Better Best Practice Note
Wildlife Transition in Construction Areas

Cities are continually changing and growing.

Public and private landowners are increasingly learning the value of urban vegetation in helping improve the health of our urban environment and the people who live in it. Our built form, from houses to roads and pipes, is also continually changing as we seek to maintain, expand and retrofit our infrastructure for growing city needs.

Within all this necessary and continual change, we often see devastating disruption to wildlife habitat that can be avoided.

Even in the most urbanised areas, wildlife habitat can be protected.

This includes microbats which shelter under the bark of trees and in small cracks and hollows, powerful owl females nesting in hollows from May to August, common brushtail possums which shelter in medium to large hollows, common ringtail possums which shelter in smaller hollows or dreys (stick nests) along with many other birds, reptiles and insects.

Each species has different habits and vulnerabilities. For example, the brushtail and ringtail possums are strongly territorial with respect to their den sites (hollows or dreys) and they are highly likely to burrow deeper into their hollows when they hear a chainsaw. They tend not to flee elsewhere for safety.

Species will confront disruption ranging from exposure, injury or mortality from tree removal itself, or via secondary risks including vehicle encounters when crossing roads, encounters with dogs and cats due to displacement, and intraspecific competition with other possums over hollows or food resources.

The following is a series of steps that will minimise fatalities and harm to wildlife during the removal of trees, and aid in maximising the quality of feeding and sheltering habitat in the operation and legacy stage landscapes.

This Better Best Practice Note primarily focuses on supporting terrestrial fauna species due to their restricted movement relative to flying birds and insects, and nimble reptiles.

Steps to support best practice fauna transition:

Step 1. Undertake an initial wildlife survey

Assess the species, tree size, number and size of hollows and inhabited nests. All trees with hollows and inhabited nests need to be clearly marked and distinguished from non-hollow-bearing trees.

Action: Conduct a survey of all trees to be felled at least two weeks prior to clearing.

Step 2. Arrange for a spotlight survey

Assess how many individuals of various species are likely to be impacted, and identify and document nests, dreys and hollows that are known or likely to be occupied by wildlife.

To best prepare for re-homing of fauna, at least two spotlight surveys should be conducted in the two weeks prior to clearing. This will give an indication of the scale of fauna numbers that may need re-homing, with enough time for re-homing solutions to be prepared.

Opportunistic stagwatching to directly count nocturnal animals, just prior to the spotlighting of most likely hollows could also be done.

Action: Conduct a spotlight survey by suitably qualified ecologists or wildlife experts.

Step 3. Inspect hollows & nests prior to tree removal

Inspection would take 1-5 mins per hollow, depending on size, access etc. Again, it gives an idea to the tree-fellers and the wildlife spotter as to how many animals to expect and which hollows are occupied. Note that some hollows and nests may be too high or for other reasons not able to be inspected.

Action: On the day of tree removal, hollows and nests with eggs and new young can be inspected with a pole mounted camera.

Step 4. Retain or replace homes

During the initial wildlife survey, the location and extent of hollows can be marked out in trees slated for removal. Find opportunities for retaining these hollows and placing them in nearby trees.

Where hollows will be lost, apply a 1 for 1 replacement of existing hollows and nesting sites with suitably sized and orientated nestboxes customised for each animal species.

Between 3 and 7 days prior to tree removal, place suitably sized nestboxes in non-impacted trees in adjacent areas.

Action: Set up replacement hollows prior to tree removal

Step 5. Prepare for the relocation of fauna

When relocating fauna, consider whether the new alternative habitat area can sustain the introduction of new animals. Given this is an emerging field of practice, quite often this impact will not be known and this will prevent some re-homing activities from being undertaken. It is hoped that increasing the best practice for fauna relocation in future years will help prompt more studies to help progressively grown this knowledge.

Planting known food sources in advance in adjacent sites will also help to reduce the pressures of intraspecific competition. This will only be applicable if food sources are planted in time to enable adequate growth.

Appoint trained people to sensitively undertake the movement of fauna from trees that will be removed.

Action: Plan well for the relocation of fauna to consider ecological impacts.

Step 6. Stage the removal of trees

Staged removal of trees will best avoid a concentrated impact of habitat loss and increase the chances of a successful transition. This more gradual removal of trees does need to be planned to minimise the likelihood that fauna will rehome in a tree that will soon itself be removed.

Remove non hollow-bearing trees first, for example on day one, and hollow-bearing trees on day two. If only a small number of trees, for example less than ten and most are hollow-bearing, then there is no order of priority.

For larger areas, begin removal of trees towards the centre of the impacted area. This is to maintain greater habitat connectivity and options for wildlife to voluntarily relocate further away from the impacted areas.

Action: Apply two stage removal by tree habitat status to help transition fauna to new homes.

Nest-box design tailored to species

Different sized animals require nestboxes with different sized internal spaces, differently entry holes, and different placement on trees with respect to tree limbs and other factors. A good guide to constructing nestboxes can be found at:

http://faunature.com.au/nest-boxes-for-wildlife-a-practical-guide

Placement of nestboxes is also a critical element determining whether an animal will take up occupancy. Nestboxes should not be placed on north or west facing sides of trees as they will not have sufficient thermal protection during the hot periods of the day. Care should also be taken to locate them where they are least likely to be affected by artificial light at night impacts.

Step 7. Tree removal day

All hollows within felled trees should be inspected and any resident animals removed and relocated. Animals that flee their hollow before or during tree felling should also be captured with a net and rehomed, however a judgement call is required if it is likely the animal can find itself a new home with less stress than that which would be caused by the capture process. Specific requirements related to wildlife relocation must be observed and complied with on the day.

Rescued animals should be released directly into a nestbox. The nestbox entrance should be stuffed with a rag to prevent fleeing during the day, to be removed at dusk.

If many trees are to be cleared, it may be necessary to hold animals in cages during the day and release at dusk that night. The animals must be supported with food and water while in cages during that day.

If a female with back-young or large-pouch-young is rescued it should be kept in cage during the day, to prevent the likelihood of the mother dropping the young, and gently released after dusk that evening. Release process is to secure the door in the open position, place cloth over entrance and monitor the cage from a distance until the possum exits of its own accord.

Transferring animals to trees that are on the same side of a road as the trees being cleared may help reduce the number of vehicle strikes as the animals may be less likely to attempt to cross the road to more familiar territories.

Injured animals should be taken to vet for assessment, or a wildlife shelter for rehabilitation. It is best for vets and wildlife carers to be forewarned of the clearing activity to enable them to prepare care or euthanasia facilities as required.

There is a limited understanding of how fauna adjust to these relocation events. This project represents an applied learning legacy opportunity by partnering with researchers to study and track how affected animals respond to a disturbance of this kind.

Action: Arrange for a wildlife spotter and rescue service to be present to capture and relocate affected animals. All activities must comply with the Wildlife Act 1975 and will require permits which must be arranged in advance

Further information

https://www.wildlife.vic.gov.au/managing-wildlife/translocation-of-wildlife

http://www.depi.vic.gov.au/environment-and-wildlife/wildlife/problems-with-wildlife/possums/possums-and-the-law

https://www.melbourne.vic.gov.au/sitecollectiondocuments/possums-city-of-melbourne.pdf

http://www.birdsinbackyards.net/places

http://www.sgaonline.org.au/artificial-tree-hollows-for-animal-habitat/

LOCI Environment & Place

Attach this Better Best Practice Note next time you request a quote, and ask bidders how they will incorporate best possibilities for your project.