

A decorative graphic on the left side of the page consisting of white, wavy contour lines on a light gray background, resembling a topographic map. The lines are more densely packed in some areas and more spread out in others, creating a sense of depth and movement.

APPENDIX A

# Flora and Fauna Management Plan

## A1 Introduction

This Flora and Fauna Management Plan (FFMP) has been prepared to satisfy the requirements of Appendix D.16 of the Phase 2 DCP, as outlined in Table 3 below. This FFMP has also been prepared in accordance with the *Code of Practice for Injured, Sick and Orphaned Protected Fauna 2011* (DPIE 2011) and is based on current best practice.

**Table 3: Appendix D.16 DCP requirements**

### Appendix D.16 DCP Requirement

Pre-construction surveys prior to removal or disturbance to all human-made structures, to ensure roosting habitat for microbat species, including subsurface structures such as mine shafts and storm water tunnels to ensure any individuals are dispersed or relocated as per best practice.

A pre-clearance assessment for any native fauna immediately prior to any clearing of native vegetation to ensure that arboreal mammals, roosting and hollow-using birds, bats and reptiles are deterred from accessing any vegetation to be cleared, and are removed if present prior to clearing according to EES' policy on the Translocation of Threatened Fauna in NSW.

Incorporation of best practice site hygiene protocols to manage the potential spread of Phytophthora and Myrtle Rust for land adjacent to land zoned E1 National Parks and Nature Reserves, E2 Environmental Conservation or lands managed as a reserve. In accordance with the best practice guideline 'Arrive Clean, Leave Clean: Guidelines (Commonwealth of Australia, 2015).

Best practice site hygiene protocols to manage the potential spread of chytrid fungus are to be incorporated along Ropes Creek to maintain local Green and Golden Bell Frog populations.

Weed management, site rehabilitation and nest boxes are to be installed on development adjoining land zoned E1 National Parks and Nature Reserves, E2 Environmental Conservation or lands managed as a reserve.

A tree-felling protocol is to be implemented to avoid impacts to birds, arboreal mammals and reptiles, raptor nests (almost all large raptors in Wilton are threatened), dreys, dens, hollows and other nests or habitat such as loose bark in trees that are to be cleared.

If the presence of Green and Golden Bell Frog is confirmed present along Ropes Creek within the Western Sydney Aerotropolis, incorporate best practice site hygiene protocols to manage the potential spread of chytrid fungus and maintain local species populations.

Reuse of native plants including, but not limited to seed collection and topsoil from development sites that contain native seed bank.

## SCOPE AND OBJECTIVES

This FFMP has been prepared for the associated construction and operation works for the Project, such that it:

- Identifies measures to protect the environment.
- Defines roles and responsibilities during proposed works.
- Identifies any external approvals needed.
- Identifies consultation and communication needs.
- Describes the monitoring and reporting regime.

