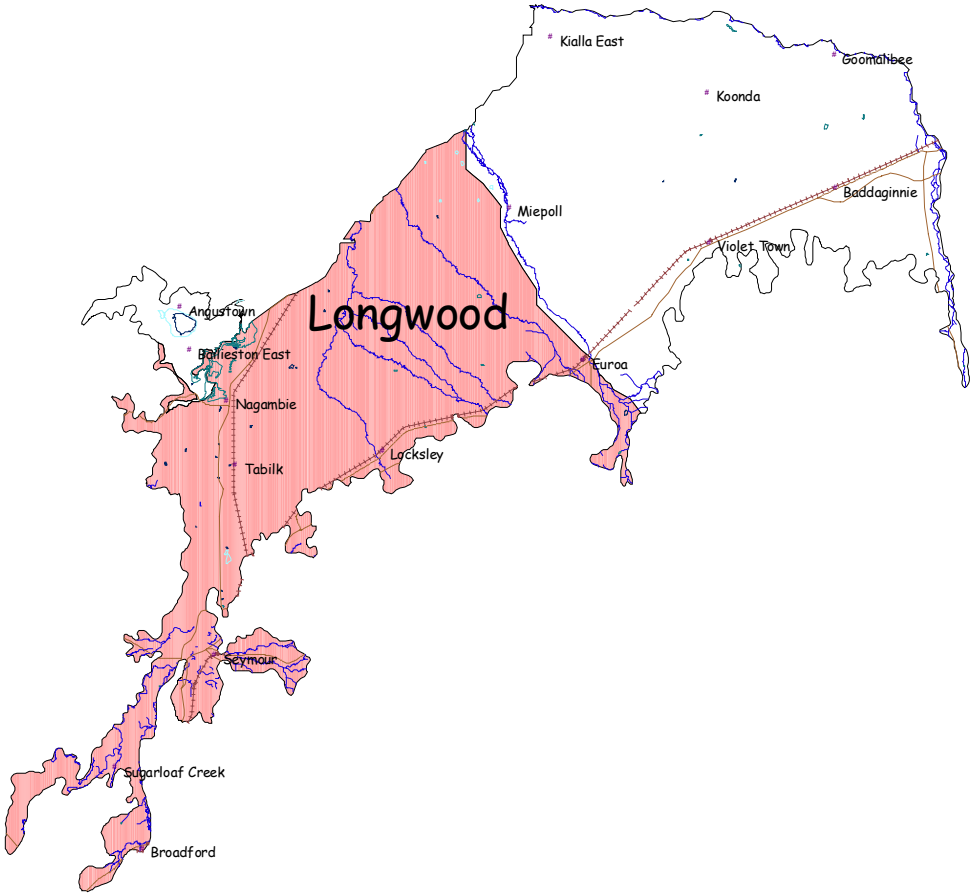


# Longwood Landscape Zone



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## Longwood Landscape Zone

### Longwood Landscape Zone description

The Longwood Landscape zone occupies 118,292 ha and lies entirely within the Victorian Riverina bioregion and Goulburn Broken CMA. It is bounded in the north-east by the Euroa–Shepparton Road. The south-eastern boundary (extending from near Euroa to High Camp) corresponds to the interface of the Victorian Riverina bioregion with that of Central Victorian Uplands. The south-west boundary follows the interface between Victorian Riverina and Goldfields bioregions from near High Camp to Lake Nagambie, then follows the Goulburn River to Goulburn Weir. The north-western boundary, between Goulburn Weir and Seven Creeks, approximates the route of the East Goulburn Main Channel.

The rail reserve for Melbourne–Sydney railway passes through the south of the zone, and contains several small but significant patches of vegetation. The Goulburn Valley railway branches north across the zone from Mangalore. The Goulburn River and its storage (Goulburn Weir–Lake Nagambie) are included in the zone. Mitchell, Strathbogie and Greater Shepparton Local Government Areas overlay the zone (Map 20).

The drainage system of the zone lies entirely within the Goulburn River Basin (LCC 1989). The Goulburn River (from Eildon to the Murray River) is listed as a Heritage River under the *Heritage Rivers Act* 1992, following recommendation A5 of the LCC (1991). This includes the entire length of the Goulburn River flowing through Longwood Landscape zone. Heritage status within this nominated corridor is superimposed over other existing tenures, such as Streamside Reserve and Public Land Water Frontage (LCC 1991, NRE 1997a) (Map 21). The zone encloses several wetlands of bioregional conservation significance (Map 23). Stream condition is mostly moderate to poor (Map 24).

To the north-east of the Goulburn River, the zone consists of a gently sloping or flat riverine plain comprised mainly of Pleistocene (Quaternary) alluvial sediments (LCC 1983), while the Goulburn River itself occupies a major riverine floodplain of Recent alluvium (LCC 1985a). Valley floors associated with creekline tributaries flowing from the south-west of Seymour consist of undulating plains formed from Newer Basalts overlying Palaeozoic sediments (LCC 1985a).

Due to the widespread agricultural suitability of much of the land within the zone, over 95% of native vegetation cover has been cleared (Map 25-26). For the same reason, few significant reserves of public land (other than water storages) exist, the most extensive being Tabilk Lagoon Wildlife Reserve (198 ha) adjacent to the Goulburn River and the linear public land water frontages along Pranjip, Creightons, Castle and Seven Creeks, and the Goulburn River. A number of smaller Bushland Reserves, and several small uncommitted or uncategorised public land blocks, occur across the zone.



Example of a broad, well-connected roadside, with Grey Box and good-quality native understorey vegetation, on Angle Road, Molka. Nature Scope Pty Ltd.

## Longwood Landscape Zone

### Longwood Landscape Zone description (cont'd)

Roadside reserves (40–60m in width) and numerous unused roads retain important high-quality connective remnants. There are few, if any, private blocks with large remnants (>100 ha) in good condition.

Long extensions of the zone stem south-west from Seymour along the undulating valley formed by Sugarloaf and Sunday Creeks, reaching up to the Broadford area, and along Kurkuruc Creek to High Camp on the Northern Highway. This stream system drains into the Goulburn River, however the associated landscape (predominantly freehold) is particularly devoid of significant natural vegetation remnants.

Due to landscape differences across the zone, pre-1750 vegetation (Map 25) was varied and, in places, formed a complex mix. Surrounding the Goulburn River floodplain, and on the riverine plain to the north-east, the vegetation largely comprised a vast low open grassy woodland (*plains grassy woodland* (e)), with numerous small wetlands scattered throughout, the latter commonly supporting *red gum wetland* (e), *wetland formation* (e) and *plains grassy wetland* (e). Dominant tree species were Grey Box, Buloke and Yellow Box, with the addition of Yellow Gum on sandier



Well-treed Public Land Water Frontage on Castle Creek at Molka, but displaying considerable weed invasion, and degradation of soils and vegetation due to grazing. Nature Scope Pty Ltd.

sites (e.g. Longwood area) in the south of the zone. The landscape was finely reticulated with several many-branched creek systems, each rising on the slopes to the south of the zone and draining northwards to the Goulburn River. Most creeks were lined with *creekline grassy woodland* (e)—sometimes giving way to *drainage line complex* (e) in the lower reaches—and were dominated by River Red Gum. Patches of *box ironbark forest* (v) and *grassy woodland* (e) occurred across the plain, mainly along the southern margin. The main course of the Goulburn River supported *floodplain riparian woodland* (v), as did Hughes Creek. Along much of the Sugarloaf Creek and Sunday Creek drainage lines, *plains grassy woodland* / *plains grassland* / *plains grassy wetland mosaic* (e) predominated, with localised patches of *gilgai plain woodland* / *wetland mosaic* (e), *box ironbark forest* (v) and *slopes box grassy woodland* / *box ironbark forest complex* (e). *Plains grassy woodland* (e) predominated around Broadford.

