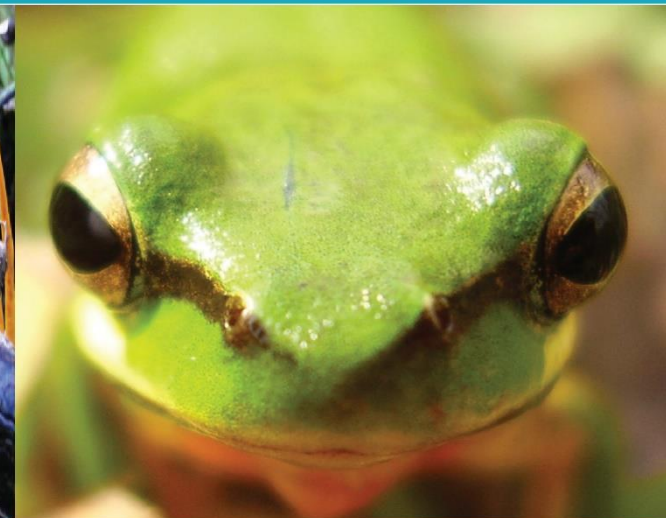




**TRIVERS
BUSHFIRE
& ECOLOGY**

A TBE ENVIRONMENTAL COMPANY



VEGETATION MANAGEMENT PLAN

Proposed Development
Lots 3 and 4 DP 26902
10 and 12 Boondah Road
Warriewood

28 June 2024
(REF: HEN09ECO)

VEGETATION MANAGEMENT PLAN

Lots 3 and 4 DP 26902, 10 and 12 Boondah Road, Warriewood

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 Date: **28 June 2024**

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Figure 1 – Proposed VMP area (Green)

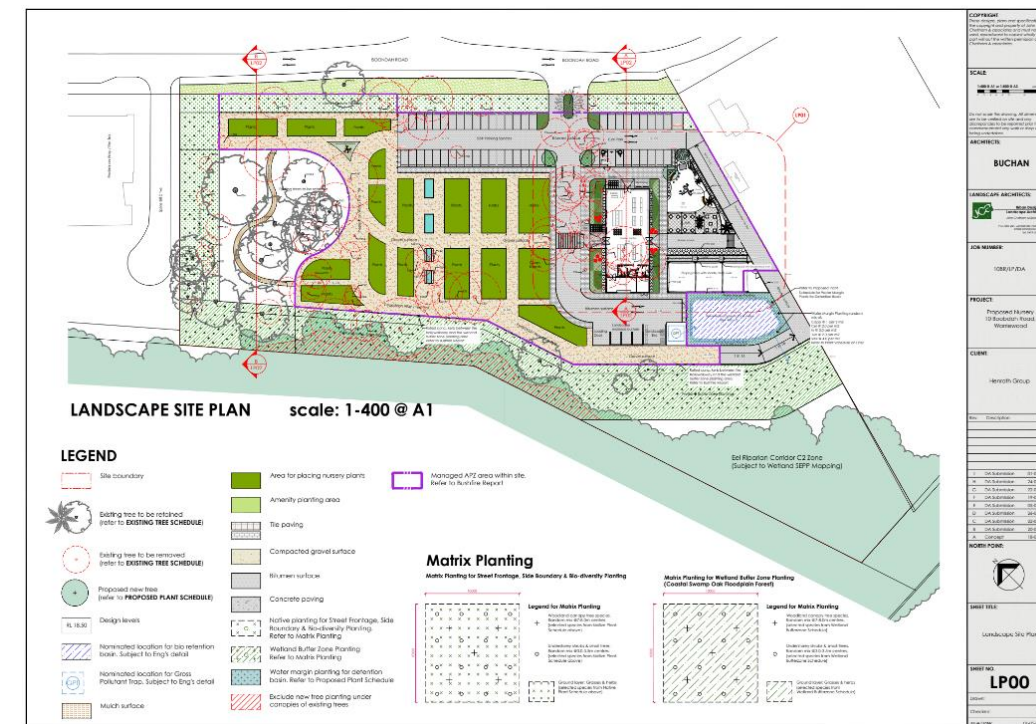


Figure 2 – Proposed site plan



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VEGETATION MANAGEMENT AIMS

The purpose of this Vegetation Management Plan (VMP) is to define and document the actions required to restore and manage 8900 m² (0.88 ha) of Plant Community Types (PCT) 3638 South Coast Sands Bangalay Forest (0.29 ha) and 4028 Estuarine Swamp Oak Twig-rush Forest (0.59 ha) within Lots 3 & 4 DP 26902, 10 & 12 Boondah Rd, Warriewood. PCT 3638 within the site is commensurate with Bangalay Sand Forest of the Sydney Basin and South East Corner bioregions which is listed as an Endangered Ecological Community (EEC) under the NSW *Biodiversity Conservation Act* (2016). PCT 4028 within the site is commensurate with Swamp Oak Floodplain Forest of the New South Wales North Coast, Sydney Basin and South East Corner bioregions which is listed as an Endangered Ecological Community (EEC) under the NSW *Biodiversity Conservation Act* (2016). PCT 4028 is commensurate with Coastal Swamp Oak (*Casuarina glauca*) Forest of New South Wales and South East Queensland ecological community which is listed as an Endangered Ecological Community (EEC) within the Commonwealth *EPBC Act* (1999).

The aims of this VMP include:

- Installation of permanent protective fencing and erosion control fencing.
- Engagement of an independent project ecologist to undertake ongoing monitoring, compliance inspections and certifications.
- Engagement of a suitably qualified bushland regeneration team.
- Restoration and management of PCT 3638 (0.29 ha) to a fully structured and diverse community.
- Restoration and management of PCT 4028 (0.59 ha) to a fully structured and diverse community.
- Weed control and maintenance for a total period of 5 years.
- Management of the restored vegetation, protective fencing and 15 x installed nest boxes for a period of 5 years, with regular inspections by the project ecologist and compliance certificates sent to Council.

SITE PREPARATION & PROTECTION OF NATIVE VEGETATION

The following site preparation must be undertaken:

- Install temporary tree protection fencing during construction for all native remnant trees to be retained, bordering the proposed development (see Schedule 1).
- Installation of permanent protective fencing with three (3) locked access gates and signage around the entire development to prevent public access and limit domestic animals entering the site as shown in Schedule 1.
- Sediment fencing is to be installed immediately adjacent or in conjunction with the permanent protection fencing along the boundary of VMP management area where it borders the construction zone for the duration of the construction period in compliance with *Soils & construction Managing Urban Stormwater* (Landcom 2004).
- Commence weed control within the whole of the VMP management area prior to commencing planting / enrichment works.
- All litter and any other waste material on site is to be removed prior to restoration works. Ongoing rubbish removal throughout the maintenance period is to be undertaken.

TREE PROTECTION

A project arborist is to be appointed to supervise construction works close to trees marked for retention. The project arborist along with the site manager will be responsible for marking trees for retention and ensuring tree protection measures including fencing and signage are put in place prior to any clearing.

FENCING AND SIGNAGE

Permanent protective fencing of 1.8m high black ringlock or chainlink fence with either timber or steel posts and rail is to be installed (Figure 3). This fence is to remain in perpetuity to limit domestic pets such as dogs from entering the site. No barbed wire fencing is to be used. Signage will be placed along the fenceline to inform the public that the retained bushland is an environmental protection area with restricted access (Figure 4).

REVEGETATION SPECIFICATIONS

Table 1 provides a recommended revegetation species list. Only plant species typically occurring within PCT 3638 and PCT 4028 are to be utilised for revegetation purposes, any variation from Table 1 and Table 2 must be approved by the project ecologist. All plant stock selected for restoration are to be sourced from the local area, preferably within

the Northern Beaches Council LGA. A minimum of 28 native species shall be used as part of the revegetation works.



Figure 3 – Fencing example



Figure 4 – Signage example

Revegetation planting is to be undertaken preferably in March / April or September / October to avoid mid-summer heat and potential frosts. Revegetation works shall include the planting of native tree, shrub and groundcover species commensurate with PCT 3638 and PCT 4028 as indicated in Table 1 and Table 2.

The planting and regeneration of the VMP management area must achieve the densities nominated. The estimated numbers of plants required are calculated within Table 1 and Table 2. As a minimum, holes for tree planting are to be twice the depth and twice the width of the pot size of the plant.

Revegetation Maintenance

All installed plantings are to be protected with a 2L cardboard box or corflute guards with small supporting stakes to protect from frost and grazing animals such as rabbits if required. If rabbit baiting is to occur, Pindone or 1080 can be utilised. Baiting is to be undertaken 4 weeks prior to revegetation and throughout the entire maintenance period (subject to Local Government guidelines).

Caution should be used if 1080 is to be applied, due to the urban nature of the site, and appropriate signage restricting domestic animals should be put in place, to minimise impacts to residents' pets

Weed control works, bush regeneration and restoration are to be undertaken over a minimum maintenance period of five (5) years which begins at the end of the construction phase. Weed control and restoration works are to be monitored and audited by an appointed project ecologist over 5 years to achieve the restoration performance targets.

It is expected that at least 95% of plantings will survive and will be progressively replaced if any plants are observed to die or be destroyed. If the success rate is less than 95%, contingency planting is to be undertaken to re-establish the performance targets required. Watering of all revegetated areas is to be undertaken a minimum of once a week for the first six to eight weeks post planting, or as required in the event of a dry spell. A 15% contingency allocation is to be set aside for all works to ensure compliance with the performance targets.

Revegetation zone specifications

The VMP area has been split into two zones within each PCT to meet the specific requirements for each PCT. These zones can be viewed in Schedule 1.

PCT 3638 and PCT 4028 – Bush Regeneration Zone

Revegetation within this zone shall include the planting of a fully structured community with 50% density to enrich the existing vegetation from PCT 3638 (0.15 ha) and PCT 4028 (0.37 ha). The following planting densities and numbers are to be achieved within the bush regeneration zone:

- Canopy – 1 per 100m²
- Sub-canopy – 1 per 40 m²
- Shrubs – 1 per 20m²
- Groundcovers – 3 per 2m²
- Other (climbers) – 1 per 80m²

PCT 3638 and 4028 – Revegetation Areas

Revegetation within this zone shall include the planting of a fully structured community within PCT 3638 (0.14 ha) and PCT 4028 (0.22 ha). The following planting densities and numbers are to be achieved within the enrichment revegetation zone:

- Canopy – 1 per 50 m²
- Sub-canopy – 1 per 20m²
- Shrubs – 1 per 10m²
- Groundcovers – 3 per 1m²
- Other (climbers) – 1 per 40m²

NON-CONFORMANCE WITH VMP

Non-conformance VMP requirements, specified BAM composition scores and restoration performance targets are to be assessed and reported within the annual compliance audit. Non-compliance is to be rectified on an annual basis to ensure the specified BAM composition scores and restoration performance targets are met.

Contingency restoration works may also include:

- Additional target weed control to reach the target weed coverage;
- Additional enrichment plantings to rectify areas of low diversity or cover that do not meet benchmark conditions;
- Rectification of fencing;
- Removal of waste or soil;
- Removal of litter;
- Rectify damage to roots of trees; and
- Sediment and erosion control.

