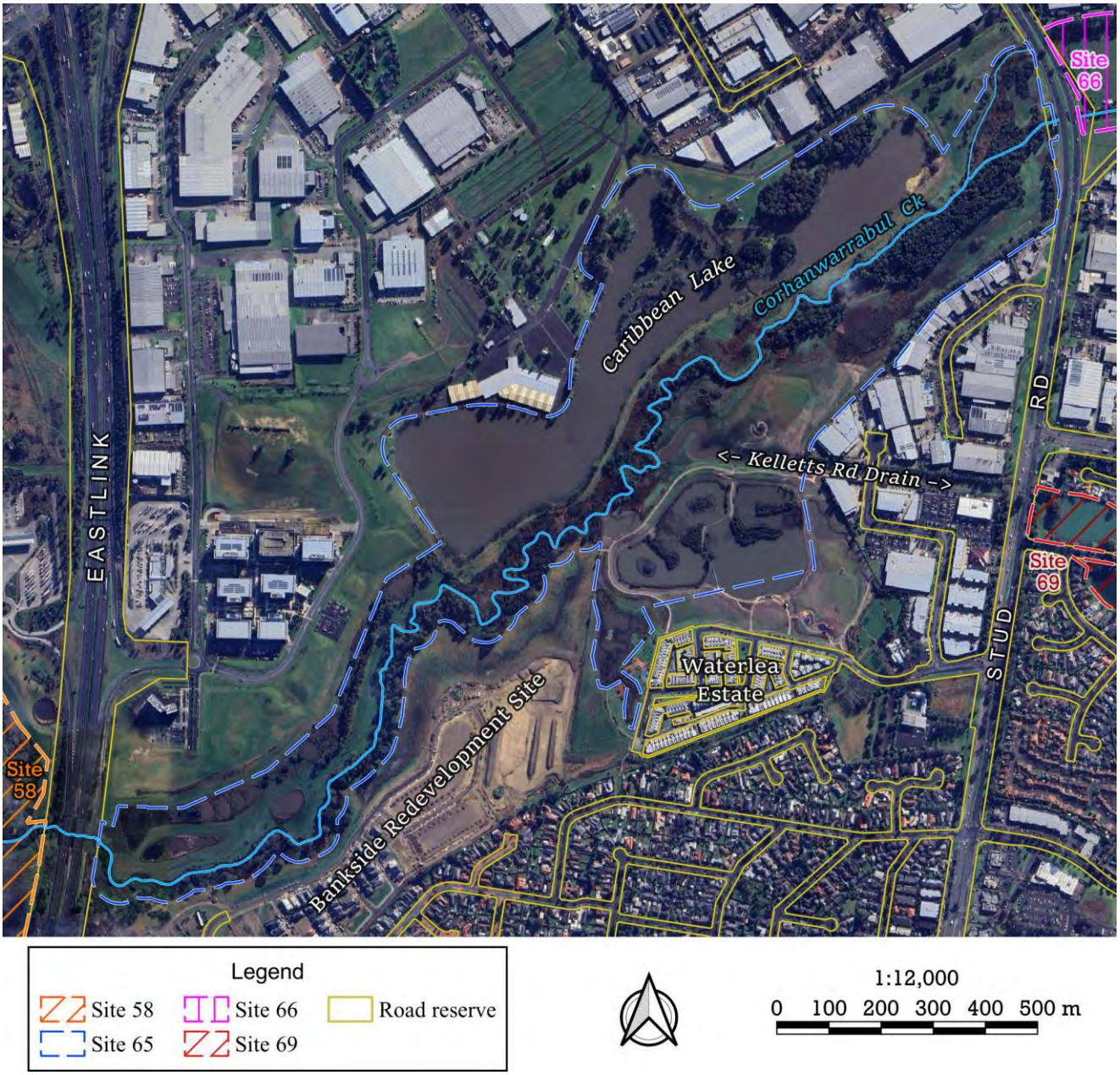
# Site 65. Stamford Park, Rowville and Caribbean Lake

A section of Corhanwarrabul Creek and its floodplain immediately downstream of Stud Rd.