Today, remnant patches (Map 26-27) of *creekline grassy woodland* (e) and *plains grassy woodland* (e) persist mainly along the more major drainage lines across the riverine plain. Vegetation on the creeklines throughout the zone is still dominated by River Red Gum. Stands of mainly Grey Box, Yellow Box and, frequently, Buloke (representing the former *plains grassy woodland*) still occur on better-drained sites and roadsides. However, this vegetation type has been spectacularly reduced in extent. Scattered wetland vegetation remnants, mainly of *red gum wetland* (e), also still occur on the north-western parts of the plain. In the south of the plain, Yellow Gum is also still commonly found in patchy associations with remnant River Red

Gum and Grey Box on roadsides or near creeklines (such as at Locksley, Longwood and Pranjip).

## Longwood Landscape Zone

### Longwood Landscape Zone description (cont'd)

In the south-west, considerable stands (>500 ha) of remnant *floodplain riparian woodland* (v) still occur along the Goulburn River and significant patches (>200 ha) of *box ironbark forest* (v) remain around Chatsworth Park and Hughes Creek Hill, near Tabilk. Nevertheless, these vegetation types are greatly reduced, while the formerly extensive flanking *plains grassy woodland* (e) is all but vanished. There are no significant remnants of native vegetation remaining along the Sugarloaf Creek – Sunday Creek extension of the zone, in the extreme south-west.

In Longwood Landscape zone, fragmentation is more advanced (and critical) than in Reedy Lake zone. Moreover, Longwood Landscape zone is extensively bordered by land largely cleared of native vegetation. Of the *Biosites* so far documented for the zone, most are under threat from grazing, weed invasion and inappropriate flooding regimes (Mullett 2000). Many remaining linear habitats are extensively degraded. Flora diversity has been reduced along creeklines, which have also been affected by siltation and altered flow regimes (Davidson 1996). Remaining freehold remnants generally have a grazed understorey, lacking shrubs or regeneration. In addition, weed invasion is a widespread threat (Davidson 1996).

Key attributes of Longwood Landscape zone include the riverine habitats fringing the Goulburn River system, and the remaining roadside and creekline habitats which, in places (such as along Pranjip, Creightons and Castle Creeks), comprise a well-connected system with good potential to assist restoration of the wider, degraded landscape. This network of roadsides and creeklines particularly provides important habitat for Grey-crowned Babbler (e), Squirrel Glider (e) and Brush-tailed Phascogale (v) colonies (Davidson 1996) (Map 28), and for Buloke Mistletoe (v) (Map 29). The zone also retains good diversity of threatened taxa associated with the scattered remnants of various vegetation types. Populations of aquatic species have mostly been lost.

Primary production within the zone comes predominantly from mixed dryland farming—mainly grazing but with some cropping (wheat, oats or barley) (LCC 1978), viticulture and horticulture.

Detailed maps showing the locations of Pre-1750 EVCs (Map 25), Current EVCs (Map 26), EVC conservation status and public land (Map 27), threatened flora (Map 28), threatened fauna (Map 29) and 1A threatened species and management actions (Map 30) are at the end of this document.

For Threatened Biodiversity Assets, the codes used in brackets are:

Conservation status Victoria - lower case, Australia - upper case; followed by

BNA priority / risk rankings for threatened taxa (1A, 2A, 2B, etc., or NR – not ranked).

## Longwood Landscape Zone

### Longwood Landscape Zone description (cont'd)

**Table 17. Total area of pre-1750 and extant EVCs in the Longwood Landscape zone**

EVC Group	EVC Number	EVC Bioregional Conservation Status	EVC Name	Pre-1750 Area (ha)	Current Area (ha)
14	55	E	Plains Grassy Woodland	87905	1346
14	263	E	Plains Grassy Woodland/Plains Grassland/Plains Grassy Wetland Mosaic	6632	26
15	56	V	Floodplain Riparian Woodland	5959	880
14	175	E	Grassy Woodland	5469	267
6	61	V	Box Ironbark Forest	3519	332
14	68	E	Creekline Grassy Woodland	2588	470
14	274	E	Shrubby Granitic-outwash Grassy Woodland/Plains Grassy Woodland Complex	1270	34
19	125	E	Plains Grassy Wetland	1145	69
14	168	E	Drainage Line Complex	707	24
14	235	E	Gilgai Plain Woodland/Wetland Mosaic	604	28
19	292	E	Red Gum Wetland	542	126
6	262	E	Slopes Box Grassy Woodland/Box Ironbark Forest Complex	312	3
15	256	V	Floodplain Riparian Woodland/Floodplain Wetland Mosaic	307	63
19	74	E	Wetland Formation	262	12
7	22	D	Grassy Dry Forest	168	9
15	250	V	Floodplain Riparian Woodland/Plains Grassy Woodland Mosaic	168	0
19	333	E	Red Gum Wetland/Plains Grassy Wetland Mosaic	161	68
7	20	LC	Heathy Dry Forest	133	47
15	47	E	Valley Grassy Forest	83	<1
14	287	E	Plains Grassy Woodland/Box Ironbark Forest Complex	81	33
3	127	E	Valley Heathy Forest	68	1
19	297	E	Lagoon Wetland/Red Gum Wetland Mosaic	61	0
19	334	E	Lagoon Wetland	35	2
14	261	E	Plains Grassy Woodland/Creekline Grassy Woodland Mosaic	31	0
6	72	V	Granitic Hills Woodland	31	0
16	67	E	Alluvial Terraces Herb-rich Woodland	22	1
19	291	X	Cane Grass Wetland	13	0
16	81	E	Alluvial Terraces Herb-rich Woodland/Creekline Grassy Woodland Mosaic	8	2
9	19	E	Riparian Shrubland	4	0
6	247	V	Box Ironbark Forest/Shrubby Granitic-outwash Grassy Woodland Mosaic	2	0
9	293	V	Riparian Forest/Creekline Grassy Woodland Mosaic	1	0
<b>TOTAL</b>				<b>118292</b>	<b>3843</b>
0	997	NA	Private Land No Tree Cover	0	114449

## Longwood Landscape Zone

### Longwood Landscape Zone description (cont'd)

**Table 18. Total area and number of current EVCs in each conservation status in the Longwood Landscape zone.**

EVC Bioregional Conservation Status	Hectares	Number of EVCs
Endangered	2513	18
Vulnerable	1274	3
Depleted	9	1
Rare	0	0
Least Concern	47	1
Presumed Extinct	0	0

**Table 19. List of current threatened flora and their conservation status in the Longwood Landscape zone (as at December 2002, NRE 2002c).**

NB: FFG listed taxa includes only species listed as individual species, not as part of communities.

