

Site 33. Middle and Upper Blind Creek Corridor

Disjoint patches or strips of habitat along one of Knox's three main streams.

Summary of significant features:

- **Nationally significant:** large populations of the Dandenong Range Cinnamon Wattle and the flat-pea *Platylobium infecundum*, which are globally endangered and critically endangered, respectively;
- **State significance:** a viable population of the spear-grass, *Austrostipa rudis* subsp. *australis*, which is endangered in Victoria;
- **State significance:** patches of regionally threatened Ecological Vegetation Classes at intervals along the whole site, in mediocre ecological condition due to past clearing and excavation;
- **Regionally significant:** consistent usage of a dam by Blue-billed Ducks, which are listed as vulnerable in Victoria. (However, the dam is planned to be demolished);
- **Locally significant:** viable populations of plant species threatened with dying out in Knox;
- **Locally significant:** a corridor for daily and seasonal movements of birds, fish and insects (particularly waterbirds and parrots), as well as for pollen and plant propagules that the fauna may transport;
- **Locally significant:** some sections of the creek flow above-ground and have riparian (streamside) vegetation.

Boundaries

Because of the extent of Site 33, the details of its boundary are better seen in the digital Knox Biodiversity Atlas that accompanies this report.

The 44.5 ha site comprises the fourteen separate strips and patches shown on the aerial photographs on the next page, between the Dandenong Ranges National Park and Burwood Hwy. (The easternmost lot in the site is now part of the national park.) The site boundary has been substantially changed compared with the previous (2010) edition of this report due to habitat destruction and creation, as discussed below. Some segments of the original version of Site 33 have been widened here to include undeveloped land that is closer to the creek than Melbourne Water's 20 m stream setback guideline. There have also been numerous boundary adjustments in line with changes that have been made to property boundaries in the digital state cadastre.

Land use & tenure: Public land, parts of three light-industrial properties and part of the former Knoxfield Institute for Horticultural Development, for which redevelopment was approved in 2024.

Site description

Most of Blind Creek's natural, meandering course has been replaced by straighter, man-made channels, mostly in the form of a floodway with a low-flow pipe beneath.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 Broadfin Galaxias are perhaps the only indigenous aquatic vertebrates that can regularly navigate such heavily modified waterways.

Site 33 is made up of sections that extend from Ferntree Gully where Blind Creek leaves the Dandenong Ranges National Park (in Yarra Ranges Shire) to where it goes into a pipe beneath Burwood Hwy in Wantirna South. The site contains sections of the corridor where: (a) the creek flows above-ground year-round; (b) the natural creek channel remains but holds only pools of water most of the time because a pipe carries base flows; or (c) there is artificial wetland habitat on its floodplain. The exception is that Site 34 (Blind Creek Billabong & former quarry) is treated separately because of its more natural and significant habitat.

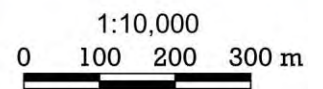
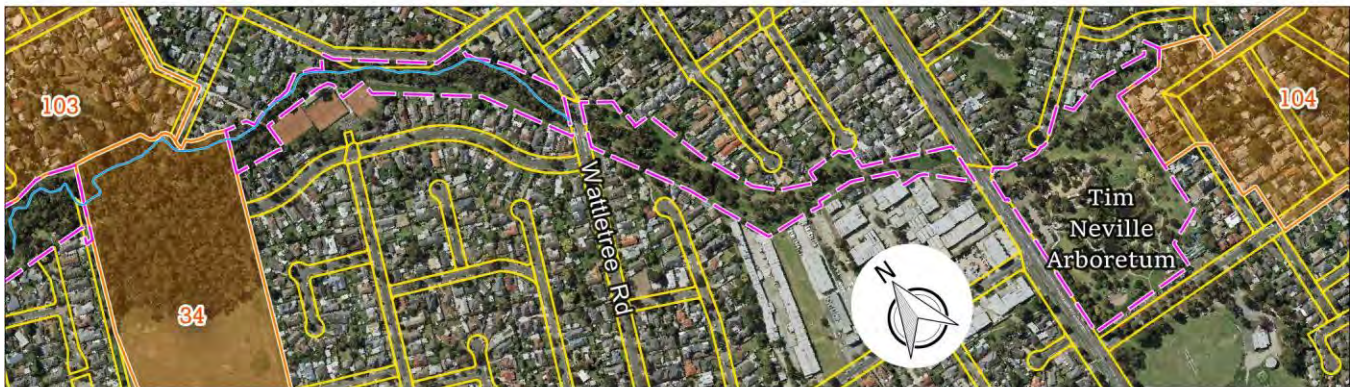
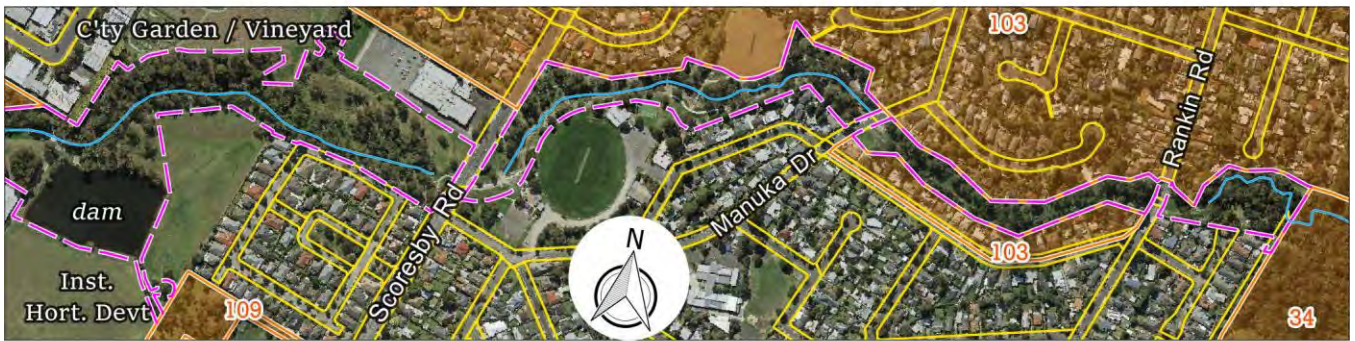
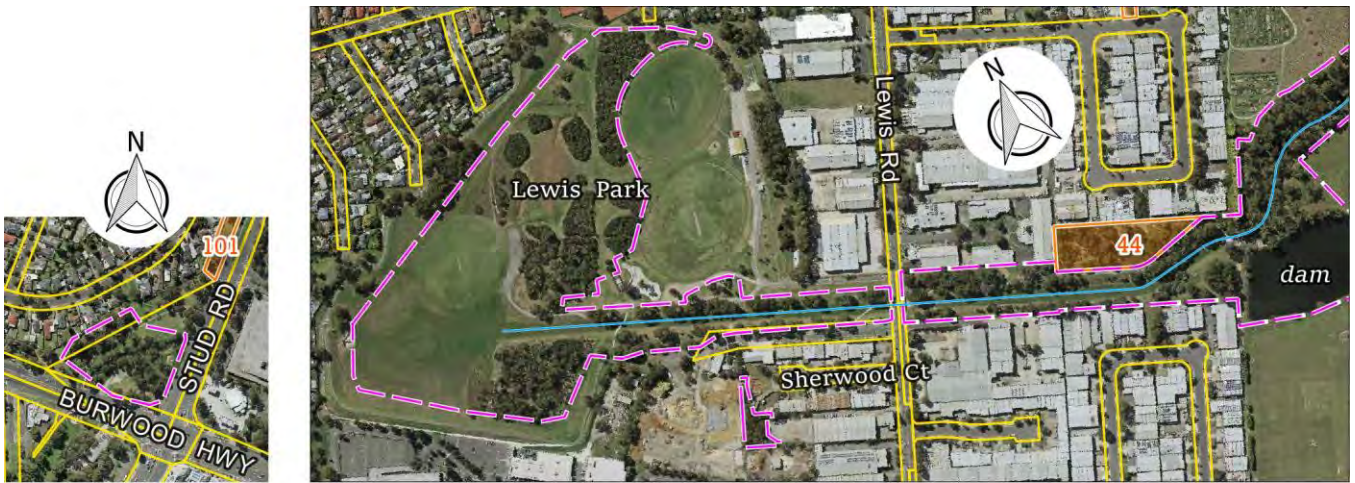
Sites 58, 59 and 60 are located on Blind Creek further downstream from this site.

