



Native Vegetation Clearance

Wastewater Treatment Plant Upgrade

100 Springs Road

Mount Barker

Data Report

Clearance under the *Native Vegetation Regulations 2017*

28 February 2025

Prepared by JS Ayre & Associates



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1. Application information

Application Details

Applicant:	Mount Barker District Council		
Key contact:	, Wastewater Project Manager, T: E:		
Landowner:	Mount Barker District Council		
Site Address:	100 Springs Road, Mount Barker		
Local Government Area:	Mount Barker District Council	Hundred:	Macclesfield
Title ID:	CT/6251/939	Parcel ID	D118757 A820

Summary of proposed clearance

Purpose of clearance	Clearance is required to facilitate the construction of buildings associated with the wastewater treatment plant, including fill batters
Native Vegetation Regulation	Regulation 12, Schedule 1; clause 33, House or Buildings
Description of the vegetation under application	<u>Size, type and general condition</u> – 30 scattered River Red Gum (<i>Eucalyptus camaldulensis</i> var <i>camaldulensis</i>) trees in fair to good condition.
Total proposed clearance - area (ha) and number of trees	30 scattered trees are proposed to be cleared.
Level of clearance	Level 4
Overlay (Planning and Design Code)	Native Vegetation Overlay

Map of proposed clearance area



Mitigation hierarchy	Options were investigated and the one chosen, located as far east as possible, reduces impact whilst achieving essential infrastructure design and function.
SEB Offset proposal	Payment of \$21,207.28 into the Fund

2. Purpose of clearance

2.1 Description

The clearance is associated with the upgrade of the wastewater treatment plant (WWTP) at Springs Road, Mount Barker. Part of the project site is a wastewater discharge channel which is fringed with densely growing River Red Gums, over exotic species. As part of the development, a fill embankment will be built into the channel, necessitating the removal of trees varying in size from seedlings/saplings to larger, semi-mature trees. Thirty of the c. 120 trees impacted are considered remnant.

2.2 Background

The site, located off Springs Road, Mount Barker, is a wastewater treatment facility. The discharge channel was built in the late 1990's to early 2000's as part of the construction of the Laratinga Wetlands. Prior to its development the site was open farmland, and much of the surrounding land is being slowly developed for residential, recreational, community facilities and commercial use. The proposed WWTP upgrade is Stage 1 of a 2 Stage development. Stage 2 is internal to the site, on a cleared area south of Stage 1, and will have no native vegetation impacts.

2.3 General location map



Figure 1. Impact site outlined in yellow

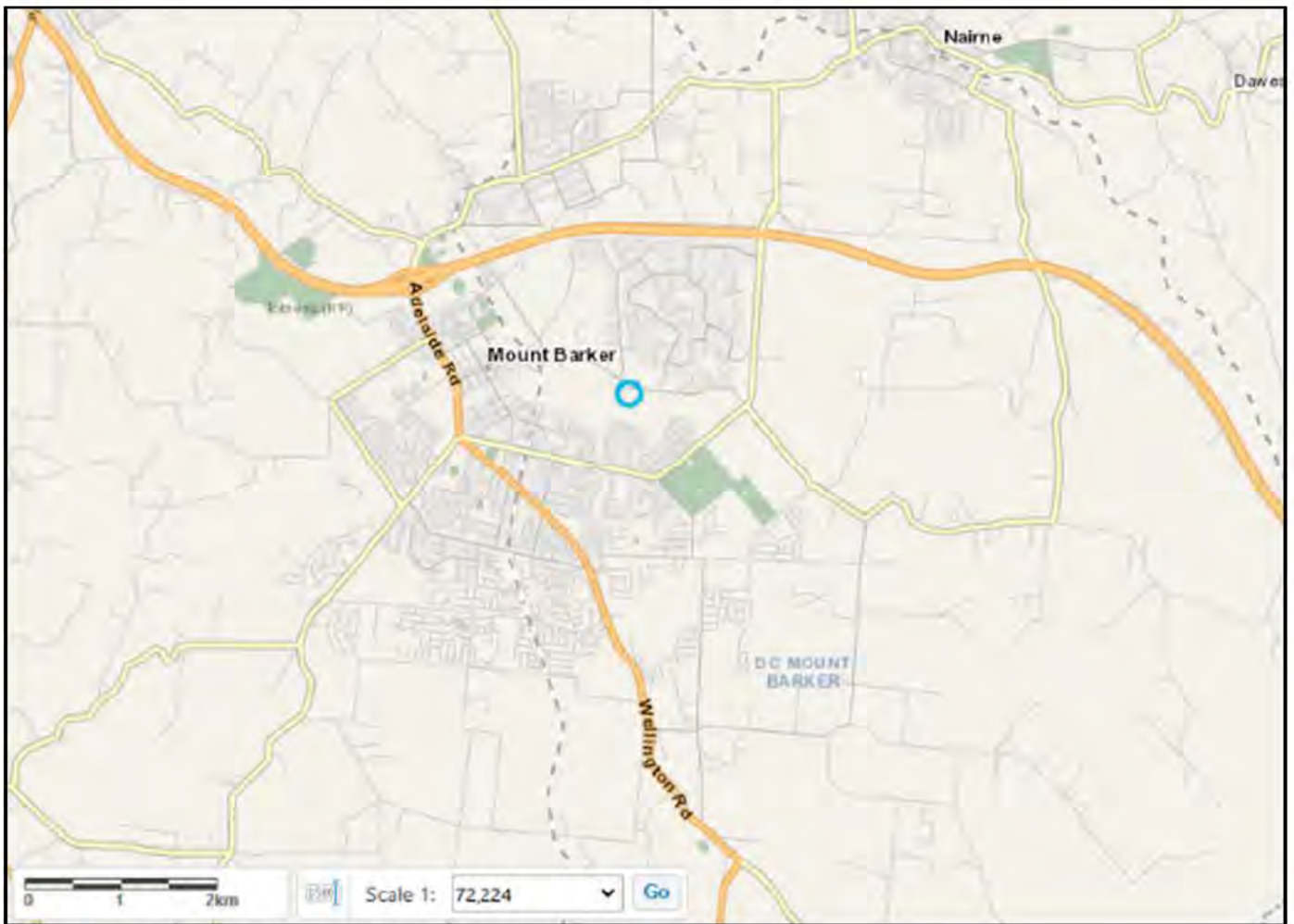


Figure 2. Site location in context with surrounding area

2.4 Details of the proposal

The WWTP development site is near a discharge channel adjacent the Laratinga Wetlands, and is fringed with River Red Gums of varying maturity. It is thought that many red gums were planted around the assessment site during and since the development of the wetlands and channel (anecdotal), however it is likely that some remnant trees were present in the vicinity before the development; there are several mature trees on the road reserve of Springs road, and elsewhere. Both the planted and remnant red gums have more than likely provided seed, which is the source of regrowth around the channel.

