

displaced fauna. A Fauna Management Plan may be required to guide the salvage and translocation process;

- Where possible, construction stockpiles, machinery, roads, and other infrastructure should be placed away from areas supporting native vegetation, large mature trees and waterbodies;
- Ensure that best practice sedimentation and pollution control measures are undertaken at all times, in accordance with Environment Protection Agency guidelines (EPA 1991; EPA 1996; Victorian Stormwater Committee 1999) to prevent offsite impacts to waterways and wetlands; and,
- As indigenous flora provides valuable habitat for indigenous fauna, it is recommended that any landscape plantings that are undertaken as part of the proposed quarry are conducted using indigenous species sourced from a local provenance, rather than exotic deciduous trees and shrubs.

In addition to these measures, the following documents may need to be prepared and implemented (based on feedback from DEPI) as part of the work plan prior to any construction activities:

- Significant Species Conservation Management Plan (CMP). A CMP will be required if significant species or their habitats are likely to be impacted (e.g. Dwarf Galaxias, Australasian Bittern, Latham's Snipe). The CMP should include a population and habitat monitoring program for Dwarf Galaxias in the local area, specifically in wetlands and waterways whose hydrological cycles are likely to be impacted by the proposed action and/or the loss of catchment area. Study design for the Dwarf Galaxias monitoring should:
  - Include collection of sufficient baseline data to properly account for natural variations in the population to help prevent the apparent detection of false impacts. Ideally, the monitoring study may be able to utilise suitable non-impacted 'control site' populations if suitable sites are identified;
  - Account for the fact that the Dwarf Galaxias is an annual species, with size, sex and abundance changing rapidly throughout each year; these seasonal trends should be quantified;
  - Occur at least 12 months prior to commencement of works, and throughout operation of the site for such a time as to determine impacts at the peak of their risk (e.g. once total proposed loss of catchment area above the population is reached, and representative dry years);

Specific details would be determined pending further investigation and consultation with relevant authorities.

- Construction Environmental Management Plan (CEMP). The CEMP should include specific species/vegetation conservation strategies, daily monitoring, sedimentation management, site specific rehabilitation plans, weed and pathogen management measures, etc.;
- Weed Management Plan. This plan should follow the guidelines set out in the CaLP Act, and clearly outline any obligations of the project team in relation to minimising the spread of weeds as a result of this project. This may include a pre-clearance weed survey undertaken prior to any construction activities to record and map the locations of all noxious and environmental weeds;

- Fauna Management Plan. This may be required if habitat for common fauna species is likely to be impacted and salvage and translocation must be undertaken to minimise the risk of injury or death to those species (e.g. hollow-bearing trees, wetlands, etc.); and,

## 7.2 Offset Impacts

### 7.2.1 Offset Criteria

The Biodiversity Assessment Guidelines require offsetting as the final step in considering the impacts of development on native vegetation. Emphasis is placed on avoiding (High Risk) and minimising impacts, and only after these steps have been taken should offsets (actions undertaken to achieve commensurate gains) be considered.

Offset targets must be met, as specified in Section 4.2. In determining the appropriate offset responses for permitted vegetation clearance, the Guidelines set out several criteria which must be considered for any offset site. These criteria are presented in Appendix 1.5.

#### 7.2.1.1 Offset Options

Potential offsets may be sourced using the following mechanisms:

- BushBroker: BushBroker maintains a register of landowners who are willing to sell offset credits. Offsets secured by Bushbroker are done so via a Section 69 Agreement under the *Conservation, Forest and Lands Act 1987*.
- Trust for Nature: Trust for Nature holds a list of landowners who are willing to sell vegetation offsets. Offsets secured by Trust for Nature are done so under the Victorian *Conservation Trust Act 1972*.
- Local Councils: The proponent may contact local councils to seek availability of offsets.
- Enhanced management of existing vegetation, and/or revegetation (or natural recruitment) within existing land owned by the proponent.
- Over-the-Counter Offsets Scheme: The Guidelines include the expansion of the “Over-the-Counter” (OTC) Offsets Scheme, allowing non-government agencies to establish themselves as OTC Facilities. OTC Facilities will broker native vegetation offsets (credits) between landholders (with offset sites) and permit holders (with offset requirements). The OTC Offsets Scheme differs from other third party offsets (Bushbroker, Trust for Nature) as permit holders will not be required to negotiate directly with landholders. Instead, they can review available credits and relevant sale prices at each private OTC Facility, and purchase their required credits through them. Following payment, the permit holder will receive a Credit Extract as proof that they have satisfied their offset requirements. Ecology and Heritage Partners is an accredited OTC Facility.

### 7.2.2 Offset Strategy

Management commitments/arrangements to meet offset obligations at any offset site can be broken up into two main strategies; 1) maintenance and 2) improvement. Some of these techniques include:

#### Maintenance

- Retention of all remnant trees (both alive and dead specimens).

- Removal of woody and herbaceous weeds.
- Foregoing allowed uses such as grazing and slashing activities.

#### **Improvement**

- Control/eradication of environmental or noxious weeds including those that are a threat to existing remnant vegetation.
- Fencing to restrict public/grazing access into areas of ecological value.
- Control of introduced animals such as foxes, rabbits and feral cats.
- Revegetation and/or supplement planting of locally indigenous tree, shrub and understorey species in appropriate areas (need to consider ecological function).

It is understood that Hanson are in the process of investigating the feasibility of purchasing additional land nearby to the study area to meet the offset obligations generated by the proposed vegetation removal associated with the proposed quarry development. Further information on the offsets able to be generated by these sites will be presented in due course.

Any additional offsets not able to be met through the enhanced management of existing vegetation on the above sites are proposed to be sourced through the Bushbroker, or Over-The-Counter Offsets scheme.

## 8 FURTHER REQUIREMENTS

Further requirements associated with development of the study area, as well as additional studies or reporting that may be required, are provided in Table 10, below.

