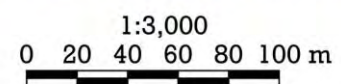
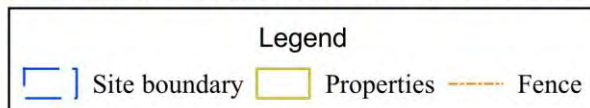


Site 42. R.D. Egan-Lee Reserve, Knoxfield

A council reserve of 8.26 ha that includes 2½ ha of remnant forest and ½ ha of high-quality revegetation.

Summary of significant features:

- **State significance:** two patches of the Ecological Vegetation Class, Valley Heathy Forest, which is listed as regionally Endangered. The western patch is in fairly good ecological condition;
- **Locally significant:** viable populations of some plant species that are threatened with dying out in Knox.



Boundaries

This site is in two parts, outlined with blue dashes above and totalling 2.96 ha. The boundaries of the western section follow property boundaries except along the eastern side, where a segmented line has been drawn to encompass trees but avoid the playing fields. The boundaries of the eastern section partly follow property boundaries, partly follow fences and otherwise circumscribe the crowns of lines of eucalypts.

Compared with the previous (2010) edition of this report, the following changes have been made to the boundaries:

- The western polygon has been slightly reduced in the northeast corner due to removal of some eucalypts; and
- The eastern polygon has been enlarged by addition of some lines of trees, which have grown considerably since 2010 and are now accompanied by understorey plantings beneath.

Lining the entrance to the reserve from Wallace Rd, remnant eucalypts with scattered indigenous groundcover are not included in the site. Nevertheless, those plants are protected to some degree by clause 52.17 of the Knox Planning Scheme.

Land use & tenure: Council reserve for nature conservation, passive recreation, a playground and a 'native vegetation offset' to compensate for vegetation removal elsewhere.

Site description

The site is on a very shallow, north-facing slope, with elevations of approximately 77–86 m. The slope is generally less than 2% for a radius of more than 1 km around the site. The soil is shallow, silty, pale loam over clay subsoil, derived from weathering of the underlying Lower Devonian siltstone of the Humevale formation.

The 2020 aerial photograph above shows that half of the reserve is occupied by playing fields, pavilions and associated car parks. Such areas are of no environmental significance and they do not materially affect the remnant native vegetation on the rest of the reserve. However, in late 2024, a system of three stormwater treatment wetlands was constructed in what appears on the aerial photograph as an open expanse to the east of the playing fields. The wetlands will provide habitat for waterbirds and invertebrates.

All the native vegetation has a history of slashing or mowing. The shrub layer and some of the trees were cleared long ago. However, some of the native understorey west of the playing fields has shown remarkable resilience since Council ceased slashing it in 1996 (or thereabout). Seventy-seven wild, indigenous plant species were recorded west of the playing fields in spring 2001, which is a very good tally for an area of its size in metropolitan Melbourne. Concerted management effort has suppressed the serious environmental weeds while the native vegetation has regenerated. Large pines have been removed. Part of the area was burned in 2002 and 2024 to stimulate regeneration. The wild, indigenous plants have been supplemented with planted indigenous species.

The number of wild, indigenous plant species west of the playing fields, and the ecological condition of the most natural vegetation there, probably peaked in the few years following the 2002 burn. A small but significant number of plant species recorded in the author's botanical survey of spring 2001 could not be found in his February 2024 survey – only partly explained by the different times of year. Perhaps the subsequent burn will bring about regeneration. Some of the plant species that could not be found in 2024 have died out over the same time span in most or all other sites in Knox, too. The Millennium Drought is implicated in some of the losses, e.g. Swamp Daisy (*Allittia cardiocarpa*) and Hooker's Fescue (*Hookerchloa hookeriana*).

While the most natural areas of native vegetation west of the playing fields have deteriorated slightly, the least natural areas have significantly improved due to revegetation and control of environmental weeds. In particular, areas that in 2002 had no native vegetation (e.g. around the edge of the current-day playground) or only trees now have multiple strata of planted plants and their descendants.

The site's eastern polygon includes far fewer wild, indigenous plant species than the western polygon but far more revegetation. Prior to the revegetation, the native vegetation comprised not much more than a canopy of large old trees with hardy native grasses beneath. The revegetation includes many shrubs and sub-canopy trees and modest numbers of non-grassy groundcover species. The intention is to simulate the Valley Heathy Forest that once grew there naturally, offsetting a loss of native vegetation that occurred elsewhere in Knox.

