

Forest Creek Action Plan

Ecology, History, Social Values & Restoration

Forest Creek

Like every waterway in Victoria, Forest Creek is important. Healthy creeks, streams, ponds, lakes and rivers are essential to our own health. Whether it be for irrigating an orchard, watering livestock, escaping the heat of summer or providing a good spot to fish, clean water is important – not to mention for drinking.

Unlike almost every other waterway in Victoria, Forest Creek has a very special history. The Forest Creek Goldrush of the early 1850's was world famous for its abundance of easily attainable alluvial gold; and it was the site of one of the first mass protests by miners against increased government license fees. It brought thousands upon thousands of 'diggers' into the area and the creek was extremely modified by their fortune hunting. The significance of the creek's uniquely preserved goldmining history was great enough to warrant its inclusion in the Castlemaine Diggings National Heritage Park (CDNHP) in 2002.

Today, Forest Creek flows past residential blocks and right through Eastern Castlemaine. Its proximity to urban areas means that there can be conflict between what is best for the ecological health of the creek and what is considered to be suitable management for land adjoining the town. The creek's urban interface and its course through public land, means there are lots of people who use Forest Creek every day and value the creek for many reasons.

This action plan has been produced because of local people's interest in the future of Forest Creek. It documents how the creek is valued, what threats there are to its health, and how it might look in the future, from the perspective of local residents and community groups. The plan also includes information on the native flora and fauna that the creek and surrounding area once would have supported, and to a lesser extent continues to support

Local Landcare Groups and other community organisations have made great improvements to the health of the creek over the last 20 years and this plan aims to help them continue their work in the future. The iconic degradation of Forest Creek is now an opportunity for iconic restoration



Happy Valley, with a Castlemaine Landcare Group planting in the foreground.

About the Plan

Who Is This Plan For?

This plan has been developed for anyone interested in learning more about Forest Creek, a tributary in the Loddon River catchment. It has also been designed to be used by Landcare, Friends of and community groups working in partnership with the various land managers to implement appropriate natural resource management works along the creek.

It aims to give their work a wider context and assist them in gaining support for future projects. It does this by providing background information on the environmental, cultural and social history of the creek, discussing the issues associated with ecological restoration along the creek and recording some of the concerns, aspirations and values that local residents and community groups have for Forest Creek

Connecting Country

Connecting Country is a community organisation dedicated to enhancing and restoring biodiversity across the Mount Alexander region.

Habitat loss and biodiversity decline in Victoria's Temperate Woodlands have been severe. Box-Ironbark Forest vegetation types, like those that surround Forest Creek, have been identified as some of the most depleted in Australia. The desire of the community to re-establish Box-Ironbark Forest landscapes in the Mount Alexander Shire has been strong enough to support the creation of Connecting Country.

Connecting Country started with seed funding from the Norman Wettenhall Foundation and is now funded through the North Central Catchment Management Authority (North Central CMA), from the Victorian and Commonwealth Governments (Victorian Investment Framework and Caring for our Country).

Consultation Process

This action plan has been produced by Connecting Country through consultation with local community groups who have an interest in restoring the ecological health of Forest Creek and the crown land adjacent to it. It has also been informed by consultation with the government bodies responsible for managing the creek, and residents who live along it. During the second half of 2011, the process of preparing this document involved meeting with representatives from interested groups and agencies, and a door-to-door survey of local residents, including a letter box drop. A total of 42 residents were consulted through this process.

Community Organisations consulted were:

- **Friends of the Box-Ironbark Forest**
- **Castlemaine Landcare Group**
- **Golden Point Landcare Group**
- **Chewton Landcare Group**
- **Friends of Kalimna Park**
- **Victoria Gully Group**
- **Post Office Hill Action Group**
- **Friends of Campbells Creek**

Government Agencies:

- **Department of Sustainability and Environment (DSE)**
- **Parks Victoria**
- **North Central Catchment Management Authority (NCCMA)**
- **Mount Alexander Shire Council**

Main Findings

There is considerable interest from local people in the ecological restoration of the crown land adjacent to Forest Creek. Some areas of the creek (Sections A, Section C and Victoria Gully – see plan) are already the focus of active restoration efforts by local Landcare and Friends groups. Other parts of the creek do not currently receive the same attention. These areas rely on what government agencies can afford to do.

The issues of greatest priority were:

Biodiversity – Restoration of the Forest Creek catchment will support local plants, birds and animals, especially those on the Victorian endangered, threatened or vulnerable lists. These include the **Red Spider Orchid** (Endangered), **Eltham Copper Butterfly** (Vulnerable), **Swift Parrot** (Endangered), **Brush-tailed Phascogale** (Vulnerable), and the **Creekline Grassy Woodland** ecosystem (Endangered).

Weeds – There are many declared noxious weed species that occur along the creek. These include species classified as *Regionally Controlled* by the Department of Primary Industries, such as Gorse, Blackberry, Paterson's Curse and St. John's Wort, as well as *Restricted* species such as Cape Broom, Bridal Creeper and Willows. All of the community groups working along the creek regard weed removal and maintenance of weed-free areas as their biggest priority.

Revegetation – Replanting with native species is viewed as necessary to maintain areas free of weeds, improve wildlife habitat, and stabilise banks.

Recreational Amenities – The creek is extremely popular with local residents for walking and cycling. All of the community groups consulted would like to extend



The Brush-tailed Phascogale - an endangered marsupial that occurs in the Box-Ironbark Forests.

or improve the current pathway.

Heritage – Much of the creek falls within the Castlemaine Diggings National Heritage Park. The European history of Forest Creek is highly valued by local residents and revegetation projects need to be sensitive to this.

Fire – DSE regards parts of Forest Creek as a possible fire risk to Castlemaine and Chewton. There was some concern from residents about the danger of planting trees along the creek with regard to the wildfire threat.

Floods – There was some concern from residents about the potential for riparian plantings to increase the local flood risk.

A Short History of Forest Creek

Geology

The story of Forest Creek begins around 470 million years ago in the Ordovician period. At that time, the area we now call the Mt Alexander Shire was a large, shallow sea in which layer upon layer of sand and silt were deposited. This ancient

sea bed formed the substrate that the creek now flows over. Around 390 million years ago, an intrusion of magma cooled deep below the earth's surface to form the granite that is exposed to the north of the creek, most prominently in the form of Mount Alexander. The intense heat associated with this event was responsible for



Steeply folded Ordovician bedrock next to Forest Creek in Happy Valley.

the formation of Gold bearing quartz reefs within the Ordovician sediments. The forces of erosion then went to work over tens of millions of years and carved the creek through the sedimentary Ordovician rock.

Geological evidence suggests that Forest Creek has existed in its present position for at least 5 million years, and its previous course (just behind Chewton) has been dated to 40 million years. Where the creek crossed a gold-bearing quartz vein, the gold was deposited in the creek bed. Forest Creek eventually became extremely rich in alluvial gold and only awaited the gold rush of 1851 to be emptied of it.

Ecology

The vegetation that existed along the Forest Creek prior to European arrival probably consisted of open woodlands with a grassy understory along the creek and its floodplain. The woodlands were then likely to be bordered by the forested slopes of surrounding hills. One early painting shows that tree ferns grew on its banks. Predictive mapping of pre-European Ecological Vegetation Classes (EVCs) indicates that the vegetation along the creek would have been a mosaic of Alluvial Terraces Herb-rich Woodlands and Creekline Grassy Woodlands. The over-storey would have consisted of large, widely spaced Yellow Box (*Eucalyptus melliodora*), Grey Box (*Eucalyptus microcarpa*), River Red Gum (*Eucalyptus camaldulensis*) and possibly White Box (*Eucalyptus albens*) with a grass and herb-rich understory. Similar to today, it is not thought that Forest Creek would naturally have had a permanent flow of water all year round. During drier periods it would have consisted of a chain of deep ponds.

The lower slopes and valleys of the Box-Ironbark Forests are the most productive part of the landscape, supporting the greatest mass of plants and animals. And waterways, even intermittent ones, are particularly important habitat areas for many animals in summer time, and especially during times of drought. The habitats along the creek would have supported many animals, including the Brush-tailed Phascogale.



The ruined Welsh Street Bridge crossing Forest Creek close to the reservoir.

Indigenous Culture

Forest Creek has been utilised by Indigenous people for thousands of years. The creek flows through the country of the Jaara Jaara people. Places and sites of significant archaeological, cultural and spiritual importance to Indigenous people have been identified throughout the Box-Ironbark Forest Region and at least two archaeological sites exist near the creek. The forests and woodlands of this area provided Indigenous people with wood and plants for food and shelter, medicinal purposes, canoes, spears, shields, nulla nullas, boomerangs, tools and dishes (ECC 2001). The Jaara Jaara people were dispossessed of their country soon after European settlement.

European Heritage

The country around Forest Creek was settled in the wake of Major Thomas Mitchell's exploration of the area in 1836, while on an expedition from Sydney to chart the Murray-Darling River system. In his journal he describes travelling through the head of Forest Creek – through the site that is now occupied by the Expedition Pass Reservoir.

