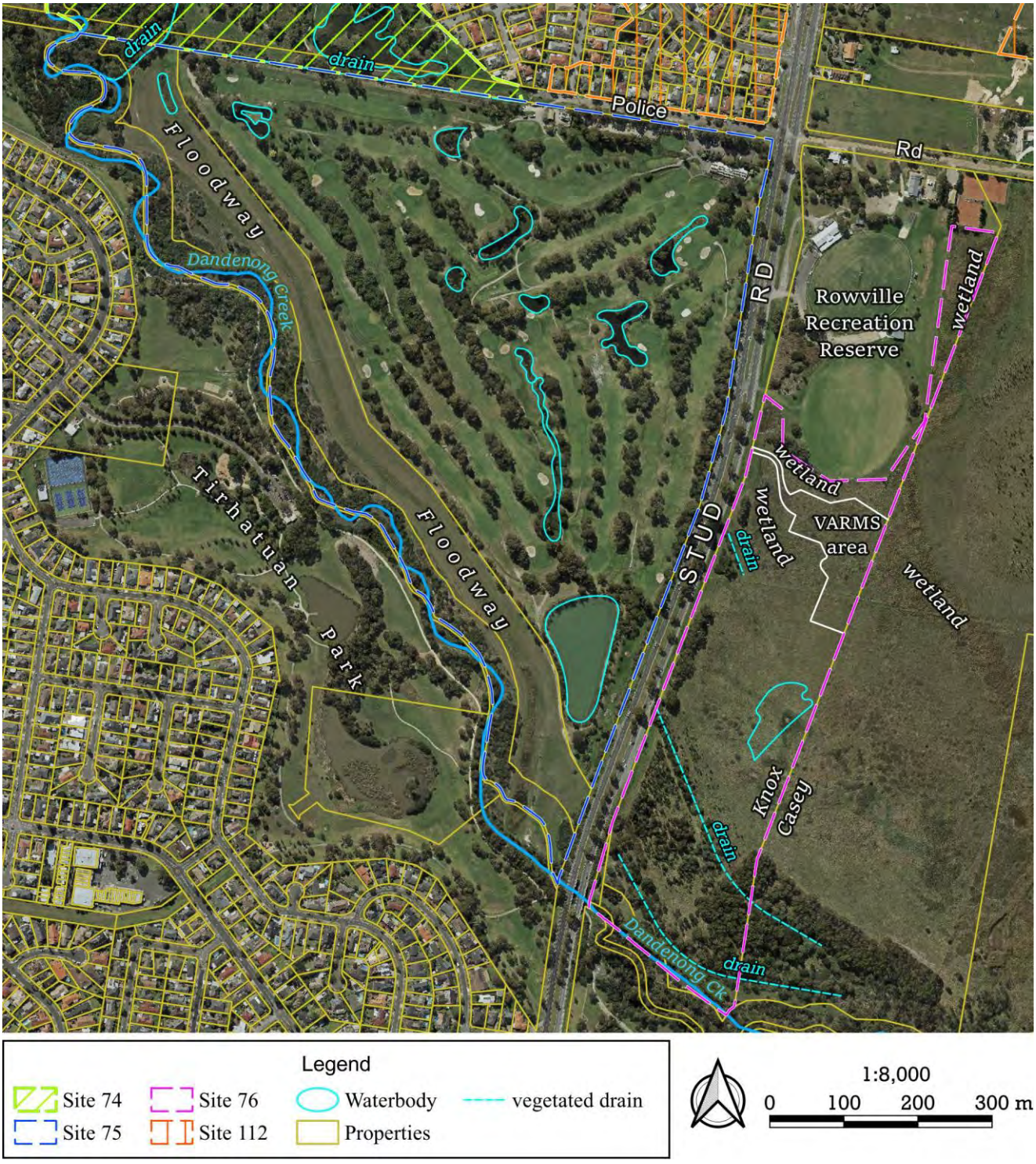
Site 75. Rowville Lakes Golf Course, Rowville

A public golf course and adjoining stream corridor, wedged between Dandenong Creek and Stud Rd.

Summary of significant features:

- State significance: a patch of Floodplain Riparian Woodland, which is regionally endangered;
- State significance: habitat of Latham's Snipe, which is listed as Vulnerable under Commonwealth law;
- Regionally significant: habitat of the Eastern Great Egret, which is listed as Vulnerable under Victorian law;
- Regionally significant: riparian habitat on the Dandenong Creek habitat corridor;
- Locally significant: viable populations of many locally-threatened plant species.