**Table 10.** Further requirements associated with development of the study area

Relevant Legislation	Implications	Further Action
<i>Environment Protection and Biodiversity Conservation Act 1999</i>	There is suitable habitat within the study area for two flora species (Green-striped Greenhood, Strzelecki Gum) and five fauna species (Southern Brown Bandicoot, Australasian Bittern, Latham's Snipe, Growling Grass Frog and Dwarf Galaxias,) listed under the EPBC Act. Based on likely impacts to Dwarf Galaxias, potential impacts to Australasian Bittern, Latham's Snipe (and Green-striped Greenhood, Southern Brown Bandicoot and Growling Grass Frog pending the results of targeted surveys), a referral to the Commonwealth Environment Minister will be required.	Conduct targeted surveys for flora and fauna species listed under the EPBC Act (Section 6.1.4).
<i>Flora and Fauna Guarantee Act 1988</i>	There is suitable habitat within the study area for several species listed or protected under the FFG Act. However, the study area is privately owned, as such a permit under the FFG Act is not required.	No further action required.
<i>Environment Effects Act 1978</i>	Based on the current development plan, vegetation proposed to be removed and other associated impacts, the development may trigger the requirement for an Environment Effects Statement (EES). A referral under the <i>Environment Effects Act 1978</i> should be considered to ensure that all environmental impacts are considered and mitigated in an appropriate manner prior to development.	Prepare and submit a referral under the <i>Environment Effects Act 1978</i> to DEPI.
<i>Mining Resources (Sustainable Development) Act 1990</i>	A work plan will need to be prepared as the proposed development does not meet any of the exemptions listed above. This work plan will need to comply with the requirements of the MRSD Act, and must include a detailed rehabilitation plan.	Prepare and submit a Work Plan (approved by DEPI) under the MRSD Act.
<i>Planning and Environment Act 1987</i>	The clearing of native vegetation for Mining Industries is exempt from the requirement for a planning permit subject to an assessment as part of the work plan approval process (MRSD Act). The removal of native vegetation for the Earth Resources Industry (ERI) is regulated through the Mining and Extractive Industry Work Approvals Process (DPI 2009). A Memorandum of Understanding (MoU) between the former DSE and DPI recognises that native vegetation should be offset in accordance with the relevant legislation (DPI 2007). Based on DEPI's NVIM Tool (DEPI 2014b) and BIOR report (Appendix 4), the study area is situated in Location A with 46.378 hectares (comprising 44.337 hectares of remnant patch vegetation, and 29 scattered trees) of native vegetation proposed to be impacted as part of the proposed quarry development	No further action required.



Relevant Legislation	Implications	Further Action
	<p>(Appendix 4). As such, the permit application falls under the <b>Moderate Risk-based pathway</b>.</p> <p>The offset requirement for native vegetation removal is 0.009 General Biodiversity Equivalence Units (BEU) and 33.712 specific BEUs for Spotted Gum, 37.491 specific BEUs for Cobra Greenhood, and 37.347 specific BEUs for Green Scentbark.</p>	
<i>Catchment and Land Protection Act 1994</i>	Several weed species listed under the CaLP Act were recorded within the study area. To meet requirements under the CaLP Act, listed noxious weeds should be appropriately controlled throughout the study area.	Planning Permit conditions are likely to include a requirement for a Weed Management Plan.
<i>Water Act 1989</i>	A 'works on waterways' permit is likely to be required from the Port Phillip and Westernport CMA where any action impacts on waterways within the study area.	Obtain a 'works on waterways' permit from Port Phillip and Westernport CMA.
<i>Wildlife Act 1975</i>	Any persons engaged to conduct salvage and translocation or general handling of terrestrial fauna species must hold a current Management Authorisation.	Ensure wildlife specialists hold a current Management Authorisation.

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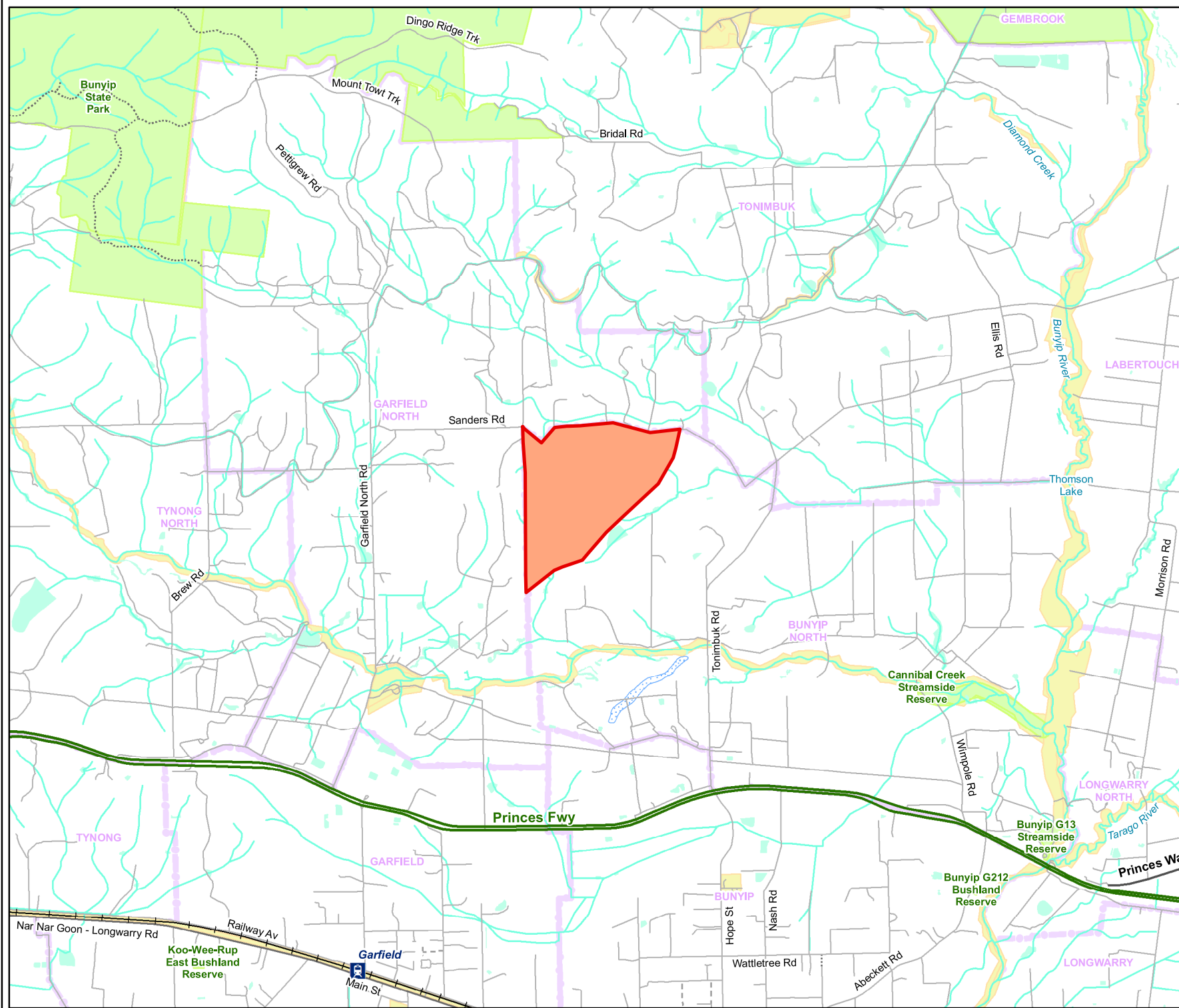
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## FIGURES