The previous (2010) edition of this report mentioned the scant native understorey in most of the site. That has been substantially redressed by revegetation in the years since.

The nature and condition of the habitat varies greatly between and within the segments that make up Site 33.

Aerial Photograph and Plan of Site 33

The separate panels below form a sequence from west to east (i.e. upstream). The 2nd, 3rd & 4th panels overlap.



Legend	
	Site 33
	Other sites
	Roads
	Above-ground creek

Upstream (east) of the Belgrave Railway Line

The stream gradient of Blind Creek is quite steep where it enters Knox and tapers to a shallow gradient by the time it reaches the Belgrave Railway Line. In that 1.4-kilometre distance, the creek flows through six separate piped sections up to 160 m long under road reserves or homes.

The riparian (streamside) vegetation in the un-piped reaches is far from natural. The tree cover is either sparse or heavily dominated by introduced trees that are often environmental weeds. The understorey mostly comprises dense environmental weeds (e.g. blackberry, Wandering Trad) or mown grass punctuated by young revegetation plots.

Nevertheless, the deep, steep-sided channel between Olivebank Rd and Perra St contains a rich flora of ferns, mosses and liverworts, including species that are quite rare in Knox, e.g. the mosses *Austrothamnium pumilum*, *Fissidens leptocladus* and *Hypnodendron vitiense*. There are ‘yabby’ holes too small to be from the common yabby; more likely one of the cray species that are listed as threatened under the *Flora and Fauna Guarantee Act*. At one point, the vertical creek bank provides an excellent view of several metres’ depth of exposed stones and soil – the colluvium that makes up the lower western slopes of the Dandenong Ranges. That exposure would qualify as a site of geological significance. This segment of the creek has been targeted by Melbourne Water for weed control and revegetation over recent years but introduced plants remain dominant.

The biological significance of the rest of the corridor upstream of the railway line principally relates to movement of birds and flying insects. However, the segment between Perra St and Little Opie St may contain uncommon ferns, mosses or liverworts like those on the other side of Perra St.

There is hardly any habitat between Chatham Avenue Reserve and the Tim Neville Arboretum other than for fish swimming along a pipe. That distance of 750 m is omitted from Site 33.

Tim Neville Arboretum

Immediately east of Dorset Rd, Ferntree Gully, Site 33 includes most of the Tim Neville Arboretum and some abutting stream reserve. The arboretum is included in the site because of its artificial wetland habitat for indigenous flora and fauna. The stream reserve is included because it contains some remnant eucalypts (notably including large Yellow Box) and vestigial indigenous understorey; however, the two creeks that once converged in the site have been replaced by low-flow pipes beneath engineered floodways with mown grass.

Dorset Rd to Wattletree Road

The grassed floodway continues as far as Wattletree Rd. The modest amount of regrowth that occurred following the engineering work has been supplemented by planting of trees and (more recently) indigenous understorey.

Wattletree Road to near Rankin Rd, excluding Site 34 (Blind Creek Billabong)

Base flows of Blind Creek continue to flow through a pipe in this section, but the pre-colonial creek channel is still present up to 60 m east of Rankin Rd. The channel carries water that exceeds the capacity of the pipe, retaining pools of wetland habitat when flow ceases. Because the pre-colonial creek channel has not been destroyed, its bed and banks retain remnant plants such as eucalypts, wattles, paperbarks, bracken, reeds, rushes and knotweeds. Those plants, together with supplementary planting of indigenous species, provide habitat suitable for a range of forest birds, frogs and invertebrates.

As discussed above, this section of Site 33 is interrupted by the excision of Site 34 (p. 256), whose habitat is much broader and more biologically significant.

Rankin Rd to Manuka Drive

From 60 m upstream of Rankin Rd to just downstream of Manuka Drive, the creek corridor (including its vegetation) is similar to between Dorset Rd and Wattletree Rd.

Manuka Drive to Scoresby Rd

For most of the length of this segment of Site 33, Blind Creek was ‘daylighted’ in c. 2020, i.e. the previous low-flow pipe was dug out and a naturalistic channel was constructed to carry the water. The banks were densely revegetated. Common waterbirds such as Pacific Black Ducks made use of the water almost immediately, resulting in the creek bed being colonised by plant propagules borne on the waterbirds. By 2024, the author made the first discovery in Knox of any species of stonewort (*Nitella* – a type of green alga), growing on rocks in the

middle of the creek. Living on the stonewort were water snails and numerous microscopic aquatic organisms – a stark contrast to the sterility of the floodway that preceded the daylighting and persists along most of Blind Creek. Among those microorganisms are diatoms, which appear not to have been previously recorded in Knox.

In addition to the extensive revegetation in this section of the creek and the mature, planted Australian Native trees, there is an area with remnant eucalypts and native understorey just east of Fairpark Reserve's northeast (secondary) oval – a remnant of Riparian Forest.

