



Watson Creek Catchment Biolink Plan

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Contents

Introduction	5
Biolink landholder engagement and planning process	5
About Linking the Mornington Peninsula Landscape (LMPL)	6
Watson Creek biolink map (Figure 1)	8
Why are biolinks required on the Mornington Peninsula?	9
Watson Creek catchment	10
Watson Creek biolink properties: ecological assets and connectivity	10
Fauna species in the biolink area listed as threatened or vulnerable	11
Works required on private land	13
Property 56 (795 Frankston Flinders Rd)	13
Property and landholders	13
Relevant works to date:	14
Proposed works to achieve linkage	14
Additional information	14
Property 88 (288 Coolart Rd)	16
Property and landholder	16
Relevant works to date:	16
Proposed works to achieve linkage	16
Additional information	17
Property 61 (725 Frankston-Flinders Rd)	18
Property and landholder	18
Relevant works to date	18
Proposed works to achieve linkage	18
Additional information	18
Property 60 (731 Frankston-Flinders Rd)	19
Property and landholder	19
Relevant works to date	20

Proposed works to achieve linkage	20
Additional information	20
Property 64 (225 Baxter-Tooradin Rd)	21
Property and landholder	21
Relevant works to date	21
Proposed works to achieve linkage	21
Additional information	21
Property 75 (72 Lower Somerville Rd).....	23
Property and landholder	23
Proposed works to achieve linkage	23
Additional information	24
Property 69 (76 Lower Somerville Rd).....	25
Property and landholder	25
Relevant works to date	25
Proposed works to achieve linkage	25
Additional information	25
Complementary works on nearby properties	26
Inghams Enterprises	26
Melbourne Water land (Grant Road)	27
Melbourne Water Easement (Baxter Drain).....	27
Vegetation offset site (Frankston-Flinders Road, Baxter)	28
Westernport Biosphere	28
Where to from here?: for landholders and Watson Creek Landcare.....	28
For biolink landholders	28
For Watson Creek Landcare group and biolink landholders	29
Appendix 1: Watson Creek biolink recommended works on private land: actions required and indicative costings	29
Appendix 2: Additional information regarding costings and considerations for proposed actions.....	30
Introduction.....	30

Woody weed control	30
Grassy/herbaceous weeds.....	30
Fencing.....	31
Plant supply & install	32
Supply & install guards	32
Installing hollow logs on the ground	33
Installing nest boxes above ground	33
Fox control.....	33
Planning permits.....	33

Introduction

This plan outlines the works on private land that will contribute to the reconnection of patches of indigenous remnant native vegetation from Grant Rd Somerville (Inghams and Melbourne-Water managed land) to an area of native vegetation on a property in Baxter on Frankston-Flinders Rd. This is part of a larger plan being pursued by Watson Creek Catchment Landcare Group to restore vegetation up to Langwarrin Flora and Fauna Reserve in the north down to where Watson Creek enters the Yaringa Marine National Park. See Figure 1, p. 6.

This plan is part of [Linking the Mornington Peninsula Landscape](#) (LMPL), a 5-year project of the [Mornington Peninsula Landcare Network](#) (MPLN). The project is funded by the [Natural Resources Conservation League](#) (NRCL). LMPL aims to reconnect fragmented remnants of indigenous vegetation to create wildlife corridors (biolinks) on the Mornington Peninsula. LMPL assists Mornington Peninsula Landcare groups and landholders to develop collaborative local biolink plans for catchments across the Peninsula. These plans focus on works required to achieve the biolink on private properties but also consider public land in the biolink area.

Biolink landholder engagement and planning process



Members of Watson Creek Landcare, July 2015. Photo courtesy Watson Creek Landcare

Engagement of landholders in the process of planning for biolinks is one of the aims of LMPL. The strategy for engagement followed in both Watson Creek and Sheepwash Creek catchments has been to work closely with the local Landcare groups to:

- identify a target area with approximately 60-70 properties in it
- develop a brochure tailored to the area and mail it out to properties in the area
- refine the number of participating properties to between 8-10 properties, based on response to the brochure, suitability of property and capacity of landholders. This includes initial site visits.

- hold a planning workshop with participating landholders to determine alignment for biolink through the properties
- undertake follow-up site visits where required
- develop works areas for each property and management actions to achieve biolink, in consultation with landholder
- develop a biolink plan that can be used by the local Landcare group to obtain funding for on-ground works.

Compared to Sheepwash Creek, it has proved relatively difficult to engage landholders in the Watson Creek catchment. While landholders were happy for the plan to be developed and were generally on board and supportive of the concepts, most were unable to participate to the extent of attending workshops or field trips. The reasons for this are varied, including time constraints, age and other priorities taking precedence. Therefore, no workshop was held in Watson Creek catchment and, in some cases, landholders did not attend follow-up site visits. It should be noted that this has been a common experience for natural resource management projects attempting to engage landholders in the Watson Creek catchment. As a result of our experiences in Watson Creek catchment, future strategies for engaging landholders in are being reviewed with a view to developing alternative pathways for catchments, or specific landholders, with lower levels of engagement.

About Linking the Mornington Peninsula Landscape (LMPL)

During the first 3 years of LMPL, the focus will be on the following areas:

- Year 1 (2014-2015): Watson Creek catchment and Sheepwash Creek catchment
- Year 2: Main Creek catchment and Southwest Mornington Peninsula region
- Year 3: Dunns Creek catchment, Merricks-Coolart catchment, Red Hill South region

The Watson Creek catchment and Sheepwash Creek catchment biolinks developed in Year 1 (2014-2015) build on a pilot completed October 2014 in the Moorooduc area where a local biolink plan (Devilbend Biolink Plan or 'Western Linkage Plan') was developed with 4 private landholders. The [LMPL website](#) shows the location of this biolink area in the context of the northern Peninsula and the Watson Creek and Sheepwash Creek catchment biolink areas. The Devilbend Biolink plan (also known as the Western Linkage Plan) is now being used to apply for grants to undertake the on-ground works detailed in the plan.

