BRUCE'S CREEK MASTERPLAN
Bannockburn

Final Master Plan Report

Prepared for:
Golden Plains Shire Council

Prepared by:
Land Design Partnership Pty. Ltd.

March 2009

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SUPPLEMENTARY INFORMATION / REFERENCE DOCUMENTS:

Bruce's Creek Masterplan: Site Analysis, Issues and Opportunities Report
Land Design Partnership Pty. Ltd. on behalf of Golden Plains Shire Council, October 2008

i. GLOSSARY

Bioregion	A landscape based approach to classifying the land surface using a range of environmental attributes such as climate, geomorphology, lithology and vegetation*
Ecological Vegetation Classification (EVC)	A type of native vegetation classification that is described through a combination of its floristics, life form and ecological characteristics, and through an inferred fidelity to particular environment attributes. Each EVC includes a collection of floristic communities that occur across a biogeographic range, and although differing in species, have similar habitat and ecological processes operating.*
Sustainability	Defined by the World Commission on Environment as 'forms of progress that meet the needs of the present without compromising the ability of future generations to meet their needs'.
Ecologically Sustainable Design (ESD)	The use of design principles and strategies which help reduce the ecological impact of works (See also definition of 'Sustainability' above).
Embedded Energy	Also known as Embodied Energy. It refers to the quantity of energy required to manufacture and supply to point of use, a product, material or service.
Revegetation	Establishment of native vegetation to a minimum standard in formerly cleared areas, outside a remnant patch.*
Supplementary Planting	Establishment of overstorey and/or understorey plants within a remnant patch. Typically includes the planting or direct-seeding of understorey life forms.*
Water Sensitive Urban Design (WSUD)	A holistic approach to the planning, design, construction and retrofitting of urban development that aims to minimise negative impacts on the natural water cycle and protect the health of aquatic ecosystems. Promotes the integration of stormwater, water supply and sewage management within a development precinct.

* Source: Department of Sustainability and Environment (DSE)

Bruce's Creek Masterplan, Bannockburn

Draft Masterplan Report

1. INTRODUCTION

The rural township of Bannockburn, located in close proximity to the regional cities of Geelong and Ballarat, is a rapidly growing community, with a maximum population predicted to grow to 10,000 people. This is a significant increase from the current population of 2,486 (Source: 2006 Census) and careful planning is required to protect the local character and sense of local community as the township grows. To this end, Golden Plains Shire Council has commissioned Land Design Partnership to undertake the Bruce's Creek Masterplan, as recommended by the *Bannockburn Urban Design Framework* (2003, rev 2005).

The Bruce's Creek Open Space Reserve will be a significant landscape corridor with high environmental values. It will provide the community with a central focal point for activity through the provision of open space areas, recreation and education precincts and shared trail networks. The corridor will facilitate the integration of new and planned residential areas with the established township, connecting a growing, walkable, healthy and integrated community.

1.1 The Study Area

The study area covers the section of Bruce's Creek as shown from the planned extent of residential development to the north and to the transmission easement to the south, below Bannockburn-Shelford Road.

The study addresses interfaces with existing and planned residential areas and will consider potential extensions along the creek corridor in the future.

Figure 1: The Study Area

1.2 Purpose and Scope of the Masterplan

The Bruce's Creek Masterplan seeks to support and implement the key recommendations identified in the *Bannockburn Urban Design Framework* and the Golden Plains Shire Planning Scheme, Clause 21.05. The key vision is to provide an open space network that is integrated with the township, is responsive to the needs of residents and protects/enhances biodiversity and heritage values. The primary purpose is to develop a set of key guidelines and actions that address the following key considerations:

Activity / Recreation

- Paths / trails
- Recreation opportunities
- Access and activity
- Supporting infrastructure / facility requirements

Environment

- Vegetation themes / landscape treatment
- Recommended species for revegetation
- Weed control and removal priorities
- Management of open space
- Cultural and Natural Heritage considerations

1.3 Objectives

The key objectives of this Masterplan study are as follows:

Identifying additional strategic / policy / planning / survey requirements to support implementation.
Supporting and implementing the relevant recommendations of existing studies / policy documents, particularly the Bannockburn Urban Design Framework and Clause 21.05 of the Golden Plains Shire Planning Scheme.
Establishing the extent of public open space to form Bruce's Creek Corridor.
Identifying key connections and linkages from the creek corridor to key features of the Bannockburn township, established and planned residential areas on both sides of the creek and broader external networks.
Identifying infrastructure and hard landscape requirements, such as trail networks (and the materials used to construct these), public amenities and facilities.
Establishing weed eradication and revegetation priorities.
Establishing vegetation themes and nominating recommended species.
Identifying management / maintenance requirements and responsibilities.

1.4 Process

In developing the Masterplan this study has taken the following approach:

Stage 1. Analysis and Research

- Context and policy setting
- Site Proper: identifying values, opportunities and issues relating to site conditions, environmental processes, landscape character, cultural and natural heritage and activity (recreation and use)

Stage 2. Consultation

- Golden Plains Shire Council – Project Steering Committee
- Golden Plains Shire Council – Councillors
- Local Community
- Key stakeholders (i.e. land owners, Primary School representatives)

Stage 3. Draft Masterplan

The Draft Masterplan outlined the proposed approach for review by Council, the local community and key stakeholders prior to the development of the Final Masterplan and implementation strategy.

The Draft was exhibited for six weeks. A number of submissions were received during this phase which have been considered in the preparation of the Final Masterplan.

Stage 4. Final Masterplan

This Final Masterplan outlines key directions and recommendations and includes an implementation strategy.

2. BACKGROUND SUMMARY

2.1 Strategic Context

Previous strategy documents have established a clear future vision for the use and the development of the Bruce's Creek corridor as a key open space spine and community open space asset that will connect the Bannockburn township as it grows into the future.

During the research and analysis phase of this project, a number of relevant local and state policies, previous studies and planning controls were reviewed, as identified below:

Local Policies and Previous Studies undertaken by Council:
Bannockburn Urban Design Framework (2003 revised 2005)
Golden Plains Shire Recreation Strategy Plan (2007)
Golden Plains Shire Open Space Strategy (2005)
Bannockburn Community Infrastructure Development Plan (2005)
Bannockburn Town Centre Investment Strategy (2008)
Golden Plains Shire Paths and Trails Strategy (2005)
Golden Plains Shire Community Environment Strategy (2000)
State Level Policies and Strategies Relevant to this Study:
Victoria's Native Vegetation Management: A framework for Action (2002) Department of Sustainability and Environment
Aboriginal Heritage Act (2006) Aboriginal Affairs Victoria, Department of Planning and Community Development
Aboriginal Heritage Regulations (2007) Aboriginal Affairs Victoria, Department of Planning and Community Development
Corangamite Catchment Management Authority *Weed Action Plan*
Other Strategies Relevant to this Study:
Bruce's Creek Archaeological Survey (August 2004) Terra Culture Pty Ltd (prepared for Coomes Consulting Group)

For further details of these documents and how they relate to this project, please refer to *Bruce's Creek Masterplan: Site Analysis, Issues and Opportunities Report,* October 2008.