Scoresby Rd to the former Knoxfield Institute of Horticultural Development

Blind Creek flows through a straightened channel from Scoresby Rd halfway to Lewis Rd, frequented by waterbirds and inhabited by a thin scattering of indigenous underwater and amphibious plants. The banks have a patchy distribution of remnant eucalypts and understorey (mostly woody species), representing Swampy Riparian Woodland close to the creek and Swampy Woodland further away. Degraded Valley Heathy Forest grows on a steep slope between the creek and the Knox Community Garden and Vineyard. All three of those vegetation types are regionally endangered.

On the opposite (southern) bank is the former Knoxfield Institute of Horticultural Development. At the time of writing, this property has a patch of Swampy Woodland and a large, well-vegetated farm dam fed (in part) by a drain with some indigenous riparian vegetation. The drain supports a colony of the liverwort, *Chiloscyphus argutus*, which is quite rare in and near Knox. On the dam's northern bank is the only plant of Giant Rush (*Juncus ingens*) within tens of kilometres. Large numbers of waterbirds frequent the dam, including the nationally-vulnerable Blue-billed Duck, which breeds there. The waterbirds are attracted by the aquatic vegetation and associated pondlife. However, in 2024, the property was approved for a residential subdivision, the removal of the farm dam and the construction of a stormwater treatment wetland. Once construction is under way, the boundary of Site 33 through the property will become obsolete.

In 2024, a system of stormwater treatment wetlands was constructed and vegetated on the floodplain just west of Scoresby Rd. Some native vegetation was removed during construction. The habitat value and biological significance of this area will change rapidly as the vegetation and aquatic habitat develop.

Former Knoxfield Institute of Horticultural Development to Lewis Park

Following the success of the daylighting of Blind Creek upstream of Scoresby Rd, the same was done in 2023–2024 from the downstream (western) end of the former Knoxfield Institute of Horticultural Development to a new stormwater treatment wetland system in Lewis Park. The plants that have been planted and those that are volunteering themselves are rapidly changing, so whatever is said about those plants will be obsolete within a year or so. Australian native trees were planted along the banks many years ago and most of them remain. There are also scattered naturally-occurring indigenous plants, e.g. Blackwood trees (*Acacia melanoxylon*), grasses and Slender Speedwell (*Veronica gracilis*).

Flanking the right bank of Site 33 is a patch of semi-natural Valley Heathy Forest in Site 44 (p. 300) – a park that extends to Wadhurst Drive.

Near the left bank, on light-industrial land at 11-12 Sherwood Court and 108 Lewis Rd, Wantirna South, there is a surprising range of remnant indigenous plant species. The overstorey comprises Swamp Gum (*Eucalyptus ovata*), Mealy Stringybark (*E. cephalocarpa*) and Swamp Paperbark (*Melaleuca ericifolia*). Groundcovers include quite a few native grasses (e.g. Kangaroo Grass, *Themeda triandra*) and thinly-scattered forbs such as Small St John's Wort (*Hypericum gramineum*). This area is subject to redevelopment as part of the Knox Central Structure Plan. Only part of it was included in Site 33 in the previous (2010) edition of this report because the rest was out of sight, behind factories.

Lewis Park

At the time of writing, Lewis Park has just been redeveloped for a large stormwater treatment wetland system. Most of the park's native vegetation that was placed into Site 33 in 2010 has survived the redevelopment. The new wetlands have started to provide habitat for some wildlife. It is unclear how the water table will adjust and hence what medium-term impacts there will be on the retained native vegetation - particularly during drought.

In the part of Lewis Park to the south of the newly-daylighted creek channel, the naturally-occurring native vegetation has been extensively supplemented with revegetation over recent years. The indigenous plants north

of the channel are all wild but under great pressure from environmental weeds such as blackberry and Cocksfoot (*Dactylis glomerata*).

As mentioned above in connection with some other parts of Site 33, the habitat value and biological significance of Lewis Park will change rapidly as the vegetation, water table and aquatic habitat adjust to the new wetland development and 'daylighting'. The site boundary delineated here anticipates the wetlands becoming biologically significant, which should be reassessed in years to come.

Stud Road / Burwood Highway corner (Collier Reserve)

Blind Creek is piped underground for 660 m downstream of Lewis Park, emerging for a length of 140 m in Collier Reserve on the northern corner of Stud Rd and Burwood Hwy. There are small numbers of naturally-occurring indigenous plants along the above-ground section, supplemented by mature plantings of Australian native trees and much more recent plantings of indigenous species. This small area is included within the site because of its possible role as an ecological stepping-stone for flying fauna (birds, bats, insects) moving along the Blind Creek corridor, perhaps also acting as an ecological junction with the native vegetation extending northward along Stud Rd (Site 101).

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 and ducks) and forest birds such as Eastern Rosellas. Waterbirds can also be observed daily flying over Burwood Hwy between the dam at the former Institute for Horticultural Development and the dam at Lakewood Reserve. The same species come and go daily at each of those dams and other wetlands in Knox, suggesting they rely on the combination of sites rather than any one of them individually.

The eastern end of the site abuts the Dandenong Ranges National Park, which represents a large reservoir of forest birds and insects that can move westward along the corridor. West of the site, there is a substantial gap before the next patch of habitat along Blind Ck, in Site 59 (p. 402).

Sites 34 (the Blind Ck Billabong site), 44 (Wadhurst Drive Park) and 45 (Roselyn Crescent Reserve) represent ecological stepping-stones along the Blind Creek habitat corridor. Treed residential neighbourhoods along the corridor probably also improve the corridor's ecological function.

Bioregion: Highlands Southern Fall upstream of Forest Rd (approximately) and Gippsland Plain elsewhere.

Habitat types

Perennial stream (no EVC number or conservation status available).

Artificial wetland (no EVC number or conservation status available): 1.45 ha at the Knoxfield Institute for Horticultural Development, 3.5 ha of newly-constructed wetlands at Lewis Park and 0.2 ha of newly-constructed wetlands just west of Scoresby Rd.

Fern gully (no EVC recognised): approximately 0.15 ha between Olivebank Rd and Perra St, almost all in poor ecological condition (rating D). Characterised by abundant ferns, mosses and liverworts.

Riparian Forest (EVC 18, **regionally Vulnerable**) between Scoresby Rd and Site 34 (the Blind Ck Billabong): Estimated in 2002 to occupy 6,450 m², comprising 500 m² in fair ecological condition (rating C) and 5,950 m² in poor ecological condition (rating D).

Swamp Scrub (EVC 53, **regionally Endangered**): The dominant vegetation type at Lewis Park, probably as a disclimax from prior Swampy Woodland vegetation that was cleared many years ago. Total area 2.4 ha, estimated in 2002 to comprise 2.3 ha in fair ecological condition (rating C) and 0.15 ha in poor ecological condition (rating D).