Summary of significant features:

- State significance: patches of seasonal wetland, which is a regionally-endangered vegetation type;
- State significance: habitat for Latham's Snipe and Growling Grass Frog, which are listed as Vulnerable under Commonwealth law;
- Regionally significant: habitat of Eastern Great Egret, which is listed as Vulnerable under Victorian law;
- Locally significant: viable populations of many locally-threatened plant species and seven locally-threatened bird species;
- Locally significant: riparian habitat on the Corhanwarrabul Creek habitat corridor.




## Boundaries

This site is outlined with mid-blue dashes above. Because of the scale of the aerial photograph and the complexity of the boundary, the details of the boundary are better inspected via the Knox Biodiversity Atlas that accompanies

this report. Compared with the previous (2010) edition of this report, the site has been increased in area from 71.1 ha to 80.7 ha due to creation of new wetland habitat and allowance of a setback of 30 m from the banks of Corhanwarrabul Creek. The setback is to match Melbourne Water's (2012) stream setback guidelines for greenfield development (see Section 4.3.3 of Volume 1).

At the time of writing (March 2025), the Bankside residential development is in progress immediately south of this site's western half, on the former Kingston Link Golf Course. Some of the development's 40% open space may well be appropriate to add to Site 65, depending on how its landscaping ends up.

**Land use & tenure**: Mixed public and private land. The public land on the left (southeast) bank of Corhanwarrabul Creek is managed for recreation, flood mitigation and treatment of urban stormwater.

### Site description

This 80.7-hectare site is on the floodplain of Corhanwarrabul Ck at elevations of 45–57 m. The creek retains its natural course. The natural terrain has alluvial soil (deposited during floods) with wetland depressions and very shallow slopes except for the bank of Corhanwarrabul Ck. Earthworks have created waterbodies, drains and elevated areas with slopes that are moderate in places.

Caribbean Lake was constructed as an amenity feature of a theme park in c. 1964. It is included within this site because it contains uncommon aquatic plant species and it is frequented by a wealth of waterbirds, including threatened species. Eel Grass (*Vallisneria australis*) covers the lake bottom and provides a strong base of the lake's food chain, from microbes to aquatic invertebrates, fish and birds. Treed areas around the lake are also included in the site for the value that they may provide to birds, e.g. the nine Australasian Darters the author saw perched in them in 2025.

The rest of the site was once part of the historic Stamford Park stud farm. At that time, it was completely cleared of woody vegetation, as evidenced by aerial photographs from 1946 and the 1970s. The floodplain was cultivated and pasture grass was planted for fodder, although part of it was cultivated in rows in 1946. Meadow Fox-tail (*Alopecurus pratensis*) from the pasture remains abundant today. Natural seasonal wetlands are very resilient ecosystems and those that remain today in the site's northeastern third are still dominated by naturally-occurring indigenous rushes and sedges. Frogs and Lowland Copperhead snakes are abundant in those natural wetlands and Latham's Snipe (a vulnerable species) can often be found there. There has been a substantial amount of heavy machinery traffic through these natural wetlands over the past decade or so but the wetlands have mostly recovered (though not the locally-threatened Fen Sedge, *Carex gaudichaudiana*).

Stream channels and banks are much less resilient than wetlands and became dominated by willows, Box Elder (*Acer negundo*), Wandering Trad (*Tradescantia fluminensis*) and scattered patches of the indigenous species, Swamp Paperbark (*Melaleuca ericifolia*) and Common Reed (*Phragmites australis*). Melbourne Water used heavy machinery and rocks to stabilise the creek bank upstream of the Bankside development (or golf course, as it was) in the late 2000s, clearing most of the riparian vegetation. Extensive revegetation followed, with a mixture of indigenous and non-indigenous species. It appears that the non-indigenous species may have been planted as a result of misidentification or substitution for indigenous species, e.g. *Lomandra hystrix* has been planted instead of *Lomandra longifolia* and Swamp Paperbarks have been mixed with the non-Victorian species, *Melaleuca linariifolia* and *Melaleuca viminea*. The stream stabilisation works and revegetation did not extend as far as the Bankside development site, where the banks remain dominated by deciduous trees. Beside the strip of willows, mature non-indigenous eucalypts remain from the former golf course.