The upgrade site will impact a patch of red gums growing on the banks of the channel. It was not possible to discern which of the trees likely to be impacted were remnant, planted, or self-sown; and if self-sown, whether they are progeny of remnant or planted parent trees. The consultant met with Council staff Scott Dearman, and Emma Barnes, Director, Planning Studio, to discuss and agree on a reasonable approach to assessing the vegetation to be impacted.

Based on limited history available, including aerial imagery, and a preliminary site assessment, it was recommended by the consultant that 25% of all the trees impacted should be considered remnant vegetation (progeny of original remnant River Red Gums around the site). This assumption determined the number of scattered trees impacted, requiring approval and offset.

Access to the trees was limited by terrain, proximity to water, density of the trees, and fencing; however visibility was sufficient to determine tree characteristics for the scoresheet.

The proposal includes a new wastewater services (administration) building and associated fill batter – the main cause of impact to trees within the discharge channel, which will be smothered by the batter.



Figure 3. Design plan, with approximate area of vegetation impacted outlined yellow

2.5 Approvals required or obtained

- *Native Vegetation Act 1991* (provide details of any previous approvals that are relevant) – this report is in part fulfillment of the requirements of this Act
- *Planning, Development and Infrastructure Act 2016* (provide Development Application number/s) 22018565 (original DA#; variation not yet submitted, this report is part of the variation)
- *Water Resources Act 1997* (e.g. a water license) – N/A
- *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) – N/A
- *National Parks and Wildlife Act 1972* (NP&W Act) – N/A
- *Landscapes SA Act 2019* (e.g. water affecting activity permit) – N/A
- *Aboriginal Heritage Act 1988*. – work will be mainly within previously disturbed sites and is not considered to pose a high risk of encountering Aboriginal sites or objects. Cultural marking was not found on any tree assessed.

2.6 Native Vegetation Regulation

Regulation 12, Schedule 1; clause 33, House or Buildings.

2.7 Development Application information (if applicable)

Zone – Community Facilities, and Overlay – Native Vegetation Overlay

3. Method

3.1 Assessment method

Prior to the field survey, a search of relevant databases including the Department for Environment and Water natural resources mapping and information program *Naturemaps*; the EPBC protected matters search tool (PMST); BDBSA and AoLa was undertaken. Search parameters were prescribed as threatened species or communities present 'within 5km of the site, since 1995'; or (PMST) 'known to occur within the site or buffer'.

The survey was undertaken using the Scattered Tree Assessment Method (STAM) for scattered remnant trees on site. There was no native understorey observed, only exotic and weedy species including dense Kikuyu on the edge of the channel banks. Fauna observation methodology included identifying and recording birds observed or heard; use of binoculars to check for signs of activity around hollows; searching for signs such as faecal matter or scratching; and observation of tracks where visible. The site was not considered to be of sufficient diversity or complexity to warrant a full fauna survey. The high number of threatened species recorded within the search parameters is thought to be a reflection of the site's proximity to the Laratinga Wetlands, an area known for its increasing biodiversity values and threatened species sightings, rather than an indication of habitat values of the site.

The site assessment was undertaken on 22 January 2025, and was of 1.5 hours duration. Tree growth was very dense and access to measure accurately was prevented by this; by slope and proximity to wastewater; and by a chainmesh security fence. Given the difficulty identifying remnant trees from planted, or progeny of planted, the total number of trees within each group assessed was divided by 4, to achieve the 25% remnant figure agreed earlier with the proponent (see 2.4 above). Three groups with similar characteristics were selected from within the site of impact; one included trees nominated 'large' – of between 12m and 16m tall; one nominated 'medium' – between 8m and 12m tall; and one nominated 'small' – up to 8m tall. The species, height, diameter, dieback, and hollow size and number were gathered for each tree group.

3.2 Flora assessment

The search identified 14 species historically recorded within the search parameters. This includes 1 EPBC Act listed and 13 NPW Act listed species. Any annual species historically recorded, but not evident due to the season of the survey, were noted against the Principles of Clearance assessment.

3.3 Fauna assessment

The search identified 31 species historically recorded within the search parameters. This includes 8 EPBC Act listed and 23 NPW Act listed species. Species which were historically recorded, but where no suitable habitat exists, (such as pelagic or marine dependent species) were excluded from the threatened species assessment.

The assessment has achieved a Risk Level 3, escalated to Level 4. Fauna survey was restricted to the methodology outlined above, for the reasons noted in 3.1.


4. Assessment Outcomes


4.1 Vegetation Assessment

General description of the vegetation, the site and matters of significance

- *Landform, geography and soils*
Located within the Mount Barker Land System, topography is undulating to gently rolling with slopes less than 20%. These slopes drain mainly into Western Flat Creek and Mount Barker Creek in the south. The area ranges from 300m elevation in the south east, to 488m in the north. Soils are moderately shallow to moderately deep over weathering rocks, with surfaces typically loam to clay loam, over well-structured clay subsoils.
- *Landform feature of significance (rivers, creeks, rocky outcrops, etc.)*
Rolling hills and fertile valleys are the main feature of the area. The site is adjacent a significant man-made wetland which receives treated water from the WWTP.
- *General overview of the vegetation under application as a whole*
The vegetation around the site is largely *E. camaldulensis* open woodland with exotics and amenity species. The trees impacted are scattered, regenerating from surrounding remnant trees or planted trees associated with the wetland development. It is not representative of the original woodland community and has sparse exotic understorey. The season of assessment and the dry conditions prevailing since spring, were not conducive to observation of herbaceous or more cryptic species. Kikuyu is the dominant understorey around the northern fringe of the channel, with exotic grass, bare ground and leaf litter on the southern fringe.
- *General description of the vegetation relating to type and condition*
The vegetation is quite homogenous within the site and surroundings. Open grassland (exotic) is present to the immediate north of the site, managed by slashing or maybe grazing. Vegetation diversity improves around the wetlands.
- *Provide a description of the landscape context for the vegetation (e.g. isolated patch of vegetation in cropping landscape) and proximity to protected areas (Conservation Parks, Heritage Agreements, etc.)*
The site is largely isolated amongst residential and commercial development, except to the north where small rural land holdings and some remnant vegetation exists. The WWTP abuts Laratinga Wetlands to the east, and the whole complex supports the processing and outcome of water treatment in the Mt Barker township. One Heritage Agreement and one NPW property (Totness Recreation Park, 3.5km to the west) are within 5km of the site.

