Site 26. Dandenong Creek Corridor

Disjunct patches or strips of habitat along Knox's largest stream, between Wantirna and Boronia.

Summary of significant features:

- Nationally significant: a stand of the Yarra Gum (*Eucalyptus yarraensis*), which is Critically Endangered globally, slightly downstream of the railway bridge in Bayswater;
- State significance: patches of regionally threatened Ecological Vegetation Classes, in mediocre ecological condition due to past clearing and excavation;
- Locally significant: viable populations of plant species threatened with dying out in Knox;
- Locally significant: a corridor for daily and seasonal movements of insects, fish and birds (particularly waterbirds and parrots), as well as for pollen and plant propagules that fauna may transport;
- Locally significant: some sections of the creek flow above-ground and have riparian (streamside) vegetation.
- All the native vegetation in this site belongs to Ecological Vegetation Classes that are regionally Endangered or Vulnerable, but only a small fraction of it is in fair ecological condition or better;
- Even open pasture within the site contains substantial areas of indigenous wetland plants in depressions, and these are habitat for frogs and their predators;
- Revegetation is playing an important role in reducing the extensive fragmentation of habitat that has occurred historically.

Boundaries

Because of the extent of Site 26, the details of its boundary are better seen in the digital Knox Biodiversity Atlas that accompanies this report.

The site comprises the six strips with magenta outlines and hatching on the aerial photographs on the next page. It extends from Boronia Rd, Wantirna in the west to near Sugarloaf Hill in Boronia (Site 23). (Between this site and Liverpool Road Retarding Basin, both banks of Dandenong Creek are within the City of Maroondah.) The orange-outlined shapes are other sites from this report, labelled with their site numbers. The total area of Site 26 is 43.9 ha, compared with 52.0 ha in the previous (2010) edition. The main downward influence on that change has been loss of habitat between J.W. Manson Reserve in Wantirna and Marlborough Rd in Bayswater. That loss has been partly compensated by: (a) 'daylighting' and revegetation of a reach of Dandenong Creek in Bayswater; (b) maturation of riparian revegetation; (c) the addition of the new Suffern Wetlands; and (d) expanding the site to include some undeveloped land that is closer to the creek than Melbourne Water's 30 m stream setback guideline. There have also been numerous tiny adjustments to the boundary to follow property boundaries as mapped in the current version of the digital state cadastre.

Land use & tenure: Public land, mostly managed by Melbourne Water and Knox City Council.