PROJECT MANAGEMENT, REPORTING AND AUDITING

The following project management tasks are to be undertaken:

1. Engagement of qualified and experienced bushland regeneration contractors to undertake all restoration works (Supervisor - *Certificate III/IV in Conservation and Land Management* or equivalent, with at least three (3) years of field experience);
2. All plant stock is to be certified as local provenance from the supplier, with preference for seeds collected from similar community types within the locality;
3. Engagement of an independent project ecologist to undertake auditing, reporting and compliance certification;
4. Photo points and monitoring quadrats are to be set up prior to contract work to establish a baseline and these are to be monitored at least annually for 5 years; and
5. A compliance statement is to be submitted to Council upon completion of the revegetation works (practical completion) and at the end of each year for the 5-year maintenance period assessing compliance with the stipulated restoration performance targets.

RESTORATION PERFORMANCE TARGETS

The following restoration performance targets are to be audited and compliance certificate issued by the project ecologist demonstrating satisfactory completion of the works in accordance with the VMP and as shown on Schedule 1.

1. Install a 1.8 m high permanent ringlock or chainlink protective fence with metal posts and railing is to be installed around the proposed development footprint as shown in Schedule 1.
2. Final weed coverage will not exceed more than 5% coverage at the end of Year 1 and less than 3% at the end of Year 5. Site to be free of priority weed species listed for the Greater Sydney Region within the Biosecurity Act (2015).
3. Native vegetation plant density within the restoration zone is to comply with the revegetation specifications in Table 1 and Table 2.
4. A minimum of 28 locally occurring native species commensurate with PCT 3638 and PCT 4028 as specified in Tables 1 and 2, are to be utilised in the revegetation works.
5. Fifteen (15) nest boxes/salvaged hollows installed to provide habitat for hollow-dependent fauna.
6. A minimum of 95% plant survival is to be achieved for all planted native vegetation, and natural growth rates and plant cover is to be typical of PCT 3638 and PCT 4028 after 5 years.
7. For PCT 3638 an overall BAM composition vegetation integrity score of no less 56.6 is to be achieved for the restored bushland VMP area.
8. For PCT 4028 an overall BAM composition vegetation integrity score of no less 59.8 is to be achieved for the restored bushland VMP area.

ONSITE VEGETATION & CONDITION

The vegetation on site was identified as PCT 3638 Coastal Sand Forest and PCT 4028 Estuarine Swamp Oak Twig-rush Forest.

PCT 3638 – South Coast Sands Bangalay Forest

Canopy - *Eucalyptus botryoides*, *Angophora costata*, *Glochidion ferdinandi* and *Syncarpia glomulifera* to a height of 15–20 m.

Mid-storey - The majority of the native mid-storey is absent. Naturalised exotic species such as *Cestrum parqui*, *Lantana camara* and *Senna pendula* are abundant.

Ground layer - The ground layer contains limited native species but includes *Dichondra repens*, *Commelina cyanea*, *Hydrocotyle sibthorpioides*, *Oplismenus aemulus*, *Solanum americanum*, *Calochlaena dubia* and *Geranium homeanum*.

PCT 4028 – Estuarine Swamp Oak Twig-rush Forest

Canopy - Canopy consists of *Casuarina glauca* to a height of 15 – 22 m. Occasionally *E. botryoides* are present at the edges of this vegetation. Naturalised exotic species such as *Erythrina skyesii* and *Cinnamomum camphora* are abundant in some areas.

Mid-Storey - The mid-storey is largely devoid of native vegetation; however, occasional small trees, palms and shrubs are present such as *Melaleuca linariifolia*, *Melaleuca ericifolia*, *Glochidion ferdinandi*, *Parsonsia straminea* and *Livistona australis*. The mid-storey contains a high abundance of naturalised exotics such as *Lantana camara*, *Senna pendula*, *Ipomoea indica*, *Arundo donax*, *Anredera cordifolia* and *Lonicera japonica*.

Ground Layer - The ground layer contains a number of sedges, herbs and ferns including *Gahnia clarkei*, *Hypolepis muelleri*, *Centella asiatica*, *Carex appressa*, *Calochlaena dubia*, *Persicaria hydropiper*, *Ranunculus plebeius*, *Oplismenus spp.*, *Commelina*

cyanea, *Centella asiatica*, *Blechnum cartilagineum* and *Viola hederacea*. Exotic species are sparse and include *Tradescantia fluminensis* and *Cenchrus clandestinus*.



Site Photo 1 – Disturbed PCT 3638 South Coast Sands Bangalay Forest



Site Photo 2 – PCT 4028 Estuarine Swamp Oak Twig-rush Forest

THREATENED ECOLOGICAL COMMUNITIES

Ecological survey and assessment has been undertaken in accordance with the *Biodiversity Assessment Methodology* (BAM) as well as relevant legislation including the *EP&A Act* and relating to the species provisions of the *BC Act*.

Threatened Communities

PCT 3638 Coastal Sand Bangalay Forest within the site is commensurate with Bangalay Sand Forest of the Sydney Basin and South East Corner bioregions which is listed as an Endangered Ecological Community (EEC) under the NSW *Biodiversity Conservation Act* (2016). PCT 4028 Estuarine Swamp Oak Twig-rush Forest within the site is commensurate with Swamp Oak Floodplain Forest of the New South Wales North Coast, Sydney Basin and South East Corner bioregions which is listed as an Endangered Ecological Community (EEC) under the NSW *Biodiversity Conservation Act* (2016). PCT 4028 is commensurate with Coastal Swamp Oak (*Casuarina glauca*) Forest of New South Wales and South East Queensland ecological community which is listed as an Endangered Ecological Community (EEC) within the Commonwealth *EPBC Act* (1999).

Threatened Fauna

Six (6) threatened fauna species were recorded or recorded with possible certainty within or beyond the study area including:

- Eastern Cave Bat (*Vespadelus troughtoni*)

- Grey-headed Flying-fox (*Pteropus poliocephalus*)
- Little Bent-winged Bat (*Miniopterus australis*)
- Large Bent-winged Bat (*Miniopterus orianae oceanensis*)
- Powerful Owl (*Ninox strenua*)
- Southern Myotis (*Myotis macropus*)

RESTORATION SPECIES LIST

Table 1 - Revegetation species for planting PCT 3638 South Coast Sands Bangalay Forest

Scientific Name	Common Name	Bush Regeneration Area 1400m ²	Revegetation Area 1500 m ²
Canopy Planting		1 per 100m² = 14	1 per 50m² = 30
<i>Eucalyptus botryoides</i>	Southern Mahogany	10	20
<i>Eucalyptus pilularis</i>	Blackbutt	2	5
<i>Angophora costata</i>	Sydney Red Gum	2	5
Sub-canopy		1 per 40m² = 35	1 per 20m² = 75
<i>Glochidion ferdinandi</i>	Cheese Tree	8	20
<i>Banksia serrata</i>	Old Man Banksia	8	20
<i>Banksia integrifolia</i>	Coast Banksia	8	20
<i>Melaleuca linariifolia</i>	Snow-in-summer	8	10
<i>Acacia longifolia</i>	Sydney Golden Wattle	3	5
Shrub Planting		1 per 20m² = 70	1 per 20m² = 25
<i>Breynia oblongifolia</i>	Coffee Bush	15	5
<i>Pittosporum revolutum</i>	Thatched Saw-sedge	15	5
<i>Elaeocarpus reticulatus</i>	Blueberry Ash	15	4
<i>Leucopogon lanceolatus</i>	Lance-leaf Beard Heath	15	4
<i>Ozothamnus diosmifolius</i>	Rice Flower	5	4
<i>Banksia ericifolia</i>	Heath-leaved Banksia	5	3
Groundcover Planting		3 per 2m² = 2100	3 per 1m² = 4500
Grasses and grass-like species		1400	3000
<i>Microlaena stipoides</i>	Weeping Grass	300	550
<i>Entolasia marginata</i>	Bordered Panic	300	550
<i>Lomandra longifolia</i>	Spiny-headed Mat-rush	300	450
<i>Imperata cylindrica</i>	Blady Grass	100	450
<i>Oplismenus aemulus</i>	Basket Grass	100	200
<i>Themeda triandra</i>	Kangaroo Grass	100	200
Forbs		700	1500
<i>Gonocarpus teucroides</i>	Forest Raspwort	125	250
<i>Dianella caerulea</i>	Blue Flax-lily	125	250
<i>Dichondra repens</i>	Kidney Weed	125	200
<i>Lobelia purpurascens</i>	White Root	125	200
<i>Commelina cyanea</i>	Scurvy Weed	100	150
<i>Viola hederacea</i>	Native Violet	50	100
<i>Geranium solanderi</i>	Native Geranium	50	50
Climber Planting		1 per 80m² = 18	1 per 40m² = 38
<i>Billardiera scandens</i>	Hairy Apple Berry	6	10
<i>Hibbertia scandens</i>	Snake Vine	6	10
<i>Kennedia rubicunda</i>	Dusky Coral Pea	3	9
<i>Hardenbergia violacea</i>	Purple Coral Pea	3	9
Subtotal		2167	4693
Total No. of plants		6860	



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Vegetation Management Plan

Table 2– Revegetation species for planting PCT 4028 Estuarine Swamp Oak Twig-rush Forest

Scientific Name	Common Name	Bush Regeneration Area 3700 m ²	Revegetation Area 2200 m ²
Canopy Planting		1 per 100m² = 37	1 per 50m² = 44
<i>Casuarina glauca</i>	Swamp She-oak	22	35
<i>Eucalyptus botryoides</i>	Southern Mahogany	15	9
Sub-canopy		1 per 40m² = 93	1 per 20m² = 110
<i>Glochidion ferdinandii</i>	Cheese Tree	25	35
<i>Melaleuca linariifolia</i>	Snow-in-summer	25	35
<i>Acacia longifolia</i>	Sydney Golden Wattle	15	25
<i>Notelaea longifolia</i>	Large Mock olive	15	25
<i>Melaleuca styphelioides</i>	Prickly-leaved Paperbark	13	15
Shrub Planting		1 per 20m² = 185	1 per 10m² = 220
<i>Melaleuca ericifolia</i>	Swamp Paperbark	40	45
<i>Goodenia ovata</i>	Hop Goodenia	40	45
<i>Callistemon salignus</i>	Willow Bottlebrush	35	40
<i>Breytia oblongifolia</i>	Coffee Bush	25	30
<i>Leptospermum polygalifolium</i>	Tantoon	15	30
<i>Ozothamnus diosmifolius</i>	Rice Flower	15	15
<i>Polyscias sambucifolia</i>	Elderberry Panax	15	15
Groundcover Planting		3 per 2m² = 5550	3 per 1m² = 6600
Grasses and grass-like species		3700	5200
<i>Machaerina juncea</i>	Twig-rush	1000	1500
<i>Juncus kraussii</i>	Sea Rush	1000	1500
<i>Gahnia clarkei</i>	Tall-Saw Sedge	800	800
<i>Entolasia marginata</i>	Bordered Panic Grass	500	500
<i>Microlaena stipoides</i>	Weeping Grass	200	500
<i>Carex appressa</i>	Tall Sedge	100	200
<i>Oplismenus aemulus</i>	Basket Grass	100	200
Forbs		1850	1300
<i>Samolus repens</i>	Sea Primrose	500	300
<i>Viola hederacea</i>	Native Violet	500	300
<i>Commelina cyanea</i>	Scurvy Weed	200	200
<i>Dianella caerulea</i>	Blue Flax-lily	200	200
<i>Centella asiatica</i>	Indian Pennywort	200	150
<i>Bacopa monnieri</i>	Bacopa	150	50
<i>Lobelia purpurascens</i>	White Root	50	50
<i>Dichondra repens</i>	Kidney Weed	50	50
Climber Planting		1 per 80m² = 46	1 per 40m² = 55
<i>Parsonsia straminea</i>	Monkey Rope	16	20
<i>Hibbertia scandens</i>	Snake Vine	10	15
<i>Kennedia rubicunda</i>	Dusky Coral Pea	10	10
<i>Pandorea pandorana</i>	Wonga Wonga Vine	10	10
Subtotal		5851	7029
Total No. of plants		12880	

RECORDED FAUNA

Powerful Owl

Powerful owl (*Ninox strenua*) was recorded during fauna surveys by TBE (BCAR 2022). The restoration actions and design specifications of the surrounding landscape are aimed at providing a habitat conducive to the requirements for this species and its prey. Powerful owls forage, mainly on medium-sized arboreal marsupials, particularly greater glider, common ringtail possum and sugar glider. It is anticipated ringtail possum and sugar glider would be the main arboreal marsupial prey for local powerful owls. Flying-foxes and birds are also part of their diet when there is lower availability of mammal prey.