A2 Biodiversity Management Plan

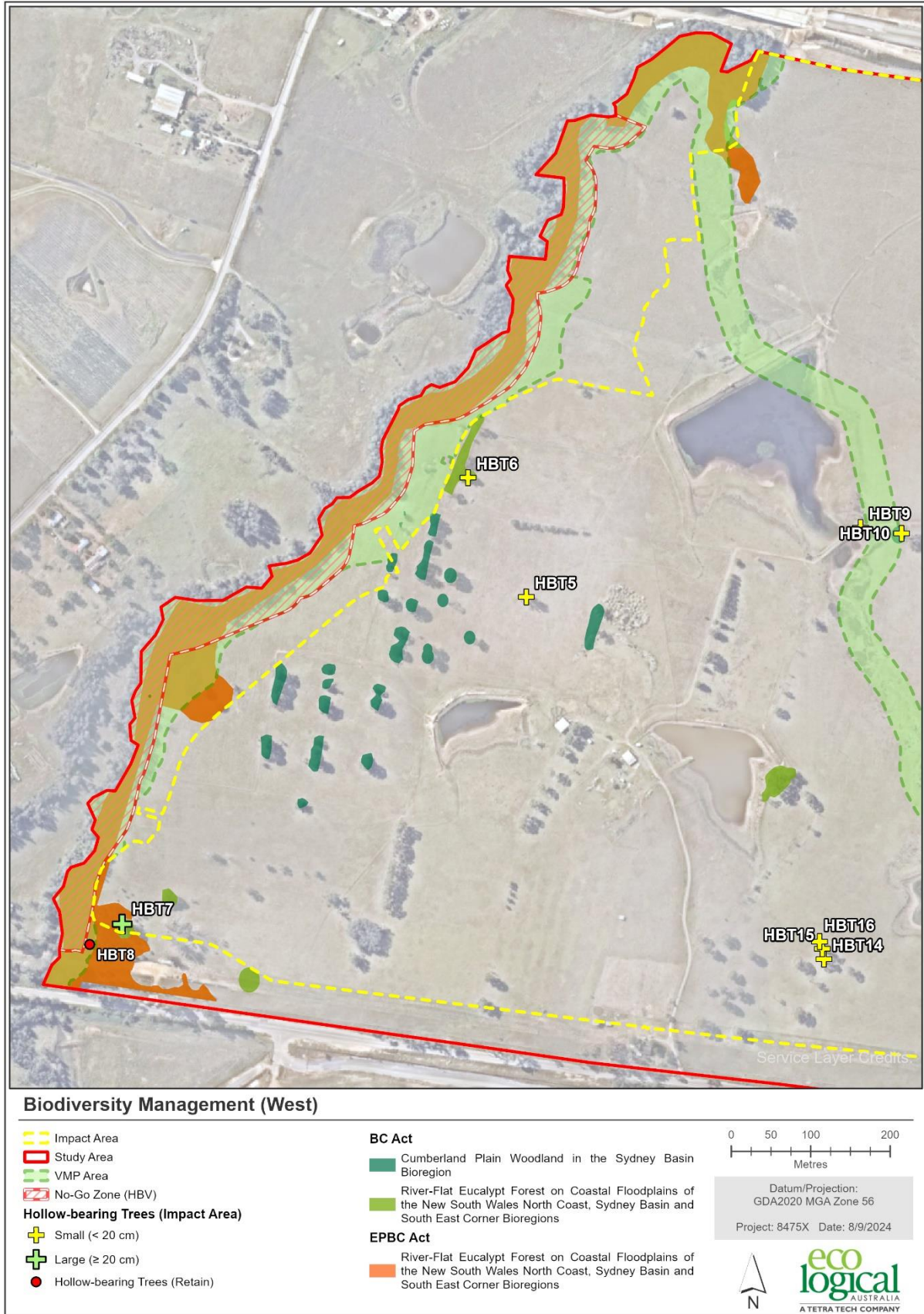


Figure 3: Biodiversity Management Plan (West)

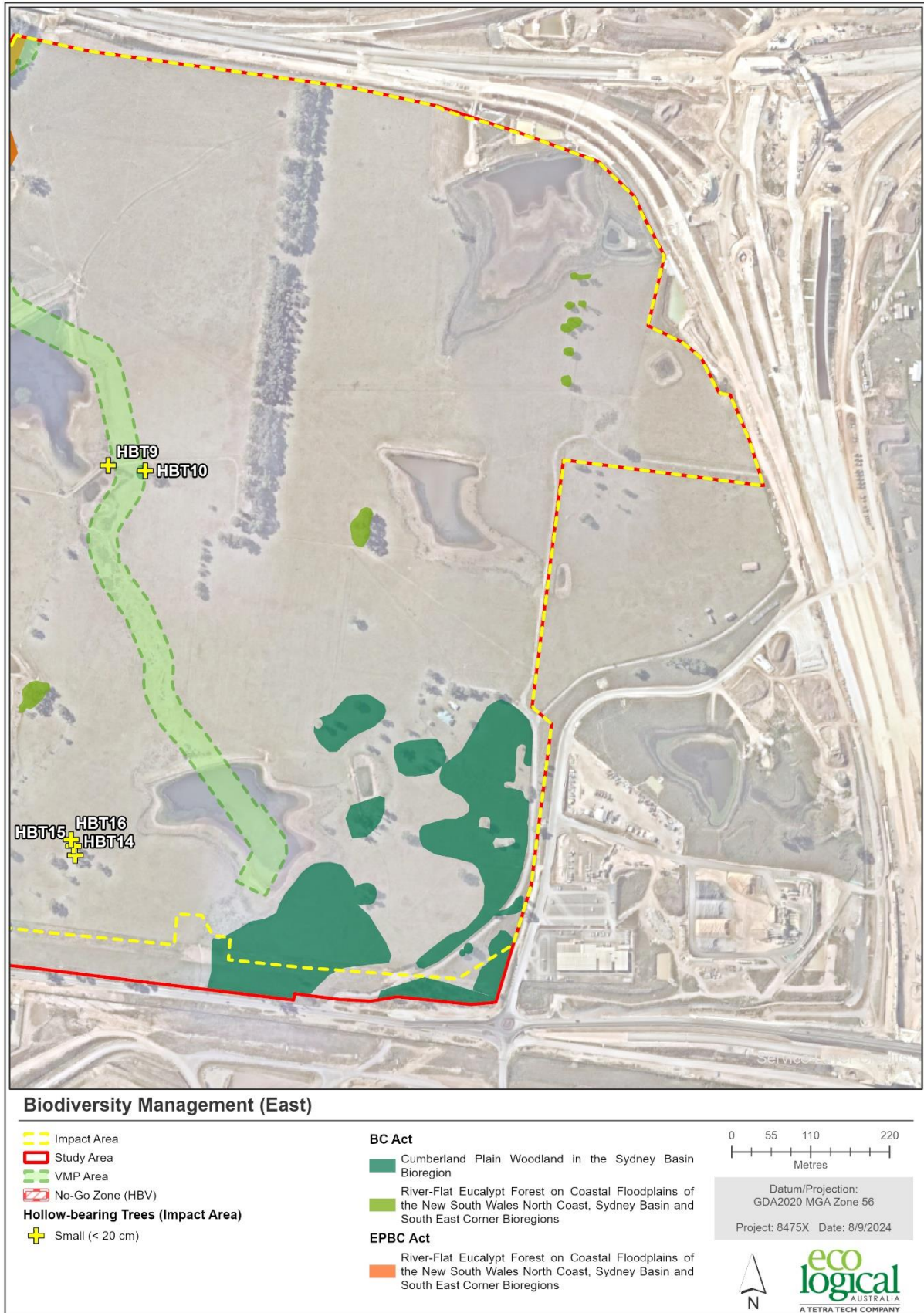


Figure 4: Biodiversity Management Plan (East)