How the Strategic Context informs the Masterplan:
There are many directions and recommendations within these related strategic policies which have informed the Masterplan as follows:

- Developing Bruce's Creek Reserve as a significant open space corridor that connects the community and contributes to Bannockburn's 'sense of place'.
- Protecting and enhancing the unique landscape setting and character.
- Expanding shared path networks that:
  - Connect into existing path/trail systems, key features and community facilities;
  - Establish links with new and future development;
  - Provide additional passive recreation opportunities through the provision of a hierarchy of trails throughout the creek corridor;
  - Achieve a high quality standard of paths using appropriate surfacing materials.
- Enhancing environmental values of the creek corridor:
  - Protect native vegetation and enhance ecosystems through weed control programs and revegetation / supplementary planting using indigenous species;
  - Enhance habitat values;
  - Reduce and protect against environmental degradation caused by pest flora and fauna, salinity and erosion;
  - Enhance waterway health and protect drainage systems;
  - Ensure infrastructure, access and activity is appropriately located.
- Ensuring open space needs are met as the township grows in population.
- Providing a diversity of recreational opportunities, both structured and unstructured, catering to a range of abilities.
- Protecting and interpreting (where appropriate) existing heritage features.
- Ensuring that future infrastructure / facility provision considers the needs and requirements of a growing community.
- Managing the additional demands placed on the reserve and its associated facilities as the township grows in population.

2.2 Site Analysis, Issues and Opportunities

As part of the analysis stage, a range of relevant site conditions, issues and opportunities were examined in relation to the objectives of the project. The analysis has identified a number of relevant themes with specific needs and values that are to be considered in developing the Masterplan, being:

- Land Use and Ownership
- Activity and Facility Provision, Circulation and Access
- Environment Management
  - Topography
  - Existing vegetation
  - Weed control
  - Erosion control
  - Salinity management
  - Fire management
  - Native Fauna
  - Pest Fauna
- Cultural Heritage Management
  - Aboriginal Cultural Heritage
  - European Cultural Heritage

2.2.1 Summary of Issues and Opportunities:

The following tables summarise the issues and opportunities as key elements to be addressed by the masterplan.

Issues:

Issues relating to Establishment, Management and Maintenance of the Creek Corridor
Council resourcing to undertake additional assessment work, to manage and maintain the creek corridor.
Issues relating to Land Use & Ownership
A need for certainty and clarity in relation to development boundaries and the extent of public open space reserved for Bruce's Creek.
Future infrastructure and servicing across the creek, such as pedestrian and vehicle crossings, services provision (stormwater and sewerage).
Issues relating to Activity & Facility Provision
Ensuring that facilities will meet community needs as the township population grows.
Balancing community needs with environmental requirements / objectives.
Ensuring that new facilities can be managed and maintained.
Understanding the constraints of steep land and the siting of facilities and infrastructure, particularly access paths.

Issues relating to Environment Management
Managing the perception of fire risk amongst the community and maintaining adequate access to the creek corridor.
Lack of a detailed flora and fauna assessment specific to Bruce's Creek corridor, to understand: the location and extent of: – significant vegetation – weed infestation – native fauna – pest fauna
Encroachment of residential development adjacent to the creek corridor is likely to increase pressures from weed infestation (eg 'garden escapees' and pest fauna (eg domestic animals and vermin) on the creek corridor.
Issues relating to Heritage
The potential for damage to, or disturbance of unidentified cultural heritage sites through physical works.
Protection of existing cultural heritage sites and clarification from the responsible authority as to how these sites should be treated (eg concealed or interpreted).

Opportunities:

Opportunities relating to Establishment, Management and Maintenance of the Creek Corridor
Sharing resources and facilities.
Developing partnerships between Council, community groups and others in order to create a diverse range of manageable recreation opportunities, revegetation and weed control projects and the like.
Opportunities relating to Land Use & Ownership
Establishing a holistic approach to development across multiple boundaries (ie connections, drainage/stormwater, weed control, revegetation) and keeping infrastructure out of the sensitive creek corridor.
Opportunities relating to Activity & Facility Provision
Developing other parks / open spaces and the major recreation precinct will increase amenity and activity. This opportunity could be further strengthened through consideration of how these additional spaces link with the creek corridor.
Providing outdoor education opportunities (such as through signage provision and access to 'waterways experience' / environmental projects).
Utilising the existing topography of the area as a guide to providing facilities and infrastructure. For example, natural amphitheatres, at grade trails, 'level' open space areas.
Using Council's existing *Paths and Trails Strategy* and recommendations outlined in the *Bannockburn Urban Design Framework* to provide a hierarchy of paths that connect to key features of Bannockburn and encourage increased use of the creek corridor.
Providing a diverse range of passive recreation experiences through the provision of paths and open space areas.

Opportunities relating to Environment Management
Minimising visual impact of built form, as viewed from within the creek corridor, through planting at higher elevations.
Identifying: - Plant communities and species considered to be rare, of high conservation value, threatened, or of special significance (including cultural heritage significance). - Locations, species and extent of weed infestation.
Employing 'best practice' methods when undertaking any planting, weed management or restoration works.
Enhancing existing areas of remnant vegetation to create high value habitat and biodiversity areas through careful weed control and supplementary planting programs.
Ongoing development of public promotion and education initiatives to encourage residents to select native and indigenous plants for home gardens, to discourage use of 'garden escapees', and to help foster community engagement with the unique environment of the creek corridor.
Ongoing control and eventual eradication of pest animals.
Improving domestic animal controls and public awareness programs to encourage responsible pet ownership.
Opportunities relating to Heritage
Minimising the potential for unnecessary impact upon cultural heritage sites through careful consideration and location of site works.
Maintaining appropriate channels of consultation and communication with Aboriginal communities.
Explaining / interpreting (where appropriate and if agreed with the relevant stakeholders), extant heritage elements as a means to contribute to a broader understanding of local social and physical history.

Appendix 3 contains a S.W.O.T. (Strengths, Weaknesses, Opportunities and Threats) analysis that was developed during the analysis phase of the project in order to clarify the main Issues and Opportunities for Bruce's Creek as an open space corridor.

2.3 Directions from Community Consultation

Community input into this Masterplan is considered critical to ensuring the project's success. As such, consultation has been undertaken throughout all stages of the project, through the following means:

- Visioning Workshop with local community members to introduce the project and its scope, and to enable the local community to identify key ideas, concerns, strengths, weaknesses and priorities.
- One on One interviews with Key Stakeholders.
- Ongoing consultation with the Project Steering Committee.
- Presentation to Councillors.
- Street Stall to allow the community to discuss and comment directly on the Draft Masterplan, and provide written responses via questionnaires and feedback forms.
- Exhibition of the Draft Masterplan for review and comment (6 week exhibition period)
- Distribution of the Draft Masterplan to Key Stakeholders and authorities

A summary of feedback received during consultation processes through all stages of the project is summarised in Appendix 4 of this document.

