Site 58. Dandenong Valley Parklands

A large area between Dandenong Ck and the EastLink road, containing parks, other public land and large private properties destined for public acquisition. Melway maps 62, 63, 71, 72 and 81.

Site Significance Level: *National* for the presence of Yarra Gums; otherwise *State*

- There are many plant species that are rare in Knox or in the whole Melbourne area, as well as many of the rare Yarra Gum (*Eucalyptus yarraensis*);
- Dandenong Ck, Blind Ck and Corhanwarrabul Ck are corridors for daily and seasonal movements of fauna;
- The streams and the many wetlands in the site are habitat for frogs, fish, other aquatic fauna and waterbirds, several species of which are threatened;
- Despite a long history of grazing and sometimes horticulture, the remnant forest and woodland vegetation is highly significant because almost all of it belongs to endangered EVCs;
- Parts of the site are being used for long-term research into management of degraded Valley Heathy Forest (an endangered EVC).

Note

The amount of fieldwork conducted during this study to assess the Dandenong Valley Parklands was substantially less intensive than for all other sites except Lysterfield Lake Park. This is because the conservation and management of the Parklands and Lysterfield Park are largely within the jurisdiction of the State government and its agencies (particularly Parks Victoria). Also, permission was not obtained from some of the private landowners within the Parklands to inspect their properties.

While the treatment below is believed to be adequate for the purposes of a municipal biodiversity study like this, more fieldwork may be required to meet more specific requirements such as park management. The site boundary might also be subject to refinement if additional fieldwork were to be done.

Boundaries

The site comprises the two polygons outlined in red on the aerial photograph on the next page, totalling 541 ha. One polygon covers Koomba Park (between Boronia Rd and Burwood Hwy) and the other covers all of the site south of Burwood Hwy. The magenta-outlined shapes are other sites from this report. Since the first edition of this report, the EastLink road has forced a reduction in site area, with boundary changes at George St and Wellington Rd.

The site includes roadside vegetation along High Street Rd, Ferntree Gully Rd and several minor roads.

The parts of Dandenong Valley Parklands on the western side of Dandenong Creek are not treated here because they are outside Knox.

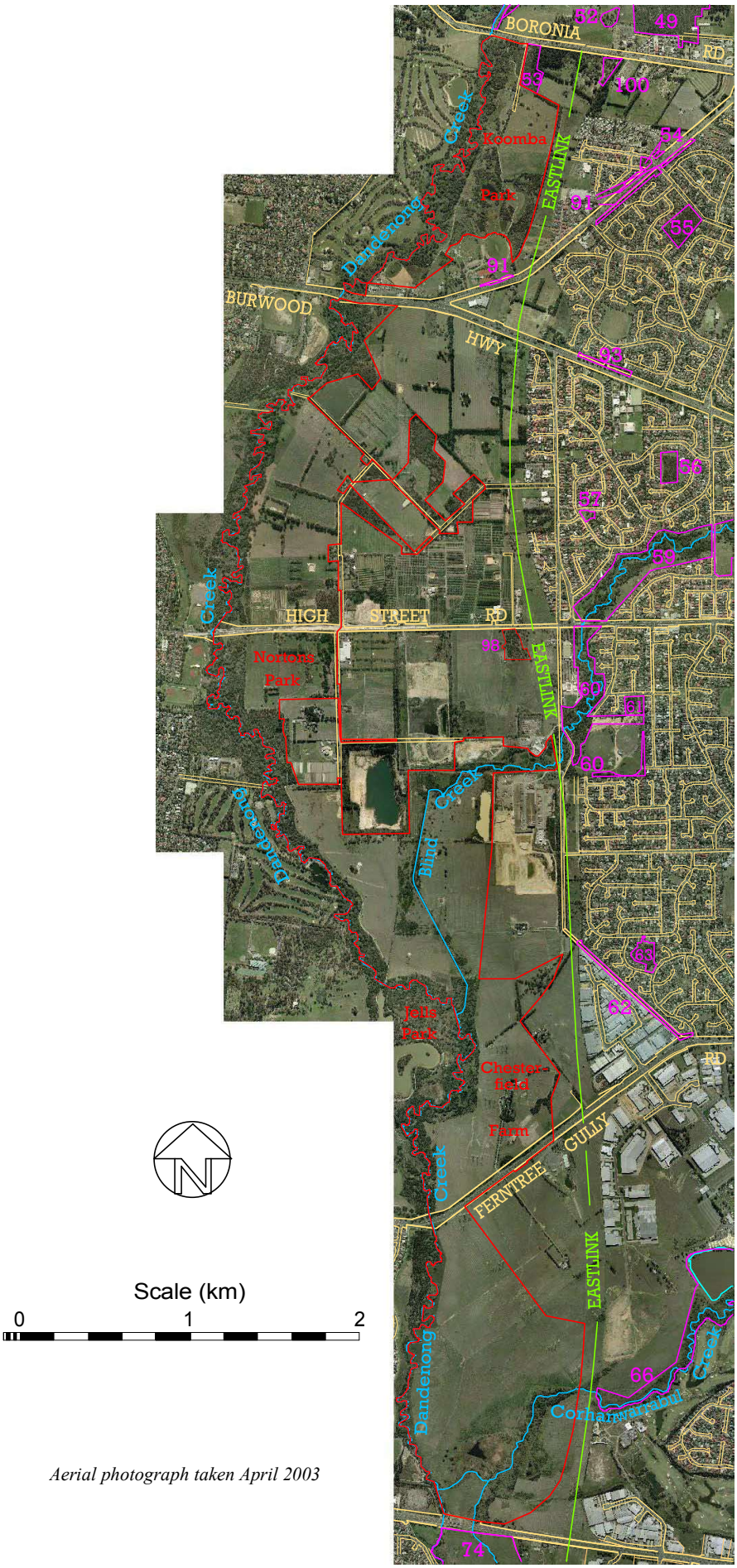
Land use & tenure: Includes parkland managed by Parks Victoria for recreation and conservation as well as proposed parkland that is presently used for farming. The farmland includes the tourist farm, Chesterfield Farm, as well as private land covered by a Public Acquisition Overlay in the Knox Planning Scheme. The site also includes roadside verges and a disused quarry pit.

