

**Iron Acton 5\* Bug Hotel**  
**Iron Acton, Bristol, South Gloucestershire**  
 J Murphy and Sons Ltd

*BIG Challenge 2015 submission category: Small scale permanent*

**Project overview**

The overall civil engineering scheme was for a client who are responsible for the network of electricity and gas in the UK.

The concept of a bug hibernacula came from the local wildlife trust and site operatives thought it would be a good idea to build one on site.

This provided a dual fold benefit. Firstly it helped reduce waste by re-using site won materials and secondly the build was to provide a micro ecosystem, helping to benefit local wildlife, including bees, insects, and invertebrates to name but a few.

Four site operatives became green fingered for the day and built the 'Bug Hotel'.

They also learned about the impact that construction has on the surrounding area from their Environmental Advisor and simple ways in which all operatives can help to mitigate this impact.

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



*Photo: Bug hotel*

Prior to works the area consisted of an electrical sub-station set in an area screened by semi-mature trees.

Due to the scope of works required a large number of trees had to be removed.

Therefore by creating a hibernacula refuge was provided for all insects, micro-organisms and invertebrates and thereby off-setting the impact on the environment.

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

No specific conditions existed for carrying out the works.

However, once heard about it was felt to be good practice, engaged operatives/educated them and overall left a legacy on site.

It is hoped that it will provide a refuge and haven for wildlife in years to come.

### What were the biodiversity measures taken?

A bug hibernacula such as this is easily replicated and is easy to build. Site won materials are used so therefore no special materials have to be bought causing no extra costs to a project.

Multiple types of material can be used, which would otherwise leave site as waste.

This bug hibernacula is innovative as it can take any shape or be made out of any materials available on site, there is no blue print to how they are constructed, meaning each hibernacula can be innovative based on flair of the people on the build.

A number of operatives were taken off the tools for the day, where they learned about ecology from the Environmental Advisor and the resultant impacts that construction works can have if not planned sympathetically.

They explored the idea of the hibernacula after learning about it from a publication with the local wildlife trust. The operatives were then left to think creatively and came up with the "5\* bug hotel".

Once built and established, no long term maintenance will be required. The wooden structure will inevitably decompose over the years.

Over its lifetime the hibernacula will provide a habitat for a variety of species from bee's and butterflies down to invertebrates such as worm, ants and woodlice many of which are part of the Local Bristol Biodiversity Action Plan.

### How would you best describe the project?

Mitigation.

#### Further information

The project involved a design and build by the site operatives. No specialist materials were required and artistic flair was welcomed.

The hibernacula was built entirely from site won materials including, old wooden pallets, bricks, branches, old sections of plastic ducting, stones and off cuts of old untreated timber.

The build has been a success and there has already been a noted interest from potential residents flying around, including bees. As the autumn/winter draws close, it is hoped that the hibernacula will be used by

a variety of species to hibernate over the winter months.

The site operatives are hoping to trial bug hibernaculum made out of different materials, to identify if different materials encourage different species.

Ideally hibernaculum need to be placed in a woodland, in area where there are trees or area which is not subjected to heavy management, to provide ultimate benefit.

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

It is common place to see natural areas built upon, often leaving a negative impact on the surrounding environment.

In this case it was a credit to continue the company ethos in not harming the environment we work in and to leave a legacy of betterment for the future.