Boundaries

The site is outlined with blue dashes on the aerial photograph. The site includes the whole golf course and extends to the municipal boundary, which roughly follows Dandenong Creek. The site would extend across Dandenong Creek if not for the municipal boundary being the limit of this report's coverage.

The site's biologically significant attributes are mostly within a narrow corridor along Dandenong Creek and in floodplain depressions, artificial waterbodies and drainage lines scattered within the golf course.

Land use & tenure: Public land owned by Melbourne Water, with a public golf course and a floodway. Flood management is an important function of the land.

Site description

This 51.5-hectare site is located on the Dandenong Creek floodplain west of the Lysterfield Hills. There is other public land on the opposite side of the creek (Tirhatuan Park), upstream (Site 74) and downstream (Dandenong Police Paddocks – Site 76). The Dandenong Creek trail follows the opposite bank, which is in the City of Greater Dandenong.

Most of the site is an alluvial floodplain at an elevation that varies little from 35 m, with very shallow slope except for the banks of the floodway (marked on the aerial photograph) and waterbodies. The exception is a slope in the northeastern corner, with a 10% gradient and a maximum elevation of approximately 49 m near the Police Rd - Stud Rd intersection. The golf course buildings are located on the slope.

The site's bedrock is Lower Devonian siltstone of the Humevale formation, and it is exposed in places in the creek channel. It has decomposed to silty grey loam with clay subsoil on the slope in the site's northeast, and on the floodplain, it has been covered with alluvium deposited by the creek.

The aerial photograph above shows a narrow corridor of vegetation along Dandenong Creek, flanked by a parallel, mown floodway on the northeastern side (the left bank). The golf course itself lies between the floodway, Stud Rd and Police Rd.

The aerial photograph above shows an extensive area of dense tree cover in site's northwestern corner and extending into Site 74. That vegetation is Floodplain Riparian Woodland – a regionally-endangered Ecological Vegetation Class (EVC). It is in good ecological condition and is home to locally-threatened plant species and many small birds such as wrens and Red-browed Finches.

Further downstream, the site's riparian tree cover that can be seen on the aerial photograph contains patchy, rudimentary Floodplain Riparian Woodland and planted indigenous species (mostly from c. 2000, following bank stabilisation work). The declared noxious weed, Bulbil Watsonia (*Watsonia meriana*), is abundant along this strip and represents a significant ecological problem.

The floodway marked on the aerial photograph is regularly mown and it has a high cover of introduced plant species but it also contains tens of thousands of Slender Onion-orchids (*Microtis parviflora*), many Trim Sun-orchids (*Thelymitra peniculata*) and countless indigenous rushes (various *Juncus* species) and Common Bog-rush (*Schoenus apogon*). It is therefore of unexpected biological significance.

The areas of aquatic habitat marked on the aerial photograph are dominated by indigenous wetland plants, often with few if any introduced plants. None of the waterbodies appear on a 1976 aerial photograph so they are evidently all artificial in origin.

The golf course's roughs have been planted with a range of 'Australian natives', most of them consistent with having been planted at completion of the course's construction in 1979. The species include Southern Mahogany, Southern Blue Gum, Large-fruited Yellow Gum, Bracelet Honey-myrtle, sheoaks and Heath Banksia.

As with treed golf courses in general, the course attracts a range of native birds, such as lorikeets, honeyeaters and ducks.

Relationship to other land

The site is part of the Dandenong Creek habitat corridor.

Substantial remnant vegetation and wetland habitat occurs within the Tirhatuan Wetlands Conservation Reserve and Police Road Retarding Basin (Site 74, managed by Melbourne Water) and the Dandenong Police Paddocks Reserve (Site 76). There are also ponds in Tirhatuan Park on the opposite side of Dandenong Ck, providing

additional wetland habitat. All of these areas are strongly ecologically linked to each other and to the creek itself, with many fauna species no doubt moving freely between them.

Bioregion: Gippsland Plain

Habitat types

Floodplain Riparian Woodland (EVC 56, **regionally Endangered**) in the narrow band along the creek. There is approximately 3.5 ha on the left bank, all in poor ecological condition (rating D). 21 indigenous plant species were found on 15th July 2002 and 22 on 17th September 2024.