Site description

Dandenong Valley Parklands has mostly had a long history of farming (mainly grazing), and the remainder has been used for roads or quarrying of clay. Despite this, the Parklands retain some very high conservation values. Even some of the pasture that is being grazed today includes the nationally rare Yarra Gum (*Eucalyptus yarraensis*) and wetlands with plants that are rare or threatened in the Melbourne area. These wetlands within the pasture provide habitat for fauna, including waterbirds that are threatened throughout Victoria.

The site assessed here includes most of the Parklands' areas of native vegetation in Knox, on both public and private land (the latter being intended for public acquisition), as well as the stream channels of Dandenong Ck, Blind Ck and Corhanwarrabul Ck. It also includes farmland within which wetlands or Yarra Gums are believed to occur, or whose location is important to the ecological function of the floodplain and the habitat corridor.

Within this site, Dandenong Creek and Corhanwarrabul Creek flow in their natural stream channels, although some of the flow is diverted by drains in the vicinity of the confluence of these creeks. Blind Creek's natural course has been replaced by a straightened channel through much of its passage through this site. Native fish have been recorded in all three creeks in the past five years. The Vulnerable fish species, Dwarf Galaxias, was present in the 1990s, but introduced fish and drainage works may have wiped out the species in this catchment in the last few years, according to fish expert, Mr John McGuckin of Streamline Research Pty Ltd.



Aerial photograph taken April 2003

A large part of the site is floodplain, with deep alluvium soil subject to periodic inundation. Much of the remaining native vegetation on the floodplain south of Burwood Highway is Floodplain Riparian Woodland, which is regionally Endangered. In other parts of the floodplain, there is a narrow band of Riparian Forest or Swampy Riparian Woodland beside the streams, flanked by Swampy Woodland. Wetlands are scattered widely across the floodplain and have predominantly native vegetation, even in the cases of disused clay pits and dams in grazed paddocks.

A few sections of the site, mainly in the vicinity of Bushy Park Lane, Axford Rd and the eastern edge of Nortons Park, extend into the more elevated ground east of the floodplain. These areas have pale loam topsoil and clay subsoil, derived from Upper Silurian and Lower Devonian sedimentary bedrock. The associated vegetation is the endangered Valley Heathy Forest.

All but one of the Ecological Vegetation Classes in the site are listed as Endangered, at the bioregional scale or greater. The exception is Riparian Forest, which is regionally Vulnerable. The area of each EVC, and the spectrum of ecological condition within each EVC, could not be determined without more detailed fieldwork.

