



Bellbird Park Landscape Plan

July 2020



Bellbird Park Landscape Plan Report



Baw Baw Shire Council July 2020

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Friends of the Drouin Trees

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2 Project Objectives

Baw Baw Shire Council set the following Project Objectives for the preparation of the Bellbird Park Landscape Plan:

Purpose

- Develop a landscape plan that guides a sustainable, high quality, well utilised and valued future for Bellbird Park.
- The landscape plan will consider the existing pressures on the Shire including population growth, new recreation trends, climate change, increasing community and user groups' expectations and the need for prioritisation of Council funds.
- The document will reflect current thinking with regards to urban design principles, environmental sustainability, universal access and community participation.
- The landscape plan will align with Council's strategic objectives, particularly in relation to fostering vibrant, healthy and inclusive communities and protecting and sustainably managing Baw Baw's environment.

Project Objectives

- To articulate the vision and values for Bellbird Park including its social, recreational, landscape and environmental significance to the community.
- Summarise the issues and future opportunities for Bellbird Park.
- Provide recommendations for the integration of natural environments and infrastructure assets and the respective use by the community.
- To obtain broad support from Council, the community and other key stakeholders.

3 Introduction

3.1 Context

Baw Baw Shire is located approximately 100 kilometres east of Melbourne in the heart of West Gippsland.

The Shire has an area of 4,027 square kilometres bounded by the Great Dividing Range to the north and the Strzelecki Ranges to the south. The 'middle' part of the shire is more densely populated, particularly in areas close to the Princes Highway and the Gippsland railway line, but still retains its rural environment.

The residential population of Baw Baw Shire as estimated by the ABS in 2018 was 52,015. The municipality is experiencing rapid residential growth with a 2.62 per cent annual growth rate between 2011 and 2016, or an increase of 5,615 people.

The 'Victoria in Future 2019' rates Baw Baw Shire as the fourth fastest growing regional area in Victoria. Population modelling has predicted the shire will continue growing to reach 75,820 by 2036.

Drouin is the second largest town in the Shire with an estimated population in 2018 of 13,724. Between the 2011 and 2016 Census, the population of Drouin increased by 27%. Drouin has been identified in Plan Melbourne as a peri-urban town with potential to attract housing and population growth out of Melbourne.

The Baw Baw Shire faces the challenge of managing population growth and also increasing expectations of the Shire's population, especially those who have migrated from Melbourne, as well as a considerable number of commuter families.

Baw Baw Shire Council currently manages or maintains approximately 407 hectares of passive, active and linear public open spaces (in addition to approximately 160 hectares of bushland reserves). The Warragul and Drouin Precinct Structure Plans identify a further 115 hectares of new parks, sports fields, bike trails and walking paths.

The Bellbird Park Landscape Plan reflects Council's and the community's vision to achieve the best possible outcomes to balance the recreational, social and environmental values of the reserve. The landscape plan provides direction for the use and development of the reserve into the future.

3.2 Bellbird Park

The Bellbird Park Recreation Precinct is a significant sport, recreation and environmental reserve located in the Drouin township. The Park consists of two distinct sections separated by Settlement Road.

The eastern section of the park is approximately seven (7) hectares in size and primarily consists of two soccer fields, a synthetic hockey field, two multi-use fields which can be used as two (2) rectangular fields or an oval, car parking and associated buildings. Significant vegetation runs along the Settlement Road corridor on the western boundary of this section, with a large swampy woodland reserve to the north of the soccer fields (protected by a Heritage Overlay) and a smaller area of native vegetation between the two soccer fields. Blackwood Court and Forrest St Reserves also abut Bellbird Park on the north eastern side of the reserve.

Formal user groups of the eastern section include the West Gippsland Hockey Association, Aztecs Hockey Club, Drouin's Hockey Club, Gulls Hockey Club,

Warriors Hockey Club, Gippsland Bulls Hockey Club, Drouin Dragons Soccer Club and Drouin Cricket Club.

The western section of the park is approximately sixteen (16) hectares in size and consists of an oval with walking track around the perimeter, indoor stadium, carparking, drainage channels and a wetland, open space, telecommunications tower and a designated 'dog off-leash' area. Significant indigenous canopy trees run along the northern boundary with Shillinglaw Road, to the north and west of the stadium and also includes a fern gully area on the southern section of the wetland.

