

# Wildlife Habitat and Impact Mitigation Plan(WHIMP)

The Heights - Precinct C1 & C2  
Rifle Range Road, Pimpama

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# 1. Introduction

## 1.1. Project Background

Tomewin Wildlife Consultancy (TWC) was commissioned by Golding Consulting on behalf of Sunland Property Group ('the Proponent') to produce a pre-clearing fauna management report in accordance with the 'Queensland Code of Practice for the Welfare of Wild Animals Affected by Land-Clearing and Other Habitat Impacts and Wildlife Spotter / Catchers (Draft), prepared by Hanger, J. and Nottidge, B. 2009' ('the Code') for proposed clearing works associated with The Heights residential development at Pimpama. This report also encompasses the provisions of the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and Queensland *Nature Conservation Act 1992* (NCA) and 'The Heights Koala Management Plan – EPBC Approved EPBC Act Management Plan, prepared by Saunders Havill Group. 2016' (KMP).

The objective of this report is to summarise the existing fauna values present and detail mitigation and management strategies applicable to fauna species likely to be during pre-clearing works areas or within specific habitat areas to be retained within the site. Commonwealth, State and Locally listed species and well as common fauna species threatened and common fauna species and their habitats have been considered.

## 1.2. Site Location and Description

Contextually, the site is located approximately 35 km north of the Gold Coast and 50 km south of Brisbane. The site is an area of approximately 18ha located on moderate slopes with dry eucalyptus forest peripheral to a large previously cleared development site adjacent to Rifle Range Road, Pimpama. The site specific area including areas of prior rural residential land use to be cleared extends from the northern boundary adjacent to an environmental retained area to the south.

The Precinct C1 & C2 clearing extent is the third clearing phase for the Heights Estate, Rifle range Road, Pimpama located to the south – west of the existing estate on both sides of Nambucca Crescent and Kiama Crescent. The specific project is tree clearance for real estate development (refer Figure 1).

The site is an area of dry eucalypt forest to wattle re-growth approximately 4ha located on a moderate slope ridge to steep slope including areas of prior rural residential land use to be cleared south of existing precincts.

