

Site 20. Lower Dobson Creek, The Basin

River flats with pasture and a playing field, as well as an adjacent forested hillside. Melway ref. 65 H6.

Site Significance Level: *State*

- Being on Dandenong Creek, the site is on a corridor for daily and seasonal movements of birds and insects;
- The floodplain is important for waterway function. It also attracts thousands of waterbirds during floods (even where there is no native vegetation), and some of the waterbird species are threatened;
- There is at least one roosting site for the Powerful Owl, which is listed as Vulnerable in Victoria;
- The waters of Dandenong Ck and Dobsons Ck support platypus, fish (including a locally rare species) and the smaller organisms that support them;
- Two regionally endangered Ecological Vegetation Classes are represented as well as one regionally vulnerable one.



Boundaries

This 76.3 ha site is outlined in red and labelled on the aerial photograph above. The northern boundary is the municipal boundary along Pavitt Lane. The other edges follow property boundaries or fence lines where practicable. The boundary is

completed with a few straight lines, mainly between well-defined locations such as fence straining posts or intersections between fences and property boundaries.

Land use & tenure: Freehold farmland and road reservations.

Site description

This site mostly occupies the uppermost parts of the broad floodplain drained by Dandenong Ck and Bungalook Ck, at elevations of approximately 140-170 m. Within a few hundred metres upstream from here, Dandenong Ck, Dobsons Ck and an unnamed creek are mountain streams with steep gradients and narrow, steep-sided valleys. The water flowing down these streams dissipates its energy on reaching the floodplain, causing silt to deposit and form the alluvial soil that has attracted farming to the area.

It has been some years since major flooding occurred, but inundation occurs more frequently than recent years suggest. The floods attract thousands of waterbirds of numerous species. Even when there is no flood, birds such as pelicans, spoonbills and egrets can often be seen moving along the floodplain and the course of Dandenong Ck further downstream, presumably following an ancestral route between the coast and the floodplain.

Floods would have caused the streams' natural courses to move greatly around the floodplain over the millennia. The present channels are mostly artificial, having been re-routed and straightened (as indicated by comparison with maps from the late 19th century). Dobsons Ck used to flow into Dandenong Ck downstream from Liverpool Rd, passing through the middle of the plant nursery on Liverpool Rd that is marked on the aerial photograph.

As can be seen from the aerial photograph, most of the floodplain's native vegetation has been cleared for pasture. The remaining strips along the watercourses still serve some habitat function (as evidenced by a roosting Powerful Owl) as well as protecting the waterway and its aquatic environment for the benefit of humans and fauna such as Platypus and Broadfin Galaxias. There are also some locally rare plants along the streams. In addition to the strips outlined in white along the streams, labelled 'Riparian Forest' or 'Swampy Riparian Woodland', there are scattered trees and tiny patches of native vegetation along the watercourses, as well as patches of woody weeds such as Hawthorn (*Crataegus monogyna*).

Dandenong Ck is particularly deficient in native vegetation, so it is important that the verge of Pavitt Lane provides a parallel corridor that links more substantial habitat further upstream and downstream. Unfortunately, most of the road verge is too distant from Dandenong Ck to provide the creek with shade, nutrient input and other habitat values. Due to a long history of slashing and grading, the understorey of the road verge mostly comprises introduced plants such as woody weeds and pasture grass.

The site includes two areas on slopes beside the floodplain. One is the area occupied by buildings (see the aerial photograph), where the Salvation Army provides residential rehabilitation programs for addicts. This area is of no environmental significance and is included within the site only because changed land use there could have significant consequences on the adjacent floodplain. The other elevated land is west of Dobsons Ck, included within the site mainly because of the remnant Herb-rich Foothill Forest that is marked on the aerial photograph. The bedrock beneath this forest is Mount Evelyn Rhyodacite, which has formed an acidic clay loam soil. The slope is between 15% and 20%, facing east-southeast.

Within the Herb-rich Foothill Forest, a southern strip has no understorey other than exotic pasture, which is grazed by livestock. A larger area is fenced to keep livestock out. It has very serious infestations of Sweet Pittosporum and Blackberry that have greatly reduced the density of native ground flora, but the area retains a good cover of canopy trees, a fair cover of indigenous lower trees and shrubs and a modest number of ground flora species.

