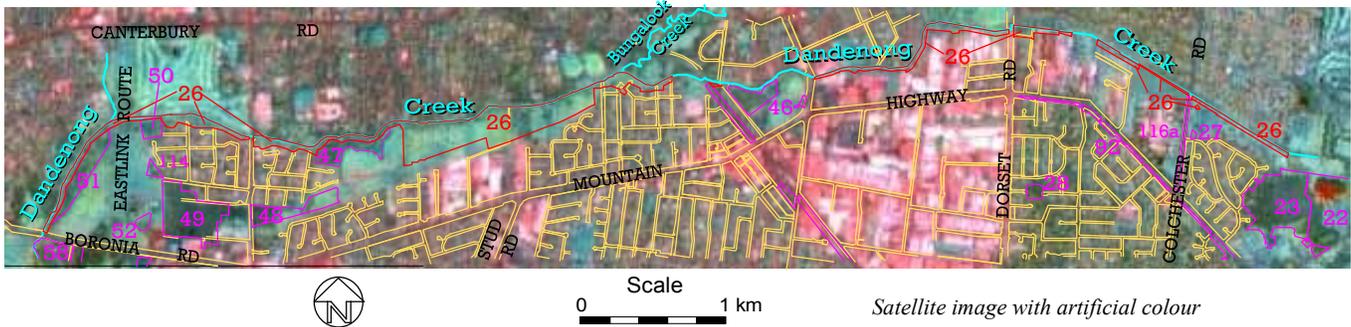


## Site 26. Dandenong Creek Corridor

Disjoint patches or strips of habitat along one of Knox's three main streams. Melway map references 63 D4 to 65 F4.

### Site Significance Level: *variously State to Local*

- 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;
- This is an important corridor for daily and seasonal movements of birds and insects (particularly waterbirds and parrots), as well as for pollen and plant propagules that the fauna may transport;
- Revegetation is playing an important role in reducing the extensive fragmentation of habitat that has occurred historically.



### Boundaries

The site comprises the eight strips shown above that are outlined in red and labelled '26', from Boronia Rd in the west to near Liverpool Road Retarding Basin in Boronia (Site 22). The magenta-outlined shapes are other sites from this report, labelled with their site numbers. The total area is 52.0 ha, reduced from 53.6 ha in the first edition of this report due to loss of habitat from construction of EastLink.

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

### Site description

The segments of this site represent stretches of the waterway with native vegetation or other habitat, excluding sites described separately in their own right. The natural course of the creek has been replaced by man-made channels, mostly in the form of a barrel drain with a low-flow pipe beneath. Shortfin Eels, which still migrate from the Coral Sea to the Dandenong Ranges and back, are probably the only aquatic vertebrate species that can survive such heavy modification to the stream.

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

#### Upstream (east) of Dorset Rd

This stretch has few mature eucalypts, but most of it has a narrow gallery of regrowth dominated by Blackwood (*Acacia melanoxylon*) and Swamp Paperbark (*Melaleuca ericifolia*), dense in parts. The habitat that this provides is being bolstered by extensive revegetation that will soon leave hardly any substantial gaps in the corridor's tree canopy. The few mature eucalypts that remain in this stretch of the corridor are mostly right at each end, where there are patches of Swampy Riparian Woodland (ecological condition rating C) that may well deserve a State significance rating. There is also a small wetland just upstream from Colchester Rd.

#### Dorset Rd to Bayswater Rd

The native vegetation in the eastern third of this stretch is more fragmented. It includes two substantially degraded patches of Swampy Riparian Woodland, some patches of Common Reed (*Phragmites australis*) and some scattered remnant eucalypts. The western third of this stretch has hardly any remnant native vegetation at all, and so has been extensively revegetated to fill the wide gap in the habitat corridor.

#### King St Bayswater to just east of Manson Reserve

There is very little remnant native vegetation on the Knox side of the creek between King St and a patch of Swampy Woodland opposite The Greenway (which is on the north side of the creek). Fortunately, the continuity of the habitat corridor is maintained by native vegetation on the north side of the creek, as seen on the satellite image on the previous page. Just west of The Greenway on the Knox side of the creek, the aerial photograph shows a substantial patch of Swampy Riparian Woodland and associated Floodplain Wetland Complex, which qualifies for State significance because of the endangered vegetation types.

The site includes a substantial area of the Healesville Freeway Reservation and adjacent floodplain. This area has many native wetland plants in depressions within pasture, and it is used for hunting mice by Black-Shouldered Kites.