Latin name	English name	Australian Status	Victorian Status	FFG Listed	FFG Action Statement number	Recovery Plan	BNA Unassessed	Species number
<i>Amyema linophylla ssp. orientale</i>	Buloke Mistletoe		v					217
<i>Brachyscome debilis</i>	Weak Daisy		v				Un	454
<i>Brasenia schreberi</i>	Water-shield	R	e	L			Un	487
<i>Cardamine microthrix</i>	Eastern Bitter-cress		v				Un	5029
<i>Hibbertia humifusa ssp. erigens</i>	Euroa Guinea-flower	V	v	L				5083
<i>Prasophyllum sp. (Nagambie)</i>	Plains Leek-orchid		e	L	168			4564

## Longwood Landscape Zone

### Longwood Landscape Zone description (cont'd)

**Table 20. List of current threatened fauna and their conservation status in the Longwood Landscape zone (as at December 2002, DSE 2003, 2002d).**

NB: FFG listed taxa includes only species listed as individual species, not as part of communities.

English name	Latin name	Australian Status	Victorian Status	FFG Listed	FFG Action Statement number	Recovery Plan	BNA Unassessed	Species number
Australasian Bittern	<i>Botaurus poiciloptilus</i>		End	L			Un	197
Australasian Shoveler	<i>Anas rhynchos</i>		Vul				Un	212
Baillon's Crake	<i>Porzana pusilla</i>		Vul	L			Un	50
Barking Owl	<i>Ninox connivens</i>		End	L				246
Blue-billed Duck	<i>Oxyura australis</i>		Vul	L				216
Brolga	<i>Grus rubicunda</i>		Vul	L				177
Brush-tailed Phascogale	<i>Phascogale tapoatafa</i>		Vul	L	79			1017
Bush Stone-curlew	<i>Burhinus grallarius</i>		End	L	78			174
Cape Barren Goose	<i>Cereopsis novaehollandiae</i>		Vul				Un	198
Caspian Tern	<i>Sterna caspia</i>		Vul	L			Un	112
Diamond Dove	<i>Geopelia cuneata</i>		Vul				Un	31
Freckled Duck	<i>Stictonetta naevosa</i>		End	L	105			214
Freshwater Catfish	<i>Tandanus tandanus</i>		Vul	L				4050
Golden Perch	<i>Macquaria ambigua</i>		Vul					4095
Golden Sun Moth	<i>Synemon plana</i>		End	L	106		Un	5021
Great Egret	<i>Ardea alba</i>		End	L				187
Grey-crowned Babbler	<i>Pomatostomus temporalis</i>		End	L	34			443
Hardhead	<i>Aythya australis</i>		Vul				Un	215
Intermediate Egret	<i>Ardea intermedia</i>		CEn	L				186
Little Egret	<i>Egretta garzetta</i>		CEn	L				185
Macquarie Perch	<i>Macquaria australasica</i>	End	End	L				4096
Murray Cod	<i>Maccullochella peelii peelii</i>		Vul	L				4094
Musk Duck	<i>Biziura lobata</i>		Vul				Un	217
Nankeen Night Heron	<i>Nycticorax caledonicus</i>		Vul					192
Painted Honeyeater	<i>Grantiella picta</i>		Vul	L				598
Powerful Owl	<i>Ninox strenua</i>		End	L	92		Un	248
Regent Honeyeater	<i>Xanthomyza phrygia</i>	End	CEn	L	41	Y	Un	603
Royal Spoonbill	<i>Platalea regia</i>		Vul					181
Speckled Warbler	<i>Chthonicola sagittata</i>		Vul	L			Un	504
Spot-tailed Quoll	<i>Dasyurus maculatus</i>	Vul	End	L	15		Un	1008
Squirrel Glider	<i>Petaurus norfolcensis</i>		End	L	166			1137
Swift Parrot	<i>Lathamus discolor</i>	End	End	L	169	Y	Un	309
Warty Bell Frog	<i>Litoria raniformis</i>	Vul	Vul	L			Un	3207
White-bellied Sea-Eagle	<i>Haliaeetus leucogaster</i>		End	L	60			226
White-footed Rabbit-rat	<i>Conilurus albipes</i>	Ext	Ext	L			Un	1426
Woodland Blind Snake	<i>Ramphotyphlops proximus</i>		Vul					2603

## Longwood Landscape Zone

### Longwood Landscape Zone priorities

#### 6.2.1 Summary of priority biodiversity actions for Longwood Landscape zone

Protect and enhance the existing biodiversity attributes of Tabilk Lagoon Wildlife Reserve and Bushland Reserves \*H66-69.

Improve protection and management of Public Land Water Frontage throughout the zone, giving priority to Pranjip, Creightons and Castle Creeks, as well as to Goulburn River (Heritage River) between Lake Nagambie and Hughes Creek.

Prevent further decline in biodiversity values of native vegetation and wetlands due to domestic grazing on public land by removal or continued exclusion of stock, and fencing of relevant reserves where needed. Give priority to Tabilk Lagoon Wildlife Reserve and Bushland Reserves \*H66-69; Public Land and Water Frontages on Pranjip, Creightons and Castle Creeks; PLWF and Streamside Reserve on Goulburn River; road reserves along Murchison–Longwood, Longwood–Pranjip, Drysdale and Pranjip Roads, Pranjip; and road reserves on Angle and Cullen Roads, Molka.

Restore environmental flows to priority creeks, and develop Streamflow Management Plans.

Ensure that, subject to its primary function of water supply, Goulburn Weir is managed so as to sustain existing habitat values for native fish and waterbirds in Lake Nagambie.

Identify localised sites of high biodiversity value and provide appropriate protection and management. Select the most strategic sites around which to develop Local Area Plans, where appropriate. These plans would use vegetation restoration to expand and extend existing remnants across tenures, for the most effective biodiversity outcome. Priority sites in the north of the zone include linkage between Bushland Reserves \*H66-67 (Murchison-Longwood Roads) and Pranjip Creek / Creightons Creek Public Land and Water Frontages; linkage between Bushland Reserves \*H68 (on Cullens Road) and Pranjip Creek / Creightons Creek Public Land and Water Frontages; linkage between Bushland Reserve \*H69 (on Pranjip Road) and Castle Creek Public Land and Water Frontages; road reserves along Murchison–Longwood, Longwood–Pranjip, Drysdale and Pranjip Roads, Pranjip; and road reserves on Angle and Cullen Roads, Molka. Additional sites in the east of the zone are the Goulburn River Public Land and Water Frontages between Lake Nagambie and Hughes Creek, and the riparian linkage between Goulburn–Major drought refuge and Puckapunyal Military Area bushland (on Major Creek).

Protect and enhance remnants along Hume Freeway and Melbourne–Sydney rail reserve, between Avenel and Euroa.

## Longwood Landscape Zone

### Private land

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#### **Land tenure details:**

This tenure includes all freehold land in the zone, with associated creeklines. Less than 5% retains native vegetation cover. The largest single patches are seldom greater than a few hundred hectares. However, many individual trees, clumps and small woodlots add greatly to the potential for biodiversity conservation, especially when considered in the context of the extensive vegetation network on Public Land Water Frontage, roadside reserves and unused roads in the zone. Davidson (1996) identified numerous freehold sites having extensive remnants, and recognised the strategic importance of native habitat on freehold adjacent to high-value roadsides in the vicinity of Pranjip and Molka (see Local Government section 6.7).