Canopy trees: Dominated by *Eucalyptus viminalis* in areas where there are more than scattered eucalypts. There are also smaller numbers of *E. ovata*.

Sub-canopy trees: *Acacia mearnsii* and patches of suckering *A. dealbata* are present. *Exocarpos cupressiformis* is scarce, in the site's northwest corner.

Shrubs: A fair cover of shrubs, including *Melaleuca ericifolia*, *Melicytus dentatus*, *Ozothamnus ferrugineus*, *Coprosma quadrifida* and *Goodenia ovata*, with some *Pomaderris racemosa* and a single *Callistemon sieberi* (which may have been planted).

Vines and ferns: Absent.

Groundcover: Indigenous groundcover is mostly very scarce due to past clearing and grazing, limited to a few patches of *Poa ensiformis* or *Rytidosperma racemosum* in shrubby areas. There are dense patches of Bulbil Watsonia (*Watsonia meriana*) and a range of other groundcover weeds.

Semi-aquatic plants: Patches of *Phragmites australis* occur along the creek margins.

Aquatic habitat as outlined in cyan on the aerial photograph. The total area is 1½ ha. 11 indigenous plant species were found on 15th July 2002. Seven were found in the most northwesterly wetland, alone, in 2024.

Trees, shrubs, vines and ferns: Absent but there are a few remnant *Acacia melanoxylon* and *A. dealbata* trees at the edges of the golf course water traps, along with planted native trees and shrubs.

Aquatic and semi-aquatic flora: Dominated variously by *Phragmites australis*, *Typha* spp., *Eleocharis sphacelata*, *Persicaria praetermissa*, *Lemna minor* or *Azolla pinnata*. Some semi-aquatic herbs occur in wetland depressions near the creek, including *Carex appressa*, *Juncus* spp., *Persicaria decipiens* and *Alisma plantago-aquatica*.

Plant species

The following plant species were recorded as growing wild in the site (not just planted) by either Rik Brown on 15th July 2002 or the author in his brief inspection of part of the site on 17th September 2024. Species not seen in 2024 are asterisked. The column headed 'Risk' indicates the indigenous species' risk of dying out in Knox as follows: 'C'=Critically Endangered; 'E'=Endangered; 'V'=Vulnerable; and 'N'=Near threatened. Additional species would no doubt be detectable in other seasons.

Indigenous moss and liverwort
Chiloscyphus semiteres, Green Worms
Eurhynchium praelongum, Common Feather-moss

Risk	Wild indigenous vascular species
	Acacia dealbata, Silver Wattle
V	*Acacia mearnsii*, Black Wattle
V	*Acacia melanoxylon*, Blackwood
	Acaena novae-zelandiae, Bidgee-widgee
N	*Alisma plantago-aquatica*, Water Plantain
V	*Azolla pinnata*, Ferny Azolla
	Bursaria spinosa, Sweet Bursaria
	Callistemon sieberi, River Bottlebrush* (planted?)
	Carex appressa, Tall Sedge
V	*Coprosma quadrifida*, Prickly Currant-bush
	Eleocharis sphacelata, Tall Spike-rush*

Risk	Wild indigenous vascular species
V	*Eucalyptus goniocalyx*, Bundy*
V	*Eucalyptus ovata*, Swamp Gum*
C	*Eucalyptus viminalis* subsp. *viminalis*, Manna Gum
V	*Exocarpos cupressiformis*, Cherry Ballart
	Goodenia ovata, Hop Goodenia*
	Juncus amabilis, Hollow Rush
	Juncus bufonius, Toad Rush
C	*Juncus fockei/holoschoenus*, a joint-leaf rush
	Juncus pallidus, Pale Rush*
	Lemna disperma, Common Duckweed
C	*Leptospermum lanigerum*, Woolly Tea-tree
E	*Melaleuca ericifolia*, Swamp Paperbark
V	*Melicytus dentatus*, Tree Violet
	Microlaena stipoides, Weeping Grass
V	*Microtis parviflora*, Slender Onion-orchid