Key user groups of the western section include Drouin Cricket Club, Drouin Junior Football Club and Auskick, Victorian YMCA Community Programming, Baw Baw Squash Club, Warragul and District Amateur Basketball Association, Gippsland Umpires Association, Keenagers Table Tennis, All Ability Netball, West Gippsland Volleyball Association and Drouin Devils Basketball Club.

The park is also used by schools, walkers with or without dogs and the general community as an important passive open space area.

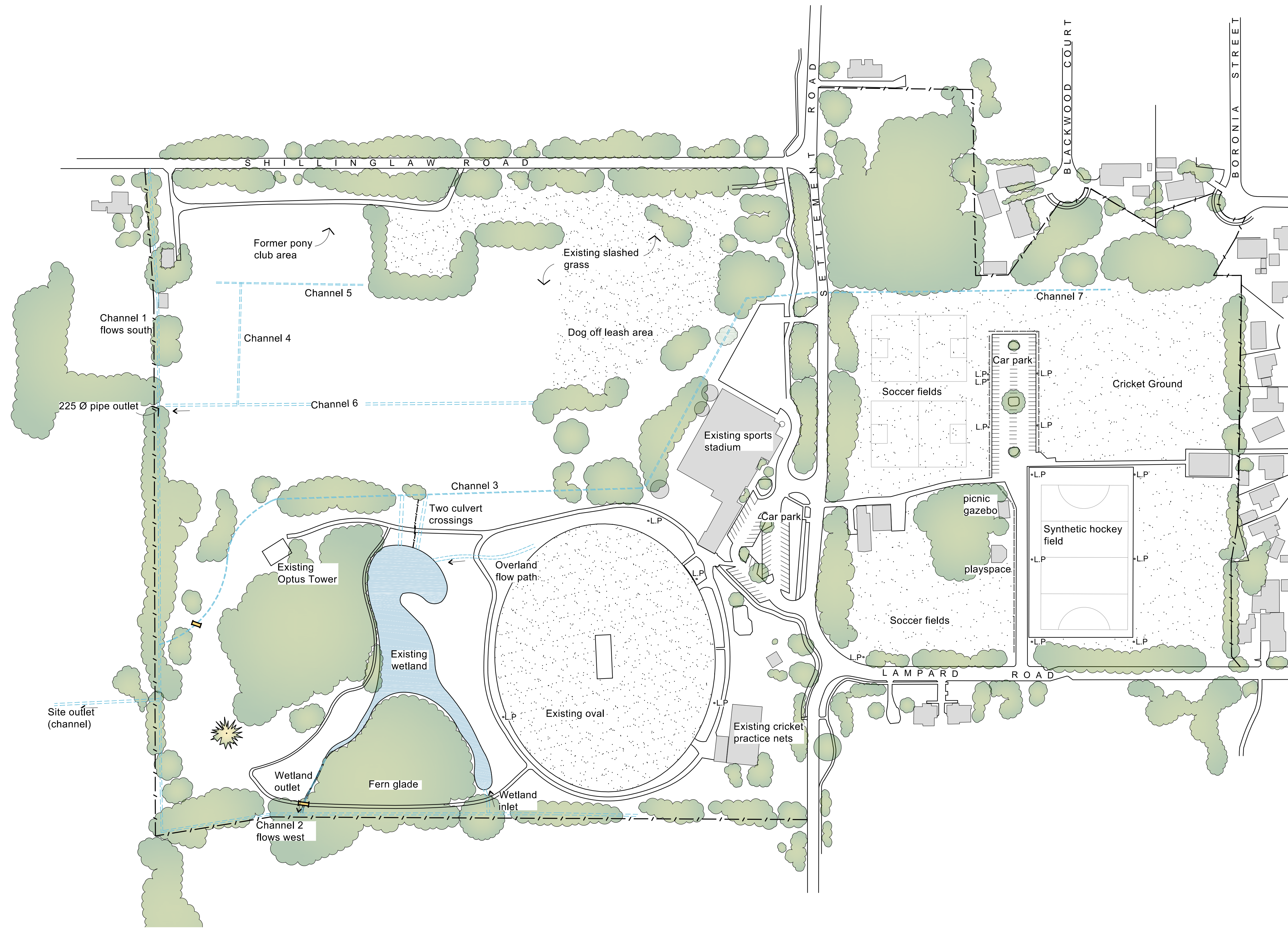
The Friends of Drouin Trees (a sub-committee of The Committee for Drouin) have completed assessments of significant trees on public land in Drouin. These assessments were approved by Council for inclusion on the Baw Baw Significant Tree Register, including eight citations for the Bellbird Park Precinct.