Relationship to other land

The site is less than 90 m southwest of Lakewood Nature Reserve (Site 43), which has a large area of forest habitat as well as a substantial lake. During fieldwork, the author saw Kookaburras, Rosellas, Musk Lorikeets, Rainbow Lorikeets and common urban birds moving between R.D. Egan-Lee Reserve and Lakewood Nature Reserve. It is likely that other fauna, such as insects and bats, also commute between the reserves.

There is almost no other native understorey for a radius of 900 m around these two reserves and Knox Park Primary School, (Site 108) which abuts Lakewood Nature Reserve. The nearest large areas of native vegetation are more than 3 km away, along Dandenong Ck and in the Dandenong Ranges. These distances represent substantial disconnection of the reserves from other forest habitat, other than for mobile fauna such as birds.

Bioregion: Gippsland Plain

Habitat type

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

There is approximately 2.8 ha of native vegetation, of which it is estimated that 0.15 ha is in good ecological condition (rating B), 1.7 ha is in fair ecological condition (rating C) and 1.0 ha is in poor ecological condition (rating D).

Canopy trees: Dominated by *Eucalyptus cephalocarpa* and *E. radiata* with a canopy density that is approximately natural.

Sub-canopy trees: Dominated by *Exocarpos cupressiformis*, followed by *Acacia melanoxylon*. There are small numbers of *Acacia mearnsii* and *Allocasuarina littoralis*, as well as *Melaleuca ericifolia* in 2002.

Shrubs: Sparse during the long history of slashing but now with dense thickets of *Bursaria spinosa* and moderate numbers of *Acacia paradoxa*, *Leptospermum continentale* and the sub-shrub, *Platylobium obtusangulum*. A range of other shrubs are either very scarce or have died out since the author's 2001 botanical survey (e.g. *Cassinia aculeata*, *Coprosma quadrifida*, *Daviesia latifolia*, *Epacris impressa*, *Kunzea* and *Ozothamnus ferrugineus*).

Vines: *Billardiera mutabilis* and *Clematis decipiens* are fairly abundant, the latter questionably indigenous (as for *Pandorea pandorana*, which is scarce). *Hardenbergia violacea* was scattered in 2001 but not found in 2024.

Ferns: Absent.

Creepers: Rich in species: *Acaena novae-zelandiae*, *Bossiaea prostrata*, *Centella cordifolia*, *Dichondra repens*, *Goodenia lanata* and, in 2001, *Oxalis exilis/perennans* and *Viola hederacea*.

Other groundcover: Densely grassy but also with scattered ericoid plants such as *Dillwynia cinerascens* and the characteristic species, *Hibbertia australis*. The groundcover is dominated by *Poa morrisii*. *Auustrostipa rudis* and *Lomandra filiformis* (both subspecies) are abundant, as is typical for Valley Heathy Forest. The grasses *Microlaena stipoides*, *Rytidosperma pallidum* and several other species of *Rytidosperma* are also each abundant in places. The sedges *Gahnia radula* and *Lepidosperma gunnii* are present, the former being dense in patches. There are substantial populations of *Acaena echinata*, *Pterostylis nutans* and *Wurmbea dioica*, all of which are typical of Valley Heathy Forest. The presence of *Hookerchloa hookeriana* and *Allittia cardiocarpa* near Allister Av in 2001 indicates that the vegetation there is at the wetter end of the spectrum for Valley Heathy Forest.

Plant species

In the list below, the indigenous plant species were observed by the author on 23rd February 2024 except for those with asterisks, which were seen most recently by Monte Hall in spring 2024 (after fire) and those with daggers (†), which were last recorded in September–October 2001 or May 2002, by the author. The column headed 'Risk' indicates the indigenous species' risk of dying out in Knox as follows: 'C'=Critically Endangered; 'E'=Endangered; 'V'=Vulnerable; and 'N'=Near threatened. In addition, the two species with names in bold are rare throughout the Melbourne region. The list of introduced species was compiled in 2001–2002.