Risk	Wild indigenous vascular species
C	*Myrsine howittiana,* Muttonwood
	Oxalis exilis/perennans, Wood-sorrel
V	*Ozothamnus ferrugineus,* Tree Everlasting*
	Persicaria decipiens, Slender Knotweed*
V	*Persicaria praetermissa,* Spotted Knotweed
E	*Phragmites australis,* Common Reed
	Poa ensiformis, Sword Tussock-grass
C	*Pomaderris racemosa,* Cluster Pomaderris*
	Rytidosperma racemosum, Clustered Wallaby-grass
	Schoenus apogon, Common Bog-rush
	Senecio quadridentatus, Cotton Fireweed*
V	*Solanum laciniatum,* Large Kangaroo Apple*
	Typha domingensis, Cumbungi*
	Typha orientalis, Cumbungi*

Introduced species
Acacia baileyana, Cootamundra Wattle*
Allium triquetrum, Angled Onion
Cassinia sifton, Sifton Bush

Introduced species
Chrysanthemoides monilifera subsp. *monilifera,* Boneseed
Cirsium vulgare, Spear Thistle
Cortaderia selloana, Pampas Grass*
Cotoneaster glaucophyllus, Cotoneaster*
Crataegus monogyna, Hawthorn*
Cyperus eragrostis, Drain Flat-sedge
Gaudinia fragilis, Fragile Oat
Genista linifolia, Flax-leafed Broom*
Paspalum dilatatum, Paspalum
Phalaris aquatica, Toowoomba Canary-grass*
Romulea rosea, Common Onion-grass
Rubus anglocandicans, Blackberry
Rumex crispus, Curled Dock
Salix × rubens, White Crack Willow*
Solanum mauritianum, Tobacco-bush*
Solanum nigrum, Black Nightshade*
Solanum pseudocapsicum, Madeira Winter-cherry
Tradescantia fluminensis, Wandering Trad
Ulex europaeus, Gorse (Furze)*
Vinca major, Blue Periwinkle*
Watsonia meriana var. *bulbillifera,* Bulbil Watsonia

Notes concerning some of the locally-threatened plant species

Callistemon sieberi (River Bottlebrush): A single shrub was seen along Dandenong Creek in 2002. It is unknown whether it was planted.

Melicytus dentatus (Tree Violet): Fairly abundant in the site's northwest corner.

Myrsine howittiana (Muttonwood): As above.

Pomaderris racemosa (Cluster Pomaderris): In 2002, approximately 20 individuals were seen scattered along Dandenong Creek (mainly towards the upstream end). In 2024, the species remains but most or all appear to have been planted.

Fauna of special significance

Listed as Endangered under Commonwealth and Victorian law

Dwarf Galaxias: Found in a pond near the site's northwestern corner in 1989, and in the same vicinity in 1985 and 1986. Despite subsequent searches, no Dwarf Galaxias were detected in the area until 600 captive individuals were released at Tirhatuan Wetlands in 2017.

Listed as Vulnerable under Commonwealth law

Latham's (or Japanese) Snipe: There are 20 records of the species in the site despite a paucity of bird surveys.

Listed as Vulnerable under Victorian law

Eastern Great Egret: Recorded in the site at least five times up to 2017 despite a paucity of bird surveys.

Other significant waterbirds associated with the Dandenong Creek floodplain are likely to be frequent visitors. Significant frogs, freshwater fish and other aquatic fauna also potentially occur within the aquatic habitats.

Fauna habitat features

The fair to good cover of shrub layer vegetation along Dandenong Creek provides habitat for small native birds, possums and invertebrates. A substantial population of Red-browed Finches was observed along the creek during field surveys.

Shallow floodplain depressions and constructed wetlands scattered throughout the golf course provide relatively extensive foraging habitat and potential nesting sites for ducks, swamphens and other waterbirds. They are also likely to provide habitat for frogs and other aquatic fauna.

Planted native trees throughout the golf course provide habitat for honeyeaters, lorikeets and other forest and woodland birds.

Native vegetation and floodplain/wetland habitat within the site would inevitably contribute to the daily and seasonal movements of native fauna along the Dandenong Creek habitat corridor, particularly of waterbirds.

Significance ratings

The following is an assessment of the site's biological significance against the Department of Energy, Environment & Climate Action's standard criteria (Amos 2004).

Ecological Integrity & Viability

Criterion 1.1.1 attributes **Local** significance to 'All parts of riparian systems with riparian vegetation present', which applies to this site.