The biological highlights of the site can be summarised as follows:

- The streams have no flow obstructions and largely retain their natural channels, providing habitat for native aquatic fauna;
- There are numerous wetlands with native vegetation, frequented by a wealth of frogs and waterbirds (some of which are rare or threatened, such as egrets), and evidently the smaller aquatic fauna that form the base of the aquatic food chain;
- Despite a long history of grazing and sometimes horticulture, the remnant forest and woodland vegetation almost all belongs to endangered EVCs and includes a large number of plant species;
- Some of the plant species are rare or threatened at various levels, including a significant proportion of the global population of the nationally rare Yarra Gum;
- The Parklands includes habitat corridors along Dandenong Ck, Blind Ck and (probably to a lesser extent) Corhanwarrabul Ck; and
- Parts of the Parklands (Capuchin Fathers' land, Noonan's and Robinsons) are being used by Parks Victoria for long-term research into management of degraded Valley Heathy Forest (an endangered EVC).

Relationship to other land

One of the site's main ecological attributes is its role as a habitat corridor linked to other habitat downstream along Dandenong Ck (e.g. Site 74) and upstream along all three streams (e.g. Sites 26, 51-53, 59-61 and 65-66). The aerial photograph helps to visualise some of these linkages. The ecological wellbeing of the Parklands significantly affects the other sites mentioned. Conversely, the ecological wellbeing of the other sites is likely to have a rather smaller effect on the Parklands.

While this report is confined to the Knox side of Dandenong Ck, there are similar connections on the other side of the creek and the site would be somewhat larger if ecological considerations were to prevail over the practicalities of the study area boundary.

The land use flanking the Parklands is so urbanised that it detracts from the Parklands' ecological function. On the other hand, some birds from the Parklands radiate to some degree into nearby residential neighbourhoods and parks, improving their aesthetics and the health of their trees.

Bioregion: Gippsland Plain

Habitat types

Stream Channel (No EVC number or conservation status available);

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

Floodplain Wetland Complex (EVC 172, **regionally Endangered**);

Floodplain Riparian Woodland (EVC 56, **regionally Endangered**);

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

Swampy Riparian Woodland (EVC 83, **regionally Endangered**);

Swampy Woodland (EVC 937, **regionally Endangered**);

Valley Heathy Forest (EVC 127, **regionally Endangered**).

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, *Eucalyptus yarraensis* is rare nationally and species with names in bold are rare throughout the Melbourne region.

Risk	Indigenous Species
E	*Acacia aculeatissima*
	Acacia dealbata
C	*Acacia genistifolia*
V	*Acacia implexa*
V	*Acacia mearnsii*
V	*Acacia melanoxylon*
E	*Acacia myrtifolia*
	Acacia paradoxa
E	*Acacia pycnantha*
V	*Acacia verticillata*
V	*Acaena echinata/ovina*
	Acaena novae-zelandiae
	Acrotriche serrulata
V	*Adiantum aethiopicum*
	Alisma plantago-aquatica
V	*Allocasuarina littoralis*
V	*Alternanthera denticulata*
C	*Amyema pendula*
	Arthropodium strictum
C	*Astroloma humifusum*
	Austrostipa pubinodis
	Austrostipa rudis subsp. *rudis*
V	*Azolla filiculoides*
E	***Azolla pinnata***
	Billardiera mutabilis
	Bossiæa prostrata
V	*Brunonia australis*
E	*Bulbine bulbosa*
	Burchardia umbellata
	Bursaria spinosa
C	*Caesia calliantha*
V	*Caesia parviflora*
C	*Caladenia dilatata* s.l.
	Carex appressa
	Carex breviculmis
E	***Carex fascicularis***
E	***Carex gaudichaudiana***
	Carex inversa
	Cassinia aculeata
	Cassinia arcuata
E	*Cassytha melantha*
E	*Cassytha pubescens*
E	*Centella cordifolia*
C	***Centipeda elatinoides***
V	*Clematis aristata*
	Clematis decipiens
V	*Comesperma volubile*
V	*Coprosma quadrifida*
E	*Correa reflexa*
E	*Crassula helmsii*
E	*Cyathea australis*
E	*Daviesia latifolia*
E	*Daviesia leptophylla*
	Deyeuxia quadriseta
	Dianella admixta
V	*Dianella longifolia* s.l.
	Dichelachne rara
	Dichondra repens
V	*Dillwynia cinerascens*
C	*Diuris chryseopsis*
V	*Drosera peltata* subsp. *auriculata*
E	*Drosera peltata* subsp. *peltata*
V	*Drosera whittakeri*
E	*Echinopogon ovatus*
E	***Elatine gratioloides***
V	*Eleocharis acuta*
C	***Eleocharis gracilis***
	Eleocharis sphacelata
	Elymus scaber
V	*Epacris impressa*
V	*Epilobium billardierianum* ssp. *cinereum*
	Epilobium hirtigerum
	Eragrostis brownii
V	*Eucalyptus cephalocarpa*
	Eucalyptus cephalocarpa × *ovata*
	Eucalyptus goniocalyx
E	*Eucalyptus macrorhyncha*
V	*Eucalyptus melliodora*
V	*Eucalyptus obliqua*
V	*Eucalyptus ovata*
E	*Eucalyptus polyanthemos*
E	*Eucalyptus radiata*
C	*Eucalyptus rubida*
E	*Eucalyptus viminalis* subsp. *viminalis*
C	***Eucalyptus yarraensis***
E	*Euchiton involucratus*
V	*Exocarpos cupressiformis*
	Gahnia radula
V	*Geranium* sp. 2
V	*Glyceria australis*
V	*Glycine clandestina*
	Gonocarpus tetragynus
E	*Goodenia humilis*
	Goodenia ovata
E	*Gynatrix pulchella*
C	*Haloragis heterophylla*
V	*Hardenbergia violacea*
V	*Helichrysum scorpioides*
E	*Hibbertia riparia*
V	*Hovea heterophylla*
V+	*Hydrocotyle* sp.
E	*Hypericum gramineum*
C	*Hypoxis hygrometrica*
E	*Indigofera australis*
E	*Isolepis hookeriana*
V	*Isolepis inundata*
	Juncus amabilis
C	***Juncus australis***
	Juncus bufonius
	Juncus gregiflorus

