

Improvements:

The bee nest boxes had limited success – three were used for nests, while others hosted bees and wasps which did not make nests. In order to improve the design of these nest boxes for future years the following factors should be considered:

One is their positioning – heaths are not typically home to large numbers of cavity nesting bees; the common solitary bees tend to be ground-dwelling mining bees. One possible improvement therefore would be to put the nests in areas with large amounts of wildflowers, to give the nests the best chance of hosting bees. In this regard, the university site and gardens might be better than the heaths, as they have a greater diversity of flowering plants.

Another issue was the dampness of the nests – which might have been a leading cause of earwig dominance. A gasket could be used in future to seal the nest box and prevent moisture from entering.

A third possibility is that initially the boxes smelt too clean for the bees, which tend to nest in old wood. This could be rectified simply by the presence of earwigs and other insects, whose excretions and shed exoskeletons will make the boxes smell more natural. Perhaps a period of time should be set aside before the bees need the nests for the boxes to be exposed to nature to allow them to feel more natural.

Another factor to consider is burrow diameter – the 3mm burrows were unused by bees so were unnecessary and took up space which could have been used for wider burrows. In future only 8mm and 12mm burrows should be used.

New box positions on campus:

Herb planters: I propose placing a bee nest by each of the two herb planters (one outside Kimmeridge house, the other in front of Poole house) to promote pollinator activity in these two areas. However, given their size I suggest one each is enough.

Fusion building: I have suggested placing 8 nest boxes around the fusion building, to cover the areas in which bulbs were planted in late 2016 and where wildflowers may be planted in the future. As this is a broad area I suggest this number of boxes given that solitary bees rarely travel far between their nest and flowers.

Wildflower patch: I have suggested three additional nest boxes for the wildflower patch, as this area has experienced a lot of pollinator activity recently and so presents an opportunity to survey the solitary bees which may visit it.

Car park: I have suggested 4 additional boxes in the carpark spread out in the areas with fruit trees and heathers, as the bees are most likely to congregate in these areas.

