British Museum World Conservation and Exhibitions Centre

Planning condition 17: Installation of bee hives and swift boxes

10th June 2014

Introduction

This paper is submitted in response to planning condition 17. It provides information on the swift boxes and bee hives to be installed around the site of the British Museum World Conservation and Exhibitions Centre (WCEC) Project and the programme for maintenance and monitoring of both.

The British Museum is a member of Inmidtown, an organisation representing businesses in Holborn, Bloomsbury and St Giles with the objective of making Mid Town a quality environment in which to work and live, a vibrant area to visit and a profitable place to do business. As part of their biodiversity initiative, Inmidtown have agreed to support the Museum in establishing bees at the Bloomsbury site. They will provide bee hives, colonies, and routine maintenance of the bee hives. The British Museum will procure and install swift boxes for installation within the Museum estate, and will carry out annual cleaning of the boxes in order to manage insect pest infestations.

The Museum is confident that with the support of both the London Borough of Camden and Inmidtown, the biodiversity measures introduced as part of the WCEC Project have a greater chance of success.

Swift boxes

Location

It is proposed that five swift boxes will be installed on the perimeter of the site on 41 Russell Square, on a north-west facing wall (facing the Museum estate rather than Russell Square) and adjacent to a tree.

It was initially planned that the swift boxes would be incorporated into the design of the WCEC building as a permanent fixture and this is reflected in the planning condition. It is now recommended that the boxes are accommodated away from the façade of the new building itself.

A number of concerns were raised by the Museum's Integrated Pest Manager following his review of the proposal to install bird boxes behind the outer cladding of the building:

- Old feathers, dead insects, dead nestlings and other materials always accumulate in bird nests which serve as a wonderful source of food for moths (Tineidae) and beetles (Dermestidae). Insects in these two families are serious pest species in museums, capable of destroying woollen and cotton fabrics as well skins, leathers and other similar animal based materials.
- Swifts prefer to fly upwards into a nesting box and nests offering this mode of entrance fitted within the cladding of the WCEC will be exceptionally difficult to clean in view of the height of the building and exterior design. It is essential that nesting

boxes placed on and around the British Museum are cleaned on an annual basis to manage the threat from insect pest species.

- There are openings on all façades of the WCEC that provide an opportunity for insects to gain access to the building. These are service ducts, air-conditioning vents, doors and lifts, many of which serve collections storage and treatment areas. The risk to the collection posed by introducing insects to the building façade is too great, in particular because a large volume of the collection in the WCEC is made from organic materials and natural fabrics.

The Museum is committed to delivering the objectives of the biodiversity plan developed in consultation with Camden and commissioned a feasibility study with Graham Holloway of the University of Reading to explore alternative options for accommodating breeding birds on site within the context of the risks set out above. The study was informed by the survey of the background level of invertebrate biodiversity in the vicinity of the British Museum which has already been established as part of the biodiversity plan. The outcomes were shared with the London Borough of Camden Nature Conservation Officer, who agreed with the key recommendations of the report:

- Boxes can be placed elsewhere on the British Museum site in order to reduce the risk to the collection.
- Boxes should be placed to facilitate essential cleaning and maintenance in order to manage the insect population introduced by the nesting birds.
- No. 41 Russell Square is sufficiently high to allow swifts to enter and leave nesting boxes. The layout of the roof also provides easy and safe access for annual cleaning once the swifts have left the box.