Details of the scattered trees proposed to be impacted

Tree ID – Clump 1	
Tree spp. <i>Eucalyptus camaldulensis</i> var <i>camaldulensis</i>)	
Number of trees – 4	
Height (m) – 16	
Hollows – nil	
Diameter (cm) –30	
Canopy dieback (%) –10	
Total Biodiversity Score –5.48	
<p>Indicative photo of the larger trees within the group assessed. Trees from 12 – 16m tall, none with hollows, and with up to 10% dieback are included in this group. Across the impact site, 16 such trees were observed; this figure was divided by 4 to determine 25% of the group considered remnant in this size category. The trees have potential habitat value for threatened species. Loss factor is 1.0.</p>	

Tree ID – Clump 2	
Tree spp. <i>Eucalyptus camaldulensis</i> var <i>camaldulensis</i>)	
Number of trees – 10	
Height (m) – 12	
Hollows – nil	
Diameter (cm) – 15	
Canopy dieback (%) – 5	
Total Biodiversity Score – 5.30	
<p>Indicative photo of the medium trees within the group assessed. Trees from 8 – 12m tall, none with hollows, and with 5% dieback on average, are included in this group. Across the impact site, 40 such trees were observed; this figure was divided by 4 to determine 25% of the group considered remnant in this size category. The trees have potential habitat value for threatened species. Loss factor is 1.0.</p>	

Tree ID – Clump 3
Tree spp. <i>Eucalyptus camaldulensis</i> var <i>camaldulensis</i>)
Number of trees – 16
Height (m) – 8
Hollows – nil
Diameter (cm) – 5
Canopy dieback (%) –5
Total Biodiversity Score – 4.96



Indicative photo of the small trees within the group assessed. Trees up to 8m tall, none with hollows, and with 5% average dieback are included in this group. Across the impact site, 65 such trees were observed; this figure was divided by 4 to determine 25% of the group considered remnant in this size category. The trees have limited habitat value for threatened species. Loss factor is 1.0.

Site map showing areas of proposed impact

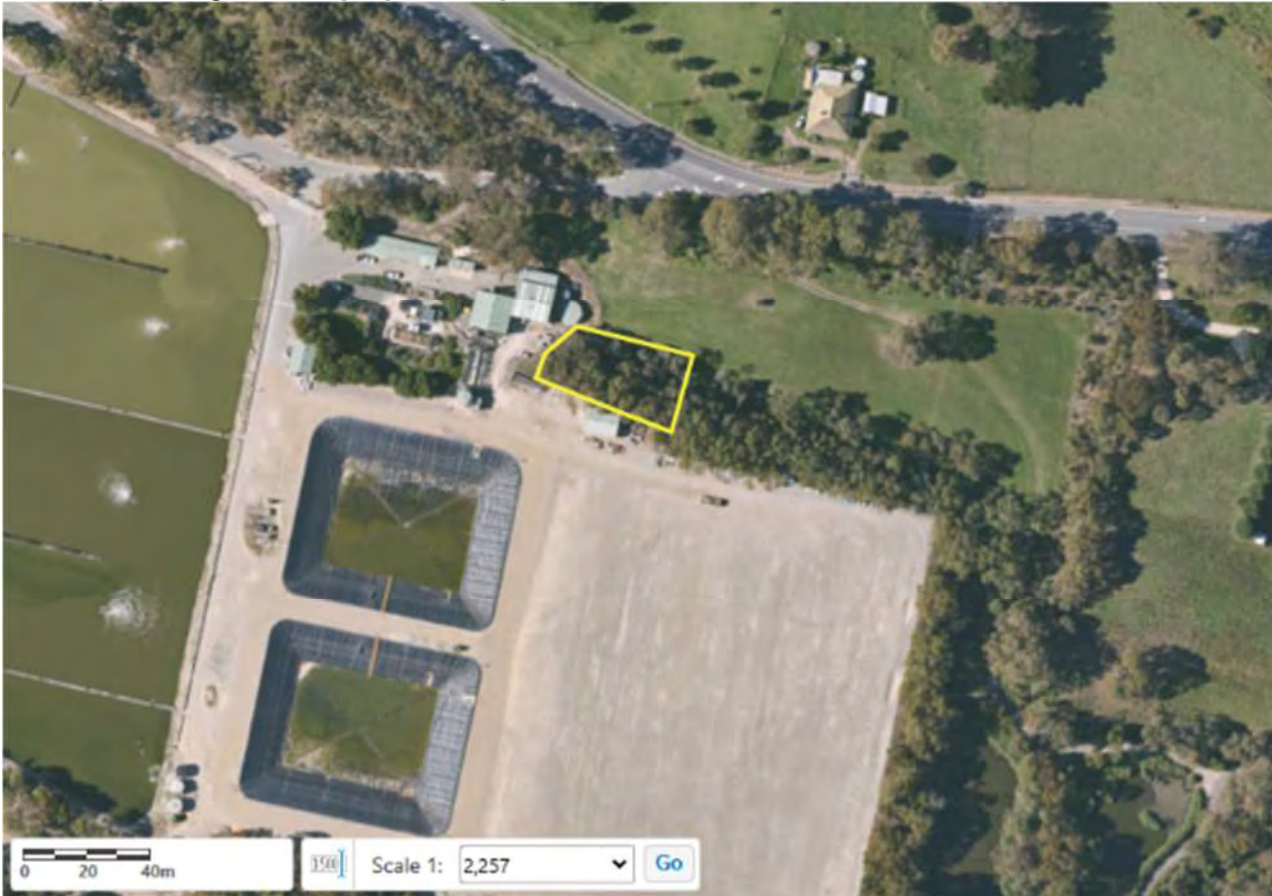


Figure 4. The vegetation to be cleared, outlined in yellow.



Photo 1 Looking west, demonstrating tree density and age range. The batter (left) will be extended past the trees



Photo 2 Looking NE. The fill embankment will extend to the left of photo, into the channel



Photo 3 Looking north at area impacted, indicative tree density and age range

4.2 Threatened Species assessment

Appendix 1 lists the threatened species historically recorded within search parameters (see part 3.1). Whilst the list was relatively large (14 flora and 31 fauna species), the results of the site assessment indicated that it was not sufficiently diversity or complex to provide significant habitat for most of the listed species, and thus it was decided that full fauna survey would not be cost- or outcome effective.