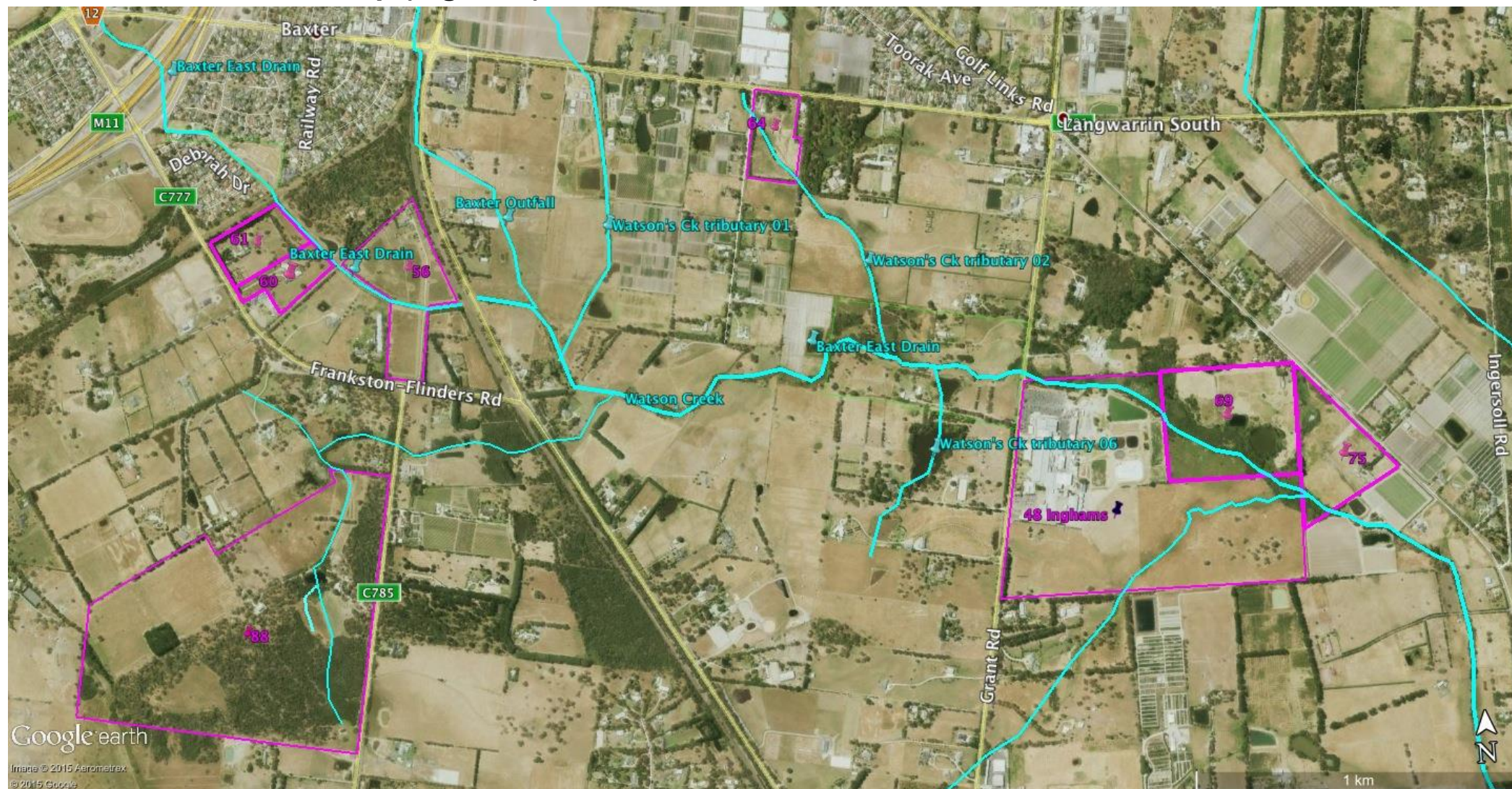
The MPLN represents the 11 Landcare Groups on the Mornington Peninsula. Its mission is to protect and enhance the unique environment of the Peninsula by promoting responsible care of the land. LMPL is a MPLN initiative and is funded by the NRCL.

MPLN was formed in 2013 to enable the local Landcare groups to work together more effectively to address local land management issues and develop constructive projects to enhance the environment. The NRCL, formed in 1951, is a not-for-profit company that promotes conservation, ideas and actions that value, conserve and restore ecosystems in a changing environment characterised by climate change, drought and fire risk.

The Watson Creek biolink is a component of a set of proposed Peninsula-wide biolinks. In 2012, assisted by their local Landcare Facilitator, representatives from (the then) nine Landcare groups on the Mornington Peninsula developed a [map of proposed biolinks covering the entire Peninsula](#). The proposed biolinks are based on an analysis of vegetation quality of the Peninsula, produced by the Arthur Rylah Institute for Environmental

Research. Input was sought from local natural resource management professionals and ecologists to ensure scientific integrity.

Watson Creek biolink map (Figure 1)



- biolink-property boundary
- 61, 60, 88 etc biolink-property ID no (note these ID are not in order and do not reflect the actual no. of properties in this biolink)
- P1, P2, etc conservation zone (actions proposed for these zones are covered in text, and in detail in Appendix 1)
- stream

Why are biolinks required on the Mornington Peninsula?

The Mornington Peninsula is an iconic and beautiful region and is considered [the most biodiverse 750 km² in Victoria](#). More than 80% of the Mornington Peninsula has been cleared for farming and development.

Fragmentation of the landscape over time has led to the decline of many native birds and mammals. As native trees, shrubs, and grasslands have been cleared to make way for farms, residences, and infrastructure, mammals such as swamp wallabies, bandicoots, antechinus, echidna, and skinks have lost habitat and become vulnerable to feral cats and foxes. Many reptiles and birds are also in decline due to loss of habitat and predation from introduced animals.

In order to be healthy, native landscapes must remain connected so that wildlife can move safely between areas of food and shelter. A landscape that is highly fragmented can trap animals in areas that are too small for their needs. Where understorey has been cleared, small mammals and birds that forage on the ground are vulnerable to predators such as cats, dogs and foxes, and their numbers decline rapidly. Those that escape predation may suffer from inbreeding (lack of genetic diversity) and their populations become vulnerable to diseases or sudden death due to disturbances such as pest outbreaks and high-intensity bushfires.

Biolinks are areas of bush and other habitat (such as waterways and stands of paddock trees) that connect areas of valuable habitat and forage. Biolinks enable wildlife to move freely and safely and have access to the broader landscape. This is increasingly important in light of climate change, as the requirement of animals to move to more suitable areas becomes critical.

In a highly fragmented (partially cleared) landscape such as the Mornington Peninsula, creating biolinks may involve the following:

- developing corridors of native vegetation on public and private property
- removing barriers such as electrified fences where possible.

These activities can help provide an effective connection between habitat patches and facilitate wildlife movement. A biolink can also be created by developing patches of bushland that act like 'stepping stones' for wildlife, reducing the distances between individual habitat patches¹. Some actions taken to create biolinks include weeding, planting, strategic fencing to keep out stock and feral animals and the building of underpasses and overpasses at roads to enable safe passage of wildlife.

¹ Bennett A. 2003., *Linkages in the Landscape: The Role of Corridors and Connectivity in Wildlife Conservation*., International Union for Conservation of Nature: Forest Conservation Programme, 2003.

