

## Cool Tower for Lesser Horseshoe Bats

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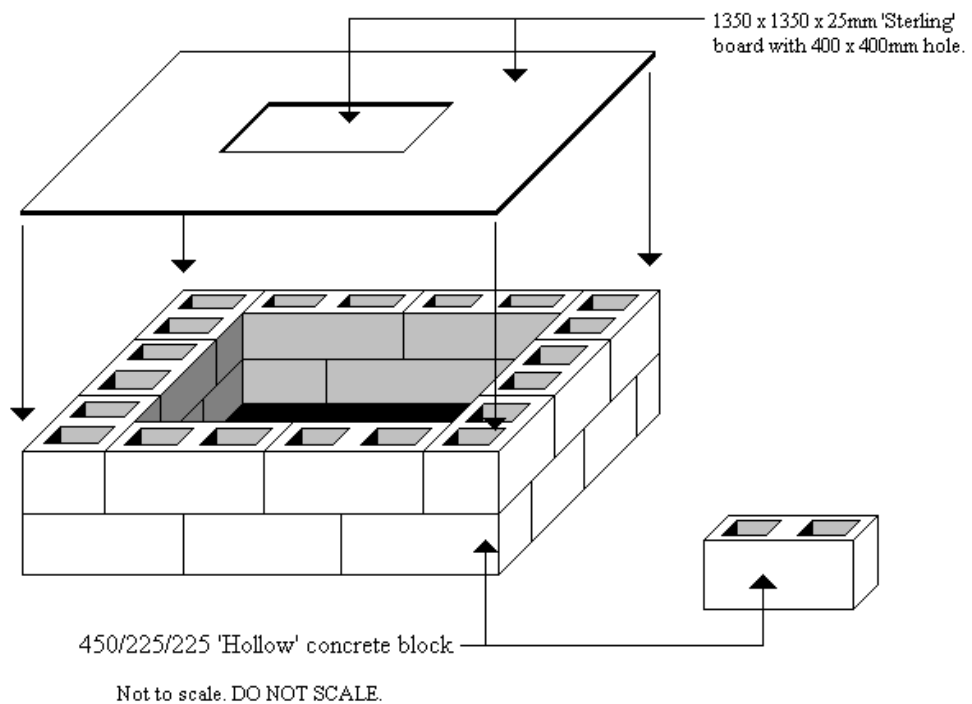
Lesser horseshoe bats, like all bats living in temperate regions, require a range of micro-environments in their summer roosts. Pregnant and lactating females need to maintain a high body temperature over the summer months to maintain the development of the foetus or the production of milk. Non-pregnant females and males are less constrained but still typically roost in warm areas of their roosts. Cooler areas in roosts, generally lower down in the building, are also required by the bats. They are used during periods of very hot weather, when the temperature in the warmer areas of the roost becomes excessive. Outside of the summer months, and during periods in the summer when inclement weather reduces the availability of insect prey, the cool areas of the roost allow bats to enter a state of torpor (similar to a mini-hibernation), where they reduce their body temperature and energy expenditure.

The provision of cooler roosting areas for this species is an important consideration when developing mitigation plans or suggesting enhancements for existing roosts. The ideal solution is usually to open up a ground floor room for the colony. However, where this is not possible, especially in smaller sites, the incorporation of a 'cool tower' can provide a suitable alternative.

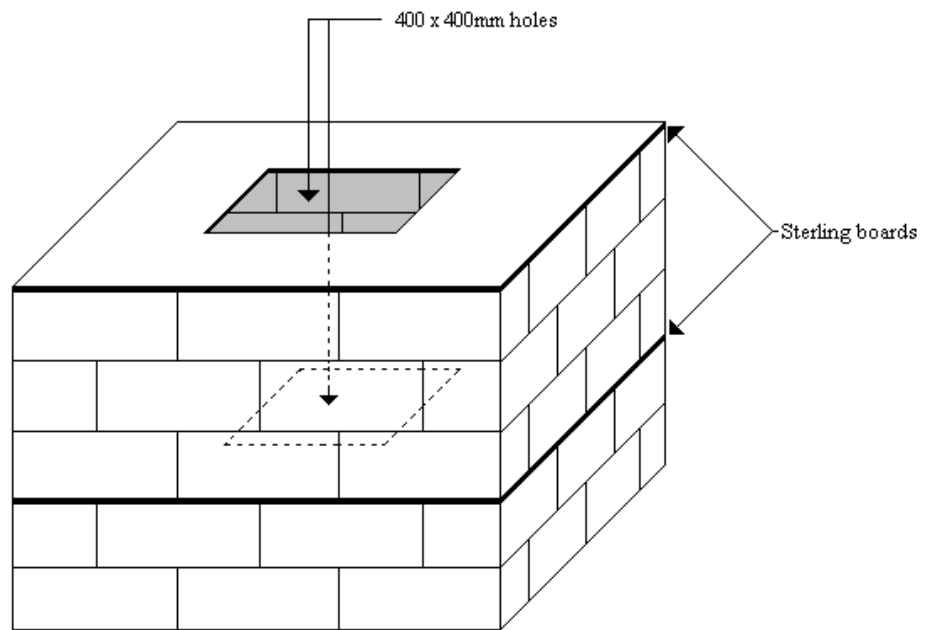
The following design was trialled at a site in west Dorset. A colony of lesser horseshoe bats was excluded from a large country house and chose to take up residence in an outbuilding which was less than 4 metres long, 2 metres wide and only 2.5 metres tall at the highest point. The single elevation slate roof offered little in the way of a range of temperatures, and the bats had no roosting opportunities lower in the building where it would be a few degrees cooler.