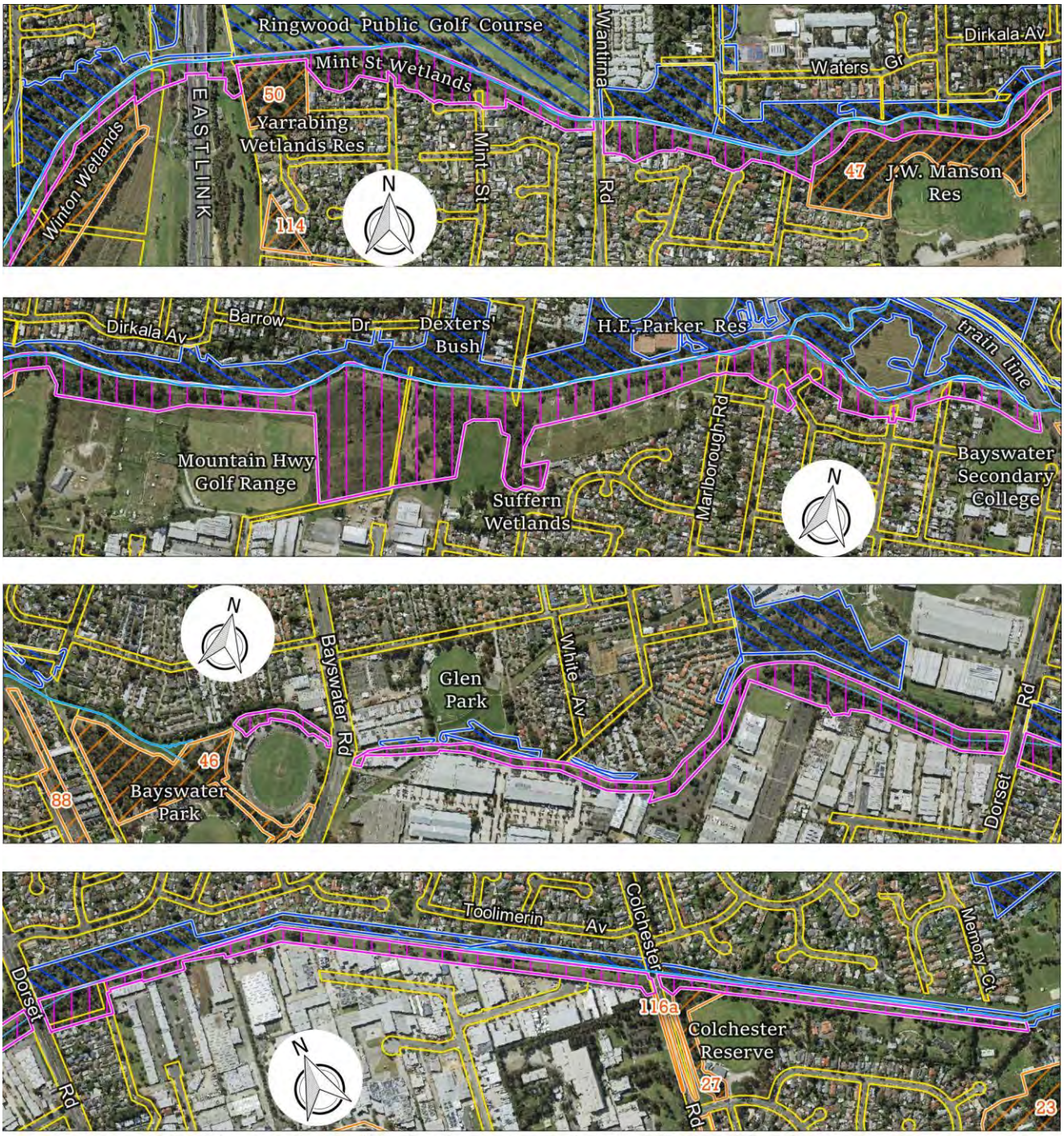
Site description

The habitat along Dandenong Creek between Boronia Rd and Liverpool Rd comprises a narrow corridor punctuated by nodes that are broader and in better ecological condition. The nodes on the Knox side of the creek are: (a) the Liverpool Road Retarding Basin in Boronia (Site 22) and abutting Sugarloaf Hill (Site 23); (b) Bayswater Park (Site 46); (c) J.W. Manson Reserve, Wantirna (Site 47); (d) Yarrabing Wetlands Reserve, Wantirna (Site 50); and (e) Winton Wetlands, Wantirna (Site 51). There are also nodes on the opposite bank of Dandenong Creek, as marked on the aerial photograph on the next page.

Site 26 comprises the habitat links between those nodes. The ecological linkages involve the stream, wetlands, forest, paperbark scrub, open floodplain habitat and revegetation.

The natural, meandering course of the creek has been replaced by straighter, man-made channels, mostly in the form of a floodway with a low-flow pipe beneath. Shortfin Eels still migrate from the Coral Sea to the Dandenong Ranges and back via the creek. They and the and Broadfin Galaxias are perhaps the only indigenous aquatic vertebrates that can regularly navigate such heavily modified streams.

The nature and condition of the habitat is very variable along the corridor.



The right edge of each of the first three maps overlaps the left edge of the subsequent map.
For the most southwestern extremity, see the map for Winton Wetlands (Site 51).

Legend

Site 26
Other Knox sites
Maroondah sites
Roads
Above-ground creek

1:12,500
0 100 200 300 400 500 m

<u>Upstream (east) of Dorset Rd</u>

This stretch has few mature, remnant eucalypts except in a patch of approximately 1 ha next to Dorset Rd, where extensive understorey revegetation has compensated for the sparsity of naturally-occurring understorey. There is an old drainage ditch that runs along the northern edge of that patch and for another 120 m east. The ditch holds enough water to provide habitat for wetland and riparian plants such as Hemp Bush (*Gynatrix pulchella*), Forest Bindweed (*Calystegia marginata*), Shrubby Fireweed (*Senecio minimus*) and Slender Knotweed (*Persicaria decipiens*). Upstream from there, there is a narrow, interrupted riparian gallery of natural regrowth dominated

by Blackwood (*Acacia melanoxylon*) and Swamp Paperbark (*Melaleuca ericifolia*), as well as the species just mentioned. The habitat provided by the naturally-occurring plants is supplemented by extensive revegetation that will soon leave hardly any substantial gaps in the corridor's tree canopy.