Swampy Riparian Woodland (EVC 83, **regionally Endangered**) along most of the creek downstream from the railway line: Estimated in 2002 to occupy 30 ha, comprising 1.8 ha in fair ecological condition (rating C) and 1.2 ha in poor ecological condition (rating D).

Valley Heathy Forest (EVC 127, **regionally Endangered**) between the creek and the Knox Community Garden and Vineyard, as well as upstream from the railway line as far as Moore St: Estimated in 2002 to occupy

1.3 ha, comprising 100 m² in good ecological condition (rating B), 1 ha in fair ecological condition (rating C) and 0.3 ha in poor ecological condition (rating D).

Grassy Forest (EVC 128, **regionally Vulnerable**) upstream from Moore St (in the Highlands Southern Fall bioregion): Estimated in 2002 to occupy 1.6 ha, comprising 1.2 ha in fair ecological condition (rating C) and 0.4 ha in poor ecological condition (rating D).

Swampy Woodland (EVC 937, **regionally Endangered**) between Scoresby Rd and Burwood Hwy: Estimated to occupy 1.2 ha, comprising 0.5 ha in good ecological condition (rating B), 0.5 ha in fair ecological condition (rating C) and 0.2 ha in poor ecological condition (rating D).

Plant species

The following species have been recorded growing wild within native vegetation in Site 33 (i.e. not just planted or confined to lawns or garden beds). Species that were not recorded during this study in 2023–2025 are indicated by the year of the most recent record as a superscript. 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.

<u>Green alga</u>	<u>Risk</u>	<u>Other wild indigenous species</u>
<i>Nitella</i> sp., a stonewort (at Fairpark Reserve)	C	<i>Hypolepis glandulifera</i> , Downy Ground-fern ²⁰⁰⁹
<u>Wild indigenous mosses & liverworts</u>	E	<i>Polystichum proliferum</i> , Mother Shield-fern <i>Pteridium esculentum</i> , Austral Bracken <i>Pteris tremula</i> , Tender Brake
<u>Liverworts</u>		<u>Flowering species</u>
<i>Chiloscyphus semiteres</i> , Green Worms		<i>Acacia dealbata</i> , Silver Wattle
<i>Heteroscyphus argutus</i> , Crestwort	V	<i>Acacia mearnsii</i> , Black Wattle
<i>Lunularia cruciata</i> , Moonwort	V	<i>Acacia melanoxylon</i> , Blackwood
<u>Mosses</u>	V	<i>Acacia stictophylla</i> , Dandenong Range Cinnamon Wattle
<i>Austrothamnium pumilum</i> , a moss	E	<i>Acacia stricta</i> , Hop Wattle
<i>Calliergonella cuspidata</i> , a moss	V	<i>Acacia verticillata</i> , Prickly Moses
<i>Campylopus clavatus</i> , Broody Swan-neck Moss		<i>Acaena novae-zelandiae</i> , Bidgee-widgee
<i>Campylopus introflexus</i> , Heath Star Moss	V	<i>Acrotriche prostrata</i> , Trailing Ground-berry
<i>Didymodon torquatus</i> , Beard Moss	N	<i>Alisma plantago-aquatica</i> , Water Plantain ¹⁹⁹⁷
<i>Eurhynchium praelongum</i> , Common Feather-moss	V	<i>Allocasuarina littoralis</i> , Black Sheoak ¹⁹⁹⁷
<i>Fissidens bifrons</i> , a pocket-moss	V	<i>Alternanthera denticulata</i> , Lesser Joyweed
<i>Fissidens curvatus</i> , a pocket-moss	C	<i>Amyema pendula</i> , Drooping Mistletoe ¹⁹⁹⁷
<i>Fissidens ?leptocladus</i> , a pocket-moss	E	<i>Amyema quandang</i> , Grey Mistletoe ²⁰⁰⁹
<i>Hypnodendron vitiense</i> subsp. <i>australe</i> , Umbrella Moss		<i>Anthosachne scabra</i> , Common Wheat-grass ²⁰⁰⁹
<i>Hypnum cupressiforme</i> , Common Hypnum		<i>Arthropodium strictum</i> , Chocolate Lily
<i>Polytrichum juniperinum</i> , Common Juniper-moss		<i>Austrostipa pubinodis</i> , Tall Spear-grass
<i>Racopilum cuspidigerum</i> var. <i>convolutaceum</i> , a moss	V	<i>Austrostipa rudis</i> subsp. <i>australis</i> , Veined Spear-grass
<i>Rhynchostegium tenuifolium</i> , a feather moss		<i>Austrostipa rudis</i> subsp. <i>rudis</i> , Veined Spear-grass
<i>Rosulabryum billarderi</i> , Common Thread-moss		<i>Billardiera mutabilis</i> , Common Apple-berry
<i>Sematophyllum homomallum</i> , a moss	N	<i>Bossiaea prostrata</i> , Creeping Bossiaea
<i>Thuidiopsis furfurosa</i> , Golden Weft-moss	V	<i>Brunonia australis</i> , Blue Pincushion
<i>Wijkia extenuata</i> , Spear Moss		<i>Bursaria spinosa</i> , Sweet Bursaria
<u>Risk</u>		V <i>Caesia parviflora</i> , Pale Grass-lily
<u>Other wild indigenous species</u>		<i>Carex appressa</i> , Tall Sedge
<u>Fern species</u>		<i>Carex breviculmis</i> , Short-stem Sedge
V <i>Adiantum aethiopicum</i> , Common Maidenhair		E <i>Carex fascicularis</i> , Tassel Sedge
C <i>Asplenium flabellifolium</i> , Necklace Fern		<i>Cassinia aculeata</i> , Common Cassinia
C <i>Blechnum parrisiae</i> , Common Rasp-fern		<i>Cassinia longifolia</i> , Shiny Cassinia
C <i>Cyathea australis</i> , Rough Tree-fern ¹⁹⁹⁷		