2.3.1 Summary of Community Positions:

Early stage consultation processes established broad community positions and priorities to help guide the development of key directions for the creek corridor, as outlined below:

Weed management, pest control and revegetation to enhance the natural values of the creek corridor. An emphasis on implementing works via considered plans / strategies that understand local conditions and protect significant vegetation.
Establishing path networks and connections to connect Bannockburn and to provide links with regional features. A particular desire to establish links with local features and existing open space reserves, such as Wabdallah Reserve and the Bannockburn Bush.
Managing construction of surrounding residential developments to minimise negative impacts on the creek corridor, such as rubbish, dust, damage to vegetation, stormwater treatment and the like.
Ensuring that the corridor is well managed and maintained.
Enabling a range of appropriate recreation activities that are sensitive to the creek environment.
Promoting natural values of the creek setting to new residents and visitors.
Investigating the long term potential to establish an increased water presence in the creek using recycled / treated water.
Use of gravel paths seen as more appropriate in a bushland environment

These community priorities were considered along with other key issues and opportunities highlighted during the research, analysis and consultation phases and included in the Draft Masterplan.

2.3.2 Feedback on the Draft Masterplan:

The draft Masterplan outlined key directions for consideration by Council, the project Steering Committee, local community and key stakeholders. The feedback received on these directions has been considered and incorporated into the final Masterplan. (See Appendix 4: Consultation Summary)

3. MASTERPLAN DIRECTIONS

The development of Bruce's Creek corridor as an open space reserve will need to meet a range of human and natural values which could be considered conflicting but which need to be considered and balanced to ensure it thrives both as a natural and habitated open space. For example, there are 'human-centric' values important to ensuring the corridor is well used and valued by the public i.e for activity, recreation, leisure and access. However, the same values and opportunities, if not planned appropriately, may denigrate natural values such as vegetation, biodiversity and habitats. There are also cultural and heritage values that need be considered. These values are all also constrained by the limitations of budget, resourcing and management capabilities.

Whilst the Masterplan considers the creek corridor as a whole, in order to balance the competing nature/human values identified above, a number of Zones have been nominated within the creek corridor. The Zones have been identified relative to their use, activity, topography, environmental and heritage value. Specific approaches and recommendations are proposed for each Zone. This will enable Council and the Community to plan and implement recommendations in a sustainable, resource-efficient way and to ensure that facility provision within the creek corridor is responsive to all values.

The Zones identified within the corridor include:

- **Creek Corridor:** This refers to the overall study area and general recommendations have been made which are relevant to all creek Zones.
- **Outer Zone:** The general regions of the creek corridor providing an enhanced, low maintenance open space asset, connected via a shared path.
- **Activity Zone**: The primary activity area within the creek corridor that concentrates leisure/recreation opportunities, facilities and feature planting in close proximity to the major features of Bannockburn.
- **Creekline Zone**: An emphasis on enhanced biodiversity / habitat values along the creekline with controlled access.
- **Escarpment Zone**: Steeply sloping land with limitations on use and development.
- Open Space Link: Areas external to the creek corridor that provide important connections into the corridor and through to key features of Bannockburn.

Further explanation and recommendations for these zones are provided later in this report (See Section 3.2).

3.1 Creek Corridor – General Directions

Overall, there is the need for coordinated recommendations to be applied to the creek corridor as a whole to ensure consistency in treatment and approach, outlined below:

3.1.1 Construction Management:

It is recommended that Council actively manages construction occurring within and adjacent to the creek corridor to ensure appropriate procedures and practices are followed:

- Staging of works (i.e to minimise disruption, maximise resources, respond to demand)
- Run-off and erosion control.
- Protection of significant vegetation, heritage features.
- Rubbish disposal and dust control.

Council guidelines relating to construction management of adjacent development should be enforced to ensure that construction occurring near the corridor has minimal negative impact on the creek corridor.

3.1.2 Funding Strategies:

Council should continue to actively seek funding opportunities to ensure that Creek Corridor works can be achieved.

3.1.3 Maintenance Regimes:

It is recommended that Council maintain the Creek Corridor in line with its standard township maintenance programs to ensure the protection of the Creek Corridor as a key open space asset into the future. The first priority for maintenance should be weed control.

3.1.4 Creek Crossings:

A number of creek crossing points are indicated on the Masterplan, the specific form of each of these crossing will need to be further designed in consultation with the relevant authorities, such as VicRoads:

- Major Pedestrian Crossing: a major pedestrian crossing is proposed as a major linkage route connecting Wabdallah Reserve. via the new residential areas, to the creek corridor and beyond to Bannockburn Bush, via new residential areas.
- Potential Under Bridge Crossing: a pedestrian crossing is proposed to connect below Bannockburn-Shelford Road. This will require assessment of safety, flood mitigation, access requirements and co-ordination with the Catchment Management Authority and VicRoads.
- Milton Street Extension Vehicular/Pedestrian Crossing: a main vehicle bridge crossing, with associated pedestrian crossing, proposed for the extension of Milton Street, connecting the town with future residential development on the western side of the corridor.

- Minor Pedestrian Crossings: smaller creek crossings strategically located to provide further choice in routes. and to enable connections across both sides of the creek where required.
- Upgraded Existing Crossings: it is recognised that there is a need to improve the existing low-level 'weir' crossing to the south of the Bannockburn-Shelford Road. The redesign and improvement of this crossing will be undertaken in consultation with VicRoads and other relevant authorities.

3.1.5 Paths / Trails:

The Masterplan defines a hierarchy of paths / trails that aim to fulfil a range of circulation and recreation roles. The hierarchy includes the following path types:

- Shared Path: a main path to provide a primary link to key features, residential areas, the town centre, proposed Education and Recreation precincts. It will be a safe and accessible shared path.
- Informal Paths: these will link into the shared path as an informal trail system providing further choice in walking routes and passive recreation opportunities. The paths will work within existing slope conditions and therefore will be of varying grades and accessibility.
- Boardwalks: boardwalks are proposed within the Activity Zone providing safe and controlled access to the creek environment.
- Future Linkage Paths: A number of linkages are identified in the Masterplan to extend from the creek corridor into future residential areas. These paths will need to be further designed in concert with future development plans to ensure that appropriate connections through residential areas are maintained. The critical objective is ensuring they are suitably located and constructed to be accessible and safe.

The path and trail system proposed can be implemented as land becomes available to Council and as budget and resourcing is confirmed. The network is designed with inherent flexibility that enables it to extend and be modified as the community needs.