As part of redevelopment of the former Stamford Park farm, construction of stormwater treatment wetlands south of the Kelletts Road Drain (marked on the aerial photograph above) commenced in 2010. Those wetlands and adjacent ones constructed in 2023–2024 have been planted with a mixture of indigenous and non-indigenous species. Some of the non-indigenous species are environmental weeds in local wetlands, e.g. River Club-rush (*Schoenoplectus tabernaemontani*).

The Waterlea estate (marked on the aerial photograph above) began construction in 2017, followed by the wetlands to its west in 2021. Those wetlands and their planting have been well designed for habitat, aesthetics, childhood development and stormwater treatment.

The site has a high diversity of bird species, from waterbirds and dotterels to floodplain species (e.g. reed-warblers and cisticolas), Fairy Martins and raptors. This diversity is a reflection of the floodplain ecosystem's

high primary production (essentially, plant growth rate) and the consequent diverse, prolific base to the food chain.

### Relationship to other land

This site is separated from the Dandenong Valley Parklands (Site 58) only by the EastLink corridor, and from the upstream parts of the Corhanwarrabul Creek catchment's habitat corridor (Site 66, p. 448) only by Stud Rd. Aquatic fauna such as fish and invertebrates can move freely between these sites. The same is true of birds such as waterbirds and birds of prey that move seasonally or nomadically along the corridor. The movements of some birds are probably disrupted by the presence of EastLink.

The industrial and residential estates that flank the corridor are barriers to fauna movements laterally from the site.

There is presumably some traffic of waterbirds and water-dependent invertebrates between Site 65 and waterbodies to its south in the former Kingston Links Golf Course (Site 65a).

**Bioregion**: Gippsland Plain

### Types of naturally-occurring habitat

Perennial Stream (No EVC number available). *Cycnogeton procerum* was seen in the creek in 2024.

Floodplain Wetland Complex (EVC 172, **regionally Endangered**): Estimated as 2.5 ha in total area of natural habitat, comprising 2.0 ha in fair ecological condition (rating C) and 0.5 ha in poor condition (rating D).

Trees, shrubs, vines and ferns: Absent.

Aquatic and semi-aquatic flora: Dominated variously by *Phragmites australis* or mixtures of *Juncus sarophorus, Eleocharis acuta* and *Carex appressa*. *Persicaria decipiens* is abundant; *P. subsessilis* and *P. praetermissa* less so.

Floodplain Riparian Woodland (EVC 56, **regionally Endangered**): Estimated as 0.5 ha in total area, comprising 0.4 ha in fair ecological condition (rating C) and 0.1 ha in poor ecological condition (rating D). 13 indigenous plant species have been recorded. Note that other reports often incorporate wetlands within this EVC because it is easier to do, but the extra effort has been put in here to separately identify and map the wetlands as Floodplain Wetland Complex.

Canopy trees: Less than ten naturally-occurring *Eucalyptus ovata* remain; others have been planted. Willows form a canopy along much of the creek bank.

Sub-canopy trees: *Melaleuca ericifolia* forms dense patches, partly natural and partly from planting. *Acacia melanoxylon* and *A. mearnsii* are fairly abundant along the creek, some supporting *Amyema quandang*.

Shrubs: Wild *Melicytus dentatus* is fairly abundant (suggesting Floodplain Riparian Woodland rather than Swampy Riparian Woodland); others of the species have been planted. *Gynatrix pulchella, Prostanthera lasianthos* and *Ozothamnus ferrugineus* were present prior to Melbourne Water's bank stabilisation works in the late 2000s but none could be found in 2024.

Vines and ferns: None.