Discovery of alluvial gold in nearby Specimen Gully in October of 1851 began one of the biggest gold rushes in Australia's history. Thousands upon thousands of hopeful 'diggers' descended on Forest Creek with the single goal of becoming very rich, very quickly. A graphic description by English gold digger and author William Kelly, written in 1856, attests to the changes this caused in the landscape. Describing Forest Creek he writes:

"A stark unsightly district, stretching far and wide, looking I was going to say, as if it were rooted all over by hogs-but rhinoceroses would be a more suitable simile, if these animals were prone to that propensity. The whole region seemed, in reality turned inside out, entrails uppermost, producing as repugnant an effect as can well be imagined. Not a tree was left standing, nor a blade of vegetation was anywhere to be seen over the vast surface."

The alluvial gold rush did not last long however. By the mid 1850's most diggers had moved on to other goldfields like Bendigo. Technological advances soon brought new and more destructive methods of mining the creek, including dredging and sluicing. Sluicing of the creek continued into the 1930's.

Throughout its recent European history the creek has been subject to many uses and changes. It has been the site of gold digging, Chinese market gardens, gravel pits, graveyards and grazing runs. Townships have grown up on along its short course, and some have already disappeared back into the forest.

Forest Creek Today

Today, Forest Creek has new values and new meaning to the people that live around it. Natural regeneration of the forests and woodlands along the creek has brought back many birds and other animal species that would not have found a branch to perch on or a hollow to nest in 100 years ago. The bare ground has been recolonised by native plants and introduced weeds, and the land above the floodplain has become increasingly residential. Almost the whole length of the creek below the intersection of Golden Point Road and the Pyrenees Highway is bordered by residential properties on the southern side. The long interface of the creek with residential areas makes it an important recreational area, and the existing walking track between Happy Valley Road and Chewton is extremely popular.

Forest Creek's significance to Australia's European heritage has been recognised at a national level. The section flowing downstream from the Expedition Pass Reservoir to Zeal Bridge at Colles Road is contained within the Castlemaine Diggings National Heritage Park (CDNHP). The Park, created in 2002, is Australia's first and only National Heritage Park – a national park gazetted for its cultural significance (and currently nominated for World Heritage listing). Noel Muller from Parks Victoria says that:

"Forest Creek is a very important part of the Castlemaine Diggings Park. It was the birthplace of the goldfields, and...the birthplace of democracy in Victoria".

The 'birthplace of democracy' refers to the *Monster Meeting*. The Monster Meeting was a large meeting of miners that took place at Forest Creek in December 1851, near the junction of Golden Point Road and the Pyrenees Highway. The meeting was held to protest against the government's decision to double the cost of a mining license. The importance of the site is commemorated by a stone monument at the site and an annual re-enactment of the event.

This picture shows Argus Flat, Forest Creek (Chewton), looking towards the south-east; the Mount Alexander Hotel on far right. It was taken by Richard Daintree between 1859 and 1863.



Image: National Library of Victoria

Along with its recreational and heritage values, Forest Creek is also valued for its ecological importance. Land clearing for agriculture, industrial and urban development has seen 83% of the original Box-Ironbark Forests of northern Victoria disappear. The creekline vegetation that once would have grown along Forest Creek is currently listed as endangered by DSE.



Bridal Creeper infestation in Moonlight Creek.

Ecological restoration of Forest Creek through weed clearing and planting of local native vegetation has been actively pursued by many local community organisations over more than 20 years with much success. This work has been supported by government agencies including the Department of Sustainability and Environment (DSE), the North Central Catchment Management Authority (NCCMA) and Parks Victoria. As the agencies responsible for the management of public land along the creek, these organisations also undertake their own restoration work.

Why does Forest Creek need restoring?

Habitat loss and biodiversity decline in Victoria's Temperate Woodlands have been severe. Box-Ironbark Forest vegetation types, like those that surround Forest Creek, have been identified as some of the most depleted in Australia. The combined impacts of mining, timber harvesting, firewood collection and land clearing have greatly reduced the habitat available to support native birds, mammals, reptiles, plants, invertebrates, fungi and mosses; in short - biodiversity. By re-establishing native woodlands and forests we can try to preserve the biodiversity that is left in the area and create new habitat areas for local species.

It would be impossible, and perhaps even undesirable, to restore Forest Creek to its pre-European state. Impossible because the soil profile has been so altered, the seed bank so depleted, and the catchment so changed that it would be infeasible to reproduce the original conditions; and undesirable because the creek no longer flows through an uninterrupted forest, but rather through a significant heritage landscape and residential area.

Under these circumstances, it may seem like a futile exercise to 'restore' the creek. Fortunately, that isn't the case. Restoration work along the creek has many potential benefits including:

- Creating and linking habitat for many threatened plants and animals. These include the **Vulnerable Brush-tailed Phascogale** (*Phascogale tapoatafa*) and **Eltham Copper Butterfly** (*Paralucia pyrodiscus lucida*), and the **Endangered Red Spider Orchid** (*Caladenia cruciformis*), **Swift Parrot** (*Lathamus discolor*) and **Creekline Grassy Woodland** ecosystem.



Looking north from the path just east of Colles Road.



Footbridge across the creek in Happy Valley.



Expedition Pass Reservoir – the upper limit of this plan.

- Improving the water quality of the creek by preventing further erosion of the banks and subsequent sedimentation. These benefits will extend throughout the catchment downstream of Forest Creek.
- Removal of invasive weed species which spread downstream into agricultural land.
- Providing shade and improved scenery for recreation along the creek.
- Preserving the 19th Century Goldfields landscape and significant heritage sites along the creek.
- Providing an opportunity for local residents to learn more about their local heritage and natural environment.

The creek is potentially an important habitat link between forests reserved by the CDNHP to the north and west of the creek and a large area reserved to the south, also part of the CDNHP.

Ecological Vegetation Classes

The pre-European vegetation pattern along forest creek has been mapped based on existing remnant vegetation and information about geomorphology, soil, rainfall, vegetation structure, floristic information, aspect, fire frequency and response to disturbance. The mapping of pre-European vegetation can only be predictive, and is based on all the information currently available.

One particularly interesting reference is the 'Selwyn Map'. The Selwyn Map was printed in 1853 and shows details of the types of vegetation seen in the Mount Alexander Shire at that time. It can be viewed on the *Friends of the Box-Ironbark Forests* website. An address for the online map is given in the 'Useful References' section of this plan.

From this data, the landscape has been classified into Ecological Vegetation Classes (EVC's), which is the generally accepted method for native vegetation mapping across Victoria. For each EVC, benchmarks have been produced which represent the average characteristics of a mature and apparently long-undisturbed stand of that vegetation type. These benchmarks can be used as a guide to the types of plant

species that may have been in the area prior to settlement, as well as their densities and other characteristics such as the amount of logs, large trees and organic ground 'litter'.

Even if they cannot or should not be completely re-created, pre-European vegetation classes are a useful guide for re-vegetation work. Plant species that naturally occurred on the site are more likely to survive there, less likely to become 'weedy', and most likely to provide suitable habitat for native animals.

The majority of public land adjacent to Forest Creek (from the reservoir to the confluence with Barkers Creek) has been classified as **Alluvial Terraces Herb-Rich Woodland / Creekline Grassy Woodland mosaic**. A mosaic community contains two or more defined EVCs that cannot be differentiated at the scale of EVC mapping. That is, if native vegetation mapping were to be undertaken at a finer scale, it is likely that this would identify some distinctive areas of Alluvial Terraces Herb-rich Woodland EVC, and other distinctive areas of Creekline Grassy Woodland EVC. Both EVC's are currently listed as endangered in the Goldfields bioregion. Areas of public land classified as **Box-Ironbark Forest**, **Valley Grassy Forest** and **Heathy Dry Forest** are also present on the more elevated areas alongside the creek. The status of these latter three EVCs in the Goldfields bioregion is depleted, vulnerable and least concern respectively.

Information about the structure and characteristics of each EVC, including a list of typical plant species useful for restoration plantings, can be viewed in Appendix A at the end of this plan.



Participants in Connecting Countries weed identification course examining some of the offending plants.

Map Keys

Three maps are shown for each section of creek. The first is an aerial photograph, the second has EVC zones overlaid, and the third has crown land management zones overlaid.

Ecological Vegetation Classes (EVCs)



Crown Land Management Zones



Creek Sections

In order to examine Forest Creek more closely, it has been divided into four contiguous sections (Victoria Gully is treated separately). The sections are as follows:

	Where?	Why?
Section A	Expedition Pass Reservoir to The Monster Meeting Site at the corner of the Pyrenees Highway and Golden Point Road.	The reservoir is the upper boundary of the scope of this plan. The section of Forest Creek above the reservoir flows through private agricultural land. This section is where the Golden Point Landcare Group works and where the creek changes from being surrounded by bush and rural properties on both sides, to having residential housing on one side.
Section B	The Monster Meeting site to Zeal Bridge	Zeal Bridge is the end of the CDNHP land along the creek. It is also where Castlemaine Landcare Group's work begins.
Section C	Zeal Bridge to Patterson Bridge. Includes Moonlight Creek	This is the last non-urban and non-channelized part of the creek. Once it passes under Patterson Bridge the creek becomes channelized and has infrastructure close to its banks on either side
Section D	Patterson Bridge to the confluence with Barkers Creek	The creek is mostly channelized through this section. It is an urban, residential area.