Risk	Indigenous Species
C	*Juncus holoschoenus*
	Juncus pallidus
E	*Juncus procerus*
	Juncus sarophorus
E	*Juncus subsecundus*
C	***Juncus vaginatus***
C	*Kennedia prostrata*
	Kunzea ericoides spp. agg.
	Lachnagrostis filiformis
V	*Lagenophora gracilis*
C	***Landoltia punctata***
E	*Lemna disperma*
	Lepidosperma gunnii
V	*Lepidosperma laterale*
	Leptorhynchos squamatus
V	*Leptorhynchos tenuifolius*
	Leptospermum continentale
E	*Leptospermum lanigerum*
E	*Leptospermum scoparium*
	Leptospermum sp.
C	*Leucopogon virgatus*
	Lomandra filiformis subsp. *coriacea*
	Lomandra filiformis subsp. *filiformis*
	Lomandra longifolia
C	*Lomandra multiflora* subsp. *multiflora*
V	*Luzula meridionalis*
C	***Lycopus australis***
V	*Lythrum hyssopifolia*
E	*Melaleuca ericifolia*
C	***Melaleuca parvistaminea***
E	*Melicytus dentatus*
	Microlaena stipoides
	Microtis parviflora
C	***Myriophyllum crispatum***
V	*Olearia lirata*
V	*Opercularia ovata*
V	*Opercularia varia*
C	***Ottelia ovalifolia***
	Oxalis exilis/perennans
E	*Ozothamnus ferrugineus*
	Persicaria decipiens
E	*Persicaria lapathifolia*
E	***Persicaria praetermissa***
E	*Phragmites australis*
V	*Pimelea humilis*
V	*Plantago varia*
V	*Platylobium obtusangulum*
	Poa ensiformis
	Poa morrisii
E	*Poa tenera*
E	***Polystichum proliferum***
E	*Pomaderris aspera*
C	***Pomaderris racemosa***
	Poranthera microphylla
V	***Potamogeton crispus***
V	*Potamogeton ochreatus*
C	***Potamogeton tricarinatus* s.l.**
E	*Prostanthera lasianthos*
	Pteridium esculentum
	Pterostylis nutans
C	***Ranunculus inundatus***
E	*Ranunculus lappaceus*
E	*Rubus parvifolius*
E	*Rytidosperma caespitosum*
	Rytidosperma laeve
	Rytidosperma linkii var. *fulvum*
	Rytidosperma pallidum
	Rytidosperma penicillatum
V	*Rytidosperma pilosum*
	Rytidosperma racemosum
	Rytidosperma setaceum
	Rytidosperma tenuius
	Schoenus apogon
	Senecio glomeratus
	Senecio hispidulus
E	*Senecio minimus*
E	*Senecio prenanthoides*
	Senecio quadridentatus
V	*Solanum laciniatum*
E	*Spyridium parvifolium*
E	*Stackhousia monogyna*
E	*Stylidium armeria/graminifolium*
E	*Tetratheca ciliata*
V	*Thelymitra peniculata*
	Themeda triandra
	Tricoryne elatior
C	*Triglochin procera*
E	*Typha domingensis*
E	*Typha orientalis*
V	*Veronica gracilis*
C	***Viminaria juncea***
E	*Viola hederacea*
V	***Wolffia australiana***
E	*Wurmbea dioica*
V	*Xanthorrhoea minor*