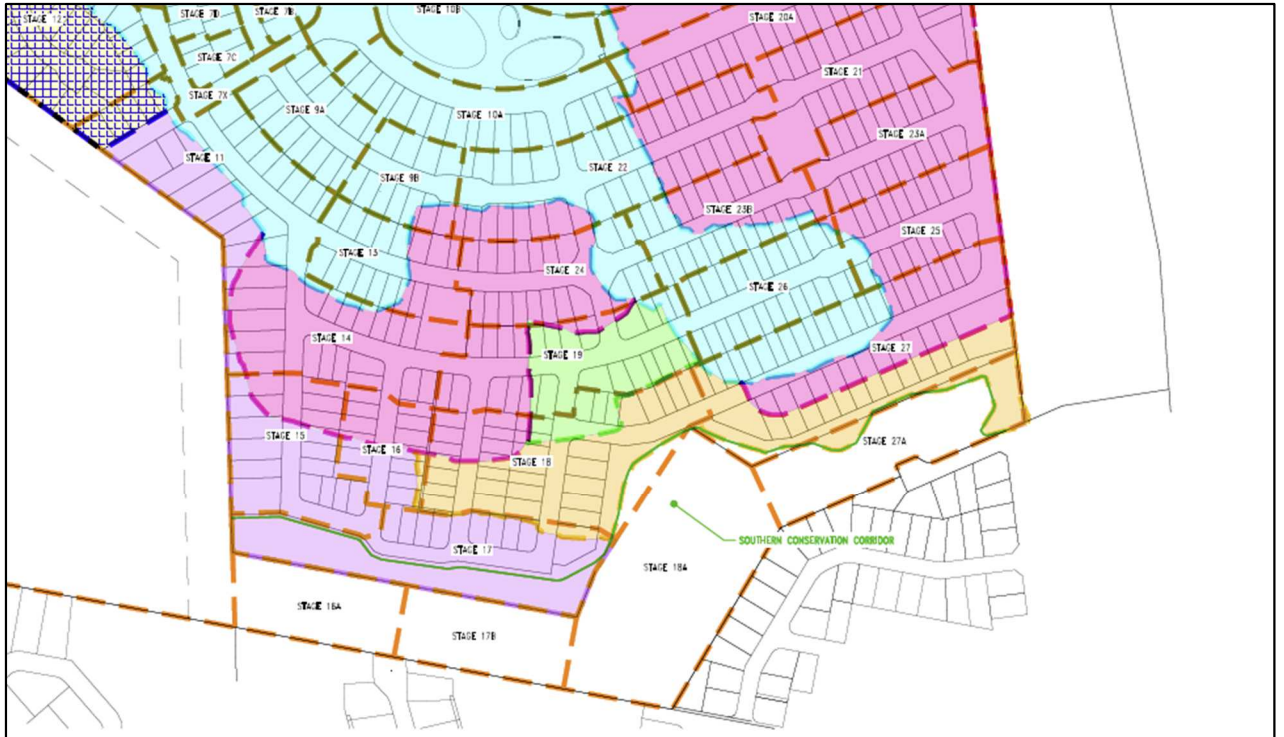


Figure 1: C1 & C2 Clearing Extent (source Bradlees)

### 1.3. Permits and Licenses

#### 1.3.1 Permit

TWC is a specialist fauna spotter-catcher consultancy approved under a Queensland DES Rehabilitation permit (unrestricted species / schedule) WIRP16922016, valid from 23/2/2018 to 22/2/2019.

#### 1.3.2 Suitable capacity / experience

TWC has a staff of three with two spotter-catchers having a minimum of ten years' experience. TWC has had lengthy large scale project experience on a broad range of habitats particularly in addressing of arboreal fauna associated with habitat trees and aquatic fauna recovery. All staff have undergone extensive in-house training of core skills including development process awareness, clearing process awareness wildlife identification and handling. Additional completed training courses are listed in Table 1.

TWC has had lengthy experience in addressing Koalas within the Coomera area working with the GCCC Koala Conservation Project over the past five years and within noted Koala areas in Pine River, Redland bay, Belmont, Gatton, Amberley, Ipswich, Rosewood, Dayboro.

Table 1: Training and Experience

<b>Qualifications and experience required to complete the task</b>	<b>Personnel, Duties and Responsibilities (Supervisory staff and others)</b>
Rehabilitation permit, Registered with D.E.H	Frank Court
General safety induction card	Frank Court, Brendan Lackey,
Clearing processes awareness – internal training	Frank Court, Brendan Lackey, Adam Baker
Development processes awareness– internal training	Frank Court, Brendan Lackey, Adam Baker
Prior experience in Australian fauna – 4 years minimum	Frank Court, Brendan Lackey,
Prior experience in clearing processes– 4 years minimum	Frank Court, Brendan Lackey,
Chainsaw operation ticket	Frank Court, Brendan Lackey , Adam Baker
Fell small trees	Frank Court
EWP operators ticket	Frank Court
Working safely at heights ticket	Frank Court, Brendan Lackey,
Electrical Awareness	Frank Court, Brendan Lackey,
Operate a 4wd vehicle in the field	Frank Court, Brendan Lackey
Canoe & water safety > 2 Meters	Frank Court, Brendan Lackey
Lyssa Virus vaccination	Frank Court,
Safe venomous course snake Handling	Frank Court,

## 2. Mitigation and Management Measures

### 2.1. Fauna Spotter

A Department of Environment and Science (DES) accredited Fauna Spotter Catcher must be present during all vegetation clearing activities. Inspection of fauna habitats and features identified during the pre-clearance survey must be inspected by the Fauna Spotter Catcher prior to clearing.

### 2.2. Fauna Fencing

Temporary fencing has already been installed around the perimeter of the project and will aid in minimizing the movement of large fauna including highly mobile macropods onto roads and into adjacent estates.

### 2.3. Felling Procedures

The following actions will effectively reduce potential fauna mortality due to removal of vegetation and construction techniques as part of the proposed development:

- It is intended that, in regard to the clearing process and associated staff, the spotter-catcher shall confirm that the tree felling operation shall occur in a manner set out below that allows safe dispersal or capture of fauna, O.H.S. issues notwithstanding.
- All static fauna valued trees will be clearly identified with high visibility tape or marker spray paint.
- There will be specific ground searches for terrestrial fauna prior to clearing and observation of the clearing process and if located temporary shelter areas to be allocated to minimise stress and provide dispersal options will occur.
- The clearing of the under-story prior to felling of canopy trees, will occur after a final inspection to confirm absence of current or anticipated fauna activity. Removal of canopy trees prior to addressing static fauna values reduces the potential of secondary injury to arboreal fauna dispersing into trees to be removed.
- Addressing of static fauna values, specifically the hollow-bearing trees or termite mounds where wildlife may occur. Techniques applicable to this stage of spotter-catcher duties vary due to the site specifics regarding topography, structure and stature of trees and OHS limitations.
- Hollow-bearing trees will be excluded from clearing processes for a period of 24 hours to allow for fauna to disperse due to disturbance and provide for greater observation opportunities to locate potential fauna shelter
- Addressing of static fauna values, specifically the hollow-bearing trees or termite mounds where wildlife may occur. Techniques applicable to this stage of spotter-catcher duties vary due to the site specifics regarding topography, structure and stature of trees and OHS limitations.