Pre-European Ecological Vegetation Classes around Forest Creek

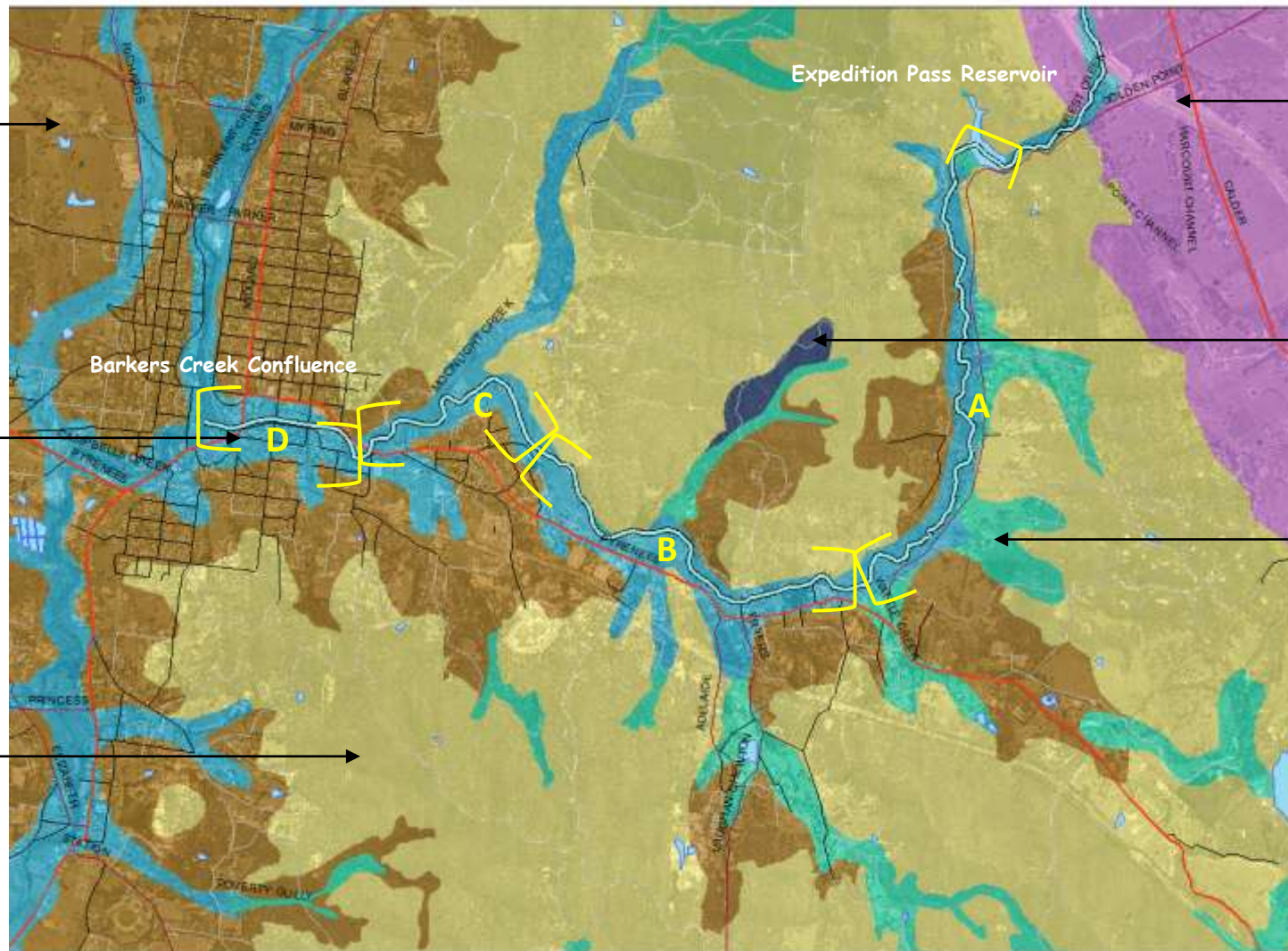


Image: Google Earth

A = Section boundary and label

Box-Ironbark Forest

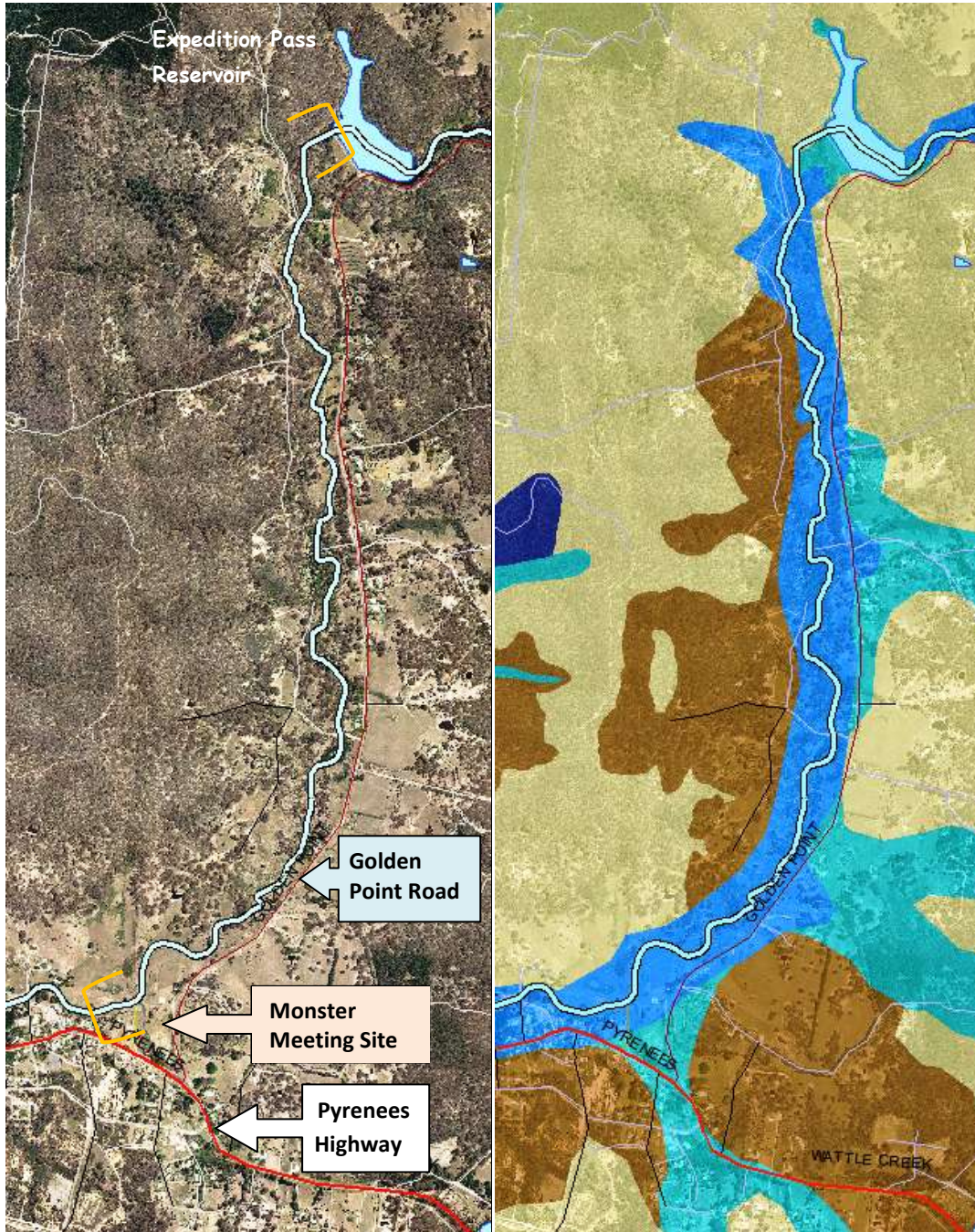
Grassy Woodland

Grassy Dry Forest

Valley Grassy Forest
(Endangered)

Alluvial Terraces
Herb-rich
Woodland/Creek-
line Grassy
Woodland

Heathy Dry Forest



Section A - Expedition Pass Reservoir to the Monster Meeting site

Distance – 3.7 km

EVC's - ALL

The section of Forest Creek that runs from the Expedition Pass Reservoir to the site of the Monster Meeting (at the junction of Golden Point Road and the Pyrenees Highway) is completely contained within the Castlemaine Diggings National Heritage Park.

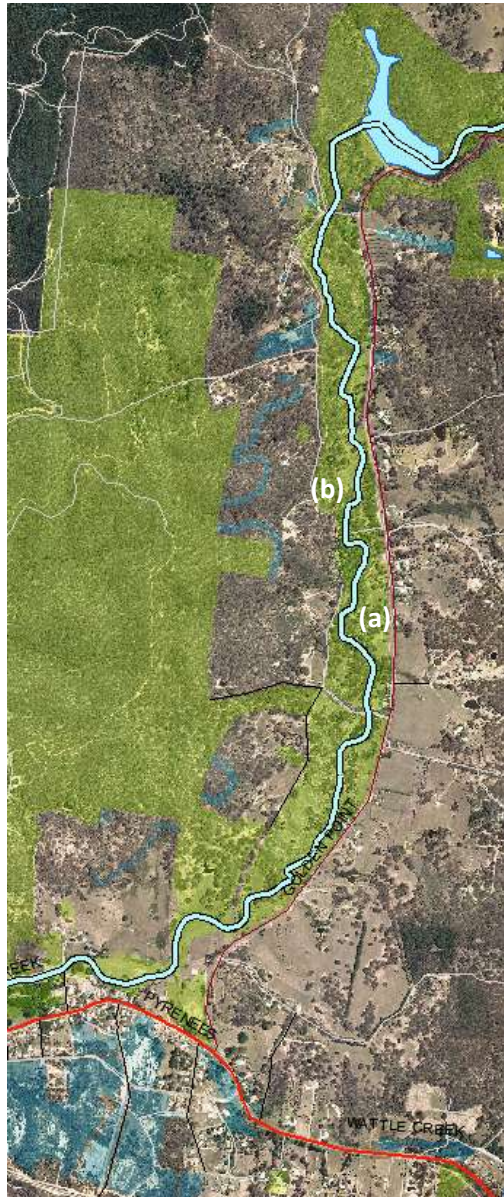
Over the past 18 years Golden Point Landcare Group has been removing weeds and replanting native species in this section with great success. It is now the best-vegetated section of the creek and management activities are focused mainly on maintaining the regenerating vegetation and preventing weed occurrences from spreading. The section includes Wattle Creek, a tributary which meets Forest Creek at the Monster Meeting site.