The high number of threatened species historically recorded is thought to be a reflection of the site's proximity to the Laratinga Wetlands, which is known for its increasing biodiversity values and threatened species sightings. The impact site's biodiversity value is not comparable to that of the wetlands. Fauna survey was restricted to observations of species, or evidence of use, and that implied by the structural and flora species diversity of the site.

Of 31 threatened species historically recorded, 2 are considered highly likely; 9, likely; 9 possible; and 11 unlikely, to find suitable habitat within the vegetation assessed for impact. The scoresheet reflects the number of species considered highly likely or likely to find habitat amongst the vegetation assessed.

See the habitat suitability table below for the full assessment of occurrence likelihood.



Figure 5. Indicative threatened species records, showing propensity at Laratinga Wetlands

Species observed on site, or recorded within 5km of the application area since 1995, or the vegetation is considered to provide suitable habitat

Species (common name)	NP&W Act	EPBC Act	Data source	Date of last record	Species known habitat preferences	Likelihood of use for habitat – Comments
<i>Actitis hypoleucos</i> Common Sandpiper	R		3	2015	A wide range of coastal wetlands, and some inland wetlands, with varying levels of salinity. Mostly found around muddy margins or rocky shores and rarely on mudflats. Recorded in estuaries and deltas, and on banks farther upstream; around lakes, pools, billabongs, reservoirs, dams and claypans, and occasionally piers and jetties. The muddy margins utilised by the species are often narrow, and may be steep. Often associated with mangroves.	Likely. Recorded in similar habitat within 1km at Laratinga Wetlands. Suitable, though sub-optimum, habitat may be present at the site.
<i>Anhinga novaehollandiae</i> <i>novaehollandiae</i> Australasian Darter	R		3	2019	Found in wetlands and sheltered coastal waters. It prefers smooth, open waters, for feeding, with tree trunks, branches, stumps or posts fringing the water, for resting and drying its wings. Most often seen inland, around permanent and temporary water bodies at least half a metre deep, but may be seen in calm seas near shore, fishing.	Likely. Some habitat features not present, but has been recorded within 1km at Laratinga Wetlands. Site has no dead tree trunks or exposed branches; the water body is small, with a largely closed canopy.
<i>Ardea intermedia plumifera</i> Plumed Egret	R		3	2012	Associates with all types of water bodies including wet fields and usually flocks with other egrets.	Likely. Recorded in similar habitat within 1km at Laratinga Wetlands. Wide habitat preferences, suitable habitat may be present at the site.
<i>Biziura lobata menziesi</i> Musk Duck	R		3	2017	Favours deep water where they dive for crustaceans, aquatic insects, fish, and amphibians, together with a small quantity of vegetation	Possible. Some habitat features not present, but has been recorded within 1km at Laratinga Wetlands.
<i>Botaurus poiciloptilus</i> Australasian Bittern		EN	5	PMST	Well vegetated wetlands inland and coastal freshwater wetlands, forages in shallow water up to 30 cm deep with dense wetland vegetation containing sedges, rushes, cumbungi or the common reed <i>Phragmites</i> .	Unlikely. Habitat features not present. Not recorded within 5km of the site.
<i>Calidris acuminata</i> Sharp-tailed Sandpiper		VU	3	2012	Prefers muddy edges of shallow fresh or brackish wetlands, with inundated or emergent sedges, grass, saltmarsh or other low vegetation	Unlikely. Some habitat features not present.

Species (common name)	NP&W Act	EPBC Act	Data source	Date of last record	Species known habitat preferences	Likelihood of use for habitat – Comments
<i>Corcorax melanorhamphos</i> White-winged Chough	R		3	2022	Found in open forests and woodlands. They tend to prefer the wetter areas, with lots of leaf-litter, for feeding, and available mud for nest building	Unlikely. Habitat present is dissimilar to the preferred. Nearby sightings not associated with wetlands.
<i>Coturnix ypsilophora australis</i> Brown Quail	V		3	2012	Prefers dense grasslands, often on the edges of open forests, and bracken. May sometimes be seen alongside roads.	Possible. Grassland surrounding the site but limited forest habitat nearby.
<i>Egretta garzetta nigripes</i> Little Egret	R		3	2012	Frequents tidal mudflats, saltwater and freshwater wetlands, and mangroves.	Unlikely. A single record within the search parameters, at Laratinga Wetlands. Habitat not optimum.
<i>Emydura macquarii</i> Macquarie River Turtle	V		3	2017	Freshwater rivers and other waterbodies	Possible. Several recorded at Laratinga Wetlands, habitat is not optimum but may be suitable.
<i>Falco peregrinus macropus</i> Peregrine Falcon	R		3	2022	Found in most habitats, from rainforests to the arid zone, from the coast to alpine areas. Requires abundant prey and secure nest sites, prefers coastal and inland cliffs or open woodlands near water. May nest on high city buildings.	Likely. Suitable habitat for roosting/perching and observing prey exists nearby, but not necessarily among the trees impacted.
<i>Falcunculus frontatus frontatus</i> Eastern Shrike-tit	R		3	2020	Found in eucalypt forests, woodlands, forested gullies and along rivers in drier areas. Sometimes seen in parks and gardens, on farms with scattered trees, and pine plantations.	Likely. Wide habitat preferences, suitable habitat may be present at the site.
<i>Gallinago hardwickii</i> Latham's Snipe	R	VU	3	2017	Found in any vegetation around wetlands, on or near the coast, generally among dense cover in sedges, grasses, lignum, reeds and rushes and also in saltmarsh and creek edges on migration. They also use crops and pasture.	Likely. Wide habitat preferences, suitable habitat may be present at the site. several records at nearby Laratinga Wetlands.
<i>Haliaeetus leucogaster</i> White-bellied Sea Eagle	E		3	2006	Coastal and near coastal areas, normally seen perched high in a tree, or soaring over waterways and adjacent land.	Unlikely. A single record within the search parameters, almost 20 years ago.
<i>Hieraaetus morphnoides</i> Little Eagle	V		3	2012	Seen over woodland and forests, open country, extending into the arid zone. Tends to avoid heavy forest.	Possible. Suitable habitat present around the site but unlikely to rely on the area impacted.
<i>Lewinia pectoralis pectoralis</i> Lewin's Rail	V		3	2006	Mostly inhabits wetland areas with dense vegetation, including wetlands, farm dams, swamps, saline lakes and river flats where they	Possible. Wide habitat preferences, suitable habitat may be present at the site. Single