Risk Oher wild indigenous species

- E *Cassytha melantha*, Coarse Dodder-laurel²⁰⁰⁸
 E *Cassytha pubescens*, Downy Dodder-laurel
 E *Centella cordifolia*, Centella
 V *Chiloglottis valida*, Common Bird-orchid
 V *Clematis aristata*, Mountain Clematis
Clematis decipiens, a small-leaved clematis
 E *Comesperma volubile*, Love Creeper
 V *Coprosma quadrifida*, Prickly Currant-bush²⁰²⁰
 C *Coronidium scorpioides*, Button Everlasting
Deyeuxia quadriseta, Reed Bent-grass
Dianella longifolia var. *longifolia*, Pale Flax-lily
Dianella revoluta, Black-anther Flax-lily
Dianella tasmanica, Tasman Flax-lily
Dichelachne rara, Common Plume-grass
Dichondra repens, Kidney-weed
 V *Dillwynia cinerascens*, Grey Parrot-pea
 V *Drosera auriculata*, Tall Sundew
Eleocharis sphacelata, Tall Spike-rush¹⁹⁹⁷
 C *Epacris impressa*, Common Heath
Epilobium hirtigerum, Hairy Willow-herb
Eragrostis brownii, Common Love-grass
 E *Eucalyptus cephalocarpa*, Mealy Stringybark
 V *Eucalyptus cypellocarpa*, Mountain Grey Gum
 V *Eucalyptus goniocalyx*, Bundy
 C *Eucalyptus macrorhyncha*, Red Stringybark
 E *Eucalyptus melliodora*, Yellow Box
 E *Eucalyptus obliqua*, Messmate Stringybark (wild and planted)
 V *Eucalyptus ovata*, Swamp Gum
 E *Eucalyptus radiata*, Narrow-leaved Peppermint
 C *Eucalyptus viminalis* subsp. *viminalis*, Manna Gum (wild and planted)
Euchiton japonicus, Creeping Cudweed
 V *Exocarpos cupressiformis*, Cherry Ballart
 E *Exocarpos strictus*, Pale-fruit Ballart (1 only)
 C *Gahnia radula*, Thatch Saw-sedge
 E *Gahnia sieberiana*, Red-fruit Saw-sedge
Geranium homeanum, Rainforest Crane's-bill
 C *Geranium* sp. 5, Naked Crane's-bill²⁰⁰⁸
Glossostigma ?elatinooides, a mud-mat²⁰¹⁷
 E *Glycine clandestina*, Twining Glycine
Gonocarpus tetragynus, Common Raspwort
Goodenia ovata, Hop Goodenia
 E *Gynatrix pulchella*, Hemp Bush¹⁹⁹⁷
 E *Hackelia latifolia*, Forest Hound's-tongue
 C *Hackelia suaveolens*, Sweet Hound's-tongue
 E *Hardenbergia violacea*, Purple Coral-pea²⁰⁰⁸
 V *Hemarthria uncinata*, Mat Grass
 C *Hovea heterophylla*, Common Hovea²⁰²⁰
 E *Hydrocotyle foveolata*, Yellow Pennywort
 V *Hydrocotyle hirta*, Hairy Pennywort
 C *Imperata cylindrica*, Blady Grass
 C *Indigofera australis*, Austral Indigo

Risk Oher wild indigenous species

- E *Hypericum gramineum*, Small St John's Wort
Isolepis inundata, Swamp Club-rush
Juncus amabilis, Hollow Rush
 C *Juncus ?australis*, Austral Rush²⁰⁰⁹
Juncus bufonius, Toad Rush²⁰⁰⁹
Juncus gregiflorus, Green Rush
 C *Juncus ingens*, Giant Rush
Juncus pallidus, Pale Rush
 E *Juncus pauciflorus*, Loose-flower Rush²⁰⁰⁹
 E *Juncus planifolius*, Broad-leaf Rush
 E *Juncus procerus*, Tall Rush
Juncus sarophorus, Broom Rush
 E *Juncus subsecundus*, Finger Rush
Kunzea leptospermoides, Yarra Burgan
Lachnagrostis filiformis, Common Blown-grass
 V *Lagenophora sublyrata*, Slender Bottle-daisy
Laphangium luteoalbum, Jersey cudweed
Lemna disperma, Common Duckweed
Lepidosperma ?elatius, Tall Sword-sedge²⁰⁰⁸
Lepidosperma gunnii, Slender Sword-sedge²⁰⁰⁸
 V *Lepidosperma laterale*, Variable Sword-sedge
 C *Leptospermum continentale*, Prickly Tea-tree²⁰²⁰
Leptospermum scoparium, Manuka²⁰⁰⁹
 E *Lobelia anceps*, Angled Lobelia¹⁹⁹⁷
Lomandra filiformis subsp. *coriacea*, Wattle Mat-rush
Lomandra filiformis subsp. *filiformis*, Wattle Mat-rush
Lomandra longifolia subsp. *longifolia*, Spiny-headed Mat-rush
 V *Luzula meridionalis*, Common Woodrush
Lythrum hyssopifolia, Lesser Loosestrife
 E *Melaleuca ericifolia*, Swamp Paperbark
 V *Melicytus dentatus*, Tree Violet
Microlaena stipoides, Weeping Grass
 V *Microtis parviflora*, Slender Onion-orchid²⁰⁰⁹
 E *Microtis unifolia*, Common Onion-orchid²⁰²⁰
 E *Olearia lirata*, Snowy Daisy-bush²⁰²¹
 C *Olearia myrsinoides*, Silky Daisy-bush
 V *Opercularia varia*, Variable Stinkweed²⁰⁰⁹
Oxalis exilis/perennans, Wood-sorrel
 V *Ozothamnus ferrugineus*, Tree Everlasting
Pandorea pandorana, Wonga Vine
Persicaria decipiens, Slender Knotweed
 E *Persicaria lapathifolia*, Pale Knotweed
 V *Persicaria praetermissa*, Spotted Knotweed
 E *Persicaria subsessilis*, Hairy Knotweed
 E *Phragmites australis*, Common Reed
 C *Pimelea curviflora*, Curved Rice-flower
 E *Pimelea humilis*, Common Rice-flower
 E *Plantago varia*, Variable Plantain
 E *Platylobium infecundum*, a flat-pea
Poa ensiformis, Sword Tussock-grass

Risk Oher wild indigenous species

- E *Poa labillardierei*, Common Tussock-grass²⁰⁰⁹
Poa morrisii, Soft Tussock-grass
- E *Poa tenera*, Slender Tussock-grass
- V *Polyscias sambucifolia*, Elderberry Panax²⁰⁰⁸
Poranthera microphylla, Small Poranthera
- E *Potamogeton crispus*, Curly Pondweed
- E *Potamogeton ochreatus*, Blunt Pondweed
- V *Prostanthera lasianthos*, Victorian Christmas-bush
- V *Pultenaea gunnii*, Golden Bush-pea
- E *Rubus parvifolius*, Small-leaf Bramble
- E *Rytidosperma caespitosum*, Common Wallaby-grass²⁰⁰⁹
Rytidosperma fulvum, Leafy Wallaby-grass
Rytidosperma geniculatum, Kneed Wallaby-grass¹⁹⁹⁷
Rytidosperma laeve, Smooth Wallaby-grass
- E *Rytidosperma pallidum*, Red-anther (or Silvertop) Wallaby-grass
Rytidosperma penicillatum, Slender Wallaby-grass
Rytidosperma racemosum, Clustered Wallaby-grass
- E *Rytidosperma semiannulare*, Tasmanian Wallaby-grass
Rytidosperma setaceum, Bristly Wallaby-grass
- Schoenus apogon*, Common Bog-rush
- E *Senecio campylocarpus*, Bulging Fireweed
- V *Senecio glomeratus*, Annual Fireweed
Senecio hispidulus, Rough Fireweed²⁰¹⁷
Senecio minimus, Shrubby Fireweed
- V *Senecio prenanthoides*, Common Fireweed²⁰⁰⁸
Senecio quadridentatus, Cotton Fireweed
- V *Sigesbeckia orientalis*, Indian Weed
- C *Solanum aviculare*, Kangaroo Apple
- V *Solanum laciniatum*, Large Kangaroo Apple
- E *Stylidium armeria*, Common Triggerplant
Tetrarrhena juncea, Forest Wire-grass
- E *Thelymitra peniculata*, Trim Sun-orchid
- C *Thelymitra rubra*, Salmon Sun-orchid²⁰¹⁹
Themeda triandra, Kangaroo Grass
Typha domingensis, Cumbungi
Typha orientalis, Cumbungi¹⁹⁹⁷
Vallisneria australis, Eel Grass
- V *Veronica gracilis*, Slender Speedwell
- E *Viola hederacea*, Ivy-leaf Violet
Wahlenbergia gracilis, Sprawling Bluebell
- E *Wahlenbergia stricta*, Tall Bluebell
- E *Wurmbea dioica*, Common Early Nancy