The public land along this section of the creek is primarily mapped as Alluvial Terraces Herb-rich Woodland/Creekline Grassy Woodland Mosaic, though it may also contain pockets of the other three EVCs listed.

An area of natural regrowth just below the reservoir.



Section A - Expedition Pass Reservoir to the Monster Meeting site



Important Values

- Great historical significance, especially the Monster Meeting site.
- Bird habitat. One planting at Chinamans Point has become a favored site for local bird watchers.
- Large water hole near Welsh Street (b).
- Walking and cycling track.
- Habitat connectivity with the Barkers Creek/Specimen Gully bushland and Fryers Forest to the South West. These areas are also known Phascogale habitat.

Threats

- Weeds – Gorse, Blackberry, St John's Wort, Patterson's Curse, Bridal Creeper and others.
- Urban development along the creek, resulting in: increased run-off and sedimentation from new roads; increased dumping of garden weeds; more household pets.
- Lack of government funding for Park management activities.
- Irresponsible gold prospectors disturbing the soil crust.



Management Actions & Priorities

- Protect and enhance existing areas of native vegetation and revegetation.
- Maintaining the condition of the areas that have been weeded and planted out already to ensure long-term success.
- Weed control near the spillway of the reservoir. It is an important location for orchids.
- Maintaining the Monster Meeting site.
- Continue to work with Parks Victoria, North Central CMA and DSE to achieve weed control.
- Maintain the Goldfields landscape by planting low vegetation forms and allowing natural regeneration to occur.

Vision for the Future

- Creek free of weeds.
- Natural regeneration rather than mass planting.
- Monster Meeting site preserved and enhanced.
- Preservation of what has been achieved already.

Section B – Monster Meeting site Zeal Bridge

Distance – 3 km

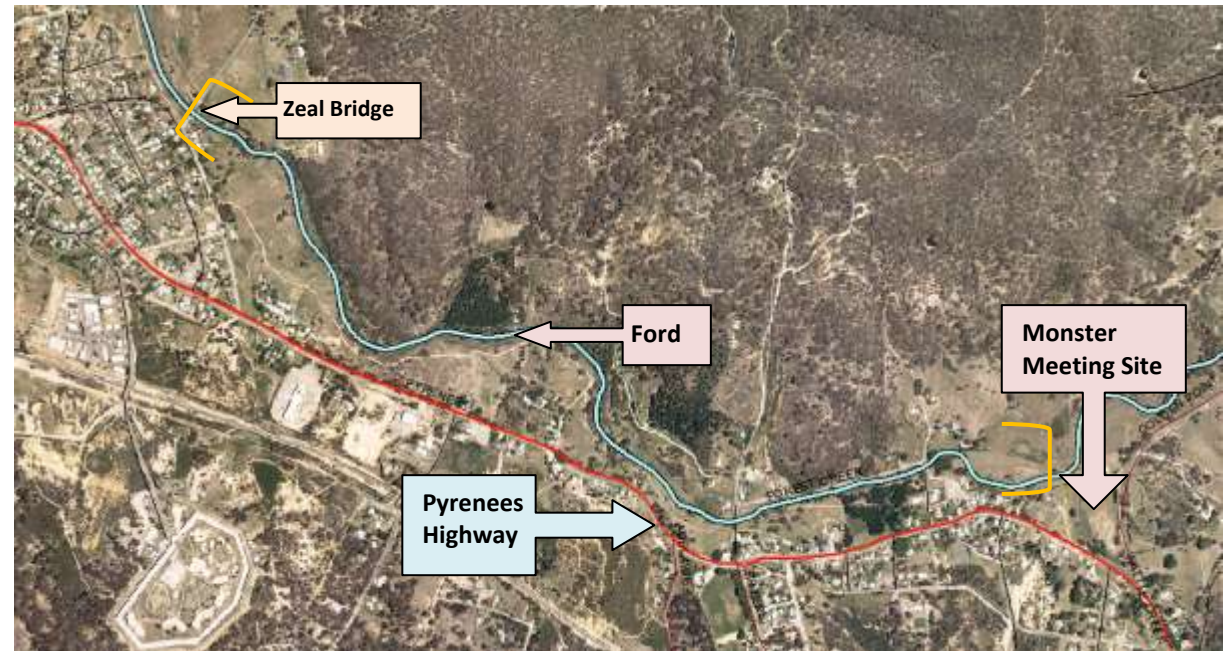
EVC's – ALL

This section of Forest Creek is also contained completely within the Castlemaine Diggings National Heritage Park.

Restoration work including weed control, planting and nest-box installation has been carried out in this section of the creek in the past by the Chewton Landcare Group. There are no current projects being undertaken in this part of the creek.

The condition of the creek varies throughout the section. There are patches heavily infested by gorse and blackberry, and patches of healthy native regeneration – particularly where previous plantings have been successful. The section is bordered on the southern side by residential blocks and a path following the creek is very well used by local residents.

This section has great scope for future restoration work. It is an important recreation area for local residents and there are many sites which could be targeted due to their habitat potential, scenic setting and exposure. Like Section A, this part of the creek requires careful plantings that are sensitive to the heritage landscape.





Section B – Monster Meeting Site to Zeal Bridge

Important Values

- Great historical and cultural significance.
- Excellent recreation area for local residents –good walking and cycling track.
- Fauna habitat. Many nest-boxes have been installed along this section of the creek.
- Habitat connectivity with CDNHP forest to the north and south.
- Beautiful scenery.

Threats

- Weeds – Gorse, Blackberry, St John's Wort, Patterson's Curse, Bridal Creeper and others. Gorse is very bad in some areas.
- Urban development along the creek resulting in: increased run-off and sedimentation from new roads; increased dumping of garden weeds; more household pets.
- Current lack of community interest in doing ecological restoration work. Management of the area is regarded by many as the government's responsibility.
- Illegal motorbike riding along the pathway.

Management Actions & Priorities

- Continue to work with Parks Victoria and DSE to achieve weed control.
- Maintain the Goldfields landscape by planting low vegetation forms and allowing natural regeneration to occur.
- Revival of the Chewton Landcare Group or creation of another group to focus on this section of the creek.
- A large patch of gorse just downstream from the ford has been identified as a priority area.

Vision for the Future

- Creek free of weeds.
- Natural regeneration rather than mass planting.
- Preservation of what has been achieved already.
- Walking track maintained and improved.



Section C – Zeal Bridge to Patterson Bridge (Happy Valley)

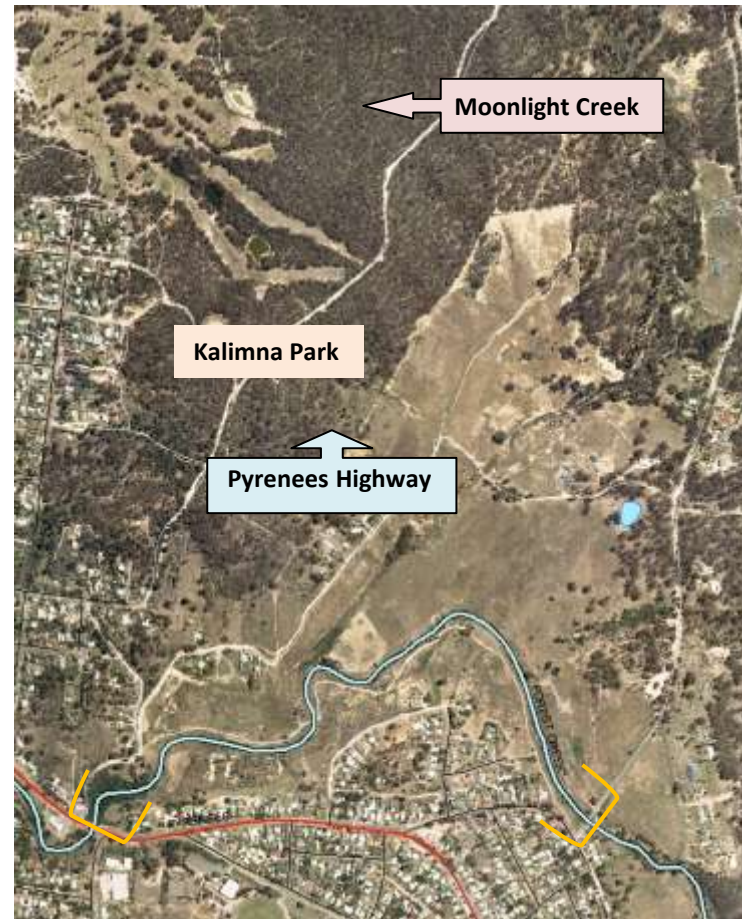
Distance – 1.8 km

EVC's – ALL except Valley Grassy Forest

This section of Forest Creek (which includes the tributary of Moonlight Creek) is bordered on each side by uncommitted and unreserved crown land. The management of this section falls to DSE, apart from an area of National Heritage Park at the head of Moonlight Creek.