Introduced Species

Acacia baileyana	*Aira caryophyllea*	*Asparagus officinalis*	*Callitriche stagnalis*
Acacia decurrens	*Aira cupaniana*	*Aster subulatus*	*Calystegia silvatica*
Acacia longifolia subsp. *longifolia*	*Aira* sp.	*Atriplex prostrata*	*Centaurium erythraea*
	Allium triquetrum	*Avena* sp.	*Chenopodium album*
Acer negundo	*Alopecurus pratensis*	*Billardiera heterophylla*	*Chrysanthemoides monilifera* subsp. *monilifera*
Acetosella vulgaris	*Anagallis arvensis*	*Briza maxima*	
Agapanthus praecox	*Anagallis arvensis* var. *arvensis*	*Briza minor*	*Cirsium vulgare*
Agave americana	*Anagallis minima*	*Bromus catharticus*	*Conium maculatum*
Agrostis capillaris	*Anthoxanthum odoratum*	*Bromus diandrus*	*Conyza sumatrensis*
Agrostis capillaris	*Arctotheca calendula*	*Bromus hordeaceus*	*Cortaderia selloana*

Cotoneaster glaucophyllus
Cotoneaster pannosus
Cotula coronopifolia
Crataegus monogyna
Crocosmia × *crocosmiiflora*
Cupressus sp.
Cynara cardunculus
Cynodon dactylon
Cyperus eragrostis
Dactylis glomerata
Daucus carota
Delairea odorata
Dittrichia graveolens
Echinochloa crus-galli
Egeria densa
Ehrharta erecta
Ehrharta longiflora
Epilobium ciliatum
Erica lusitanica
Euphorbia peplus
Festuca arundinacea
Festuca rubra
Fraxinus angustifolia
Freesia alba × *leichtlinii*
Fumaria capreolata
Fumaria officinalis spp. agg.
Galenia pubescens
Galium aparine
Genista linifolia
Genista monspessulana
Gladiolus undulatus
Grevillea robusta
Hedera helix
Helminthotheca echioides
Holcus lanatus
Hypericum tetrapterum
Hypochoeris radicata
Isolepis levynsiana
Jasminum sp.
Juncus articulatus
Juncus capitatus
Leontodon taraxacoides
Ligustrum vulgare
Linum trigynum
Lolium perenne
Lonicera japonica
Lotus subbiflorus
Lotus uliginosus
Ludwigia sp.
Malus pumila
Malva parviflora
Medicago polymorpha
Melilotus indicus
Mentha pulegium
Mentha spicata
Mentha × *piperita*
Modiola caroliniana
Myosotis sylvatica
Myriophyllum aquaticum
Oxalis ?*incarnata*
Oxalis pes-caprae
Paspalum dilatatum
Paspalum distichum
Pennisetum clandestinum
Phalaris aquatica
Phalaris minor
Pinus radiata
Pittosporum undulatum
Plantago coronopus
Plantago lanceolata
Plantago major
Poa annua
Polygonum aviculare s.l.
Polygonum aviculare
Populus sp.
Prunella vulgaris
Prunus cerasifera
Ranunculus repens
Raphanus raphanistrum
Romulea rosea
Rorippa palustris
Rosa rubiginosa
Rubus anglocandicans
Rumex conglomeratus
Rumex crispus
Salix babylonica s.l.
Salpichroa origanifolia
Sedum sp.
Sisyrinchium iridifolium
Solanum nigrum
Solanum pseudocapsicum
Sonchus asper s.l.
Sonchus oleraceus
Sporobolus africanus
Taraxacum officinale
Tradescantia fluminensis
Trifolium campestre
Trifolium dubium
Trifolium glomeratum
Trifolium repens
Ulex europaeus
Vicia hirsuta
Vicia sativa
Vinca major
Viola odorata
Vulpia bromoides
Watsonia meriana
Zantedeschia aethiopica