Dorset Rd to Bayswater Rd

The naturally-occurring native vegetation in the eastern third of this stretch was narrow and quite fragmented until extensive, dense revegetation filled in gaps, broadened the width of native vegetation and added extra species. The naturally-occurring native vegetation includes two substantially degraded patches of Swampy Riparian Woodland, some patches of Common Reed (*Phragmites australis*) and some scattered remnant eucalypts. The western two-thirds of this stretch has hardly any remnant native vegetation at all, and so has been revegetated to fill what had been a wide gap in the habitat corridor.

Bayswater Rd to Manson Reserve

A new, 220 m-long section of Site 26 has been added in this edition, from the Bayswater Rd bridge to a large water tank northwest of Bayswater Oval. It contains no remnant vegetation but a mixture of mature, planted non-indigenous trees (e.g. River Red Gum and Prickly-leaved Paperbark) and younger indigenous plantings. These plantings help bridge what would otherwise be a 300 m-long gap in the Dandenong Creek habitat corridor.

Downstream (west) from the abovementioned water tank is a substantial patch of remnant vegetation and revegetation in Bayswater Park. That patch forms Site 46 in this report (p. 314), separated from Site 26 because much of its native vegetation is in better ecological condition, forming more of a broad node along the corridor rather than a link in the corridor.

There is very little remnant native vegetation on the Knox side of the creek between Bayswater Park and Marlborough Rd, other than thinly-scattered mature eucalypts. Fortunately, the continuity of the habitat corridor is maintained by native vegetation on the north side of the creek and revegetation on the south side. The revegetation comprises mature plantings of Australian native trees supplemented by younger indigenous plants.

For a distance of approximately 0.6 km downstream of the railway bridge, the creek was 'daylighted' in 2018 – essentially a process of digging out the low-flow pipe and letting the creek flow in the naturalised trench that is left. The new banks of the creek have been revegetated but the excavation destroyed some significant vegetation on the both banks, including Yarra Gums – a species that is Critically Endangered, globally. A large Yarra Gum remains on the Knox side, beside the shared path next to Bayswater Secondary College. As the 'daylighted' creek is substantially lower than the floodway it replaces, the water table must have dropped. Prior warnings that this could cause the death of trees on the banks appear to have already materialised, with the expectation of increasing mortality when drought returns.

There are two small, vestigial patches of regrowth of the regionally-endangered Swampy Riparian Woodland within 300 m westward from Marlborough Rd, on the Knox side of the creek. That is followed by a much larger, more diverse patch of the same vegetation type on the opposite side of the creek from Dexters Bush. Around half this area burned in March 2024, which has stimulated regeneration of the native vegetation. Among the regenerating plants are over 100 Kopata (*Pelargonium inodorum*) – a locally-threatened, post-fire colonising species whose seed have probably laid dormant in the soil for over fifty years. However, blackberries and other environmental weeds are also benefiting from the burn and the area receives scant weed control. The burn has also diminished a population of the locally-threatened Grey Mistletoe (*Amyema quandang*) but the site remains a stronghold of the species in Knox with an estimated 45 individuals in July 2024.

Since the previous (2010) edition of this report, parts of the floodplain just east of Manson Reserve have been leased for the Mountain Highway Golf Range, horse agistment and a large building. As a result, these areas have lost most of their floodplain habitat for waterbirds, frogs, raptors and indigenous wetland plants. They have been excised from the site delineated in this edition. Nevertheless, this part of the corridor retains a strip of Riparian Forest 40–50 m wide next to the Dandenong Creek Trail, more mature and in better ecological condition than in 2010.

Manson Reserve to Wantirna Rd

Like Bayswater Park, Manson Reserve has native habitat that is broader than most of the corridor and in better ecological condition, so it is represented in this report as a separate site – Site 47 (p. 321).

There is rather limited remnant native vegetation on the Knox side of the creek between Manson Reserve and Wantirna Rd but there are substantial areas of Riparian Forest, Swampy Riparian Woodland and Swampy Woodland across the creek. There has been extensive revegetation on the Knox side to supplement the remnant vegetation and improve the continuity of habitat.