Relationship to other land

The native vegetation along both sides of Pavitt Lane provides a corridor between the Dandenong Ranges National Park and Liverpool Road Retarding Basin (Site 22).

Birds, bats, possums, frogs, insects and pollen undoubtedly move between the site and the various other sites marked on the aerial photograph to the east and southeast, as well as into the westward continuation of the Herb-rich Foothill Forest on Melbourne Water's property with the marked tank (or covered reservoir). The Melbourne Water land is included in Site 99, the Dandenong Ranges Buffer.

The Platypus that were found in 2002 at the Sheffield Rd crossings of both Dandenong Ck and Dobsons Ck no doubt move both upstream and downstream of those locations, between this site and land upstream. They also probably move into Liverpool Road Retarding Basin.

Bioregion: The floodplain is part of the Gippsland Plain bioregion and the slopes are within the Highlands Southern Fall.

Habitat types

Perennial Stream (No EVC number). Flora includes *Isolepis inundata*, *Juncus gregiflorus* and *Lemna disperma*.

Riparian Forest (EVC 18, **Vulnerable** in the Gippsland Plain bioregion): Estimated to cover 3.2 ha, comprising 0.3 ha in fair ecological condition (rating C) and 2.9 ha in poor ecological condition (rating D). 50 indigenous plant species were found.

Dominant canopy trees: *Eucalyptus viminalis* with smaller numbers of *E. obliqua* in some places and *E. ovata* in others.

Dominant lower trees: *Acacia melanoxylon*, with fewer *Pomaderris aspera*, *Melaleuca ericifolia* and *Exocarpos cupressiformis*.

Shrubs: *Coprosma quadrifida* is the most numerous indigenous shrub species. Others include *Cassinia aculeata*, *Goodenia ovata*, *Gynatrix pulchella*, *Olearia lirata*, *Ozothamnus ferrugineus* and *Prostanthera lasianthos*. The shrubby herb, *Senecio minimus*, is also present.

Vines: *Calystegia marginata* is present but very scarce. *Rubus parvifolius* is scattered. The weeds *Lonicera japonica* and *Rubus discolor* are well established.

Ferns: *Adiantum aethiopicum*, *Cyathea australis* and *Pteridium esculentum* are present.

Ground flora: The indigenous ground flora has been heavily replaced by weeds. The natural ground layer is tussocky due to abundant *Carex appressa*, *Juncus* species and *Poa ensiformis*, but with large patches dominated by *Phragmites australis*. Creepers and scramblers are conspicuous, including *Acaena novae-zelandiae* and *Austrocynoglossum latifolium*. Amphibious species are well represented, particularly by *Persicaria* species.

Herb-rich Foothill Forest (EVC 23, conservation status rated 'Least Concern' in the bioregion): Estimated to cover 2.5 ha, with 0.25 ha in fair ecological condition (rating C) and 2.25 ha in poor ecological condition (rating D). 26 indigenous plant species were recorded on 8/4/02, and others would be detected in late spring or summer.

Canopy trees: Dominated by *Eucalyptus obliqua* with smaller numbers of *E. goniocalyx*, *E. ovata* and *E. radiata*, forming a fair to good cover up to >25 m tall.

Lower trees: *Acacia melanoxylon* and a smaller number of *Exocarpos cupressiformis*.

Shrubs: Absent in grazed areas and mostly dominated by a very serious infestation of *Pittosporum undulatum* elsewhere. The most abundant of the indigenous species are *Coprosma quadrifida* and *Ozothamnus ferrugineus* and there are also *Acacia stricta*, *Bursaria spinosa*, *Cassinia aculeata*, *Goodenia ovata*, *Indigofera australis*, *Polyscias sambucifolia* and *Prostanthera lasianthos*.

Vines: *Clematis aristata* is present.

Ferns: There are large patches of *Pteridium esculentum* and more localised patches of *Calochlaena dubia*.

Ground flora: The indigenous ground flora is all but absent in grazed areas and heavily suppressed by the very serious weeds, *Pittosporum undulatum* and *Rubus discolor* elsewhere. The dominant indigenous species are *Poa ensiformis* and *Pteridium esculentum*. *Gahnia radula*, *Lomandra longifolia* and *Viola hederacea* are also present, along with grasses that could not be identified.

