

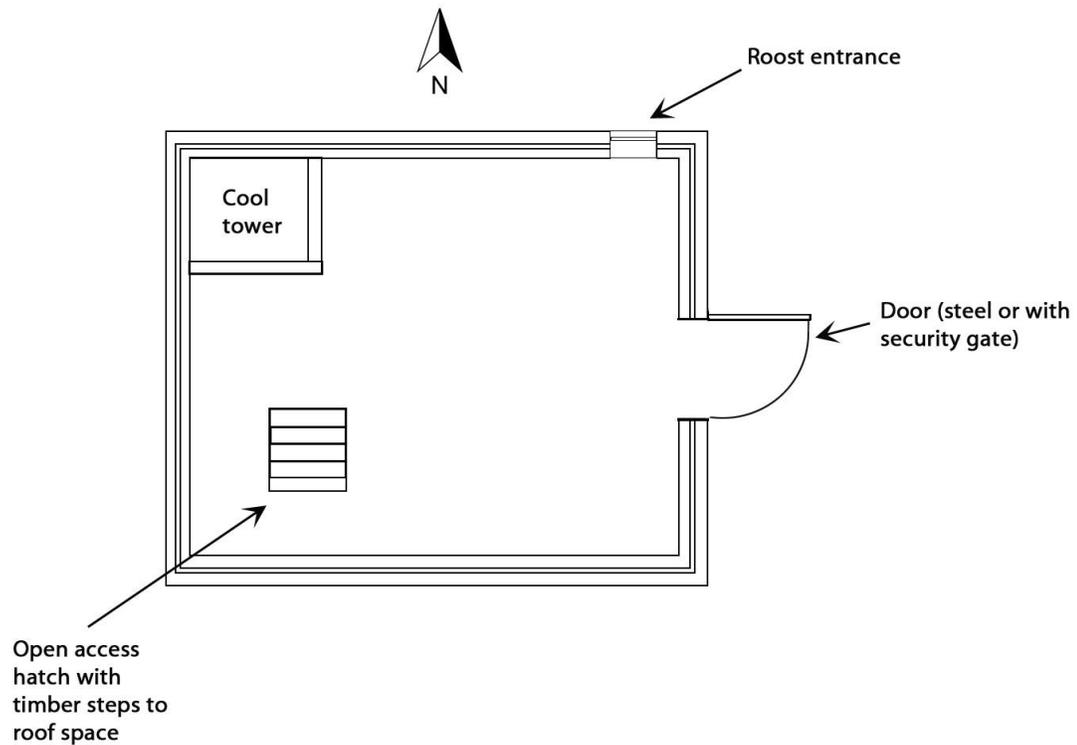
The Hamptons, Malvern. Bat Roost Specification

Building	
Footprint:	5m x 5m
Materials:	<p>External wall: double skinned cavity wall made of concrete blockwork.</p> <p>Internal wall: ground floor wall made of Thermolite blocks.</p>
Roof	
Roof void height:	2.4m
Roof style:	Pitched with gable ends.
Roof pitch:	45°
Ridge line orientation:	East-west.
Roof timber:	Traditional cut, untreated.
Roof rafters:	Spaced at 600mm intervals.
Roof dressing:	Slates
Under tile waterproof layer:	Bitumastic sarking felt.
Additional roosting features inside roof space:	<p>Wooden battens (4 No.): Fixed horizontally between the ceiling joists (for bats to hang). Running the length of the roof space. Two each side of roof. First baton close to ridge beam, second spaced 40cm down.</p> <p>Ridge apex baffles: 2 x untreated triangular plywood panels fixed to ceiling to make baffles to trap warm air. Cut carefully around the ridge plate to make a tight seal. Leave at least 1000mm of space between joists and bottom of panels to let bats fly underneath.</p>
Roof insulation:	Regular loft floor insulation. Plywood