Risk	Wild indigenous species	Risk	Wild indigenous species
	<i>Acacia dealbata</i> , Silver Wattle (planted?)	C	<i>Coronidium scorpioides</i> , Button Everlasting†
V	<i>Acacia mearnsii</i> , Black Wattle		<i>Cotula australis</i> , Common Cotula*
V	<i>Acacia melanoxylon</i> , Blackwood		<i>Crassula decumbens</i> , Spreading Crassula†
	<i>Acacia paradoxa</i> , Hedge Wattle	C	<i>Daviesia latifolia</i> , Hop Bitter-pea
V	<i>Acaena echinata</i> , Sheep's Burr		<i>Deyeuxia quadriseta</i> , Reed Bent-grass
	<i>Acaena novae-zelandiae</i> , Bidgee-widgee		<i>Dianella longifolia</i> var. <i>longifolia</i> , Pale Flax-lily (perhaps planted)
E	<i>Acrotriche serrulata</i> , Honey-pots†		<i>Dianella revoluta</i> , Black-anther Flax-lily
C	<i>Allittia cardiocarpa</i>, Swamp Daisy†		<i>Dichondra repens</i> , Kidney-weed
V	<i>Allocasuarina littoralis</i> , Black Sheoak	V	<i>Dillwynia cinerascens</i> , Grey Parrot-pea
	<i>Arthropodium strictum</i> , Chocolate Lily	V	<i>Drosera aberrans</i> , Scented Sundew*
	<i>Auustrostipa pubinodis</i> , Tall Spear-grass	V	<i>Drosera auriculata</i> , Tall Sundew†
	<i>Auustrostipa rudis</i> subsp. <i>rudis</i> , Veined Spear-grass	C	<i>Epacris impressa</i> , Common Heath†
	<i>Billardiera mutabilis</i> , Common Apple-berry	E	<i>Eucalyptus cephalocarpa</i> , Mealy Stringybark
N	<i>Bossiaea prostrata</i> , Creeping Bossiaea	E	<i>Eucalyptus radiata</i> , Narrow-leaved Peppermint
	<i>Burchardia umbellata</i> , Milkmaids*	V	<i>Exocarpos cupressiformis</i> , Cherry Ballart
	<i>Bursaria spinosa</i> , Sweet Bursaria	C	<i>Gahnia radula</i> , Thatch Saw-sedge
V	<i>Caesia parviflora</i> , Pale Grass-lily†		<i>Gonocarpus tetragynus</i> , Common Raspwort
	<i>Carex breviculmis</i> , Short-stem Sedge†	N	<i>Goodenia lanata</i> , Trailing Goodenia
	<i>Cassinia aculeata</i> , Common Cassinia	E	<i>Hardenbergia violacea</i> , Purple Coral-pea†
	<i>Cassinia longifolia</i> , Shiny Cassinia	C	<i>Hibbertia australis</i> , Upright Guinea-flower†
E	<i>Centella cordifolia</i> , Centella	C	<i>Hookerchloa hookeriana</i>, Hooker Fescue†
	<i>Clematis decipiens</i> , a small-leaved clematis		
V	<i>Coprosma quadrifida</i> , Prickly Currant-bush†		

Risk Wild indigenous species

- E *Hypericum gramineum*, Small St John's Wort†
Juncus bufonius, Toad Rush†
Juncus pallidus, Pale Rush
Kunzea sp. (Upright form), Forest Burgan
- V *Lagenophora sublyrata*, Slender Bottle-daisy*
Lepidosperma gunnii, Slender Sword-sedge
- C *Leptospermum continentale*, Prickly Tea-tree
Lomandra filiformis subsp. *coriacea*, Wattle Mat-rush
Lomandra filiformis subsp. *filiformis*, Wattle Mat-rush
Lomandra longifolia subsp. *longifolia*, Spiny-headed Mat-rush
- V *Luzula meridionalis*, Common Woodrush*
E *Melaleuca ericifolia*, Swamp Paperbark†
Microlaena stipoides, Weeping Grass
E *Olearia lirata*, Snowy Daisy-bush (planted?)
V *Opercularia ovata*, Broad-leaf Stinkweed
V *Opercularia varia*, Variable Stinkweed
Oxalis exilis/perennans, Wood-sorrel†
V *Ozothamnus ferrugineus*, Tree Everlasting†
Pandorea pandorana, Wonga Vine
E *Pauridia vaginata*, Yellow Star*
E *Platylobium obtusangulum*, Common Flat-pea
Poa morrisii, Soft Tussock-grass
Poranthera microphylla, Small Poranthera
Pterostylis nutans, Nodding Greenhood*
C *Ranunculus lappaceus*, Australian Buttercup†
Rytidosperma fulvum, Leafy Wallaby-grass
E *Rytidosperma pallidum*, Red-anther (or Silvertop) Wallaby-grass
Rytidosperma penicillatum, Slender Wallaby-grass
Rytidosperma racemosum, Clustered Wallaby-grass
Rytidosperma setaceum, Bristly Wallaby-grass
Rytidosperma tenuius, Purplish Wallaby-grass
Schoenus apogon, Common Bog-rush†
Senecio hispidulus, Rough Fireweed*
Senecio quadridentatus, Cotton Fireweed
- V *Solanum laciniatum*, Large Kangaroo Apple
V *Solenogyne dominii*, Smooth Solenogyne
V *Solenogyne gunnii*, Hairy Solenogyne
E *Stackhousia monogyna/subterranea*, Candles*
Themeda triandra, Kangaroo Grass
Tricoryne elatior, Yellow Rush-lily
- V *Veronica gracilis*, Slender Speedwell†
E *Viola hederacea*, Ivy-leaf Violet*
E *Wurmbea dioica*, Common Early Nancy*
V *Xanthosia dissecta*, Cut-leaf Xanthosia*