Bellbird Park is owned by Baw Baw Shire Council and is managed by two Council appointed Committees of Management. The land is zoned Public Park and Recreation Zone.

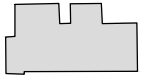

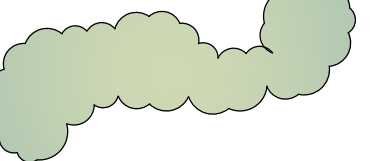
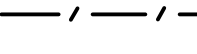



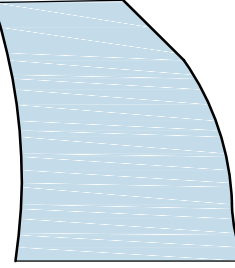

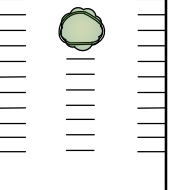
Residential development abuts the reserve and therefore any development of Bellbird Park Precinct should consider the impact on the amenity of the local community.



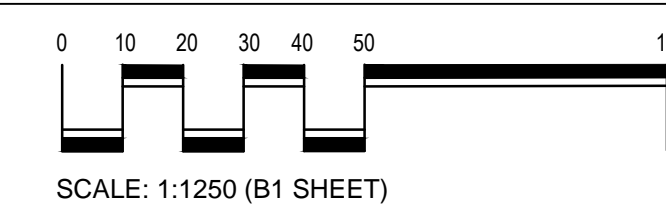
Bellbird Park sports stadium



LEGEND

-  EXISTING BUILDING/ STRUCTURE AS NOTED
-  EXISTING MOWN/SLASHED GRASSED AREA
-  EXISTING VEGETATION (PREDOMINANTLY INDIGENOUS AND NATIVE TREES)
-  EXISTING FENCELINE
-  EXISTING DRAINAGE CHANNEL
- EXISTING LIGHT POLE
-  EXISTING BRIDGE
-  EXISTING CONCRETE / GRAVEL PATH
-  EXISTING WETLAND
-  EXISTING GROUP OF PHRAGMITES
-  EXISTING CAR PARK

**EXISTING CONDITIONS PLAN
 BELLBIRD PARK LANDSCAPE PLAN
 BAW BAW SHIRE COUNCIL**



Amendments:
 16/01/2020 Rev A - Amendments to existing paths based on council's comments

Print Issue:
 08/01/2020 Emailed to G.McBain
 16/01/2020 Rev A - Emailed to G.McBain

**Title: EXISTING CONDITIONS PLAN,
 BELLBIRD PARK LANDSCAPE PLAN**

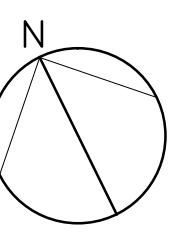
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4 Process

The table below outlines the actions undertaken to inform the preparation of the Bellbird Park

November 2019	<p>Appointment of Consultant</p> <p>Baw Baw Shire Council appointed Michael Smith and Associates (MSA) in conjunction with Storm Consulting to prepare the Landscape Plan for Bellbird Park</p>
December 2019	<p>Council Staff Briefing Meeting on site</p> <p>Council's Recreation Project Officer, six supporting Council officers and Friends of Drouin Trees provided briefing advice to Michael Smith and Associates and Storm Consulting on 11th December 2019 and undertook the site visit. The consultant team and Council's Recreation Project Officer reviewed the attributes, opportunities and constraints for the Park.</p>
January 2020	<p>Assessment of Merit</p> <p>MSA and Storm Consulting prepared the Assessment of Merit of Ideas.</p>
January 2020	<p>Preparation of the Draft Landscape Plan</p> <p>A Draft Landscape Plan was prepared addressing the findings from the site visit and the Assessment of Merit.</p>

May - June 2020	<p>Community Consultation</p> <p>Michael Smith and Associates prepared the draft plan which was made available for public comment through Council's 'Have Your Say' public consultation process.</p> <p>The 'Have Your Say' period ran for 4 weeks and opened on 20 May and closed on 17 June 2020.</p> <p>The 'Have Your Say' provided several ways for the community to provide feedback on the draft landscape plan. These included;</p> <ul style="list-style-type: none"> • An online survey via Survey Monkey, and • In writing, via post or email. Feedback could be received through completing a 'Have your say' form or any other written submission.
July 2020	<p>Revised Landscape Plan and Report</p> <p>The Draft Landscape Plan was revised following recent developments and feedback by Council and the community. The final Landscape Plan Report was prepared.</p> <p>Finalisation of the Master Plan</p> <p>Briefing of Council by Council's Recreation Project Officer on 15 July to provide an overview of the Final Landscape Plan. Based on the Final Landscape Plan an Opinion of Probable Costs and an Implementation Plan was prepared.</p>