Wantirna Rd to EastLink

Yarrabing Wetlands Reserve (almost abutting EastLink) is segregated from Site 26 for the same reason as Bayswater Park and Manson Reserve.

Leaving Yarrabing Wetlands Reserve aside, the naturally-occurring indigenous vegetation along the creek corridor from Wantirna Rd to EastLink comprises: (a) some impressive, large Manna Gums (*Eucalyptus viminalis*); (b) some other scattered remnant trees (e.g. Blackwood, *Acacia melanoxylon* and Cherry Ballart, *Exocarpos cupressiformis*); and (c) a range of wetland plants in swales next to the creek and in vestiges of the natural, meandering course of Dandenong Creek near Juniper Rd. There has been extensive planting of indigenous and non-indigenous species in and around the relatively-new, artificial Mint Street Wetlands, complementing scattered remnant plants there and allowing natural colonisation by some indigenous wetland plant species. The primary purpose of the Mint Street Wetlands is to reduce stormwater pollution from the adjacent residential area.

This stretch of the corridor also has some mature, planted Australian Native trees and younger indigenous plantings.

The planting that has occurred in this stretch since the previous (2010) edition of this report – including the Mint Street Wetlands – has substantially reduced what had been a significant gap in the continuity of the habitat corridor.

The wetlands of this stretch and (to a lesser extent) the creek provide habitat for waterbirds and aquatic fauna such as frogs and invertebrates. The birds that use this stretch of the corridor appear to be largely very common parrots, nectar-eaters and ducks. Noisy Miners are abundant because they benefit from the park-like landscape of the golf course on the other side of the creek.

EastLink to Boronia Rd

This stretch of the site has very little native vegetation but it is flanked by the fenced habitat of Winton Wetlands (Site 51, p. 349) to the east and Campbell's Croft Reserve to the west. It is included within Site 26 mainly because of its strategic importance for ecology (e.g. for fish migration) and the role that its revegetation plots play in improving the continuity of the habitat corridor.

The channel of Dandenong Creek in this stretch is undergoing fairly rapid change due to colonisation by the non-indigenous aquatic plant species, River Club-rush (*Schoenoplectus tabernaemontani*). That species was planted in stormwater treatment wetlands beside EastLink (as promoted by Melbourne Water) and it has now spread prolifically downstream of EastLink. Its robust rhizome system is trapping sediment and creating obstructions and terraces low in the creek channel. This is probably more a problem for flood management than ecological impact.

Relationship to other land

One of the site's main ecological attributes is the role that it is believed to play in facilitating movement of fauna along the corridor, and the consequent transport of pollen and plant propagules. Such movements are corroborated by the regular observations along the corridor of nomadic or highly mobile waterbirds (e.g. egrets, ducks and pelicans) and forest birds such as rosellas and Australian King-parrots.

The aerial photograph on p. 195 has been marked with orange or blue outlines and hatching to show separately described sites along the corridor. These sites serve as ecological stepping-stones or nodes. The corridor helps to facilitate movement of some birds, insects and frogs between these stepping-stones.

Some types of birds (particularly parrots) have been observed by the author to spend their nights along the corridor and disperse away from the corridor during the daytime.

Treed residential neighbourhoods each side of the corridor are likely to improve the corridor's ecological function. This is particularly true of Heathmont.

Bioregion: Gippsland Plain

Habitat types

Stream Channel (No EVC number or conservation status available). 14 naturally occurring indigenous plant species recorded.

Wetland (EVC 74, **regionally Endangered**).

Riparian Forest (EVC 18, **regionally Vulnerable**).

Swampy Riparian Woodland (EVC 83, **regionally Endangered**). 53 naturally occurring indigenous plant species recorded.

Swampy Woodland (EVC 937, **regionally Endangered**). 18 naturally occurring indigenous plant species recorded.

Plant species

The following lists contains the wild, indigenous plant species recorded within Site 26. Those species not seen in July 2024 are indicated by superscripts showing the year of the most recent record. 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. In addition, *Eucalyptus yarraensis* is critically endangered, globally. The many planted species within the site are not listed here.