It is categorised as 'Natural Features Reserve - Public Land Water Frontage' land and is mostly managed based on the Victorian Environmental Assessment Council's (VEAC) recommendations for this category of land. The guidelines can be viewed in the *Box-Ironbark Forests and Woodlands Investigation – Final Report* (ECC 2001).

The Castlemaine Landcare Group has been actively working in this section of the Creek for over 10 years. They have been very successful in removing Gorse and Blackberry from this area. This section of the creek was completely devoid of native vegetation cover prior to Landcare plantings. Their current focus is on revegetating the 'chain of ponds' system that the group created in collaboration with the NCCMA. The ponds are designed to mimic the



natural, permanent ponds that are believed to have existed prior to European settlement and the Goldrush disturbances to the creek

The Friends of Kalimna Park is another community group active in this section of the creek. The friends began work in 1971 and have been involved in weed clearing and revegetation projects throughout Kalimna Park. They are currently focused on a severe Bridal Creeper infestation at the head of Moonlight Creek.

Looking east down Happy Valley from near Happy Valley Road.



Section C – Zeal Bridge to Patterson Bridge (Happy Valley)

Important Values

- Open space, and accessible water close to Castlemaine town centre.
- Visual amenity – used by painting groups that come up from Melbourne.
- Walking – safe way to walk between Castlemaine and Wesley Hill, avoiding the highway.
- Habitat connectivity between the Barkers Creek/Specimen Gully Heritage Park forests and Kalimna Park; also between these forests and forests to the south, via Victoria Gully.
- Eltham Copper Butterfly habitat - Kalimna Park has two occurrences of this rare species.
- Wide floodplain that disperses flood water before it enters the narrow channelized section through town.
- Attractive scenery.

Management Actions & Priorities

- Revegetating around the 'Chain of Ponds' waterholes to stabilise their banks, create habitat, and provide shade for recreational use.
- Remove woody weeds around ponds.
- Bridal Creeper infestation in Moonlight Creek.
- Continue to work with DSE to achieve weed control.
- Continue to re-establish indigenous vegetation along creek with concern for fire risk.
- Improve management of the land licensed for cattle grazing along the creek.
- Grazing of water frontage.



Threats

- Weeds – Bridal Creeper in Moonlight Creek is particularly bad. There is a dense stand of poplars at the beginning of Happy Valley Road. All areas require ongoing weed maintenance. There are new weeds appearing all the time.
- Rabbits.
- Residential development – a large subdivision is planned for land on the northern side of Moonlight Creek. Potential for increased runoff, rubbish dumping and escaped pets.
- Fire – Re-vegetation along the creek is believed by some residents to create a fire corridor.

Visions for the Future

- Permanent waterholes along the creek that will provide water for recreation and native animals.
- Creation of habitat suitable for native fauna – especially the threatened Brush-tailed Phascogale.
- All weed species brought under control.
- Picnic tables and benches installed at suitable locations.
- Pathway maintained and improved.
- Interpretive signage about the history of Forest Creek installed along the pathway.



Section D – Patterson Bridge to the Confluence

Distance – 1.3 km

EVC's – Box-Ironbark Forest and Alluvial Terrace Mosaic

This section of Forest Creek flows from Patterson Bridge to its confluence with Barkers Creek. The section is managed by DSE and has the same land classification as Section C. It includes the tributary of Victoria Gully, which is dealt with separately.

Much of the creek in this section has been redirected from its natural course and channelized by a stone embankment. An area directly below Patterson Bridge, and the last hundred metres or so before the confluence has not been channelized. It is the most urban environment that the creek passes through. The upper end of this section, between Patterson Bridge and the start of the channel, was the original focus of the Castlemaine Landcare Group. They have removed most of the weeds there and native vegetation is growing well. The channelized section of the creek has had weedy vegetation removed by the Castlemaine Lions Club in the past.

The section between Barker Street Bridge and the confluence has been worked on by the Friends of Campbells Creek (FOCC) since 2000. They have successfully undertaken weed removal and revegetation work along this section and consider it part of the area that they 'manage'.

The area near the confluence with Barkers Creek has particular historical importance because it is the site where the first commissioner of the goldfields built his cottage in the 1850's, and was subsequently the birthplace of Castlemaine. It is also contains a small stand of native woodland. The relatively high quality of vegetation between the confluence and the railway bridge is a result of work undertaken in 1986 by the Castlemaine Revegetation Project.



Section D – Patterson Bridge to the Confluence

Important Values

- Walking – track along the creek is used as an access route into town by nearby residents.
- Connects the town to the bush.
- Habitat linkage between sections of the CDNHP and Forest Creek.
- The channelled section allows floodwater to flow quickly through Castlemaine.
- Historical importance of the confluence site.

Threats

- Weeds – Perennial grasses including Couch, Paspalum, Phalaris, Green Bent and Chilean Needle Grass are preventing native plant regeneration, particularly around the confluence. Gorse, Blackberry and woody weeds are also present.
- Rubbish/garden waste dumping.
- Encroachment onto public land by neighbouring properties.



Connecting Country



Forest Creek Action Plan



Management Action & Priorities

- Removal of weeds.
- Maintaining an open channel for flood water to pass through.
- Removal of private rubbish and property from areas of public land.

Vision for the Future

- Weed free.
- Easy access to walk along the whole length of the section.
- Recognition of the historical importance of the confluence area, possibly with the erection of an interpretive plaque.
- Crown land along the creek reserved for conservation.

Victoria Gully

Distance – 1.3 km

EVC's – Box-Ironbark Forest and Alluvial Terrace Mosaic

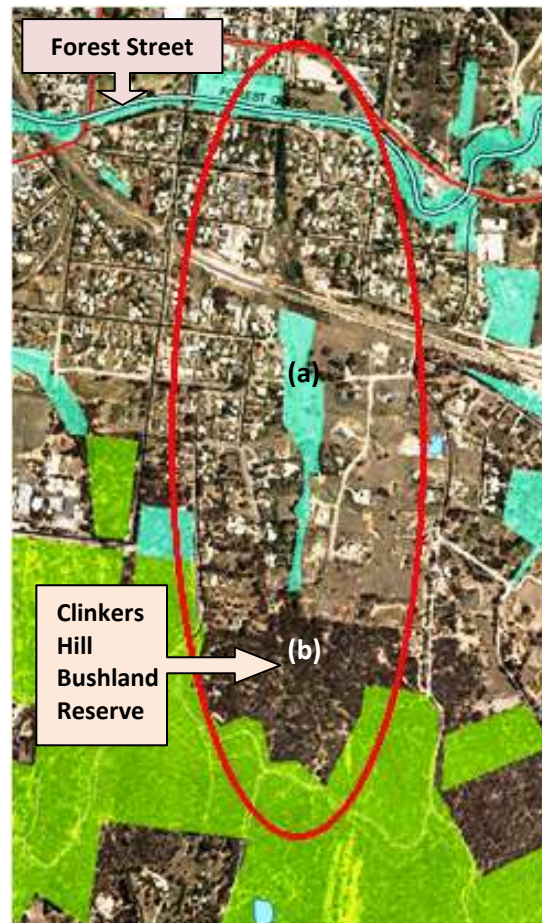
Victoria Gully runs from Clinkers Hill Bushland Reserve into Forest Creek at the end of McGregor Street. The gully includes a section of National Heritage Park Reserve at its head, and is managed by DSE, Parks Victoria and privately further down.

The Victoria Gully Group is a local community group currently doing weed removal and indigenous species planting at the top of the gully with the assistance of Parks Victoria and Connecting Country. They would like to extend their work down the gully. DSE undertook chemical weed control in the gully in 2011.

The gully has a number of weed infestations and has been subject to considerable rubbish dumping from surrounding properties. It has the potential to be an important habitat corridor between the National



Heritage Park forests North of Castlemaine and the Forests of the Kalimna Park Reserve on the other side of the creek.



Important Values

- Wildlife habitat close to town.
- Bird watching.
- Scenery.
- Access way – the gully is regularly crossed by local residents as a shortcut.

Threats

- Weeds – a number of weeds are thriving in the gully, especially Blackberry, Broom and Gorse.
- Rubbish dumping – hard rubbish and garden waste.
- Housing encroachment – some properties along the gully have used areas of crown land between their property and the gully for their own purposes.

Vision for the Future

- Weed free all the way to Forest Creek.
- Increased participation by local residents in its management.
- Educational signage about native species growing along the gully and a walking/cycling path.
- Hard rubbish removed completely.
- Expansion of quality native animal habitat down the gully.

Management Actions & Priorities

- Removal of weeds and planting of indigenous plants in the reserve area at the end of Preshaw Street.
- Removal of hard rubbish which has been dumped in the gully over many years.