### A3 Implementation and Operation

Safeguards to manage potential flora and fauna impacts are detailed in Table 4, together with who is responsible for their implementation and at what stage of works. Person responsible for implementation: PM – Project Manager; SS – Site Supervisor; E – Project Ecologist; AE – Aquatic Ecologist; All – All Site Personnel

**Table 4: Flora and Fauna Management Plan**

Environmental Action	Timeframe	Monitoring	Responsible Person
<b>OBJECTIVE: GENERAL</b>			
All project staff and contractors will be inducted on the biodiversity values and habitat features of the study area (Figure 2), and relevant safeguards prior to commencement.	Prior to works	Induction Records	PM
A complaints register is to be maintained. DPHI will be notified immediately of any complaints in relation to management of biodiversity issues.	As required	Complaint Register	SS
All general contractor waste is to be disposed of using provided waste bins.	During works	Weekly checklist	SS, All
<b>OBJECTIVE: REDUCE HARM TO BIODIVERSITY</b>			
Programming of works should avoid critical life cycle events such as breeding or nursing wherever possible. Impacts to vegetation should be minimised during the spring/summer seasons to avoid disrupting breeding cycles of threatened species.	Prior to works	Weekly checklist	PM, SS, E
Prior to clearance of the vegetation in the development area, collectable floristic material such as native species seed stock and woody fruit of all native species will be collected for reuse in landscaping works wherever feasible. Refer to Appendix A14 for further information.	Prior to works	Weekly checklist	PM, SS, E
Pre-clearance surveys must be completed prior to removal of any vegetation, with a focus on the habitat features described in Section 2.2. Pre-clearance procedures are provided in Appendix A9.	Prior to works	Weekly checklist	PM, SS, E
Survey efforts identified several hollow-bearing trees within the Study area (Figure 2). The Project Ecologist is to be present during removal of hollow-bearing trees. Hollow-bearing trees (HBTs) should be removed per the procedure in Appendix A10.	Prior to works	Weekly checklist	PM, SS, E
If native fauna is identified during pre-clearance surveys or prior to removal of habitat features, the Fauna Rescue and Release Procedure found in Appendix A12 must be adhered to.	Prior to works	Weekly checklist	PM, SS, E
During any hollow-bearing tree removal, an experienced wildlife handler is to be present to extract and re-locate any displaced fauna that may be disturbed during this activity. Any injured fauna is to be	During works	Weekly checklist	SS, E

Environmental Action	Timeframe	Monitoring	Responsible Person
appropriately cared for and released on site where and when appropriate. Refer to Appendix A10 for further details.			
The Project Ecologist and /or a wildlife handler is to be present during removal of identified hollow-bearing trees to relocate any identified fauna. Native animals are to be relocated from development sites in accordance with the former Office of Environment and Heritage’s Policy on the <i>Translocation of Threatened Fauna in NSW</i> and Fauna Relocation Management Plan, if required.	During construction	Weekly checklist	PM, SS, E
A report detailing the pre-clearance and clearance works is to be prepared within 10 days of completion.	During construction	Weekly checklist	PM, E
The identified hollow-bearing trees should be replaced with the extracted/carved hollow from the tree, an artificial hollow or nest box after removal and/or removed hollows should be retained for reuse in the landscaping or nearby retained bushland, wherever feasible. This is to be done under the direction of the Project Ecologist. If further hollows are identified during pre-clearance or clearance surveys and are proposed to be removed, the use of the hollow (extracted from tree and mounted/rested against a suitable host tree) or replacement with artificial hollows or nest boxes would be required.	During construction, completion of works	Weekly checklist	SS, E
Ensure that no plant, equipment, or stockpiles are positioned under the drip line of retained along the boundary of the development site trees.	During construction	Weekly checklist	SS, All
If fauna is found on the construction site during construction works, stop work – all native fauna is protected. Do not touch the animal; wait for it to leave. If injured fauna is found, an ecologist trained in wildlife rescue is to transport to the nearest local vet and / or call WIRES or a wildlife rescue service.	All times	Weekly checklist	All
If a threatened fauna species is identified, stop works. Refer to Appendix A12 for further guidance.	All times	Weekly checklist	PM, SS, E, All
Install sediment barriers and erosion controls to prevent runoff into vegetation outside the impact area, in particular the riparian corridors. Maintain controls throughout construction and complete regular inspections (weekly, before and after predicted heavy rainfall periods). Schedule works outside heavy rainfall periods.	Prior to works and during construction	Weekly checklist	SS, All
To reduce the spread of pathogens and diseases, ensure Arrive Clean, Leave Clean Guidelines (Department of the Environment, 2015) are adhered to: <ul style="list-style-type: none"> <li>Ensure all clothing, hats, footwear, tools, equipment, machinery and vehicles are free of mud, soil and organic matter before entering and exiting bushland.</li> <li>Ensure any soil, plants or other materials entering the site are certified free of weeds and pathogens.</li> </ul>	During construction	Weekly checklist	SS, All