As many prey species require hollows and a shrub layer, these are identified as important components for powerful owls (Bionet Wildlife Atlas 2024). Powerful owls themselves nest in large tree hollows (0.5m deep) in large eucalypts (80+ DBH) and nesting occurs from late autumn to mid-winter (May to August). The largest hollows on site were recorded as approximately 10 cm in diameter and it is however unlikely the species would be breeding on site, given the lack of large hollows.

Microbats

A number of hollow-bearing trees were located containing suitable sized hollows for microbats, including four (4) hollow-bearing trees (HT7, HT8, HT9 and HT10), which are to be removed. It should be noted that all but HT1 (*Casuarina glauca*) are exotic Black Poplar (*Populus nigra*) trees, and the hollows are likely to be shallower and of less quality than those found in native *Eucalyptus* sp. Additionally, all threatened microbats identified within the site were recorded with only possible certainty, however, a precautionary approach will be taken to ensure if any roosting habitat is within these trees, the relevant hollow section will be safely recovered and relocated to the conserved bushland area. If hollows cannot be salvaged, then they will be replaced with appropriate nest boxes. A minimum five (5) microbat nest boxes are to be installed to provide additional habitat for any displaced individuals as a result of the development.

Grey-headed Flying-fox (GHFF)

Grey-headed flying-fox were recorded on site during fauna surveys, however there are no known camps nor were any recorded within the site. Therefore, GHFF are considered to only utilise the site as foraging habitat and as such focus has been put on planting native foraging resources. Rainforest species have been included in the revegetation specifications including *Notelaea longifolia*, *Polyscias sambucifolia*, *Pittosporum revolutum* and *Elaeocarpus reticulatus*, all of which produce fruit for GHFF. Nectar and pollen will also be available to GHFF from existing *Eucalyptus* sp. and additional *Eucalyptus* sp. introduced during the revegetation works.

Threatened Fauna Considerations

Factors to consider include:

- Lighting elements to limit light pollution emanating from adjacent development
- Landscape planting of a visual barrier within each lot bordering the restoration area to filter light and over time create 'night' shading.
- Roadside hedging to capture highlight beams.
- Progressive weeding of exotic shrub layer which currently provides foraging habitat in particular powerful owl. Natives should be planted and exotics replaced gradually only once the natives have achieved a reasonable level of growth. This is particularly true for
- Installation of nest boxes/salvaged hollows in the restoration area to provide replacement roosting habitat for potentially displaced microbats.
- Installation of nest boxes/salvaged hollows to encourage arboreal mammals and birds, and subsequently prey items for powerful owl.

Light reduction

Artificial light from the proposed development impacts fauna species in terms of behaviour and/or physiology, alter the availability of habitat or food resources and can attract predators and invasive pests. To minimise light pollution within the conserved bushland, particularly to encourage bandicoot foraging, the adjacent development will have building design to limit artificial lighting.

- Window film on buildings will be installed to reduce light export by 75%.
- Light baffles, deflectors and shields are to be used on light sources to direct light away from protected habitat.
- Non-reflective dark-coloured surfaces should be used where possible.
- Access pathways are to use low lumen and restricted height lighting (<0.5m) with directional shields. Light fixtures are to be located as close to the ground as possible and shielded (Figure).
- There is to be no use of external lighting on buildings facing the protected restoration area.
- Strategic native species or hedge planting to create a dark night space for nocturnal fauna.

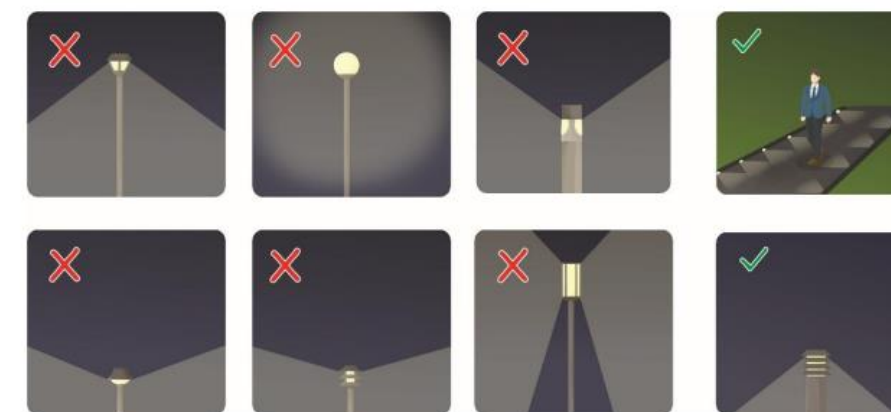


Figure 5 – Examples of outdoor wildlife friendly lighting for accessways (National Pollution Guidelines for Wildlife - DEE 2020)

DOMESTIC PETS

The restoration area will be designed to limit access from domestic animals entering the site. The area is to have a 1.2m high chainlink or ringlock fence, with locked gates to discourage both the public, and domestic animals, from disturbing resident native fauna. The fence is to have signage indicating that it is a protected environmental area, and activities which will impact the ecological community and hinder its recovery are prohibited.

WEED CONTROL

Primary (initial) weed control is to be undertaken prior to any site works to remove highly invasive weed propagules and the bulk of exotic ground layer grasses. All ground and shrub layer weed control works are to be undertaken by qualified personnel from an experienced bushland regeneration company utilising low impact and best practice weed control, restoration, revegetation and bush regeneration methods.

In accordance with the *Biosecurity Act 2015*, all pest plants are regulated with a general biosecurity duty to prevent, eliminate or minimize any biosecurity risk they may pose. Any person who deals with any plant, who knows (or ought to know) of any biosecurity risk, has a duty to ensure the risk is prevented, eliminated or minimised, so far as is reasonably practicable.

Table 3– Weed species identified within the site

Scientific name	Common name	Weed Control Priority
TREES		
<i>Cinnamomum camphora</i>	Camphor Laurel	HIGH
<i>Erythrina sykesii</i>	Coral Tree	HIGH
<i>Phoenix canariensis</i>	Phoenix Palm	HIGH
<i>Salix babylonica</i>	Weeping Willow	HIGH
<i>Syagrus romanzoffiana</i>	Cocos Palm	HIGH
<i>Morus alba</i>	Mulberry	MEDIUM
<i>Populus nigra</i>	Black Poplar	MEDIUM
SHRUBS		
<i>Cestrum parqui</i> *	Green Cestrum	VERY HIGH
<i>Rubus fruticosus</i> sp. agg.*	Blackberry Complex	VERY HIGH
<i>Lantana camara</i> *	Lantana	VERY HIGH
<i>Ligustrum lucidum</i>	Broad-leaf Privet	HIGH
<i>Ligustrum sinense</i>	Narrow-leaf Privet	HIGH
<i>Hedychium gardnerianum</i>	Ginger Lily	HIGH
<i>Olea europaea</i> subsp. <i>cuspidata</i>	African Olive	HIGH
<i>Ricinus communis</i>	Castor Oil Plant	HIGH
<i>Senna pendula</i> var. <i>glabrata</i>	Easter Cassia	HIGH
<i>Ochna serrulata</i>	Mickey-Mouse Plant	MEDIUM
<i>Solanum mauritanium</i>	Wild Tobacco	MEDIUM
<i>Dimorphotheca ecklonis</i>	Cape Daisy	LOW
GROUNDCOVERS		
<i>Asparagus aethiopicus</i> *	Asparagus Fern	VERY HIGH
<i>Cortaderia selloana</i> *	Pampas Grass	VERY HIGH
<i>Ludwigia peruviana</i> *	Ludwigia	VERY HIGH
<i>Senecio madagascariensis</i> *	Fireweed	VERY HIGH
<i>Ageratina adenophora</i>	Crofton Weed	HIGH
<i>Andropogon virginicus</i>	Whisky Grass	HIGH
<i>Arundo donax</i>	Giant Reed	HIGH
<i>Axonopus fissifolius</i>	Narrow-leaved Carpet Grass	HIGH
<i>Cenchrus clandestinus</i>	Kikuyu	HIGH
<i>Ehrharta erecta</i>	Panic Veldtgrass	HIGH
<i>Foeniculum vulgare</i>	Wild Fennel	HIGH
<i>Lilium formosanum</i>	Formosan Lily	HIGH
<i>Paspalum dilatatum</i>	Paspalum	HIGH
<i>Sporobolus africanus</i>	Parramatta Grass	HIGH
<i>Stenotaphrum secundatum</i>	Buffalo Grass	HIGH
<i>Xanthium occidentale</i>	Noogoora Burr	HIGH
<i>Watsonia meriana</i>	Wild Watsonia	HIGH
<i>Chlorophytum comosum</i>	Spider Plant	MEDIUM
<i>Cirsium vulgare</i>	Spear Thistle	MEDIUM
<i>Conyza bonariensis</i>	Flaxleaf Fleabane	MEDIUM
<i>Conyza sumatrensis</i>	Tall Fleabane	MEDIUM
<i>Cyperus brevifolius</i>	Mullumbimby Couch	MEDIUM
<i>Cyperus eragrostis</i>	Tall Flat-sedge	MEDIUM
<i>Erechtites valerianifolius</i>	Brazilian Fireweed	MEDIUM
<i>Paspalum urvillei</i>	Vasey Grass	MEDIUM
<i>Phytolacca octandra</i>	Inkweed	MEDIUM
<i>Plantago lanceolata</i>	Ribwort	MEDIUM
<i>Poa annua</i>	Winter Grass	MEDIUM
<i>Setaria parviflora</i>	Pigeon Grass	MEDIUM
<i>Sida rhombifolia</i>	Arrowleaf Sida	MEDIUM
<i>Solanum nigrum</i>	Black Nightshade	MEDIUM

<i>Tagetes minuta</i>	Stinking Roger	MEDIUM
<i>Verbena bonariensis</i>	Purpletop Vervain	MEDIUM
<i>Verbena litoralis</i>	Coastal Vervain	MEDIUM
<i>Zantedeschia aethiopica</i>	Arum Lily	MEDIUM
<i>Cyclosporum leptophyllum</i>	Slender Celery	LOW
<i>Euphorbia peplus</i>	Petty Spurge	LOW
<i>Hydrocotyle bonariensis</i>	Large Leaf Penny Wort	LOW
<i>Hypericum perfor</i>	St. Johns Wort	LOW
<i>Lysimachia arvensis</i>	Scarlet Pimpernel	LOW
<i>Rumex crispus</i>	Curly Dock	LOW
<i>Sonchus oleaceus</i>	Common Sow-thistle	LOW
<i>Soliva sessilis</i>	Jojo	LOW
<i>Taraxacum officinale</i>	Dandelion	LOW
<i>Trifolium repens</i>	White Clover	LOW
Climbers		
<i>Anredera cordifolia</i>	Madeira Vine	VERY HIGH
<i>Ipomoea indica</i> *	Morning Glory	VERY HIGH
<i>Acetosa sagittatus</i>	Turkey Rhubarb	HIGH
<i>Lonicera japonica</i>	Japanese Honeysuckle	HIGH
<i>Tradescantia fluminensis</i>	Wandering Trad	HIGH
<i>Passiflora edulis</i>	Passonfruit	MEDIUM

*Denotes priority weed (DPI 2023)

WEED CONTROL

Primary (initial) weed control is to be undertaken prior to any site works to remove highly invasive weed propagules and the bulk of exotic ground layer grasses. All ground and shrub layer weed control works are to be undertaken by qualified personnel from an experienced bushland regeneration company utilising low impact and best practice weed control, restoration, revegetation and bush regeneration methods.