#### **Land manager:**

Private landholders

#### **Stakeholders:**

Key CMA, DPI, LV, Shire, CFA

Other GAV, TSN, LFW, Lc, TFN, VFF, GAV, CVA, GNP, VFB, WAG

**Threatened Biodiversity Assets** (in brackets: Cons status Vic - lower case, Aust - upper case; followed by BNA priority / risk rankings for threatened taxa = 1A, 2B, etc., or un - unassessed):

**EVCs:** The overwhelming reduction of vegetation cover on freehold in this zone has been in *plains grassy woodland* (e), which occurred on soils eminently suited to farming. Though remnants of this EVC remain widespread today, it occurs mainly in small patches which are usually highly degraded. EVCs which were formerly more localised—such as *red gum wetland* (e), *creekline grassy woodland* (v), *floodplain riparian woodland* (v), *gilgai plain woodland / wetland mosaic* (e), *plains grassy woodland / box ironbark forest complex* (e), *box ironbark forest* (v) and *plains grassy woodland / plains grassland / plains grassy wetland mosaic* (e)—are today mostly represented by relatively few remnants. However, some, despite their localisation, have survived proportionately well, primarily due to their unsuitability for agriculture (e.g. *box ironbark forest*).

**Threatened flora:** Buloke Mistletoe (v, 1A), Euroa Guinea-flower (Vv, 2B), Mueller Daisy (Ve, 3A),

**Threatened fauna:** Australasian Bittern (e, un), Barking Marsh Frog (dd, 3B), Barking Owl (e, 2A), Blue-billed Duck (v, 4B), Brolga (v, 2B), Brush-tailed Phascogale (v, un), Bush Stone-curlew (e, 1A), Flat-headed Galaxias (dd, 3B), Freshwater Catfish (v, 1A), Golden Perch (v, un), Great Egret (e, un), Grey-crowned Babbler (e, 2A), Intermediate Egret (cen, 1A), Little Egret (cen, 1A), Nankeen Night Heron (v, 1B), Royal Spoonbill (v, 1B), Squirrel Glider (e, 3A), Swift Parrot (Ve, 1A).



Blue-billed Duck (Photo: DSE/McCann)

## Longwood Landscape Zone

### Private land (cont'd)

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#### **Recommended actions:**

##### **Protection of existing remnants:**

Encourage protection of remnants on freehold and apply voluntary programs, incentives and/or planning controls, as appropriate. Give priority attention to private remnants (L1-7) identified by Davidson (1996), and recognise the high-value habitat of roadsides in the vicinity of Murchison–Longwood Road (including the south-east unused section) and of Cullens, Pranjip, Drysdale, Angle and Longwood–Pranjip Roads, in the Pranjip and Molka areas (Davidson 1996, Robinson 1998).

Emphasise the value of remnants containing Buloke and Yellow Gum (Davidson 1996) and maximise opportunities to publicise model stewardship (through Landcare, LFW, etc.).

Identify and monitor sites containing Mueller Daisy.



*Eucalyptus leucosylon*  
ssp. *leucosylon* (Photo:  
Viridans Biological  
Databases)

Highlight the need to protect habitats > 2 ha in extent, especially patches adjoining roadsides, at or near Grey-crowned Babbler or Squirrel Glider colonies.

Adhere strictly to native vegetation retention controls, particularly in the case of large trees and woodlots near Grey-crowned Babbler or Squirrel Glider colonies.

Investigate the potential of freehold remnants to complement significant native vegetation on Public Land Water Frontage and Streamside Reserves along the Goulburn River and Hughes Creek (Todd 1999), and on Public Land Water Frontage along Pranjip, Creightons and Castle Creeks (Robinson 1998).

Ensure that Shire staff know locations and importance of freehold remnants having biodiversity values.

Assist Shire to align any priority freehold remnants having strategic connective value or potential with roadside conservation plans.

Protect and enhance status of unreserved stream frontages which connect or extend existing Public Land Water Frontage reserves on Pranjip, Creightons and Castle Creeks.

Review status (fencing, grazing, condition) of all unused roads in the zone, and ensure that all fenced and ungrazed roadsides remain protected.

Investigate creekline habitat viability in light of silt loads from Strathbogie Ranges (Davidson 1996).

Encourage Shires to promote responsible pet ownership, giving priority to known locations of Brush-tailed Phascogale, Bush Stone-curlew, Grey-crowned Babbler and Squirrel Glider habitat.

## Longwood Landscape Zone

### Private land (cont'd)

**Management to enhance remnants for threatened taxa** (BNA response level in brackets: 4 = full commitment, 3 = substantive participation, 2 = opportunistic action, 1 = watching brief):

Supplement habitat for Barking Owl (3), Brush-tailed Phascogale (2), Buloke Mistletoe (4), Bush Stone-curlew (4), Grey-crowned Babbler (3), Squirrel Glider (3) and Swift Parrot (4) by increasing abundance of mature and hollow trees, mitigating against tree dieback, restoring understorey, conserving fallen tree debris, and enhancing connectivity.



Freshwater Catfish (Photo: DSE)

Supplement habitat for Barking Marsh Frog (1), Freshwater Catfish (4), Golden Perch (2), Nankeen Night Heron (3) and Royal Spoonbill (3) by improving quality and extent of riparian vegetation.

Control cats and foxes to curtail predation on Brolga (2), Brush-tailed Phascogale (2), Bush Stone-curlew (4), Grey-crowned Babbler (3) and Squirrel Glider (3).

Exclude stock from grazing on or near shallow wetlands used by Brolga (2), but ensure that fencing does not exclude chicks from receding wetlands (Arnol et al. 1984).

Enhance flow regimes in streams and wetlands to improve habitat for Barking Marsh Frog (1), Blue-billed Duck (1), Flat-headed Galaxias (1), Freshwater Catfish (4), Golden Perch (2), Little Egret (4) and Royal Spoonbill (3).

Change stocking levels (and develop appropriate grazing management guidelines) or exclude grazing, to reduce physical disturbance, or understorey loss or damage, affecting Barking Owl (3), Brolga (2), Brush-tailed Phascogale (2), Euroa Guinea-flower (2), Grey-crowned Babbler (4), Little Egret (4), Mueller Daisy (3) and Squirrel Glider (3).

Control weeds affecting the habitat of Buloke Mistletoe (4), Euroa Guinea-flower (2) and Mueller Daisy (3).

Encourage and promote grazing control (preferably exclusion by fencing) to conserve understorey near sites used by or suitable for Grey-crowned Babbler (4) and Squirrel Glider (3).

Discourage use of barbed-wire fencing near Squirrel Glider (3) habitat, as this snares many gliders (van der Ree 1999).

#### Restoration of strategic vegetation blocks or linkages:

Assist Landcare groups and LFW program to inform landholders of their potential role in conserving biodiversity, and to coordinate their involvement for the best possible outcome.

Co-ordinate restoration and revegetation initiatives to assist landholders and the Shire in consolidating local remnant networks (currently mainly creekline and roadside linear remnants). Give priority to linkage of Pranjip and Creightons Creek Public Land Water Frontages with Bushland Reserves \*H66-8, and of Castle Creek Public Land Water Frontage with Bushland Reserves \*H69 (Robinson 1998).

## Longwood Landscape Zone

### Private land (cont'd)

Arrange (in consultation with licensees) to fence out key unused roads (of which there are many associated with this tenure) and creeklines.

On freehold abutting roadside habitats of Squirrel Glider or Grey-crowned Babbler, promote and assist creation of buffer strips (at least 15 m wide and 500 m long) which have been neither ploughed nor ripped.