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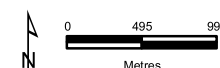
## Legend

- Study Area
- Freeway
- Major Road
- Collector Road
- Minor Road
- Proposed Road
- Walking Track
- Minor Watercourse
- Permanent Waterbody
- Land Subject to Inundation
- Parks and Reserves
- Crown Land
- Localities



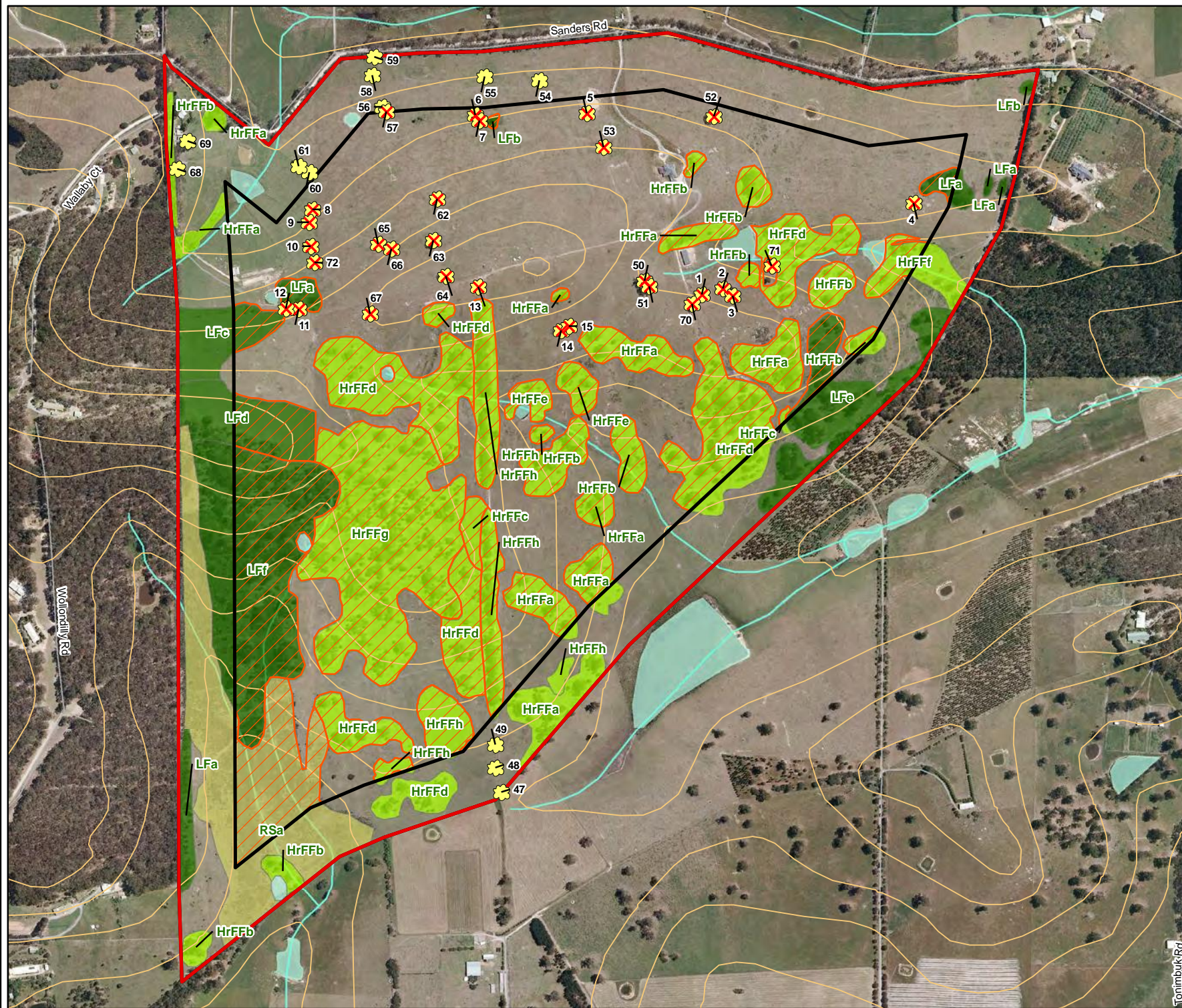
**Figure 1**

**Location of the study area**  
*Biodiversity Assessment for a proposed hard rock extraction site on Sanders Road, Garfield*



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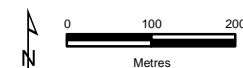


## Legend

- Study Area
  - 100m buffer
  - Contour (10m)
  - ✿ Scattered Trees
- ### Ecological Vegetation Classes
- Herb-rich Foothill Forest
  - Lowland Forest
  - Riparian Scrub
- ### Ecological features impacted
- Vegetation
  - ✗ Scattered Trees