In accordance with the *Biosecurity Act 2015*, all pest plants are regulated with a general biosecurity duty to prevent, eliminate or minimize any biosecurity risk they may pose. Any person who deals with any plant, who knows (or ought to know) of any biosecurity risk, has a duty to ensure the risk is prevented, eliminated or minimised, so far as is reasonably practicable.

HERBICIDE USE

Highly invasive or priority weeds may need to be treated with herbicide rather than by manual methods. Applying herbicides near waterbodies or in areas of existing native vegetation is to be avoided due to the sensitivity of waterways and native flora and fauna species.

The use of low residue and low toxicity herbicides is recommended in accordance with the manufacturer's labels. Only operators with *Chemcert* or equivalent training must undertake the spraying of weeds. The operator must evaluate the success of each treatment after a set period of time according to the labelled effective method of treatment of each species for each herbicide.

All herbicides must be applied according to the herbicide usage label and provisions of the Protection of the Environmental Operations Act (NSW). Weeding within the restoration areas is to be undertaken by hand, through cut and paint or paint and scape, or where unavoidable via spot spraying. No heavy machinery is to be used for weed control.

SEDIMENT AND EROSION CONTROL

Sediment and erosion control is to be installed in accordance with the "Blue Book" (Landcom 2004) and in accordance with an approved sediment and erosion control plan. Sediment fencing is to be placed on the boundary of all earth works and a permanent fence of stable pathways are to protect the conservation areas from trampling, damage and unauthorised access. Sediment and erosion control measures are to be monitored on a monthly basis for the first 6 months, then every 6 months for the maintenance period.

RUBBISH REMOVAL

All waste and rubbish on site is to be removed in conjunction with Stage 1 VMP works. The landowner is ultimately responsible for waste removal, in particular large scale waste such as old vehicles needing to be sent to landfill. If hazardous materials are located on site the landholder must ensure the material is disposed of at the appropriate facilities. Small scale rubbish removal can be completed by the bush regeneration

contractors where practical. Continuous monitoring and removal of waste and rubbish is to occur throughout the restoration works to prevent illegal dumping and/or rubbish build up as this will undermine restoration efforts.

RESTORATION MONITORING

Prior to commencement of works a minimum of ten (10) photo locations are to be established, GPS recorded and marked with a coloured wooden stake (dumpy peg). Star pickets can be a hazard in the long term and should be avoided. Baseline vegetation condition assessment and regular monitoring reports and photos are to be sent to council. The vegetation condition at the time of survey can be viewed in Schedule 1. The monitoring of vegetation within the retained bushland will be completed through general condition assessment and using Biodiversity Assessment Method (BAM) vegetation plots.

Target Vegetation Integrity Scores for compliance reporting

Three (3) BAM plots are to be undertaken within the restoration area, one (1) plot within PCT 3638 area, and then two (2) within PCT 4028 area.

The location of the BAM monitoring plot is to be permanently marked and completed in accordance with the Biodiversity Assessment Method 2020, with monitoring performance to be based on Composition, Structural, Function Condition Score to demonstrate compliance with the target aggregate Vegetation Integrity Score.

The target benchmarks have been determined in accordance with reference to the benchmark BAM scores recorded for PCT 3638 and PCT 4028 from the Bionet Vegetation Classification (DPE 2024).

Plot 1 - PCT 3638

For PCT 3638 revegetated area, a BAM Composition Score of no less than 74.4, a BAM Structural Score of no less than 70.7 and a BAM Function Condition Score no less than 34.5, This results in an overall vegetation integrity score of 56.6 (Table 4).

Plots 2 – PCT 4028

For PCT 4028, a BAM Composition Score of no less than 74.5, a BAM Structural Score of no less than 70.7 and a BAM Function Condition Score no less than 40.7. This results in an overall vegetation score of 59.8 (Table 4)

Table 4 – Target PCT 3638 and PCT 4028 composition, structural, function condition & aggregate VIS scores for auditing and compliance (Plots 1-3)

Criteria	Benchmark PCT 3638	Proposed restoration performance targets	Benchmark PCT 4028	Proposed restoration performance targets
Tree richness	7	3	4	2
Shrub richness	11	8	8	4
Grass and grass like richness	6	6	8	6
Forb richness	8	6	8	6
Fern richness	2	1	2	1
Other richness	9	4	4	2
Tree cover	51	35	21	15
Shrub cover	26	16	21	16
Grass and grass like cover	30	15	69	35
Forb cover	5	4	3	1
Fern cover	19	10	1	0.5



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Vegetation Management Plan

Other cover	10	2	1	0.5
Total length of fallen logs	45	15	12	8
Litter cover	65	50	40	20
Hollow-bearing trees	not specified	0	not specified	0
High threat exotics %	not specified	0.5	not specified	0.5
Composition score	not specified	74.4	Not specified	74.5
Structure score	not specified	70.7	Not specified	70.6
Function condition score	not specified	34.5	Not specified	40.7
Vegetation integrity score	not specified	56.6	Not specified	59.8

PATHOGEN CONTROL AND MANAGEMENT

Two types of pathogens are at risk of being introduced to the site and affect the outcomes for restoration works and tree plantings.

- **Root Rot Disease** (*Phytophthora cinnamomi*)
- **Myrtle Rust** (*Austropuccinia psidii*)

Phytophthora cinnamomi

Phytophthora cinnamomi is a soil-borne plant pathogen that attacks the roots of susceptible plants—destroying the root system and reducing the ability of the plant to absorb water and nutrients. This causes symptoms referred to as ‘dieback’ which can lead to plant death.

Under favourable conditions *Phytophthora* spp. can spread easily and quickly, destroying plants and plant communities. These guidelines to help minimise the risk of spreading *Phytophthora cinnamomi* also apply to other species of *Phytophthora* present in Australia, as the management of those species is similar. Thousands of Australian native plant species are susceptible to *Phytophthora cinnamomi*, and several of those species may be at risk of extinction due to its impacts. The dramatic impact of *Phytophthora* spp. infestations on plant communities may also lead to major declines in some insect, bird and animal species due to the loss of shelter, nesting sites and food sources.

Phytophthora cinnamomi thrives in warm, moist conditions with temperatures between 15°C and 30°C, and with rainfall greater than 400 millimetres a year. Its impact is greatest in Western Australia, Victoria, Tasmania and South Australia. The Northern Territory remains the only jurisdiction unaffected, as its environmental conditions are generally unfavourable to the pathogen.

Phytophthora cinnamomi spreads through soil, water, and organic matter. It can remain dormant for long periods during dry weather and is impossible in most situations to eradicate from infested areas, which means limiting further spread is critical. Any activity that moves soil, water or plant material can spread the disease. This includes soil on tools, footwear, and vehicles.

Myrtle rust

Myrtle rust is a disease caused by the fungus *Austropuccinia psidii*, (previously *Puccinia psidii*). It affects trees and shrubs in the Myrtaceae plant family—attacking young, soft, actively-growing leaves, shoot tips and young stems, as well as fruits and flower parts.

The first signs of rust infection are tiny, raised spots or pustules on infected leaves. After a few days, the pustules erupt into distinctive bright yellow spore masses. Left untreated, the disease can cause deformed leaves, heavy defoliation of branches, dieback, stunted growth and plant death.

Plants susceptible to myrtle rust are those in the Myrtaceae family, which includes bottle brush (*Callistemon* spp.), tea tree (*Melaleuca* spp. and *Leptospermum* spp.), Lilly pillies (*Syzygium* spp.) and eucalypts (*Eucalyptus* spp., *Angophora* spp. and *Corymbia* spp.). The Myrtaceae family in Australia is ecologically important, accounting for about 10% of Australia’s native flora, with many Australian plant communities dominated by myrtaceous species.

- Arrive clean, leave clean – ensuring all clothing, hats, footwear, tools, equipment, machinery and vehicles are free of weed seeds, mud, soil and organic material before entering and leaving bushland;

- Schedule works for dry soil conditions where possible;
- Minimise soil disturbance;
- **Do not** remove any plant material from sites infested with myrtle rust.
- If using seedlings, purchase them from a supplier that can guarantee high standards of hygiene – such as NIASA-accredited businesses;
- Ensure transport and disposal of plant material does not introduce weeds to new areas.

Procedures to minimise risk of pathogen transmission

When conducting works on site the following steps will help stop the spread of invasive species:

- If a site is infested with myrtle rust, **do not** remove any plant material from that site. Instead, dispose of plant waste by burial. If this is not possible, seal the waste in a plastic bag, seal the bag in a second bag and spray the outside of the bag with a solution of 70% ethanol or methylated spirits in 30% water before responsible disposal offsite;
- Ensure all materials taken onto site – such as seedlings, mulch, soil, gravel, rock, and sand – are certified free of weeds and pathogens. You can do this by purchasing from Nursery Industry Accreditation Scheme Australia (NIASA) accredited businesses, and ensuring materials conform to Australian Standards—for example, *AS3743–2003 Potting mixes* or *AS4454–2012 Composts, soil conditioners and mulches*;
- Create a checklist of hygiene procedures for project managers and participants to use;
- Ensure equipment is cleaned and disinfected with a solution of 70% ethanol or methylated spirits in 30% water. This includes footwear, tools, equipment, machinery, vehicles, backpacks, walking sticks, tent pegs and personal items;
- Remove all weed seeds, mud, soil and organic matter from any items or equipment which comes into contact with plants or the ground. Stay as clean as possible while in the bush.

Disinfecting clothing, footwear, equipment, and personal items

The following procedures apply to the disinfection of vehicles and machinery:

- Carry a hard brush and a spray bottle of disinfectant—made up of a solution of 70% ethanol or methylated spirits in 30% water. If you are able to carry more, assemble a simple hygiene kit;
- Set up a wash-down area for participants to wash and dry their face and hands and clean their footwear before entering and exiting the site;
- To clean footwear, first use a hard brush or stick to remove as much mud, soil and organic matter as possible before disinfecting with a solution of 70% ethanol or methylated spirits in 30% water—applied through a spray bottle or a footbath;
- Seal all personal rubbish in a bag and spray the outside of the bag with a solution of 70% ethanol or methylated spirits in 30% water before responsible disposal offsite;
- Collect all removed mud, soil and organic matter in a bag or bucket, and keep it out of clean bushland;
- Where myrtle rust is present, disposable overalls and caps is to be worn over clothing upon entering a site and removed when leaving the site. However, in high-risk cases, also shower and change into clean clothes (including hats, gloves and footwear); and
- Wash all clothing, hats and gloves between site visits using warm or hot machine wash with detergent.