Swampy Riparian Woodland (EVC 83, **regionally Endangered**): Estimated to cover 0.8 ha, comprising 0.1 ha in fair ecological condition (rating C) and 0.7 ha in poor ecological condition (rating D). 36 indigenous plant species were found.

Dominant canopy trees: *Eucalyptus ovata* to nearly 30 m tall, fairly sparse.

Dominant lower trees: *Acacia melanoxylon* (characteristically supporting the mistletoe, *Amyema quandang*), with fewer *Melaleuca ericifolia* and *Pomaderris aspera*.

Shrubs: *Goodenia ovata* and *Prostanthera lasianthos* dominate. *Cassinia aculeata*, *Coprosma quadrifida* and *Ozothamnus ferrugineus*, *Olearia lirata* and *Polyscias sambucifolia* are also present, and so is the shrubby herb, *Senecio minimus*.

Vines: *Billardiera mutabilis* is present but scarce.

Ferns: *Blechnum minus*, *Cyathea australis* and *Pteridium esculentum* were recorded.

Ground flora: Confined to patches that are less accessible to grazing. Dominated by *Phragmites australis*, *Poa ensiformis* and *Tetrarrhena juncea*. Other species include *Acaena novae-zelandiae*, *Dianella tasmanica*, *Gahnia radula*, *G. sieberiana*, *Juncus gregiflorus*, *J. procerus*, *Lepidosperma elatius*, *Lomandra longifolia*, *Persicaria decipiens* and *P. praetermissa*.

Swampy Woodland (EVC 937, **regionally Endangered**): Estimated to cover 2.55 ha, comprising 0.05 ha in fair ecological condition (rating C) and 2.5 ha in poor ecological condition (rating D). 32 indigenous plant species were found.

Dominant canopy trees: Pure or near-pure stands of *Eucalyptus ovata*, except along most of Sheffield Rd where the canopy is overwhelmingly *E. cephalocarpa* and the vegetation approaches Valley Heathy Forest.

Dominant lower trees: *Acacia melanoxylon* is dominant. *Melaleuca ericifolia* is abundant but not dominant. *Exocarpos cupressiformis* is much less abundant.

Shrubs: Greatly reduced in density by past clearing and slashing. The most common shrubs are *Bursaria spinosa*, *Coprosma quadrifida* and *Goodenia ovata*.

Vines: Sparse *Pandorea pandorana*.

Ferns: *Pteridium esculentum* is abundant, a dominant species of the ground flora. There are no other ferns.

Ground flora: The indigenous ground flora has been drastically reduced by past clearing, slashing, excavation and consequent weed invasion. *Gahnia radula* and *Lomandra longifolia* are the most common indigenous species.

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, the species with names in bold are rare throughout the Melbourne region.

