

Preliminary monitoring results of threatened microbat mitigation and the latest microbat habitat features in heritage timber truss bridge design

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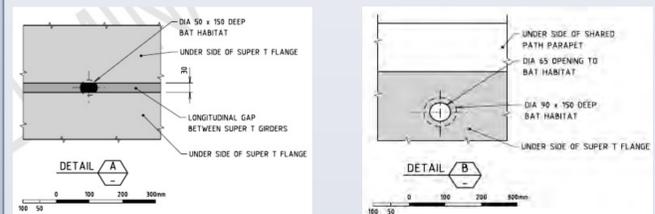


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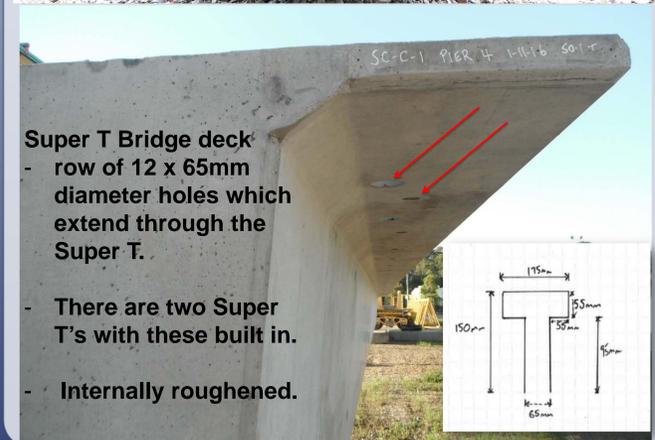
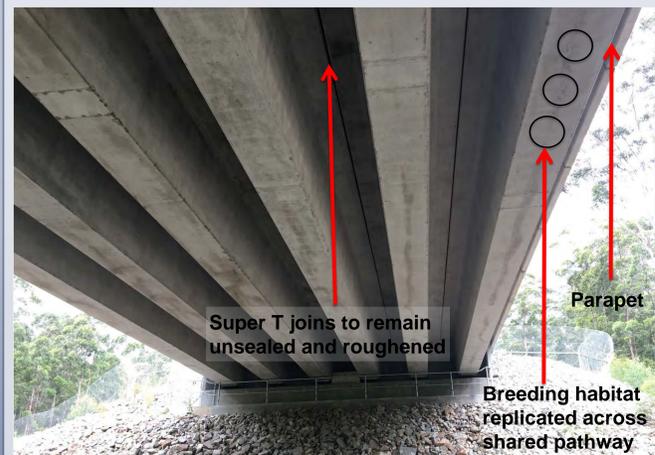
Heritage bridge replacement



Creating permanent microbat habitat



Microbat habitat between Super T girders and under shared path



- Super T Bridge deck
- row of 12 x 65mm diameter holes which extend through the Super T.
- There are two Super T's with these built in.
- Internally roughened.

Construction lessons learned Part 1:

Bat caves are not easy to install on the bridge deck!



Bat caves are very fiddly to make so leave grab holes open!



But they look pretty awesome!



Construction lessons learned Part 2:

NEVER TRUST A BAT!!!!

Five (5) Myotis found in the roughened parapet before construction finished.



Works had to stop within the vicinity of the bats and they were monitored daily until construction finished.

Use 'Rugasol' in the precast yard to roughen surfaces instead of using a scabbling gun.



Post-construction Monitoring

- Five (5) Myotis in the roughened parapet
- Eight (8) Myotis in the breeding habitat under the Super T deck but NOT under the shared pathway - WHY? 90mm vs 50mm diameter? Too exposed???



More monitoring needed before celebrating!



- Myotis prefer old bridge
- Before exclusion of old bridge
- Post exclusion
- Breeding season (Oct- Feb)

New Heritage Timber Truss Bridge designs

Objective: To replicate breeding habitat in TT Bridges when decking is permanently replaced with Stress Laminated Timber which has no gaps for microbats.



Drill cylindrical 'bat caves' and horizontal habitat into secondary cross girders at same dimensions as TT being replaced.



Horizontal gap: 35mm wide x 250mm long
Cylindrical bat cave: 60mm wide X 180mm deep (offset 45° angle)