Wild indigenous mosses & liverworts
Breutelia affinis, Common Breutelia
Campylopus introflexus, Heath Star Moss
Chiloscyphus semiteres, Green Worms
Eurhynchium praelongum, Common Feather-moss
Lunularia cruciata, Moonwort

Risk	Wild indigenous vascular species
	Acacia dealbata, Silver Wattle
V	*Acacia mearnsii*, Black Wattle
V	*Acacia melanoxylon*, Blackwood
	Acacia paradoxa, Hedge Wattle [1997]
	Acaena novae-zelandiae, Bidgee-widgee
N	*Alisma plantago-aquatica*, Water Plantain [2014]
N	*Alisma plantago-aquatica*, Water Plantain
V	*Allocasuarina littoralis*, Black Sheoak [1997]
V	*Alternanthera denticulata*, Lesser Joyweed [2002]
C	*Amyema pendula*, Drooping Mistletoe [1997]
E	*Amyema quandang*, Grey Mistletoe
	Austrostipa pubinodis, Tall Spear-grass [1997]
	Austrostipa rudis subsp. *rudis*, Veined Spear-grass [2014]
	Bursaria spinosa, Sweet Bursaria
E	*Calystegia marginata*, Forest Bindweed
	Carex appressa, Tall Sedge
E	*Carex fascicularis*, Tassel Sedge [1997]
E	*Carex gaudichaudiana*, Fen Sedge [1997]
	Carex inversa, Knob Sedge [2014]
	Cassinia aculeata, Common Cassinia [1997]
E	*Centella cordifolia*, Centella [1997]
	Clematis decipiens, a small-leaved clematis
V	*Coprosma quadrifida*, Prickly Currant-bush
V	*Crassula helmsii*, Swamp Crassula [2002]
C	*Cyathea australis*, Rough Tree-fern [1997]
	Cycnogeton procerum, Water-ribbons [2014]

Risk	Wild indigenous vascular species
	Dianella longifolia var. *longifolia*, Pale Flax-lily
V	*Eleocharis acuta*, Common Spike-rush [2014]
	Eleocharis sphacelata, Tall Spike-rush [2002]
	Epilobium cf. *billardiereanum* subsp. *intermedium*, a willow-herb
	Epilobium hirtigerum, Hairy Willow-herb
	Eragrostis brownii, Common Love-grass [2014]
E	*Eucalyptus cephalocarpa*, Mealy Stringybark
E	*Eucalyptus obliqua*, Messmate Stringybark
V	*Eucalyptus ovata*, Swamp Gum
E	*Eucalyptus radiata*, Narrow-leaved Peppermint
C	*Eucalyptus viminalis* subsp. *viminalis*, Manna Gum
C	*Eucalyptus yarraensis*, Yarra Gum
E	*Euchiton involucratus*, Common Cudweed
	Euchiton japonicus, Creeping Cudweed [2014]
V	*Exocarpos cupressiformis*, Cherry Ballart
E	*Exocarpos strictus*, Pale-fruit Ballart [1997]
C	*Gahnia radula*, Thatch Saw-sedge
E	*Gahnia sieberiana*, Red-fruit Saw-sedge [1997]
V	*Geranium* sp. 2, Variable Crane's-bill
V	*Glyceria australis*, Australian Sweet-grass [2002]
	Goodenia ovata, Hop Goodenia [2022]
E	*Gynatrix pulchella*, Hemp Bush
E	*Hypericum gramineum*, Small St John's Wort [2014]
	Isolepis inundata, Swamp Club-rush
V	*Isolepis platycarpa*, a club-rush [1997]
	Juncus amabilis, Hollow Rush
C	*Juncus australis*, Austral Rush [2014]
	Juncus bufonius, Toad Rush [1997]
C	*Juncus fockei/holoschoenus*, a joint-leaf Rush