5 Strategic Context

5.1 Baw Baw Shire Council Plan 2017-2021

The Baw Baw Shire Council Plan 2017-2021 identifies Council’s vision as “Happy, healthy people sharing prosperity and knowledge from living sustainably and in harmony with our rural identity, thriving villages, productive and inspiring landscapes.”

Council has identified the following strategic objectives:

Vibrant Communities	Quality community focused services, facilities and infrastructure to support a growing and ageing community. Managing Baw Baw’s growth and development. A vibrant, healthy and inclusive community. Thriving town centres, rural and remote communities.
Thriving Economy	Supporting innovative, thriving and sustainable local business and industry providing local employment.
Safe and Sustainable Environments	Protecting and sustainably managing Baw Baw’s environment. Efficient roads, transport and parking. Community safety and protection. Preparing for the impacts and consequences of climate change and extreme events.
Organisational Excellence	Be innovative, community focused and future ready. Positive leadership, advocacy and decision making around shared goals. Providing community benefit by effectively managing council’s resources and finances. Staff who are supported to ensure they are effective, safe and skilled in the workplace.

5.2 Baw Baw Shire Recreation Strategy 2017-2027

The Baw Baw Shire Recreation Strategy 2017-2027 has identified several guiding principles that drive the future direction of providing sport and recreation opportunities across the Shire. Some of the relevant principles to this project include;

- Encourage community participation in recreation for wide benefits to health, wellbeing and social cohesion
- Support a range of recreation opportunities, including through partnering with recreation service providers
- Maximise opportunities for broader community use of recreation reserves by incorporating passive leisure facilities.
- Minimise barriers and encourage participation in recreation for women, girls, cultures and people of all abilities
- Seek grants and partnerships in order to help fund facility developments

5.3 Public Open Space Strategy 2014

Council’s Public Open Space Strategy 2014 includes three key principles for planning public open space, including:

- To design and develop the public open space in a way that maximises community benefit from the place.

Specifically, “Parks must be designed to be fit for its intended purpose, to be functional and attractive and ultimately it must be designed for people.

General principles are that public open space must:

- Provide for a range of different community recreational needs and activities and multi-use spaces and contribute to a sense of place.
- Be designed and developed so that it can be used for its intended purpose, including facilities and infrastructure.

- Be sustainably and economically designed and managed with good orientation and respond to site characteristics.
- Be safe with good surveillance and provide opportunities for all community members in accordance with Universal Design Principles.
- Include appropriate facilities and infrastructure.
- Take account of and appropriately respond to cultural heritage values.
- Respond to biodiversity conservation values and needs providing habitat and encouragement of native flora and fauna.

the area to the north and west of the existing oval. Plan to detail suitable locations and designs for walking tracks, revegetation works and other open space.”

A copy of the masterplan for Bellbird Park as part of the Drouin Recreation Plan Review is included in the Appendix.

5.4 Environmental Sustainability Policy

Council’s Environmental Sustainability Policy contains the following vision statement “to be one of the most environmentally sustainable Shire’s in Victoria.”

5.5 Environmental Sustainability Strategy 2018-2022

The Environmental Sustainability Strategy 2018-2022 contains three key pillars, including the natural environment. “The natural environment commitments and actions identified in this Strategy’s Action Plan aim to maintain and improve the condition of our environmental assets, including our bushland and wetland reserves, flora and fauna habitats and significant trees as well as educating and encouraging the community to connect with and protect the natural environment.”

5.6 Drouin Recreation Plan Review – 2019 review

The Drouin Recreation Plan Review 2019 provides a clear direction for the provision of sport and recreation facilities within Bellbird Park and was adopted by Council on 26 June 2019.

The Drouin Recreation Plan Review 2019 has identified thirty-two (32) recommendations for Bellbird Park, including “Prepare a landscape plan for

6 Landscape Plan Recommendations Summary

Below is the summary of the Bellbird Park Landscape Plan's recommendations for each of the three themes, which are expanded on in Chapter 7.

