

# Nest Box Strategy and Design

As part of the environmental offset requirements of constructing a haul road between collieries, this client needed to install nest boxes to offset habitat loss caused during the construction process. The effectiveness and cost-efficiency of nest boxes as a management tool; however, remained uncertain.

## PROJECT RESULTS

*Through bi-annual monitoring events and constant data collation, Kleinfelder identified important trends in animal usage between nest boxes and their aspects.*

*The outcome of this research reduced costs for our client, while increasing the scientific knowledge of nest boxes as a management tool.*

*In September 2012, Kleinfelder presented the initial findings of the research project at the Australian Mammal Society Conference in front of more than 100 key individuals throughout Australia's environmental industry.*



## ASSESSING NEST BOX EFFICIENCY AND COST-EFFECTIVENESS

Nest boxes are designed to emulate natural hollows as an alternative solution for arboreal fauna species after loss of habitat. Generally, the ratio for offsetting hollow-bearing tree loss is recommended at 1:1. In this case; however, the density of hollows far outweighed the ability of the ecosystem to support the equivalent number of species. As such, this client faced a costly exercise that might not be effectively utilised.

## SAVING MONEY WHILE INCREASING KNOWLEDGE

To address the environmental requirements, Kleinfelder devised a strategy that enabled the client to successfully fulfill the requirements without compromising the ecosystem's ecological integrity.

Leveraging extensive experience in offset strategies, Kleinfelder devised an innovative research project—to run over a five year period—that substantially reduced the amount of nest boxes required, while improving the scientific knowledge of nest boxes as an effective management tool. The project evaluated placement of the boxes and compared internal temperatures of nest boxes and natural hollows using state-of-the-art temperature receptors.

### Location:

Mandalong, NSW

### Owner:

Centennial Coal

