

Sustainability Matters

Construction challenge at home - A bug hotel!

April 2020



Building a Bug Hotel

The World Economic Forum this year has listed Biodiversity loss and ecosystem collapses as a top risk to business, as it been a tick-box exercise for many business. Scientists warn that one million speices are facing extinction which is setting us a path to catastrophe just like climate change. Biodiversity and ecosystem are intrinsically linked with human well-being, so we need to act now to save our plants and wildlife which makes us happy and healthy by connecting us to nature.

As Covid -19 locks us at home with family, let us use this opportunity to enhance biodiversity both floral and fauna at our home - here is a construction challenge Building a Bug Hotel during Easter break at home. It is also a great way to re-use potential waste materials from around the house and your time. For the kids it may help inspire environmental champions of the future! The guidance below has been taken from the RSPB website, more detail and a film can be found here: <https://www.rspb.org.uk/get-involved/activities/give-nature-a-home-in-your-garden/garden-activities/build-a-bug-hotel/>

What you will need

You can choose any of the following:

- Old wooden pallets
- Strips of wood
- Straw
- Moss
- Dry leaves
- Woodchips
- Old terracotta pots
- Old roofing tiles
- Bricks, preferably those with holes through them
- Old logs
- Bark
- Pine cones
- Sand
- Soil
- Hollow bamboo canes
- Dead hollow stems cut from shrubs and herbaceous plants
- A sheet of roofing felt
- Planks of wood.

Plus, whatever else you can find – but preferably natural materials....



*Bug Hotel materials
Photo credit: RSPB*

Step-by-step guide

- 1.) **Suitable location:** Choose a suitable site in a garden. It needs to be level and on the ground firm. You will get different residents depending on where you place your hotel, as some like cool, damp conditions and others (such as solitary bees) prefer the sun. If you have vegetable beds, keep it a good distance away from them.

2.) **The basic structure:** You will need a strong, stable framework that's no more than a metre high. Old wooden pallets or bricks are perfect for a large hotel as they are sturdy and come with ready-made gaps. Start by laying some bricks on the ground as sturdy corners. Leave some spaces in between the bricks – try creating an H-shape. Add three or four layers of wooden pallets on top of your bricks. If you leave larger ends, you're more likely to attract hedgehogs. You can also make a smaller structure, depending on the wood and space you have.

3.) **Fill the gaps:** The idea is to provide all sorts of different nooks and crannies, crevices, tunnels and cosy beds. Include:

- dead wood and loose bark for creepy crawlies like beetles, centipedes, spiders and woodlice
- holes and small tubes (not plastic) for solitary bees made from bamboo, reeds and drilled logs
- larger holes with stones and tiles, which provide the cool, damp conditions frogs and toads like – if you put it in the centre, you'll give them a frost-free place to spend the winter (they'll help eat slugs)
- dry leaves, sticks or straw for ladybirds (they eat aphids) and other beetles and bugs
- corrugated cardboard for lacewings (their larvae eat aphids, too).



*Filling the gaps (gardening gloves recommended!)
Photo credit: RSPB*

4.) **Add a 'roof':** When you think you have gone high enough, making sure the stack remains stable, put a roof on to keep it relatively dry. Use old roof tiles or some old planks covered with roofing felt. You could even give it a 'green' or 'brown' roof by putting a bit of rubble or gritty soil on top. Only plants that love dry conditions cope up there, but some wild flower seeds could arrive on the breeze and take root. If you can, surround your hotel with nectar-rich flowers – essential food for butterflies, bees and other pollinating insects. If you want, choose a name for your hotel and put a sign up outside. Children of all ages get a thrill from building their first home!



*Adding a roof (gardening gloves recommended!)
Photo credit: RSPB*

On a bigger scale - Biodiversity Net Gain – Principles and Guidance for UK Construction and Developments

Biodiversity Net Gain is an emerging term linked to new development. Its objective is to leave biodiversity in a better state than before the construction work started. Where a development has an impact on biodiversity it encourages developers to provide an increase in appropriate natural habitat and ecological features over and above that being affected. In this way it is hoped that the current loss of biodiversity in Britain through development will be halted and ecological networks restored. Many projects including ABP are already included Biodiversity Net Gain into the designs and the National Planning Policy Framework encourages a Net Gain approach. In the UK, the Environment Bill which came into effect in January 2019 is bringing in requirements for developers to prove Biodiversity Net Gain on development sites. The Bug Hotel is very similar in concept to some of the mitigation features ADCW has installed on sites within the garrisons because of our construction work and disturbance. In 2019, ADCW is one of the finalist for the Best Biodiversity and Environmental Net Gain Project category for IEMA Sustainability Impact Awards.

Share your Bug Hotel – photos/videos: We encourage all to take part in this challenge and share the Bug Hotel photos or time lapse videos to Environmental.Mailbox@AspireDefence.co.uk which will be included in the special edition sustainability newsletter next month.