General Management Considerations

Walking trails

More than two-thirds of local residents surveyed used the creek to walk either on their own or with their dog. Walking trails along the creek are therefore very important. It is the ambition of all of the Community Groups involved with the creek to maintain and improve the walking tracks that exist, and construct new ones where suitable. These ambitions are supported by the Mount Alexander Shire Council's *2010-2020 Walking and Cycling Strategy* (see Appendix C).

The strategy includes a trail connecting the current walking track between Happy Valley Road and Chewton with trails along Barkers Creek and Campbells Creek, as well as a cycling route right along Forest Creek and past Faraday. The strategy includes the stated task to “*Work with local groups to improve the planting and visual amenity of the trail network*”.



Walking track next to the Forest Creek near the old Welsh Street Bridge.



Path along Forest Creek just west of the ford between Chewton and Wesley Hill.

The best pathway along the creek is currently that which forms part of the Great Dividing Trail (Goldfields Walking Track). It runs from Happy Valley Road to the ford between Wesley Hill and Chewton. The trail is a pedestrian and mountain bike tourist route that connects Buninyong, Ballarat, Creswick, Daylesford, Castlemaine and Bendigo.

Floods

Like fire, floods are a potentially damaging natural event which should be taken into account by groups restoring Forest Creek. Seven respondents in the local resident survey were concerned about trees already growing along the creek or being planted near the creek due to the risk they pose in a flood. Despite these concerns, there is little evidence that vegetation growing on creeklines or large woody debris in a waterway has a significant impact on local flood heights. Other

factors such as the intensity of rainfall and the existence of structural constrictions such as road embankments, bridges and culverts have a much larger influence on local flood events. The North Central Catchment Management Authority (NCCMA), which manages waterways in the Loddon Catchment, encourages plantings along the creek for ecosystem health and stabilisation of the banks.

Floods are also a concern for groups whose plantings may be washed away before they can become established. The Castlemaine Landcare Group watched many of their young plants disappear down the river during the 2010 floods. After its complete upheaval during the goldrush, Forest Creek is still 'finding its way'; it should be expected that the creek will change its course in places. Pathways constructed close to its banks will always be prone to getting washed away so plans for new pathways may benefit from seeking higher ground. Plantings often have to be done near the creek bank and losing plants to floods is unavoidable.

Bushfires

Castlemaine is included in DSE's list of 52 High Bushfire Risk locations in Victoria. Only a small section of the creek, between Patterson Bridge and the Western Reserve is part of the 'High Risk Zone' identified in the CFA's *Castlemaine Township Protection Plan* (see Appendix B). DSE considers Forest Creek a major fire concern and actively manages the fire risk by removing weeds (mainly Gorse) and slashing land between private properties and the creek. Locally, DSE have maintained a 30 metre gap between all revegetation plantings and property boundaries, so that a buffer strip can be easily maintained. DSE recently conducted two fuel reduction burns along the creek.

Bushfire danger is a real concern for some residents who live along the creek. Ecological restoration planting along the creek needs to be done with consideration of the bushfire risk. Methods are available to achieve successful regeneration while minimising the fire danger. They include planting in blocks rather than straight lines, alternating between different forms of vegetation

(trees, grass, shrubs etc.) and planting species that are naturally more fire resistant and will not carry a fire easily (see Appendix B for a species list). Creating a landscape that improves the health of the creek, provides habitat to native animals and does not create a fire risk, will be a constant challenge to restoration activities along Forest Creek. This is particularly the case along the more urbanised sections between Chewton and the confluence with Barkers Creek.

Goldfields Heritage

The historical importance of the Forests Creek landscape is well-documented and, since the establishment of the Castlemaine Diggings National Heritage Park, well recognised. Roughly six and a half kilometres of the creek lies within the Park. Parks Victoria's primary management objective for this area is to maintain the heritage landscape; to keep it looking and feeling like a goldfields landscape and preserve the archaeological relics that exist throughout the area. To this end, ecological restoration of Forest Creek (where it is part of the Heritage Park) should not change the landscape in such a way that heritage values are lost. This can be achieved by focusing efforts on weed removal and allowing natural regeneration of native species to occur, and by using sensitive plantings that are restricted to species that do not exceed one metre in height. Parks Victoria is very happy to work with local groups wanting to do restoration work in the Park area to achieve a balance between ecological restoration and historical preservation.

Along with the official recognition of the creeks heritage value is the importance placed on it by many local residents who live around the creek.

The section of Forest Creek that does not flow through the Heritage Park still has historical significance. The whole of the creek was subject to frenzied alluvial mining and its current shape is a direct result of 19th Century goldmining activities. It is a good example of the resilience of the country. Native regeneration has occurred along most of the creek and on the surrounding hills. The Forest Creek landscape is an important example of how terrible the impacts of mining were, and how resilient the native flora and fauna can be.

Indigenous Heritage

Forest Creek is listed as culturally sensitive area under the *Aboriginal Heritage Act 2006*. No specific Aboriginal Cultural sites are listed in the area covered by this plan; however a rock well site and an artefact scatter are located nearby. Any work undertaken along the creek should be done in accordance with the regulations set out by the Act for areas of cultural sensitivity. The Indigenous Facilitator at the North Central CMA should be consulted before works involving soil disturbance along the creek are undertaken.

Planting Restrictions

Planting a variety of vegetative life forms along Forest Creek is very important. To maintain the heritage landscape, and minimise the bushfire risk associated with plantings at the urban interface, planting large and medium-sized trees may not be possible in certain areas along the creek. Landcare groups working along Forest Creek currently plant a variety of life forms, including grasses, herbs, woody shrubs and trees. Continuing to plant low-growing vegetation will be important.

Despite the limitations, trees are still important. Their spreading roots help stabilize eroded banks and prevent further degradation of the riparian zone, and they provide crucial habitat for many native animals. Tree plantings should be judicious, and have consideration for all of the effects that trees will have on the landscape.

Useful Contacts

Community Organisations

Castlemaine Landcare Group

President: Christine Kilmartin

Phone: (03) 5472 1256

Web: Christine.Kilmartin@dpcd.vic.gov.au

Chewton Landcare Group

President: Jackie McMaster

Phone: (03) 5470 6703

Connecting Country

Phone: (03) 5472 1594

Web: <http://connectingcountry.org.au>

Friends of the Box-Ironbark Forests

Phone: (03) 5470 5161

Web: <http://www.fobif.org.au>

Friends of Campbells Creek

Contact: Shona Cornwall

Phone: 0408 724 699

Web: <http://www.focc.org.au>

Friends of Kalimna Park

Secretary: Geoff Hannon

Phone: (03) 5473 5243

Web: Email: ghannon@mmnet.com.au

Golden Point Landcare Group

Secretary: Jennifer Pryce

Phone: 0423 900 590

Web: j.pryce@bigpond.com

Victoria Gully Group

Contact: Julie Hurley
Phone: (03) 5472 5082

Management Agencies

Department of Sustainability and Environment

Phone: (03) 5430 4444 (Bendigo main office) Web:
<http://www.dse.vic.gov.au>

Dja Dja Wurrung Clans Aboriginal Corporation

Executive Officer: Barbara Huggins
Phone: (03) 5444 2888
Web: barbara@ddwcac.com.au

Mount Alexander Shire Council

Phone: (03) 5471 1700
Web: <http://www.mountalexander.vic.gov.au>

North Central Catchment Management Authority

Phone: (03) 5448 7124
Web: <http://www.nccma.vic.gov.au>

Parks Victoria

Phone: 13 1963
Web: <http://parkweb.vic.gov.au>

Useful References

Box-Ironbark Forest and Woodlands Investigation – Final Report

(Environment Conservation Council 2001)

Available from

<http://www.veac.vic.gov.au/investigation/box-ironbark-forests-woodlands-investigation-ecc-/reports>

Castlemaine Community Preparedness Guide, Country Fire Association

Available from

http://www.mountalexander.vic.gov.au/files/Major_Projects/Walking_Cycling_Strategy-final_combined.pdf

Description of EVC Benchmarks, DSE

Available from

<http://www.dse.vic.gov.au/conservation-and-environment/evc-benchmarks-goldfields-bioregion>

DSE Interactive Maps – a simple and free online mapping program

Available from

<http://www.dse.vic.gov.au/about-dse/interactive-maps>

Geological Survey of Victoria, Victorian Department of Primary Industries

Available from

<http://dpistore.efirst.com.au/categories.asp?clD=4>

The Selwyn Map – A very useful map printed in 1853 with details of the types of vegetation in the Mount Alexander Shire at that time.

Available from

http://www.fobif.org.au/admin/wp-content/uploads/2011/08/large.selwyn_map2-3.pdf

VicVeg Online – Lots of useful information on Bioregions, EVC's and indigenous plants

Available from

<http://www.vicveg.net.au/vvHome.aspx>

Walking and Cycling Strategy 2010-2020, Mount Alexander shire Council

Available from

http://www.mountalexander.vic.gov.au/files/Major_Projects/Walking_Cycling_Strategy-final_combined.pdf

Appendix A – EVC descriptions

Key to life form categories

LT = Large Tree	T = Tree MS = Medium Shrub SS = Small Shrub
PS = Prostrate Shrub or prostrate herb	LH = Large Herb MH = Medium Herb SH = Small
LTG = Large tufted grass	MTG = Medium to small tufted grass
MNG = Medium to small non-tufted grass	SC = Soil Crust

Valley Grassy Forest



Photo: Geoff Park

EVC Description

Valley Grassy Forest occurs under moderate rainfall regimes of 600-800 mm per annum on fertile well-drained colluvial or alluvial soils on gently undulating lower slopes and valley floors. The tall, open overstorey to 20 m tall may carry a variety of eucalypts, usually species which prefer more moist or more fertile conditions over a sparse shrub cover. In season, a rich array of herbs, lilies, grasses and sedges dominate the ground layer but at the drier end of the spectrum the ground layer may be sparse and slightly less diverse, but with the moisture-loving species still remaining.