Groundcover: Mostly dominated by introduced species, particularly *Tradescantia fluminensis* and *Phalaris aquatica*. The dominant indigenous species is *Phragmites australis*.

### Plant species

The following plant species have been recorded growing wild in the site (i.e. not just planted) in botanical surveys in 1997, 2005, 2007, 2024 or 2025. Indigenous species not seen in the author's inexhaustive surveys on 10th September 2024 and 23rd March 2025 are indicated by the year of the most recent record in parentheses. The introduced species were either seen in 2024 to be competing with native vegetation or are believed very likely to still be doing so. 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.

| Indigenous mosses and liverworts |
|---|
| *Fissidens bifrons*, a pocket-moss |
| *Riccia bifurca*, a liverwort |

| Risk | Wild indigenous vascular species |
|---|---|
| V | *Acacia mearnsii*, Black Wattle |
| V | *Acacia melanoxylon*, Blackwood |
| | *Acacia paradoxa*, Hedge Wattle (1997) |

| Risk | Wild indigenous vascular species |
|---|---|
| N | *Alisma plantago-aquatica*, Water Plantain |
| V | *Alternanthera denticulata*, Lesser Joyweed |
| C | *Amphibromus nervosus*, Veined Swamp Wallaby-grass |
| E | *Amyema quandang*, Grey Mistletoe |
| V | *Azolla pinnata*, Ferny Azolla |
| V | *Azolla rubra*, Pacific Azolla |
| | *Carex appressa*, Tall Sedge |
| E | *Carex gaudichaudiana*, Fen Sedge (1997) |
| | *Carex inversa*, Knob Sedge (1997) |
| V | *Coprosma quadrifida*, Prickly Currant-bush (only planted?) |
| V | *Crassula helmsii*, Swamp Crassula |
| | *Cycnogeton procerum*, Water-ribbons |
| V | *Eleocharis acuta*, Common Spike-rush |
| | *Epilobium hirtigerum*, Hairy Willow-herb |
| V | *Eucalyptus ovata*, Swamp Gum |
| E | *Euchiton involucratus*, Common Cudweed (1997) |
| V | *Glyceria australis*, Australian Sweet-grass (1997) |
| E | *Gynatrix pulchella*, Hemp Bush (1997) |
| E | *Isolepis hookeriana*, Grassy Club-rush |
| | *Juncus amabilis*, Hollow Rush |
| | *Juncus bufonius*, Toad Rush |
| C | *Juncus fockei/holoschoenus*, a joint-leaf rush |
| | *Juncus gregiflorus*, Green Rush |
| | *Juncus pallidus*, Pale Rush (1997) |
| | *Juncus sarophorus*, Broom Rush |
| | *Lachnagrostis filiformis*, Common Blown-grass |
| | *Lemna disperma*, Common Duckweed |
| E | *Lycopus australis*, Australian Gipsywort |
| | *Lythrum hyssopifolia*, Lesser Loosestrife (2005) |
| E | *Melaleuca ericifolia*, Swamp Paperbark |
| V | *Melicytus dentatus*, Tree Violet |
| V | *Ozothamnus ferrugineus*, Tree Everlasting (1997) |
| | *Persicaria decipiens*, Slender Knotweed |
| E | *Persicaria lapathifolia*, Pale Knotweed |
| V | *Persicaria praetermissa*, Spotted Knotweed |
| E | *Persicaria subsessilis*, Hairy Knotweed |
| E | *Phragmites australis*, Common Reed |
| V | *Prostanthera lasianthos*, Victorian Christmas-bush (1997) |
| | *Rytidosperma setaceum*, Bristly Wallaby-grass |
| | *Schoenus apogon*, Common Bog-rush |
| | *Senecio quadridentatus*, Cotton Fireweed |
| C | *Solanum aviculare*, Kangaroo Apple (2005) |
| | *Typha* sp., a cumbungi (1997) |
| | *Vallisneria australis*, Eel Grass |