Species (common name)	NP&W Act	EPBC Act	Data source	Date of last record	Species known habitat preferences	Likelihood of use for habitat – Comments
					usually forage around the waters edge in shallow water and close to cover for a variety of aquatic plants and invertebrates.	nearby sighting at Laratinga wetland.
<i>Neophema chrysotoma</i> Blue-winged Parrot		VU	5	PMST	Found in Eucalypt woodland, pasture, orchards	Unlikely. Not recorded within search parameters.
<i>Neophema elegans elegans</i> Elegant Parrot	R		3	2020	Found in a wide variety of habitats, including grasslands, shrublands, mallee, woodlands and thickets, bluebush plains, heathlands, saltmarsh and farmland.	Likely. Wide range of habitat preferences, recently recorded.
<i>Oxyura australis</i> Blue-billed Duck	R		3	2023	Inhabits fresh to saline, deep permanent open wetlands and deep, densely vegetated lakes. During the breeding season (November – March) there is a tendency to disperse to deep freshwater wetlands that have abundant aquatic and emergent vegetation although many birds remain on large wetlands	Likely. Habitat is available, though sub-optimum. Recently recorded at Laratinga wetlands.
<i>Plegadis falcinellus</i> Glossy Ibis	R		3	2017	Preferred habitat for foraging and breeding are fresh water marshes at the edges of lakes and rivers, lagoons, flood-plains, wet meadows, swamps, reservoirs, sewage ponds, rice-fields and cultivated areas under irrigation. The species is occasionally found in coastal locations such as estuaries, deltas, saltmarshes and coastal lagoons	Possible. Wide range of habitat preferences, but only a single record within 1km at Laratinga Wetlands.
<i>Pteropus poliocephalus</i> Grey-headed Flying-fox	R	VU	3	2020	Feeds in remnant native vegetation patches as well as in urban areas. They can also take advantage of resources such as cultivated trees, especially when their preferred food resources are limited.	Unlikely. Recorded within 1km in different habitat.
<i>Spatula rhynchotis</i> Australasian Shoveler	R		3	2024	Found in all kinds of wetlands, preferring large undisturbed heavily vegetated freshwater swamps. It is also found on open waters and occasionally along the coast.	Highly likely. Wide habitat preferences and numerous records nearby in similar habitat.
<i>Stagonopleura guttatal</i> (Diamond Firetail)		VU	5	PMST	Open grassy woodland, heath and farmland or grassland with scattered trees.	Unlikely. Nearby grassy woodland and farmland may provide suitable habitat. However, no records within the search parameters.

Species (common name)	NP&W Act	EPBC Act	Data source	Date of last record	Species known habitat preferences	Likelihood of use for habitat – Comments
<i>Stictonetta naevosa</i> Freckled Duck	V		3	2022	Prefers permanent fresh water swamps and creeks with heavy growth of cumbungi (bullrushes), lignum or tea-tree. During drier times, the Freckled Duck moves from ephemeral (not permanent) breeding swamps to more permanent waters such as lakes, reservoirs, farm dams and sewerage ponds. They generally rest in dense cover.	Possible. Habitat is sub-optimum. Numerous records at nearby wetlands, mostly in more open habitat.
<i>Tringa glareola</i> Wood Sandpiper	R		3	2006	Inland shallow freshwater wetlands, often with other waders. They prefer ponds and pools with emergent reeds and grass, surrounded by tall plants or dead trees and fallen timber.	Unlikely. One record in 2006 from the nearby wetlands, however the site doesn't have the reeds and fallen timber preferred.
<i>Tringa nebularia</i> Common Greenshank		EN	3	2012	Uses both permanent and ephemeral terrestrial wetlands, including swamps, lakes, dams, rivers, creeks, billabongs, waterholes and inundated floodplains, claypans and salt flats. Will also use artificial wetlands, including sewage farms and saltworks dams, inundated rice crops and bores. The edges of the wetlands used are generally of mud or clay, occasionally of sand, and may be bare or with emergent or fringing vegetation, including short sedges and saltmarsh, mangroves, thickets of rushes, and dead or live trees.	Possible. Suitable habitat exists, although only a single record in 2012, at nearby wetlands.
<i>Zapornia tabuensis</i> Spotless Crake	R		3	2019	Found in well vegetated freshwater wetlands with rushes, reeds and cumbungi. Will also frequent muddy areas, reedbeds or wetlands. Quick to retreat when disturbed	Likely. Numerous recent records at the wetlands. Site not optimum habitat with kikuyu infested water edges and limited diversity.
<i>Zanda funerea whiteae</i> Yellow-tailed Black Cockatoo	V		3	2017	A variety of habitat types, but favours eucalypt woodland and pine plantations	Possible. Habitat not ideal but may visit to forage or roost occasionally on route to other areas.
<i>Zoothera lunulata halmaturina</i> SA Bassian Thrush	SP	VU	3	2005	Damp, densely forested areas and gullies usually associated with a thick canopy and leaf litter below	Unlikely. Sufficient optimum habitat is not available; a single record from 2005 indicates unlikely to be present.

Species (common name)	NP&W Act	EPBC Act	Data source	Date of last record	Species known habitat preferences	Likelihood of use for habitat – Comments
<i>Trichosurus vulpecula</i> Common Brushtail Possum	R		3	2024	Eucalyptus and Sheoak woodlands. Nest in tree hollows or hollow logs, or crevices. Have adapted to suburbs, some nest in roof spaces	Highly likely. An adaptable species, potentially using the trees assessed for feeding/sheltering. Droppings were recorded very close to the site in 2019
<i>Varanus rosenbergi</i> Heath Goanna	V		3	2016	Heath, wet and dry forest and temperate woodlands usually with sandy soils and termite mounds present	Unlikely. Suitable habitat variety not present.
Source; 1- BDBSA, 2 - AoLA, 3 – NatureMaps 4 – Observed/recorded in the field, 5 - Protected matters search tool, 6 – others NP&W Act; E= Endangered, V = Vulnerable, R= Rare EPBC Act; Ex = Extinct, CR = Critically endangered, EN = Endangered; VU = Vulnerable						

Criteria for the likelihood of occurrence of species within the Study area.

