

## Site 69. Cogley, Sutton and Hill Lakes, Rowville

Three adjacent lakes in a parkland setting. Melway ref. 72 K11.

### Site Significance Level: *Regional*

- Supports native wetland flora and a wealth of waterbirds, some of which are threatened in Victoria;
- Includes the plant species, *Potamogeton pectinatus* (Fennel Pondweed), which is unique in Knox and rare throughout Melbourne.



Scale 1:4,000  
0 20 40 60 80 100m

*Aerial photograph taken April 2003*

### Boundaries

The site is in two parts, each outlined in red above and totalling 9.55 ha. The boundaries follow property boundaries.

**Land use & tenure:** Lakes and fringing open space. The lakes were constructed for purposes of drainage, water quality and amenity. Some of the open space is public and some is fenced for access only by adjacent properties.

### Site description

The site is on a minor tributary of Corhanwarrabul Ck at an elevation of 55 m. Probably all the natural vegetation was destroyed by farming and drainage works, culminating in the construction of the three lakes. There has been amenity planting around the lakes, particularly using non-indigenous 'Australian native' species, but the lakes themselves contain predominantly indigenous vegetation that must have been introduced by waterbirds (as often happens in such situations).

One of the plants that has established, the Fennel Pondweed (*Potamogeton pectinatus*), is unique in Knox and very rare in the entire Melbourne area. However, the site's most biologically significant feature is its wealth of birdlife, some of which is rare.

### Relationship to other land

This site is a component of the Corhanwarrabul Creek catchment's habitat corridor, as evidenced by the frequent visits of waterbirds such as Darters, Hardhead and Australian Pelicans. The nearest other component of the corridor is Site 65, on the other side of Stud Rd.

**Bioregion:** Gippsland Plain

### Habitat types

**Wetland Complex (EVC 74, regionally Endangered):** Estimated as 0.1 ha of vegetation in fair ecological condition (rating C) fringing the lake, plus an unknown extent of bottom-dwelling plants. 9 indigenous plant species were recorded in June 2002.

**Trees, shrubs, vines and ferns:** Effectively absent, but there are some *Melaleuca ericifolia* that were probably planted on the island in Sutton Lake.

**Aquatic and semi-aquatic flora:** The fringing vegetation is dominated variously by *Typha domingensis* or any of three species of *Juncus*. The bottom of Cogley Lake evidently has substantial cover of *Potamogeton pectinatus*, gathering from the amount of fragments found floating on the lake.

### Plant species

The following plant species were observed by the author on 4th June 2002. Other species would be expected to appear in summer, or perhaps if the lake bottoms were inspected. The column headed 'Risk' indicates the indigenous species' risk of extinction in Knox as follows: 'C'=Critically Endangered; 'E'=Endangered; and 'V'=Vulnerable.

Risk	Indigenous Species	Risk	Indigenous Species
V	<i>Alternanthera denticulata</i>	E	<i>Juncus subsecundus</i>
	<i>Epilobium hirtigerum</i>		<i>Lachnagrostis filiformis</i>
V	<i>Exocarpos cupressiformis</i>	E	<i>Melaleuca ericifolia</i> (?planted)
	<i>Juncus amabilis</i>	C	<i>Potamogeton pectinatus</i>
	<i>Juncus sarophorus</i>	E	<i>Typha domingensis</i>

Numerous fragments of *Potamogeton pectinatus* (Fennel Pondweed) were found floating on Cogley Lake, the only known occurrence in Knox. It is at risk of destruction when the lake is drained for silt removal.

### Introduced Species

<i>Aster subulatus</i>	<i>Cortaderia seloana</i>	<i>Lonicera japonica</i>	<i>Rubus anglocandicans</i>
<i>Callitriche stagnalis</i>	<i>Cyperus eragrostis</i>	<i>Paspalum distichum</i>	

### Fauna of special significance

With the exception of Hardhead, the following information about numbers and frequencies of birds come from a knowledgeable local resident whose birdwatching skills were verified by the author.