Risk Planted indigenous species

- V *Acacia implexa*, Lightwood
V *Acacia melanoxylon*, Blackwood
E *Acacia myrtifolia*, Myrtle Wattle

Risk Planted indigenous species

- Acacia paradoxa*, Hedge Wattle
V *Acacia verticillata*, Prickly Moses
V *Allocasuarina littoralis*, Black Sheoak
Bursaria spinosa, Sweet Bursaria
Cassinia aculeata, Common Cassinia
C *Chrysocephalum semipapposum*, Clustered Everlasting
C *Correa reflexa*, Common Correa
C *Daviesia latifolia*, Hop Bitter-pea
C *Daviesia leptophylla*, Narrow-leaf Bitter-pea
Dianella longifolia var. *longifolia*, Pale Flax-lily
Dianella tasmanica, Tasman Flax-lily
C *Dichelachne crinita*, Long-hair Plume-grass
E *Eucalyptus obliqua*, Messmate Stringybark
C *Eucalyptus viminalis*, Manna Gum
Goodenia ovata, Hop Goodenia
C *Hakea nodosa*, Yellow Hakea
E *Hardenbergia violacea*, Purple Coral-pea
C *Hibbertia australis*, Upright Guinea-flower
C *Indigofera australis*, Austral Indigo
V *Lepidosperma laterale*, Variable Sword-sedge
Lomandra longifolia subsp. *longifolia*, Spiny-headed Mat-rush
C *Lomandra multiflora*, Many-flowered Mat-rush
E *Olearia lirata*, Snowy Daisy-bush
C *Olearia myrsinoides*, Silky Daisy-bush
E *Platylobium obtusangulum*, Common Flat-pea
Poa morrisii, Soft Tussock-grass
C *Pomaderris racemosa*, Cluster Pomaderris
V *Prostanthera lasianthos*, Victorian Christmas-bush
V *Spyridium parvifolium*, Australian Dusty Miller
E *Xanthorrhoea minor*, Small Grass-tree

Wild introduced species

- Acacia floribunda*, White Sallow-wattle
Agrostis capillaris, Brown-top Bent
Allium triquetrum, Angled Onion
Anthoxanthum odoratum, Sweet Vernal-grass
Cassinia sifton, Sifton Bush
Cerastium glomeratum s.l., Common Mouse-ear Chickweed
Dactylis glomerata, Cocksfoot
Ehrharta erecta, Panic Veldt-grass
Ehrharta longiflora, Annual Veldt-grass
Freesia leichtlinii, Freesia
Genista monspessulana, Montpellier Broom
Hypochaeris radicata, Cat's Ear
Oxalis ?incarnata, Pale Wood-sorrel
Oxalis pes-caprae, Soursob
Pinus radiata, Monterey Pine
Pittosporum undulatum, Sweet Pittosporum
Plantago lanceolata, Ribwort

Wild introduced species

Poa annua/infirma, a meadow-grass
Romulea rosea, Common Onion-grass
Rubus anglocandicans, Blackberry
Soliva sessilis, Jo Jo

Wild introduced species

Sparaxis sp., Harlequin Flower
Stellaria media, Chickweed
Vulpia bromoides, Squirrel-tail Fescue

Notes concerning some of the locally-threatened plant species

Allittia cardiocarpa (Swamp Daisy) – Six plants were seen near Allister Av in 2001.

Hookerchloa hookeriana (Hooker's Fescue) – Three plants were seen near Allister Av in 2001 but appear to have died out.

Hypoxis vaginata (Sheath Star) – Six plants were seen west of the playing fields in 2001, and others could have been overlooked.

Luzula meridionalis (Common Woodrush) – Found west of the playing fields in 2001.