	boarding over insulation. Plastic can be left on boarding to provide a protective layer for bat droppings and urine.
Additional roof insulation:	South western end of roof only (minimum 2m width). 100mm polystyrene boards between the roof beams using 6mm untreated plywood boards. Insulation should extend at least 2/3 down the roof slope.
Roof ventilation:	No air vent/s on roof to retain heat in roof.
Roof floor:	Plywood boarding.
Ground floor	
Roosting features:	3 x dummy timbers or batons (untreated rough sawn planks) fixed to first floor ceiling for bats to hang to.
Cool tower:	Located on northern aspect of the ground floor to provide a cool alternative roosting area for bats.
Cool room dimensions:	1.5m x 1.5m wide x to ceiling height.
Cool tower materials:	<p>A free-standing structure built from concrete blocks with simple floors made from plywood boarding.</p> <p>Openings in the side of the walls and the centre of the floors allow bats access to the structure. Blocks filled with earth or sand (if hollow) for extra insulation.</p> <p>Earth floor, no damp-proof course on ground to retain moisture and encourage humidity.</p> <p>Shrubs planted against outside building wall to eliminate solar gain through the external wall.</p>

Access points for bats	
Roost entrance (outside to inside building):	Square hole, located on northern wall. Grille with horizontal bars spaced at 13-15cm for security purposes.
Roost entrance dimensions:	50cm x 50cm.
Internal access between ground floor space and roof space:	Open hatch with fixed timber ladder. Large enough for ecologist to gain access to roof space for inspections.
Access door for human use	
Human entrance:	Composite steel door.

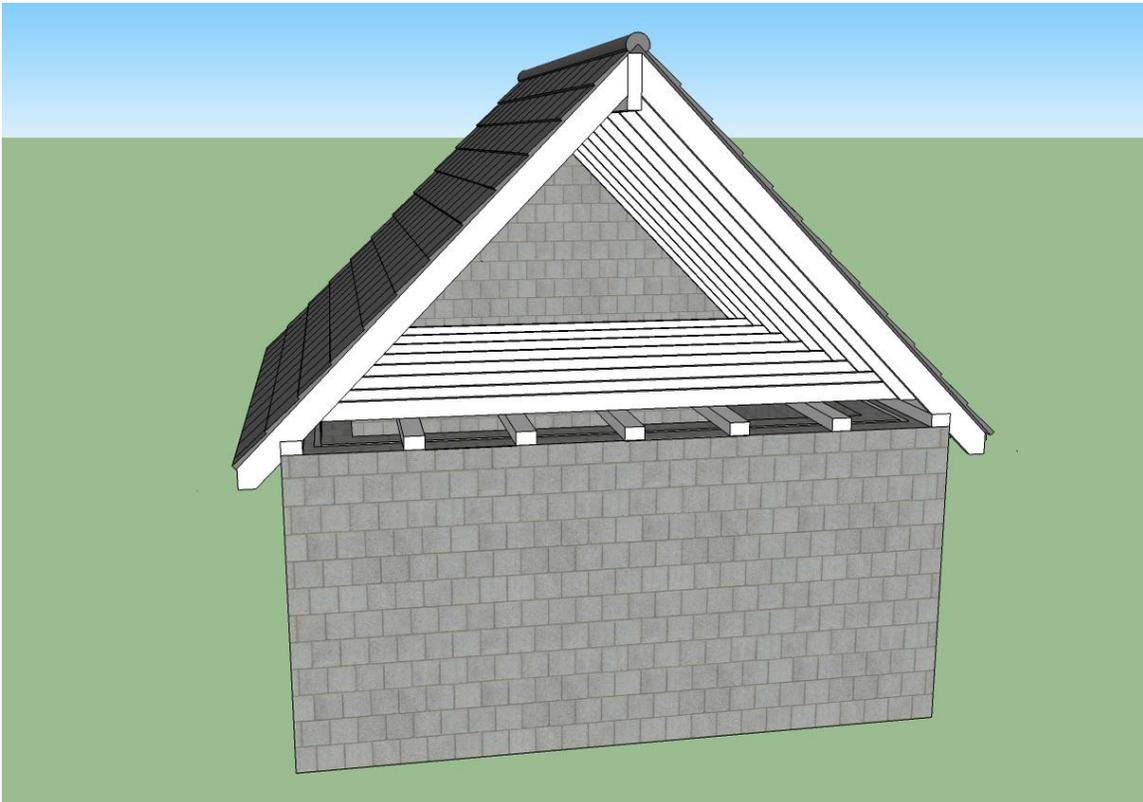
Ground floor plan (not to scale)