Risk	Indigenous Species	Risk	Indigenous Species
V	<i>Acacia melanoxylon</i>	E	<i>Indigofera australis</i>
E	<i>Acacia stricta</i>	V	<i>Isolepis inundata</i>
	<i>Acaena novae-zelandiae</i>		<i>Juncus amabilis</i>
V	<i>Adiantum aethiopicum</i>		<i>Juncus gregiflorus</i>
V	<i>Alternanthera denticulata</i>		<i>Juncus pallidus</i>
V	<i>Amyema quandang</i>	E	<i>Juncus procerus</i>
E	<i>Austrocynoglossum latifolium</i>	E	<i>Lemna disperma</i>
	<i>Austrostipa rudis</i> subsp. <i>rudis</i>		<i>Lepidosperma elatius</i>
	<i>Billardiera mutabilis</i>		<i>Leptospermum continentale</i>
C	<i>Blechnum minus</i>		<i>Lomandra longifolia</i>
	<i>Bursaria spinosa</i>	V	<i>Lythrum hyssopifolia</i>
V	<i>Calochlaena dubia</i>	E	<i>Melaleuca ericifolia</i>
E	<i>Calystegia marginata</i>	C	<i>Melaleuca squarrosa</i>
	<i>Carex appressa</i>		<i>Microlaena stipoides</i>
	<i>Cassinia aculeata</i>	V	<i>Olearia lirata</i>
	<i>Cassinia arcuata</i>	E	<i>Ozothamnus ferrugineus</i>
V	<i>Clematis aristata</i>		<i>Pandorea pandorana</i>
V	<i>Coprosma quadrifida</i>		<i>Persicaria decipiens</i>
E	<i>Cyathea australis</i>	E	<i>Persicaria hydropiper</i>
	<i>Deyeuxia quadrisetia</i>	E	<i>Persicaria praetermissa</i>
V	<i>Dianella tasmanica</i>	C	<i>Persicaria subsessilis</i>
	<i>Dichondra repens</i>	E	<i>Phragmites australis</i>
	<i>Epilobium hirtigerum</i>		<i>Poa ensiformis</i>
V	<i>Eucalyptus cephalocarpa</i>	E	<i>Poa tenera</i>
	<i>Eucalyptus goniocalyx</i>	E	<i>Polyscias sambucifolia</i>
V	<i>Eucalyptus obliqua</i>	E	<i>Pomaderris aspera</i>
V	<i>Eucalyptus ovata</i>	E	<i>Prostanthera lasianthos</i>
E	<i>Eucalyptus radiata</i>		<i>Pteridium esculentum</i>
E	<i>Eucalyptus viminalis</i> subsp. <i>viminalis</i>	E	<i>Rubus parvifolius</i>
V	<i>Exocarpos cupressiformis</i>		<i>Senecio hispidulus</i>
E	<i>Exocarpos strictus</i>	E	<i>Senecio minimus</i>
	<i>Gahnia radula</i>		<i>Senecio quadridentatus</i>
E	<i>Gahnia sieberiana</i>		<i>Tetrarrhena juncea</i>
V	<i>Geranium potentilloides</i>	E	<i>Viola hederacea</i>
	<i>Gonocarpus tetragynus</i>	E	<i>Wahlenbergia gracilis</i>
	<i>Goodenia ovata</i>	V	<i>Xanthorrhoea minor</i>
E	<i>Gynatrix pulchella</i>		

Introduced Species

<i>Acer pseudoplatanus</i>	<i>Crepis capillaris</i>	<i>Fumaria ?officinalis</i> spp. agg.	<i>Oxalis pes-caprae</i>
<i>Allium triquetrum</i>	<i>Crocsmia</i> × <i>crocsmiiflora</i>	<i>Galium aparine</i>	<i>Pennisetum clandestinum</i>
<i>Anthoxanthum odoratum</i>	<i>Cyperus eragrostis</i>	<i>Genista monspessulana</i>	<i>Phalaris aquatica</i>
<i>Asparagus scandens</i>	<i>Dactylis glomerata</i>	<i>Hedera helix</i>	<i>Pinus radiata</i>
<i>Aster subulatus</i>	<i>Delairea odorata</i>	<i>Hypericum androsæmum</i>	<i>Pittosporum undulatum</i>
<i>Callitriche stagnalis</i>	<i>Ehrharta erecta</i>	<i>Hypericum tetrapterum</i>	<i>Plantago lanceolata</i>
<i>Chlorophytum comosum</i>	<i>Euphorbia peplus</i>	<i>Hypochoeris radicata</i>	<i>Prunella vulgaris</i>
<i>Cirsium vulgare</i>	<i>Festuca arundinacea</i>	<i>Ilex aquifolium</i>	<i>Prunus cerasifera</i>
<i>Coryza sumatrensis</i>	<i>Foeniculum vulgare</i>	<i>Juncus articulatus</i>	<i>Quercus robur</i>
<i>Coprosma robusta</i>	<i>Fraxinus angustifolia</i>	<i>Lonicera japonica</i>	<i>Ranunculus repens</i>
<i>Cotoneaster pannosus</i>	<i>Fraxinus angustifolia</i>	<i>Malus pumila</i>	<i>Romulea rosea</i>
<i>Crataegus monogyna</i>		<i>Oxalis incarnata</i>	<i>Rosa rubiginosa</i>

<i>Rubus anglocandicans</i>	<i>Salix × rubens</i>	<i>Tradescantia fluminensis</i>	<i>Zantedeschia aethiopica</i>
<i>Rumex crispus</i>	<i>Solanum nigrum</i>	<i>Trifolium repens</i>	
<i>Salix babylonica</i> s.l.	<i>Sonchus oleraceus</i>	<i>Vinca major</i>	