Introduced species

- Acacia baileyana*, Cootamundra Wattle²⁰¹⁷
Acacia decurrens, Green Wattle¹⁹⁹⁷
Acacia elata, Cedar Wattle²⁰⁰⁸
Acacia floribunda, White Sallow-wattle²⁰⁰⁹

Introduced species

- Acacia longifolia* subsp. *longifolia*, Sallow Wattle²⁰⁰⁹
Acacia prominens, Gosford Wattle²⁰⁰⁸
Acer negundo, Box Elder¹⁹⁹⁷
Agapanthus praecox, Agapanthus
Agrostis capillaris, Brown-top Bent²⁰¹⁷
Aira sp., Hair Grass
Allium triquetrum, Angled Onion
Anredera cordifolia, Madeira Vine²⁰²²
Anthoxanthum odoratum, Sweet Vernal-grass
Araujia sericifera, White Bladder-flower²⁰⁰⁸
Arundo donax, Giant Reed¹⁹⁹⁷
Atriplex prostrata, Hastate Orache¹⁹⁹⁷
Billardiera fusiformis, Bluebell Creeper¹⁹⁹⁷
Briza maxima, Large Quaking-grass
Briza minor, Lesser Quaking-grass
Bromus catharticus, Prairie Grass²⁰¹⁷
Bromus diandrus, Great Brome²⁰⁰⁹
Calystegia silvatica, Greater Bindweed²⁰²¹
Cassinia sifton, Sifton Bush
Cenchrus clandestinus, Kikuyu Grass²⁰²²
Centaurium erythraea, Common Centaury
Centaurium tenuiflorum, Branched Centaury²⁰⁰⁹
Chamaecytisus palmensis, Tree Lucerne²⁰⁰⁸
Chrysanthemoides monilifera subsp. *monilifera*, Boneseed²⁰⁰⁸
Cirsium vulgare, Spear Thistle²⁰¹⁷
Coprosma repens, Mirror-bush²⁰²²
Cordyline australis, New Zealand Cabbage Tree²⁰⁰⁹
Cortaderia selloana, Pampas Grass²⁰²²
Cotoneaster glaucophyllus, Cotoneaster²⁰⁰⁹
Cotoneaster pannosus, Cotoneaster²⁰⁰⁸
Crassula multicava, Shade Crassula²⁰⁰⁸
Crataegus monogyna, Hawthorn²⁰¹⁷
Crepis capillaris, Smooth Hawksbeard²⁰⁰⁹
Crocoshmia × *crocoshmiflora*, Montbretia²⁰²¹
Cynara cardunculus, Spanish Artichoke²⁰⁰⁹
Cynodon dactylon, Couch²⁰¹⁷
Cyperus eragrostis, Drain Flat-sedge
Dactylis glomerata, Cocksfoot
Delairea odorata, Cape Ivy²⁰⁰⁸
Disa bracteata, South African Orchid²⁰²¹
Echinochloa crus-galli, Common Barnyard Grass¹⁹⁹⁷
Echium plantagineum, Paterson's Curse²⁰⁰⁸
Ehrharta erecta, Panic Veldt-grass²⁰¹⁷
Ehrharta longiflora, Annual Veldt-grass²⁰¹⁷
Erica lusitanica, Spanish Heath²⁰¹⁷
Erigeron karvinskianus, Seaside Daisy²⁰⁰⁹
Erigeron sumatrensis, Fleabane²⁰¹⁷
Festuca arundinacea, Tall Fescue²⁰⁰⁹
?Festuca rubra, Red Fescue²⁰⁰⁹
Foeniculum vulgare, Fennel¹⁹⁹⁷
Fraxinus angustifolia, Desert Ash²⁰¹⁷
Fumaria bastardii, Bastards Fumitory²⁰⁰⁹

Introduced species

Fumaria muralis, Wall Fumitory²⁰⁰⁹
Galium aparine, Cleavers²⁰⁰⁹
Genista linifolia, Flax-leafed Broom²⁰²²
Genista monspessulana, Montpellier Broom²⁰⁰⁹
Geranium ?dissectum, Cut-leaf Crane's-bill²⁰⁰⁹
Hedera helix/hibernica, Ivy²⁰⁰⁹
Helminthotheca echioides, Ox-tongue²⁰⁰⁹
Holcus lanatus, Yorkshire Fog²⁰²²
Hypochaeris radicata, Cat's Ear
Ipomoea indica, Lear's Morning-glory²⁰²²
Juncus ?articulatus, Jointed Rush²⁰⁰⁹
Leontodon saxatilis, Lesser Hawkbit²⁰⁰⁹
Ligustrum lucidum, Large-leafed Privet²⁰⁰⁹
Lilium formosanum, Lily²⁰⁰⁹
Lolium perenne, Perennial Rye-grass²⁰⁰⁹
Lonicera japonica, Japanese Honeysuckle²⁰⁰⁹
Lotus subbiflorus, Hairy Bird's-foot Trefoil²⁰¹⁷
Lysimachia arvensis, Pimpernel
Malus pumila, Domestic Apple²⁰¹⁷
Malva sp., Mallow²⁰¹⁷
Melaleuca parvistaminea, Rough-barked Honey-myrtle²⁰⁰⁹
Melaleuca styphelioides, Prickly Paperbark²⁰¹⁷
Modiola caroliniana, Carolina Mallow²⁰¹⁷
Nephrolepis cordifolia, Fishbone Fern
Oxalis incarnata, Pale Wood-sorrel²⁰²¹
Oxalis pes-caprae, Soursob
Oxalis purpurea, Large-flower Wood-sorrel
Paraserianthes lophantha, Cape Wattle²⁰⁰⁹
Paspalum dilatatum, Paspalum²⁰²²
Paspalum distichum, Water Couch¹⁹⁹⁷
Phalaris aquatica, Toowoomba Canary-grass²⁰¹⁷
Pinus radiata, Monterey Pine²⁰⁰⁸
Pittosporum undulatum, Sweet Pittosporum
Plantago coronopus, Buck's-horn Plantain²⁰⁰⁹
Plantago lanceolata, Ribwort²⁰²¹
Plantago major, Greater Plantain²⁰⁰⁹