#### Manson Reserve to Wantirna Rd

This stretch of the site has little native vegetation, but is flanked by substantial areas of Riparian Forest, Swampy Riparian Woodland and Swampy Woodland to the north, the south or both. It has also been extensively revegetated to improve the continuity of habitat.

#### Wantirna Rd to the EastLink road

This stretch includes some impressive, large Manna Gums (*Eucalyptus viminalis*) and some other scattered remnant trees, but hardly any other native vegetation. Some mature planted trees occupy some of the remaining space, but this stretch is a major gap in the continuity of the habitat corridor.

#### Beside Winton Wetlands

This stretch has practically no native vegetation but it is flanked by the habitat of Winton Wetlands (Site 51) to the east and Campbell's Croft Reserve on the west. It is included within the site because of its strategic importance for ecology and the role that its revegetation plots play in improving the continuity of the habitat corridor.

More detailed descriptions of the segments of this site can be found in 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.

### **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 Eastern Rosellas.

The satellite image on p. 141 has been marked with magenta outlines to show separately described sites along the corridor. These sites serve as ecological stepping-stones. 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). 8 naturally occurring indigenous plant species recorded.

Wetland (EVC 74, **regionally Endangered**). 44 naturally occurring indigenous plant species recorded.

Riparian Forest (EVC 18, **regionally Vulnerable**). 64 naturally occurring indigenous plant species recorded.

Swampy Riparian Woodland (EVC 83, **regionally Endangered**). 51 naturally occurring indigenous plant species recorded.

Swampy Woodland (EVC 937, **regionally Endangered**). 25 naturally occurring indigenous plant species recorded.

## Plant species

In the following plant list, the column headed 'Risk' indicates the indigenous species' risk of extinction in Knox as follows: 'C'=Critically Endangered; 'E'=Endangered; and 'V'=Vulnerable. In addition, species with names in bold are rare throughout the Melbourne region. If the identity of a particular eucalypt in the site is confirmed as *Eucalyptus yarraensis*, it is rare nationally.