Environmental Action	Timeframe	Monitoring	Responsible Person
<ul style="list-style-type: none"> <li>A dedicated washdown location, at the entry/exit of the site is to be determined prior to construction works. If weeds or pathogens are known to be present within the development site, the WEMP (Appendix B) must be adhered to.</li> </ul>			
<b>OBJECTIVE: REDUCE HARM TO AQUATIC BIODIVERSITY</b>			
Compliance with dewatering and aquatic fauna handling procedures per the DDP (Appendix C).	Prior to dewatering commencing and during works	Weekly checklist	SS, AE
<b>OBJECTIVE: REDUCE SPREAD OF PRIORITY WEEDS</b>			
Comply with all additional measures in accordance with the WEMP (Appendix B)	During pre-construction, construction and for Project life	Weekly checklist	SS, PM
<b>OBJECTIVE: REDUCE POTENTIAL LIGHT AND NOISE IMPACTS TO NATIVE FAUNA</b>			
Works will only occur during the standard daytime hours unless otherwise set out by the conditions of Development Consent: <ul style="list-style-type: none"> <li>Monday to Friday 7:00 am to 5:00 pm</li> <li>Saturday 8:00 am to 1:00 pm.</li> </ul> Works will be avoided after sunset to minimise indirect noise and light impacts to fauna species in adjacent retained vegetation.	During construction	Weekly checklist	SS
Where practical, avoid simultaneous operation of noisy plant within discernible range of vegetation outside of the development site.	During construction	Weekly checklist	All
Maximise the distance between noisy plant items and nearby residential receivers and potential fauna habitat.	During construction	Weekly checklist	All
Orient equipment such as offensive noise carriers away from residential receivers and potential fauna habitat.	During construction	Weekly checklist	All
Plant used intermittently is to be throttled or shut down when not required.	During construction	Weekly checklist	All
Permanent lighting installed during construction is to be designed as compliant with AS/NZS 4282:2019 <i>Control of the obtrusive effects of outdoor lighting</i> .	During and after construction.		PM

## A4 Structure and Responsibility

Details of personnel responsibilities are outlined in Table 5. Contact details for these personnel are included in Section A7.

**Table 5 Responsibilities of personnel**

Role	Name, Position and Company	Responsibility
Project Manager	Name: Position: Company:	<ul style="list-style-type: none"> <li>Requires the contractor to adhere to the approved works.</li> <li>Accountable for contractor's and subcontractor's environmental performance.</li> <li></li> </ul>
Site Supervisor	Name: Position: Company:	<ul style="list-style-type: none"> <li>Issues stop work orders, if required.</li> <li>Records any community complaints (Section A6) and notifies Project Manager.</li> <li>Responsible for site management, FFMP compliance, including subcontractors.</li> <li>Facilitates environmental induction and toolbox talks for site personnel.</li> <li>Undertakes minimum of weekly environmental inspections (or after environmental conditions change).</li> <li>Ensures proponent, DPPI and community are notified of commencement of works.</li> <li>Initiates corrective actions.</li> <li>Reports FFMP non-conformances to the Project Manager.</li> <li>Reports incidents.</li> <li>Notifies the Project Manager if the FFMP needs revising.</li> </ul>
Staff	Company:	<ul style="list-style-type: none"> <li>Comply with the FFMP.</li> <li>Monitor and maintain controls.</li> <li>Report breaches of the FFMP and potential / actual incidents to Site Supervisor</li> <li>Report incidents.</li> <li>Stop work and reports to Site Supervisor in the event of unexpected finds (e.g., native fauna).</li> <li>Record any community complaints and notify the Site Supervisor (Section A6).</li> </ul>

## A5 Team Induction Sign-Off Sheet

The following personnel certify the works will be carried out in accordance with the FFMP.

Name	Position / Company	Signature	Date
	Position: Project Manager <b>Company:</b>		
	Position: Site Supervisor / Contractor <b>Company:</b>		
	Position: Project Ecologist <b>Company:</b>		
	Position: Staff <b>Company:</b>		
	Position: Staff <b>Company:</b>		
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## A7 Phone and Emergency Contact List

Organisation	Name	Position	Contact Number
<b>Project Contacts</b>			
		Project Manager	
		Site Supervisor	
		Project Ecologist	
<b>Emergency Contacts</b>			
Emergency Services	-	-	000
Nepean Hospital	-	-	02 4734 2000
Environment Protection Authority	-	-	131 555
SafeWork NSW	-	-	131 050
Fire and Rescue NSW	-	-	02 9265 2999
State Emergency Services (SES)			132 500
WIRES	-	-	1300 094 737
Origin Energy			132 461
Energy Australia			133 466
Transgrid Operations	System		1800 027 253 / 9284 300
Police Assistance Line (PAL)			131 444
Gas – Agility			131 909
Poisons Information			131 126
Telstra			132 200
NSW Road and Maritime Services (RMS)			132 213

## A8 Site Biodiversity Inspection Checklist (Weekly)

### Constructor Details Site Supervisor - Environmental Checklist

**Site Inspected:** Burrah Park (1953-2109 Elizabeth Drive, Badgerys Creek NSW)

**Time & Date:**

**Weather:**

#### Biodiversity

All staff are inducted and aware of significant biodiversity values and procedures on site, including HBV, Avoided Land, Threatened Ecological Communities, habitat features (e.g. hollow-bearing trees) and clearing/protection procedures

All collectable floristic material such as native vegetation seed stock, woody debris and bush rock has been collected for use in landscaping following removal

No-go zones are clearly delineated and protected (on all site survey/GIS systems, and with physical fencing, bunting or similar)

No clearing occurred outside approved development footprint, boundary or impact area

Trees to be removed are clearly marked to differentiate between trees to be retained.

