

Proposed mitigation at Mill Cottage

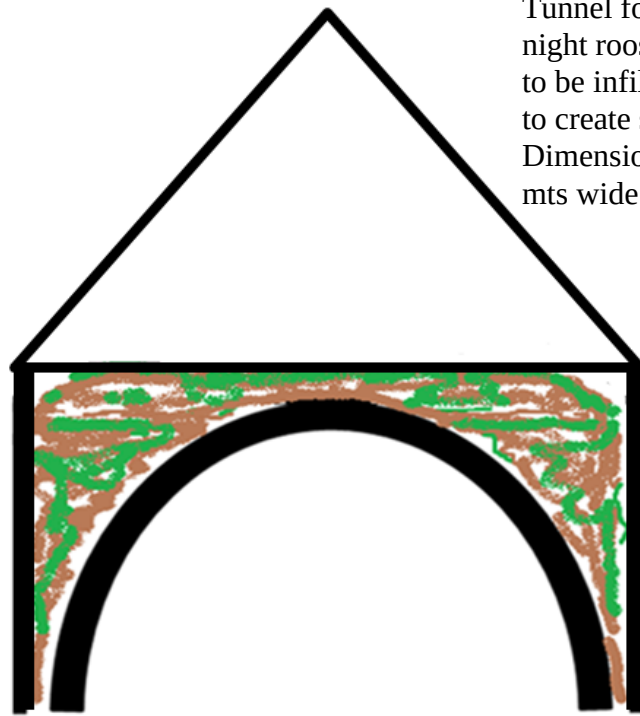
Mitigation will be located close to woodland and the nearby river, both of which are prime foraging habitat for all bat species that have been recorded in the locality. One element will mimic limestone brick kilns (Figure 1) that are known to support hibernating bats and can also act as a typical “swarming” site and a night roost for Lesser Horseshoe bats. The interior of the “tunnel” will be constructed as shown in Figure 2 with random roof crevices to variable depths and dimensions but typically 15-25 mm wide and 100 -250 mm deep. The tunnel will be situated beneath the loft space structure to provide mitigation in one place rather than fragmented, hence if bats use it in one season, be that summer, autumn or winter, they will be aware of the opportunities for other times of the year. Figure 3



Figure 1



Figure 2



Tunnel for hibernation, swarming & night roost to be located below loft and to be infilled with earth/stone substrate to create stable temperatures.
Dimensions of tunnel 2.0 mts high x 2.0 mts wide x 4mts long

Figure 3

Mitigation loft for Brown Long Eared bats will be raised on piling to a height of 5 mts from ground level to apex. Loft dimensions 5mts wide x 6mts long x 2.8 mts high; roof construction to be a purlin & rather slate roof lined with bitumen underfelt and compartmentalised with a 42 degree pitch. (Figures 4 - 6) In addition ridge tile access for bats will be created; one roof pitch will face south to gather solar heat. Reclaimed rough sawn timber use for roof construction rather than new timber; walls will be timber framed with a cavity to be filled with 100mm "kingspan" insulation. A double ridge board will be created with a gap of 20mm between boards to provide crevice situations. At both gable elevations elm cladding will be fixed on vertical 18mm battens over bitumen underfelt; gaps of 15-20 mm will be created in the cladding for crevice dwelling bats. At both gable elevations access in to the loft will be created via the cladding (Figure 5) access for monitoring the loft will be to the rear underside of the loft floor by way of a 500mm x 500 mm hatch.

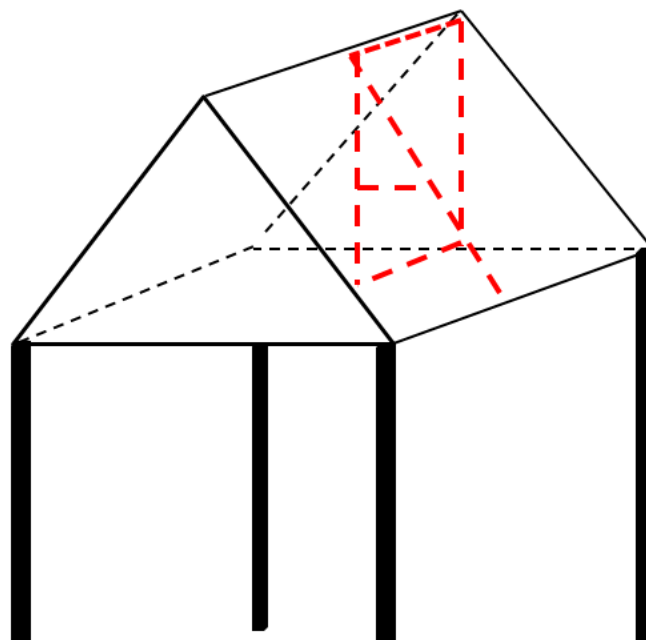


Figure 4

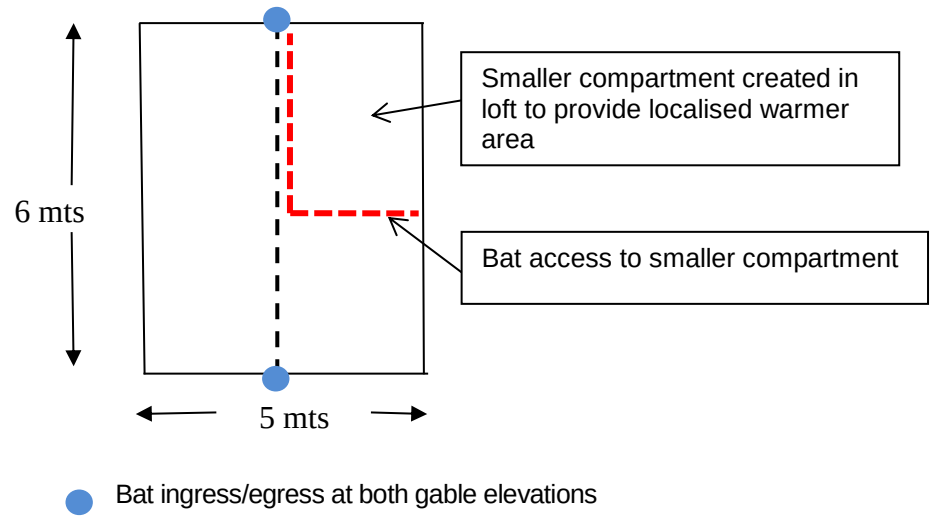


Figure 5



Figure 6. Design of loft

Access into loft at gable elevations & crevice situations

Mitigation roost will be free of lighting or light spill from adjacent cottage