In consultation with Goulburn-Broken CMA, develop habitat management plans for streambanks on freehold, with particular emphasis upon protecting and expanding habitat nodes (e.g. creekline / roadside intersects).

**EXISTING POLICIES, PLANS OR PROGRAMS** supporting one or more of the recommended actions:

FFG Action Statement – Grey-crowned Babbler (34).

FFG Action Statement – Predation by Red Fox (44).

FFG Action Statement – Bush Stone-curlew (78).

FFG Action Statement – Brush-tailed Phascogale (79).

FFG Action Statement – Predation by Cat (80).

FFG Action Statement – Squirrel Glider (166).

FFG Action Statement – Swift Parrot (169).

CAMBA – Great Egret.

JAMBA – Great Egret.

Management Plan – Brolga (Arnol et al. 1984).

Recovery Plan – Swift Parrot (SPRT 2000).

ECC (2001) recommendation to include 'stream beds and banks' (which are technically deemed Crown Land) as Natural Features Reserve.

## Longwood Landscape Zone

### Public Land Water Frontage

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#### **Land tenure details:**

This tenure type includes all Public Land Water Frontage (K1) occurring across the zone—on Hughes, Pranjip, Creightons, Castle Creeks on the riverine plain; on Sunday Creek at Broadford; and on the Goulburn River, between Lake Nagambie and Tallarook. Three small Streamside Reserves occur along the Goulburn River floodplain, around Mitchellstown—K44 (25 ha), 45 (11 ha) & 46 (3 ha). Todd (1999) considered Public Land Water Frontage on the Goulburn River between Lake Nagambie and Hughes Creek to be part of a site warranting priority for 'protected area' status. Additional frontages identified by Todd for protection in this zone occur along Pranjip, Creightons and Castle Creeks, and are the same frontages identified by Robinson (1998) as 'major sites of conservation significance in the eastern Northern Plains'. A drought refuge (Goulburn—Major site 9 - rated *very good*) is located on this tenure type at the confluence of Goulburn River and Major Creek (Robinson & Rowley 1994), in proximity of Scenic Reserve K44.

#### **Land manager:**

LV

#### **Stakeholders:**

Key CMA, DPI, PV, Shire, CFA

Other Private, VFF, FNC, TSN, VFGA, GAV, CVA, GNP, Lc, VAA, VFB

**Threatened Biodiversity Assets** (in brackets: Cons status Vic - lower case, Aust - upper case; followed by BNA priority / risk rankings for threatened taxa = 1A, 2B, etc., or un - unassessed):

**EVCs:** Only *floodplain riparian woodland* (v), *creepline grassy woodland* (v) and *plains grassy woodland* (e) linear remnants persist on water frontage in this zone. Before settlement, vast tracts of *plains grassy woodland* (e), providing good connective habitat throughout the zone, dominated the alluvial plains adjacent to the Goulburn River and other streams. Public Land and Water Frontage around Broadford still carries remnant River Red Gum, but is highly disturbed, with pasture grasses and other invasive 'volunteer' species in abundance (LCC 1985b).

**Threatened flora:** None recorded.

**Threatened fauna:** Brush-tailed Phascogale (v, un), Bush Stone-curlew (e, un), Flat-headed Galaxias (dd, 1B), Freshwater Catfish (v, 1A), Golden Perch (v, 1B), Great Egret (e, un), Grey-crowned Babbler (e, un), Nankeen Night Heron (v, 3B), Royal Spoonbill (v, un), Squirrel Glider (e, 4A).



Nankeen Night Heron  
(Photo: DSE/McCann)

## Longwood Landscape zone

### Public Land Water Frontage (cont'd)

#### **Recommended actions:**

##### **Protection of existing remnants:**

Protect and enhance status of all Public Land Water Frontage in the zone, giving priority to the significant sites identified above. Throughout these sites ensure protection and regeneration of understorey, maintenance of connectivity and retention of large hollow-bearing trees.

Improve awareness of landholders and key stakeholders of the potential linkage value of these frontages, once restored.

Prevent removal from water frontage habitats of ground litter, fallen timber or dead-standing trees, which provide valuable shelter and forage sources for Brush-tailed Phascogale, Bush Stone-curlew, Tree Goanna and Squirrel Glider.



Tree Goanna (Photo: Peter Robertson)

Protect habitat at Goulburn-Major drought refuge, particularly box / Yellow Gum along the Goulburn.

Liaise with Army to retain and enhance vegetation upstream along Major Creek.

**Management to enhance remnants for threatened taxa** (BNA response level in brackets: 4 = full commitment, 3 = substantive participation, 2 = opportunistic action, 1 = watching brief):

Enhance flow regimes to benefit Flat-headed Galaxias (3), Freshwater Catfish (4) and Golden Perch (3) which favour still or slow waters, billabongs and backwaters. Other threatened species to benefit include Great Egret (2) and Royal Spoonbill (2).

Control cats and foxes to reduce predation on Brush-tailed Phascogale (2), Bush Stone-curlew (2), Grey-crowned Babbler (2) and Squirrel Glider (2).

Ensure permanent exclusion of grazing to protect riparian values and regenerate understorey on water frontage known or likely to support Brush-tailed Phascogale (2), Grey-crowned Babbler (2) and Squirrel Glider (2) (e.g. Creightons and Pranjip Creeks, Pranjip).

Supplement habitat associated with major stream systems to benefit Brush-tailed Phascogale (2), Bush Stone-curlew (2), Golden Perch (3), Nankeen Night Heron (1) and Squirrel Glider (2).

Avoid use of barbed-wire fencing near Squirrel Glider (2) habitat, as this snares many gliders (van der Ree 1999).

##### **Restoration of strategic vegetation blocks or linkages:**

Initiate revegetation of degraded creekline frontages.

Identify adjoining or strategic landholdings and easements having potential connectivity (e.g. adjacent roadsides) or enhancement value (e.g. nodes at roadside / streamside intersections) and encourage collaboration using incentives and voluntary programs.

## Longwood Landscape Zone

### Public Land Water Frontage (cont'd)

In particular, manage tenure to best facilitate linkage of Pranjip and Creightons Creek Public Land Water Frontages with Bushland Reserves \*H66-68, and consolidation of Castle Creek Public Land and Water Frontage with Bushland Reserves\*H69 (Robinson 1998).

Liaise with Army to retain and enhance vegetation along Major Creek (in Puckapunyal Military Area) immediately upstream of Goulburn–Major drought refuge.

**EXISTING POLICIES, PLANS OR PROGRAMS** supporting one or more of the recommended actions:

FFG Action Statement – Grey-crowned Babbler (34).

FFG Action Statement – Predation by Red Fox (44).

FFG Action Statement – Bush Stone-curlew (78).

FFG Action Statement – Brush-tailed Phascogale (79).

FFG Action Statement – Predation by Cat (80).

FFG Action Statement – Squirrel Glider (166).

CAMBA – Great Egret.

JAMBA – Great Egret.

ECC (2001) recommendation for upgrade of Public Land Water Frontage (K1) to Natural Features Reserve.

## Longwood Landscape Zone

### Water Production

#### **Land tenure details:**

The tenure includes only one reserve—Goulburn Weir (D51), on the Goulburn River near Nagambie. This reserve, containing Lake Nagambie, occupies 1840 ha. The lake supplies water for town use and irrigation purposes. Despite being a man-made storage, its fringing vegetation remnants and still-water habitats support a number of threatened waterbird and fish species.