Notes concerning some of the locally threatened plant species

Acacia aculeatissima (Thin-leaf Wattle). Only a few plants seen by the author, beside and near High Street Rd.
Astroloma humifusum (Cranberry Heath). Last recorded in 1989.
Caesia calliantha (Blue Grass-lily). Last recorded in 1989.
Callistemon ?*sieberi* (River Bottlebrush). Two plants discovered in 2004 near the Shepherd Rd footbridge.
Carex fascicularis (Tassel Sedge). A rather large population at several locations.
Carex gaudichaudiana (Fen Sedge). Last recorded in 1989.
Centipeda elatinoides (Elatine Sneezeweed). Last recorded in 1989.
Clematis microphylla (Small-leafed Clematis). Last recorded in 1989.
Correa reflexa (Common Correa). Last recorded in 1989.
Crassula helmsii (Swamp Crassula). Common in wetlands, particularly toward Wellington Rd.
Daucus glochidiatus (Austral Carrot). Last recorded in 1989.
Daviesia leptophylla (Narrow-leaf Bitter-pea). Last recorded in 1989.
Drosera peltata ssp. *peltata* (Pale Sundew). Localised in two patches of Valley Heathy Forest, but abundant there.
Echinopogon ovatus (Common Hedgehog-grass). Last recorded in 1989.
Eleocharis gracilis (Slender Spike-rush). Last recorded in 1989.
Eucalyptus rubida (Candlebark). Last recorded in 1989, but dubiously.
Eucalyptus yarraensis (Yarra Gum). Locally common, particularly in the triangle between Blind Ck, Dandenong Ck and High Street Rd.
Glyceria australis (Australian Sweet-grass). Surprisingly uncommon. Discovered in 2004 in small numbers.
Goodenia humilis (Swamp Goodenia). Last recorded in 1992.
Gynatrix pulchella (Hemp Bush). Scattered along Dandenong Ck.
Haloragis heterophylla (Varied Raspwort). Last recorded in 1989.
Hypoxis hygrometrica var. *hygrometrica* (Golden Weather-glass). Very scarce, found in Robinson's in 1998.
Isolepis hookeriana (Grassy Club-rush). Numbers uncertain due to the species' cryptic, ephemeral ecology.
Juncus australis (Austral Rush). Many discovered in 2004 near Wellington Rd.
Juncus holoschoenus (Joint-leaf Rush). Found in moderate numbers in a few wetlands.
Kennedia prostrata (Running Postman). Scarce and localised, but possibly present as soil-stored seed in more locations.
Lemna disperma (Common Duckweed). Fairly common in wetlands.
Lomandra multiflora ssp. *multiflora* (Many-flowered Mat-rush). Last recorded in 1989.
Luzula meridionalis (Common Woodrush). Last recorded in 1989.
Lycopus australis (Australian Gipsywort). Many found in the Shepherds Bush area.

Melaleuca parvistaminea (Rough-barked Honey-myrtle). Unique in Knox. Herbarium specimen collected by botanist Mr W.M. Molyneux in 1990 (specimen number MEL 2011925). This species is probably still present but hard to distinguish from the dominant *M. ericifolia* with which Mr Molyneux said it was growing.
Melicytus dentatus (Tree Violet). Localised to stream banks, but moderately common.
Microtis parviflora (Slender Onion-orchid). Few recorded, but possibly locally common in Valley Heathy Forest.
Myriophyllum crispatum (Upright Milfoil). Moderate numbers found in 2004 near Wellington Rd.
Ottelia ovalifolia (Swamp Lily). In several wetlands, mostly with more than just a few plants in each.
Persicaria lapathifolia (Pale Knotweed). Moderately common in and around wetlands and stream channels.
Persicaria praetermissa (Spotted Knotweed). Discovered during 2004 in two wetlands, abundant in one of them.
Potamogeton crispus (Curly Pondweed). Discovered in this study. Common in the creeks.
Ranunculus lappaceus (Australian Buttercup). Last recorded in 1989.
Rumex brownii (Slender Dock). Last recorded in 1989.
Spirodela punctata (Thin Duckweed). Discovered during 2004 in moderate numbers in a few wetlands.
Spyridium parvifolium (Australian Dusty Miller). Last recorded in 1989.
Viminaria juncea (Golden Spray). Last recorded in 1989.
Wolffia australiana (Tiny Duckweed). Discovered during 2004 in moderate numbers in a few wetlands.
Wurmbea dioica (Common Early Nancy). Scattered through patches of Valley Heathy Forest.