Risk	Indigenous Species	Risk	Indigenous Species
	<i>Acacia dealbata</i>	V	<i>Isolepis inundata</i>
V	<i>Acacia mearnsii</i>		<i>Juncus amabilis</i>
V	<i>Acacia melanoxylon</i>		<i>Juncus bufonius</i>
	<i>Acacia paradoxa</i>		<i>Juncus gregiflorus</i>
E	<i>Acacia stricta</i>	C	<i>Juncus ?holoschoenus</i>
V	<i>Acacia verticillata</i>		<i>Juncus pallidus</i>
	<i>Acaena novae-zelandiae</i>	E	<i>Juncus planifolius</i>
	<i>Alisma plantago-aquatica</i>	E	<i>Juncus procerus</i>
V	<i>Allocasuarina littoralis</i>		<i>Juncus sarophorus</i>
V	<i>Alternanthera denticulata</i>	E	<i>Juncus subsecundus</i>
C	<i>Amyema pendula</i>		<i>Kunzea ericoides</i> spp. agg.
V	<i>Amyema quandang</i>		<i>Lachnagrostis filiformis</i>
	<i>Austrostipa pubinodis</i>	E	<i>Lemna disperma</i>
	<i>Austrostipa rudis</i>		<i>Lepidosperma elatius</i>
E	<b><i>Azolla pinnata</i></b>	E	<i>Leptospermum lanigerum</i>
	<i>Billardiera mutabilis</i>	E	<i>Lobelia anceps</i>
E	<b><i>Blechnum cartilagineum</i></b>		<i>Lomandra filiformis</i> subsp. <i>coriacea</i>
	<i>Bursaria spinosa</i>		<i>Lomandra filiformis</i> subsp. <i>filiformis</i>
	<i>Carex appressa</i>		<i>Lomandra longifolia</i>
E	<b><i>Carex fascicularis</i></b>	V	<i>Lythrum hyssopifolia</i>
E	<b><i>Carex gaudichaudiana</i></b>	E	<i>Melaleuca ericifolia</i>
DD	<i>Carex inversa</i>		<i>Microlaena stipoides</i>
	<i>Cassinia aculeata</i>	C	<i>Muellerina eucalyptoides</i>
	<i>Cassinia arcuata</i>	V	<i>Olearia lirata</i>
E	<i>Centella cordifolia</i>		<i>Oxalis exilis/perennans</i>
V	<i>Coprosma quadrifida</i>	E	<i>Ozothamnus ferrugineus</i>
E	<i>Crassula helmsii</i>		<i>Persicaria decipiens</i>
E	<i>Cyathea australis</i>	E	<i>Persicaria hydropiper</i>
	<i>Deyeuxia quadriseta</i>	E	<i>Persicaria laphathifolia</i>
	<i>Dianella admixta</i>	E	<b><i>Persicaria praetermissa</i></b>
V	<i>Dianella longifolia</i> s.l.	C	<b><i>Persicaria subsessilis</i></b>
V	<i>Dianella tasmanica</i>	E	<i>Phragmites australis</i>
V	<i>Eleocharis acuta</i>		<i>Poa ensiformis</i>
	<i>Eleocharis sphacelata</i>	E	<i>Poa labillardierei</i> var. <i>labillardierei</i>
	<i>Epilobium hirtigerum</i>		<i>Poa morrisii</i>
	<i>Eragrostis brownii</i>	E	<b><i>Polystichum proliferum</i></b>
V	<i>Eucalyptus cephalocarpa</i>	E	<i>Pomaderris aspera</i>
V	<i>Eucalyptus melliodora</i>	C	<b><i>Pomaderris racemosa</i></b>
V	<i>Eucalyptus obliqua</i>		<i>Poranthera microphylla</i>
V	<i>Eucalyptus ovata</i>	V	<b><i>Potamogeton crispus</i></b>
E	<i>Eucalyptus radiata</i>	V	<i>Potamogeton ochreatus</i>
E	<i>Eucalyptus viminalis</i> subsp. <i>viminalis</i>	E	<i>Prostanthera lasianthos</i>
C	<b><i>Eucalyptus ?yarraensis</i></b>		<i>Pteridium esculentum</i>
E	<i>Euchiton involucratus</i>	C	<b><i>Rytidosperma duttonianum</i></b>
V	<i>Exocarpos cupressiformis</i>		<i>Rytidosperma linkii</i> var. <i>fulvum</i>
E	<i>Exocarpos strictus</i>		<i>Rytidosperma penicillatum</i>
	<i>Gahnia radula</i>		<i>Rytidosperma racemosum</i>
E	<i>Gahnia sieberiana</i>	E	<i>Rytidosperma semiannulare</i>
C	<b><i>Geranium homeanum</i></b>		<i>Rytidosperma setaceum</i>
V	<i>Glyceria australis</i>		<i>Schoenus apogon</i>
	<i>Gonocarpus tetragynus</i>		<i>Senecio glomeratus</i>
	<i>Goodenia ovata</i>		<i>Senecio hispidulus</i>
E	<i>Gynatrix pulchella</i>	E	<i>Senecio minimus</i>
E	<i>Isolepis cernua</i> var. <i>platycarpa</i>		<i>Senecio quadridentatus</i>

Risk	Indigenous Species	Risk	Indigenous Species
	<i>Tetrarrhena juncea</i>	E	<i>Triglochin striata</i> (flat leaf variant)
	<i>Themeda triandra</i>	E	<i>Typha domingensis</i>
	<i>Tricoryne elatior</i>	E	<i>Typha orientalis</i>
C	<i>Triglochin procera</i>		
Introduced Species			
	<i>Agrostis capillaris</i>		<i>Cyperus eragrostis</i>
	<i>Allium triquetrum</i>		<i>Dactylis glomerata</i>
	<i>Anthoxanthum odoratum</i>		<i>Egeria densa</i>
	<i>Aster subulatus</i>		<i>Ehrharta erecta</i>
	<i>Briza maxima</i>		<i>Erica lusitanica</i>
	<i>Bromus catharticus</i>		<i>Eriobotrya japonica</i>
	<i>Calystegia silvatica</i>		<i>Festuca arundinacea</i>
	<i>Chrysanthemoides monilifera monilifera</i>		<i>Fraxinus angustifolia</i>
	<i>Cirsium vulgare</i>		<i>Galium aparine</i>
	<i>Cortaderia sellosana</i>		<i>Genista monspessulana</i>
	<i>Crataegus monogyna</i>		<i>Grevillea rosmarinifolia</i>
	<i>Crepis capillaris</i>		<i>Hedera helix</i>
	<i>Cynodon dactylon</i>		<i>Holcus lanatus</i>
			<i>Hypericum tetrapterum</i>
			<i>Hypochoeris radicata</i>
			<i>Ilex aquifolium</i>
			<i>Juncus articulatus</i>
			<i>Leontodon taraxacoides</i>
			<i>Lonicera japonica</i>
			<i>Lotus subbiflorus</i>
			<i>Lotus ?uliginosus</i>
			<i>Malus pumila</i>
			<i>Paspalum dilatatum</i>
			<i>Paspalum distichum</i>
			<i>Pennisetum clandestinum</i>
			<i>Persicaria maculosa</i>
			<i>Phalaris aquatica</i>
			<i>Phalaris arundinacea</i>
			<i>Pittosporum undulatum</i>
			<i>Plantago lanceolata</i>
			<i>Prunella vulgaris</i>
			<i>Prunus cerasifera</i>
			<i>Ranunculus repens</i>
			<i>Rubus anglocandicans</i>
			<i>Rumex crispus</i>
			<i>Salix ?babylonica</i> s.l.
			<i>Salix fragilis</i>
			<i>Salix</i> sp.
			<i>Salix × reichardtii</i>
			<i>Sonchus oleraceus</i>
			<i>Verbena bonariensis</i> s.l.
			<i>Zantedeschia aethiopica</i>