Disinfecting vehicles and machinery

The following procedures apply to the disinfection of vehicles and machinery:

- Use a wash-down facility for vehicles and machinery if available, or wash-down on a hard, well-drained surface, for example a road, and on ramps if possible;
- Pay particular attention to cleaning mud flaps and tyres;
- Dispose of wash-down water so that it drains back into a low area of the infested zone

away from waterways. If this is not possible, empty it into a waste container for responsible disposal offsite;

- Don’t allow wash-down water to drain into clean bushland; and
- Don’t drive through wash-down water.

The Australian Government, Department of the Environment (2015) has published a more comprehensive guide to the management of invasive plant diseases and weeds. The Title of this document is “*Arrive Clean, Leave Clean*” and can be found at the following website:

- <https://www.agriculture.gov.au/sites/default/files/documents/arrive-clean-leave-clean.pdf>



Photo 4 – Myrtle rust on paperbark leaf (*Melaleuca quinquenervia*) (Source Department of Primary Industries- DPI)

TREE REMOVAL & HOLLOW RELOCATION

As four (4) hollow-bearing trees are to be removed for the development, a fauna ecologist is required to conduct a pre-clearing inspection and to supervise the clearing process. Any encountered fauna species prior to or during clearing which cannot self-relocate are to be relocated by the fauna ecologist to areas where no future works are planned.

Pre-clearing inspection of trees

At least two (2) weeks’ notice will be needed prior to the planned date for clearing of any hollow bearing trees. This is required so as to allow for time for inspections of trees for use by fauna and to plan for the safe felling of the tree/removal of fauna if present. After notice is given of the planned removal of trees a fauna ecologist will inspect the trees for use by fauna. This may include inspection of trees at sunset (stag watching) that allows for the detection of diurnal fauna returning to hollows or nocturnal fauna leaving for the night. Inspections may also require camera probe inspection. All hollow-bearing trees proposed for removal shall be clearly marked with a ‘H’ Symbol to indicate removal under supervision by a fauna ecologist. A fauna ecologist is to be present at the removal of each habitat tree.

Hollows of high quality or with fauna recorded residing within are to be sectionally dismantled for relocation and all hollows are to be inspected for occupation, signs of previous activity and potential for reuse.

Subsequent to felling, hollows suitable for re-use are to be relocated within remaining bushland areas within the retained VMP area. After modification for reinstallation the hollow section is to be reattached to a recipient tree within the nearby retained areas as selected and directed by the fauna ecologist. The welfare and temporary holding of the residing animal(s) is at the discretion of the fauna ecologist. The hollow section should be well secured in the recipient tree in a manner that will not compromise the current or future health of that tree.

Where retained hollows are placed as on ground habitat and are not reattached to a new recipient tree then they are to be replaced with appropriately sized, high quality, long-life nest boxes. A minimum of fifteen (15) nest boxes/salvaged hollows are to be installed.



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During clearing

Where fauna is identified within a hollow and the risk of death or injury as a result of machine felling of the tree is high, the tree may need to be felled in sections. This will involve the removal of hollow limbs or sections by chainsaw with the hollow limb lowered to the ground for removal/relocation of fauna.

All hollow limbs will be inspected after felling for occupation by fauna. Any fauna will be removed and relocated to adjoining bushland.

Where young fauna are identified within a hollow whose survival will be at risk as a result of the removal of the hollow or the felling of the tree, then clearing will not be carried out until those young are old enough to leave the hollow and the care of the parents. It is suggested therefore that clearing is not carried out during breeding times when young are likely to be present within hollows (spring-early summer).

Where possible, hollow limbs removed from trees will be collected by the fauna ecologist for re-erection in retained bushland on site. Any fauna injured during clearing will be handed to WIRES or a veterinarian for care and rehabilitation.

Table 5 – Management of hollows

Habitat tree no.	Hollow size	Hollow usage	Actions for hollow bearing trees
Nest box installation			
Fifteen (15) nest boxes / recovered hollows are to be installed into retained trees within the site. The ultimate number of nest boxes will be subject to the number of recoverable hollows from trees to be removed. A minimum of five (5) microbat boxes/hollows are recommended to be installed and the remainder made up of mixed small/medium nest boxes as per the nest box specifications.			
HT1	1 x 5-10 trunk split	Unknown	Inspect hollow before dismantling (where possible). Supervise felling of tree. Check hollow for fauna.
HT2	1 x 0-5cm trunk 1 x 5-10cm trunk	Unknown	Inspect hollow before dismantling (where possible). Supervise felling of tree. Check hollow for fauna.
HT3	1 x 0-5cm trunk 5-10cm trunk	Unknown	Inspect hollow before dismantling (where possible). Supervise felling of tree. Check hollow for fauna.
HT3	1 x 10-15cm broken trunk	Common Brushtail Possum	Inspect hollow before dismantling (where possible). Supervise felling of tree. Check hollow for fauna.
HT4	1 x 5-10cm trunk 1 x 5-10cm broken trunk	Unknown	Inspect hollow before dismantling (where possible). Supervise felling of tree. Check hollow for fauna.
HT5	1 x 0-5 cm trunk split	Unknown	Inspect hollow before dismantling (where possible). Supervise felling of tree. Check hollow for fauna.
HT6	1 x 5-10cm trunk	Unknown	Inspect hollow before dismantling (where possible). Supervise felling of tree. Check hollow for fauna.
HT7	1 x 0-5cm trunk 1 x 0-5cm trunk split	Unknown	Inspect hollow before dismantling (where possible). Supervise felling of tree. Check hollow for fauna.
HT8	1 x 5-10cm broken trunk	Unknown	Inspect hollow before dismantling (where possible). Supervise felling of tree. Check hollow for fauna.
HT9	1 x 5-10cm Trunk split	Unknown	Inspect hollow before dismantling (where possible). Supervise felling of tree. Check hollow for fauna.
HT10	1 x 0-5cm Trunk	Unknown	Inspect hollow before dismantling (where possible). Supervise felling of tree. Check hollow for fauna.

Hollow modification for relocation

Hollows that have been selected for relocation are to be modified to provide a dry, enclosed nest. Modifications may include:

- Attaching a 17+ millimetre thick marine ply/structural ply at the base which has been cut to provide a good seal and fixing with construction glue and galvanised screws.
- Attaching metal brackets or hardwood timber support batten to allow hollows to be screwed into a suitable branch or trunk.
- Entrance hollows to be positioned on installation to minimise water entry, located as per the 'nest box specifications'.

- Hollow to be painted externally with a non-toxic wood preservative or external paint.

NEST BOX INSTALLATION

A minimum of fifteen (15) nest boxes/salvaged hollows will be installed within the restoration area or under the guidance of a fauna ecologist. Constructed nest boxes should replace good quality hollows being removed where salvaged hollows are not suitable. Supplementary nest boxes may need to be installed depending on the quality and condition of removed hollows.

For any nest boxes being installed, the nest box designs should be for target species as follows:

- 1-2cm sized entry, suitable for microchiropteran bats;
- 2.5-3 cm entries suitable for small birds (little lorikeet);
- 10-20cm entries suitable for medium to large parrot species;
- 20-25cm entries suitable for small arboreal marsupial species (ringtail possums and sugar gliders)

Nest box design

The following specifications apply to the construction of the nest boxes. I also refer to the generic diagrams in Figures 6, 7, 8 and 9.

- Timber is to be of high-grade ply 17+ mm thick (MDF, particle board and low-grade ply are not acceptable).
- The lid is to be hinged at the rear side of the box that is affixed to the tree to allow internal inspections from the front side. Lids are to be well sloped to the front to allow runoff by rain. Hinges are to be robust (not small) and made of brass, stainless steel or galvanised. Lids are to be larger than the overall cross-sectional size of the box and placed so that a small eave exists on all sides to prevent entry of rain.
- Two vertical timber supports (approximately 30x30mm timber strips 150 mm apart) are to be attached down the rear face of the box so that there are two points of attachment to the trunk on a curved surface and the box does not rock in the wind. This will also provide easy attachment points to the trees without having to screw through the inside of the box. These are to be made of treated pine and any screws into this (for hinges etc.) should be manufactured for use in treated pine or stainless. Holes at both ends of both supports are to be predrilled for easy attachment to trees. Timber supports should not be placed directly onto the box but with small timber spacers so that an eave is permissible along this side of the roof.
- Joints are to be glued and screwed for strength. Glue should be labelled as non-toxic wood glue.
- All fasteners used are to be weather resistant stainless steel, galvanised or other. Screws into the treated pine supports are to be stainless steel or screws manufactured for use in treated pine.
- All fasteners for tree attachment are to be supplied (stainless steel or treated pine coach screws). These are to be a suitable gauge depending on the size of bow and suitable length to pass through the vertical timber supports, through the bark and cambium, and into a sufficient extent of heartwood. Heartwood penetration will depend on the size of the box. Screws for small boxes should extend a minimum of 20mm into the heartwood of hardwood eucalypts and medium boxes ~40mm. All boxes are to be screwed so that a small distance for growth exists between the timber supports and the trunk. This can be achieved with a small stainless sleeve over the screw.
- 5 mm drainage holes are to be drilled in each corner at the base of each nest box.
- Exterior of the boxes (including treated pine supports) are to be painted with a primer and then a minimum of two coats of external non-alcohol based acrylic paint. The colour selected should be consistent with the colour of the recipient trunk and therefore recipient trees should ideally be prior selected.

Nest box placement

- Nest boxes are to be erected by a qualified arborist under the supervision of the project ecologist or fauna ecologist. A fauna ecologist is to locate appropriate trees and locations for installing the nest boxes.
- All replacement nest boxes are to be secured to trees at a minimum height of four metres above ground level facing the east to northeast direction. Place nest boxes as high as physically possible within a tree preferably using a cherry picker or tree climber/arborist - generally the higher the better for consideration to most species.
- Nest boxes and re-erected limbs are not to be placed near locations where public access is planned.
- The larger and more mature tree are to be selected to be nest box recipients where available. This will comparatively reduce the weighted stress on the tree, make the box less visible and result in less change in growth ratio affecting the selected attachment

method. Boxes are preferably to be placed on the trunk for structural stability and protection from falling branches.

- Place nest boxes away from continual direct mid-day summer sun.
- Place nest boxes with large entry holes away from any prevailing winds when close to open water-bodies. E.g., protect from strong southerly winds close to the ocean and contrastingly cool-hot westerly winds in different seasons.
- Attach nest boxes securely so that they do not shift or shake in response to strong winds or being knocked by the movements of heavier animals, e.g. Possums and goannas.
- To ensure nest boxes are inaccessible to cats and rats or to also assist native species by exclusion of possums, the base of the trunk or branches may also require the installation of tree guards or exclusion collars.
- Nest boxes should ideally be placed in such a way that they are accessible for management but concealed from interference.
- These artificial nest boxes / structures must be accessible for maintenance purposes with an expected life span of 20 years.

Nest box attachment

Nest boxes are to be appropriately affixed to a recipient tree under the guidance of a fauna ecologist. Different methods of attachment to the tree are available. *Travers bushfire & ecology* generally recommends that the boxes should be fixed with robust stainless steel or treated pine coach screws that penetrate through the cambium and into the heartwood of the tree to ensure a very secure attachment. Provided that any cambium damage to a tree is not left as an open wound then the chance of fungal infection or insect attack is significantly reduced and the tree will grow around the screw. Any other method of attachment selected should also ensure the box is secured to prevent movement or fall and allows for the future growth of the tree without any cambium constriction over the entire life of the nest box.

