# Urban Development and Managing Hollows



**Sharyn Styman** 

**Ecologist** 

Development Assessment and Rezoning Unit
Wyong Shire Council



## Urban Expansion and Loss of Hollows

- 72% of land in Wyong contains native vegetation
- High density of hollows and many large hollows
- Ongoing pressure from urban expansion

40,000 new homes on Central Coast over next 20 years and enhance Warnervale employment lands(DPE 2016)

 'Greenfield' development – clearing of bushland and rural areas for houses, industry and infrastructure

Key Threatening Process – Loss of Hollow Bearing

Trees





#### Environmental Planning And Assessment Act 1979 (NSW)

#### Part 4 Development Assessment

- Biobanking Scheme or
- s5A Assessment of Significance and 79C heads of consideration





## Development Assessment Process

#### Flora and Fauna Surveys and Report

- Survey hollow bearing trees
- Stagwatch/camera trap
- Internal inspection
- Fauna list for study area and threatened species habitat assessment

#### Section 5A Assessment of Significance

- Avoid retain significant trees
- Minimise loss of hollows
- Mitigate no net loss of hollows salvage or compensate (nest boxes)
- Offset





## Wyong's Standard Condition of

Consent

- Trees/vegetation to be retained and protected identified on approved plans
- Habitat Restoration Management Plans
- Tree Clearing Protocol
- Mitigation measures:
  - Install natural hollows or nest boxes (number, type)
  - Location
  - Construct and install to Council's specifications
  - Install nest boxes prior to clearing
  - Monitor, maintain and report every 6 months for 3 years
  - Relocate or create hollow logs





#### Nest Box Construction and Installation



This owl nest box:

- has been installed too low to the ground,
- in a tree that is not of sufficient diameter to mimic suitable habitat for target species
- has been constructed from poor quality materials

It is highly unlikely this box will provide functional compensatory habitat for the target species.



## Nest Box Construction and Maintenance

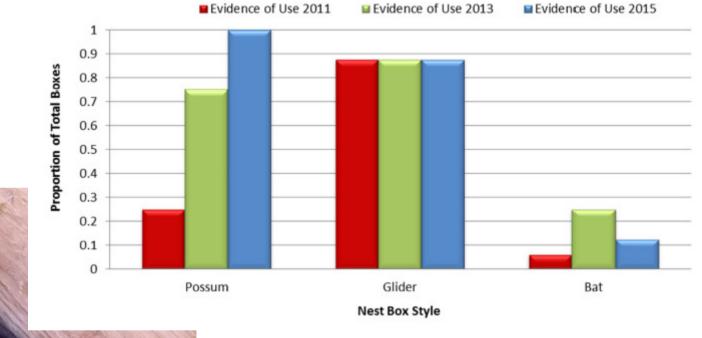


- After 7 years, only 27 of the 98 boxes installed in Wadalba Wildlife Corridor are still functional
- Poor quality materials and construction and lack of maintenance, such that lids fall off, boxes fall apart or boxes fall off trees

Travers Bushfire and Ecology 2015



## **Nest Box Monitoring**



Nest box usage over 5 year period (n = 40)

Forest Fauna Surveys 2015



## Nest Boxes for Large Forest Owls



- Designed in collaboration with owl expert John Young
- Internal dimensions 1500 (H) x 500 (W) mm

Monitoring in 2014 for 4 months during owl breeding season:

- Sulfur-crested Cockatoo nesting in one box
- Other box visited by 6 hollow dependent fauna species
- No owl activity in either box

Travers Bushfire and Ecology 2015



## Installing Salvaged Hollows



## **Ongoing Improvement**



Travers Bushfire and Ecology 2015

- Council is currently drafting a 'Tree Clearing Protocol and Nest Box Specifications'
- Available on Council's website in late 2016



Robert Payne 2016