No plant, equipment or stockpiles are positioned under the drip line of retained trees

Pre-clearance surveys completed for habitat features (stags, woody debris, dams, buildings/sheds, trees)

The Project Ecologist was present during habitat tree/feature removal and any displaced fauna have been appropriately relocated

Removed hollow sections have been relocated to appropriate bushland areas

#### Aquatic Biodiversity

Aquatic ecologist has been notified of intention to commence dam dewatering, DPI Fisheries notified of intended dewatering works and aquatic fauna relocation location has been chosen in accordance with DDP

Erosion and sediment controls downstream of dam water irrigation areas are installed correctly

Aquatic Ecologist completed capture and translocation of aquatic fauna

#### Noise and Light

Simultaneous operation of noisy plants within discernible range of a sensitive receiver has been avoided

The distance between noisy plant items and nearby residential receivers and potential fauna habitat has been maximised

Equipment such as offensive noise carriers have been oriented away from residential receivers and potential fauna habitat

Plants used intermittently have been throttled or shut down when not required

Works occur only within standard daytime hours, or as otherwise approved per consent conditions

Any required lighting is minimised, oriented away from retained habitat and warm-toned lighting used

Inspected by:                      Signature:

Actions:

By Who:

Date Completed:

## A9 Pre-Clearance Survey Procedure

A survey of habitat features identified within the Study area is to be completed by a suitably qualified ecologist prior to any vegetation clearing, to determine:

- If any fauna are using hollow-bearing trees (HBTs) or stags. In addition:
  - HBTs to be removed will be marked with flagging tape and an “H” spray painted onto two or three sides of the tree trunk with fluorescent paint
  - HBTs immediately adjacent to and / or within the Development Footprint that will be retained will be marked, for the establishment of an exclusion zone and protection from impacts. Note that the HBTs to be retained will be differentiated (marked differently (i.e. colour)) to those HBTs that are to be removed
  - Removal of HBTs is to be avoided during spring to minimise disturbance of the main breeding period of hollow-dependent fauna
- If any microbats are present in suitable habitat trees (hollows as above, or manmade structures and decorticating bark);
- Resident fauna or habitat features that may require active management prior to or during disturbance will be recorded using GPS (see active management protocols below). This may include:
  - actively nesting birds or mammals
  - habitat features including tree hollows or fallen logs that may contain roosts
  - nests, dreys or dens
  - suspected active microbat roosts, particularly within manmade structures (existing sheds and buildings)
- The presence of any previously unrecorded threatened flora or fauna species requiring management

Features identified in the pre-clearing survey will be recorded using handheld GPS. The use of a differential GPS unit will be considered where sensitive vegetation or features are identified to provide greater accuracy of the location.

Data collected in the pre-clearing inspection will be collated and reported by Project Ecologist and/or Site Supervisor to the Project Manager.

## A10 Hollow-bearing Tree Removal Procedure

Prior to removal of hollow-bearing trees, the following is to be completed by, or under the supervision of, the Project Ecologist:

- Discourage fauna first by restricting access to the hollow, deterrence measures (e.g., noise).
- Check for fauna in the zone of disturbance before clearing.
- Remove all non-hollow bearing vegetation prior to the removal of the habitat trees.
- After clearing, re-check to ensure no fauna have become trapped or injured during clearing operations. Any fauna found should be safely relocated to nearby habitat.

- Leave habitat trees standing for at least one night after clearing of non-hollow bearing trees to allow any fauna the opportunity to remove themselves after site disturbance.
- Before felling the habitat tree, engage a climbing arborist to sectionally lop and lower branches one at a time.
- Re-check after felling the habitat tree to ensure no fauna have become trapped or injured during clearing operations. Any fauna found should be safely relocated to nearby habitat.
- If taking the habitat tree down in stages, the non-hollow-bearing branches should be removed before the hollow-bearing branches are removed.
- Take care when moving equipment near vegetation to be retained.

## A11 Fauna Management

As a general principle, any native animals found within the construction area should be avoided. Fauna should only be handled by a qualified ecologist or wildlife carer with relevant skills and experience (e.g., snake handling), and only when absolutely necessary.

Where a need for active fauna management has been determined from the pre-clearing inspections, a qualified ecologist/licenced wildlife handler is to be present during vegetation clearing activities.

In any area to be cleared, non-habitat vegetation should be cleared first per vegetation removal procedures. Any fauna habitat (or resident fauna including actively nesting birds) demarcated during the pre-clearing procedure is then to be left standing overnight as a minimum (ideally longer up to three days) to encourage the self-relocation of fauna that may be using the available habitat feature.

