Site 76. Dandenong Police Paddocks Reserve, Rowville

A part of the small section of the Dandenong Police Paddocks Reserve that lies within Knox, north of Dandenong Creek and east of Stud Rd.

Summary of significant features:

- State significance: patches of Floodplain Riparian Woodland and Floodplain Wetland Complex, which are regionally-endangered vegetation types;
- State significance: known habitat of a small cluster of the spear-grass, *Austrostipa rudis* subspecies *australis*, which is listed as Endangered under Victorian law;
- Regionally significant: habitat of the Eastern Great Egret, which is Vulnerable under Victorian law;
- Regionally significant: riparian habitat on the Dandenong Creek habitat corridor;
- Locally significant: habitat of viable populations of many locally-threatened plant species, including Knox's only known wild plants of Prickfoot (*Eryngium vesiculosum*) and the only convincingly-wild populations of White Purslane (*Montia australasica*) and River Buttercup (*Ranunculus inundatus*).

Aerial photograph and plan: See page 495, which covers this site and Site 75.

Boundaries

Because this is a municipal study, Site 76 only covers Knox's small part of the Dandenong Police Paddocks Reserve, most of which is within the City of Casey (east of Site 76) and the City of Greater Dandenong (across Dandenong Creek).

The site boundary is outlined with magenta dashes on the aerial photograph on p. 495. The western boundary is the edge of the road reservation for Stud Rd. The southern and eastern boundaries coincide with the municipal boundary. The rest of the boundary mostly follows fences around Rowville Recreation Reserve.

Compared with the previous (2010) edition of this report, the site has been extended slightly to include seasonal wetland habitat to the west of the recreation reserve's southern oval.

Land use & tenure: Reserve managed by Parks Victoria for nature conservation except (since 2022) the facilities of the Victorian Association of Radio Model Soaring (VARMS). The aerial photograph on p. 495 was taken in 2020 and so does not show the VARMS facilities other than by way of a marked-up outline and label.

Site description

The site comprises part of Dandenong Creek and its floodplain at the foot of the Lysterfield Hills. It measures 15.5 ha. The elevation is approximately 30 m where the creek exits the site (in the southeastern corner) and rises to approximately 35 m in the north. Apart from the creek channel and the drains, the site is almost flat. The soil is alluvium washed down by the creek.

The area has a long history of grazing and it was once totally cleared. (The 'native police', whose barracks and horse paddocks were on this site in the 19th Century, are commemorated on the Knox City Council coat of arms.) A 1946 aerial photograph shows the whole site had no trees and only a handful of shrubs. Aerial photographs in 1976, 1979 and 1992 show only five plants big enough to be called trees (but still smaller than mature eucalypts). There was also some regenerating undergrowth beside Dandenong Creek and a small patch of what may have been paperbark scrub. Otherwise, the land was occupied by drains, some farm dams and a matrix of wetlands and wet pasture.

The aerial photograph on p. 495 shows that there is now a substantial amount of tree cover in the site's southern quarter and beside Stud Rd. Most of that tree cover is the result of planting of indigenous species that began in 1992 and increased over the past two decades. Few if any groundcover species have been planted. Grazing by cattle continued in most of the site until recent years, after which many more significant wetland plant species became apparent. Many kangaroos continue to graze.

The history of clearing, grazing, cultivation and revegetation makes it difficult to determine whether some of the indigenous woody species present now have established naturally or are solely the result of planting (or both). Perhaps the most important of those species are Woolly Tea-tree (*Leptospermum lanigerum*) and Cluster Pomaderris (*Pomaderris racemosa*). Both these species are extremely scarce in Knox and Site 76 contains a

substantial fraction of Knox's entire population. Nevertheless, some locally-threatened woody plant species are convincingly represented by wild plants, including Manna Gum (*Eucalyptus viminalis*), Sweet Bursaria (*Bursaria spinosa*), Swamp Paperbark (*Melaleuca ericifolia*), Hemp Bush (*Gynatrix pulchella*), Tree Violet (*Melicytus dentatus*) and Tree Everlasting (*Ozothamnus ferrugineus*). Some of the Blackwoods (*Acacia melanoxylon*) are probably also wild.

Among the trees are patches of hardy native groundcover species, particularly grasses.