3.1.6 Siting / locating path routes:

The Masterplan indicates the general location and route for the path system. A proposed route for Stage One of the Shared Path is also shown on the Masterplan. This has been determined according to existing grades, accessibility, stability and desired access points.

For future stages the siting and location of paths will be also be established in this manner, considering specific site characteristics and site features. This will be particularly important for establishing the shared path route along the creek corridor south of Bannockburn-Shelford Road. Here the steep topography and the difficulty in achieving access will limit the location and use of the path. A level of flexibility in location will also be required. For example, if the path is located at the bottom of the creek valley it will not necessarily provide access to and from residential areas on the embankments. Alternatively, if the shared path is provided at the top of the embankment, access to the creek will be difficult.

3.1.7 Path / Trail Materials:

A range of pavement surfacing materials are proposed for each of the path types:

Concrete:

The shared path is expected to be a high use path, providing a route for pedestrians and cyclists. Importantly, it will be an accessible path for all users, including pram and wheelchair users. It will be the main route to the Primary School and Recreation Precinct, as well as link to key features of Bannockburn. The selection of concrete as a pavement surface for this shared path is based on its function as a major shared circulation route and the requirement for it to be safe, accessible, robust in construction and easily maintained over the long term.

While concrete may be perceived as detracting from the bushland character of the creek corridor, it offers many practical and environmental benefits that cannot be met by other materials.

Golden Plains Shire *Paths and Trails Strategy* (2005) provides a clear guide for path provision and material considerations to ensure minimal future maintenance liabilities, ensure public safety and maximise accessibility. Of particular relevance, the *Strategy* notes a hierarchy of path types and recommends construction materials for each. Under this *Strategy*, the proposed shared path through Bruce's Creek corridor falls under the category of a 'Local Path', which is recommended to be constructed from either concrete or asphalt.

In terms of overall Life Cycle Costs, including both capital cost and ongoing maintenance, concrete is considered more cost effective long term as compared to gravel which is maintenance intensive and has significant ongoing costs associated with labour, materials and maintenance. Further, concrete is recognised to be a far safer and more accessible paving material over gravel, particularly in the context of the conditions of the creek corridor, distinguished by significant changes in level and potential for flooding.

Sustainable practices are important considerations and while concrete may be perceived to have a higher embedded energy than other materials, its use does in fact have several advantages:

- Potential to reduce the scale and rate of resource consumption through minimising replacement and repair requirements.
- Minimal disturbance of the creek corridor due to its minor maintenance needs and therefore minimal need to gain access to the reserve to maintain the path network.
- Reduction in herbicide use that would be required to maintain a gravel path.
- Longer life expectancy.

Other practical considerations include:

- Provides accessibility for all.
- The overall cost of construction and ongoing maintenance is much less over a 30 year cycle than other paving materials.
- Controls pedestrian access by providing a clearly defined route to discourage inappropriate access through sensitive creek environments.
- Less affected by erosion and flooding.
- Ease of providing linemarking required for the shared path use.

Should resourcing allow, Council may consider a range of aesthetic treatments for the concrete paths such as exposed aggregate finishes or colouring/staining to minimise visual impact. It should be noted that these treatments will add to construction costs.

Gravel:

The informal trails are proposed to be constructed from compacted gravel, as it is expected that these paths will experience lower traffic levels. These gravel paths will not be located on steep sections of the creek corridor and hence will be less prone to erosion and wash out.

Use and performance of these trails should be monitored over time, enabling Council to consider the feasibility / necessity for formalising the more popular trails using more robust paving materials (such as boardwalks or concrete paths, for example).

Timber Boardwalk:

Boardwalks will be constructed from timber decking, providing an accessible and aesthetically pleasing feature walk along the creekline.

Consideration should be given to utilising sustainable timber products in decking construction. Such timbers could be recycled or sourced from Forest Stewardship Council (FSC) certified suppliers.

3.1.8 Furniture:

It is recommended that furniture selections are consistent throughout the creek corridor. A Style Manual has been prepared to guide the selection of furniture items, as attached in Appendix 5.

The materials, style and forms of the furniture need to be robust in design and materials, as well as complement the bushland character of the creek corridor. Accordingly, it is recommended that furniture is constructed with heavy section hardwood timbers and use of steel for framing and supports. Sustainability should also be considered with the construction of furniture, again sourcing materials from sustainable sources.

Furniture may be custom made, off the shelf, or locally made, with the opportunity for furniture to be designed and constructed through a local community or artist project.

3.1.9 Signage:

Similarly to the provision of furniture it is recommended that signage is consistent throughout the creek corridor. There are a number of signage types required for use in the creek corridor:

- *Interpretive:* Interpretive signage can be used to provide information about a range of points of interest within the creek corridor, such as heritage and natural features, waterway processes and the like. The design should be robust enough to withstand the environmental conditions, however it should also respond to the bushland character of the creek corridor. Interpretive signage, when used effectively, can add to a broader understanding of the unique story of the creek corridor and the township as a whole.
- *Placemaking:* Use of signs to define and name an activity point i.e 'Amphitheatre' or 'Red Gum Picnic Area'
- *Directional:* Directional signage should coordinate with the style used for interpretive signage in terms of materiality, colour and font styles. Its role is for orientation and to provide direction to key features and linkages.
- *Standard Shared Path Signs:* Standard shared path signage should be used along the shared path as required for safety and to minimise the risk of conflicts between pedestrians and cyclists.

Refer to the Style Manual, as attached in Appendix 5, prepared to guide the design and selection of signage.

3.1.9 Environment:

Prior to European Settlement, Bruce's Creek Corridor and surrounds was dominated by open native grassland punctuated by areas of open woodland and fertile river valleys and flats. These types of vegetation characteristics are described as an Ecological Vegetation Class (EVC). Figure 2 below provides an indication of how EVC's are likely to have figured in relation to local conditions pre-1750, while Figure 3 shows a broad indication of EVC occurrence in recent times. As these figures illustrate, the creek corridor and surrounds have largely been cleared to make way for rural use and new residential development, however, a number of areas of remnant vegetation remain.