- Hollow-bearing trees will be accessed and examined with torch, chainsaw, buffer rags with all fauna located during spotter-catcher duties to be assessed for injury, maturity prior to being placed in a cotton capture bag.
- Hollow-bearing trees will be excluded from processing for a period of 24 hrs to allow natural dispersal of small fauna unlikely to be located.
- Where required, WHS limitations notwithstanding, the usage of an elevated working platform will occur to access Hollow-bearing trees with significant species or numbers of breeding birds prior to clearing and further processing.

#### 2.4. Aquatic Fauna

It is not envisaged that aquatic dewatering activities will be required within the proposed clearing area; however pooled water and drainage features (if present) will be inspected during terrestrial load reduction activities ahead of the clearing front. The following recommendations are made to mitigate impacts to potentially occupant fauna:

- Inspection of banks, peripheral vegetation and other immediate terrestrial microhabitats;
- Identification of potential fauna values including: logs, rocks, artificial structures, discarded rubbish and burrows;
- Targeted searched for frog egg deposition sites on debris, bank edges, water surface and vegetation.

#### 2.5. Terrestrial and Arboreal Fauna

Overall the site contains medium value refugial opportunities for arboreal and terrestrial fauna species. The species expected within the site are likely to primarily reflect common fauna assemblages for the region however provisions are proposed directly for common fauna and species of conservation significance. It is advised that all identified fauna habitats onsite be inspected by a DES approved Fauna Spotter prior to vegetation clearing and all vegetation removal activities be supervised during the clearing process. Terrestrial load reduction activities will be conducted ahead of the clearing front where possible. Fauna captured will be relocated to adjacent habitat consistent with the life history requirements of the species requiring translocation.

#### 2.6. Threatened species (Specific Provisions)

The potential presence of significant fauna; that is fauna scheduled as Endangered, Vulnerable, Near threatened (EVNT) in the Queensland *Nature Conservation Act 1992* or the Commonwealth *Environmental Protection & Biodiversity Act 1999* not listed in this report will be considered by the wildlife spotter-catcher during clearing processes.

If and where an EVNT species is located onsite an immediate cessation of clearing process and an exclusion zone defined by high visibility tape will occur. Relevant authorities, the GCCC environmental assessment &

compliance section and DES south coast Wildlife Officer will be notified to confirm issues and where required arrange a site inspection prior to commencement of clearing process.

#### 2.6.1 Koala

Due the high component of Koala feed species present on the site and confirmed presence Koalas noted during prior survey, a Koala Management Plan is included to confirm spotter-catcher actions in the event of random Koala movements.

In accordance with the *Nature Conservation (Koala) Conservation Plan 2017*, the below actions will be directed to allow Koala dispersal without human intervention.

- A spotter will be required to conduct a pre-clearing inspection prior to daily commencement with one spotter catcher per clearing machine to be present for all the clearing process to occur.
- It is intended that the direction of the clearing process will occur from the edge of existing road systems to the nearest edge of retained habitat to encourage Koala dispersal out of clearing zones and avoid land-locking of Koalas within the clearing zone.
- During the clearing process, there will a differentiation between *Complete cover trees* and *See-through trees* where *Complete cover trees* will be retained until the spotter-catcher responsible is certain of absence of Koalas prior to the tree being felled.
- A *Complete cover tree* is defined as a tree with luxuriant foliage that does not allow confirmation of absence of Koalas without a full 360 degree viewing and if required extended viewing during peripheral clearing operations to detect movement. A *See-through tree* is defined as sparsely foliated tree where a 360 degree viewing confirms the absence of Koalas
- There will be a daily inspection of trees to be removed to confirm the absence of koalas or other fauna prior to felling the tree. Where located, Koalas in trees will be clearly identified by high visibility tape or paint and site foreman and clearing crew will be informed to confirm presence of animal in clearing area.
- When located, Clearing Exclusion zones around the active Koala tree will be set out where no activity can occur for the day's duration to confirm animal safety and allow dispersal. Secondly, Koala response to peripheral human activity will be monitored by spotter-catcher to confirm acceptable disturbance and if required, cessation of clearing process.
- Koala response to peripheral human activity will be monitored by Koala spotter-catcher to confirm acceptable disturbance and if required, cessation of clearing process. A four point monitoring protocol utilized for Koalas within the clearing zone is as follows.