| Introduced species |
|---|
| *Acer negundo*, Box Elder |
| *Agrostis capillaris*, Brown-top Bent |
| *Allium triquetrum*, Angled Onion |
| *Alopecurus pratensis*, Meadow Fox-tail |
| *Brachythecium mildeanum*, a feather-moss |
| *Bromus catharticus*, Prairie Grass |
| *Callitriche stagnalis*, Pond Water-starwort |
| *Cassinia sifton*, Sifton Bush |
| *Cenchrus clandestinus*, Kikuyu Grass |
| *Cirsium vulgare*, Spear Thistle |
| *Cotula coronopifolia*, Water Buttons |
| *Crassula natans*, Water Crassula |
| *Cynodon dactylon*, Couch |
| *Cyperus eragrostis*, Drain Flat-sedge |
| *Dactylis glomerata*, Cocksfoot |
| *Galium aparine*, Cleavers |
| *Geranium dissectum*, Cut-leaf Crane's-bill |
| *Glyceria declinata*, Manna Grass |
| *Helminthotheca echioides*, Ox-tongue |
| *Holcus lanatus*, Yorkshire Fog |
| *Hypericum tetrapterum*, Square-stem St John's Wort |
| *Juncus articulatus*, Jointed Rush |
| *Leontodon saxatilis*, Lesser Hawkbit |
| *Lolium perenne*, Perennial Rye-grass |
| *Lotus subbiflorus*, Hairy Bird's-foot Trefoil |
| *Lotus uliginosus*, Greater Bird's-foot Trefoil |
| *Nassella neesiana*, Chilean Needle-grass |
| *Paspalum distichum*, Water Couch |
| *Phalaris aquatica*, Toowoomba Canary-grass |
| *Plantago lanceolata*, Ribwort |
| *Polygonum aviculare*, Hogweed |
| *Ranunculus repens*, Creeping Buttercup |
| *Raphanus raphanistrum*, Wild Radish |
| *Rubus anglocandicans*, Blackberry |
| *Rumex conglomeratus*, Clustered Dock |
| *Salix* spp., various willow species |
| *Solanum pseudocapsicum*, Madeira Winter-cherry |
| *Schoenoplectus tabernaemontani*, River Club-rush |
| *Symphyotrichum subulatum*, Aster-weed |
| *Tradescantia fluminensis*, Wandering Trad |
| *Ulex europaeus*, Gorse (Furze) |
| *Verbena bonariensis* s.l., Purple-top Verbena |

## Notes concerning some of the locally-threatened plant species

*Amphibromus nervosus* (Veined Swamp Wallaby-grass) – There were many individuals in the largest wetland (near Stud Rd) in 1997. The September 2024 survey was at the wrong time of year to find any but a brief follow-up in a small part of the habitat on 21/11/24 found at least ten to the rear of 20 Kingsley Close.

*Amyema quandang* (Grey Mistletoe) – In 2024 at Stamford Park, 17 were found on one *Acacia melanoxylon* and one on an *A. mearnsii*. In addition, in 2025, c. 10 were seen on an *A. mearnsii* at the northeast end of Caribbean Lake and a few were seen above the creek, southeast of the middle of the lake.

*Carex gaudichaudiana* (Fen Sedge) – abundant in 1997 but apparently all destroyed by subsequent earthworks.

*Gynatrix pulchella* (Hemp Bush) – Two plants were found in 1997; none in 2024 or 2025.

*Melicytus dentatus* (Tree Violet) – abundant along the creek bank, both wild and planted.

*Persicaria subsessilis* (Hairy Knotweed) – locally abundant, particularly on the floodplain at Caribbean Park; some of the plants on the opposite side of the creek were planted in c. 2024.

## Fauna of special significance

The following species are believed to use the site's habitat to a material degree. They have been recorded recently enough to expect they are (or may well be) still present, at least sometimes.