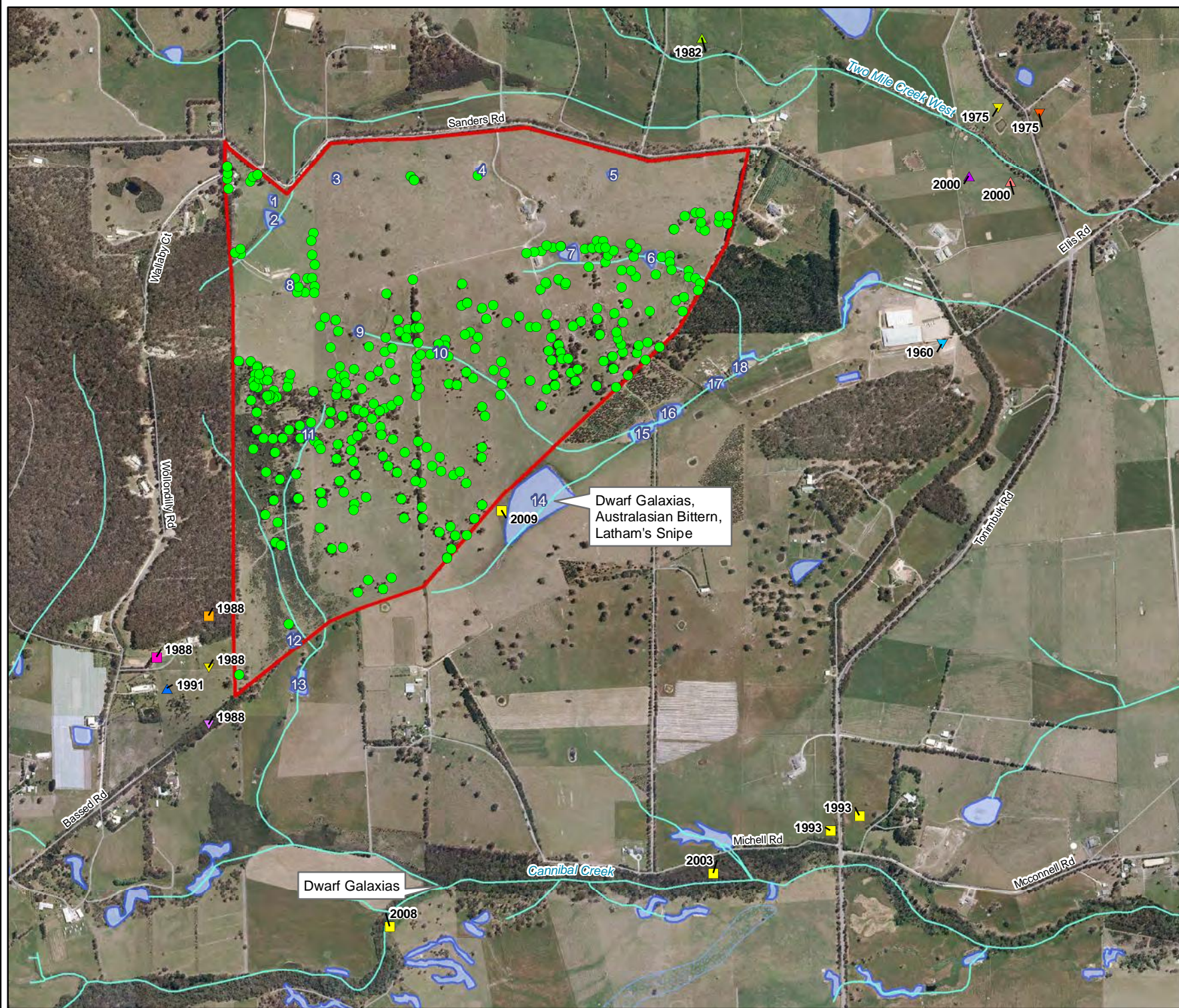


**Figure 2a**  
**Ecological features**  
 Biodiversity Assessment for a proposed hard rock extraction site on Sanders Road, Garfield



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## Legend

- Study Area
- Large and Very Large Old Trees
- 7 Aquatic habitat
- Minor Watercourse

## Significant fauna (VBA 2014)

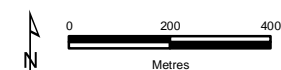
- Azure Kingfisher
- Barking Owl
- Dwarf Galaxias
- ▲ Eastern Great Egret
- ▲ Growling Grass Frog
- ▲ Powerful Owl
- ▲ Royal Spoonbill
- ▼ Southern Brown Bandicoot
- ▼ Southern Toadlet
- ▼ Spotted Quail-thrush
- ▼ White-throated Needletail



## Figure 2b

### Fauna habitat

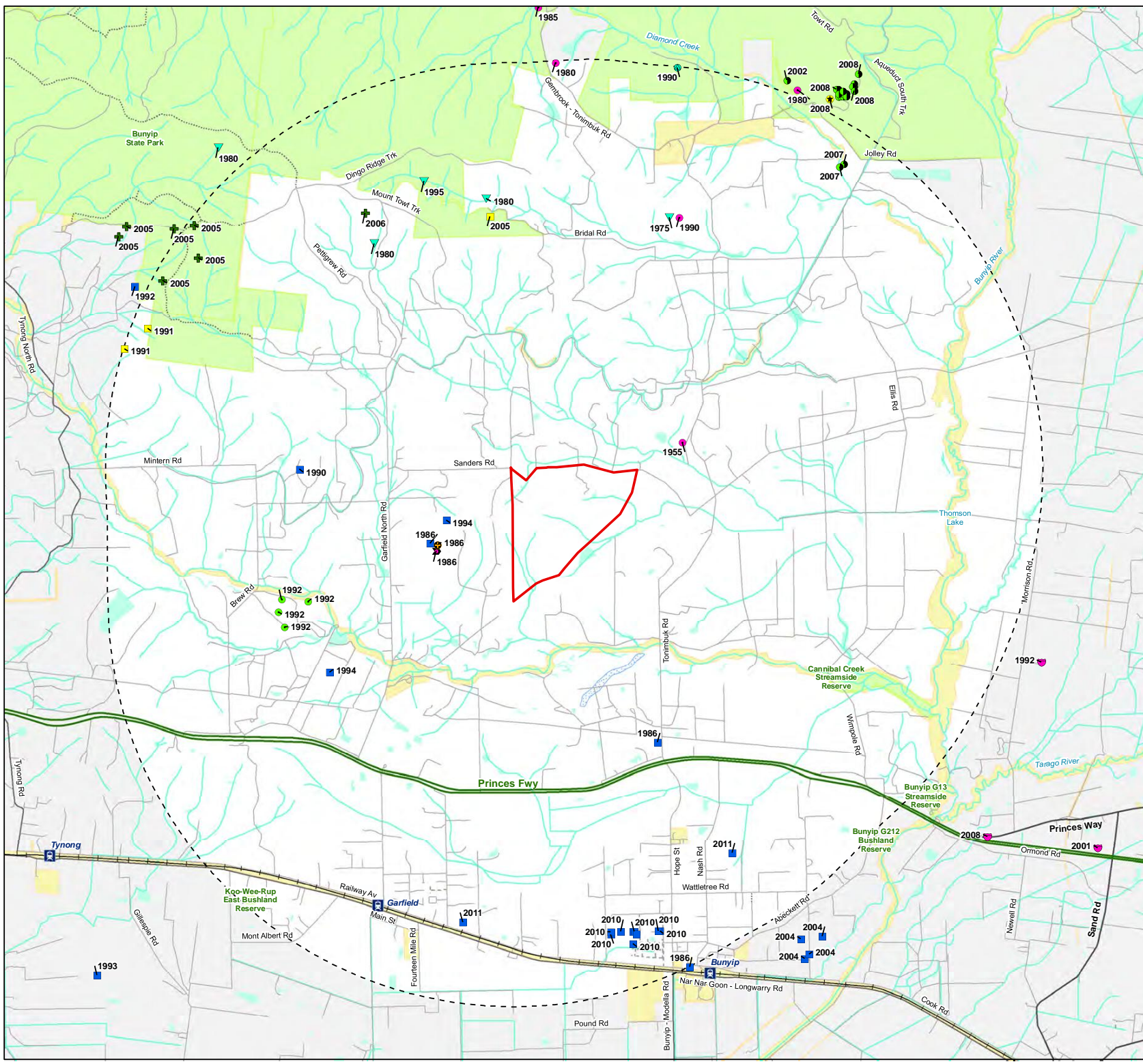
*Biodiversity Assessment for a proposed hard rock extraction site on Sanders Road, Garfield*