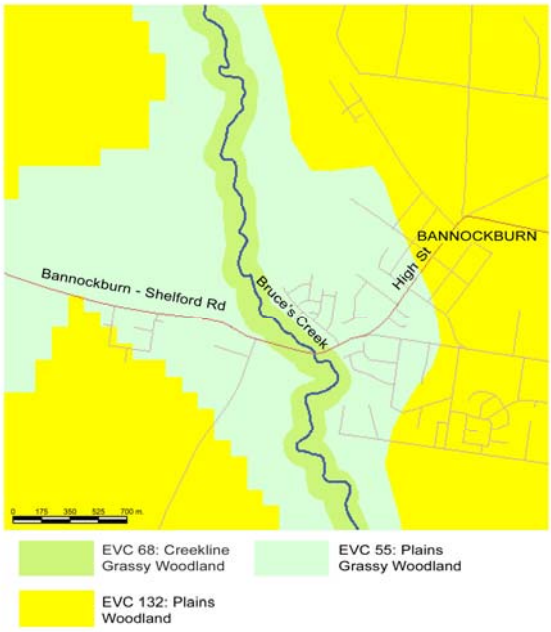

Figure 2: Pre-1750 EVCs (Source: Adapted from DSE)

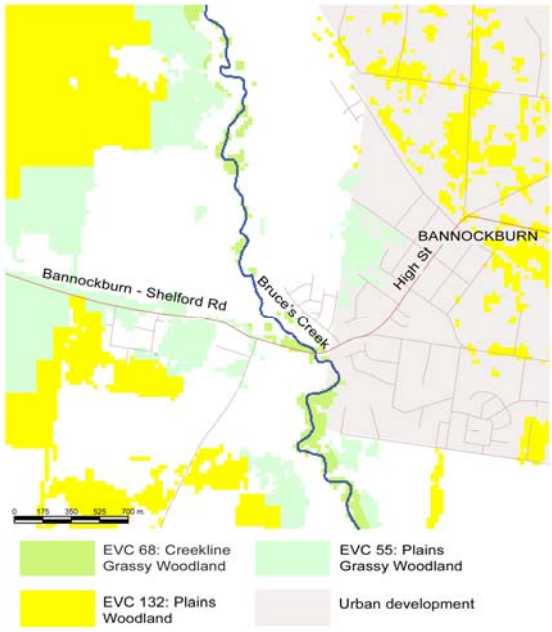

Figure 3: 2005 EVCs (Source: Adapted from DSE)

The general EVCs that are likely to be found within the creek corridor, as shown above, provide a general guide for assessing what once would have been the vegetation characteristics of the creek corridor.

It is important to note that ongoing and seasonal site inspections may reveal additional EVCs or species / plants of significance that would need to be considered in undertaking any revegetation / supplementary planting works.

EVCs Known to Occur within the Study Area:
EVC 68: Creekline Grassy Woodland Typically occurs along ephemeral to intermittent drainage lines on fertile soils and substrates. The EVC is characterised by its eucalypt dominant woodland with scattered shrubs over a mostly grassy / sedgy to herbaceous understorey. The EVC includes a range of graminoid and herbaceous species tolerant of waterlogged soils, resembling a linear wetland or network of small, interconnected ponds. (Adapted from DSE) This EVC is categorised as endangered.
EVC 55_61: Plains Grassy Woodland An open eucalypt dominated woodland occupying poorly drained fertile soils on flat or gently undulating plains. The understorey is characterised by few sparse shrubs over a species-rich grassy and herbaceous ground layer (Adapted from DSE).
EVCs Known to Occur Adjacent to the Study Area
EVC 132_61: Plains Grassland (heavier soils) While this EVC is less likely to have occurred within the creek corridor itself, it appears to have once been widespread on the plains above the escarpment and is therefore useful for consideration in any revegetation projects that may occur on the higher areas of land, such as open space links through development. The EVC features treeless vegetation, mostly less than one metre tall, dominated by a grassy / herbaceous ground cover (Adapted from DSE).

It is recommended that all weed control, pest animal control, revegetation / supplementary planting and management is undertaken and / or supervised by skilled, qualified people and within recognised Best Practice methodologies.

Given the importance of identifying and protecting areas of remnant vegetation, including plants of significance, the process for undertaking works in the creek corridor should as a basis follow the principals and guidelines as set out by the Department of Sustainability and Environment's *Victoria's Native Vegetation Management: A framework for Action* (2002). This methodology ensures that practices are undertaken appropriately. Under the supervision of suitably qualified professionals, it is also possible to use this methodology as a basis for enabling volunteer / community group to participate in weed control and revegetation projects.

3.1.10 Weed Control

Weed control programmes are to be undertaken according to the following guidelines:

a) Detailed guidelines and principles for weed control as described in the Department of Sustainability and Environment's *Guidelines and Procedures for Managing the Environmental Impacts of Weeds on Public Land in Victoria* (2007).

b) Target priority weeds with particular species identified in the Corangamite Catchment Management Authority's *Corangamite Weed Action Plan* (as identified in Table 1 below). However, it should be noted that this list is a broad guide that is not specifically targeted to the Creek Corridor, therefore further site investigations may reveal other weed species that may be nominated as priorities for management activities (such as Box Thorn). At the time of writing the *Corangamite Weed Action Plan* was due for review, and it is expected that species lists will be re-assessed in due course when updated information becomes available.

Table 1: Common Weeds known to occur within the Corangamite Catchment area[2]

State Priority Weeds:
- Ragwort *(Senecio jacobaea)*
- Serrated Tussock (*Nassella trichotoma)*

Emerging Weeds:
- Bridal Creeper (*Myrsiphyllum asparagoides)*
- Chilean Needle Grass (*Nassella neesiana)*
- Other *Nassella sp.*

State Prohibited Weeds
- Alligator Weed (*Alternanthera philoxeroides)*
- Black knapweed (*Centaurea nigra)*
- Camel Thorn (*Alhagi maurorum)*
- Ivy Leaf Sida (*Sida leprosa)*
- Marijuana (*Cannabis sativa)*
- Mesquite (*Prosopis spp.)*
- Nodding Thistle (*Carduus nutans)*
- Poverty Weed (*Iva axillaris)*
- Salvinia (*Salvinia molesta)*
- Water Hyacinth (*Eichhornia crassipes)*

Regional Priority Weeds:
- Blackberry (*Rubus fruticosus)*
- Cape Tulip (*Homeria sp.)*
- Wild Garlic (*Allium vineale)*
- Gorse (*Ulex europaeus)*
- St John's Wort (*Hypericum tetrapterum)*
- Paterson's Curse (*Echium plantaginetum)*
- Ox Eye Daisy *(Leucanthemum vulgare)*

c) Further site investigations may reveal the presence of other weeds that are classified under the *Catchment and Land Protection Act* (1994). Any such weeds shall also be included in weed control programs undertaken in the Creek Corridor.

3.1.11 Pest Animal Control:

It is recommended that a pest animal removal program be implemented in conjunction with the weed control program. Ideally, this program would occur prior to the commencement of any revegetation / supplementary planting. The removal program should include:

a) Identification of pest animal populations and their locations within the creek corridor.
b) Undertake the appropriate strategy / methodology for controlling each species specifying ongoing control and eventual removal of pest animals occurring in the area.
c) Removal of weeds (such as boxthorn) that may provide habitat for pest animals.

It is expected that the impacts of domestic animals on the creek corridor may increase as residential development occurs along the creek corridor. Therefore, Council should monitor any such impacts over time to assess whether a review of domestic animal controls is required.