Introduced species

Poa annua/infirma, a meadow-grass²⁰⁰⁹
Prunella vulgaris, Self-heal
Prunus cerasifera, Cherry-plum²⁰¹⁷
Pseudoscleropodium purum, Neat Feather-moss
Psoralea pinnata, Blue Psoralea¹⁹⁹⁷
Ranunculus repens, Creeping Buttercup²⁰²²
Raphanus raphanistrum, Wild Radish²⁰²¹
Romulea rosea, Common Onion-grass²⁰²²
Rosa rubiginosa, Sweet Briar²⁰⁰⁹
Rubus anglocandicans, Blackberry
Rumex conglomeratus, Clustered Dock²⁰⁰⁹
Rumex crispus, Curled Dock²⁰²¹
Salix ?x reichardtii, Pussy Willow²⁰¹⁷
Salix sp., unidentified willow¹⁹⁹⁷
Solanum mauritianum, Tobacco-bush
Solanum nigrum, Black Nightshade²⁰²²
Solanum pseudocapsicum, Madeira Winter-cherry
Sonchus oleraceus, Sow-thistle²⁰²¹
Symphytotrichum subulatum, Aster-weed²⁰¹⁷
Taraxacum sect. *Taraxacum*, Garden Dandelion²⁰⁰⁹
Tradescantia fluminensis, Wandering Trad²⁰²¹
Tragopogon porrifolius, Salsify¹⁹⁹⁷
Trifolium dubium, Suckling Clover²⁰⁰⁹
Tropaeolum majus, Nasturtium
Verbena bonariensis s.l., Purple-top Verbena¹⁹⁹⁷
Vicia hirsuta, Tiny Vetch
Vicia sativa subsp. *cordata*, a vetch
Vicia sativa subsp. *nigra*, Narrow-leaf Vetch
Vinca major, Blue Periwinkle²⁰²²
Vulpia bromoides, Squirrel-tail Fescue
Vulpia myuros, Rat's-tail Fescue²⁰⁰⁸
Watsonia meriana var. *bulbillifera*, Bulbil
*Watsonia*¹⁹⁹⁷
Zantedeschia aethiopica, White Arum Lily²⁰²¹

Notes concerning some of the significant plant species

Critically Endangered, globally

Platylobium infecundum (a flat-pea): Abundant in the national park at Site 33's eastern extremity.

Listed as Endangered under Victorian law

Acacia stictophylla (Dandenong Range Cinnamon Wattle): The dominant shrub species in the unmown area in the national park at Site 33's eastern extremity.

Austrostipa rudis subsp. *australis* (a spear-grass): Scores of plants at Lewis Park, mostly just south of the Blind Ck channel, west of the skate park. Many others appear to have been destroyed for 'daylighting' the creek in 2023–4.

Senecio campylocarpus (Bulging Fireweed): Scattered around the former Institute of Horticultural Development, numbers varying from year to year.

Locally threatened

Gynatrix pulchella (Hemp Bush): Two wild plants grew just downstream of Scoresby Rd in 1997 but none were found during 2023–2025.

Poa labillardierei (Common Tussock-grass): 5 or 6 wild tussocks grew north of Blind Creek at Lewis Park in 2009 but none remain (except planted individuals south of the creek).

Persicaria subsessilis (Hairy Knotweed): one patch is destined for destruction beside the dam at the former Institute of Horticultural Development; a few others were observed close by in the creek channel in 2009.

Thelymitra peniculata (Salmon Sun-orchid) – the only known surviving population of the species in Knox: scores of plants in 8 patches typically 4 m² each, photographed and documented by Chris Klep on 23rd October 2019 at Lewis Park, around 40 m northeast of the new wetlands. It is unknown whether the plants survived the earthworks conducted in 2024 for construction of adjacent stormwater treatment wetlands.

Fauna of special significance

The following species are listed as Vulnerable under Victorian law and have been recorded as repeatedly making use of habitat within Site 33:

Blue-billed Duck – up to eleven can be seen almost daily at the dam at the former Institute of Horticultural Development, breeding there in some years.

Australasian Shoveler – recorded four times between 1990 and 2021, at the former Institute of Horticultural Development. Considering the extensive bird surveys there, so few observations do not constitute adequate usage of the habitat to be significant.

Fauna habitat features

- There are some very large old trees, particularly Manna Gums (*Eucalyptus viminalis*) and Swamp Gums (*Eucalyptus ovata*) with tree hollows, providing what is now a highly depleted habitat resource for arboreal fauna with specialised needs;
- Patches of scrub provide habitat for small insect-eating birds such as wrens;
- The dam at the Knoxfield Institute for Horticultural Development supports a wealth of waterbirds and acts as an important substitute for the natural wetlands that would once have occurred along Blind Ck. The dam is planned to be replaced by an adjacent, smaller stormwater treatment wetland;
- Even open pasture within the site contains substantial areas of indigenous wetland plants in depressions, and these are habitat for frogs, their predators and certain waterbird species such as ibis and Wood Ducks;
- The wetlands and the waters of the creek provide habitat for Shortfin Eel, Broadfin Galaxias and aquatic invertebrates, including larvae of flying insects.

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 all the segments of this site. Criterion 1.2.6 might also be taken to accord Local significance to each segment because they fit the description, 'Important at local scale - Link between individual remnant habitat blocks or within subcatchment'.

The newly-constructed wetlands at Lewis Park are included in Site 33 for the ecological values they are expected to develop, consistent with the following description in standard criterion 1.3.2: 'Cleared or degraded area which may with suitable habitat reconstruction or rehabilitation work form an important additional area of habitat ... Site (or one of a group of such sites) to form a strategic corridor of local importance and scale'. Such conditions are recognised by that criterion as **Locally** significant.

Regionally Threatened Ecological Vegetation Classes

According to 'Victoria's Native Vegetation Management – A Framework for Action' (NRE 2002a), remnant patches of native vegetation belonging to a regionally-endangered EVC (including most of the native vegetation in this site) have a conservation significance rating of either High or Very High, depending on their ecological condition. In either case, any site containing a remnant patch of such vegetation is of State significance under criterion 3.2.3.