Nest box maintenance

- All nest boxes and re-erected limbs will be inspected annually for a minimum of five (5) years and any damaged, or in danger of falling, are to be repaired or replaced.
- Deterring mynas and starlings from re-nesting is not easy; these pests are very persistent, and constant vigilance is necessary. This also means that you must have convenient regular access to the nest-box, and that you must be aware of what creatures are using it for what purposes.
- Nest boxes found to be utilised by threatened or otherwise significant fauna may be prioritised for ongoing management to ensure their longevity and replicate their design/placement characteristics

Table 6– Typical nest box dimensions for various fauna
(Source: *Birds Australia Supplement No. 5 – Nest Boxes for Natives*)

SPECIES	INTERNAL SIZES	DEPTH/ LENGTH	ENTRY DIAMETER	VERT/ HOR	HEIGHT	REF
Bat sp.	70-100 x 150-240 mm	200-250 mm	15-20 mm slit	v	-	BFNC (n.d.)
Bat, Chocolate Wattled	-	-	10 mm slit	v	-	Trainor (1995)
Bat, Gould's Wattled	-	-	10 mm slit	v	-	Trainor (1995)
Bat, Lesser Long-eared	-	-	10 mm slit	v	-	Trainor (1995)
Little Lorikeet	120 mm	600 mm	25-30mm	h	-	Trainor (1995)
Ringtail Possum	250mm	400mm	60-80mm	V	-	BFNC (n.d.)
Sugar glider	200mm	450mm	35-40mm	v	-	BFNC (n.d.)

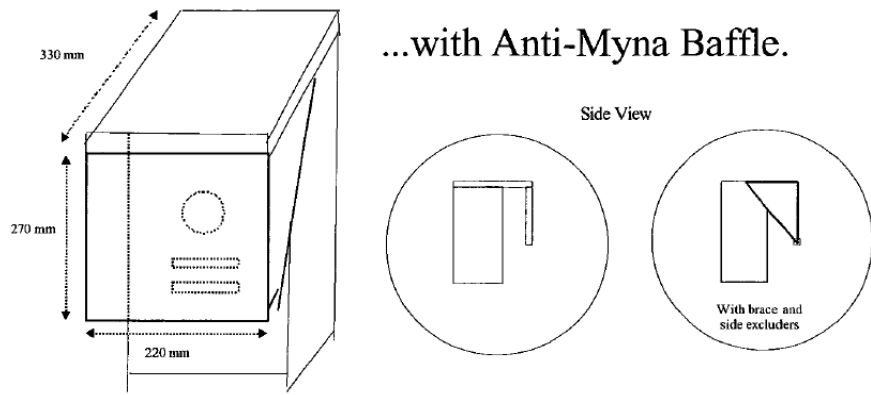


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Vegetation Management Plan



...with Anti-Myna Baffle.

Figure 6 - Anti-Myna baffle

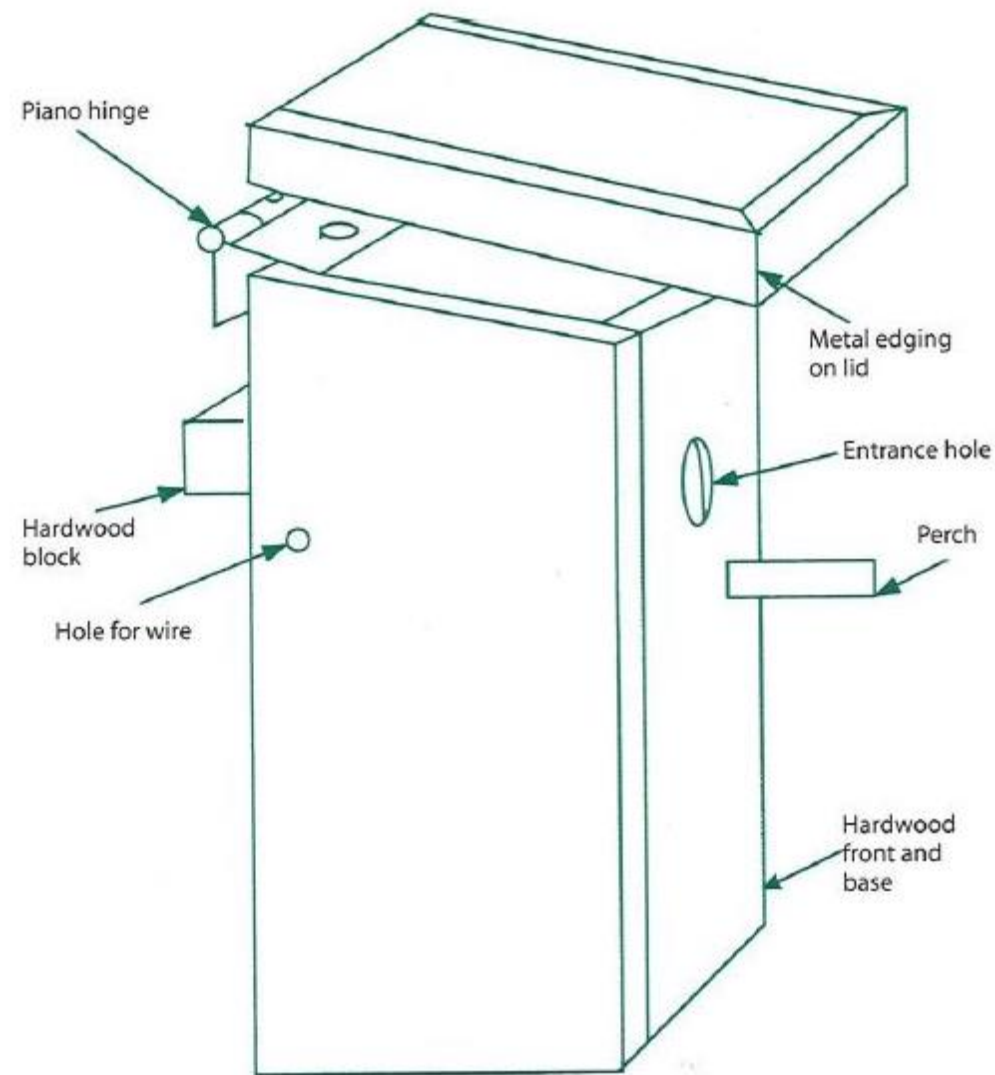


Figure 7 - A Generic nest box design
(Source - From Alan and Stacey Franks, 2003)

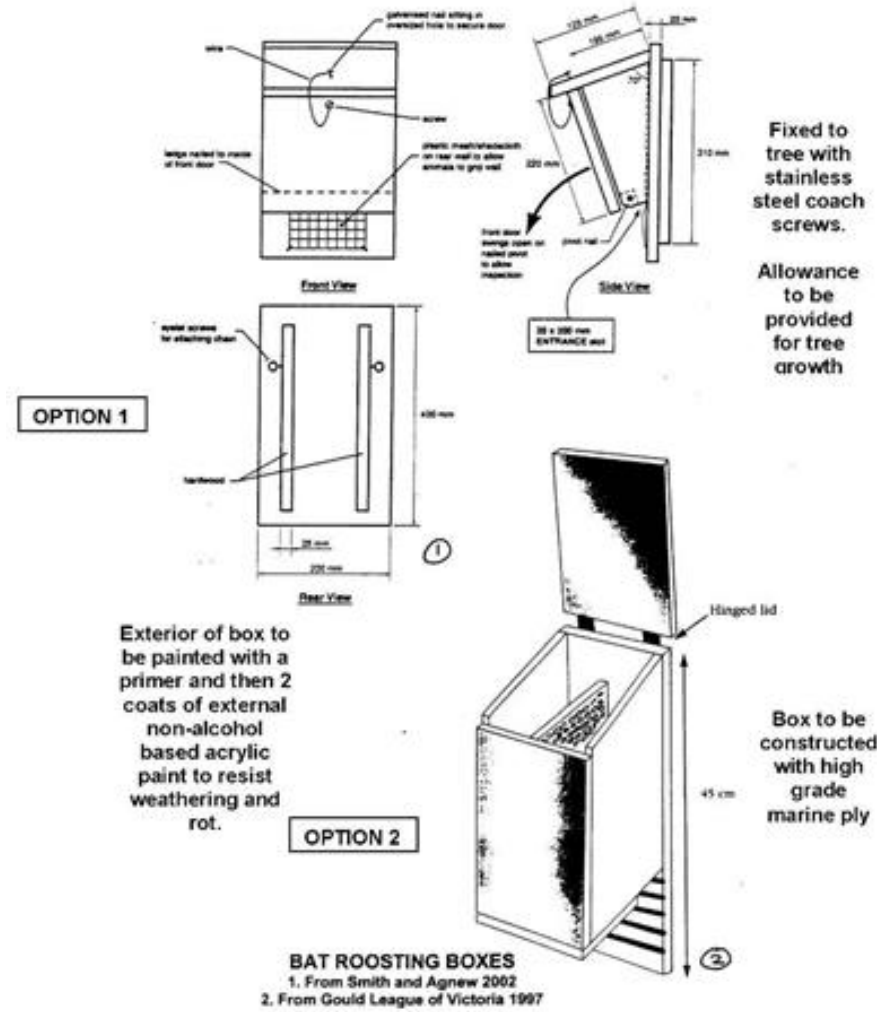
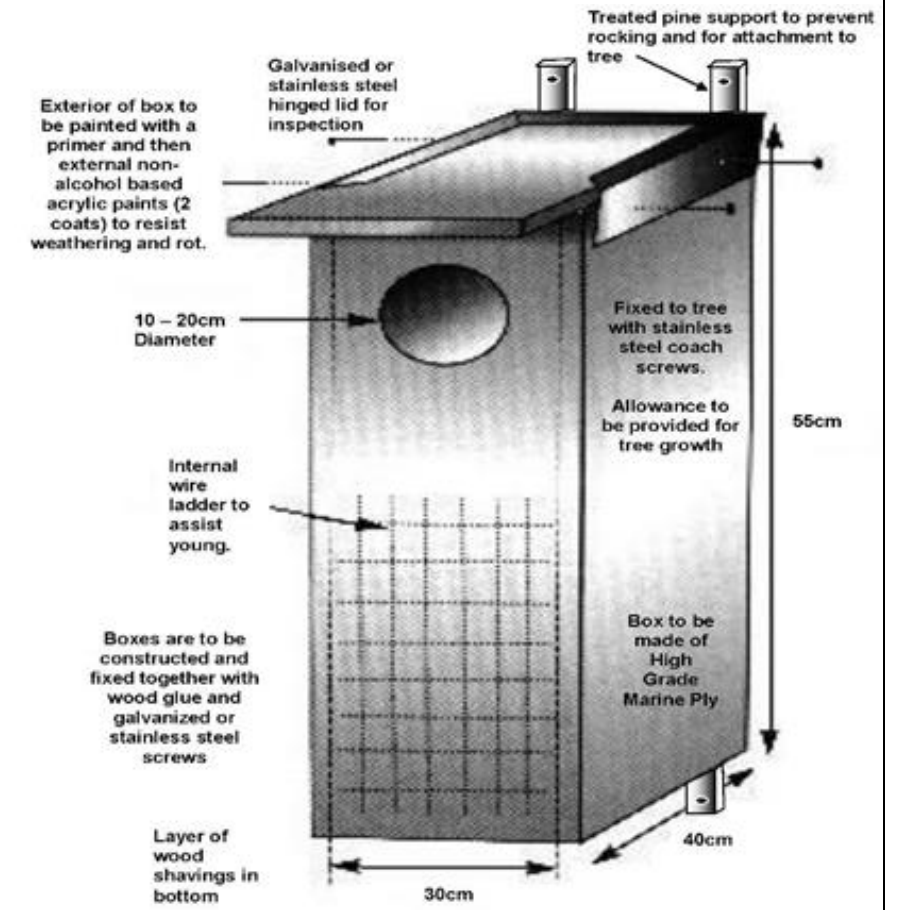


Figure 8 - Microbat roost box detail



Example 1 - DIMENSIONS APPLIED FOR A LARGE PARROT ROOSTING / NESTING BOX

Note: Small parrot nest boxes will require a reduced entry hole size of 5 – 10cm in diameter

Figure 9 – Typical dimensions for large parrot box

PROGRAM OF WORKS

The program of works (Table 7) is aimed at providing a management framework for enacting works such as undertaking revegetation, maintenance, monitoring and review works required for the site. Site rehabilitation, including weed control works is to be undertaken in accordance with the Schedule 1 – Vegetation Management Works. A typical timeline of works is shown on Figure 6. For the purposes of the program of works, the listed tasks are divided into the following stages.