Risk	Wild indigenous vascular species
	Juncus gregiflorus, Green Rush
	Juncus pallidus, Pale Rush
E	*Juncus pauciflorus*, Loose-flower Rush [2020]
E	*Juncus planifolius*, Broad-leaf Rush [2002]
E	*Juncus procerus*, Tall Rush [2014]
	Juncus sarophorus, Broom Rush
E	*Juncus subsecundus*, Finger Rush [1997]
	Kunzea leptospermoides, Yarra Burgan
	Lachnagrostis filiformis, Common Blown-grass [2014]
	Laphangium luteoalbum, Jersey cudweed [2014]
	Lemna disperma, Common Duckweed [2014]
	Lepidosperma elatius, Tall Sword-sedge
C	*Leptospermum lanigerum*, Woolly Tea-tree [1997]
E	*Lobelia anceps*, Angled Lobelia [1997]
	Lomandra longifolia subsp. *longifolia*, Spiny-headed Mat-rush
	Lythrum hyssopifolia, Lesser Loosestrife [2020]
E	*Melaleuca ericifolia*, Swamp Paperbark
	Microlaena stipoides, Weeping Grass
C	*Myriophyllum* ?*simulans*, Amphibious Water-milfoil [1997]
	Oxalis exilis/perennans, Wood-sorrel
V	*Ozothamnus ferrugineus*, Tree Everlasting
	Pandorea pandorana, Wonga Vine
C	*Pelargonium inodorum*, Kopata
	Persicaria decipiens, Slender Knotweed
E	*Persicaria hydropiper*, Water-pepper [2020]
E	*Persicaria lapathifolia*, Pale Knotweed [2021]
V	*Persicaria praetermissa*, Spotted Knotweed [1997]
E	*Persicaria subsessilis*, Hairy Knotweed [1997]

Risk	Wild indigenous vascular species
E	*Phragmites australis*, Common Reed
	Poa ensiformis, Sword Tussock-grass (perhaps now all planted)
E	*Poa labillardierei*, Common Tussock-grass[1997]
V	*Pomaderris aspera*, Hazel Pomaderris [1997]
C	*Pomaderris racemosa*, Cluster Pomaderris [1997]
E	*Potamogeton crispus*, Curly Pondweed [2020]
E	*Potamogeton ochreatus*, Blunt Pondweed [1997]
	Pteridium esculentum, Austral Bracken
	Pteris tremula, Tender Brake
E	*Rubus parvifolius*, Small-leaf Bramble
C	*Rytidosperma duttonianum*, Brown-back Wallaby-grass [1997]
	Rytidosperma fulvum, Leafy Wallaby-grass [2002]
	Rytidosperma laeve, Smooth Wallaby-grass [2014]
	Rytidosperma penicillatum, Slender Wallaby-grass [1997]
E	*Rytidosperma* ?*semiannulare*, Tasmanian Wallaby-grass [2002]
	Rytidosperma setaceum, Bristly Wallaby-grass [2014]
	Schoenus apogon, Common Bog-rush [1997]
E	*Senecio campylocarpus*, Bulging Fireweed [2014]
V	*Senecio glomeratus*, Annual Fireweed [1997]
	Senecio minimus, Shrubby Fireweed
	Senecio quadridentatus, Cotton Fireweed [2014]
V	*Solanum laciniatum*, Large Kangaroo Apple
	Themeda triandra, Kangaroo Grass [1997]
V	*Triglochin striata*, Streaked Arrow-grass [2002]
	Typha domingensis, Cumbungi
	Typha orientalis, Cumbungi

Notes concerning some of the threatened plant species

Some of the species that appear in the list above as not having been recorded in recent years may still be present as wild plants but indistinguishable from planted plants of the same species.

Listed as Critically Endangered under Victorian law

Eucalyptus yarraensis (Yarra Gum) – A large individual grows beside the shared path next to Bayswater Secondary College. Another (of less certain identity) grew at Derwent Drive Reserve, Bayswater until it was removed in 2018 for 'daylighting' Dandenong Creek. Several on the opposite bank were also cleared for the 'daylighting' project and others appear to be dying due to either the project's excavations or the consequent dropping of the water table.

Listed as Endangered under Victorian law

Senecio campylocarpus (Bulging Fireweed) – Three plants were seen in 2014 on recently-excavated ground beside the stormwater treatment wetland immediately west of EastLink's bridge over Dandenong Creek. When inspected in 2024, the author found this area to have been sprayed with herbicide, broadscale, killing all the large numbers of indigenous plants that had been growing there. However, *Senecio campylocarpus* is a very opportunistic species and it is likely to appear almost anywhere in this site when boggy ground is laid bare, as it did a short distance from the site beside Colchester Rd in 2024.

Locally threatened

Amyema quandang (Grey Mistletoe) – an estimated 45 grow on *Acacia melanoxylon* trees on the opposite side of the creek from Dexters Bush.