Watson Creek catchment



Watson Creek as it enters Yaringa Marine National Park. Photo: Richie Ball

Watson Creek flows through a relatively small catchment area (approximately 70km²) from its headwaters in Baxter and Frankston South through Somerville and Pearcedale, entering Western Port at Watson's Inlet in Yaringa Marine National Park. The catchment contains valuable native vegetation and is important for many native animals and migratory bird species. Most of Western Port itself, including Yaringa Marine National Park, is listed as a wetland of international importance under the Convention on Wetlands of International Importance especially as "Waterfowl Habitat" (Ramsar Convention).

However, Watson Creek is also one of Victoria's most polluted waterways, exceeding State Environment Protection Plan levels for many pollutants including nutrients and heavy metals². Originally a system of swampy creeks and wetlands supporting many species-rich vegetation communities, Watson Creek has been highly modified and has become a system of channels and drains with only 15% of native vegetation remaining.³ It is impacted by a number of environmental threats, including loss of riparian vegetation, run-off from local townships, nutrient input, and sedimentation. Melbourne Water rates the condition of Watson Creek as "very poor".

Watson Creek biolink properties: ecological assets and connectivity

Watson Creek biolink properties (Figure 1) do not form a continuous corridor but do have connectivity with sites containing major ecological assets on local landscape scale. One participating property, property no. 88 on Coolart Rd, contains major ecological assets. While the preference is to have a continuous corridor of participating properties, it has proved difficult in the Watson Creek catchment due to the significant fragmentation of vegetation, small average property size and the multiple land uses that inhibit biolinks - i.e vegetable and flower farms,

² Watson Creek', Western Port Biosphere, <http://www.biosphere.org.au/biosphere-projects/watson-creek>

³ 'Watson Creek', Western Port Biosphere, <http://www.biosphere.org.au/biosphere-projects/watson-creek>

residential housing. This contrasts with Sheepwash Creek catchment, another area on the Peninsula for which another LMPL biolink plan is being developed.

Fauna species in the biolink area listed as threatened or vulnerable



Dwarf galaxias (*Galaxiella pusilla*) occurs in the biolink area and is listed as vulnerable under the federal *Environment Protection and Biodiversity Act* (1999). Photo: Western Port Biosphere

Species	Source	Status
Dwarf galaxias (<i>Galaxiella pusilla</i>)	Paul Hodgson, River Health Officer, South East River Health, Melbourne Water, pers. comm 3/9/2015	Vulnerable – <i>Environment Protection and Biodiversity Conservation Act</i> (Cwlth) 1999
Hardhead [duck] (<i>Aythya australis</i>)	Atlas of Living Australia (location search over area covered by biolink properties)	Vulnerable - Advisory List of Threatened Vertebrate Fauna in Victoria, Victorian Dept. of Environment, Land, Water and Planning, 2013
Latham's Snipe/Japanese Snipe (<i>Gallinago hardwickii</i>)	Atlas of Living Australia (location search over area covered by biolink properties) And Biolink landowners Anne and Ron Tyrrell	Near threatened - Advisory List of Threatened Vertebrate Fauna in Victoria, Victorian Dept. of Environment, Land, Water and Planning, 2013
Blue billed duck (<i>Oxyura australis</i>)	Atlas of Living Australia (location search over area covered by biolink properties)	Threatened – <i>Flora and Fauna Guarantee Act</i> (1988)
Musk duck (<i>Bizuria lobata</i>)	Atlas of Living Australia (location search over area covered by biolink properties)	Vulnerable - Advisory List of Threatened Vertebrate Fauna in Victoria, Victorian Dept. of Environment, Land, Water and Planning, 2013



Net Gain Offset site at 745 Frankston-Flinders Rd, Baxter, with wetland containing endangered Dwarf Galaxias fish.
Photo: Michele Sabto

In Baxter South, on private property at 745 Frankston-Flinders Rd, a 22 acre Net Gain Offset site has been established for Peninsula Link offsets. This site contains a wetland with the endangered Dwarf Galaxias fish, as well as endangered EVC Grassy Woodland. Baxter East drain, a significant tributary of Watson Creek, runs along the south west boundary of this property and is in very poor condition. As the landholders are already undertaking works for the offset, this Plan does not address their property directly, but it is obviously complementary.

The net gain offset site is adjacent to the first two properties in this Biolink Plan: properties no. 61 and 60 (neighbouring properties) in Baxter South at 725 and 731 Frankston-Flinders Rd. These are relatively small properties of 10 and 7 acres respectively, with Baxter East Drain running along the north east boundaries. These properties lack existing major ecological assets, so works outlined in this Plan are designed to enhance connectivity to the net gain offset site by improving and extending existing areas of remnant native vegetation on the properties. Works also represent an opportunity to begin remediation of Baxter East Drain, by improving streamside vegetation, in collaboration with a neighbouring biolink property, no. 56 at 795 Frankston-Flinders Rd). As with properties no. 61 and 60, property no. 56 is adjacent to the net-gain offset site. Baxter East Drain runs through property no. 56.

To the south of property no. 56 is a considerable expanse of remnant woodland on private property that is adjacent to another biolink property: property no. 88 at 288 Coolart Rd. Thus property no. 56 is well-placed to connect these two important remnants.

The 130-acre property no. 88 has a minor tributary of Watson Creek running through it. Its value to the biolink lies in its extensive Grassy Woodland and Swamp Scrub EVC's which cover some 80 acres of the property and represent one of only three large patches of Grassy Woodland within a 5km radius. Sugar Gliders have been recorded on the property. There is good potential to link it to property no. 56 to the north.

Jumping north across Watson Creek to 225 Baxter Tooradin Rd, is property no. 64, which comprises 9 acres of open paddocks with a tributary of Watson Creek running through the middle. This tributary has some intact riparian remnant vegetation and the landholders have already begun weed control and revegetation along it via a State

Government Communities for Nature grant run by Watson Creek Landcare group. There is no livestock on the property. This property is somewhat disconnected from other biolink properties but all the properties downstream of this one, to where this tributary enters Watson Creek, have already taken action towards environmental improvement independently.

Finally, two adjacent properties in Somerville at 76 and 72 Lower Somerville Rd – properties no. 69 and no. 75 - are in a critical position, being adjacent to Inghams Enterprises at 121 Grant Rd, Somerville, and having Watson Creek running through both. Inghams has commenced significant environmental works along the Watson Creek tributary at the south eastern portion of the property, fencing off creeks and undertaking revegetation and weed control. Inghams is also working with a local consultant to develop a whole-property plan covering the grazing and conservation areas on the property (i.e. all areas not covered by the enterprise infrastructure.)