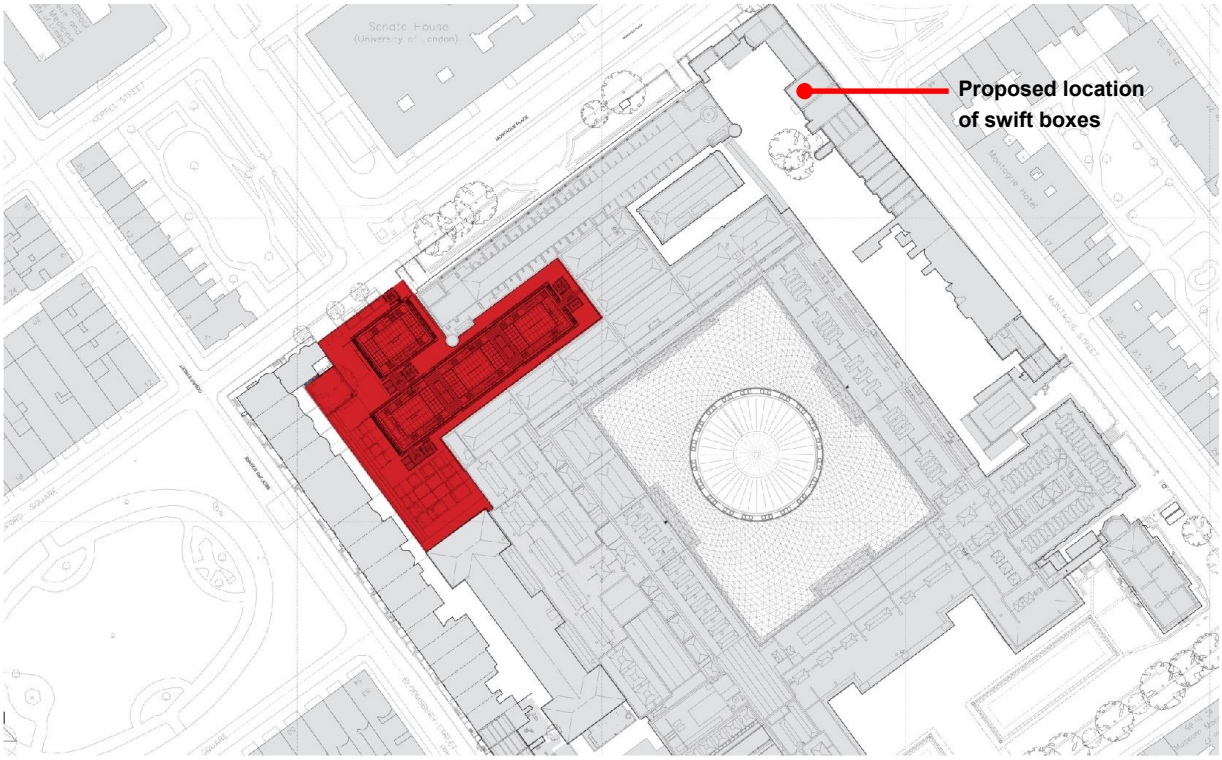

Figure 1: RSHP WCEC site plan showing the proposed location of the swift boxes on 41 Russell Square

The Museum would therefore like to proceed with installation of five swift nesting boxes on the roof of 41 Russell Square, pending the approval of the London Borough of Camden. The boxes will be placed away from direct sunlight and at least 5 metres above ground, on a north-west facing wall (facing the Museum estate rather than Russell Square).

Design

Figure 2: The Schwegler swift box no.17

The Museum has identified a swift box which is easy to mount on the brickwork exterior using the galvanised steel bracket. The Schwegler swift box (no.17) can also be painted using breathable paint to match the colour of the brickwork. It is made from plant fibre and wood-concrete (100% asbestos-free). It measures 15cm x 15cm x 34cm with an internal brood chamber of 14cm x 14cm x 30cm. The weight is 3.1kg.

Maintenance

The five swift boxes will be cleaned annually by the Museum's facilities management team when the nests are empty. The box can be opened by rotating the circular plate containing the entrance hole by 90° and removing it.

Monitoring

The Museum is interested in monitoring the impact of the swift boxes both in terms of their success in attracting breeding pairs, but also insect biodiversity and potential negative outcomes such as increased risk of damage to the collection. Both will be monitored as part of the Museum's Integrated Pest Management (IPM) programme.

Bee hives

Location

Two beehives will be installed on Pavilion 1 of the WCEC (adjacent to Montague Place), located on the green roof substrate. The location has been chosen on the advice of the Inmidtown beekeeper, Luke Dixon. Following a survey of the roof, he confirmed that the WCEC roof is an excellent location for a bee hive, offering plenty of sunlight, easy access for the beekeeper, away from mechanical plant, and with the potential of plenty of forage provided by the green roof subject to suitable planting. The hives would be away from human traffic and so there will be no problem with bees coming close to clients or staff. In the event of major disruptive work being done in the area of the hive, the hive could be closed down for the duration. Storage space for equipment would need to be made available nearby.

