habitats (2 no. hibernacula & 3 no. log piles), set out in a line and spreading over 15 metres.

The biodiversity strategy is replicable on many other construction and civil engineering projects due to the initiative being of relatively low cost and because the materials are readily available.

The greatest challenges to overcome are attaining



Photo: Filling of hibernaculum with suitable material

client approval and having the available land. A biodiversity case study and 'How to' briefing sheet has already been shared with other projects.

Long term maintenance is expected to be minimal, however, as answered in question 14, monitoring will be undertaken.

The cost of the mitigation works equated to approximately £5,000. The new areas of ecological habitat are expected to result in a biodiversity net gain and will demonstrate good value for money.

This initiative will assist with the Vale of Glamorgan's Biodiversity Action Plan which is relevant to this particular area.

Our Sustainable Design Manager and the Ecologist have also been engaging in the local community by volunteering at the local school.

An event was set up by Balfour Beatty with the charity Keep Wales Tidy and St. Athan Primary School. This event was specifically organised to further promote biodiversity through an outdoor exercise with the pupils and our ecologist.

How would you best describe the project?

An enhancement.

Further information

The areas where the log piles and hibernacula were erected were first hand searched by our Ecologist.

These areas were then dug with spades to a depth of 0.5m, and a length and width of 2m.

The top soil and arisings were stored in areas having previously been hand searched by the Ecologist, and later used to partially cover the log piles and hibernacula.

As referred to in question 12, wood, bricks and some other construction materials were reused off the site to create the various habitats in the dug areas.

In addition, an area of grassland covering approximately 2,235m² surrounding the habitats, was retained and left unmanaged to establish a tussocky sward. This area is marked out with posts and rope to prevent any potential disturbance.

As agreed as part of the method statement covering the works, great crested newt monitoring surveys will be undertaken in year 1 and 3 post development completion (taken to be when the ground works have been completed).

The monitoring works will be undertaken between mid-April to mid-May (survey time specific to the species) during which the ponds would be subject to 6



Photo: Completed hibernaculum

survey visits after dusk, to undertake a torch light survey.

The results of the monitoring will be used to determine if any remediation works are required.

In the long term, improved habitats have been provided for great crested newts and reptiles as well as hares, birds and insects that are also commonly seen on the hibernacula and log piles.

What was your personal motivation for carrying out the enhancement?

Enhancing the ecology on our projects is one of our 23 Blueprint (Sustainability) objectives and as a leader of the construction industry we have a responsibility to benefit local biodiversity and encourage others to do likewise.