Pre-restoration Works (prior to vegetation restoration works) - All site preparation activities prior to the commencement of vegetation restoration works on site and generally excludes any landscaping and planting works.

Restoration Works - Period during which primary restoration works are completed. *Primary Restoration Works*, as defined under this VMP, include the completion of primary and secondary weed control, protective fencing and planting works. Practical completion of the primary restoration phase is determined by the project ecologist at which point all primary restoration actions need to have been completed and the installed plants are well established only requiring periodic maintenance or watering. Should there be a delay in the completion of construction works, for any reason, then the vegetation restoration works phase may be extended.

Post Restoration Works - Consist of maintenance activities, unless further contingency works are identified by the project ecologist for auditing, fulfilment of the performance targets, or other purposes. Maintenance will be undertaken by a fully qualified bush regeneration crew for a minimum of five (5) years post completion of primary restoration works. Table 7– Program of Works

Action	Responsibility
<p>Stage 1 – Pre-restoration works</p> <ul style="list-style-type: none"> Formation of site management team– minimum project ecologist, qualified bushland restoration contractor and site manager Erection of erosion control fencing Installation of primary exclusion / protection fencing and access gates Commencement of primary weed control Commencement of seed collection and propagation contracts Baseline monitoring of vegetation condition and establish monitoring plots Provide certificates of compliance 	<ul style="list-style-type: none"> Site project manager Site manager / project ecologist Project manager Suitably qualified bushland restoration contractor Bushland restoration contractor / project ecologist Project ecologist Project ecologist
<p>Stage 2 – Restoration works</p> <ul style="list-style-type: none"> Supervision of any vegetation and management works Monitor erosion control measures (monthly – especially after heavy rain) and replace if required Waste removal and soil amelioration works to control weed infestations and provide suitable restoration soil base. Complete revegetation works Commencement of secondary weed control and maintenance weed control Maintenance of fencing and signage around protected vegetation Continuation of primary restoration and revegetation works Provide certificates of compliance at practical completion 	<ul style="list-style-type: none"> Site project manager with the project ecologist Contractor with advice of project manager suitably qualified bushland restoration contractor Bushland restoration contractor / project manager Contractor / suitably qualified bushland restoration contractor Contractor Contractor / suitably qualified bushland regenerator Project ecologist
<p>Stage 3 – Post Restoration Works</p> <ul style="list-style-type: none"> Enrichment planting within revegetation areas if required. Continuation of regeneration and weed control maintenance. Monitoring of retained vegetation at six (6) months, twelve (12) months and annually for five (5) years post construction stage. Conduct maintenance beyond five (5) years as required Provide certificates of compliance at end of each year during the 5-year maintenance period 	<ul style="list-style-type: none"> Qualified bushland restoration contractor with advice of project ecologist Contractor / suitably qualified bushland regenerator Project ecologist Site manager with advice of project ecologist Project ecologist

The following typical timeline (Table 8) is provided to indicate a possible overall timing of restoration works. The commencement of the maintenance period of five (5) years is subject to the completion of primary restoration works as certified by the project ecologist. A certificate of practical completion will be required as evidence of satisfactory completion prior to the commencement of the maintenance period.

The successful implementation of restoration works may affect the release of any required bonds as required. Upon engagement, contractors are expected to meet the following typical schedule of works.

Table 8 – Typical restoration works timeline (5 years maintenance)

ID	Task Name	Duration	Primary Restoration Works												Year 1 Maintenance												Year 2 -5 (in perpetuity post year 5)											
			1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
STAGE 1 - PRECOMMENCEMENT (Pre Construction Certificate)																																						
1.0	PROJECT INITIATION	1 month																																				
1.1	Confirm funding	1 month																																				
1.2	Preparation of contract schedules	1 month																																				
1.3	Submission of fee proposals	1 month																																				
1.4	Contractor approvals, engagement of project ecologist & bushland restoration contractor	1 month																																				
2.0	SITE PREPARATION AND PROPAGATION																																					
2.1	Pre-commencement vegetation condition assessment	1 day																																				
2.2	Seed collection	12 months																																				
2.3	Plant propagation (initial & contingency)	8 months																																				
2.4	Installation of protective fencing and signage	2 weeks																																				
2.5	Obtain permit & undertake pest control (if necessary)	6 weeks																																				
2.6	Commence Primary weed control	1-6 months																																				
STAGE 2 DURING CONSTRUCTION WORKS (post Construction Certificate and pre subdivision certificate)																																						
3.0	WEED CONTROL																																					
3.1	Complete Primary Weed Control																																					
3.2	Secondary weed control	3-6 months																																				
4.0	REVEGETATION WORKS																																					
4.1	Site preparation - sediment and erosion control, removal of waste	1-5 days																																				
4.2	Revegetation works	6 months																																				
4.3	Regeneration works	8 months																																				
4.4	Initial watering & maintenance	9 months																																				
4.5	Pest Control (if required)	3 months																																				
4.6	Installation of minimum 15 nest boxes/salvaged hollows	2 weeks																																				
STAGE 3 - POST CONSTRUCTION WORKS (from Practical completion of Stage 2)																																						
5.0	BUSH REGENERATION & REVEGETATION MAINTENANCE																																					
5.1	Watering, maintenance, weed control and repairs	5 years																																				
5.2	Ongoing regeneration of existing bushland areas	5 years																																				
5.3	Pest Control (if required)	5 years																																				
6.0	MANAGEMENT AUDITING AND MONITORING																																					
6.1	Contractor supervision / monitoring	5 years																																				
6.2	Ongoing supervision/auditing/monitoring	5 years																																				
6.3	Submission of annual reporting	5 years																																				
6.4	Review and update to VMP post 5 years	Year 5 only																																				
7.0	CONTINGENCY & MAINTENANCE WORKS (Subject to Audits)																																					
7.1	Target priority and environmental weeds	2 weeks																																				
7.2	Replacement planting	1 month																																				
7.3	Watering & maintenance	3-6 months																																				
7.4	Medium term maintenance	6 months																																				
7.5	Submission of compliance certification (to 5 yrs maintenance)	As required																																				



Scientific Name	Common Name	Bush Regeneration Area 3700m ²	Revegetation Area 2200m ²
Canopy Planting			
<i>Casuarina glauca</i>	Swamp She-oak	1 per 100m ² = 37	1 per 50m ² = 44
<i>Eucalyptus botryoides</i>	Southern Mahogany	15	9
Sub-canopy			
<i>Glochidion ferdinandii</i>	Cheese Tree	25	35
<i>Melaleuca linearifolia</i>	Snow-in-summer	25	35
<i>Acacia longifolia</i>	Sydney Golden Wattle	15	25
<i>Notelaea longifolia</i>	Large Mock olive	15	25
<i>Melaleuca styphelioides</i>	Prickly-leaved Paperbark	13	15
Shrub Planting			
<i>Melaleuca ericifolia</i>	Swamp Paperbark	40	45
<i>Goodenia ovata</i>	Hop Goodenia	40	45
<i>Callistemon salignus</i>	Willow Bottlebrush	35	40
<i>Breynia oblongifolia</i>	Coffee Bush	25	30
<i>Leptospermum polygalifolium</i>	Tantoon	15	30
<i>Ozothamnus diosmifolius</i>	Rice Flower	15	15
<i>Polyscias sambucifolia</i>	Elderberry Panax	15	15
Groundcover Planting			
Grasses and grass-like species		3700	5200
<i>Machaerina juncea</i>	Twig-rush	1000	500
<i>Juncus kraussii</i>	Sea Rush	1000	500
<i>Gahnia clarkii</i>	Tall-Saw Sedge	800	800
<i>Entolasia marginata</i>	Bordered Panic Grass	500	500
<i>Microlaena stipoides</i>	Weeping Grass	200	500
<i>Carex appressa</i>	Tall Sedge	100	200
<i>Oplismenus aemulus</i>	Basket Grass	100	200
Forbs		650	900
<i>Samolus repens</i>	Sea Primrose	500	300
<i>Viola hederacea</i>	Native Violet	500	300
<i>Commelina cyanea</i>	Scurvy Weed	200	200
<i>Dianella caerulea</i>	Blue Flax-lily	200	200
<i>Centella asiatica</i>	Indian Pennywort	200	150
<i>Bacopa monnieri</i>	Bacopa	50	50
<i>Lobelia purpurascens</i>	White Root	50	50
<i>Dichondra repens</i>	Kidney Weed	50	50
Climber Planting			
<i>Parsonsia straminea</i>	Monkey Rope	15	20
<i>Hibbertia scandens</i>	Snake Vine	10	15
<i>Kennedia rubicunda</i>	Dusky Coral Pea	10	10
<i>Pandorea pandorana</i>	Wonga Wonga Vine	10	10
Subtotal		5851	7029
Total No. of plants		12880	

Scientific Name	Common Name	Bush Regeneration Area 1400m ²	Revegetation Area 1500m ²
Canopy Planting			
<i>Eucalyptus botryoides</i>	Southern Mahogany	10	20
<i>Eucalyptus pilularis</i>	Blackbutt	2	5
<i>Angophora costata</i>	Sydney Red Gum	2	5
Sub-canopy			
<i>Glochidion ferdinandii</i>	Cheese Tree	8	20
<i>Banksia serrata</i>	Old Man Banksia	8	20
<i>Banksia integrifolia</i>	Coast Banksia	8	20
<i>Melaleuca linearifolia</i>	Snow-in-summer	8	10
<i>Acacia longifolia</i>	Sydney Golden Wattle	3	5
Shrub Planting			
<i>Breynia oblongifolia</i>	Coffee Bush	15	5
<i>Pitiosporum revolutum</i>	Thatched Saw-sedge	15	5
<i>Elaeocharis reticulatus</i>	Blueberry Ash	15	4
<i>Leucopogon lanceolatus</i>	Lance-leaf Beard Heath	15	4
<i>Ozothamnus diosmifolius</i>	Rice Flower	5	4
<i>Banksia ericifolia</i>	Heath-leaved Banksia	5	3
Groundcover Planting			
Grasses and grass-like species		1400	3000
<i>Microlaena stipoides</i>	Weeping Grass	300	550
<i>Entolasia marginata</i>	Bordered Panic	300	550
<i>Lomandra longifolia</i>	Spiny-headed Mat-rush	300	450
<i>Imperata cylindrica</i>	Blady Grass	100	450
<i>Oplismenus aemulus</i>	Basket Grass	100	200
<i>Themeda triandra</i>	Kangaroo Grass	100	200
Forbs		700	1500
<i>Gonocarpus teuroides</i>	Forest Raspwort	125	250
<i>Dianella caerulea</i>	Blue Flax-lily	125	250
<i>Dichondra repens</i>	Kidney Weed	125	200
<i>Lobelia purpurascens</i>	White Root	125	200
<i>Commelina cyanea</i>	Scurvy Weed	100	150
<i>Viola hederacea</i>	Native Violet	50	100
<i>Geranium solanderi</i>	Native Geranium	50	50
Climber Planting			
<i>Billardiera scandens</i>	Hairy Apple Berry	6	10
<i>Hibbertia scandens</i>	Snake Vine	6	10
<i>Kennedia rubicunda</i>	Dusky Coral Pea	3	9
<i>Hardenbergia violacea</i>	Purple Coral Pea	3	9
Subtotal		2167	4693
Total No. of plants		6860	



PERFORMANCE RESTORATION TARGETS

The following restoration performance targets are to be audited and compliance certificate issued by the project ecologist demonstrating satisfactory completion of the works in accordance with the VMP and as shown on Schedule 1.