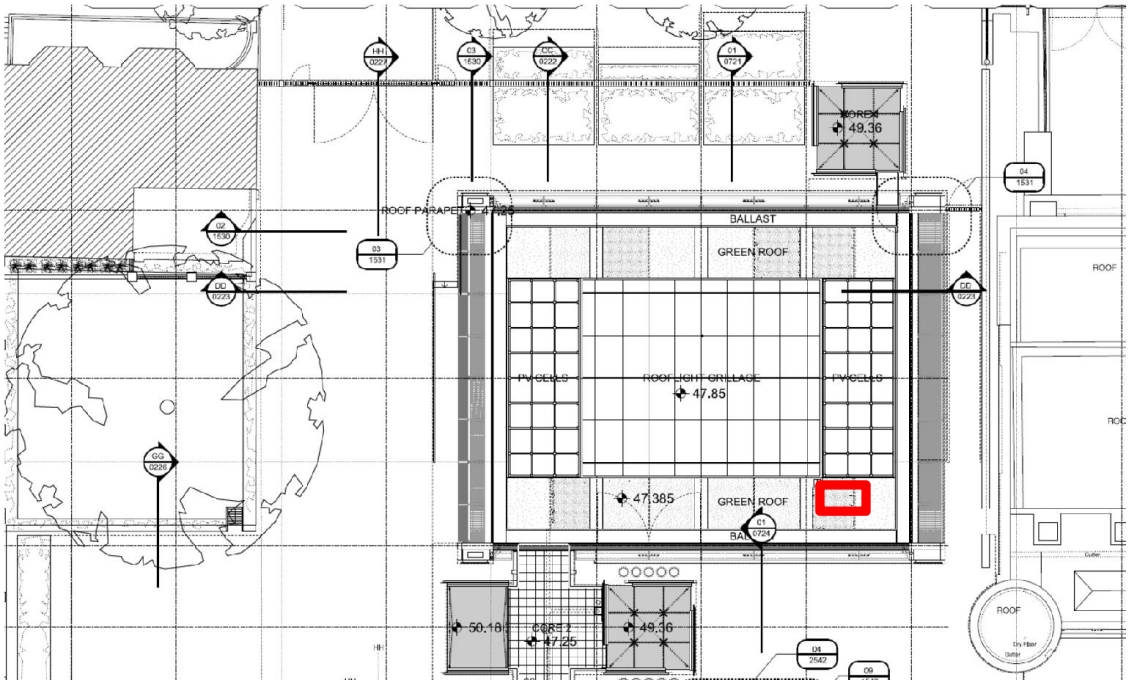

Figure 3: WCEC site plan showing the location of the two bee hives on the green roof substrate

Design

The bee hives will be supplied by Habi-Sabi via Inmidtown and the design specification is submitted with this paper. The Habi-Sabi bee hive is designed to the UK National Standard. External dimensions are 460mm deep x 460mm long x 830mm high. The hive is made from recycled household insulation and can be assembled without the need for tools or glues. A paving slab will be put down to provide a level base for each hive as they are placed within the planted areas.

Maintenance

Luke Dixon of Urban Beekeeping will be responsible for the management of the hives as part of the Museum's arrangement with Inmidtown. Urban Beekeeping has established

apiaries and manages sites in many London locations, including roofs. Their projects include Lancaster London Hotel, London College of Fashion, London School of Economics, Ted Baker, Conway Hall and The Three Stags Pub (all rooftops), Coram's Fields, The Duke of Gloucester's garden at Kensington Palace and the Natural History Museum (all at ground level).

Their maintenance responsibilities at the British Museum will include installation of the hives and the bee colonies as well as:

- Weekly visits in season
- Monthly visits out of season
- Emergency call outs
- Advice as necessary
- Training and mentoring of staff
- Honey harvest (including spinning, filtering and delivery in jars)
- DEFRA liaison
- Medicines
- Winter feeding
- Replacement of hive parts (including the frames)
- Replacement of bees and queens as necessary

The Museum will also take the opportunity to establish a bee club from interested members of staff who would meet once a week at a suitable time to be trained into looking after the hives themselves.

Monitoring

The beekeeper will monitor and treat any pests that infest the hives as part of the weekly and monthly maintenance visits. Of the insects that are likely to be attracted to the hives, only the wax moth represents a significant risk to the collection. The presence of wax moths will also be monitored through the Museum's IPM programme of monthly sampling and analysis.

The beekeeper will also be responsible for monitoring the size of the bee colonies and taking any measures required to prevent swarming (when a colony of bees divides and one half flies off in search of a new home).

Programme

The swift boxes can be installed immediately on approval by Camden.

The bee hives can also be installed immediately and prior to occupation of the development.