Fauna of special significance

The Atlas of Victorian Wildlife contains many unreliable records of birds in the Parklands, based on a 1994 list. The bird species in the list below are mostly from the report, *'Birds of the Dandenong Valley Parklands – An Annotated Checklist'* by careful observer, Mr Ren Millsom, who has surveyed birds in the valley for many years.

Nationally Endangered

Swift Parrot. Seen rarely to make brief stop-overs during autumn migration.

Nationally Vulnerable

Warty Bell Frog. Listed for the Parklands in 1988, but not detected during any of the searches that have been conducted within the Parklands (or anywhere else in the catchment) as part of the Melbourne Frog Census since its inception in 2001. Quite likely to be not extant.

Critically Endangered in Victoria

Intermediate Egret – Recorded only once by a skilled observer who can reliably distinguish this species, in c.1990 on the western side of Dandenong Ck (and hence not in Knox).

Endangered in Victoria

Blue-billed Duck – Rarely seen in the Parklands since 1993, prior to which it was more common.
Little Egret - A very rare visitor with no record in recent years.
Little Bittern – A single record from Geoff Deason in 1994 at Koomba Park.
Australasian Bittern - Only one report in recent years for the Parklands, but the species' secretiveness and the extensive suitable habitat in the Parklands mean there could well be reasonable numbers present.

Vulnerable in Victoria

Hardhead – This species was once more common and bred in the Parklands, but has shifted to nearby lakes (e.g. Sites 43,65 and 69) since carp began to cloud the water in the previously favoured site in the Parklands.
Musk Duck – No records since 1985.
Australasian Shoveller – An uncommon visitor, in pairs or small parties.
Great Egret – Commonly seen, mostly as solitary individuals, in certain wetlands or marshy areas, and less commonly at other swampy locations.
Nankeen Night Heron – There is a substantial population, probably increasing in numbers since 1992.
Royal Spoonbill - Seen in the shallow wetlands, either singularly or in small parties, and becoming more abundant over the years.
Baillon's Crake – An occasional summer visitor, usually in years of inland drought. There is a 1997 record from near Wellington Rd in the Atlas of Victorian Wildlife.
Powerful Owl – Apparently only vagrant.

Near Threatened in Victoria

Pied Cormorant – multiple records up to at least 1999, from various locations in the parklands, appear in the Atlas of Victorian Wildlife, but the occurrences seem to be vagrants.
Whiskered Tern – A very rare visitor to the Parklands, and not yet recorded on the Knox side of Dandenong Ck.
Latham's (or Japanese) Snipe - A common non-breeding visitor in spring and summer, in substantial numbers.
Glossy Grass Skink – A 1994 record appears in the Atlas of Victorian Wildlife.

Fauna habitat features

- There is aquatic habitat in the streams and wetlands, some with fringing native vegetation;
- Waterbirds forage and breed in the wetlands;
- Many large eucalypts have tree hollows that would make suitable locations for habitation by native birds, bats, possums and insects;
- Patches of scrub and revegetation plots provide habitat for small insect-eating birds such as wrens;
- Some areas have logs and fallen branches that may provide cover for native reptiles and invertebrates;
- Fragmentation of the Parklands' native vegetation is to some degree offset by the diversity of habitat (forest, woodland, grassland, wetland, stream), which is beneficial to some native fauna.

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 parts 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)'. This applies to the Dandenong Valley Parklands.

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 (like most of the remnant native vegetation in this site) have a conservation significance rating of High or Very High. In either case, the significance level of the site is **State** under criterion 3.2.3.

Rare or Threatened Flora

Eucalyptus yarraensis is endemic to Victoria and is on the Department of Sustainability & Environment's *'Advisory List of Rare or Threatened Plants in Victoria – 2005'*. The author estimates that more than half of the global population of this species would be in sites with smaller populations than the Parklands. It follows from criterion 3.1.2 that the Parklands is of **National** significance for its population of *Eucalyptus yarraensis*.