The highlight of the site is the natural wetland vegetation surrounding the new VARMS facility. It contains Knox's only wild population of Prickfoot (*Eryngium vesiculosum*) – in abundance – and Knox's only populations of White Purslane (*Montia australasica*) and River Buttercup (*Ranunculus inundatus*) that are convincingly wild. It also contains many other locally-threatened plant species such as Upright Millfoil (*Myriophyllum crispatum*). Unfortunately, the VARMS facility was built on top of the core of this highly-significant wetland. The only wetland in Knox of comparable significance is at Tirhatuan Wetlands Conservation Reserve (in Site 74), but that wetland was constructed and has been heavily planted.

A shallow depression was dug slightly southeast of the site's centre in 2022 to extract soil for the runway of the VARMS facility, which was under construction. The depression is now an artificial wetland and it attracts waterbirds. The immediate surroundings are quite weedy (e.g. abundant blackberry), with few indigenous plants. Wetland plants may well germinate in the runway from seeds in the soil that was taken from the depression.

The drains marked on the aerial photograph on p. 495 are dominated by wild, indigenous wetland plants such as Common Reed (*Phragmites australis*), Slender Knotweed (*Persicaria decipiens*) and Tall Sedge (*Carex appressa*).

The land to the east of the ovals at Rowville Recreation Reserve is dominated by indigenous species of rushes, interspersed with a mixture of introduced pasture species (weeds and fodder) and native wetland species such as Upright Millfoil, Fen Sedge (*Carex gaudichaudiana*) and knotweeds (*Persicaria* species).

Relationship to other land

The site is a component of the Dandenong Creek habitat corridor. In addition to the obvious linkage of the stream itself, daily and seasonal movements of birds (particularly waterbirds) can be readily observed along the corridor. Frogs and flying insects no doubt also move along the corridor.

The most direct connections are with neighbouring areas of habitat in the rest of the Dandenong Police Paddocks Reserve, Tirhatuan Park and the Rowville Lakes Public Golf Course (Site 75).

The Dandenong Police Paddocks Reserve and Churchill National Park to its east also provide habitat linkage between the Dandenong Creek corridor and the Lysterfield Hills, across to Lysterfield Park and the Dandenong Ranges via Belgrave South.

Bioregion: Gippsland Plain

Habitat type

Floodplain Riparian Woodland (EVC 56, **regionally Endangered**) – approximately 1 ha.

Canopy trees: A thin cover of *Eucalyptus viminalis*.

Sub-canopy trees: Scattered specimens of *Acacia mearnsii* and *A. dealbata*, with some *A. melanoxylon* and *Exocarpos cupressiformis*.

Shrubs: A fair to good cover of *Melaleuca ericifolia* and other scattered indigenous shrubs, including *Leptospermum lanigerum, L. scoparium, Melicytus dentatus, Coprosma quadrifida* and some large specimens of *Bursaria spinosa*. Fair levels of natural regeneration appeared once this area was fenced to exclude cattle in the 1990s.

Vines and ferns: Absent.

Groundcover: Patches of indigenous grasses where least disturbed, including *Austrostipa rudis*, *Microlaena stipoides, Rytidosperma racemosum* and *Poa ensiformis*.; otherwise dominated by exotic pasture grasses, particularly Paspalum, Kikuyu Grass and Toowoomba Canary-grass.

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

Woody vegetation: None.

Aquatic and semi-aquatic flora: Mostly dominated by *Juncus sarophorus* or *Phragmites australis*. Other species that are abundant in various parts of the site are *Carex gaudichaudiana, Eleocharis acuta, Epilobium hirtigerum, Eryngium vesiculosum, Glyceria australis, Juncus amabilis, Myriophyllum crispatum, Persicaria decipiens, Schoenus apogon, Triglochin striatum* and, *Typha domingensis*.

Plant species

The following plant species were recorded growing wild in the site by the author in September 2024 or (in the case of the asterisked species) by him or Rik Brown in 2002–2004 for the first edition of this report. Additional species (e.g. *Alisma*) would no doubt be detectable in summer. The column headed 'Risk' indicates the indigenous species' risk of dying out in Knox as follows: 'C'=Critically Endangered; 'E'=Endangered; and 'V'=Vulnerable. In addition, *Austrostipa rudis* subsp. *australis* is listed as Endangered under Victorian law.