Carex gaudichaudiana (Fen Sedge) – last recorded in 1997, when only one patch could be confidently identified. That patch has since been replaced by planted *Carex appressa*.

Pelargonium inodorum (Kopata) – Over 100 germinated in the months following the March 2024 fire opposite Dexters Bush.

Rytidosperma duttonianum (Brown-back Wallaby-grass) – One patch, several metres across, was found in 1997 to the rear of 885 Mountain Hwy, Bayswater – one of only two known populations in Melbourne's outer eastern suburbs. A few plants that may be this species remain there but the identity could not be determined in this study's July 2024 survey because of the time of year.

Fauna of special significance

Golden-headed Cisticola – This locally-rare species lives among the blackberries in the open expanses of floodplain.

Otherwise, no records of significant fauna were found other than one-off observations of Superb Parrot and Gang-gang Cockatoo, presumably of birds passing through or flying over. However, much of the significant fauna reported at other sites along the corridor is believed to get there by moving along the corridor.

Fauna habitat features

- The waters of Dandenong Creek contain Shortfin Eel, Broadfin Galaxias and aquatic invertebrates;
- There are some large eucalypts – particularly Manna Gums (*Eucalyptus viminalis*) – with tree hollows that would make suitable locations for nesting or roosting of certain birds, bats, possums and invertebrates;
- Patches of scrub and revegetation plots provide habitat for small insect-eating birds such as wrens;
- The floodplains are habitat of frogs, crustacea, reptiles, certain waterbirds, cisticolas and raptors – even where there is little if any native vegetation;
- The site's wetlands provide habitat for pondlife.

Significance ratings

The following is an assessment of Site 26's 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 all the segments of this site.

Criterion 1.2.6 attributes **Regional** significance to any corridor that meets the description 'Important at regional scale (link within bioregion or catchment)'. The Dandenong Creek corridor site described here is likely to play a role in facilitating movements of waterbirds between the more significant sites along it, between the Lower Dobson Creek floodplain (Site 20) and the Dandenong Valley Parklands (Site 58). The creek also allows native fish to migrate along it; Shortfin Eel and Broadfin Galaxias must migrate between freshwater and the sea during their lifecycle.

Regionally Threatened Ecological Vegetation Classes

Some of the native vegetation in the site meets the definition of a 'remnant patch' adopted by the standard criteria, i.e. 'a continuous area of native vegetation that is at least 0.25 hectares in extent and indigenous native understorey cover is 10% or greater'. These patches are: (a) a strip extending west from Dorset Rd for a length of 540 m; (b) immediately south of Dexters Bush; (c) immediately east of Manson Reserve, south of the Dandenong Creek Trail; and (d) in the vicinity of the dead-ends of Juniper Rd and Mint St, Wantirna. For (a) and (b), the EVC is regionally endangered and so the patches are of **State** significance under criterion 3.2.3. For (c) and (d), the EVC is regionally vulnerable (Riparian Forest), which means the patches are of State significance under criterion 3.2.3 if the habitat score is at least 0.3 or Regional significance otherwise. In the absence of a formal assessment of habitat scores, the author surmises that State significance appears more likely in each case.

Threatened Plants

The riparian native vegetation extending almost 300 m westward from the railway bridge in Bayswater contains a stand of Yarra Gum (*Eucalyptus yarraensis*), on both sides of the recently-'daylighted' creek. That species is endemic to Victoria and is listed as Critically Endangered under Victorian law. It follows from criterion 3.1.2 that the habitat for *Eucalyptus yarraensis* is of **National** significance. Note that it is the habitat that is significant, not just the area occupied by each tree individually.

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

Threats

- Displacement of indigenous flora and fauna by environmental weeds such as blackberry, Angled Onion, Cocksfoot and Wandering Trad, exacerbated by debilitation of the native vegetation by the impacts of climate change;
- 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);
- Tree deaths from the fallen water table associated with 'daylighting' of Dandenong Creek;
- Loss or decline of plant species that have such small populations that they are vulnerable to inbreeding, poor reproductive success or chance events;
- Foxes, which kill wildlife and spread woody weeds and blackberries. Many were seen along the creek.