Works required on private land

Property 56 (795 Frankston Flinders Rd)

Property and landholders

This is a 20 acre (8 ha) property on Frankston-Flinders Rd, Baxter (Figure 2). The landholders are members of Watson Creek Catchment Landcare group.



Figure 2: Property no. 56 (795 Frankston-Flinders Rd)

This property contains a significant tributary to Watson Creek known as 'Baxter East Drain'. This tributary runs through the middle of the property within a Melbourne Water easement that is in poor ecological condition. The

property is also adjacent to what is believed to be a large Net Gain Offset site (created for Peninsula Link offsets) to the north-west at 745 Frankston-Flinders Rd. This adjacent property has a wetland that contains the endangered Dwarf Galaxias (fish) and endangered EVC Grassy Woodland. To the south of property no. 56 is a considerable expanse of remnant woodland on private property that links to another Biolink participant (288 Coolart Rd), so property no. 56 is well-placed to connect these two important remnants.

There is currently no stock on the land and pasture is cut for hay. However, increasing amounts of Blackberry in the paddocks is making this less productive. The landholders have recently completed planting indigenous plants along their boundary that borders the Melbourne Water drainage line easement. They avoid slashing certain areas of their pasture altogether as they have observed Japanese Snipe (Latham's Snipe) routinely inhabiting the long grass. This reduced slash regime has allowed resilient indigenous species to co-exist in the wetter areas of the pasture, allowing a grassy wetland to form, which is worth preserving. The landholders are keen to create revegetation corridors across their property to link the large remnants around them, as well as preserve certain areas for Japanese Snipe and treat Blackberries across the entire property. They are also seeking cooperation with Melbourne Water regarding weed control (at a minimum) and revegetation within the easement.

Relevant works to date:

- Designated areas of pasture as 'no-go zones' for grassy wetland development and Japanese Snipe habitation.
- Clusters of indigenous trees in paddocks.
- Planting of approx 1000 indigenous plants along Melbourne Water easement (P10, Figure 2) through the Watson Creek Catchment Landcare group's Communities for Nature (C4N) project undertaken July 2015.
- Subsequent extension of C4N project by the landholders by increasing plant density and extending it to North-west boundary (extra 1000 plants, at landholders' expense).

Proposed works to achieve linkage

- P1, P2, P4, P6 and P8 (see Figure 2) are essentially revegetation zones. They will require initial weed control (blackberry and grassy weeds) followed by installation of indigenous plants. For the purposes of creating a functional biolink, this revegetation should include all vegetation layers: i.e canopy, understorey and ground layer species.
- P3 and P7 should be managed as wetlands. Blackberry and Cumbungi will need to be eradicated. Beyond this, it may be enough to just leave nature to its own devices. For aesthetic value, there are indigenous aquatic species worth installing into P3.
- P9 requires Blackberry control in order to avoid re-infestation of surrounding revegetation and wetland zones.
- P5 has existing native tree plantings. Woody weed control is required to maintain condition.

There are no plans for livestock of any kind to be run on the property so no fencing has been proposed.

Additional information

EVCs present onsite: 175 Grassy Woodland and 53 Swamp Scrub. Both listed as 'Endangered' in the region. The 'Grassy Wetland' area is difficult to classify as it's highly disturbed, however the prevalence of indigenous plants and the fact that Japanese Snipe are using it, is justification enough to conserve it.



Property no. 56, planting of indigenous species along Melbourne Water Easement (P10 , Figure 2), funded by a Communities for Nature Grant, July 2015. Photo: Michele Sabto



Property no. 56 . The landholder walks through a wet area of the property (P7, Figure 2). Although this area is highly disturbed, indigenous wetland species have persisted due to a lighter slashing regime (notice the green strip) such that this area could be considered EVC 125 'Plains Grassy Wetland'. Anne and Ron have seen Japanese Snipe in this area. Photo: Michele Sabto

Property 88 (288 Coolart Rd)

Property and landholder

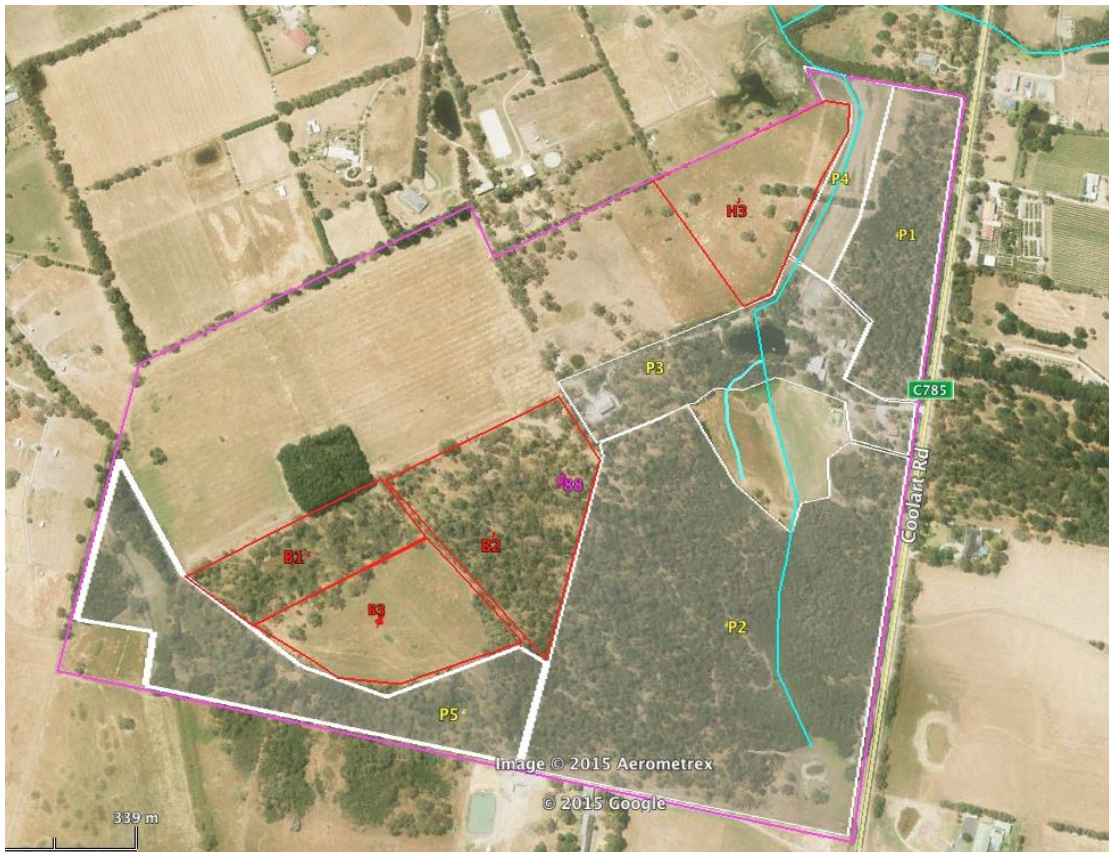


Figure 3: Property no. 88 (288 Coolart Rd)

This is a 130 acre property on Coolart Rd, Somerville. It has significant areas of pasture and remnant woodlands, with a minor tributary to Watson Creek running through it. Therefore, its real value in terms of Biolinks is the extensive Grassy Woodland and Swamp Scrub EVCs that cover some 80 acres. This is one of only three large patches of Grassy Woodland within a 5km radius and Sugar Gliders have been recorded on the property. There is good potential to link it to Property 56 to the north, which itself is part of another large patch of Grassy Woodland.