1. Install a 1.8 m high permanent ringlock or chainlink protective fence with metal posts and railing is to be installed around the proposed development footprint as shown in Schedule 1.
2. Final weed coverage will not exceed more than 5% coverage at the end of Year 1 and less than 3% at the end of Year 5. Site to be free of priority weed species listed for the Greater Sydney Region within the Biosecurity Act (2015).
3. Native vegetation plant density within the restoration zone is to comply with the revegetation specifications in Table 1 and Table 2.
4. A minimum of 28 locally occurring native species commensurate with PCT 3638 and PCT 4028 as specified in Tables 1 and 2, are to be utilised in the revegetation works.
5. Fifteen (15) nest boxes/salvaged hollows installed to provide habitat for hollow-dependent fauna.
6. A minimum of 95% plant survival is to be achieved for all planted native vegetation, and natural growth rates and plant cover is to be typical of PCT 3638 and PCT 4028 after 5 years.
7. For PCT 3638 an overall BAM composition vegetation integrity score of no less 56.6 is to be achieved for the restored bushland VMP area.
8. For PCT 4028 an overall BAM composition vegetation integrity score of no less 59.8 is to be achieved for the restored bushland VMP area.

Legend

- VMP boundary
- Habitat Tree
- Retain tree (26)
- Retain tree canopy
- Access gate (3)
- Nest box or augmented hollows (15)
- 1.8 m high chainlink fence (300m)

Bush Regeneration Areas

- Bangalay Sand Forest Restoration area (0.15ha)
- Swamp Oak Floodplain Forest Restoration area (0.37ha)

Revegetation Areas

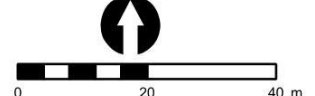
- Bangalay Sand Forest Restoration area (0.14ha)
- Swamp Oak Floodplain Forest Restoration area (0.22ha)



PROJECT & MXD REFERENCE
10 & 12 Boondah Road, Warriewood
HEN09_VMP001

DATE & ISSUE NUMBER
24/05/2024
Issue 1

SCALE & COORDINATE SYSTEM
1:1,100 @ A3
GDA 1994 MGA Zone 56



Schedule 1 - Vegetation Management Plan

Document Path: N:\GIS\STORAGE\N Drive\18HEN03_BoondahRd_Warriewood\MXDs\HEN09\HEN09_VMP001.mxd

Disclaimer: The mapping is indicative of available space and location of features which may prove critical in assessing the viability of the proposed works. Mapping has been produced on a map base with an inherent level of inaccuracy, the location of all mapped features are to be confirmed by a registered surveyor.

ATTACHMENT 1 – RESTORATION WORKS COSTING (5 YEARS)

Task	Description	Labour						Materials/Subcontractors				Total Personnel/ Subcontractor/ Supply Costs	
		Quantity	work rate	Unit	Hours	Rate	Total	Unit	Quantity	rate	Risk Factor		Subtotal
1	Site Preparation												
1.1	Mulching, supply and install - assumed 20% of revegetation area to be mulched (subject on ground regeneration)	8,800	50	m ²	176.0	\$75.00	\$13,200.00	mulch m ³	660	\$40.00		\$26,400.00	
1.2	Install minimum 3 gates	3						gates	3	\$450.00		\$1,350.00	
1.3	Supply & Install of fencing	300		Lm				Fence	300	\$15.00		\$4,500.00	
	Subtotal						\$13,200.00					\$32,250.00	\$45,450.00
2	Primary Weed Control												
2.1	Entire site	8800	20	hr	440.0	\$75.00	\$33,000.00						\$33,000.00
3	Secondary Weed Control												
3.1	Entire site	8800	30	hr	293.3	\$75.00	\$22,000.00						\$22,000.00
4	Pest Control (only if required) -Pindone Baiting	8800	60	m ²	146.7	\$8.00	\$1,173.33						\$1,173.33
6	Revegetation (8800m²)												
6.1	Planting of emergent trees at 1 per 50m ² and 1 per 100 m ²	125	20	units/hr	6.3	\$75.00	\$468.75	tube	125	\$7.95		\$1,142.81	\$1,146.56
6.2	Planting of sub-canopy at 1 per 20m ² and 1 per 40m ² - Forestry Tubes	313	20	units/hr	15.7	\$75.00	\$65.00	tube	313	\$1.25		\$449.94	\$450.15
6.3	Planting of shrubs at 1 per 10m ² and 1 per 20m ² - Forestry Tubes	500	20	units/hr	25.0	\$75.00	\$1,875.00	tube	500	\$1.25		\$718.75	\$722.50
6.4	Planting of groundcovers at 3 per 1 m ² and 1 per 2m ² - Forestry Tubes	18750	50	units/hr	375.0	\$75.00	\$28,125.00	tube	18750	\$1.25		\$26,953.13	\$26,954.63
6.5	Planting of climbers at 1 per 40m ² and 1 per 80m ² - Forestry Tubes	157	50	units/hr	3.1	\$75.00	\$235.50	tube	157	\$1.25		\$225.69	\$227.19
6.6	Watering and maintenance	1085	250	units/hr	4.3	\$75.00	\$325.50						
6.7	Subtotal	19845			429.4		\$31,094.75					\$29,490.31	\$60,585.06
7	Nest Boxes												
7.1	Supply and install nest box (s) (example if required)	15	1	units/hr	15.0	\$390.00	\$5,850.00	unit	5	\$350.00		\$1,750.00	\$7,600.00
8	Maintenance Weeding												
8.1	Year 1 - 12 sessions	8800	150	hr	704.0	\$75.00	\$52,800.00						
8.2	Year 2 - 12 sessions	8800	150	hr	704.0	\$77.25	\$54,384.00						
8.3	Year 3 - 12 sessions	8800	200	hr	528.0	\$79.57	\$42,011.64						
8.4	Year 4 - 12 sessions	8800	250	hr	422.4	\$81.95	\$34,617.59						
8.5	Year 5 - 12 sessions	8800	300	hr	352.0	\$84.41	\$29,713.43						
8.7	Subtotal				3537.3		\$279,157.41						\$279,157.41
	TOTAL OF ALL RESTORATION WORKS												\$478,466.83
9	Contingency Restoration works												
9.1	15% additional weed control												\$46,823.61
9.2	15% additional planting												\$9,087.76
9.3	15% Replacemnet Next Boxes												\$1,140.00
9.4	Miscelanneous contingency works												\$14,718.65
	Subtotal												\$71,770.02
10	Bush Regenerator Compliance - Reporting, Monitoring & Auditing (5 years)												
10.1	Certification to Council - inspection and certification letter, annually	5 sessions	25	hr	125.0	\$195.00	\$24,375.00						\$24,375.00
11	TOTAL COSTS												\$574,611.85



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Vegetation Management Plan

ATTACHMENT 2 – AUDIT & COMPLIANCE CERTIFICATION TABLE

Audit items	Timing	Responsibility	Rectification works required? Yes/No	Works required	Completion Date	Compliant Yes/No
Preconstruction works (Prior to CC)						
Practical completion of all preconstruction works – weed control, local provenance seed collection, sediment erosion control, protective fencing, installation of nest boxes prior to construction	0-3 months	Bush Regeneration Contractor				
During Construction (Post issuance of CC)						
Practical completion of all primary restoration works (Prior to Issuance of Subdivision Certificate – Plant establishment of PCT 3638 (6860 plants) and PCT 4028 (12880) as per the revegetation species list (minimum 25 endemic native species), fencing installation (3 access gates), watering, litter removal	3-12 months	Bush Regeneration Contractor				
3-12 months – Establish minimum three (3) BAM monitoring plots to assess whether contingency works are required to achieve practical completion and satisfaction of performance targets	3-12 months	Project Ecologist				
12 months – submission of first audit and compliance certificate demonstrating practical completion and compliance with Restoration Performance Targets	12 months	Project Ecologist				
Year 1 Maintenance						
Commence year 1 Maintenance works – Monthly maintenance session with submission of works report to Project Ecologist	Year 1 maintenance	Bush Regeneration Contractor				
Biannual review with Project Ecologist to determine need for contingency works	Every 6 months	Bush Regeneration Contractor with Project Ecologist				
Annual Audit report demonstrating compliance with Restoration Performance targets	Every 12 months	Project Ecologist				
Year 2 Maintenance						
Commence year 2 Maintenance works – Monthly maintenance session with submission of works report to Project Ecologist	Year 2 maintenance Period	Bush Regeneration Contractor				
Biannual review with Project Ecologist to determine need for contingency works	Every 6 months	Bush Regeneration Contractor with Project Ecologist				
Annual Audit report demonstrating compliance with Restoration Performance Targets	Every 12 months	Project Ecologist				
Year 3 Maintenance						
Commence year 3 Maintenance works – Monthly maintenance session with submission of works report to Project Ecologist	Year 3 maintenance	Bush Regeneration Contractor				
Biannual review with Project Ecologist to determine need for contingency works	Every 6 months	Bush Regeneration Contractor with Project Ecologist				
Annual Audit report demonstrating compliance with Restoration Performance Targets	Every 12 months	Project Ecologist				
Year 4 Maintenance						
Commence year 4 Maintenance works – Monthly maintenance session with submission of works report to Project Ecologist	Year 4 maintenance	Bush Regeneration Contractor				
Biannual review with Project Ecologist to determine need for contingency works	Every 6 months	Bush Regeneration Contractor with Project Ecologist				
Annual Audit report demonstrating compliance with Restoration Performance targets	Every 12 months	Project Ecologist				
Year 5 Maintenance						
Undertake a review of the Vegetation Management Plan and make adjustment for any site conditions for updated methodologies to improve restoration outcomes	During year 5	Project Ecologist				
Commence year 5 Maintenance works – Monthly maintenance session with submission of works report to Project Ecologist	Year 5 maintenance	Bush Regeneration Contractor				
Biannual review with Project Ecologist to determine need for contingency works	Every 6 months	Bush Regeneration Contractor with Project Ecologist				
Annual Audit report demonstrating compliance with Restoration Performance Targets	Every 12 months	Project Ecologist				
Handover or extended maintenance period						
Meet with receiving organization and determine readiness for hand over	Midway through year 5 maintenance	Project Manager with Project Ecologist				
On going maintenance until hand over occurs	Every Month	Bush Regeneration Contractor				
Biannual review with Project Ecologist to determine need for contingency works	Every 6 months	Bush Regeneration Contractor with Project Ecologist				
Annual Audit report demonstrating compliance with Restoration Performance Targets	Every 12 months	Project Ecologist				