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

Rare or Threatened Fauna

Of the 'Fauna of special significance' above, the most significant populations are probably the Great Egret, Nankeen Night Heron and Royal Spoonbill, because they are Vulnerable species, regularly observed and making substantial use of the wetlands or wet pasture in the Parklands. The apparent population sizes of these species are in the range which qualifies for **Regional** significance under criterion 3.1.2. The substantial seasonal population of Latham's Snipe might also be argued to be of Regional significance, but only barely if at all.

The other 'Fauna of special significance' listed above, and several other species that are rare or threatened in the Melbourne region, give the site **Local** significance.

Scientific and educational value

The site is of **Regional** significance under criterion 5.1.1 because of its importance as a site for studying and monitoring the regenerative capacity of an endangered EVC (Valley Heathy Forest) and the ways that this may be encouraged, with application to other sites in the region.

Threats

- Invasion by environmental weeds is the main environmental threat, at least for the short to medium term;
- Tree dieback disease;
- 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;
- European Carp, which have already caused serious ecological damage in Jells Lake and could do likewise in other wetlands if they were to arrive there;
- Climate change. While this may affect all of Knox to one degree or another, the large floodplain in the Parklands is probably at greater risk than elsewhere.

Management issues

Management issues in the Parklands are outside the scope of this report.

Administration matters

- A targeted search for the Warty Bell Frog (or Growling Grass Frog) would be desirable;
- 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 Sites 75-80.

Information sources used in this assessment

- The author's work in the Parklands for Parks Victoria since 1997, which led to the following reports for Parks Victoria (all authored by Dr Lorimer):
  - 'Dandenong Valley Parklands - Flora Survey Prior to Ecological Burns' (1997);
  - 'Dandenong Valley Parklands - Flora Recovery after Ecological Burns' (1999);
  - 'Plant Species List for Dandenong Valley Parklands' (2000);
  - 'Dandenong Valley Parklands - Second Baseline Flora Survey for Fire Research' (2000);
  - 'Dandenong Valley Parklands Ground Flora Survey, Revisited' (2000); and
  - 'Dandenong Valley Parklands - Flora Recovery after Ecological Burns and Other Treatments' (2001);

  as well as the scientific paper, *'Ecological burning trials in degraded open-forest remnants in Melbourne'*, presented to the Ecological Society of Australia's annual conference in 2000.

  The data generated from the above studies included updated plant lists for the Parklands as well as data from nine quadrats within Knox. To monitor the effects of fire and selective herbicide application, five of the quadrats have each been surveyed in three separate years (1997, 1998, 2000) and the other four quadrats were each surveyed in 1999 and 2000;
- References cited in the above documents, including plant species lists for the Parklands and *'Botanical Survey and Guidelines for the Management of Remnant Native Vegetation in the Dandenong Valley Metropolitan Park'* by R. Adams and D. Simmons for the MMBW in 1989;
- A vegetation map showing EVCs and vegetation quality, and seven lists of plant species (indigenous and introduced) for different sections of High Street Rd within the site, observed by Dr Lorimer on 11th-17th September 1997, as described in the report, *'A Survey and Management Plan for Significant Vegetation of Roadsides in Knox'* by G.S. Lorimer for Knox City Council (May 1998, 137 pp.);
- The equivalent of one full day of vegetation survey by Dr Lorimer, on foot and by bicycle, within the parklands from Wellington Rd to Burwood Hwy in January 2004, and close to Boronia Rd on 30/8/02. The purpose was to determine appropriate site boundaries, update old plant lists, check the EVCs that had been mapped by the Department of Sustainability & Environment (which are inaccurate), check for rare flora or fauna and provide a stronger basis for preparing the text above;
- A brief inspection of roadside vegetation along Ferntree Gully Rd in late 2003, seeking *Eucalyptus yarraensis* and *Melaleuca parvistaminea*;
- The 1998 *'Scoresby Transport Corridor Environment Effects Statement'*, including Supplement Volume H: Flora and Fauna by Williams L.M., Yugovic J.V., McGuckin J., Humphrey P. and Larwill S. (1998), in which part of Koomba Park is labelled as 'Site 4';
- 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;
- The report, *'Birds of the Dandenong Valley Parklands – An Annotated Checklist'* by careful observer, Mr Ren Millsom, who has surveyed birds in the valley for many years, plus updated verbal information from Mr Millsom.
- The Atlas of Victorian Wildlife (which contains many unreliable records for the Parklands, from a 1994 bird list);
- 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.

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Thanks to Mr Ren Millsom for documentation and verbal information about bird observations in the Parklands.