The landowner has developed a whole-farm plan that will see significant changes in how the property is run overall. For the purposes of the Biolink Plan, only those areas that will remain exclusively dedicated to (or have a direct impact on) conservation will be addressed in detail. As part of the whole farm plan, the landowner is endeavouring to make sure agricultural activities remain sympathetic to the environment. Works proposed here are designed to be complementary to the whole farm plan.

Relevant works to date:

- Developing Whole Farm Plan that will include realignment of fencing to protect remnant vegetation and add indigenous flora windbreaks to grazing paddocks.
- Blackberry spraying has begun.

Proposed works to achieve linkage

- Rationalisation of farm fencing, including some new fencing as well as moving/replacing existing fencing to define conservation zones.
- Woody weed control across all conservation zones (P1, P2, parts of P3, P5).

- Consider the options for P4: i.e. grazing vs revegetation, or a mixture of both. Trenching for drainage is not recommended - this has been a mistake of previous generations. If it is to remain a paddock, it is recommended that grazing only occur at times when the paddock is not under water.

Additional information

EVCs present onsite: 175 Grassy Woodland and 53 Swamp Scrub. Both listed as 'Endangered' in the region.



Property no. 88 (288 Coolart Rd), Grassy Woodland EVC (P2, Figure 3).

Property 61 (725 Frankston-Flinders Rd)

Property and landholder



Figure 4: Property no. 61 (725 Frankston Flinders Rd)

This is a 10 acre (4 ha) property on Frankston-Flinders Road, Baxter (Figure 4). It is mostly paddocks that are slashed as needed, with remnant gums and some indigenous understory occurring in the north east of the property. It backs on to the Melbourne Water easement containing Baxter East Drain, and the vegetation offset site described under Property 56 above. While there are no major ecological assets currently on the property, the owners have expressed a desire to be a cooperative neighbour to biolink properties by addressing weed control and establishing streamside vegetation on their property as well as the Melbourne Water easement land.

Relevant works to date

- Ad-hoc woody weed control
- Communities for Nature (CFN) project involving the installation of approximately 500 indigenous plants in the area between the creek and P3, undertaken July 2015.

Proposed works to achieve linkage

- Weed control and revegetation of P1 and P2 (see Figure 4).
- Weed control throughout entire property (blackberry and Pampass Grass in particular). For the purposes of the biolink, we have only costed this work within P3 and P4 as these areas contain the remnant gums and understorey.
- Fence P1 and P3 (if livestock will be part of agricultural activities in the future).

Additional information

- EVCs present onsite: 175 Grassy Woodland. Listed as 'Endangered' in the region.
- Potential to re-establish 53 Swamp Scrub within Melbourne Water easement.



Property no. 61 Blackberry infestation on Melbourne Water Easement (Baxter East Drain) (P2, Figure 4), 11 May 2015. Photo: Michele Sabto

Property 60 (731 Frankston-Flinders Rd)

Property and landholder



Figure 5: Property no. 60.

This is a 7-acre (2.8 ha) property on Frankston-Flinders Road, Baxter (Figure 5). It is mostly paddocks that are slashed as needed, with remnant gums and some indigenous understory occurring in the north east of the property. It backs on to the Melbourne Water easement containing Baxter East Drain, and the Vegetation Offset site described under Property 56 above. While there are no major ecological assets currently on the property, the owners have expressed a desire to be a cooperative neighbour to Biolink Properties by addressing weed control and establishing streamside vegetation on their property as well as the Melbourne Water easement land.

Relevant works to date

Ad-hoc woody weed control

Proposed works to achieve linkage

- Weed control and revegetation of P1 and P2 at a density that will maximise habitat values given that the size of these zones is limited.
- Weed control throughout entire property (Blackberry in particular). For the purposes of the biolink, we have only costed this work within P3 as this area contains the remnant gums and understorey.
- Fence P1 and P3 (if livestock will be part of agricultural activities in the future).

Additional information

EVCs present onsite: 175 Grassy Woodland. Listed as 'Endangered' in the region.

Potential to Re-establish 53 Swamp Scrub within Melb Water easement.



Weed infestation (mainly blackberries and pampas grass) on Melbourne Water Easement (Baxter East Drain), (P1, Figure 5), 5 May 2015. Photo: Michele Sabto

Property 64 (225 Baxter-Tooradin Rd)

Property and landholder



Figure 6: Property no. 64

This is a 9 acre (3.6 ha) property on Baxter-Tooradin Road, Baxter (Figure 6). There are open paddocks with a tributary of Watson Creek running through the property north-west to south-east. This tributary has some intact remnant vegetation along it and the landholders have already begun weed control and revegetation along it via a State Government Communities for Nature Grant grant run by Watson Creek Landcare group. There is no livestock on the property. This property is somewhat disconnected from other participating biolink landholders but all the properties downstream of this one, to where this tributary enters Watson Creek, have already taken action towards environmental improvement independently.

Relevant works to date

- Weed control and revegetation along sections of Watson Creek Tributary via Communities for Nature grant undertaken July 2015.
- Revegetation (using a mixture of indigenous and native species) around property boundaries.

Proposed works to achieve linkage

- Extend revegetation along tributary to encompass all wet paddock areas and widen the corridor of vegetation (P1 and P2).
- Fencing will not be needed as there is no livestock.

Additional information

EVC 53 Swamp Scrub present on site. Listed as 'Endangered' in the region.

Potential to Re-establish 175 Grassy Woodland in drier positions.



Property no. 64, July 2015, brown grass along Watson Creek tributary marks the edge of the Communities for Nature planting area (P1, Figure 6). Planting undertaken July 2015. Proposed biolink works will extend revegetation along tributary to encompass all wet paddock areas and widen the corridor of vegetation. Photo: Michele Sabto.