Likelihood	Criteria
Highly Likely/Known	Recorded in the last 10 years, the species does not have highly specific niche requirements, the habitat is present and falls within the known range of the species distribution or; The species was recorded as part of field surveys.
Likely	Recorded within the previous 20 years, the area falls within the known distribution of the species and the area provides habitat or feeding resources for the species.
Possible	Recorded within the previous 20 years, the area falls inside the known distribution of the species, but the area provide limited habitat or feeding resources for the species. Recorded within 20 -40 years, survey effort is considered adequate, habitat and feeding resources present, and species of similar habitat needs have been recorded in the area.
Unlikely	Recorded within the previous 20 years, but the area provide no habitat or feeding resources for the species, including perching, roosting or nesting opportunities, corridor for movement or shelter. Recorded within 20 -40 years; however, suitable habitat does not occur, and species of similar habitat requirements have not been recorded in the area. No records despite adequate survey effort.

4.3 Cumulative impact

When exercising a power or making a decision under Division 5 of the Regulations, the NVC must consider the potential cumulative impact, both direct and indirect, that is reasonably likely to result from a proposed clearance activity.

- *clearance directly required for the development (e.g. access, building footprints, associated infrastructure – power and water, etc.)* – all associated clearance has been included in the assessment. The impact is mainly from the extended fill batter which will smother trees.
- *subsequent clearance that will be permitted or required (e.g. 10m around a building, 20m around a dwelling, clearance for fire protection)* – this has been considered and included in the impact tally.
- *indirect clearance that may occur as a result of the development (e.g. dust generation smoothing vegetation, altered hydrology inundating or drying vegetation, impacting on tree root zones (the application of fill) impacting on tree health)* – effluent will no longer be discharged via the channel. The channel will be subject to local rainfall and environmental flows to the Laratinga Wetland, resulting in more natural flows and soil hydration around the remaining trees.
- *future stages or associated components of a development* – the proposed Stage 2 is within a cleared site and will not impact native vegetation.

4.4 Address the Mitigation Hierarchy

When exercising a power or making a decision under Division 5 of the Regulations, the NVC must have regard to the mitigation hierarchy. The NVC will also consider, with the aim to minimise, impacts on biological diversity, soil, water and other natural resources, threatened species or ecological communities under the EPBC Act or listed species under the NP&W Act.

a) Avoidance – outline measures taken to avoid clearance of native vegetation

e.g. making adjustments to the location, design, size or scale of the activity in order to reduce the scale of the impact. – multiple design options were considered including re-siting of the building to minimise clearance, whilst maintaining sufficient area on site for essential infrastructure, parking and vehicle manoeuvring. The result achieves the minimum impact to native vegetation feasible.

b) Minimisation – if clearance cannot be avoided, outline measures taken to minimise the extent, duration and intensity of impacts of the clearance on biodiversity to the fullest possible extent (whether the impact is direct, indirect or cumulative).

e.g. located the development in area where vegetation is sparser or more degraded or does not contain threatened species, etc. – the building is situated to minimise impact to native vegetation. Building and tanks to the west are existing WWTP infrastructure that need to remain operational. Land to the south of the site is earmarked for the new WWTP and carparking. This space has WH&S limitations for constructing the building further south. The existing WWTP drain was considered the only suitable location for the building and was located as far to the east as possible to limit vegetation removal.

c) Rehabilitation or restoration – outline measures taken to rehabilitate ecosystems that have been degraded, and to restore ecosystems that have been degraded, or destroyed by the impact of clearance that cannot be avoided or further minimised, such as allowing for the re-establishment of the vegetation.

e.g. if clearance is only temporary, actions take to re-establish the vegetation after clearance has occurred. – clearance is permanent, however natural regeneration around the remaining channel is highly likely from the retained and remnant River Red Gums.

d) Offset – any adverse impact on native vegetation that cannot be avoided or further minimised should be offset by the achievement of a significant environmental benefit that outweighs that impact.

The offset will be achieved via payment into the fund.

4.5 Principles of Clearance (Schedule 1, Native Vegetation Act 1991)

The NVC will consider Principles 1(b), 1(c) and 1(d) when assigning a level of Risk under Regulation 16 of the Native Vegetation Regulations. The NVC will consider all the Principles of clearance of the Act as relevant, when considering an application referred under the *Planning, Development and Infrastructure Act 2016*.

Principle of clearance	Considerations
Principle 1a - it comprises a high level of diversity of plant species	<u>Relevant information</u> A single native plant species was recorded for this scattered tree assessment. Understorey species observed were all exotic.
	<u>Assessment against the principles</u> <u>Seriously at Variance</u> N/A
	<u>At Variance –</u> N/A
	<u>Moderating factors that may be considered by the NVC</u> N/A
Principle 1b - significance as a habitat for wildlife	<u>Relevant information</u> <i>Detail if the vegetation support a high diversity of animal species.</i> The threatened fauna search results (Part 4.2 and Appendix 1) are distorted by the site's proximity to the Laratinga Wetlands, within 1km to the east. Whilst several of the listed species may find habitat amongst the surveyed vegetation from time to time, few are considered likely to be reliant on the young to semi-mature River Red Gums fringing the drainage channel, since the adjacent wetlands offer much higher habitat complexity, diversity, and greater area. <i>Detail if the vegetation provide a corridor for movements between other areas of native vegetation, or a habitat refuge, especially in heavily cleared areas.</i> The vegetation assessed provides a narrow link between the adjacent wetlands and golf course (to the east and south east), to larger vegetation patches near the SE Freeway to the north west. However, the area impacted is only one of three links across the property, which contain more complex age classes and higher species diversity.
	Trees; Fauna Habitat Score – 1.8 Total Biodiversity Score – 15.74
	<u>Assessment against the principles</u> <u>Seriously at Variance</u> All Scattered trees are SAV
	<u>At Variance –</u> N/A
	<u>Moderating factors that may be considered by the NVC</u> <i>Impact significance – the clearance is unlikely to do any of the following:</i> <ul style="list-style-type: none"> • lead to a long term decrease in the size of a population • reduce that area of occupancy of the species • fragment an existing population into two or more populations • adversely affect habitat critical to the survival of a species