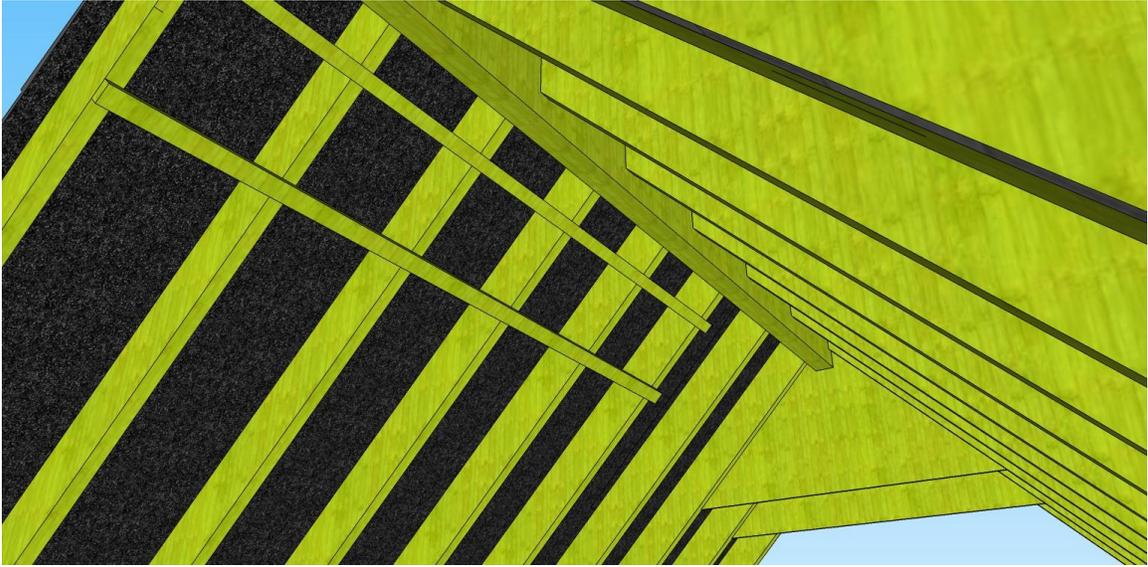
External view



Roof structure



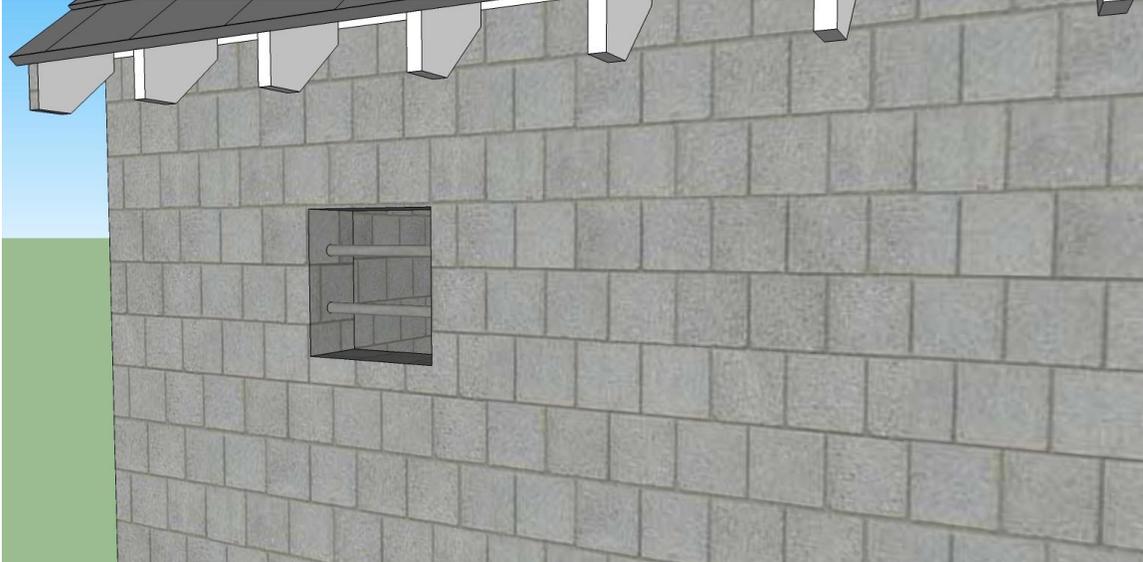
Roof batons



Plywood baffles



Bat entrance with horizontal grille (northern side)



Cool Tower (located on ground floor of roost)