Property 75 (72 Lower Somerville Rd)

Property and landholder

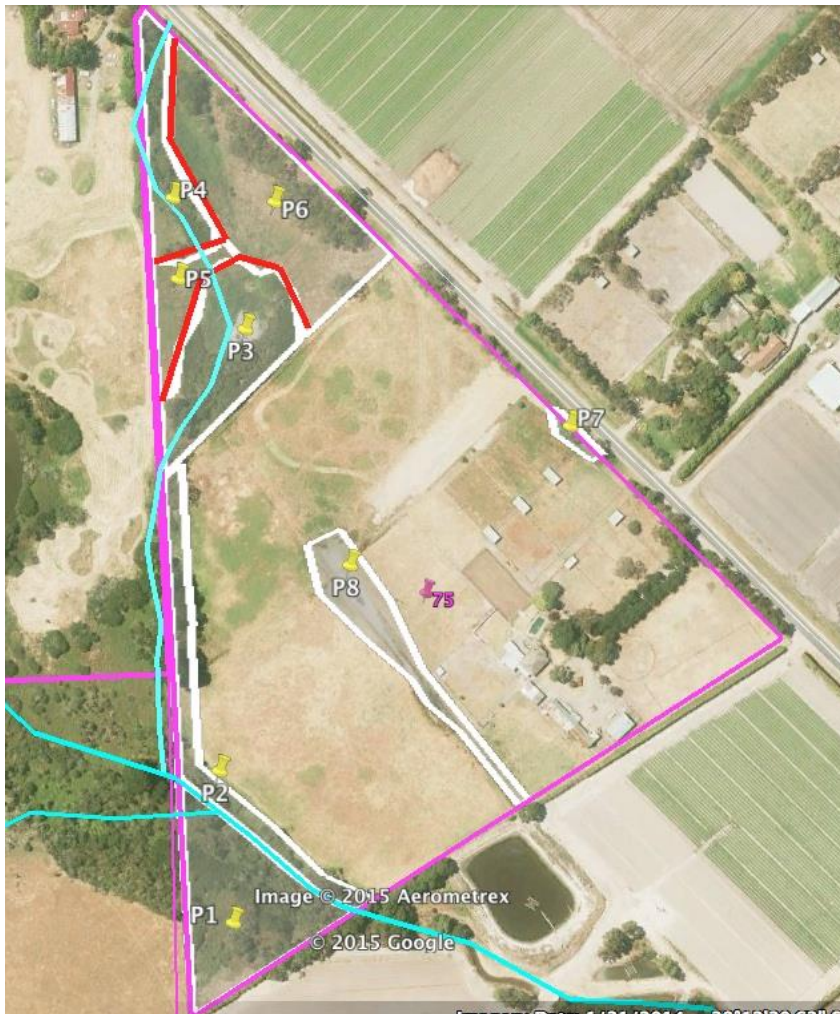


Figure 7: Property no. 75 (72 Lower Somerville Rd).

This is a property of approximately 18 acres (7.3 ha) on Lower Somerville Rd, Somerville (Figure 7). The landholders have only recently purchased the property and are still developing their vision for the property.

The property received little management prior to being purchased by the landholders, so weeds are widespread. There are a number of open paddocks infested with Blackberry as well as areas of remnant indigenous vegetation severely infested with weeds. Watson Creek and a small tributary both run through the property.

Due to the scale of the project, it is recommended that the landowners concentrate on restoring the existing bushland areas and address the paddock weeds before creating any new revegetation areas. Otherwise the maintenance issues will outrun the landowner's capacity to deal with them.

The property is adjacent to Inghams and Property 69, and therefore any works on this property will be complementary to the neighbours' efforts and vice-versa.

Proposed works to achieve linkage

- Woody weed control in P1, P2, P3, P4, P5, P6 and P7 (Figure 7).
- Revegetation in P2 and P5, also possibly in P4
- Dam restoration in P3, which at a minimum should include control of aquatic weeds.

- Consider wetland creation in P8, built to be aesthetic as well as functional.
- Install a bridge between P1 and P2 across creek, otherwise there is no access to P1.
- Blackberry eradication throughout paddocks (this is outside the biolink plan conservation zones (P1-P8 Figure 7) but is essential to prevent reinvasion.
- Install fenceline along P2. Possible fence installation around P4 - P6 or part thereof. Landholders undecided about the future land uses in this part of the property.

Additional information

EVCs present onsite: 175 Grassy Woodland and 53 Swamp Scrub. Both listed as 'Endangered' in the region.



Property no. 75, July 2015. Watson Creek (P1, Figure 7) - remnant indigenous Melaleuca, Gums, and Acacias. Severely impacted by Blackberry/Desert Ash (woody weeds) and Bridal Creeper, Cape Ivy (grassy/herbaceous weeds). Photo: Michele Sabto



Property no. 75, July 2015. Remnant Melaleuca in wet paddock (P3, Figure 7). Weeds largely Blackberry and variety of other herbaceous weeds.

Property 69 (76 Lower Somerville Rd)



Figure 8: Property no. 69

Property and landholder

This is a 13.6 ha property on Lower Somerville Rd (Figure 8), to the east of Inghams Enterprises. The landholder has expressed interest in being part of the LMPL biolink plan, and has undertaken weed control along Watson Creek in the past via Melbourne Water funding. In 2007, the landholders also used earth movers to clear blackberries from an approximately 1ha area adjacent to the creek and this area is now regenerating with *Melaleuca* and has a relatively low incidence of weeds.

However communication with the landholder has been difficult. Therefore we have not been able to finalise the plan for this site.

The property is severely weed infested but it also has a large area of remnant native vegetation with Watson Creek running through the middle. It also holds a critical position in the Biolink Plan being between Inghams and Property 75. Should Inghams and property 75 continue biolink work, this property could become a source of significant reinvasion to them.

Relevant works to date

Weed work has been undertaken in the past.

Proposed works to achieve linkage

Staged program of weed control (especially Blackberry) followed by revegetation required throughout most of the creekline corridor. Melbourne Water has advised that wildlife is inhabiting the Blackberry and would not fund a widespread and sudden weed spray, hence the staged approach.

Additional information

EVCs present onsite: 175 Grassy Woodland and 53 Swamp Scrub. Both listed as 'Endangered' in the region.



Property no. 69, May 2015 (Z1, Figure 8). Photo: Michele Sabto.



Property no. 69, May 2015. Area (approx. 1ha) adjacent to Watson creek (in background) cleared in 2007 of Blackberries and now regenerating with Melaleuca (Z1, Figure 8). Photo: Michele Sabto.

Complementary works on nearby properties

Inghams Enterprises

Inghams Enterprises (a poultry processing plant) contains a significant length of Watson Creek, and sits between two biolink properties. Inghams Enterprises is a member of Watson Creek Catchment Landcare group and is represented in the group by Hudson Cameron, Environmental Manager at Inghams. Inghams have begun significant environmental works on their property by fencing off creeks and conducting revegetation and weed control. Inghams is also in the process of developing a whole-farm plan for those areas of the property not occupied by buildings and infrastructure. This plan will consider both agricultural productivity and conservation, seeking to balance the two. Works proposed in the Biolink Plan are complementary to the works undertaken by Inghams.