#### Vulnerable in Victoria

Hardhead. 2 birds were observed by the author.

Great Egret. One individual is present most of each year.

#### Lower Risk (Near Threatened) in Victoria

Pied Cormorant. Two or three Pied Cormorants visit the lakes.

#### Regionally Uncommon

Darter. One individual was seen by the author and said by the local resident to be an occasional visitor.

#### Locally Uncommon

Australian Pelican. Regular visitors in autumn and occasional in other seasons.

Black Swan. Very infrequent visitors.

Flatheaded Gudgeon. Fairly abundant, at least in Sutton Lake. Shown to the author by a biology student at the site.

### Fauna habitat features

- The lakes are inhabited by fish (native and introduced) and invertebrates, and almost certainly frogs;
- The lakes and the fringing native vegetation and lawns are used by waterbirds for foraging;

- The fringing beds of Cumbungi (*Typha domingensis*) are used by waterbirds for nest sites;
- Frogs probably seek cover among the lakes' fringing native vegetation;
- Some birds use the island in Sutton Lake as a safe refuge.

### 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*

The site is a component of the Corhanwarrabul Creek habitat corridor, which is important at a Local scale. This gives the site **Local** significance under criterion 1.2.6 of Amos (2004).

#### *Rare or Threatened Flora*

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

#### *Rare or Threatened Fauna*

The author believes that the resident Great Egret is part of a wider ranging, viable population in the catchment. The same is likely to apply to the Hardhead. Both are listed as Vulnerable in Victoria. These conditions represent **Regional** significance under criterion 3.1.2. There might be a temptation to downgrade this rating due to the small population sizes, but this is compensated by the presence of other, less rare waterbirds and the likelihood that other threatened species have gone undetected.

### Threats

- Removal of silt from the lake bottoms, which could also remove vegetation;
- Invasion by environmental weeds, of which the only serious threat is a small outbreak of Pampas Grass (*Cortaderia selloana*);
- European Carp, which have already caused serious ecological damage in nearby Jells Lake and could do so in this site if they were to arrive there.

### Management issues

- The Pampas Grass should be removed;
- Management of silt in the lakes should be conducted with due consideration to the presence of the *Potamogeton pectinatus* and other possible significant flora growing in the silt. Removal of silt should be preceded by arrangements for botanical inspection of the bottom-dwelling flora and rescue any plants that need to be rescued, as discussed below;
- Removal of rushes around the lakes should be avoided as much as possible and only done in a season when waterbirds are not breeding.

### Administration matters

- When any of the lakes are drained for maintenance, their bottom-dwelling flora should be inspected to determine the density of plants and the presence of previously undetected species;
- Melbourne Water should take note that if any *Potamogeton pectinatus* is found in silt that has to be removed from the lake, samples of this species should be collected and propagated for re-establishment after the work is complete;
- Ideally, there should be surveys of the site's fish and frogs. Frogs could be sought as part of the Melbourne Frog Census organised through Melbourne Water;
- Signs should be erected to draw visitors' attention to the biological significance of the site;
- This site is worthy of inclusion within the proposed Environmental Significance Overlay, ESO2, because of the potential for land development and the matters considered under the heading, 'Significance ratings';
- The site is not presently covered by the Vegetation Protection Overlay in the Knox Planning Scheme, having not previously been identified as a site of biological significance;
- The Planning Scheme zoning of the water bodies is Public Use Zone - Service & Utility (PUZ1) and the remainder of the site is zoned Public Park and Recreation Zone (PPRZ).

### Information sources used in this assessment

- A site survey by Dr Lorimer taking one hour on 4th June 2002, comprising compilation of separate lists of indigenous and introduced plant species in and around each of the lakes, fauna observations, and checks for fauna habitat, ecological threats, management issues and populations of scarce or threatened plant species;
- On-site discussions with local residents, one of whom was surveying Sutton Lake's fish and another who provided a bird list for the lakes;

- Aerial photography from February 2001, April 2003 and February 2007;
- 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.