A hierarchy of fauna management should be followed that prioritises passive fauna management and proactive measures prior to clearing, to reduce fauna disturbance and potential harm. Any injured fauna must be reported to the Project Manager and identified by a qualified Ecologist.

# FAUNA MANAGEMENT HIERARCHY

**Proactive discouragement of fauna by passive methods.** This may involve using noise and light to make habitat less desirable, giving fauna time to leave site on their own.

**Passive fauna management** with higher disturbance. For example, felling non-habitat trees and leaving HBTs to stand overnight, or up to 3 days, to encourage fauna to leave.

**Active fauna management** – handling, manual removal etc. by Ecologist

Figure 5: Fauna management hierarchy

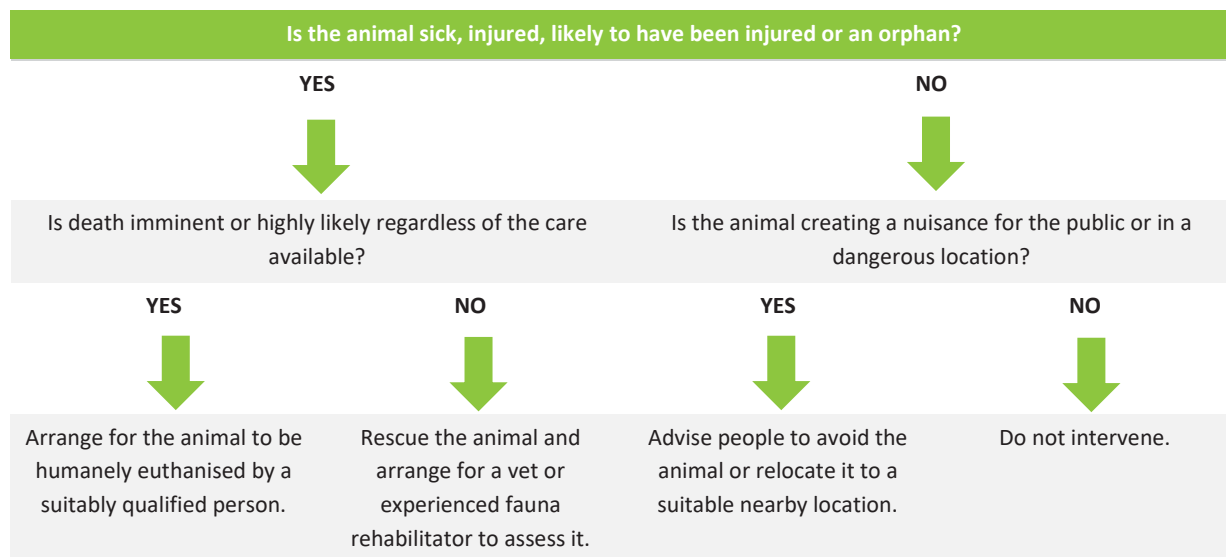
## A12 Fauna Rescue and Release Procedure

The following Fauna Rescue and Release Procedure has been prepared in accordance with the NSW Department of Planning, Industry and Environment *Code of Practice for Injured, Sick and Orphaned Protected Fauna 2011*.

### NATIVE FAUNA ENCOUNTER

If native fauna (including threatened fauna) is encountered during pre-clearance or clearance surveys, the decision tree outlined in Table 6 should be adhered to.

**Table 6: Decision tree on how to respond to a native fauna encounter**



### RESCUING OF NATIVE FAUNA

If rescuing of the animal is chosen to be the most suitable option, the following must be adhered to:

- Assessment of all risk to fauna from environmental hazards and from capture.
- Confirmation that the correct rescue equipment for the type and size of fauna is at hand.
- Confirmation that enough trained personnel for that species and size are present.
- If the rescued wildlife needs assessment by a vet, wildlife rescuer or rehabilitator, ensure that an organisation such as WIRES has been contacted to ascertain an available person relevant to that species.

### TRANSPORTATION OF RESCUED NATIVE FAUNA

When transporting the rescued native fauna to a veterinary surgery, wildlife rescuer, or rehabilitation facility guided by an organisation such as WIRES, the following must be adhered to:

- Ensure transport methods and container sizes are appropriate for the species, size, strength, and temperament of fauna. This may include incorporating padding walls and ensuring no ingestible surfaces are present. Containers must also be designed and positioned so breathing is not restricted.
- Transportation containers are kept at an appropriate temperature for the species (note a range of 25 – 27°C is appropriate for most species and ages; 31°C is appropriate for unfurred joeys and 21°C is appropriate for echidnas, platypuses, and frogs).

- Transportation containers are well ventilated.
- Ensure containers holding snakes and bats include a visible warning label outlining the danger.
- Ensure transportation containers are not left in the back of uncovered utility vehicles or car boots.
- During transportation, adult fauna should not be fed or watered during trips lasting less than a few hours.
- Attain approval by a veterinarian before use of medication to facilitate transport.
- Ensure fauna transport is the sole purpose of the trip.

#### RELOCATION OF NATIVE FAUNA

If the encountered native fauna does not require rescuing, however, is required to be located outside of the construction site, the following must be adhered to:

- A suitable environment must be identified prior to relocation, this is one that:
  - Contains appropriate habitat and adequate good resources.
  - Is occupied by members of the same species.
  - Does not place the animal at a high risk of injury.
  - Is not outside of an area which the fauna would not normally cross (i.e., brush-tail possums rarely move more than 50 m however; wombats have a radius of approximately 50 km).