#### **Land manager:**

Rural Water Authority

#### **Stakeholders:**

Key CMA, DPI, Shire

Other FNC, Private, TSN, VFGA

**Threatened Biodiversity Assets** (in brackets: Cons status Vic - lower case, Aust - upper case; followed by BNA priority / risk rankings for threatened taxa = 1A, 2B, etc., or un - unassessed):

**EVCs:** The reserve area was originally mainly *floodplain riparian woodland* (v) surrounded by expanses of *plains grassy woodland* (e). The margins of the storage retain valuable remnant patches (a few hundred hectares) of *floodplain riparian woodland*, mainly along the natural river alignment, and still fewer scattered fragments of *plains grassy woodland*, on margins of adjoining freehold.

**Threatened flora:** Plains Leek-orchid (Re, un).



*Prasophyllum* sp.  
(Nagambie) (Photo: John Eichler)

**Threatened fauna:** Barking Marsh Frog (dd, un), Flat-headed Galaxias (dd, 1B), Freckled Duck (e, 3A), Freshwater Catfish (v, 1A), Golden Perch (v, 1B), Great Egret (e, un), Murray Cod (v, 2A), Nankeen Night Heron (v, 3B), Royal Spoonbill (v, un), White-bellied Sea-eagle (e, un).



Barking Marsh Frog  
(Photo: Peter Robertson)

## Longwood Landscape zone

### Water Production (cont'd)

#### **Recommended actions:**

##### **Protection of existing remnants:**

Maintain status of D51, to conserve and enhance riparian habitat values for flora, fish, frogs and waterbirds whilst providing for recreation and water supply purposes.

**Management to enhance remnants for threatened taxa** (BNA response level in brackets: 4 = full commitment, 3 = substantive participation, 2 = opportunistic action, 1 = watching brief):

Enhance flow regimes to benefit Flat-headed Galaxias (3), Freckled Duck (3), Freshwater Catfish (4), Golden Perch (3), Great Egret (2), Murray Cod (3), Plains Leek-orchid (2), Royal Spoonbill (2) and White-bellied Sea-eagle (2).

Also enhance instream habitat quality, providing a range of substrate options (from logs to gravel) and flow conditions, including access to shallow-flooded backwaters, to facilitate spawning of Freshwater Catfish (4), Golden Perch (3) and Murray Cod (3).

Provide shallow feeding sites for Freckled Duck (3) and Royal Spoonbill (2).



White-bellied Sea-eagle  
(Photo: G. Withers)

Supplement riparian habitat to ensure nest trees and feeding sites for Great Egret (2) and White-bellied Sea-eagle (2), and exclude (or buffer) human disturbance of breeding areas for these species.

Supplement slow-flowing or still-water floodplain or woodland habitats to benefit Barking Marsh Frog (2).

Exclude domestic stock grazing and human disturbance to benefit Plains Leek-orchid (2).

##### **Restoration of strategic vegetation blocks or linkages:**

Encourage collaboration with adjoining landholders to restore connectivity via creekline and other remnants.

**EXISTING POLICIES, PLANS OR PROGRAMS** supporting one or more of the recommended actions:

FFG Action Statement – Use of lead shot (32).

FFG Action Statement – White-bellied Sea-eagle (60).

FFG Action Statement – Freckled Duck (105).

FFG Action Statement – Plains Leek-orchid (168).

CAMBA – Great Egret and White-bellied Sea-eagle.

JAMBA – Great Egret.

## Longwood Landscape Zone

### Other State Government

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#### **Land tenure details:**

The tenure takes in the linear easements of Hume Freeway and Goulburn Valley Highway, as well as the rail reserves of Melbourne–Sydney railway (which transects the south of the zone) and Goulburn Valley railway (extending north from Mangalore). Although for most of its width, the Melbourne–Sydney rail reserve is scraped clear of vegetation, there are numerous remnant vegetation patches associated with its (mostly fenced) margins. At Locksley, the rail reserve is separated from Bushland Reserve I181 only by the road reserve. Cropper (1996) describes a number of potential threats to native vegetation adjacent to the Hume Freeway (throughout the zone). In this zone, there are many unused roads retaining good-quality vegetation remnants, notably on the riverine plain.

#### **Land manager:**

Land Victoria, Public Transport Corporation, VicRoads

#### **Stakeholders:**

Key CMA, DPI, PV

Other VAA, BG, TSN, GNP, FNC, LGA

**Threatened Biodiversity Assets** (in brackets: Cons status Vic - lower case, Aust - upper case; followed by BNA priority / risk rankings for threatened taxa = 1A, 2B, etc., or un - unassessed):

**EVCs:** The course of the Goulburn Valley railway is over formerly extensive *plains grassy woodland* (e) (now almost entirely cleared), amongst which there were many wetland and drainage line crossings to be made. The plains through which the Melbourne–Sydney railway runs once carried *plains grassy woodland* (e), patchy *box ironbark forest* (v) and *grassy woodland* (e) and, at Locksley, an isolate of *plains grassy woodland / box ironbark forest complex* (e). The latter isolate remains evident at Locksley. There were also several patches of *shrubby granitic-outwash grassy woodland / plains grassy woodland complex* (e) (no longer evident) around the margins of the foothills to the south (Central Victorian Uplands bioregion). Although most of the broader woodland and forest cover along the Melbourne–Sydney railway is reduced to patchy fragments and linear remnants, the adjacent road reserve (Old Hume Hwy) retains valuable linear remnants. A number of *box ironbark forest* and *grassy woodland* remnants occur along the alignment of the (new) Hume Freeway.

**Threatened flora:** Euroa Guinea-flower (Vv, 3B).

**Threatened fauna:** Bandy Bandy (In, un), Barking Owl (e, un), Blue-billed Duck (v, 3B), Brush-tailed Phascogale (Rv, un), Great Egret (e, un), Grey-crowned Babbler (e, un), Intermediate Egret (cen, un).



Bandy Bandy (Photo: Peter Robertson)

## Longwood Landscape Zone

### Other State Government (cont'd)

#### **Recommended actions:**

##### **Protection of existing remnants:**

Protect and monitor sites of Grey-crowned Babbler occurrence, notably on rail reserve in the Locksley–Longwood area, and ensure that Public Transport Corporation (PTC) planning and maintenance staff are aware of the significance of not only these site locations, but other strategically valuable vegetation nodes, also.

Ensure that PTC liaise with Shire over roadside conservation plans pertaining to management of the road reserve (Old Hume Highway) adjacent to the above sites.

If necessary, establish a Public Authority Management Agreement (PAMA) with PTC to protect biodiversity values within the rail reserve.

Establish a PAMA with VicRoads to protect biodiversity values on and abutting the Hume Freeway road reserve. In particular, issues include vegetation disturbance associated with road works and maintenance, positioning of fire-breaks, mistletoe conservation, and the conservation of *protected* flora.

Review status (fencing, grazing, condition) of all unused roads in the zone to ensure maximum possible habitat protection. In particular, consult with licensees to fence key elements of Grey-crowned Babbler and Squirrel Glider habitat on unused roads (avoiding the use of barbed wire).