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**Legend**

Study Area

**Significant flora**

Finger Hakea

Green Scentbark

Green-striped Greenhood

Hoary Rapier-sedge

Powelltown Correa

River Leafless Bossiaea

Slender Tick-trefoil

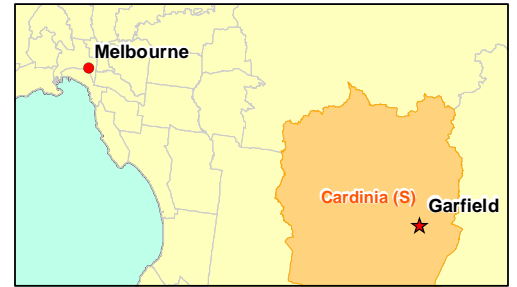
Small Fork-fern

Southern Bristle-sedge

Strzelecki Gum

Summer Spider-orchid

Swamp Bush-pea



**Figure 3**  
**Previously documented significant flora within 5km of the study area**  
*Biodiversity Assessment for a proposed hard rock extraction site on Sanders Road, Garfield*

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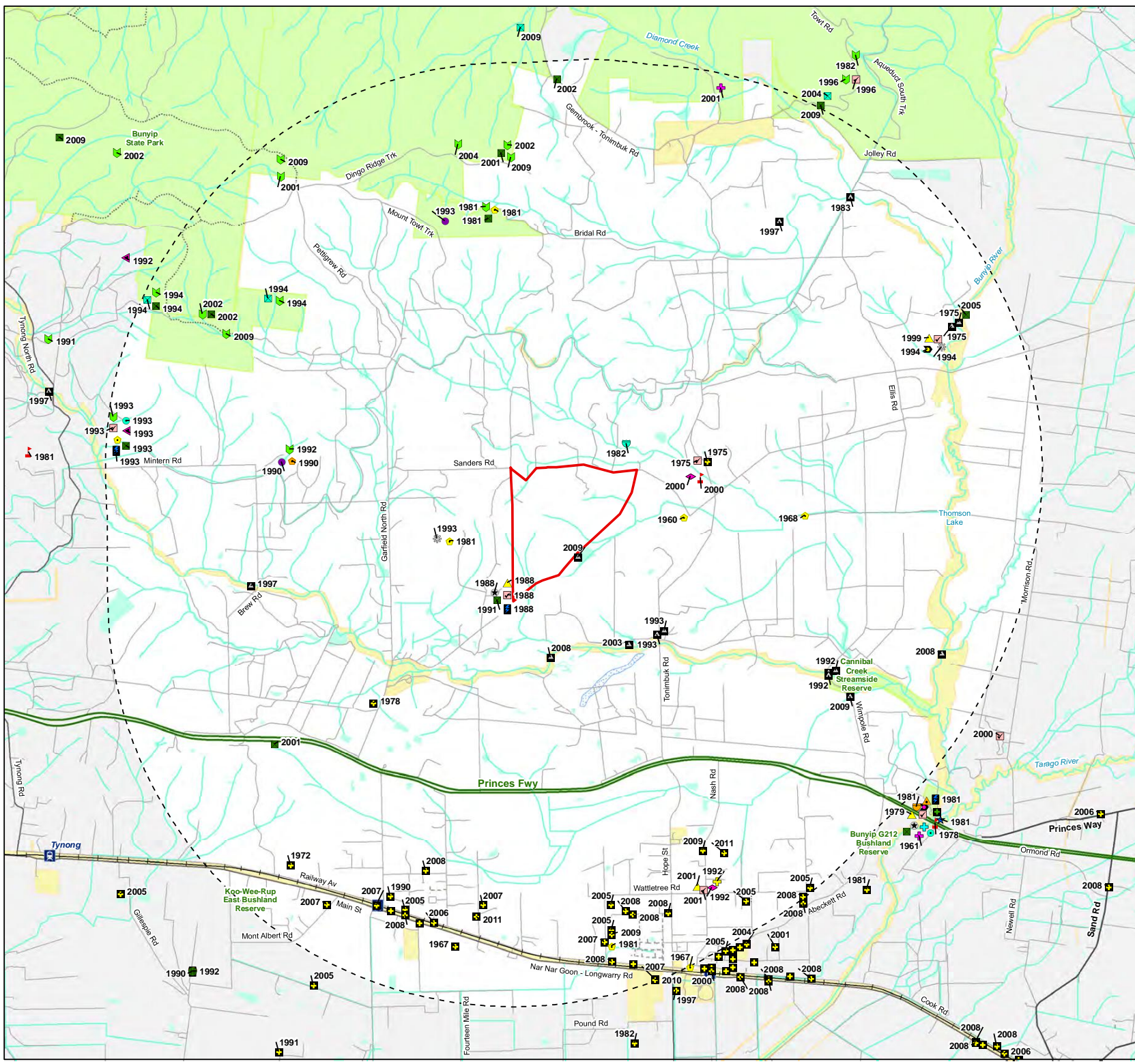
Kilometres

VBA 2014. Victorian Biodiversity Atlas. Sourced from: 'VBA\_FLORA25' and 'VBA\_FLORA100', March 2014 © The State of Victoria, Department of Environment and Primary Industries. Records prior to 1949 not shown.