Inhgams, streamside revegetation, NE corner of property. This revegetation is approximately 8 years old and was undertaken with the support of the Western Port Biosphere.

Melbourne Water land (Grant Road)

Across the road from Inghams, on Grant Road, there is a Melbourne Water-managed parcel of land. It is severely infested with Blackberry and Willow among other weeds. During discussions with private landholders in the Watson Creek area, the condition of this land, that has Watson Creek running through it, was frequently mentioned to Michele Sabto and Blair Luxmoore and it appears it is a sore point in the community. It is hoped that this Biolink Plan will lead to improved management of this property by Melbourne Water.

Melbourne Water Easement (Baxter Drain)

Blair Luxmoore has discussed with Paul Hodgson of Melbourne Water, the weed-infested easement that runs through several of the conservation zones proposed for biolink properties. Paul has responded that Melbourne Water is aware of the problem, has supported private landholders in weed control efforts in the past, and has also undertaken independent weed control and revegetation measures on this easement. He has said that Melbourne Water would be pleased to explore ways to support Biolink landholders on this issue following the release of this Plan.



Weed-infested Melbourne Water easement (Baxter Drain) on property no. 56 (P8, Figure 2).

Vegetation offset site (Frankston-Flinders Road, Baxter)

This property at 745 Frankston-Flinders Rd contains remnant Grassy Woodland and is receiving funding from the government for conservation works. The government also funded the creation of wetlands as habitat for the rare Dwarf Galaxias fish (listed as vulnerable in the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*) that was displaced during construction of Peninsula Link. Since this site is already funded, it is not included in this Biolink as a participating property. However the works are directly complementary.

Westernport Biosphere

The Western Port Biosphere has recently (mid-2015) started the [Watson Creek Water Stewardship Project](#), which aims to help landholders develop water stewardship plans for their properties in order to protect the unique values of Watson Creek and Yaringa Marine National Park. The aims of this program are to:

- improve the water quality and ecology of Watson Creek
- improve water security for water users along Watson Creek
- improve and maintain the ecological conditions at the internationally significant Yaringa Marine National Park.

Where to from here?: for landholders and Watson Creek Landcare

For biolink landholders

One of the main purposes of producing this community-driven biolink plan is to enable you, the participating landholders to expand your environmental works beyond your current level. This can largely be achieved by attracting grant money from government, business and philanthropists. For legal and other reasons these grants normally require applicants to be some sort of legal entity. This is especially the case when dealing with business and

philanthropic organisations, and where larger sums of money are required. By far the simplest option is for you to join Watson Creek Catchment Landcare group, which is already established in the area to apply for these grants. Landcare groups have access to grant offers that are unique to this organisation.

However, it is also a good idea for you, as the participating landholders in this particular biolink, to work together to achieve your shared vision of a biolink in the Watson Creek region. After all, you have now met each other, and know about each other's properties and conservation aspirations. This is a good base from which to build an ongoing productive group in which members can support each other into the future to carrying out the works set out in this plan. Our recommendation is that someone in your group should act as 'communications manager'. That is to say, someone should be in charge of keeping the landholders up to date on progress. This can be done via group email, newsletter, regular meetings etc. Most importantly, this will alert everyone to grant opportunities. Application periods are usually short, so you need to know the moment they are released.

As a group, you should build a database of people you can go to for expertise, in-kind contributions, legal issues etc.

For Watson Creek Landcare group and biolink landholders

The information below is addressed to both the Landcare Group and participating landholders.

With this biolink plan in existence, you have a much better chance of securing larger funding amounts. You can highlight the:

- landscape-scale approach of your group,
- length of creekline within the project area,
- the fact that the biolink is aligned to reconnect important existing natural areas
- community-driven cooperative approach,
- the grand design - each grant application contributes to this incrementally.

Regular sources of government-based funding:

- [Melbourne Water](#)
- [Port Phillip and Westernport Catchment Management Authority](#) (PPWCMA)
- [Department of Environment, Land, Water and Planning](#) (DELWP) (State government)
- Various sources via [Landcare](#)

Last but not least, don't just rely on government grants. There are many other sources of funding out there; you just have to find them. A good place to start is the Australian Environmental Grantmakers Network website, which has a [section of resources for grantseekers](#).

Appendix 1: Watson Creek biolink recommended works on private land: actions required and indicative costings

[See spreadsheet marked 'Appendix 1']

Appendix 2: Additional information regarding costings and considerations for proposed actions

Author: Blair Luxmore

Introduction

This information is addressed directly to landholders and to Watson Creek Catchment Landcare group members.

While every care has been taken to accurately represent the cost of activities, these figures should only be taken as a guide. You should always seek up-to-date quotes, as market forces will affect pricing over time. More importantly, I have chosen an underlying methodology that I believe is most appropriate in each case, which therefore directly influences price calculations. There are other methodologies to consider, but to price all options would be almost open-ended.

My costings are based on the assumption that professional contractors are completing all works for you! Any time/equipment/materials you can contribute yourself may bring the cost down.

My prices are based on measuring dimensions off Google Earth, which is very accurate however it's still a good idea to seek exact site-based quotes that have been 'ground-truthed'.

There is a wide variety of capability, experience, equipment and work ethic amongst professional environmental companies. They also have differing opinions on what is the 'right' way to do things, given the complexity of dealing with natural systems and risk to wildlife. You can ask for references, or ask them to show you one of their comparable projects that are further advanced than your own, and decide for yourself which contractor you will put your trust in.

Most professional contractors with appropriate OHS and insurance in place charge from \$40 p/h to \$60 p/h ex GST. Price estimates have been based on the lower end of this range, however keep in mind that the cheapest hourly rate is not necessarily the best, as it still depends on the skill level and quantity of work that can be achieved 'per hour'.

You may be able to reduce the cost of your project by delegating simple tasks to your in-house staff such as groundskeepers, farmhands etc. Discuss this option with your contractor to make sure that what you see as 'simple' is actually simple. For example, a common mistake is made when people mistake Native Raspberry for Blackberry. Another common mistake is to assume that Bracken is a weed. In conservation projects, Bracken is not a weed. It is actually highly beneficial.

Woody weed control

The bulk of the cost of woody weed control is usually incurred in the first 3 years. There will be a significant drop in maintenance costs after this, and you should even be able to start skipping a year or two between maintenance passes.

These figures are based on your individual property needs as of August 2015. Please note that Blackberry in particular grows rapidly, so applicable estimates should be revised yearly.