Risk	Wild indigenous species
	Acacia dealbata, Silver Wattle*
V	*Acacia mearnsii*, Black Wattle*
V	*Acacia melanoxylon*, Blackwood
	Acaena novae-zelandiae, Bidgee-widgee
C	*Amyema pendula*, Drooping Mistletoe*
E	*Amyema quandang*, Grey Mistletoe*
V	*Austrostipa rudis* subsp. *australis*, Veined Spear-grass
	Bursaria spinosa, Sweet Bursaria
	Carex appressa, Tall Sedge
E	*Carex* ?*fascicularis*, Tassel Sedge
E	*Carex gaudichaudiana*, Fen Sedge
	Carex inversa, Knob Sedge
V	*Coprosma quadrifida*, Prickly Currant-bush
	Dichondra repens, Kidney-weed
V	*Eleocharis acuta*, Common Spike-rush
	Epilobium hirtigerum, Hairy Willow-herb
C	*Eryngium vesiculosum*, Prickfoot
E	*Eucalyptus cephalocarpa*, Mealy Stringybark
V	*Eucalyptus ovata*, Swamp Gum*
C	*Eucalyptus viminalis* subsp. *viminalis*, Manna Gum
V	*Exocarpos cupressiformis*, Cherry Ballart*
V	*Glyceria australis*, Australian Sweet-grass
	Goodenia ovata, Hop Goodenia*
C	*Gratiola peruviana*, Austral Brooklime
E	*Gynatrix pulchella*, Hemp Bush
V	*Hemarthria uncinata*, Mat Grass
E	*Hypericum gramineum*, Small St John's Wort
V	*Isolepis* ?*platycarpa*, a club-rush
	Juncus amabilis, Hollow Rush
	Juncus bufonius, Toad Rush
	Juncus pallidus, Pale Rush
	Juncus sarophorus, Broom Rush
	Laphangium luteoalbum, Jersey cudweed
	Lemna disperma, Common Duckweed*
C	*Leptospermum lanigerum*, Woolly Tea-tree
	Leptospermum scoparium, Manuka*
	Lythrum hyssopifolia, Lesser Loosestrife
C	*Machaerina arthrophylla/rubiginosa*, a twig-rush
E	*Melaleuca ericifolia*, Swamp Paperbark
V	*Melicytus dentatus*, Tree Violet
	Microlaena stipoides, Weeping Grass
V	*Microtis* ?*parviflora*, Slender Onion-orchid
C	*Montia australasica*, White Purslane
C	*Myriophyllum crispatum*, Upright Water-milfoil
V	*Ozothamnus ferrugineus*, Tree Everlasting
	Persicaria decipiens, Slender Knotweed
E	*Phragmites australis*, Common Reed
E	*Poa* ?*ensiformis*, Sword Tussock-grass*
C	*Ranunculus inundatus*, River Buttercup
	Rytidosperma racemosum, Clustered Wallaby-grass
	Rytidosperma sp., a wallaby-grass
	Schoenus apogon, Common Bog-rush
V	*Senecio glomeratus*, Annual Fireweed
V	*Solanum laciniatum*, Large Kangaroo Apple*
V	*Triglochin striata*, Streaked Arrow-grass
	Typha domingensis, Cumbungi

Introduced species
Acacia longifolia subsp. *longifolia*, Sallow Wattle
Agrostis capillaris, Brown-top Bent
Anthoxanthum odoratum, Sweet Vernal-grass
Cassinia sifton, Sifton Bush
Cenchrus clandestinus, Kikuyu Grass
Chrysanthemoides monilifera subsp. *monilifera*, Boneseed
Cirsium vulgare, Spear Thistle
Cortaderia selloana, Pampas Grass*
Crataegus monogyna, Hawthorn*
Cynodon dactylon, Couch
Cyperus eragrostis, Drain Flat-sedge
Hakea salicifolia, Willow-leaf Hakea*
Holcus lanatus, Yorkshire Fog
Hypochaeris radicata, Cat's Ear
Juncus articulatus, Jointed Rush
Leontodon saxatilis, Lesser Hawkbit*
Lotus ?*corniculatus*, Bird's-foot Trefoil
Lythrum junceum, Mediterranean Loosestrife
Paspalum dilatatum, Paspalum
Phalaris aquatica, Toowoomba Canary-grass*
Pittosporum undulatum, Sweet Pittosporum*
Plantago lanceolata, Ribwort
Rubus anglocandicans, Blackberry

Introduced species

Rumex crispus, Curled Dock
Ulex europaeus, Gorse (Furze)

Introduced species

Watsonia meriana var. *bulbillifera*, Bulbil Watsonia

Notes concerning some of threatened plant species

Listed as Endangered under Victorian law

Austrostipa rudis subsp. *australis* (a subspecies of Veined Spear-grass) – a small cluster c. 65 m from the site's southwestern corner, beside a disused drain.