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6427\_Fig03\_SigFlora 2011/2014 melboly





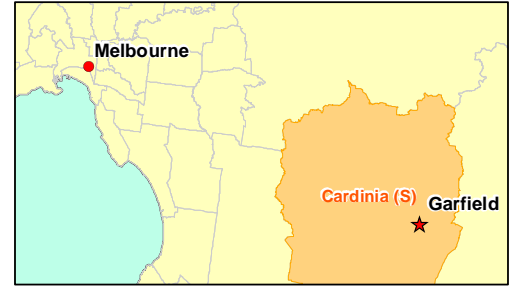
**Legend**  

Study Area

**Significant fauna**

- Australasian Bittern
- Australasian Shoveler
- Australian Grayling
- Azure Kingfisher
- Barking Owl
- Blue-billed Duck
- Broad-toothed Rat
- Common Bent-wing Bat
- Dwarf Galaxias
- Eastern Great Egret
- Glossy Ibis
- Greater Glider
- Growing Grass Frog
- Hardhead

- Helmeted Honeyeater
- Intermediate Egret
- Latham's Snipe
- Masked Owl
- Musk Duck
- Nankeen Night Heron
- Pied Cormorant
- Powerful Owl
- Royal Spoonbill
- Sooty Owl
- Southern Brown Bandicoot
- Southern Toadlet
- Spotted Quail-thrush
- White-footed Dunnart
- White-throated Needletail



**Figure 4**  
**Previously documented significant fauna within 5km of the study area**  
*Biodiversity Assessment for a proposed hard rock extraction site on Sanders Road, Garfield*

012

Kilometres

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5437\_Fig04\_SigFauna 2011/2014 melb.vic

## APPENDICES

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## APPENDIX 1

### Appendix 1.1 – Rare or Threatened Categories for Listed Victorian Taxa

**Table A1.1.** Rare or Threatened categories for listed Victorian taxa.

Rare or Threatened Categories
<b>Conservation Status in Australia (Based on the EPBC Act 1999)</b>
<b>EX</b> - Extinct: Extinct is when there is no reasonable doubt that the last individual of the species has died.
<b>CR</b> - Critically Endangered: A species is critically endangered when it is facing an extremely high risk of extinction in the wild in the immediate future.
<b>EN</b> - Endangered: A species is endangered when it is not critically endangered but is facing a very high risk of extinction in the wild in the near future.
<b>VU</b> - Vulnerable: A species is vulnerable when it is not critically endangered or endangered but is facing a high risk of extinction in the wild in the medium-term future.
<b>R*</b> - Rare: A species is rare but overall is not currently considered critically endangered, endangered or vulnerable.
<b>K*</b> - Poorly Known: A species is suspected, but not definitely known, to belong to any of the categories extinct, critically endangered, endangered, vulnerable or rare.
<b>Conservation Status in Victoria (Based on DEPI 2014e, DSE 2009, DSE 2013)</b>
<b>x</b> - Presumed Extinct in Victoria: not recorded from Victoria during the past 50 years despite field searches specifically for the plant, or, alternatively, intensive field searches (since 1950) at all previously known sites have failed to record the plant.
<b>e</b> - Endangered in Victoria: at risk of disappearing from the wild state if present land use and other causal factors continue to operate.
<b>v</b> - Vulnerable in Victoria: not presently endangered but likely to become so soon due to continued depletion; occurring mainly on sites likely to experience changes in land-use which would threaten the survival of the plant in the wild; or, taxa whose total population is so small that the likelihood of recovery from disturbance, including localised natural events such as drought, fire or landslip, is doubtful.
<b>r</b> - Rare in Victoria: rare but not considered otherwise threatened - there are relatively few known populations or the taxon is restricted to a relatively small area.
<b>k</b> - Poorly Known in Victoria: poorly known and suspected, but not definitely known, to belong to one of the above categories (x, e, v or r) within Victoria. At present, accurate distribution information is inadequate.



## Appendix 1.2 – Defining Ecological Significance

**Table A1.2.** Criteria for defining Ecological Significance ratings for significant flora, fauna and communities.

National Significance
<p><b>Flora:</b> National conservation status is based on the EPBC Act list of taxa considered threatened in Australia (i.e. extinct, critically endangered, endangered, vulnerable).</p>
<p><b>Fauna:</b> National conservation status is based on the EPBC Act list of taxa considered threatened in Australia (i.e. Extinct, Critically Endangered, Endangered, Vulnerable). Fauna listed as Extinct, Critically Endangered, Endangered, Vulnerable, or Rare under National Action Plans for terrestrial taxon prepared for DoE: threatened marsupials and monotremes (Maxwell et al. 1996), rodents (Lee 1995), bats (Duncan et al. 1999), birds (Garnett and Crowley 2000), reptiles (Cogger et al. 1993), amphibians (Tyler 1997) and butterflies (Sands and New 2002).</p>
<p><b>Communities:</b> Vegetation communities considered critically endangered, endangered or vulnerable under the EPBC Act and considering vegetation condition.</p>
State Significance
<p><b>Flora:</b> Threatened taxa listed under the provisions of the FFG Act. Flora listed in the State Government’s Advisory List of Rare or Threatened Plants in Victoria (DEPI 2014E).</p>
<p><b>Fauna:</b> Threatened taxon listed under Schedule 2 of the FFG Act. Fauna listed as Extinct, Critically Endangered, Endangered and Vulnerable on the State Government’s Advisory List of Threatened Vertebrate Fauna in Victoria (DSE 2013). Listed as Lower Risk (Near Threatened, Conservation Dependent or Least concern) or Data Deficient under National Action Plans for terrestrial species prepared for the DoE: threatened marsupials and monotremes (Maxwell et al. 1996), rodents (Lee 1995), bats (Duncan et al. 1999), birds (Garnett and Crowley 2000), reptiles (Cogger et al. 1993), amphibians (Tyler 1997) and butterflies (Sands and New 2002).</p>
<p><b>Communities:</b> Ecological communities listed as threatened under the FFG Act. EVC listed as threatened (i.e. endangered, vulnerable) or rare in a Native Vegetation Plan for a particular bioregion (DSE 2013c) and considering vegetation condition.</p>
Regional Significance
<p><b>Fauna:</b> Fauna with a disjunct distribution, or a small number of documented recorded or naturally rare in the particular Bioregion in which the study area is located. A particular taxon that is has an unusual ecological or biogeographical occurrence or listed as Lower Risk – Near Threatened, Data Deficient or Insufficiently Known on the State Government’s Advisory List of Threatened Vertebrate Fauna in Victoria (DSE 2013).</p>
<p><b>Communities:</b> EVC listed as depleted or least concern in a Native Vegetation Plan for a particular bioregion (DSE 2013c) and considering vegetation condition. EVC considered rare by the author for a particular bioregion.</p>
<p><b>Local Significance</b> Local significance is defined as flora, fauna and ecological communities indigenous to a particular area, which are not considered rare or threatened on a national, state or regional level.</p>