	<ul style="list-style-type: none"> • modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline • result in invasive species that are harmful to a threatened species becoming established in the habitat • interfere with the recovery of a species <p><i>Non essential habitat</i> – the habitat impacted is unlikely to provide the full range of requirements for any threatened species.</p>
Principle 1c - plants of a rare, vulnerable or endangered species	<u>Relevant information</u> No threatened flora species were recorded on the site. Threatened Flora Score(s) - 0
	<u>Assessment against the principles</u> <u>Seriously at Variance</u> N/A <u>At Variance</u> – N/A
	<u>Moderating factors that may be considered by the NVC</u> N/A
Principle 1d - the vegetation comprises the whole or part of a plant community that is Rare, Vulnerable or endangered:	<u>Relevant information</u> The plant community represented by the scattered River Red Gums is not threatened under the EPBC Act or the DEW Provisional list of threatened ecosystems. Threatened Community Score – N/A
	<u>Assessment against the principles</u> <u>Seriously at Variance</u> N/A
	<u>Moderating factors that may be considered by the NVC</u> N/A
Principle 1e - it is significant as a remnant of vegetation in an area which has been extensively cleared.	<u>Relevant information</u> Remnancy figures: IBRA Association 8% and IBRA Subregion 15% <i>Discuss the health and likely longevity of remnants.</i> The vegetation assessed is an artificial community supported by the practices associated with the WWTP. It consists of numerous, very dense planted and self-sown River Red Gums, on the banks of a drainage channel. It is inconclusive whether the individual trees are progeny from remnant mature trees nearby (on the road verge, and scattered in nearby properties) or from the planted trees around the channel. The 'remnant' is likely to continue to develop and evolve structurally, without human interference, and species diversity may increase as the patch develops.
	Total Biodiversity Score – 15.74
	<u>Assessment against the principles</u> <u>Seriously at Variance</u> At the Association level <u>At Variance</u> At the Regional level
	<u>Moderating factors that may be considered by the NVC</u> <i>Impact significance</i> <i>Quality of remnant</i>

Principle 1f - it is growing in, or in association with, a wetland environment.	<u>Relevant information</u> <i>Discuss if any of the vegetation is associated with a wetland – the scattered trees are associated with a man-made 'wetland, consisting of a drainage channel taking treated water from the WWTP to ponds adjacent Laratinga wetlands. The lack of structural complexity and species diversity limits its function as wetland.</i>
	<u>Assessment against the principles</u> <u>Seriously at Variance</u> All scattered trees <u>At Variance –</u> N/A
	<u>Moderating factors that may be considered by the NVC</u> N/A
Principle 1g - it contributes significantly to the amenity of the area in which it is growing or is situated.	<u>Relevant information</u> <i>Detail the location of trees or vegetation relative to sites frequented by the public (e.g. roads, towns, lookout, etc.) – the site is within a secure area with no public access. It cannot be readily seen from the road, for form the public access areas of the adjacent wetlands.</i> <i>Provide details of cultural or historical values – there are no likely cultural or historical values associated with the vegetation assessed as it consists of recent revegetation and regeneration present before the area was developed.</i> <i>Discuss possible effect on landscape character – the impact is expected to be negligible. Not all the vegetation around the channel will be removed – trees further east of the development site will be retained and are likely to self-sow in areas where there are no constraints. Few people can actually see the vegetation and its removal will have limited impact on landscape character.</i>
	N/A
	<u>Moderating factors that may be considered by the NVC</u> N/A

4.6 Risk Assessment

Determine the level of risk associated with the application

Total clearance	No. of trees	30
	Area (ha)	N/A
	Total biodiversity Score	15.74
Seriously at variance with principle 1(b), 1(c) or 1 (d)		1(b)
Risk assessment outcome		Level 3 escalated to Level 4

5. Clearance summary

Scattered trees Summary table

Tree or Cluster ID	Number of trees	Fauna Habitat score	Threatened flora score	Biodiversity score	Loss factor	SEB Points required	SEB Payment	Admin Fee
1	4	1.8	0	5.48	1	6.03	\$6,998.45	\$384.91
2	10	1.8	0	5.30	1	5.83	\$6,766.33	\$372.15
3	16	1.8	0	4.96	1	5.46	\$6,336.91	\$348.53
Total	30			15.74		17.32	\$20,101.69	\$1,105.59

Totals summary table

Economies of Scale Factor	0.5	SEB Uplift Factor	1.10
Rainfall (mm) Factor	703		
SEB Points of Gain/ha Factor	7.5	Management Cost (\$/ha)	\$24,764

	Total Biodiversity score	Total SEB points required	SEB Payment	Admin Fee	Total Payment
Application	2.21	17.32	\$20,101.69	\$1,105.59	\$21,207.28

6. Significant Environmental Benefit

A Significant Environmental Benefit (SEB) is required for approval to clear under Division 5 of the Regulations. The NVC must be satisfied that as a result of the loss of vegetation from the clearance that a SEB will result in a positive impact on the environment that is over and above the negative impact of the clearance.

ACHIEVING A SEB

Indicate how the SEB will be achieved by ticking the appropriate box and providing the associated information:

- ☐ Establish a new SEB Area on land owned by the proponent.
- ☐ Use SEB Credit that the proponent has established. Provide the SEB Credit Ref. No. _____
- ☐ Apply to have SEB Credit assigned from another person or body. The [application form](#) needs to be submitted with this Data Report.
- ☐ Apply to have a SEB to be delivered by a Third Party. The [application form](#) needs to be submitted with this Data Report.
- ☒ Pay into the Native Vegetation Fund.

PAYMENT SEB

The SEB Policy states that if a SEB is required as a result of an approved activity undertaken under the Regulations, the applicant has a choice of either providing an on-ground SEB or a Payment SEB. However, if a proposed clearance will have an offset obligation of greater than 150 SEB Points Required, the NVC will first request that a reasonable attempt be made to identify an on-ground SEB before a payment will be accepted.

If a proponent proposes to achieve the SEB by paying into the Native Vegetation Fund, summary information must be provided on the amount required to be paid and the manner of payment:

- Payment amount required (including admin. fee) \$21,207.28

7. Appendices

Appendix 1. Flora and Fauna Species Lists

PMST Search Results					
Family Name	Species	Common Name	National Rating	State Rating	Date of Last Record
ORCHIDACEAE	Caladenia leptochila ssp. leptochila	Narrow-lip Spider-orchid		R	25-Jan-2014
ORCHIDACEAE	Caladenia rigida	Stiff White Spider-orchid	EN	E	
POACEAE	Deyeuxia densa	Heath Bent-grass		R	25-Jan-2014
ASPHODELACEAE	Dianella longifolia var. grandis	Pale Flax-lily		R	27-Jun-2022
POACEAE	Echinopogon ovatus	Rough-beard Grass		R	25-Jan-2014
MYRTACEAE	Eucalyptus fasciculosa	Pink Gum		R	27-Jun-2022
MYRTACEAE	Eucalyptus viminalis ssp. viminalis	Manna Gum		R	27-Jun-2022
ORCHIDACEAE	Pterostylis curta	Blunt Greenhood		R	
AMARANTHACEAE	Ptilotus erubescens	Hairy-tails		R	25-Jan-2014
ASTERACEAE	Senecio pinnatifolius var. pinnatifolius			R	25-Jan-2014
ORCHIDACEAE	Thelymitra aristata	Great Sun-orchid		E*	25-Jan-2014
ORCHIDACEAE	Thelymitra batesii			R	22-Oct-2010
ORCHIDACEAE	Thelymitra grandiflora	Great Sun-orchid		R	25-Jan-2014
ORCHIDACEAE	Thelymitra ixioides	Spotted Sun-orchid		E*	25-Jan-2014