**0** - Koala sleeping in perch; normal behaviour

**1** - Koala awake, alert, resting position in perch – acceptable disturbance

**2** - Koala awake, alert to shifting position in same perch – acceptable disturbance

**3** - Koala moving perch position within tree - unacceptable disturbance, increased exclusion zone

**4** – Koala exhibiting panicked behaviour, vocalizations - unacceptable disturbance, immediate cessation of clearing process within general area of Koala.



### 2.6.2 Glossy Black Cockatoo

Glossy Cockatoos are noted for breeding in secluded gullies, often in association with other breeding pairs, with a high proportion of significant hollow-bearing trees (HBT) present and feed species present as understory.

The site contains limited hollow-bearing trees with potentially suitable hollows and moderate feed value that is partially consistent with noted breeding site features, limited by site proximity to motorway and the absence of breeding records for the area.

- As such it is possible that suitable hollow bearing trees could be utilized, the following actions to confirm the presence or absence of Glossy Black Cockatoo on site will occur.
- All hollow-bearing trees with suitable hollows will be retained to the latter stages of clearing process with on-going observation occurring at early morning and late afternoon periods to confirm absence prior to felling.
- Where possible, high valued hollow-bearing trees with suitable hollows to be removed will be accessed by Elevated Working platform to confirm absence of fauna or trace prior to felling.
- If Glossy Cockatoos are observed in proximity to suitable hollows the tree with proximal trees will be retained to confirm presence; if confirmed disturbance will be minimised and the defined area will be retained for duration of the breeding season.

### 3. Wildlife Capture and Removal Plan

Relocation of native fauna is a strategy that may be required during the course of developmental works to up-hold the project's required nature conservation, animal welfare and human safety objectives. In all circumstance where native fauna are required to be relocated it must be done so, or under the direct supervision of, a suitably licensed fauna spotter/catcher.

Suitable release sites for fauna take into account a number of considerations, depending on the ecology of the animal. These considerations include:

- Adequate food supply and presence of prey species;
- Adequate housing and nesting habitat such as tree hollows, dense vegetation, suitable areas to burrow;
- Similar vegetation type, eg. Similar tree species, density, and location to water;
- Appropriate social group, eg. Releasing all gliders from one family group into the same area;
- Releasing territorial animals as close as practical to their home range (within 1km or less), but far enough away that they won't re-disperse to the clearing zone;
- Habitat corridors that are of suitable size, and connect to other suitable habitat for further dispersal to avoid overpopulation of the release site., and;
- Time of day: Nocturnal release for nocturnally active animals .Additionally, if aquatic animals are required to be captured in the event of a dewatering, potential release locations will consider the following factors:
  - Recent rainfall and observed flow velocity of waterways or river;
  - Composition of riparian vegetation (with preference for presence of native flora species and dense/overhanging vegetation);
  - Diversity of habitats available (i.e. riffles/pools);
  - Presence of invasive species (i.e. Carp or Gambusia);
  - Potential availability of food resources (i.e. for Turtles); and
  - Evidence of overpopulation of relevant species.

## 4. Wildlife Contingency Plan

In the event sick, injured or orphaned protected animals are encountered during the course of the project they shall be administered to in accordance with the *Code of Practice Care of Sick, Injured or Orphaned Protected Animals in Queensland* under the *Nature Conservation Act 1992*. The stages in which injuries or illness are described under the code are as follows:

- **Critical:** Injuries or illnesses that are life-threatening; for example, an animal that has been struck by a car and has serious head injuries.
- **Serious:** Injuries or illnesses that might reasonably be expected to cause moderate pain (but are not immediately life-threatening), and the animal is not showing obvious signs of distress or pain, or significantly reduced mental activity; for example an animal with a closed fracture but no other apparent injuries and that is alert and responsive.
- **Mild:** The injuries or illness of an animal appear to cause little discomfort, pain or function loss and are not life-threatening (even without immediate vet treatment); for example superficial cuts, superficial bruising or orphaned animals suffering from mild dehydration.

Where observations of Koala by senior FSC / permit holder indicates poor health or injury, relevant authorities, the GCCC environmental assessment & compliance section and DES south coast Wildlife Officer will be notified to confirm issues and where required seek approval to capture/relocate the Koala to suitable veterinary care designated below.