## Appendix 1.3 – Defining Site Significance

**Table A1.3.** Criteria for defining Site Significance ratings.

National Significance
<p>A site is of National significance if:</p> <ul style="list-style-type: none"> <li>It regularly supports, or has a high probability of regularly supporting individuals of a taxon listed as 'Critically Endangered' or 'Endangered' under the EPBC Act and/or under National Action Plans for terrestrial taxon prepared for the DoE.</li> <li>It regularly supports, or has a high probability of supporting, an 'important population' as defined under the EPBC Act of one or more nationally 'vulnerable' flora and fauna taxon.</li> <li>It is known to support, or has a high probability of supporting taxon listed as 'Vulnerable' under National Action Plans.</li> <li>It is known to regularly support a large proportion (i.e. greater than 1%) of a population of a taxon listed as 'Conservation Dependent' under the EPBC Act and/or listed as Rare or Lower Risk (near threatened, conservation dependent or least concern) under National Action Plans.</li> <li>It contains an area, or part thereof designated as 'critical habitat' under the EPBC Act, or if the site is listed under the Register of National Estate compiled by the Australian Heritage Commission.</li> <li>It is a site which forms part of, or is connected to a larger area(s) of remnant native vegetation or habitat of national conservation significance such as most National Park, and/or a Ramsar Wetland(s).</li> </ul>
State Significance
<p>A site is of State significance if:</p> <ul style="list-style-type: none"> <li>It occasionally (i.e. every 1 to 5 years) supports, or has suitable habitat to support taxon listed as 'Critically Endangered' or 'Endangered' under the EPBC Act and/or under National Action Plans.</li> <li>It regularly supports, or has a high probability of regularly supporting (i.e. high habitat quality) taxon listed as 'Vulnerable', 'Near threatened', 'Data Deficient' or 'Insufficiently Known' in Victoria (DEPI 2014E, 2013), or species listed as 'Data Deficient' or 'Insufficiently Known' under National Action Plans.</li> <li>It contains an area, or part thereof designated as 'critical habitat' under the FFG Act.</li> <li>It supports, or likely to support a high proportion of any Victorian flora and fauna taxa.</li> <li>It contains high quality, intact vegetation/habitat supporting a high species richness and diversity in a particular bioregion.</li> <li>It is a site which forms part of, or connected to a larger area(s) of remnant native vegetation or habitat of state conservation significance such as most State Parks and/or Flora and Fauna Reserves.</li> </ul>
Regional Significance
<p>A site is of Regional significance if:</p> <ul style="list-style-type: none"> <li>It regularly supports, or has a high probability of regularly supporting regionally significant fauna as defined in Table 1.2.</li> <li>Is contains a large population (i.e. greater than 1% or 5%) of flora considered rare in any regional native vegetation plan for a particular bioregion.</li> <li>It supports a fauna population with a disjunct distribution, or a particular taxon that has an unusual ecological or biogeographical occurrence.</li> <li>It is a site which forms part of, or is connected to a larger area(s) of remnant native vegetation or habitat of regional conservation significance such as most Regional Parks and/or Flora and Fauna Reserves.</li> </ul>
Local Significance
<p>Most sites are considered to be of at least local significant for conservation, and in general a site of local significance can be defined as:</p> <ul style="list-style-type: none"> <li>An area which supports indigenous flora species and/or a remnant EVC, and habitats used by locally significant fauna species.</li> <li>An area which currently acts, or has the potential to act as a wildlife corridor linking other areas of higher conservation significance and facilitating fauna movement throughout the landscape.</li> </ul>



## Appendix 1.4 – Vegetation Condition and Habitat Quality

**Table A1.4.1** Defining Vegetation Condition ratings.

Criteria for defining Vegetation Condition
<b>High Quality:</b> Vegetation dominated by a diversity of indigenous species, with defined structures (where appropriate), such as canopy layer, shrub layer, and ground cover, with little or few introduced species present.
<b>Moderate Quality:</b> Vegetation dominated by a diversity of indigenous species, but is lacking some structures, such as canopy layer, shrub layer or ground cover, and/or there is a greater level of introduced flora species present.
<b>Low Quality:</b> Vegetation dominated by introduced species, but supports low levels of indigenous species present, in the canopy, shrub layer or ground cover.

**Table A1.4.2** Defining Habitat Quality.

Criteria for defining Habitat Quality
<b>High Quality:</b> <ul style="list-style-type: none"> <li>• High degree of intactness (i.e. floristically and structurally diverse), containing several important habitat features such as ground debris (logs, rocks, vegetation), mature hollow-bearing trees, and a dense understorey component.</li> <li>• High species richness and diversity (i.e. represented by a large number of species from a range of fauna groups).</li> <li>• High level of foraging and breeding activity, with the site regularly used by native fauna for refuge and cover.</li> <li>• Habitat that has experienced, or is experiencing low levels of disturbance and/or threatening processes (i.e. weed invasion, introduced animals, soil erosion, salinity).</li> <li>• High contribution to a wildlife corridor, and/or connected to a larger area(s) of high quality habitat.</li> <li>• Provides known, or likely habitat for one or more rare or threatened species listed under the EPBC Act, FFG Act, or species considered rare or threatened according to DEPI 2014e; 2009 or 2013.</li> </ul>
<b>Moderate Quality:</b> <ul style="list-style-type: none"> <li>• Moderate degree of intactness, containing one or more important habitat features such as ground debris (logs, rocks, vegetation), mature hollow-bearing trees, and a dense understorey component.</li> <li>• Moderate species richness and diversity - represented by a moderate number of species from a range of fauna groups.</li> <li>• Moderate levels of foraging and breeding activity, with the site used by native fauna for refuge and cover.</li> <li>• Habitat that has experienced, or is experiencing moderate levels of disturbance and/or threatening processes.</li> <li>• Moderate contribution to a wildlife corridor, or is connected to area(s) of moderate quality habitat.</li> <li>• Provides potential habitat for a small number of threatened species listed under the EPBC Act, FFG Act, or species considered rare or threatened according to DEPI 2014e; 2009 or 2013.</li> </ul>
<b>Low Quality:</b> <ul style="list-style-type: none"> <li>• Low degree of intactness, containing few important habitat features such as ground debris (logs, rocks, vegetation), mature hollow-bearing trees, and a dense understorey component.</li> <li>• Low species richness and diversity (i.e. represented by a small number of species from a range of fauna groups).</li> <li>• Low levels of foraging and breeding activity, with the site used by native fauna for refuge and cover.</li> <li>• Habitat that has experienced, or is experiencing high levels of disturbance and/or threatening processes.</li> <li>• Unlikely to form part of a wildlife corridor, and is not connected to another area(s) of habitat.</li> <li>• Unlikely to provide habitat for rare or threatened species listed under the EPBC Act, FFG Act, or considered rare or threatened according to DEPI 2014e; 2009 or 2013.</li> </ul>