Locally threatened

Carex gaudichaudiana (Fen Sedge) – fairly abundant in rushland.

Eryngium vesiculosum (Prickfoot) – abundant in rushland southward from the VARMS driveway.

Gynatrix pulchella (Hemp Bush) – A few shrubs were found scattered along the drain adjacent to Dandenong Ck in 2002, and one plant in the less thorough site inspection in 2024.

Lemna disperma (Common Duckweed) – seen in 2002 and extremely likely to come and go with the seasons.

Leptospermum lanigerum (Woolly Tea-tree) – Several shrubs were found scattered along Dandenong Ck in 2002; more abundant along the creek and the adjacent drain in 2024, perhaps supplemented by planting.

Machaerina arthrophylla/rubiginosa (a twig-rush) – A single patch grows in a drain near the bend in the site's eastern boundary.

Melicytus dentatus (Tree Violet) – fairly abundant along Dandenong Ck and the adjacent drainage line.

Montia australasica (White Purslane) – discovered in September 2024, growing in a wheel rut left by vehicles involved in construction of the VARMS facility; Probably more will be found when less of the ground is covered with water.

Myriophyllum crispatum (Upright Milfoil) – scattered fairly liberally through rushland.

Ranunculus inundatus (River Buttercup) – One patch was found in September 2024, south of the shallow depression created by excavations to extract soil for the VARMS runway.

The large remnant Sweet Bursaria (*Bursaria spinosa*) shrubs along Dandenong Creek are locally significant because of their size.

Milky Beauty-heads (*Calocephalus lacteus*) occurs within a few tens of metres (at most) east of the municipal boundary, and also at the foot of the slope slightly further east. There is no record of this species anywhere in Knox but it may have been overlooked within this site.

Fauna of special significance

Listed as Vulnerable under Victorian law

Eastern Great Egret – A single bird was observed foraging along Dandenong Creek during the investigation for the first edition of this report; also recorded in 1999. Given the site's extensive habitat for this species, the lack of subsequent records may well be just for want of looking.

Other significant waterbirds associated with the Dandenong Creek floodplain are likely to be frequent visitors or seasonal residents, particularly Latham's Snipe. Significant frogs, freshwater fish and other aquatic fauna also potentially occur within the creek and wetland areas.

Some significant forest birds occurring within the Dandenong Ranges National Park are likely to visit the site via the Lysterfield Hills.

There are many yabby holes in parts of the site. Some of the holes appear to be from *Engaeus* species, all of which are threatened in Victoria.

Fauna habitat features

The shrubby, treed vegetation along Dandenong Creek provides habitat for native birds and a range of other fauna. A range of small forest birds, such as the Golden Whistler, Grey Fantail, Striated Thornbill, Superb Fairy-wren and White-plumed Honeyeater were recorded during field surveys. Common Ringtail Possum dreys were also seen in shrubs along the creek.

Dandenong Creek and its adjoining floodplain provide relatively extensive foraging habitat for waterbirds and breeding locations for frogs and other aquatic fauna. Birds of prey also hunt on the floodplain.

The indigenous vegetation and floodplain/wetland habitat within the site would inevitably contribute to the daily and seasonal movements of native fauna along the Dandenong Creek wildlife corridor.

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 & Viability

Criterion 1.1.1 attributes **Local** significance to 'All parts of riparian systems with riparian vegetation present', which applies to this site.

The site provides a substantial amount of habitat for native wildlife associated with the Dandenong Creek and its floodplain and forms a component of the Dandenong Creek habitat corridor. This corridor is important on a scale larger than just local and smaller than state-wide. This represents **Regional** significance under criterion 1.2.6.