Ranunculus lappaceus (Australian Buttercup) – A single plant was found near the middle of the western boundary in 2001.

Wurmbea dioica (Common Early Nancy) – At least dozens were present west of the playing fields in 2001, possibly many more. The 2024 botanical survey could not have detected them due to the time of year.

There is also a large eucalypt east of the playing fields that appears to be a hybrid. This is of mild scientific significance.

Fauna of special significance

None recorded. The birdlife observed incidentally during fieldwork was mostly typical of urban, treed neighbourhoods except for Kookaburras and uncommonly many Eastern Rosellas.

Fauna habitat features

The cover of remnant trees and the presence of tree hollows suggests that native bats and birds such as parrots should find suitable habitat here, but this has not been confirmed by way of a dedicated investigation. There is also a modest number of logs and branches on the ground and a shrub layer that is dense enough in patches to provide sites for bird nests, several of which were seen.

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).

Regionally Endangered Ecological Vegetation Class

Each polygon of this site contains a remnant patch of a regionally-endangered EVC, where 'remnant patch' is defined under the standard criteria as a continuous area of at least 0.25 ha that has at least 10% native understorey cover throughout. Appendix 3 of *Victoria's Native Vegetation Management – a Framework for Action* (NRE 2002a) recognises that any such patch is of at least High conservation significance. Criterion 3.2.3 translates this to **State** significance.

Threatened Plants

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

Threats

- Human-induced climate change, which is predicted to cause more severe droughts, heatwaves, fires and storms, as well as substantially lower rainfall (particularly in winter). Some of the site's plant species are particularly vulnerable to droughts. *Allittia cardiocarpa* and *Hookerchloa hookeriana* may both have already died out due to the Millennium Drought;
- Decline of tree health. Eucalypts are quite vulnerable to the abovementioned droughts and storms;
- Dumping of garden waste by neighbours;
- Trampling;

- Displacement of indigenous flora by environmental weeds, though that threat is being well managed by Knox City Council;
- Loss or decline of plant species that have such small populations that they are vulnerable to inbreeding, poor reproductive success or chance events such as a being scratched out by a dog or struck by a falling tree limb.

Strategic planning

- The reserve is larger than 0.4 ha and therefore does not qualify for the size-based exemption from the state-wide baseline planning controls over removal of native vegetation (clause 52.17). Those controls provide limited protection to indigenous trees and scattered groundcover plants beside the reserve's driveway, outside the site delineated here;
- The previous (2010) edition of this report led to its version of this site being covered by Schedule 2 of the Environmental Significance Overlay (ESO2). That edition cited the State significance for the presence of the regionally-endangered EVC, partly in good condition. The EVC and its condition are not significantly changed other than by expansion to the site boundaries adopted here. The only recommended amendment to the overlay is to change its boundaries to match the ones adopted here;
- Schedule 1 of the Vegetation Protection Overlay (VPO1) abuts the eastern edge of this site's western polygon. If the ESO2 boundary is slightly amended as just recommended, it would be appropriate to either: (a) similarly amend the VPO1 boundary so the two continue to abut; or (b) remove VPO1, as the only vegetation it affects are some overhanging branches of eucalypts with trunks just outside the VPO1 area. If VPO1 is removed, clause 52.17 still protects those branches;
- The reserve is zoned Public Park and Recreation Zone (PPRZ).

Information sources used in this assessment

- An ecological survey by Dr Lorimer of vegetation west of the playing fields, taking at least ten hours during September and October 2001. This included descriptions of the vegetation composition, compilation of lists of indigenous and introduced plant species, incidental fauna observations, and checks for fauna habitat, ecological threats, management issues and populations of scarce or threatened plant species. This was conducted principally for the report, *'Fire in Knox Bushland Reserves 2001'* by Lorimer (2001);
- A 55-minute botanical survey of the area east of the playing fields by Dr Lorimer on 10th May 2002;
- Brief re-visits of the area east of the playing fields in May 2004 and March 2008 to update the site description and ensure the information remained relevant to the previous editions of this report;
- A fairly intensive botanical survey by Dr Lorimer on 23rd February 2024 for this edition;
- Records of flora and fauna observations stored in the Atlas of Living Australia;
- Eleven records of plant species from Monte Hall, seen in spring 2024 and uploaded to iNaturalist;
- Aerial and satellite imagery from between 1976 and 2025;
- The Victorian Government's 'NatureKit' website;
- Maps of geology, topography and strategic planning information produced by agencies of the Victorian Government.