#### A13 General prevention of Weeds and Pathogens

Construction works on development sites have the potential to introduce and promote the spread of weed species and pathogens. This general procedure is intended to prevent or minimise the spread of priority weed species and some pathogens. For detailed weed management requirements please refer to the **targeted required Weed Eradication Management Plan (WEMP) measures** described in **Appendix B**.

During construction, the Project Manager and Site Supervisor should adhere to best practice methods for weed management, which include:

- Mowing or slashing areas infested with weeds before they seed. This may reduce the propagation of new plants.
- Program works from least to most weed infested areas.
- Clean machinery, vehicles, and footwear before moving to a new location.
- Securely cover loads of weed-contaminated material to prevent weed plant material falling or blowing off vehicles.
- Dispose of weed-contaminated soil at an appropriate waste management facility.
- Remove weeds immediately onto suitable trucks and dispose of without stockpiling.

#### WEED ERADICATION

A Weed Eradication Management Plan (WEMP) has been prepared (Appendix B) which should be referred to in full for weed management measures. The WEMP includes:

- Identification and description of weed infested areas within the site.
- Recommendations for managing weeds.

- Weed control methods.
- Measures to prevent the spread of weeds.
- A monitoring program to measure the success of weed management.
- Communication strategies to improve contractor awareness of weeds and weed management.

### MANAGEMENT OF PATHOGENS

Pathogens are agents such as bacterium, virus or fungus that cause disease in flora and fauna, which are spread on footwear, vehicles, or machinery. The four most common pathogens found in NSW include:

- **Phytophthora (*Phytophthora cinnamomi*):** A soil-borne fungus that attacks the roots of native plant species, causing them to rot and eventually die.
- **Chytrid fungus (*Batrachochytrium dendrobatidis*):** A waterborne fungus that affects native frog species.
- **Myrtle rust (*Uredo rangellii*):** An introduced fungus that attacks young leaves, shoot tips and stems of Myrtaceous plants (such as Bottle Brush, Tea Tree, Lilly Pilly and Turpentine), eventually killing the plant.

Construction works on development sites have the potential to promote the spread of pathogens. This procedure is intended to prevent or minimise the spread of pathogens if they have been identified within the development site. If the occurrence of pathogens is known within the locality, a test for presence through soil or water tests should first be undertaken. If pathogens are present, during construction, the Project Manager and Site Supervisor should adhere to best practice methods for pathogens (Table 7).

**Table 7: Best practice hygiene protocols to prevent the spread of pathogens**

Pathogen	Best Practice Hygiene Protocols
<b>Phytophthora</b>	<ul style="list-style-type: none"> <li>• Minimise work during excessively wet or muddy conditions.</li> <li>• Programming of works should always move from uninfected areas to infected areas.</li> <li>• Set up exclusion zones with fencing and signage to restrict access into contaminated areas.</li> <li>• All personnel (including visitors) to be inducted on Phytophthora management measures for the site. Provide vehicle wash down facility.</li> <li>• Restrict vehicles to designated tracks, trails, and parking areas.</li> <li>• Provide parking and turn-around points on hard, well-drained surfaces.</li> <li>• Provide boot wash down facility.</li> <li>• Restrict personnel to designated tracks and trails.</li> <li>• Use a certified supply of plants and soil that is disease-free.</li> <li>• Retain all potentially affected materials within the contaminated area.</li> <li>• Ensure stockpiles of mulch, topsoil and fill material are separated to avoid potential contamination and spread.</li> </ul>
<b>Chytrid Fungus</b>	<ul style="list-style-type: none"> <li>• Minimise work during excessively wet or muddy conditions.</li> <li>• Programming of works should always move from uninfected areas to infected areas.</li> <li>• Set up exclusion zones with fencing and signage to restrict access into contaminated areas.</li> <li>• All personnel (including visitors) to be inducted on chytrid management measures for the site.</li> <li>• Provide vehicle wash down facility.</li> <li>• Restrict vehicles to designated tracks, trails, and parking areas.</li> <li>• Provide parking and turn-around points on hard, well-drained surfaces.</li> <li>• Provide boot wash down facility.</li> </ul>