The following areas of native vegetation belong to endangered EVCs and clearly meet the definition of a 'remnant patch', thereby qualifying for **State** significance:

- Lewis Park (Swampy Woodland south of the creek and several patches of Swamp Scrub north of the creek);
- Valley Heathy Forest on the hillside south of the Knox Community Garden and Vineyard;
- Swampy Riparian Woodland abutting the Valley Heathy Forest and extending to the dam at the former Institute of Horticultural Development and toward Scoresby Rd; and
- Extending slightly west and east of Site 34 (the Blind Creek Billabong).

In addition, the Grassy Forest (a regionally Vulnerable EVC) in the national park at the site's eastern extremity is almost certain to have a habitat score of at least 0.3, which would give this segment **State** significance.

It is possible but doubtful whether the threatened EVCs represented in the remaining segments of Site 33 meet the definition adopted by the standard criteria for a 'remnant patch'.

Threatened Plants

Platylobium infecundum is abundant in the national park at the site's eastern extremity. That species is listed under the *Flora and Fauna Guarantee Act* as Critically Endangered and it does not occur outside Victoria. As a result, the habitat provided for *Platylobium infecundum* in the site (effectively all of the national park component) qualifies as **National** significance under criterion 3.1.2.

Platylobium infecundum had not been scientifically described in 2010 when the previous edition of this report was written. As a result, the site's significance level has risen from State to National.

Acacia stictophylla is listed as Endangered in Victoria and its range extends only a few tens of kilometres from Knox. It is the dominant shrub species at Site 33's eastern extremity, in the national park. The plants form part of the much larger, viable population in the park. It follows that this area is of **National** significance under criterion 3.1.2.

The spear-grass, *Austrostipa rudis* subsp. *australis*, is listed as endangered in Victoria. It has a substantial population at Lewis Park despite destruction of part of the population for 'daylighting' Blind Creek. This taxon also occurs interstate. These characteristics give the site **State** significance according to criterion 3.1.2.

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

Threatened Fauna

The Blue-billed Duck is listed as a Vulnerable species in Victoria. It also occurs interstate. The consistent presence of small numbers of the species at the dam at the former Knoxfield Institute for Horticultural Development – breeding there in some years – represents 'known habitat' (but not an 'important site') for the species in the sense of the standard criteria. Criterion 3.1.2 confers **Regional** significance on such habitat. However, that habitat is planned to be destroyed soon. It is uncertain whether the ducks will make use of the stormwater treatment wetland that is planned to be constructed next to the existing dam.

Threats

- Removal of native vegetation, as has been happening in recent years for stormwater management projects and as is expected to happen at the former Knoxfield Institute for Horticultural Development and around Sherwood Court, Wantirna South;
- Displacement of indigenous flora by environmental weeds such as blackberry, Sweet Pittosporum, Desert Ash, Wandering Trad, Cocksfoot and Kikuyu Grass;
- Loss of trees if the water table falls due to daylighting of sections of Blind Creek, as appears to have happened along Dandenong Creek in Bayswater due to daylighting there;
- Loss or decline of plant species that are present in such precariously small numbers that they are vulnerable to inbreeding, poor reproductive success or localised chance events such as being struck by a falling tree limb;
- 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);
- Foxes, which kill wildlife and spread woody weeds and blackberries.

Strategic planning

- The previous (2010) edition of this report successfully recommended that its substantially different version of Site 33 be covered by Schedule 2 of the Environmental Significance Overlay (ESO2). The Minister for Planning subsequently excised the dam at the former Institute of Horticultural Development to facilitate

residential development. The minister applied ESO2 to adjacent pasture where a new stormwater treatment system is proposed, in the hope that it will one day attain biological significance;

- As discussed above, the site's habitat has changed greatly since 2010, causing a redrawing of the boundary. The extensive new aquatic and riparian habitat with its very immature revegetation will change greatly over coming years. For this reason, the site boundary adopted here and any amendment to the ESO2 boundary involve some speculation about the future. It may be premature to amend the ESO2 boundary between Scoresby Rd and Stud Rd to match the new boundary of Site 33 until new habitat starts to stabilise. There appears to be no point in amending the ESO2 boundary at the former Institute of Horticultural Development because destruction of the habitat has already been approved (in 2024). In the rest of the site, the boundary is not at all speculative and it is recommended to amend the ESO2 boundary to match;
- The part of the site around the dead end of Sherwood Court, Wantirna South, contains properties smaller than 0.4 ha, thereby qualifying for the size-based exemption from the state-wide baseline planning controls over removal of native vegetation (clause 52.17). The rest of the site is not exempt. 11-12 Sherwood Court are not covered by ESO2 but the abutting 108 Lewis Rd is.

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;
- A reinspection of parts of the site by Dr Lorimer on 12/4/02 to seek any changes from the data listed above and to fill any gaps in the pre-existing data for the first edition of this report;
- A major study by Dr Lorimer of the section of the corridor between Burwood Hwy and Scoresby Rd, titled '*Blind Creek and Lewis Parklands Ecological Assessment*'. Completed in September 2009, the study included approximately forty hours of fieldwork during October 2008 to March 2009 to thoroughly document the area's natural assets;
- An ecological assessment of the dam at the former Institute of Horticultural Development by Dr Lorimer on 19th January 2017;
- Documentation and photographs of sun-orchids (*Thelymitra* species) from Chris Klep in October 2019;
- An ecological assessment of the whole of the former Institute of Horticultural Development by Dr Lorimer for a 2023 VCAT appeal, including fieldwork on 12th July 2023;
- Similar ecological assessments of that land by the developer's consultants over several prior years;
- A botanical survey of Lewis Park by Dr Lorimer for several hours on 5th November 2023;
- Inspections by Dr Lorimer of habitat at the Tim Neville Arboretum in July and December 2023 and February 2025;
- A survey of the wild aquatic flora of the daylighted sections of Blind Creek by Dr Lorimer, mostly on 30th March 2024;
- A brief inspection of vegetation around the dead end of Sherwood Court, Wantirna South, on 2nd May 2024;
- A botanical survey by Dr Lorimer between Olivebank Rd and Perra St on 18th May 2024;
- Inspections by Dr Lorimer of habitat from Wattletree Rd to Rankin Rd on 23rd July 2024;
- Casual observations of plants along the corridor west of the railway line, by Dr Lorimer over several years;
- 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 most of the indigenous plant records since 2009 are of planted plants but not flagged as such;
- The Victorian Government's 'NatureKit' website;
- Aerial and satellite imagery from between 1946 and 2025;
- A 1946 Crown Lands and Survey cadastral map of the area, showing the course of Blind Creek;
- Maps of geology, topography and strategic planning information produced by agencies of the Victorian Government.