[2] *Corangamite Weed Action Plan: pp39,* Corangamite Catchment Management Authority

3.1.12 Vegetation Themes and Recommended Species:

The objectives of revegetation and supplementary planting programs are to:

- Protect existing significant species and communities
- Enhance and complement the natural setting of the creek corridor through use of indigenous species and in concert with established EVC benchmarks
- Undertake planting to ensure ease of undertaking maintenance and management regimes

Vegetation for each of the key Zones has been nominated according to the particular qualities and role that each Zone is to perform (Refer to section 3.2: Creek Corridor Zones).

The objective is to find an achievable balance between recreational, cultural and natural values. Accordingly, it is important to note that it is only intended to recreate EVC benchmarks in the Creekline Zone. Elsewhere species selection will be generally according to EVC's but the form, character and 'feel' of the landscape may vary from the specifics of 'benchmarks' in order to provide:

- passive surveillance
- open grass , active areas
- access points
- view corridors, filtering views
- formal planting beds – for definition of areas
- visual screening
- ease of maintenance
- variety and amenity provided by other native species

Recommended species of planting in specific Zones are included in Tables 2, 3 and 4.

Table 2: Outer Zone - Recommended Species (low maintenance, grassed space, open planting)

Indicative species selection of indigenous plants typically found in EVC 55_61: Plains Grassy Woodland

Botanical Name	Common Name
Trees	
Eucalyptus camaldulensis	River Red Gum
Shrubs	
Acacia pycnantha	Golden Wattle
Acacia paradoxa	Hedge Wattle
Pimelea humilis	Common Rice-flower
Tussocks / Grasses	
Austrostipa bigeniculata	Kneed Spear-grass
Austrostipa mollis	Supple Spear-grass
Themeda triandra	Kangaroo Grass
Elymus scaber var. scaber	Common Wheat-grass
Austrodanthonia setacea	Bristly Wallaby-grass
Austrodanthonia racemosa var. racemosa	Striped Wallaby-grass
Microlaena stipoides var. stipoides	Weeping Grass
Herbs / Groundcovers	
Astroloma humifusum	Cranberry Heath
Bossiaea prostrate	Creeping Bossiaea
Gonocarpus tetragynus	Common Raspwort
Acaena echinata	Sheep's Burr
Dichondra repens	Kidney-weed
Hydrocotyle laxiflora	Stinking Pennywort

Table 3: Activity Zone - Recommended Species (activity area, concentrates leisure/recreation opportunities, facilities and feature planting)

Indicative species selection of indigenous plants typically found in river and plains areas of the Victorian Volcanic Plains bioregion.

Botanical Name	Common Name
Trees	
Eucalyptus camaldulensis	River Red Gum
Acacia melanoxylon	Blackwood
Allocasuarina littoralis	Black She-oak
Allocasuarina verticillata	Drooping She-oak
Shrubs	
Acacia pycnantha	Golden Wattle
Acacia paradoxa	Hedge Wattle
Bursaria spinosa	Sweet Bursaria
Banksia marginata	Silver Banksia
Hymenanthera dentata	Tree violet
Goodenia ovata	Hop Goodenia
Pimelea humilis	Common Rice-flower

Tussocks / Grasses / Sedges	
Austrostipa bigeniculata	Kneed Spear-grass
Bulbine bulbosa	Bulbine Lily
Dianella revoluta	Black-anther Flax-lily
Lomandra longifolia	Spiny Headed Mat Rush
Poa labillardierei	Common Tussock-grass
Phragmites australis	Common Reed
Austrodanthonia racemosa var. racemosa	Striped Wallaby-grass
Austrodanthonia caespitosa	Common Wallaby-grass
Microlaena stipoides var. stipoides	Weeping Grass
Dichelachne crinita	Plume Grass
Climbers / Scramblers	
Glycine clandestina	Twining Glycine
Clematis microphylla	Small Leaf Clematis
Herbs / Groundcovers	
Chrysocephalum apiculatum	Common Everlasting
Rhagodia parabolica	Fragrant Saltbush
Astroloma humifusum	Cranberry Heath
Calocephalus citreus	Lemon Beauty Heads
Calocephalus lacteus	Milky Beauty Heads
Kennedia prostrata	Running Postman
Dillwynia serecia	Showy Parrot Pea
Pimela humilis	Common Rice-flower
Wahlenbergia stricta	Tall Bluebell

Table 4: Creekline Zone - Recommended Species (enhance biodiversity / habitat values)
Indicative species selection of indigenous plants typically found in EVC 68: Creekline Grassy Woodland

Botanical Name	Common Name
Trees	
Eucalyptus camaldulensis	River Red Gum
Acacia melanoxylon	Blackwood
Acacia retinodes	Wirilda
Shrubs	
Hymenanthera dentata	Tree Violet
Rubus parvifolius	Small-leaf Bramble
Enchylaena tomentosa var. tomentosa	Ruby Saltbush
Tussocks / Grasses / Sedges	
Austrostipa bigeniculata	Kneed Spear-grass
Poa labillardierei	Common Tussock-grass
Phragmites australis	Common Reed
Austrodanthonia racemosa var. racemosa	Striped Wallaby-grass
Austrodanthonia caespitosa	Common Wallaby-grass
Microlaena stipoides var. stipoides	Weeping Grass
Climbers / Scramblers	
Glycine clandestina	Twining Glycine
Groundcovers / Herbs	
Azolla filiculoides	Pacific Azolla
Lemna disperma	Common duckweed

3.1.13 Fire Management:

Fire management is an important consideration in the Creek Corridor, particularly as residential development is established on surrounding land. The design and management of the Creek Corridor will consider fire management principles in consultation with the CFA and other relevant authorities to ensure works proceed in accordance with appropriate fire management principles.

Design considerations may include providing breaks in planting areas and locating roads and paths to act as fire breaks. Design considerations for areas where access is difficult, such as areas along the escarpment and steep banks should include reducing understorey as potential fuel loads, for example incorporation of mown buffers between unmanaged areas of the reserve and residential development.

3.1.14 Cultural Heritage Management:

Cultural heritage management is an important Masterplan consideration, with a number of both European and Aboriginal cultural heritage sites already identified within the study area. It is also important to note that a lack of detailed survey information across the entire site raises the potential for additional sites to be discovered during any construction works undertaken.

Aboriginal Cultural Heritage Management
Key objectives relating to Aboriginal Cultural Heritage Management are:

- Minimise the potential for damage to, or disturbance of unidentified sites through physical works.
- Adequately protect existing sites and consult with the responsible Aboriginal community as to how these sites should be treated.
- Understand the legislative and regulatory requirements for management of Aboriginal Cultural Heritage.
- Where appropriate, explain extant heritage elements as a means to contribute to a broader understanding of local social and physical history.