Listed as Vulnerable under Commonwealth and Victorian law

Growling Grass Frog – recorded in 2012 beside Corhanwarrabul Ck north of what is now the Bankside development site. The author is unclear about the species' chances of continuing to exist in the site post-development due to lack of information about the habitat the frogs were using or what has been done to protect them from the development. The detection of the species was not mentioned in the Bankside development's planning permit application and it was not referred to the federal environment minister under the *Environment Protection and Biodiversity Conservation Act*.

Listed as Vulnerable under Commonwealth law

Latham's Snipe – recorded ten times and probably overlooked due to the species' secretive behaviour and because the prime habitat is somewhat secluded and not generally visited by bird enthusiasts.

Listed as Vulnerable under Victorian law

Eastern Great Egret – recorded four times between 2010 and 2022; probably overlooked on many other occasions because the prime habitat is somewhat secluded and not generally visited by bird enthusiasts.

Uncommon in metro Melbourne

Australasian Darter – approximately fifty records, including up to nine birds at a time in this study in 2025.

Nankeen Kestrel – ten records.

Black-fronted Dotterel – eighteen records, including in this study.

Fairy Martin – twenty-two records of up to fifty birds (25 seen in this study).

Australian Reed-Warbler – twenty-one records, including in this study.

Little Grassbird – seventeen records.

Golden-headed Cisticola – twenty records, including in this study

## Fauna habitat features

- The stream is used by fish, ducks, aquatic invertebrates and probably Water Rats;
- The wetlands (including Caribbean Lake) are used extensively by frogs, waterbirds, snakes and aquatic invertebrates;
- Pasture areas support a high density of Lowland Copperhead snakes, probably because of all the frogs in the wetlands;
- Scattered trees (alive and dead) are used as hunting lookouts by birds of prey;
- Fragmentation of the native vegetation is to some degree offset by the diversity of habitat (scrubby to open, aquatic to dry), which is beneficial to some native fauna.

## 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 and 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 is also a component of the Corhanwarrabul Creek habitat corridor. The corridor is important at a Local scale. Criterion 1.2.6 takes this to be of **Local** significance.

*Endangered Vegetation Types*

The main wetland in the site's northeast third (excluding Caribbean Lake) occupies almost 2½ ha. It easily 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. Natural wetland is a regionally-endangered EVC. Under Appendix 3 of *Victoria's Native Vegetation Management – a Framework for Action* (NRE 2002a), any 'remnant patch' of a regionally-endangered EVC is of at least High conservation significance. This translates to **State** significance under standard criterion 3.2.3. Several seasonal wetlands on the northern side of Corhanwarrabul Ck, east and southeast of Caribbean Lake, satisfy the same criteria. Whether any of the Floodplain Riparian Woodland still qualifies as a 'remnant patch' since Melbourne Water's bank stabilisation work is doubtful, as it has been mostly replaced by revegetation.

*Threatened Plants*

Many of the locally-threatened plant species listed above have viable populations, thereby meeting criterion 3.1.5 for **Local** significance.

*Threatened Fauna*

The Growling Grass Frog was detected in 2012 in the current-day Bankside site and it may well continue to do so. As the species is listed as Vulnerable under Commonwealth law, its habitat in the site is of **State** significance under criterion 3.1.1.

Latham's Snipe is listed as Vulnerable under Commonwealth law and this site has a substantial area of known, high-quality habitat for it. The species occurs interstate and overseas 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 is believed to use the site's habitat to a material extent. The species occurs naturally outside Victoria. Criterion 3.1.2 attributes **Regional** significance to any known habitat for such species, other than 'important sites' (which does not apply here).

The ten bird species mentioned above in the section headed 'Uncommon in metro Melbourne' are believed to have viable populations in the site and be threatened in the local area. Criterion 3.1.5 treats the habitat of such species as **Locally** significant.