The site provides a substantial amount of habitat for native wildlife associated with the Dandenong Creek and its floodplain (including vulnerable species in Victoria and Australia) and forms a component of the Dandenong Creek habitat corridor. This corridor is important on a scale larger than just local and smaller than state-wide. This represents **Regional** significance under criterion 1.2.6.

Regionally-endangered Ecological Vegetation Class

The Floodplain Riparian Woodland in the site's northwest corner meets the definition of a 'remnant patch' adopted by the standard criteria, i.e. a continuous area of at least 0.25 ha in which the cover of native understorey is at least 10% throughout. Floodplain Riparian Woodland is regionally endangered. Under Appendix 3 of *Victoria's Native Vegetation Management – a Framework for Action* (NRE 2002a), any remnant patch of a regionally-endangered EVC has a conservation significance rating of at least High. This translates to **State** significance under criterion 3.2.3 of Amos (2004).

Threatened Plants

Most of the locally-threatened plant species seen in 2024 have viable populations, thereby meeting criterion 3.1.5 for **Local** significance.

Threatened Fauna

The nationally-endangered Dwarf Galaxias was found in a pond next to the golf course in 1989 and at other locations in the immediate vicinity in 1985 and 1986. It is believed that the species died out in the catchment during the Millennium Drought but 600 individuals were released into Tirhatuan Wetlands Conservation Reserve in 2017. The standard criteria do not specifically consider a situation like this. No biological significance is recognised here for Dwarf Galaxias at the golf course because the habitat for any re-introduced Dwarf Galaxias appears to be mediocre and the degree of success of reintroduction of the species to the catchment is unclear at present.

Latham's Snipe is listed as Vulnerable under Commonwealth law and this site is known habitat for it (though not high-quality habitat or in large quantity). The species occurs interstate as well as Victoria. Criterion 3.1.1 attributes **State** significance to known habitat for such species, other than 'important sites' (which does not appear to apply here).

The Eastern Great Egret is listed as Vulnerable under Victorian law and Site 75 is known habitat for it (though, again, not high-quality habitat or in large quantity). The species occurs interstate as well as Victoria. Criterion 3.1.2 attributes **Regional** significance to known habitat for such species, other than 'important sites' (which does not apply here).

Threats

- Human-induced climate change, which is predicted to cause more severe droughts, heatwaves, floods, fires and storms, as well as substantially lower rainfall (particularly in winter);
- Decline of tree health, partly due to the abovementioned droughts and storms and the associated falling of the water table;
- Displacement of indigenous flora and fauna by environmental weeds, exacerbated by debilitation of the native vegetation by the impacts of climate change. The introduced plant species with the most adverse ecological impact appear to be Bulbil Watsonia (*Watsonia meriana* var. *bulbifera*), Wandering Trad (*Tradescantia albiflora*) and Creeping Buttercup (*Ranunculus repens*). Removal of the Watsonia (a declared noxious weed) is a legal obligation, quite tractable and very important for the site's biological significance;

- Loss or decline of plant species whose populations are so small that they are vulnerable to inbreeding, poor reproductive success or chance events;
- Potential nutrient overload in the waterbodies due to the application of fertilisers and other chemicals on the golf course.

Strategic planning

- The previous (2010) edition of this report led to this site being covered by Schedule 2 of the Environmental Significance Overlay (ESO2), on the basis of essentially the same matters as identified in the 'Significance ratings' section above. Since 2010, there have been no material changes affecting the applicability of ESO2 to the site, so no recommendation is made here for amending ESO2. Note that ESO2 exempts maintenance of the golf course and associated assets;
- The site is zoned 'Public Use Zone – Other Public Use' (PUZ7).

Information sources used in this assessment

- An ecological survey undertaken for the first edition of this report by Rik Brown on 15th July 2002, including compilation of lists of indigenous and introduced plant species, incidental fauna observations and vegetation mapping/descriptions;
- An inspection of part of the site by Dr Lorimer on 17th September 2024, including: (a) compiling separate lists of wild indigenous plant species for wetlands and the woodland; (b) mapping significant plants; and (c) checking for changes in features relevant to this report compared with pre-existing information;
- Records of flora and fauna observations stored in the Atlas of Living Australia;
- Aerial and satellite imagery from between 1946 and 2025;
- The Victorian Government's 'NatureKit' website;
- Maps of geology, topography and strategic planning information produced by agencies of the Victorian Government.