**Management to enhance remnants for threatened taxa** (BNA response level in brackets: 4 = full commitment, 3 = substantive participation, 2 = opportunistic action, 1 = watching brief):

Within the constraints of rail and highway reserve management, supplement habitat to benefit Bandy Bandy (2) Barking Owl (2), Blue-billed Duck (v, 3B), Brush-tailed Phascogale (2), Great Egret (2), Grey-crowned Babbler (2) and Intermediate Egret (2). This may entail conserving and expanding existing tree cover, retaining understorey shrub and ground layer vegetation, and enhancing natural flows in wetland sites and drainage lines on or adjacent to reserves.

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Control cats and foxes to curtail predation on Bandy Bandy (2) and Grey-crowned Babbler (2).

Control weeds affecting habitat of Euroa Guinea-flower (1).

##### **Restoration of strategic vegetation blocks or linkages:**

Investigate options to expand or extend linear remnants on rail and highway reserve, so as to supplement adjoining habitat on road reserves or freehold land.

Give priority to sites according to presence of threatened taxa and conservation status of vegetation remnants.

Use LFW extension resources to encourage collaboration of neighbouring landholders and land managers with appropriate remnants, roadsides or unused roads.

## Longwood Landscape Zone

### Other State Government (cont'd)

**EXISTING POLICIES, PLANS OR PROGRAMS** supporting one or more of the recommended actions:

FFG Action Statement – Grey-crowned Babbler (34).

FFG Action Statement – Predation by Red Fox (44).

FFG Action Statement – Brush-tailed Phascogale (79).

FFG Action Statement – Predation by Cat (80).

CAMBA – Great Egret.

JAMBA – Great Egret.

## Longwood Landscape Zone

### Local Government

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#### **Land tenure details:**

The tenure includes municipal roads and township land throughout the zone. In light of the extensive clearing of freehold, this tenure type (along with streamside remnants) provides the key to restoring and securing biodiversity assets in this zone (as also in Violet Town Landscape Zone). The Shire road networks (together with highways) contribute hundreds of kilometres of well-treed roadside reserves. A number of threatened species are recorded from bushland and low-lying areas on township land, notably around Euroa. Outstanding roadsides identified by Todd (1999) as warranting priority for 'protected area' status in this zone occur along Longwood–Pranjip Road, Pranjip; and on Angle and Cullen Roads, Molka. Davidson (1996) noted the high habitat value of roadsides in the vicinity of Drysdale and Pranjip Roads, Angle Road and Murchison–Longwood Road.

#### **Land manager:**

Local Government Authorities

#### **Stakeholders:**

Key: DPI, CMA, Priv, PV, RCC, VicRds, CFA

Other: Lc, LFW, GAV, FNCV, TSN, CVA, LFB

**Threatened Biodiversity Assets** (in brackets: Cons status Vic - lower case, Aust - upper case; followed by BNA priority / risk rankings for threatened taxa = 1A, 2B, etc., or un - unassessed):

**EVCs:** The predominant pre-1750 vegetation across this zone was *plains grassy woodland* (e), of which numerous small roadside patches (usually < 50 ha) remain. Most remaining roadside tree cover also reflects this EVC. In the north of the zone, some roadsides transect margins of small *red gum wetland* (e) patches. However, these would always have been localised. *Grassy woodland* (e), *box ironbark forest* (v) and *plains grassy woodland / box ironbark forest complex* (e) also persist on roadsides in the south of the zone. Roadsides in the basaltic valleys along the Sunday Creek – Sugarloaf Creek system, south-west of Seymour, formerly traversed predominantly *plains grassy woodland / plains grassland / plains grassy wetland mosaic* (e) and *plains grassy woodland* (e), both classes of which are now represented only by scattered stands of River Red Gum over a (usually) highly disturbed grassy understorey.



*Eucalyptus camaldulensis* (Photo: Viridans Biological Databases)

## Longwood Landscape Zone

### Local Government (cont'd)

**Threatened flora:** Buloke Mistletoe (v, un), Euroa Guinea-flower (Vv, 2B), Plains Leek-orchid (Re, un), River Swamp Wallaby-grass (Vk, un).



Amyema linophylla ssp. orientale (Photo: John Eichler)

**Threatened fauna:** Brush-tailed Phascogale (Rv, un), Bush Stone-curlew (e, un), Golden Perch (v, un), Great Egret (e, un), Grey-crowned Babbler (e, 1A), Nankeen Night Heron (v, un), Royal Spoonbill (v, un), Squirrel Glider (e, 1A).



Squirrel Glider (Photo: DSE/Seebeck)

#### Recommended actions:

##### Protection of existing remnants:

Protect existing roadside remnants, giving priority to high-value roadsides in the vicinity of Murchison–Longwood Road (including the south-east unused section), and of Cullens, Pranjip, Drysdale, Angle and Longwood–Pranjip Roads, in the Pranjip and Molka areas (Davidson 1996, Robinson 1998). In particular, conserve sites where native vegetation retains mature and hollow-bearing trees, shrubby understoreys, and sparse grassy ground layers.

Assist Shires to develop roadside conservation plans and encourage integration with voluntary efforts on adjacent freehold. Promote voluntary programs (e.g. Land for Wildlife) and planning overlays, as tools to assist Shires in protecting and managing roadsides.

Identify in Shire roadside conservation plans sites known or likely to support Brush-tailed Phascogale, Bush Stone-curlew, Grey-crowned Babbler or Squirrel Glider and advise Country Fire Authority to avoid or limit control burning of these sites, unless under advice.

Prevent removal from roadside habitats of ground litter, fallen timber, logs or dead-standing trees, which provide valuable shelter and forage sites for support Brush-tailed Phascogale, Bush Stone-curlew, Grey-crowned Babbler and Squirrel Glider.

Ensure that Shire staff (especially road maintenance crews) are aware of significant roadsides and actions required to protect them.

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## Longwood Landscape Zone

### Local Government (cont'd)

**Management to enhance remnants for threatened taxa** (BNA response level in brackets: 4 = full commitment, 3 = substantive participation, 2 = opportunistic action, 1 = watching brief):

Control cats and foxes to curtail predation on Brush-tailed Phascogale (2), Bush Stone-curlew (2), Grey-crowned Babbler (4) and Squirrel Glider (4).

Exclude grazing on roadsides to prevent physical disturbance, or understorey loss or damage, affecting on Brush-tailed Phascogale (2), Bush Stone-curlew (2), Euroa Guinea-flower (2), Grey-crowned Babbler (4) and Squirrel Glider (4). Also monitor for any needed grazing controls on River Swamp Wallaby-grass (2).

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DISTURBANCE  
WETLANDS

does anyone have a good photo for here?

Control weeds affecting habitat of Buloke Mistletoe (2) and Euroa Guinea-flower (2).

Enhance flow regimes in streams and wetlands to improve habitat for River Swamp Wallaby-grass (2).

Monitor and control human disturbance to sites (e.g. Lake Nagambie) supporting Plains Leek-orchid (2).

Supplement habitats on roadsides and around townships (e.g. Euroa) to benefit

Brush-tailed Phascogale (2), Grey-crowned Babbler (4), Nankeen Night Heron (2) and Squirrel Glider (4).

Enhance flow regimes of wetlands and drainage lines on road reserves to benefit Golden Perch (2), Great Egret (2), and Royal Spoonbill (2).