Grassy/herbaceous weeds

There are two sub-categories here i.e. grassy/herbaceous weed control within *existing bushland*, and within *revegetation sites*.

Bushland Situation: Usually, the sheer cost, consistency and level of botanical skill required to effectively manage grassy and other herbaceous weeds makes it unfortunately impractical to address this problem on a large scale. Therefore, in my costings, I have concentrated on obvious priorities only, such as Cape Ivy, Bridal Creeper, Pampass Grass. This is one of those tasks where different contractors will have varying views. All you can do is hear them out, look at their other projects, and decide for yourself.

Revegetation Situation: In contrast to the above situation, most contractors will all agree that grassy/herbaceous weed control in young revegetation sites is necessary and often overlooked. Since most of you are intending some revegetation, thereby making handweeding hugely expensive, I have opted for a method where a person would use their feet only to stomp the weeds down, and spray a general herbicide around the plant like a halo. While this is not 100% effective, it will significantly reduce the competition of pasture towards the newly installed plants. For large projects where no mulch is being used, this is a good compromise on a 'cost vs benefit' basis. If you see \$0 values for your property in this column, it means there is enough 'good' understory that this task is not needed for your particular revegetation zones.

Fencing

You will probably only ever install your fencing once, so try to think towards the future and be generous where you can regarding how much land you devote to conservation. Besides the ecologically beneficial concept that 'more is better', there are some more practical realities to consider.

When applying for grants, particularly from Melbourne Water, your case is that much stronger if you have devoted enough land to make a real habitat corridor. Grants are generally assessed by people that know about ecological principles. Melbourne Water is much more interested in projects that fence off/devote at least 20m *each side* of the waterway. You will also get a higher % of your costs covered if you go wide. Even if you can't afford to undertake all the actions within the fence straight away, at least you have the infrastructure in place for when you are ready.

The more land you devote to conservation, the less 'edge-effect' of weed invasion you will have, therefore the less weed maintenance you will have. Wider revegetation areas are also more resilient to wind and drought, thus decreasing the likelihood that trees will come down across your paddock every time there is a storm. Also, don't expect a Koala to cross an entire paddock just to get to a couple of trees!

Your fence may be actively restricting cattle, hence the need for barbed wire and/or electric wiring. Kangaroos and wallabies are most at risk of these devices. They will either go under the lowest wire, or over the highest wire. Try running the barbed/electrified wire at positions other than the top and bottom strand. Think about installing wildlife gates such as depicted in the photo below. It only takes a few; animals will find them.



Wildlife-friendly stock fencing. This wildlife 'gate' on a property in Moorooduc, allows wildlife such as kangaroos and wallabies, but not cattle, to pass through. Photo: Michele Sabto

Plant supply & install

The cost of plant supply and installation varies widely, depending on three main points. They are:-

- 1) The overall number of plants you purchase in a single order. Obviously the more you buy, the cheaper they get.
- 2) The planting density i.e. how many plants per acre you intend to install. The closer they are, the faster it is to install. This actually makes a bigger difference than the first point!
- 3) Access to AND AROUND the planting site.

Nurseries may require a deposit, and may even offer a discount if you are willing to pay this. There are large up-front outlays in growing plants, which specialist indigenous nurseries are sensitive to when quoting you a price. If you are in a position to offer a deposit, bring this up early in negotiations.

My costings are based on the assumption that the nursery that grows the plants will also be employed to install the plants, hence attracting a wholesale price. If the plants are grown by one company and installed by either yourselves or another company, expect to pay at least 50 cents more per plant.

Supply & install guards

The supply and installation of guards is a relatively expensive activity. I have not recommended using guards on any of your sites as there is no reason to assume they are needed until proven otherwise. If you see rabbits, wallabies and/or kangaroos, you will need to consider guards.

The correct guard must be chosen for the situation. It is a common misconception that guards are 100% effective in protecting plants from animals, especially kangaroos/wallabies. Guards can also make weed maintenance more difficult.

A typical green treeguard (or bag as commonly known) with three bamboo stakes only costs about 50 cents. The expense is really in the installation, and similar to plant installation pricing, depends on spacing, access, hardness of the ground etc. For most sites within this biolink, installing guards on a plant spacing of approx. 1 plant per m² would cost about \$2.00 per guard. This is close to the cost of the plant itself so you can see how much cost it adds to

a project.

Make sure you consider the removal and disposal of guards about three years (or less in many cases) after installation. Not all guards are biodegradable, so do check into this before purchasing. I have not priced the removal of guards as I have assumed all guards will be biodegradable. Having said that, your revegetation will not look 'natural' until all these guards (and stakes) disappear from view, and a lot of people don't like the look of them in the meantime. This is a personal choice for you to consider.

Installing hollow logs on the ground

I did not go to the extent of quoting this item due to too many variables. Having said that, I've never met owners of a large parcel of land who didn't accumulate branches, logs and leaf litter somehow. Provided you wait till the branches/logs are dead and free of seeds (to avoid spreading weeds), throw them around your revegetation area or into your creek, rather than burning or chipping them. You'll be surprised how quickly it builds up. Try offering this disposal method to your neighbours too.

Installing nest boxes above ground

I did not go to the extent of quoting this item in full, as there are too many variables. However please don't ignore this important aspect. Just think, ten thousand seedlings will not produce one useable tree hollow for maybe 20 years! Ready-made nestboxes (starting at \$25 ea) and 'How-to-Install' guides are available from Latrobe University Wildlife Reserve. They are custom-made for the actual creatures you are trying to attract, and have been researched and developed over a number of years, so they are very effective. Watson Creek Catchment Landcare also have experience building and installing nest boxes.

Nest boxes require some maintenance to the extent that they may be colonised by feral creatures such as Indian Mynas, exotic bee species (Italian Honey Bee), Starlings and European Wasps.

Fox control

Fox control is another one of those aspects that is often overlooked, as the average person cannot 'see' the results in comparison to seeing the results of, for example, installing 500 plants. However, research being done particularly over the last 10 years is consistently showing that foxes are having a much greater impact than previously thought. Foxes are also one of the main spreaders of Sweet Pittosporum berries, Blackberries and other woody weeds that have berries.

Fox control is only effective if adjoining landowners have a coordinated plan, or if your own property is so large that it can be considered a 'landscape-scale program' in its own right. It's actually not that expensive, but just like weed control, it should only be started if you have the means to conduct follow-ups on a yearly basis.

I have not quoted this task for each property as there are too many variables. Furthermore, given that there are ethical concerns here, there are alternate options which are a very personal decision for each landowner to make. These will affect the price too.

Planning permits

Planning Permits from Mornington Peninsula Shire are actually required in some circumstances for killing trees/large shrubs *even if they are known weeds*. You should check with the Shire if you are unsure.