PMST search results

FAMILY NAME	SPECIES	COMMON NAME	NATIONAL RATING	STATE RATING	DATE OF LAST RECORD
ORCHIDACEAE	Caladenia leptochila ssp. leptochila	Narrow-lip Spider-orchid		R	25-Jan-2014
ORCHIDACEAE	Caladenia rigida	Stiff White Spider-orchid	EN	E	
POACEAE	Deyeuxia densa	Heath Bent-grass		R	25-Jan-2014
ASPHODELACEAE	Dianella longifolia var. grandis	Pale Flax-lily		R	27-Jun-2022
POACEAE	Echinopogon ovatus	Rough-beard Grass		R	25-Jan-2014
MYRTACEAE	Eucalyptus fasciculosa	Pink Gum		R	27-Jun-2022
MYRTACEAE	Eucalyptus viminalis ssp. viminalis	Manna Gum		R	27-Jun-2022
ORCHIDACEAE	Pterostylis curta	Blunt Greenhood		R	
AMARANTHACEAE	Ptilotus erubescens	Hairy-tails		R	25-Jan-2014
ASTERACEAE	Senecio pinnatifolius var. pinnatifolius			R	25-Jan-2014
ORCHIDACEAE	Thelymitra aristata	Great Sun-orchid		E*	25-Jan-2014
ORCHIDACEAE	Thelymitra batesii			R	22-Oct-2010
ORCHIDACEAE	Thelymitra grandiflora	Great Sun-orchid		R	25-Jan-2014
ORCHIDACEAE	Thelymitra ixioides	Spotted Sun-orchid		E*	25-Jan-2014

Naturemaps search results

CLASS NAME	SPECIES	COMMON NAME	NATIONAL RATING	STATE RATING	DATE OF LAST RECORD
AVES	<i>Actitis hypoleucos</i>	Common Sandpiper		R	24-Oct-2015
AVES	<i>Anhinga novaehollandiae novaehollandiae</i>	Australasian Darter		R	29-Sep-2019
AVES	<i>Ardea intermedia plumifera</i>	Plumed Egret		R	11-Feb-2012
AVES	<i>Biziura lobata menziesi</i>	Musk Duck		R	11-Feb-2017
AVES	<i>Calidris acuminata</i>	Sharp-tailed Sandpiper	VU		14-Jan-2012
AVES	<i>Corcorax melanorhamphos</i>	White-winged Chough		R	07-Jul-2022
AVES	<i>Coturnix ypsilophora australis</i>	Brown Quail		V	14-Jan-2012
AVES	<i>Egretta garzetta nigripes</i>	Little Egret		R	14-Jan-2012
REPTILIA	<i>Emydura macquarii</i>	Macquarie River Turtle		V	07-Dec-2017
AVES	<i>Falco peregrinus macropus</i>	Peregrine Falcon		R	23-Jul-2022
AVES	<i>Falcunculus frontatus frontatus</i>	Eastern Shriketit		R	10-Jun-2020
AVES	<i>Gallinago hardwickii</i>	Latham's Snipe	VU	R	17-Mar-2017
AVES	<i>Haliaeetus leucogaster</i>	White-bellied Sea Eagle		E	26-Feb-2006
AVES	<i>Hieraaetus morphnoides</i>	Little Eagle		V	14-Jan-2012
AVES	<i>Lewinia pectoralis pectoralis</i>	Lewin's Rail		V	13-Mar-2006
AVES	<i>Neophema elegans elegans</i>	Elegant Parrot		R	22-Mar-2020
AVES	<i>Oxyura australis</i>	Blue-billed Duck		R	27-Oct-2023
AVES	<i>Plegadis falcinellus</i>	Glossy Ibis		R	24-Jun-2017
MAMMALIA	<i>Pteropus poliocephalus</i>	Grey-headed Flying-fox	VU	R	17-Jan-2020
AVES	<i>Spatula rhynchotis</i>	Australasian Shoveler		R	26-Nov-2024
AVES	<i>Stictonetta naevosa</i>	Freckled Duck		V	02-Nov-2022
MAMMALIA	<i>Trichosurus vulpecula</i>	Common Brushtail Possum		R	04-Jan-2024
AVES	<i>Tringa glareola</i>	Wood Sandpiper		R	26-Feb-2006
AVES	<i>Tringa nebularia</i>	Common Greenshank	EN		14-Jan-2012
REPTILIA	<i>Varanus rosenbergi</i>	Heath Goanna		V	11-Jan-2016
AVES	<i>Zanda funerea whiteae</i>	Yellow-tailed Black Cockatoo		V	13-Nov-2017
AVES	<i>Zapornia tabuensis</i>	Spotless Crake		R	29-Sep-2019
AVES	<i>Zoothera lunulata halmaturina</i>	South Australian Bassian Thrush (southern FR, MLR, KI)	EN	SP	26-Aug-2005

Naturemaps search results

Appendix 2. Scattered Tree Assessment Scoresheet

SEB Required for Scattered Trees				(SEB Policy 1 September 2024; File Update 17 Dec 2024)			
Landscapes Region	H&F			Total Biodiversity Score	15.74		
Mean Annual Rainfall (mm)	703			Total SEB Points required	17.32		
Economies of Scale Factor	0.5			Payment \$ (GST exclusive)	\$20,101.70		
Management Cost Factor	\$24,764			Admin fee (GST inclusive)	\$1,105.59		
SEB Uplift Factor	1.10			Total SEB \$ required	\$21,207.29		
SEB Points of Gain/ha Factor	7.5						
IBRA Association	Hahndorf			Surveyors	J Ayre		
				Survey Date	22/01/2025		
				Datum	AGD84		
Tree Species	Number of Trees (total)	Number of trees (proposed removed)	Number of trees (proposed pruning)	Total SEB Points required	Payment in NV Fund (GST Exclusive)	Administration fee (GST Inclusive)	Total
<i>Eucalyptus camaldulensis</i>	30	30	0	17.32	\$20,101.70	\$1,105.59	\$21,207.29
	0	0	0	0.00	\$0.00	\$0.00	\$0.00