Regionally-endangered Ecological Vegetation Class

The naturally-occurring Floodplain Riparian Woodland along Dandenong Creek and some of the site's Floodplain Wetland Complex habitat meet the definition of a 'remnant patch' adopted by the standard criteria, i.e. a continuous area of at least 0.25 ha in which the cover of native understorey is at least 10% throughout. Both those EVCs are regionally endangered. Under Appendix 3 of *Victoria's Native Vegetation Management – a Framework for Action* (NRE 2002a), any remnant patch of a regionally-endangered EVC has a conservation significance rating of at least High. This translates to **State** significance under criterion 3.2.3 of Amos (2004).

Threatened Plants

The site has a small population of the spear-grass, *Austrostipa rudis* subsp. *australis*, which is listed under the *Flora and Fauna Guarantee Act* as Endangered in Victoria. The species also occurs interstate. Any known habitat for such a species meets criterion 3.1.2 for **State** significance.

Most or all of the locally-threatened plant species seen in 2024 have viable populations, thereby meeting criterion 3.1.5 for **Local** significance.

Threatened Fauna

The Eastern Great Egret is listed as Vulnerable under Victorian law and Site 75 is known habitat for it, though there have been no recent records. The species occurs interstate as well as Victoria. Criterion 3.1.2 attributes **Regional** significance to known habitat for such species, other than 'important sites' (which does not apply here). If the age of the most recent record is taken to preclude such an assessment, criterion 3.1.3 attributes Regional significance to good potential habitat for such a species if the site is 'adjacent to or in proximity to known habitat', as in the case of the many records of the species on the opposite side of Stud Rd – see Sites 74 & 75.

Threats

- Human-induced climate change, which is predicted to cause more severe droughts, heatwaves and storms, as well as substantially lower rainfall (particularly in winter);
- Decline of tree health, partly due to the abovementioned droughts and storms and the associated falling of the water table;
- Displacement of indigenous flora and fauna by environmental weeds (particularly blackberry), exacerbated by debilitation of the native vegetation by the impacts of climate change;
- Slashing of wetlands at the wrong time of year, i.e. when wet or before they have completely dried out;
- Loss or decline of plant species whose populations are so small that they are vulnerable to inbreeding, poor reproductive success or chance events such as being run over by the wheel of a slasher.

Strategic planning

- The previous (2010) edition of this report led to this site being covered by Schedule 2 of the Environmental Significance Overlay (ESO2), on the basis of the biological significance that was known at the time. Since 2010, cattle grazing has ceased, many additional significant plant species have been discovered and the ecological condition of the habitat has generally improved (apart from where it has been destroyed by the VARMS facility). The arguments for applying ESO2 to the site have therefore strengthened. The only recommendation for amending ESO2 is to extend the boundary west of the southern oval to match the boundary adopted here. The recommended retention of ESO2 on the VARMS facility is partly because the soil used to make the runway came from wetland habitat further south in the site and rare wetland plants may regenerated in it. Normal activities at VARMS will not trigger ESO2;
- The construction of the VARMS facility on top of the core of what is arguably Knox's most biologically-significant wetland – despite ESO2 and the presence of an abutting area of low sensitivity – suggests a failure of statutory planning from which lessons should be learned.

Information sources used in this assessment

- An ecological survey undertaken for the first edition of this report by Rik Brown on 15th July 2002, including compilation of lists of indigenous and introduced plant species, incidental fauna observations and vegetation mapping/descriptions;
- An additional inspection by Dr Lorimer over 45 minutes on 8/5/04, to do the same things as above, but for the rushlands south of the Rowville Reserve tennis courts (not inspected by Mr Brown);
- Verbal information from respected naturalist, Darren Wallace, about *Calocephalus lacteus* and any other rare or threatened species that may occur within the site;
- An inexhaustive inspection of the site by Dr Lorimer on 17th–18th September 2024, including: (a) compiling a list of wild indigenous plant species for wetlands and the woodland; (b) mapping rare plant species; and (c) checking for changes in features relevant to this report compared with pre-existing information;
- Records of flora and fauna observations stored in the Atlas of Living Australia;
- Aerial and satellite imagery from between 1946 and 2025;
- The Victorian Government's 'NatureKit' website;
- Maps of geology, topography and strategic planning information produced by agencies of the Victorian Government.