European Cultural Heritage Management
Key objectives relating to European Cultural Heritage Management are:

- Where appropriate, explain extant European Cultural Heritage elements as a means to contribute to a broader understanding of local social and physical history.

Key directions for the Masterplan relating to Cultural Heritage Management are:

- Undertake an assessment to review whether works proposed in the Masterplan will require a Cultural Heritage Management Plan or a Cultural Heritage Permit is required and to understand the implications of these requirements.
- Conform with legislative and regulatory requirements relating to Cultural Heritage Management.
- Protect all Aboriginal places, objects and human remains in accordance with procedures and provision of the Aboriginal Heritage Act 2006 and the Aboriginal Heritage Regulations 2007.
- Minimise the potential for unnecessary impact upon cultural heritage sites through careful consideration and location of site works.
- Maintain appropriate channels of consultation and communication with relevant Aboriginal communities.
- Protect and explain (where appropriate and if agreed with the relevant stakeholders), extant heritage elements through interpretive signage and features within the creek corridor.

Table 5: Creek Corridor - Recommendations relating to General Directions

No.	Action / Recommendation
G1	Council to continue pursuing funding opportunities for implementing creek corridor works and protection of its natural assets.
G2	Council to monitor construction activity occurring adjacent to the creek corridor to ensure no undue affects on the creek environment.
G3	Council to maintain the creek corridor as per their standard maintenance regimes. The first priority for action shall be weed control.
G4	Use the Masterplan as a guide to design the route of the Shared Path, determining key linkages. Set out a staged implementation strategy as land becomes available.
G5	Select a suite of furniture for use within the creek corridor, using the Style Manual as guide for selecting seating, shelters, bins etc.
G6	Provide appropriate signage using the Style Manual as a guide for selecting Interpretive, Placemaking, Directional and Standard Shared Path Signs.
G7	Undertake a staged weed control program across the creek corridor that includes a site audit / assessment by a suitably skilled and qualified person to identify weed species to be targeted, and to identify the appropriate methodology for weed control.
G8	Undertake a staged supplementary planting / revegetation program. Use the vegetation themes described for each Zone as guide. Planting programmes should include an assessment by a suitably skilled and qualified person to identify existing significant species and communities to be protected and to develop an appropriate design selecting and locating species in each Zone.
G9	Undertake a pest animal control program for the control and eventual removal of pest animals within the creek corridor
G10	Assess whether works proposed in the Masterplan will require a Cultural Heritage Management Plan or a Cultural Heritage Permit and understand the implications of these requirements.

3.2 Nominated Zones within the Creek Corridor:

The Creek Corridor refers to the overall study area, essentially the broad open space spine, defined as encompassing the land from the top of the escarpments on the Eastern and Western sides of the creek to the creek valley itself. In its entirety it will provide a significant open space spine that integrates Bannockburn township with new and planned residential areas.

Specific Zones have been nominated within the broad framework of the Creek Corridor. The Zones have been identified relative to their use, activity, topography, environmental and heritage value. Specific approaches and recommendations are proposed for each Zone.

The Zones are illustrated in the Context Plan, attached as Appendix 1.

3.2.1 Outer Zone

The Outer Zone is identified as the general area of the creek corridor that occur north of the proposed Milton Street Extension and south of the Bannockburn-Shelford Road.

The emphasis for the Outer Zone will be in providing path infrastructure, revegetation / weed control measures that minimise maintenance requirements whilst enhancing the bushland setting of the corridor.

Image: Illustrative image showing proposed landscape character of the Outer Zone

Activity and Recreation Opportunities:

Key features of the Outer Zone will be a major shared path system provided to encourage alternative access routes to areas of Bannockburn township including the future new Primary School and proposed recreation precinct. The main shared path will be supplemented by a network of informal trails.

Landscape character and Setting

The landscape character of the Outer Zone will be largely open planting, featuring indigenous trees with a grassy understorey. There will be some feature planting areas to enhance the landscape setting and to define key open space areas. Planting will help to define path networks and areas of focus, as well as to reduce the visual impact of adjacent development. Plant species used in the Outer Zone will generally conform with EVC 55_61: Plains Grassy Woodland.

Table 6: Outer Zone - Recommendations:

No.	Action / Recommendation
OZ1	Design and construct the major shared path along the eastern side of the creek corridor, providing a continuous shared path link along the eastern side of the creek. Use the Masterplan as a guide for the location of the path and determining the location of crossings and town connections.
OZ2	Design and construct informal paths in the locations indicated on the Masterplan, as alternative leisure routes. The route to be designed to ensure that the path system links with the major shared path, any other existing paths, creek crossings and important connections as relevant. Work with the existing topography to provide an 'at grade' path wherever possible.
OZ3	Design and construct creek crossings at locations as indicated on the Masterplan. The form and structure of the creek crossing shall be agreed in consultation with the relevant authorities (ie the Catchment Management Authority).
OZ4	Undertake a staged weed control program throughout the Outer Zone as part of the overall Weed Control Program (Refer also recommendation G7)
OZ5	Undertake a staged Revegetation / Supplementary Planting program throughout the Outer Zone Creek Corridor (Refer also recommendation G8) Use the recommended vegetation theme and species list outlined in Table 2.
OZ6	Select a suite of furniture for use within the creek corridor, using the Style Manual as guide for selecting seating, shelters, bins etc.
OZ7	Provide appropriate signage using the Style Manual as a guide for selecting Interpretive, Placemaking, Directional and Standard Shared Path Signs.

3.2.2 Activity Zone

The Activity Zone is identified as the main activity area within the creek corridor, providing a range of passive recreation opportunities and amenities for public use. The extent of the nominated Activity Zone is illustrated on the Main Activity Are Plan attached as Appendix 2.

The extent of the Activity Zone is between the proposed pedestrian link to Wabdallah Reserve and the proposed Milton Street extension. The Activity Zone's purpose is to concentrate facilities within close proximity to key Bannockburn features and activities where there is likely to be more demand for use. This Zone is situated within close proximity to the proposed Education and Recreation precincts and will be the focus of activity within the creek corridor.

Illustrative image showing potential activity and landscape setting within the Activity Zone

Activity and Recreation Opportunities

Key features of the Activity Zone will include picnic areas with provision for shelters, tables, as well as 'level' open space areas for small gatherings. This Zone would also be the starting point for boardwalk and small circuit trails connecting both sides of the creek.

Given its close location to the Education Precinct, there is the opportunity for encouraging outdoor learning programmes in this Zone to promote the unique natural qualities of the creek environment, indigenous flora, significant fauna and heritage values. This may be achieved through feature plantings, signage and interpretation initiatives, which could be developed in partnership with the school or other interested community group.

Landscape Setting

The landscape character of the Activity Zone will have a park-like character, featuring open space areas with some feature landscaping using native and indigenous species. Feature trees and garden planting surrounding open grassed areas can provide spatial definition of defined activity areas (i.e amphitheatres, picnic areas, recreation areas). Formal native gardens can promote local flora by demonstrating use in a garden context.