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

*Carex gaudichaudiana* (Fen Sedge). Apparently present at several locations, but identity only 75% certain in some cases due to lack of stems.

*Rytidosperma duttonianum* (Brown-back Wallaby-grass). One patch, several metres across. The only population in the outer eastern suburbs.

*Eucalyptus ?yarraensis* (Yarra Gum). A single individual opposite the northern end of Derwent Drive, Bayswater, identity unconfirmed. (The '?' in the scientific name is the scientists' way of indicating uncertain identity.)

#### Fauna of special significance

No records of significant fauna were found, but the significant fauna reported at other sites along the corridor clearly get there by moving along the corridor.

#### Fauna habitat features

- 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 insects;
- Patches of scrub and revegetation plots provide habitat for small insect-eating birds such as wrens;
- Swampy depressions are used by waterbirds and frogs.

#### Significance ratings

The following is an assessment of the site's significance against the Department of Sustainability & Environment'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 important for 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).

##### Regionally Threatened Ecological Vegetation Classes

According to the criteria of 'Victoria's Native Vegetation Management – A Framework for Action' (NRE 2002a), areas of native vegetation belonging to an endangered EVC (such as most of the remnant native vegetation in this site) have a conservation significance rating of High if they are in a substantially degraded state (as in this case). According to criterion 3.2.3, sites that include a remnant patch with High conservation significance due to the presence of a threatened EVC are of State significance.

The area of native vegetation immediately south of The Greenway belongs to Endangered EVCs and it meets the definition of a 'remnant patch'. This gives the **State** significance. The patches of Swampy Riparian Woodland just east

of Dorset Rd and at the eastern extremity of this site also qualify for State significance on the same basis if they are found to qualify as 'remnant patches'.

It is somewhat doubtful whether the remaining segments of the Dandenong Ck corridor site described here meet the definition for a 'remnant patch', in which case criterion 3.2.3 accords them no significance.

#### *Locally Threatened Flora*

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

#### **Threats**

- Invasion by environmental weeds, particularly woody weeds (e.g. Hawthorn) and grass weeds (e.g. Cocksfoot and Water Couch). Blackberries would also be a serious problem if they were not subjected to repeated control;
- Loss or decline of plant species whose populations are dangerously small, due to inbreeding, poor reproductive success or vulnerability to localised chance events;
- Foxes, which kill wildlife and spread woody weeds and blackberries. Many were seen along the creek.

#### **Management issues**

Refer to 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.

#### **Administration matters**

- This site is worthy of inclusion within the proposed Environmental Significance Overlay, ESO2, because of the riparian habitat, the threatened EVCs and the other attributes discussed under the heading 'Significance ratings' above;
- Some segments of the site are presently covered by Schedule 1 of the Vegetation Protection Overlay in the Knox Planning Scheme, on the basis of their recognition by Water Ecoscience (1998) as their Site 83.

#### **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 was standard for the other sites assessed in this report;
- A report, *'Assessment of Native Vegetation on the Mitcham to Frankston Freeway Alignment in Knox'*, by Dr Lorimer in July 2003 for Knox City Council;
- Aerial photography from February 2001 and April 2003;
- Satellite imagery of the district;
- The Department of Sustainability & Environment's BioMaps of the area;
- Maps of geology and topography produced by agencies of the Victorian government.