

DOXEY DEPOT BUG HOTEL
DOXEY, STAFFORDSHIRE, ENGLAND
 Kier Highways

BIG Biodiversity Challenge Award Category: Small scale

Project overview

The objective of this project is to promote and improve the biodiversity of invertebrates in the vicinity of the Doxey depot. Providing ideal habitats for insects to thrive will in turn, have positive impacts for flowering plants, insect feeding mammals and the ecosystem in the area as a whole.

‘£691 million: The annual value of pollination in the UK. **80% of UK wildflowers** rely on pollinators’ – *Buglife.org.uk*

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

Doxey is one of the busiest depots within the Area 9 Network in terms of vehicular and staff movements. The depot is surrounded by motorway infrastructure, residential areas but also backs onto greenfield countryside areas. An existing, albeit negatively affected, population of pollinating insects and associated wildlife was identified at the site, providing a clear opportunity to support and preserve the population’s wellbeing, inline with the BIG Biodiversity Challenge objectives.



A Bug Hotel provides natural enclosed spaces for vital pollinating species under threat from population decline.

<http://www.gardenfurnitureland.com/wp-content/uploads/2016/01/bug-hotel-2.jpg>

What were the reasons behind this project ?

Existing species such as butterflies, moths, ladybirds and solitary bees require suitable shelter to be successful, particularly whilst hibernating throughout winter. A bug hotel is a low cost, low maintenance, highly effective measure that can help mitigate the loss of natural habitat. This will ultimately improve biodiversity in the area as well as demonstrating a positive level of corporate social responsibility and awareness.

What were the biodiversity measures taken?

- Identification of vulnerable key species
- Long term planning for the wellbeing and ongoing support of pollinator populations - Cost benefit analysis
- 'Knock on' Impact assessment for reliant species i.e. impacts for wildflower biodiversity and population, provision of consistent food source for terrestrial mammals.
- Recycled, non-harmful and biodegradable materials utilised
- Year-round, isolated, provision of shelter that will remain undisturbed
- Surrounding areas will see increasing returns in improved landscape and ecology
- Follow up surveys to monitor populations in the future

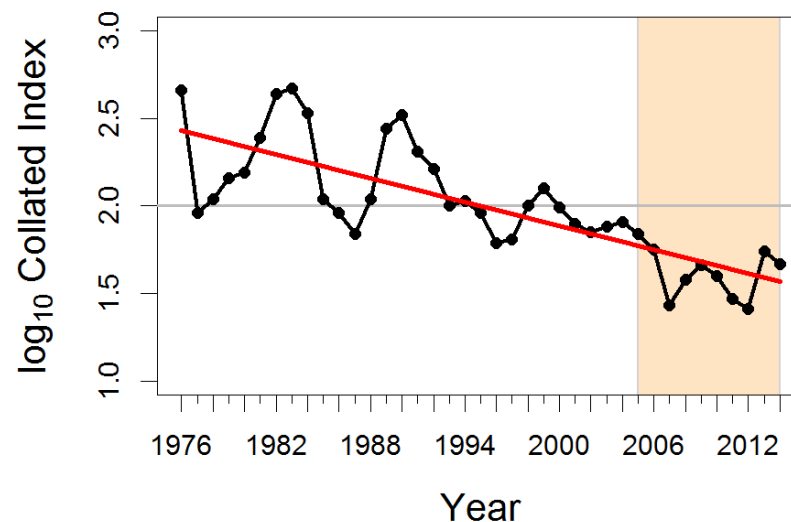


Fig. 1. UKBMS Data showing continued population decline of butterfly species, UK wide.¹ 'The state of UK butterflies report 2015' shows a 76% decline in UK resident and migrant species over the past 4 decades.¹



A solitary bee making use of a bug hotel
<https://www.woodlandtrust.org.uk/>

¹ <https://www.ceh.ac.uk/our-science/projects/uk-butterfly-monitoring-scheme>

Project Implementation and Actions

- Volunteers from Kier Highways used reclaimed materials to construct the bug hotel in a safe and suitable area of vegetation at the Doxey depot. The design and project development came from an initiative by the Area 9 environment team.
- Post installation surveys of key species populations will monitor the impact that the bug hotel will have on site, hopefully making a good business case to develop more of these sites across the network. The hotel requires very little maintenance, but the structure will be monitored and improved as necessary going forward.

Project Team

- Les Aston, Dave Wild (Volunteers, Doxey)
- Katie Owen (Design Lead, Coordinator. Doxey)
- Kier Highways Area 9 Environment Team

What was the motivation for carrying out the enhancement?

- This project was specifically designed to promote more pollinating species and invertebrates around the Doxey depot area. Furthermore, this pioneer project demonstrates how low cost, simple mitigation measures can be utilised across the Area 9 network, playing a small part in increasing net biodiversity gain for Kier and combating ecological decline in the UK.

The Bug Hotel installed at Doxey Depot



Kier Highways volunteers, Les Aston and Dave Wild standing behind their handiwork.