Table 7: Activity Zone - Recommendations:

No.	Action / Recommendation
AZ1	Design and construct the major shared path along the eastern side of the creek corridor, extending from Bannockburn-Shelford Road through to the proposed Milton Street extension. Use the Masterplan as a guide for the location of the path and determining important connections, such as the future Education and Recreation Precincts and the proposed major pedestrian linkage from Wabdallah Reserve through to Bannockburn Bush.
AZ2	Design and construct a boardwalk within the Activity Zone to provide access to the creekline. Ensure the boardwalk links with creek crossing points, the proposed open space areas and other path links.
AZ3	Design and construct informal paths in the locations indicated on the Masterplan, as alternative leisure routes. Design the route to ensure that the path system links with the shared path, the boardwalk, creek crossings and important connections as relevant. Work with the existing topography to provide an 'at grade' path.
AZ4	Design and construct creek crossings at locations as indicated on the Masterplan. The form and structure of the creek crossing shall be agreed in consultation with the relevant authorities.
AZ5	Coordinate with developers and relevant authorities to construct a main pedestrian crossing and linkage path that links Wabdallah Reserve, planned residential areas, the creek corridor and Bannockburn Bush.
AZ6	Coordinate with developers and relevant authorities to construct path linkages that provide access through proposed residential development, the recreation precinct and the like to the creek corridor as generally indicated on the Masterplan.
AZ7	Undertake a staged weed control program throughout the Activity Zone (Refer also recommendation G7)
AZ8	Undertake a staged Revegetation / Supplementary Planting program throughout the Activity Zone. (Refer also recommendation G8) Use the Activity Zone vegetation theme and recommended species list outlined in Table 3.
AZ9	Select a suite of furniture for use within the creek corridor, using the Style Manual as guide for selecting seating, shelters, bins etc.
AZ10	Provide appropriate signage using the Style Manual as a guide for selecting Interpretive, Placemaking, Directional and Standard Shared Path Signs.
AZ11	Construct a carpark near the Milton Street extension, once designs for the Education and Recreation precincts are confirmed to ensure integration. The design should consider the use of ESD and WSUD principles to ensure that negative impacts on the creek corridor are minimised.
AZ12	Construct public toilet facilities within the Milton Street parking area.

3.2.3 Creekline Zone

The Creekline Zone follows the area covered by the Land Subject to Inundation Overlay (LSIO) as identified in the Golden Plains Planning Scheme. It is within this Zone where the emphasis will be on restoration of the creekline and using revegetation / supplementary planting initiatives to build upon existing significant vegetation. Planting within the Creekline Zone will follow EVC Benchmarks to ensure these values may be achieved within best practice methods.

Image: Illustrative image showing potential Boardwalk providing controlled access to the creekline

Activity / Recreation:
Controlled access within the Creekline Zone can be provided through a combination of informal paths and boardwalks. The experience can be further enhanced through the provision of interpretive signage at selected viewing areas.

Landscape Setting:
The landscape character of the Creekline Zone will based on restoring the creekline to its recognised Victorian Volcanic Plains Bioregion EVC benchmark: EVC 68: Creekline Grassy Woodland.

Given the emphasis on enhancing the biodiversity values of the creekline, supplementary planting and revegetation programs should take particular care to employ recognised Best Practice methodologies to ensure:

- Existing significant species and communities are protected.
- Plant stock is sourced from local provenance supplies and/or collected site seeds.

Table 8: Creekline Zone - Recommendations:

No.	Action / Recommendation
CZ1	Design and construct informal paths and boardwalks in the locations indicated on the Masterplan.
CZ2	Undertake a staged weed control program throughout the Creek Zone as part of the overall Weed Control Program (Refer also recommendation G7).
CZ3	Undertake a staged Revegetation / Supplementary Planting program throughout the Creekline Zone (Refer also recommendation G8) Use the recommended vegetation theme and species list outlined in Table 4
CZ4	Provide appropriate signage using the Style Manual as a guide for selecting Interpretive Signs where appropriate.

3.2.4 Escarpment Zone

The Escarpment Zone covers the area of land on the eastern side of the creek corridor to the south of Bannockburn-Shelford Road. The slope of this land makes the use of this area for open space difficult, although it has high visual value. It will also be difficult to manage and maintain and get access. If developed as residential land there will be negative impacts on the creek corridor in terms of erosion, views to built form and infrastructure and the visual intrusion of back fences.

Despite the difficulties with maintenance and access, it is recommended that the land located on escarpments is retained and managed as open space. Determination of the boundary line for open space and adjacent development can be determined by a measure of slope (typically the line of a break in slope and increased grade) and a measure of soil stability and suitability.

3.2.5 Open Space Link

A number of open space links are shown in the Masterplan. These are designed to provide shared path access through future developed areas to the creek corridor and, in particular, to link into key features and significant open space reserves within the area such as Wabdallah Reserve, the proposed Recreation Precinct and Bannockburn Bush.

It is acknowledged that the final locations and routes will need to be further designed in close consultation with land developers as their subdivision plans become clearer.

Activity / Recreation

The primary role for the Open Space Links will be providing access into and out of the creek corridor via accessible and safe path links.

Landscape Character and Setting

The landscape character should respond to the surrounding landscape, be it:

- Avenues of tree planting (preferably native) within generous medians through residential areas and along roadways.
- Informal planting using indigenous species to provide visual screening to adjacent fences as the link passes through reserve easements between residences, whilst preserving passive surveillance qualities.

Table 9: Open Space Link Recommendations:

No.	Action / Recommendation
OS1	Design and construct safe and accessible path links, using the general locations shown on the Masterplan, ensuring connections between future residential areas and the creek corridor. Consult with land developers to ensure a co-ordinated approach.
OS2	Undertake planting programs throughout these Open Space links that are consistent with the adjacent landscape settings.

4. IMPLEMENTATION

The Bruce's Creek Masterplan details a number of achievable and realisable projects that can be easily initiated by Council and other project partners.

The implementation of the Recommendations is likely to be undertaken incrementally as sections of creek corridor land become available as open space.

Land in the corridor will be handed over to Council upon the issue of titles. Titles are issued after each stage of subdivision has been through Council planning processes.

On hand over, all actions can be programmed into Council resources / budgeting processes.

The implementation sequence outlined below, is provided as a guide for understanding the likely process for implementing the Masterplan recommendations:

Ongoing Works (pre land handover)	**Staged Implementation Works (following land hand over)**
Funding applications	Cultural Heritage checks & assessments,
Strategic Approvals	EVC check and existing conditions assessment.
Infrastructure coordination	Weed & pest animal control
Implementation programmes	Infrastructure design & implementation
Maintenance programmes	Implementation of works - paths - vegetation - furniture, signage
	Maintenance programmes

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5. APPENDICES