Management

It would be useful to monitor the health of trees along the daylighted section of Dandenong Creek to see whether it declines from the fallen water-table. This could help improve planning for similar projects in future. Any decline in health is expected to become clear during a drought. One or more control sites would be necessary to determine whether trees lining the daylighted section suffer worse than trees in otherwise comparable conditions. It would also be desirable to monitor groundwater depth at each location.

Strategic planning

- This site is covered by Schedule 2 of the Environmental Significance Overlay (ESO2) as a result of the previous (2010) edition of this report, which cited the same biologically-significant attributes discussed above. Since then: (a) the site has been expanded to include the part of Dandenong Creek that has been daylighted; (b) a substantial amount of revegetation has been added; (c) the surviving vegetation is more mature; and (d) some land has been excised from the site, as discussed on p. 194. It is recommended to amend the ESO2 boundary to match the one adopted here, perhaps coordinated with Maroondah City Council so that overlays abut neatly along the creek. The ordinance for ESO2 does not seem to require any site-specific change;
- Schedule 1 of the Vegetation Protection Overlay (VPO1) covers some of this site as a legacy of 1998 study. VPO1 is unnecessary where ESO2 applies;
- The section of the site upstream (east) of Colchester Rd is covered by Schedule 3 of the Significant Landscape Overlay (SLO3) and Schedule 2 of the Design and Development Overlay (DDO2).
- None of the site qualifies for the size-based exemption from the state-wide baseline planning controls over removal of native vegetation (clause 52.17);
- The Healesville Freeway reservation is zoned 'Transport Zone 2 – Principal Road Network' (TRZ2). The rest of the site is variously zoned 'Urban Floodway Zone' (UFZ), 'Public Conservation and Resource' (PCRZ), 'Public Park and Recreation' (PPRZ), 'Rural Living Zone' (RLZ) and 'Neighbourhood Residential Zone – Schedule 5' (NRZ5).

Information sources used in this assessment

- The 1997 report, *'Vegetation Survey of Linear Reserves. A Management Strategy for Riparian and Flood Plain Vegetation',* by Reid, Moss and Lorimer for Knox City Council, along with the supporting field data. This included descriptions of vegetation composition, compilation of lists of indigenous and introduced plant species for each of fifteen parts of the site, incidental fauna observations, and checks for fauna habitat, ecological threats and management issues;
- The 2002 report, *'Biologist's Assessment of the Proposed Wantirna Golf Park'* by G.S. Lorimer for Knox City Council, along with the underlying research and field data. The study area was generally between

Havelock Rd and Dandenong Ck. The fieldwork took 1¼ hours on 15th August 2002, and included gathering the same kinds of data as for the abovementioned 1997 report;

- A report about what subsequently became EastLink, titled *'Assessment of Native Vegetation on the Mitcham to Frankston Freeway Alignment in Knox'*, by Dr Lorimer in July 2003 for Knox City Council;
- A botanical survey of the EastLink stormwater treatment system (immediately west of the Dandenong Creek bridge) by Dr Lorimer on 4th February 2014 as part of a larger project to monitor vegetation – see *'Monitoring of Bushland Reserves in Knox – 2014 Review'* by G.S. Lorimer for Knox City Council;
- The *'Knox Revegetation Plan'* of 2012 by G.S. Lorimer. It recommended revegetation between Dorset Rd and Bayswater Rd;
- *'Biodiversity in Maroondah'* (Lorimer 2020), a similar report to this one but for Maroondah City Council. The study associated with that report included ecological surveys along Dandenong Creek, including the aquatic environment that is shared between Maroondah and Knox;
- A botanical survey from Colchester Rd, Boronia to Boronia Rd, Wantirna in July–August 2024 for this edition;
- Incidental observations of flora and fauna by Dr Lorimer on many occasions since 1997;
- The Melbourne Water stream setback guidelines in the organisation's 2013 document, *'Waterway Corridors – Guidelines for Greenfield Development Areas within the Port Phillip and Westernport Region'*;
- Records of flora and fauna observations stored in the Atlas of Living Australia, noting that: (a) most of the plant records are of planted plants but not flagged as such; and (b) some of the records have been inaccurately mapped within this site instead of their stated locations in (for example) Heathmont or Manson Reserve;
- The Victorian Government's 'NatureKit' website;
- Aerial and satellite imagery from between 1946 and 2024;
- Maps of geology, topography and strategic planning information produced by agencies of the Victorian Government.