Notes concerning some of the locally threatened plant species

- Austrocynoglossum latifolium* (Forest Hound's-tongue). Several plants were found beside Dandenong Ck.
- Blechnum minus* (Soft Water-fern). A few plants were found around a small dam adjacent to Dobsons Ck.
- Calystegia marginata* (Forest Bindweed). About a dozen plants found, and others on the other side of Liverpool Rd.
- Gahnia sieberiana* (Red-fruit Saw-sedge). Scarce near the eastern bend in Sheffield Rd; more abundant near Basin-Olinda Rd.
- Gynatrix pulchella* (Hemp Bush). Five plants found, threatened by grazing.
- Juncus holoschoenus* (Joint-leaf Rush). Small numbers seen beside Sheffield Rd, and quite likely others overlooked.
- Lemna disperma* (Common Duckweed). In several patches along the creeks.
- Melaleuca squarrosa* (Scented Paperbark). A solitary, sick specimen was found amid weeds beside Sheffield Rd.
- Persicaria praetermissa* (Spotted Knotweed). Several patches were found along Dobsons Ck.
- Persicaria subsessilis* (Hairy Knotweed). Plants scattered along Dandenong Ck, particularly near Liverpool Rd.

Fauna of special significance

Vulnerable in Victoria and listed under the *Flora and Fauna Guarantee Act 1988*

Powerful Owl. Observed roosting close to Dobsons creek during this study (8/4/02).

Threatened in Victoria

Little, Intermediate and/or Great Egrets. Observed in substantial numbers at times of flood in the past decade.

Uncommon in the Melbourne Region

Platypus. Trapped and released at the edge of this site in Dandenong Ck in 2001 and in Dobsons Ck in 2002 (Williams 2002).

White-necked Heron. Observed in substantial numbers at times of flood in the past decade.

Cattle Egret. Frequently seen foraging on the floodplain and the pasture on the slopes.

Australian King-parrot. Locally common around The Basin.

Rare or Threatened in suburban Melbourne

Broadfin Galaxias. Trapped in Dandenong Ck in 2002 at Sheffield Rd (Williams 2002).

Fauna habitat features

- Vegetation on the slope on the western side of Dobsons Ck includes a roosting site for the Powerful Owl and the creek corridor is likely to form an important component of its territory;
- Native vegetation along Dobsons Ck and on the western slope supports substantial populations of smaller forest birds, including several nests observed within dense thickets of shrubs on the western slope;
- The larger Manna Gums and Swamp Gums along the creeks contain hollows;
- The floodplain provides foraging habitat for waterbirds, which congregate there in thousands during times of flood;
- The waters of Dandenong Ck and Dobsons Ck support Platypus, fish and the smaller organisms that support them;
- Fauna on the site always have access to water from the streams or dams, even during drought.

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 part of this site.

The site is known as a feeding site for nomadic species listed as threatened in Victoria (specifically, Little Egrets, Intermediate Egrets and/or Great Egrets). Criterion 1.2.3 confers State significance on such sites if the species are deemed to be 'reliant on defined, dispersed feeding sites'. This might or might not apply to the egrets. The significance is taken here to be **Regional** because of the relatively low frequency with which the birds use the site.

For a broader range of fauna, the site is an ecological 'stepping stone' for the reasons discussed above in the section on 'Relationship to other land'. In terms of criterion 1.2.6, it is 'Important at local scale - Link between individual remnant habitat blocks or within subcatchment', which confers **Local** significance on the site.

Regionally Threatened Ecological Vegetation Class

Criterion 3.2.3 confers at least Local significance on any site containing native vegetation that meets the Department of Sustainability & Environment's definition of a 'remnant patch'.

The central part of the Herb-rich Foothill Forest clearly qualifies as a 'remnant patch'. Because of the conservation status and ecological condition of this area, it gives the site only Local significance. The Riparian Forest and Swampy Riparian Woodland both have substantial areas that qualify as remnant patches because of their fully developed tree canopies. Riparian forest is listed as vulnerable and gives the site Regional significance. Swampy Riparian Woodland is Endangered and gives the site **State** significance.

Rare or 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.

Rare or Threatened Fauna

The use of the site by Powerful Owl for roosting, combined with the additional habitat features that the site possesses for that species (e.g. large tree hollows), gives the site at least **Regional** significance under Criterion 3.1.