This EVC is *vulnerable* in the Goldfields bioregion.

Flora Species List

LT	<i>Eucalyptus melliodora</i>	Yellow Box
LT	<i>Eucalyptus macrorhyncha</i>	Red Stringybark
LT	<i>Eucalyptus polyanthemos ssp. vestita</i>	Red Box
LT	<i>Eucalyptus rubida</i>	Candlebark
LT	<i>Eucalyptus goniacalyx s.l</i>	Bundy
T	<i>Acacia dealbata</i>	Silver Wattle
MS	<i>Cassinia arcuata</i>	Drooping Cassinia
MS	<i>Ozothamnus obcordatus</i>	Grey Everlasting
MS	<i>Grevillea alpina</i>	Cat's Claw Grevillea
MS	<i>Daviesia leptophylla</i>	Narrow-leaf Bitter-pea
SS	<i>Tetradlea ciliata</i>	Pink-bells
SS	<i>Dillwynia cinerascens s.l.</i>	Grey Parrot-pea
PS	<i>Astroloma humifusum</i>	Cranberry Heath
LH	<i>Senecio quadridentatus</i>	Cotton Fireweed
MH	<i>Gonocarpus tetragynus</i>	Common Raspwort
MH	<i>Oxalis perennans</i>	Grassland Wood-sorrel
MH	<i>Drosera peltata</i>	Pale Sundew
SH	<i>Hydrocotyle laxiflora</i>	Stinking Pennywort
LTG	<i>Austrostipa mollis</i>	Supple Spear-grass
MTG	<i>Lomandra filiformis</i>	Wattle Mat-rush
MTG	<i>Dianella admixta</i>	Black-anther Flax-lily
MTG	<i>Schoenus apogon</i>	Common Bog-sedge
MTG	<i>Austrodanthonia fulva</i>	Copper-awned Wallaby-grass
MNG	<i>Microlaena stipoides var. stipoides</i>	Weeping Grass
GF	<i>Cheilanthes sieberi ssp. sieberi</i>	Narrow Rock-fern

Alluvial Terraces Herb-rich Woodland/Creekline Grassy Woodland Mosaic



Photo: Annette Muir

Woodlands associated with low lying alluvial areas provide important habitat connections between drier vegetation types such as Box-Ironbark and the creek itself. Richer soils and greater moisture availability make these areas quite productive places, supporting a rich array of fauna. There are very few good examples occurring in the local area, and they tend to be weedy. Both EVCs are listed as *endangered* in the Goldfields Bioregion. For the Goldfields area, Creekline Grassy Woodland is also listed as a threatened community on the Victorian *Flora and Fauna Guarantee Act 1988*.

EVC description

Alluvial Terraces: Open woodland to 15 m tall on broad alluvial plains and along ephemeral drainage lines. Soils are generally poorly drained duplex soils with sandy loam overlying a heavier clay subsoil. Understorey consists of few, if any shrubs with the striking feature of this EVC being the high species-richness of the ground-layer and the low biomass of this cover, particularly in summer.

Creekline: Eucalypt-dominated woodland to 15 m tall with occasional scattered shrub layer over a mostly grassy/sedgy to herbaceous ground-layer. Occurs on low-gradient, ephemeral to

intermittent drainage lines, typically on fertile colluvial/alluvial soils, on a wide range of suitably fertile geological substrates. These minor drainage lines can include a range of grassy and herbaceous species tolerant of waterlogged soils, and are presumed to have sometimes resembled a linear wetland or system of interconnected small ponds.

Flora species list (Alluvial Terraces)

LT	<i>Eucalyptus microcarpa</i>	Grey Box
LT	<i>Eucalyptus melliodora</i>	Yellow Box
LT	<i>Eucalyptus leucoxylon</i>	Yellow Gum
LT	<i>Allocasuarina luehmannii</i>	Buloke
MS	<i>Acacia pycnantha</i>	Golden Wattle
MS	<i>Acacia acinacea</i>	Gold-dust Wattle
MS	<i>Acacia paradoxa</i>	Hedge Wattle
MS	<i>Acacia genistifolia</i>	Spreading Wattle
SS	<i>Pimelea humilis</i>	Common Rice-flower
SS	<i>Dillwynia cinerascens</i>	Grey Parrot-pea
PS	<i>Astroloma humifusum</i>	Cranberry Heath
PS	<i>Acrotriche serrulata</i>	Honey-pots
LH	<i>Senecio quadridentatus</i>	Cotton Fireweed
LH	<i>Senecio tenuiflorus</i>	Slender Fireweed
MH	<i>Cynoglossum suaveolens</i>	Sweet Hound's-tongue
MH	<i>Oxalis perennans</i>	Grassland Wood-sorrel
MH	<i>Daucus glochidiatus</i>	Australian Carrot
MH	<i>Cymbonotus preissianus</i>	Austral Bear's-ears
SH	<i>Hydrocotyle laxiflora</i>	Stinking Pennywort
SH	<i>Solenogyne dominii</i>	Smooth Solenogyne
SH	<i>Drosera whittakeri</i> ssp. <i>Aberrans</i>	Scented Sundew
SH	<i>Cymbonotus preissianus</i>	Austral Bear's-ear
LTG	<i>Austrostipa mollis</i>	Supple Spear-grass
MTG	<i>Lomandra filiformis</i>	Wattle Mat-rush
MTG	<i>Elymus scaber</i> var. <i>Scaber</i>	Common Wheat-grass
MTG	<i>Dianella admixta</i>	Black-anther Flax-lily
MTG	<i>Austrostipa scabra</i> ssp. <i>falcata</i>	Rough Spear-grass
MNG	<i>Microlaena stipoides</i> var. <i>stipoides</i>	Weeping Grass
TTG	<i>Centrolepis strigosa</i> ssp. <i>strigosa</i>	Hairy Centrolepis
TTG	<i>Centrolepis aristata</i>	Pointed Centrolepis
GF	<i>Cheilanthes austrotenuifolia</i>	Green Rock-fern
SC	<i>Thysanotus patersonii</i>	Twining Fringe-lily

Additional/alternative species for Creekline areas

LT	<i>Eucalyptus camaldulensis</i>	River Red-gum
MS	<i>Cassinia arcuata</i>	Drooping Cassinia
LTG	<i>Carex tereticaulis</i>	Rush Sedge
MTG	<i>Poa labillardierei</i>	Common Tussock-grass
MTG	<i>Juncus remotiflorus</i>	Diffuse Rush
MTG	<i>Carex appressa</i>	Tall Sedge

Box-Ironbark Forest



Photo: Geoff Park

Prior to settlement the trees of the Box-Ironbark Forests were much larger than the spindly specimens we see today. Waves of extensive clearing that began during the gold rushes of the mid to late 1800s have led to a forest dominated by coppice regrowth. These areas still provide important habitat for a range of fauna including the migratory Swift Parrot which is a threatened bird that relies on flowering eucalypts such as Yellow Gum for food.

EVC description

Occurs in low rainfall areas on gently undulating rises, low hills and penneplains (elevated plains) on infertile, often stony soils derived from a range of geologies. The open overstorey to 20 m tall consists of a variety of eucalypts, often including one of the Ironbark (i.e. Yellow Gum or Red Ironbark) species. The mid storey often forms a dense to open small tree or shrub layer over an open ground layer ranging from a sparse to well-developed suite of herbs and grasses.

This EVC is considered to be *depleted* in the Goldfields bioregion.

Flora species list

LT	<i>Eucalyptus microcarpa</i>	Grey Box
LT	<i>Eucalyptus tricarpa</i>	Red Ironbark
LT	<i>Eucalyptus polyanthemos</i>	Red Box
LT	<i>Eucalyptus leucoxylon</i>	Yellow Gum
MS	<i>Acacia pycnantha</i>	Golden Wattle
MS	<i>Cassinia arcuata</i>	Drooping Cassinia
MS	<i>Acacia genistifolia</i>	Spreading Wattle
MS	<i>Acacia acinacea</i>	Gold-dust Wattle
SS	<i>Hibbertia exutiacies</i>	Spiky Guinea-flower
SS	<i>Pultenaea largiflorens</i>	Twiggy Bush-pea
PS	<i>Astroloma humifusum</i>	Cranberry Heath
MH	<i>Senecio tenuiflorus</i>	Slender Fireweed
MH	<i>Xerochrysum viscosum</i>	Sticky/Shiny Everlasting
MH	<i>Gonocarpus tetragynus</i>	Common Raspwort
MH	<i>Veronica plebeia</i>	Trailing Speedwell
LTG	<i>Austrostipa mollis</i>	Supple Spear-grass
MTG	<i>Joycea pallida</i>	Silvertop Wallaby-grass
MTG	<i>Dianella admixta</i>	Black-anther Flax-lily
MTG	<i>Lomandra filiformis</i>	Wattle Mat-rush
MTG	<i>Austrodanthonia setacea</i>	Bristly Wallaby-grass
MTG	<i>Poa sieberiana</i>	Grey Tussock-grass
SC	<i>Thysanotus patersonii</i>	Twining Fringe-lily