#### Restoration of strategic vegetation blocks or linkages:

Extend and expand existing roadside / creekline habitat networks, giving priority to sites known or likely to support colonies of Grey-crowned Babbler (particularly from Monea area, in the south, to Miepoll area, in the north), Squirrel Glider (Pranji–Molka–Dargalong areas) or Brush-tailed Phascogale (Longwood–Pranji–Molka areas). Target suitable sites within 300m of a known colony.

In expanding linear habitat networks, utilise nodes on creek-crossings, intersections with other road reserves or patches on adjacent freehold.

To conserve roadside Buloke Mistletoe, encourage and assist regeneration and consolidation of Buloke stands, especially at habitat nodes on creek-crossings or intersections, or near adjacent stands on freehold.

Liaise with landholders on adjacent properties to establish habitat strips by which to broaden roadside habitat.

Also liaise with landholders to fence across paddock corners at key intersections of roadside treelines, to maximise habitat availability for fauna (Robinson & Davidson, in prep.).



Photo: *Allocasuarina luehmannii* (Photo: Viridians Biological Databases)

## Longwood Landscape Zone

### Local Government (cont'd)

**EXISTING POLICIES, PLANS OR PROGRAMS** supporting one or more of the recommended actions:

FFG Action Statement – Grey-crowned Babbler (34).

FFG Action Statement – Predation by Red Fox (44).

FFG Action Statement – Bush Stone-curlew (78).

FFG Action Statement – Brush-tailed Phascogale (79).

FFG Action Statement – Predation by Cat (80).

FFG Action Statement – Squirrel Glider (166).

FFG Action Statement – Plains Leek-orchid (168).

CAMBA – Great Egret.

JAMBA – Great Egret.

## Longwood Landscape Zone

### Parks and Reserves

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#### **Land tenure details:**

Land in this tenure totals around 500 ha. The largest reserve is Tabilk Lagoon WR (C16) (198 ha), situated on the Goulburn River near Mitchellstown. Across the zone are scattered a number of small Bushland Reserves (I177-182, ^I40, \*H60 and \*H66-70—totalling 217 ha and ranging in size from 2–69 ha) and a Flora Reserve (\*G3; 70 ha), most of which abut creeklines. Robinson (1998) recommended that Bushland Reserves \*H66-69 be included (with associated Public Land Water Frontage) in 'Pranjip and Creightons Creek district' (site 24), considered by him as a "major site of conservation significance in the eastern northern plains".

#### **Land manager:**

Parks Victoria

#### **Stakeholders:**

Key CMA, DPI

Other FNC, BG, Private, Shire, TSN, VNPA, VAA, VFGA, CFA, GAV, GNP

**Threatened Biodiversity Assets** (in brackets: Cons status Vic - lower case, Aust - upper case; followed by BNA priority / risk rankings for threatened taxa = 1A, 2B, etc., or un - unassessed):

**EVCs:** Most of the present conservation reserves were (pre-1750) surrounded by extensive *plains grassy woodland* (e), now largely cleared. Bushland Reserve ^I40 formerly also carried this EVC, which still persists around that site. Bushland Reserves I177-8 retain *box ironbark forest* (v) and *heathy dry forest* (d). An unusual and localised occurrence of *plains grassy woodland / box ironbark forest complex* (e) and *plains grassy woodland* (e) continues to be supported on Bushland Reserve I181. *Creekline grassy woodland* (v) and/or *plains grassy woodland* (e) occur on Bushland Reserves \*H60, \*H66-70 and I180. Flora Reserve \*G3 (near Mangalore) formerly supported *box ironbark forest* (v) flanked by *grassy woodland* (e), both vegetation types of which are still present on the reserve. Fragments of *floodplain riparian woodland / floodplain wetland mosaic* (e) remain in Wildlife Reserve C16.

**Threatened flora:** None recorded.

**Threatened fauna:** Bush Stone-curlew (e, un), Freshwater Catfish (v, 3A), Golden Perch (v, 2B), Swift Parrot (Ve, un).



Swift Parrot (Photo: Mike Carter)

## Longwood Landscape Zone

### Parks and Reserves (cont'd)

#### **Recommended actions:**

Protection of existing remnants:

Give priority to protection and securing of Bushland Reserves \*H66-69 in accord with recommendations of Robinson (1998). Determine priorities for protection of other conservation reserves throughout the zone, based on habitat quality, patch size and existing or potential connectivity value.

Protect and enhance status of box ironbark remnants on Bushland Reserves (I177-8) near Tabilk, preclude grazing (I178) and strictly limit gravel extraction (I177).

Protect and enhance status of other high-value EVCs on Bushland Reserves \*H60, \*H70, I180-1, ^I40 and °G3.

Protect and enhance status of Tabilk Lagoon Wildlife Reserve, to maintain both instream and arboreal habitat values.

Undertake protective actions recommended by Davidson (1996) on Bushland Reserves \*H66-70. These include fencing, signage, control of weeds and rabbits, review of grazing, and management planning activities.

Consider any reserve within about 5 km of a Grey-crowned Babbler colony as a prospective colony site, if suitable or potential habitat exists there.

Monitor use of Flora Reserve °G3 by Swift Parrot.

**Management to enhance remnants for threatened taxa** (BNA response level in brackets: 4 = full commitment, 3 = substantive participation, 2 = opportunistic action, 1 = watching brief):

Enhance flow regimes at Tabilk Lagoon Wildlife Reserve to benefit Freshwater Catfish (3) and Golden Perch (2). (Note also use of riverine woodland by Powerful Owl.)

Control cats and foxes (notably at \*H67) to curtail predation on Bush Stone-curlew (2).

Supplement habitat on reserves to benefit Bush Stone-curlew (2) by promoting establishment of stands of trees and by retaining natural understorey and fallen tree debris.

Increase abundance of large and mature trees to benefit Swift Parrot (2).



Bush Stone-curlew (Photo: DSE/McCann)

#### **Restoration of strategic vegetation blocks or linkages:**

For each Bushland Reserve and Flora Reserve, investigate with adjoining landholders or land managers options for patch expansion and for restoring local connectivity, especially where near vegetated drainage lines. For more isolated patches, investigate options for buffer establishment on adjacent land.

Give priority to reconnection or consolidation of Bushland Reserves \*H66-68 (on Cullens and Murchison–Longwood Roads, west of Molka) with Pranjip Creek and Creightons Creek Public Land Water Frontages, and consolidation of Bushland Reserve \*H69 (on Pranjip Road) with Castle Creek Public Land Water Frontage (Robinson 1998).

## Longwood Landscape Zone

### Parks and Reserves (cont'd)

Liaise with adjoining landholders to reconnect and expand remnant box ironbark habitat between and surrounding Bushland Reserves (I177-8) near Tabilk, and to restore broad vegetated links between Tabilk Lagoon Wildlife Reserve and Goulburn River Public Land Water Frontage.

**EXISTING POLICIES, PLANS OR PROGRAMS** supporting one or more of the recommended actions:

FFG Action Statement – Predation by Red Fox (44).

FFG Action Statement – Bush Stone-curlew (78).

FFG Action Statement – Predation by Cat (80).

FFG Action Statement – Swift Parrot (169).

Recovery Plan – Swift Parrot (SPRT 2000).

ECC (2001) recommendation to redesignate Tabilk Lagoon Wildlife Reserve (C16) as Natural Features Reserve, all Bushland Reserves to Natural Features Reserve, and Big Hill Flora Reserve to Nature Conservation Reserve.