Pathogen	Best Practice Hygiene Protocols
	<ul style="list-style-type: none"> <li>• Disinfect with cleaning products containing benzalkonium chloride or 70% methylated spirits in 30% water.</li> <li>• Disinfect hands or change gloves between the handling of individual frogs and between each site.</li> <li>• Only handle frogs when necessary. Use the 'one bag-one frog' approach.</li> <li>• To avoid cross contamination, generally avoid transferring water between two or more separate waterbodies.</li> </ul>
<b>Myrtle Rust</b>	<ul style="list-style-type: none"> <li>• To determine if Myrtle Rust is known within the locality of the development site, the following should be undertaken: <ul style="list-style-type: none"> <li>○ Use of The DPI Myrtle Rust Management Zone map (<a href="http://www.dpi.nsw.gov.au/biosecurity/plant/myrtle-rust/zones">www.dpi.nsw.gov.au/biosecurity/plant/myrtle-rust/zones</a>)</li> <li>○ Photograph potentially infected plants and send to: <a href="mailto:biosecurity@industry.nsw.gov.au">biosecurity@industry.nsw.gov.au</a> for confirmation.</li> </ul> </li> <li>• Programming of works should always move from uninfected areas to infected areas.</li> <li>• Set up exclusion zones with fencing and signage to restrict access into contaminated areas.</li> <li>• All personnel (including visitors) to be inducted on Myrtle rust management measures for the site.</li> <li>• Provide vehicle wash down facility.</li> <li>• All vehicles and machinery to be washed with Truck wash*(or equivalent).</li> <li>• Restrict vehicles to designated tracks, trails, and parking areas.</li> <li>• For medium-long term projects, install a concrete wash down bay which will capture the water in a trench or bunded area.</li> <li>• Water used for wash downs must not be used for dust control.</li> <li>• Personnel working in an infected site should shower and launder clothes (especially hats) before moving to another bushland site.</li> <li>• Provide boot wash down facility.</li> <li>• Footwear and equipment to be cleaned of soil/mud then sprayed with 70% methylated spirits in 30% water.</li> <li>• Use a certified supply of plants and soil that is disease-free (the Australian Nursery Industry <i>Myrtle Rust Management Plan</i> (McDonald 2011) provides best practice Myrtle rust management that is to be expected from suppliers).</li> <li>• Plant material should be buried on site if possible.</li> <li>• Do not dispose of waste at another bushland site.</li> <li>• Buried material sites must be mapped to prevent re-exposure, especially if located near utility easements.</li> <li>• If material cannot be buried advice should be sought from Liverpool City Council.</li> </ul>

## A14 Re-Use of Floristic Material and Native Habitat Features Strategy

### COLLECTION OF FLORISTIC MATERIAL

Native seed collection may be completed prior to construction to later be used in project landscaping, or nearby conservation areas. If this is the case, the following should be adhered to:

- Seed should first be collected from all areas that are to be cleared as part of the project. By selecting a seed source that is from plants growing in similar environmental conditions nearby, the plants should be naturally adapted to local conditions and more likely to survive and prosper in proposed re-use areas.

- Carry out all seed collection in accordance with the Florabank Guidelines (Florabank, 2000) and Model Code of Practice (Mortlock, 1998). Experienced and licensed seed collectors should carry out the seed collection.

#### RELOCATION OF WOODY DEBRIS AND BUSH ROCK

Many native fauna species utilise woody debris and bush rock for shelter, basking to hide from predators, find food and avoid extreme weather. When woody debris and bush rock are required to be removed from a development site, consideration should be given to finding suitable locations for re-use of these important habitat features.

Term	Definition
<b>Woody Debris</b>	Trees and wood, whether living or dead, at least 100 mm in diameter and 500 mm long, including hollows.
<b>Bush Rock</b>	Loose rock occurring on rock or soil surfaces.

Prior to relocation of woody debris found within the development site, consultation should be undertaken with DPHI and the Project Ecologist to determine a suitable location for re-use to ensure it does not have a negative impact on the receiving environment. For example, in areas of high-quality bushland, there may already be enough suitable hollows, fallen logs or bush rock and adding more may cause unnecessary disturbance or create a fire hazard.

If a suitable relocation area (such as a nearby conservation area) has been agreed upon by DPHI and the development proponent, the Project Manager and Site Supervisor should ensure the following best practice methods are undertaken during relocation:

- Removal, stockpiling, transportation, and relocation of woody debris and/or bush rock is carried out in a manner that minimises disturbance to native vegetation (including the canopy, shrubs, dead trees, fallen timber and groundcover species) or bush rock.
- The spread of any weeds or pathogens that may be in the soil is avoided when relocating woody debris and bush rock from stockpiles.
- The Project Ecologist is consulted with to provide advice on positioning woody debris and bush rock in designated relocation areas.
- Topsoil disturbance is kept to a minimum and is not heaped up against woody debris or bush rock because of the potential to provide habitat for rabbits.
- Woody debris is placed evenly across the site.
- Where woody debris is to be mulched the Project Manager and/or Site Supervisor should ensure that weeds are separated from native vegetation.

#### USE OF NEST BOXES

Nest boxes can be used to provide supplementary breeding habitat and shelter for hollow-dependant fauna where hollows have been removed. If requested by DPHI, nest boxes may be required to be installed as a replacement for the removal of the identified hollow-bearing trees. Generally, it is recommended that three (3) nest boxes are installed for every hollow-bearing tree removed. Ideally, nest boxes should replicate the hollows being replaced as close as possible due to specific species requirements as outlined below.

If the installation of nest boxes is required, the following must be considered in consultation with the Project Ecologist:

- The target species.
- The tree hollow preferences of native hollow-dependant fauna known or likely to occur in the locality.
- The sizes, types, and quantities of potential tree hollows to be removed.
- The sizes, types and quantities of tree hollows existing in adjacent areas.
- The design, materials and quantity of nest boxes required.
- Whether the nest boxes are required to fill a short-term gap in the availability of hollows (e.g., during construction) or to compensate for the long-term reduced availability of hollows.
- Monitoring and maintenance of the nest boxes.