Many of the locally threatened plant species listed above have viable populations, thereby meeting criterion 3.1.5 for a site of **Local** significance. The same is probably also true for some of the significant fauna species listed above.

Threats

- Grazing access by livestock along most of the creek has resulted in substantial depletion of remnant vegetation and fragmentation of habitat;
- Invasion of native vegetation by environmental weeds, the worst of which are:
 - Square-stemmed St John's Wort (*Hypericum tetrapterum*), a weed that is Regionally Prohibited under the *Catchment & Land Protection Act* and which is spreading down the valley;
 - Very serious: Sweet Pittosporum (*Pittosporum undulatum*) and Blackberry (*Rubus discolor*), particularly in the Herb-rich Foothill Forest;
 - Serious: Asparagus Fern (*Asparagus scandens*), Cape Ivy (*Delairea odorata*), Japanese Honeysuckle (*Lonicera japonica*);
- Moderate to severe eucalypt dieback disease within unfenced areas on the western slope, probably associated with altered drainage, grazing and consequent loss of understorey;
- Ringbarking of trees by cattle;
- Disturbances to Powerful Owl roosting site on the western slope;
- Fertiliser, manure and farm chemicals causing elevated concentrations of phosphorus, nitrogen, trace elements, pesticides etc. in the streams and in the soil of naturally vegetated areas, rendering the habitat less suitable for native flora or fauna;
- Loss or decline of plant species that are present in dangerously small numbers (e.g. the solitary, unhealthy *Melaleuca squarrosa*), due to inbreeding, poor reproductive success or vulnerability to localised chance events;
- Predation of fauna (particularly birds) by foxes;
- Potential site development.

Management issues

- Grazing should be excluded from all native vegetation, extended to a distance of at least 10 m from each stream, to prevent a further decline in native vegetation and to provide opportunities for regeneration. Revegetation and a weed control program would also be required. The Port Phillip and Westernport Catchment Management Authority should assist this project, consistent with their Draft Native Vegetation Plan;
- Weeds should be brought under control, particularly Blackberry, Square-stem St John's Wort and Sweet Pittosporum. Note that the first two, and some of the woody weeds, are declared noxious;
- Disturbances to Powerful Owls should be minimised by restricting access to the western slope as far as possible.

Administration matters

- This site is worthy of inclusion within the proposed Environmental Significance Overlay, ESO2, because of its riparian vegetation and the biologically significant attributes discussed under the heading 'Significance ratings';
- The native vegetation is mostly covered at present by overlay VPO1, having been listed by Water Ecoscience (1998) as their Site 64, but the floodplain is not similarly protected despite its importance to waterway function;
- The site is outside the Urban Growth Boundary;
- Planning scheme zones within the site are GWZ2, SUZ1 and UFZ, plus a trace of RDZ2 at the Liverpool Rd bridge and a trace of RCZ1 on the east-west section of Sheffield Rd.

Information sources used in this assessment

- Vegetation field data and mapping by G.S. Lorimer in 1997, as reported by Reid J.C., Moss H. and Lorimer G.S. (1997), *'Vegetation Survey of Linear Reserves. A Management Strategy for Riparian and Flood Plain Vegetation'*, for Knox City Council. This includes a list of indigenous and introduced plant species within each of several separate areas of the site;
- Similar data for all vegetation in proximity to the roads around the site, gathered by Dr Lorimer in 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.);
- Detailed vegetation data and mapping along Dobsons Ck and in the Herb-rich Foothill Forest by Mr Rik Brown on 8/4/02, in accord with this study's standard approach described in Section 2.4 of Vol.1. This included lists of indigenous and introduced plant species within each of three EVCs;
- Incidental observations of birds and frogs while the above data were being gathered, as well as by Dr Lorimer when periodically passing through the area over at least a decade;
- *'Distribution of Platypus along Upper Dandenong and Dobsons Creeks. Results of Live Trapping Surveys, October 2001 - February 2002'*, a report by G.A. Williams of the Australian Platypus Conservancy to Knox City Council, April 2002.
- A map of the area from c.1890, reproduced in a Deakin University student's project report by Kath Davies in 1996 titled *'Wicks Reserve Draft Management Plan'*;
- 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.

Aerial Photograph and Plan of Sites 21-23

The sites are outlined and labelled in red. This is a composite of several photographs from February 2001.