### Currumbin Wildlife Hospital

Address: 27 Millers Dr, Currumbin QLD 4223

Phone: (07) 5534 0813

Or After Hours:

### Wildcare Australia

Wildlife Rescue Service

Phone (07) 5527 2444

### Animals Emergency Services (as a last resort)

04 Eastlake Street, Carrara, QLD 4211

Phone: (07) 5559 1599

## 5. Wildlife Storage and Housing Plan

For wildlife requiring storage, temporary housing and transportation to release sites and/or to a wildlife carer or veterinarian, guidelines set out in the Code and TWC's Animal Ethics Permit will be followed. Dependent on the species of animal and condition of the animal, temporary storage and housing of animals will be as follows:

- **Calico bags:** Calico bags will be used to temporarily house fauna such as snakes, lizards and small mammals (including microbats), Bags will range in size from 200mm x 200mm to 600mm x 1800mm. Bag selection will vary according to the size of animals to be placed in them. In the case of snakes a "hoop bag" may be used to facilitate capture. The hoop is approximately 500mm in diameter attached to a handle. The bag is placed around the hoop ensuring a greater area in which to pass the snake through into the bag
- **Plastic holding tubs/containers/animal crate:** Plastic holding tubs/containers/crates will be used to temporarily house fauna such as snakes, lizards, frogs, small mammals and birds (Plastic holding tubs/containers/crates will range in size from 150mm x 150mm x 120mm to 500mm x 400mm x 400mm. Plastic holding tubs/containers/crates selection will vary according to the size and number of animals to be placed in them. In addition to this, material is used to line the tub/crate to ensure the animals won't lose its footing. This may include folded towels on the bottom of the crate or a fitted pad. These items are washed between each use to reduce the spread of disease/parasites.

Section 9 of the Code relates to how transportation of wildlife should be undertaken. The following will be adhered to when transporting wildlife to the vet and/or carer:

- Additional pain or distress of the animal is to be avoided;
- Wildlife should only be transported when necessary;
- Transport containers must be appropriate for the species (size, strength and behaviour of species being moved);
- Transport containers must be designed and maintained in a way as to:
  - Prevent injury;
  - Prevent escape;
  - Prevent rolling/tipping during transit;
  - Prevent damage to plumage (feathers);
  - Be hygienic;
  - Minimise stress and
  - Be suitably ventilated.
- Non-compatible species must not be transported in a manner which allows for visual or physical contact;
- Containers must be secured to prevent movement and provide protection from direct sunlight, wind and rain;
- Venomous, dangerous or potentially disease transmitting animals must be clearly marked with warning labels (i.e. Caution –'venomous snake' or 'live bat') and be locked and secured.

## 6. Wildlife Release and Disposal Plan

All vertebrate fauna species encountered (relocated, moved, injured or killed) during the preclearing, construction and operational works will be recorded and a summary of events will be presented to the client within the post clearing report.

The fauna spotter catcher will collect information pertaining to each capture, sighting and release of all animals interacted with onsite including:

- a. species;
- b. identification name or number;
- c. sex (M, F, or unknown);
- d. approximate age or age class (neonate, juvenile, sub-adult, adult);
- e. time and date of capture;
- f. method of capture;
- g. exact point of capture (GPS point);
- h. state of health;
- i. incidents associated with capture likely to affect the animal;
- j. veterinary intervention or treatments;
- k. time held in captivity;
- l. disposal (euthanasia, re-release, translocation etc);
- m. date and time of disposal;
- n. details of disposal (if released, exact point of release GPS);
- o. for released animals: distance in metres from point of capture to point of release.

## 7. Post Works Impact Minimisation

Where fauna is found on site during the absence of the fauna spotter (i.e., on days or in areas where no fauna spotter catcher is required), the following will occur:

- Cease works at the location of the animal;
- Report the animal immediately to the site foreman and environmental officer
- Contact the fauna spotter catcher
- Do not attempt to touch or catch an animal as it may be dangerous;
- Maintain site and known area of animal;
- If required, set up an exclusion zone around the animal;
- Once the TWC fauna spotter catcher arrives, take them to the animal.
- The fauna spotter catcher will follow the procedures outlined above.

## 8. Recommendations

A number of conclusions and recommendations are presented, with the specific intention of providing a comprehensive management structure to facilitate minimal impact to fauna during the clearing of vegetation and subsequent disturbance of habitats. The directives given by Fauna Spotter Catchers should adhere to the Code and adopt implementation of proven specific management techniques for identified habitat types and compliance with legislation relevant to the activity. Fauna management is presented here specific to EVNT fauna, general terrestrial, arboreal and aquatic fauna. Although each is treated separately, overlap does occur within target techniques providing a comprehensive approach for target species of all conservation significance.