The cool tower constructed inside the roost offered the bats an opportunity to roost at a lower height in the building. It proved to be very successful, within a few days bats began to use the structure, and although there are only around 30 animals in the colony, accumulations of droppings 50-75mm deep collected on each 'floor'.

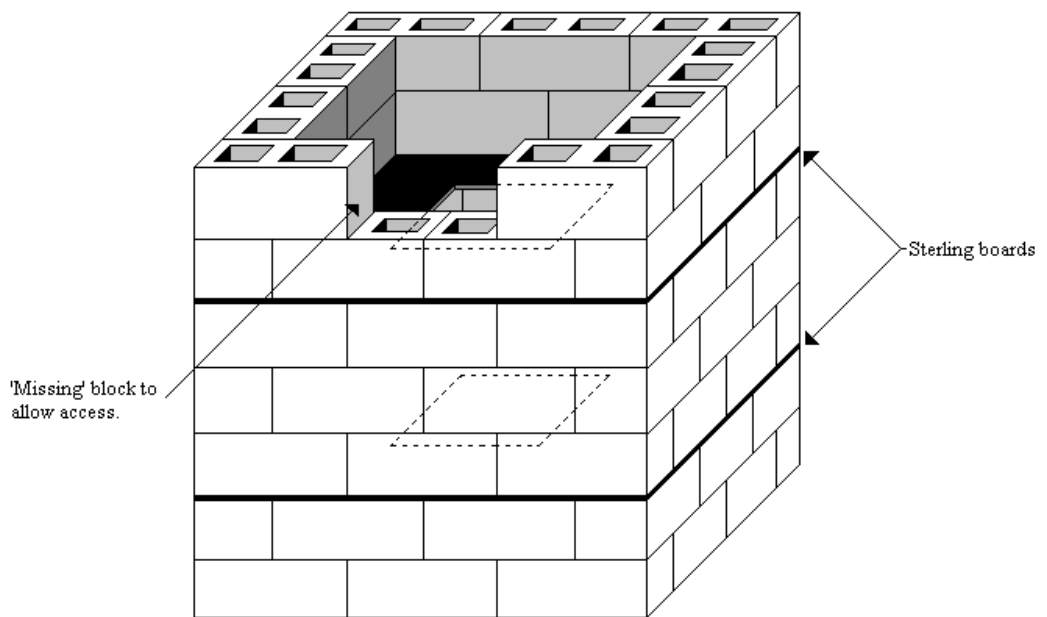
This design may prove useful in other roosts where the opportunity to roost low down in the building is not available to the colony.



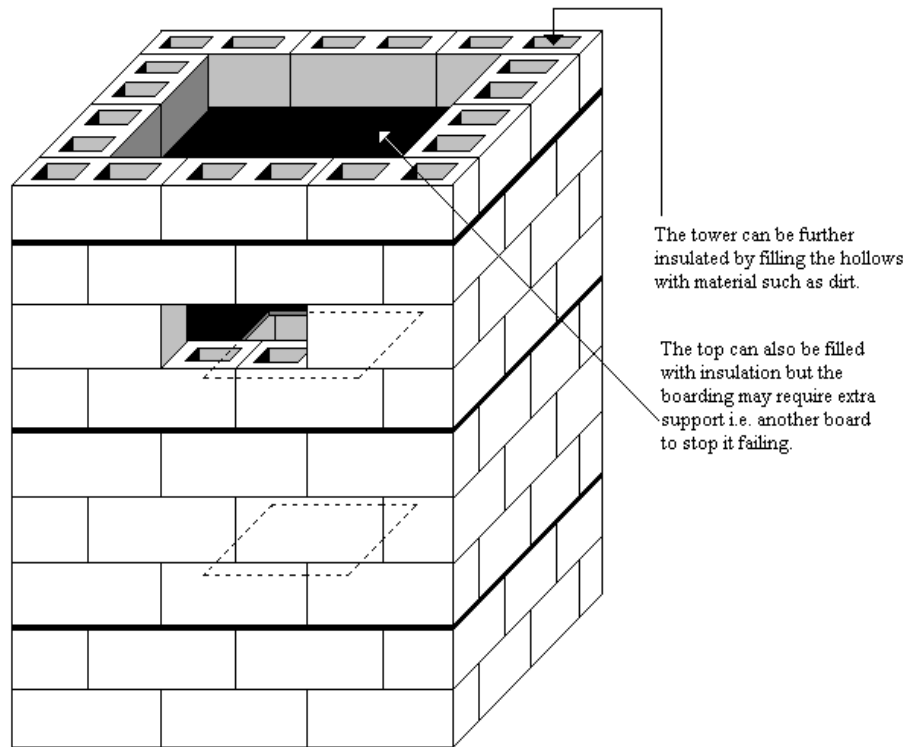
*Fig 1 BASE. The floor/ground need to be flat and level. Sterling board has been suggested as it has a 'rough' surface, enabling lesser horseshoe bats to grip. In my original 'tower' I fixed nylon netting to the underside of the boarding.*



*Fig 2 CENTRAL SECTION. 400x 400mm holes cut centrally through boarding.*



*Fig 3. UPPER SECTION. Showing 'missing' block to allow bats access.*



*Fig 4. FULL TOWER. Insulation can be increased by filling the hollow sections and covering the roof with suitable material, i.e. earth.*