## Appendix 1.5 – Offsets and Exemptions

**Table A1.5.1.** Calculation of Biodiversity Equivalence Scores and General or Specific Offsets (DEPI 2013a)

Pathway	Biodiversity Assessment Tools	Information Source
Low Risk-based pathway	Condition Score	Modelled data, NVIM Tool (DEPI 2014d)
	Habitat Hectares	= Condition Score x Extent (ha)
	Strategic Biodiversity Score	Modelled data, NVIM Tool (DEPI 2014d)
	General Biodiversity Equivalence Score	= Habitat Hectares x Strategic Biodiversity Score
Moderate or High Risk-based pathway	Condition Score	Habitat hectare assessment
	Habitat Hectares	= Condition Score x Extent (ha)
	Strategic Biodiversity Score and Habitat Importance Score	Modelled data, determined by DEPI
	Specific Biodiversity Equivalence Score (A)	= Habitat Hectares x Habitat Importance Score
	Sum of Specific Biodiversity Equivalence Scores of remaining habitat (B)	Data gathered during the site assessment is provided to DEPI for analysis and a resulting assessment offset report is provided by the Department.
	Specific Offset Threshold (C)	
	General/Specific Threshold Test: If $A \div B > C$ a <b>Specific</b> offset is required If $A \div B < C$ a <b>General</b> offset required	

**Table A1.5.2.** Summary of offset requirements (DEPI 2013a)

Risk-based Pathway	Offset Type	Offset Amount (Risk adjusted biodiversity equivalence score)	Offset Attributes		
			Habitat for Species	Vicinity	Strategic Biodiversity Score
Low Risk	General offset	1.5 times the general biodiversity equivalence score of the native vegetation to be removed.	No restrictions	In the same Catchment Management Authority or Local Government Area boundary as the native vegetation to be removed.	At least 80 per cent of the strategic biodiversity score of the native vegetation to be removed.
Moderate or High Risk	General offset	1.5 times the general biodiversity equivalence score of the native vegetation to be removed.	No restrictions	In the same Catchment Management Authority or Local Government Area boundary as the native vegetation to be removed.	At least 80 per cent of the strategic biodiversity score of the native vegetation to be removed.
Moderate or High Risk	Specific offset	For each species impacted, 2 times the specific biodiversity equivalence score of the native vegetation to be removed.	Likely habitat for each rare or threatened species that a specific offset is required for, according to the specific-general offset test.	No restrictions	No restrictions

**Table A1.5.3.** Permit exemptions (from *Victorian Planning Provisions Clause 52.17 -7*)

No permit is required to remove, destroy or lop native vegetation to the minimum extent necessary if any of the following apply:	
Property size	A permit is not required for removal of native vegetation if the native vegetation is on land which, together with all contiguous land in one ownership, has an area of less than 0.4 hectares. This exemption does not apply to native vegetation within a road reservation, or where a subdivision is proposed with lots less than 0.4 hectares <sup>4</sup> .
Lopping or pruning	Generally, minor lopping or pruning of up to a third of the foliage (not including the trunk) that does not affect the continued health of the tree does not require a permit or attract an offset requirement.
Regrowth	<p>A permit is not generally not required for removal of native vegetation that is For regrowth which has naturally established or regenerated on land lawfully cleared of naturally established native vegetation and is:</p> <ul style="list-style-type: none"> <li>a) Less than 10 years old; or,</li> <li>b) Bracken (<i>Pteridium esculentum</i>); or,</li> <li>c) Less than ten years old at the time of a Property Vegetation Plan being signed by the Secretary of the Department of Sustainability and Environment (as constituted under Part 2 of the <i>Conservation, Forest and Lands Act 1987</i>), and is shown on that Plan as being 'certified regrowth', and is on land that is to be used or maintained for cultivation or pasture during the term of that Plan; or,</li> <li>d) Within the boundary of a timber production plantation, as indicated on a Plantation Development Notice or other documented record, and has established after the plantation.</li> </ul> <p>This exemption does not apply to land on which native vegetation has been cleared or otherwise destroyed or damaged as a result of flood, fire or other natural disaster.</p>
Weeds	<p>A permit is not required for removal of native vegetation to enable the removal or destruction of a weed listed in the schedule to the clause. The maximum extent of native vegetation removed, destroyed or lopped under this exemption on contiguous land in the same ownership in a five year period must not exceed any of the following:</p> <ul style="list-style-type: none"> <li>a) 1 hectare of native vegetation which does not include a tree; or,</li> <li>b) 15 native trees if each tree has a DBH of less than 20.</li> </ul>
Planted vegetation	The removal of planted trees does not require a permit or attract an offset requirement, except if public funding was provided to assist in planting or managing the native vegetation and the terms of the funding did not anticipate removal or harvesting of the vegetation.
Other	<p>Numerous additional exemptions apply to works relating to approvals granted prior to 15 September 2008, fencing, mowing, stone exploration / extraction, utility maintenance, crown land, emergency works, works in Farming Zone and Rural Activity Zone, fire protection, geothermal energy exploration, grazing, greenhouse gas sequestration, harvesting timber, mineral exploration / extraction, pest animal burrow removal, road safety, stock movement on roads and surveying.</p> <p>See Clause 52.17 -6 for details.</p>

<sup>4</sup> In accordance with the Victorian Civil and Administrative Tribunal's (VCAT) decision *Villawood v Greater Bendigo CC* (2005) VCAT 2703 (20 December 2005) all native vegetation is considered lost where proposed lots are less than 0.4 hectares in area and must be offset at the time of subdivision.

## Appendix 1.6 – Tree Retention Zones

Tree Retention Zones (TRZs) should be implemented to prevent indirect losses of native vegetation during construction activities (DSE 2010). A TRZ applies to a tree and is a specific area above and below the ground, with a radius 12 x the DBH. At a minimum standard a TRZ should consider the following:

- A TRZ of trees should be a radius no less than two metres or greater than 15 metres;
- Construction, related activities and encroachment (i.e. earthworks such as trenching that disturb the root zone) should be excluded from the TRZ;
- Where encroachment exceeds 10% of the total area of the TRZ, the tree should be considered as lost and offset accordingly;
- Directional drilling may be used for works within the TRZ without being considered encroachment. The directional bore should be at least 600 millimetres deep;
- The above guidelines may be varied if a qualified arborist confirms the works will not significantly damage the tree (including stags / dead trees). In this case the tree would be retained and no offset would be required; and,
- Where the minimum standard for a TRZ has not been met an offset may be required.