## Threats

- Human-induced climate change, which is predicted to cause more severe droughts, heatwaves, floods 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 consequent falling of the water table;
- Mowing of wetland habitat while wet or boggy (as has happened repeatedly in recent years), thereby: (a) risking the killing of Growling Grass Frogs and other significant aquatic or amphibious fauna; (b) inhibiting reproduction of indigenous plants; and (c) resulting in wheel ruts in which indigenous wetland vegetation becomes replaced by wetland weeds such as *Brachythecium mildeanum*;
- Displacement of indigenous flora and fauna by environmental weeds, exacerbated by debilitation of the native vegetation by the impacts of climate change. The environmental weeds with the most adverse ecological impact or threat appear to be willows, Box Elder (*Acer negundo*), Wandering Trad (*Tradescantia albiflora*) and Chilean Needlegrass (*Nassella neesiana*). However, the 2024 site inspection was done when the first of these two species had no leaves and so only a subset of individuals could be identified. The Chilean Needlegrass is on the slope northwest of Kingsley Close and it appears to be being spread by slashing while the needlegrass is in seed, which should not occur;
- Further stream bank stabilisation works;
- Further driving of heavy machinery through the natural wetlands in the site's northeastern third;

- Continuing loss or decline of plant species that have such small populations that they are vulnerable to inbreeding, poor reproductive success or chance events such as being run over by slasher tyres.

### Strategic planning

- The previous (2010) edition of this report led to its version of this site being covered by Schedule 2 of the Environmental Significance Overlay (ESO2). Since 2010, habitat for wetland fauna has been added by construction of artificial wetlands, while a small fraction of the site's native vegetation has been destroyed. The site delineated here accommodates the new habitat and takes into account Melbourne Water's stream setback guidelines. Despite these changes, ESO2 remains appropriate for the site as currently delineated. The only recommendation for amending the application of ESO2 to the site is to alter the boundary to match the one adopted here;
- It may become appropriate to extend ESO2 to the Bankside development's floodplain open space, depending on the outcome of its landscaping.

### Information sources used in this assessment

- The 1996 report, *'Preliminary Flora and Fauna Assessment of the Proposed Water Ski Park, Stud Rd, Rowville'* by K.P. Lampman and A.R.G. McMahon for Maunsell Pty Ltd;
- Discussions in 1997 with stream experts, Vin Pettigrove (Melbourne Water) and Tarmo Raadik (Marine and Freshwater Resources Institute), about fish (and particularly Dwarf Galaxias) in Corhanwarrabul Creek;
- The Melbourne Water report, *'Waterway Assessment in the Dandenong Valley: The Health of Corhanwarrabul, Monbulk and Ferny Creeks'* by V. Pettigrove and R. Coleman (1997);
- Additional discussions about Dwarf Galaxias in the catchment with John McGuckin of Streamline Research Pty Ltd, in 2003;
- A study of the parts of the site upstream of the golf course for the report, *'Flora and Fauna Study of Stamford Park, Corhanwarrabul Creek, Rowville'* by G.S. Lorimer, M. Belvedere, D. Lockwood and M. Serena for Knox City Council (1998). Several person-days were spent surveying the site, including:
  - Compilation of lists of indigenous and introduced plants within each of five vegetation types within the site;
  - Detailed mapping and documentation of rare species populations and the ecological condition of the vegetation;
  - A description of each vegetation type's structural and floristic composition;
  - Active fauna searches for birds, reptiles and frogs, including (in part) spotlighting and predator scat analysis;
  - Checks for fauna habitat, ecological threats and management issues; and
  - Recommendations for the preservation of the vegetation;
- The 1998 *'Scoresby Transport Corridor Environment Effects Statement'*, including Supplement Volume H: Flora and Fauna by Williams L.M., Yugovic J.V., McGuckin J., Humphrey P. and Larwill S. (1998), in which the area of the proposed bridge over Corhanwarrabul Ck is labelled as 'Site 7';
- Written reports of the Australian Platypus Conservancy about Platypus surveys conducted within the site almost annually from 1994 to 2001. Three Platypus and four fish species were found;
- A botanical survey of the site by Dr Lorimer on 10th September 2024, 11th November 2024 and 23rd March 2025, compiling lists of indigenous plant and bird species and checking for changes in features relevant to this report compared with pre-existing information;
- 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.