Heathy Dry Forest



Photo: Tim D'Ombrian

EVC Description

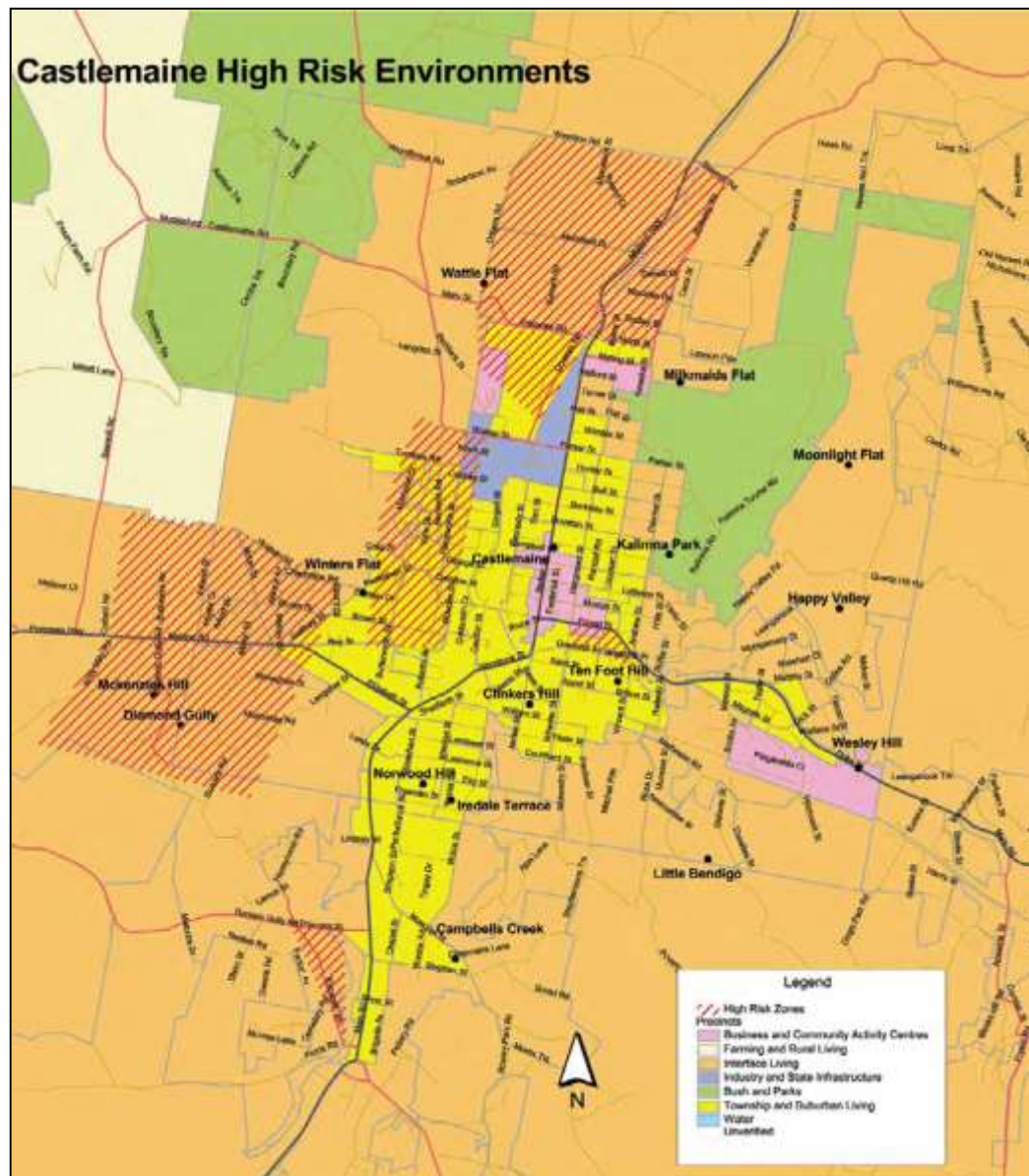
Grows on shallow, rocky skeletal soils on a variety of geologies and on a range of landforms from gently undulating hills to exposed aspects on ridge tops and steep slopes at a range of elevations. The overstorey is a low, open eucalypt forest, poor in form to 20 m tall with an open crown cover. The understorey is dominated by a low, sparse to dense layer of ericoid-leaved shrubs including heaths and peas. Graminoids and grasses are frequently present in the ground layer, but do not provide much cover. Considered to be of *least concern* in the Goldfields bioregion.

Typical Flora Species

LT	<i>Eucalyptus macrorhyncha</i>	Red Stringybark
LT	<i>Eucalyptus polyanthemos</i>	Red Box
LT	<i>Eucalyptus tricarpa</i>	Red Ironbark
LT	<i>Eucalyptus goniocalyx</i> s.s.	Bundy
MS	<i>Brachyloma daphnoides</i>	Daphne Heath
MS	<i>Acacia pycnantha</i>	Golden Wattle
MS	<i>Grevillea alpina</i>	Cat's Claw Grevillea
MS	<i>Cassinia arcuata</i>	Drooping Cassinia
SS	<i>Tetradlea ciliata</i>	Pink-bells
SS	<i>Hovea heterophylla</i>	Common Hovea
SS	<i>Leucopogon virgatus</i>	Common Beard-heath
SS	<i>Cheiranthra cyanea</i> var. <i>cyanea</i>	Blue Finger-flower
PS	<i>Acrotriche serrulata</i>	Honey-pots
PS	<i>Astroloma humifusum</i>	Cranberry Heath
LH	<i>Senecio tenuiflorus</i>	Slender Fireweed
LH	<i>Wahlenbergia stricta</i>	Tall Bluebell
LH	<i>Xerochrysum viscosum</i>	Shiny Everlasting
MH	<i>Gonocarpus tetragynus</i>	Common Raspwort
MH	<i>Drosera peltata</i> ssp. <i>auriculata</i>	Tall Sundew
SH	<i>Opercularia varia</i>	Variable Stinkweed
SH	<i>Hydrocotyle laxiflora</i>	Stinking Pennywort
LTG	<i>Austrostipa mollis</i>	Supple Spear-grass
MTG	<i>Joycea pallida</i> Silvertop	Wallaby-grass
MTG	<i>Lomandra filiformis</i>	Wattle Mat-rush
MTG	<i>Poa sieberiana</i>	Grey Tussock-grass
MTG	<i>Dianella admixta</i>	Black-anther Flax-lily
MNG	<i>Microlaena stipoides</i> var. <i>stipoides</i>	Weeping Grass
SC	<i>Thysanotus patersonii</i>	Twining Fringe-lily

Appendix B – Fire map and species list

Map of high risk environments around Castlemaine. Taken from the CFA's *Castlemaine Community Preparedness Guide* (November 2010).



Fire Retardant Species

All plants will burn if conditions are extreme enough. The following indigenous plant species are considered to be more resistant than many others.

Indigenous Fire Retardant Species*

TREES & SHRUBS

Acacia dealbata - SILVER WATTLE
Acacia mearnsii - BLACK WATTLE
Acacia melanoxylon - BLACKWOOD
Banksia marginata - SILVER BANKSIAI
Bursaria spinosa - SWEET BURSARIA
Dodonaea viscosa - HOP BUSH
Allocasuarina verticillata – DROOPING SHEOAK

SMALL PLANTS & GROWDCOVERS

Carpobrotus modestus - INLAND PIGFACE
Dichondra repens - KIDNEY PLANT
Dodonaea procumbens - TRAILING HOPBUSH
Einadia hastata - SALOOP SALT BUSH
Einadia nutans - NODDING SALT BUSH
Hardenbergia violacea - PURPLE CORAL-PEA
Kennedia prostrata - RUNNING POSTMAN
Pelargonium australe - AUSTRAL STORK'S-BILL
Pelargonium rodneyanum - MAGENTA STORK'S-BILL

*Based on a list on the Australian Native Plants Society (Australia) website - <http://asgap.org.au/fire.html>.

Appendix C – walking and cycling map



Map taken from the Mount Alexander Shire Council's *Walking and Cycling Strategy 2010-2020*.

Appendix D – Local resident survey results

This list is a summary of responses given by local residents when asked how they valued Forest Creek and what concerns they had about its management. The numbers represents how many respondents gave that response. There were a total of 42 respondents.

Values

Walking/dog walking – 29

Visual amenity – 20

Wildlife habitat – 14

Aboriginal heritage – 1

European heritage – 9

Trees and native vegetation – 7

Water (ponds) – 9

Bird watching - 2

Public access way – 2

Spiritual – 1

Bike riding – 2

Children's play area - 1

Concerns

Snake habitat - 4

Weeds – 13

Urban development – 3

Too much vegetation (flood risk) – 7

Too much Vegetation (fire risk) - 2

Not enough trees/ native vegetation- 1

Motorcycles using tracks– 3

Haven for rats - 1

Poor condition of path – 3

Removal of European trees – 2

Too much rubbish in creek - 1

Desired Actions

More access to creek – 7

More picnic spots/benches etc. – 5

Build a weir to maintain permanent water - 2

Develop the confluence area – 1

More effort on general maintenance – 5

Plant fire-resistant plants to minimise fire risk – 1

Develop a long-term management plan – 4

Left alone (no management) - 1