Infrastructure

1. Establish well defined walking tracks, some with boardwalks.
2. Provide boardwalks to the south west section of the park which is frequently inundated with stormwater.
3. Provide interpretive and direction/way finding signage at the interface to boundaries and within the path networks.
4. Dog off-leash park.
5. Consider future use of the former pony club site- options include revegetation, a possible location for an environment visitor centre, a location for a potential community hub, or allowing future sporting infrastructure to accommodate growth.
6. Consolidate public toilet facilities and provide signage to the existing public toilet facility located externally to the sports stadium.
7. Provide two bird viewing platforms to the existing wetland.
8. Provide a new multi-use pavilion and social rooms at the existing car park site with new car parking constructed to the east of the synthetic pitch as a replacement.
9. Construct a sealed car park.

Recreation

Refer to Drouin Recreation Plan Review 2019 located in the Landscape Plan Report Appendix for all recommendations

Environment and Drainage

10. Gradual/incremental eradication of weeds and revegetation with indigenous grasses, tufting plants and shrubs.
11. Clear the existing drainage channels in the western half of the park, create an ephemeral wetland.
12. Work with Gippsland Water and Melbourne Water to manage park drainage outflow from the existing outlet.
13. Plant additional indigenous trees and large shrubs, linked to the removal of Salix trees (Willows). New plantings or revegetation areas should consider separation by maintained grassland.
14. Plant indigenous shrubs and groundcovers to the fern glade and the Blackwood wetland.
15. Plant tall growing Gums and Blackwood trees to the north side of the fern glade to provide shade.
16. Group of Phragmites retained as bird habitat. Monitor and deter spread.
17. Demolish the former pony club's toilet block and shed.
18. Create two habitat islands within the wetland.

7 Landscape Plan

Recommendations

The following discussion underpins the recommendations derived from the analysis and the assessment of merit of ideas raised during the community consultation and engagement process.

7.1 Infrastructure

Current situation and key issues

- Division by Settlement Road running through the middle of the park, separating the park into two distinct sections.
- Access from the surrounding residential area to the eastern half is good, along Lampard Road and other streets that terminate at the 'north end of the eastern half' i.e. Boronia Street, Forrest Street, Blackwood Court and access to Adam Court.
- Due to the wet ground conditions, there are only limited walking tracks within the passive recreation area to the western half of the park.
- There is scope for expansion of facilities i.e. potential community hub location and a dog park to the northern section.
- There is a distinct lack of seating to the few existing sections of walking tracks.
- The existing large shelter to the south side of the stadium provides spectator protection from the elements both sun and rain.
- Identified by the community as a potential site for an environment visitor centre. Possible link to a community hub. Council is currently (2019-2020) considering other potential sites within Drouin for the community hub.
- Flat topography, difficult orientation, few landmarks. The Telstra tower and sports stadium are points of reference for the first time visitor.

- Unauthorised use of some areas of the park by people, bikes and dogs off-leash, is having a negative impact on flora and fauna.
- There is an Environment Protection Authority (EPA) endorsed buffer for the Drouin Wastewater Treatment Plant which extends over the entire western section of Bellbird Park. Separation distances are required to minimise the impacts on sensitive land uses arising from unintended odour emissions. Any new sensitive land uses including a visitor centre, community hub and informal outdoor recreation will need to consider this planning constraint.

Recommendations

- **Establish well defined walking tracks, some with boardwalks**

Improve the usability, presentation and function of Bellbird Park, by establishing well defined earthen/gravel walking tracks of 2.5m width with interpretive and way finding signage and rest areas with seating. Tracks need to be raised with appropriate foundations and drainage to allow year round access. Some of the boardwalk tracks should allow for light weight utility maintenance vehicles and be 3m wide. Council could consider the use of local artwork and sculptures as part of these projects.

The park is devoid of walking paths mainly due to wet ground conditions and weed growth particularly to the western half. The establishment of a perimeter walking circuit would allow greater usage, as would paths that link key features and activity zones.



Large Eucalyptus trees near Blackwood Court

- **Provide boardwalks to the south west section of the park.**

As much of the western edge of the park is regularly inundated with stormwater after high rainfall events, boardwalks are the best solution for pedestrian and vehicle access.

Provide boardwalks that cater for pedestrians for the main part to the south west section of the park which is a natural flood zone. All boardwalks need to take vehicle loading of a one tonne utility for maintenance access.

Boardwalks need to have signage and seating along their journey.



Current condition of southwest section of the park

- **Interpretive and way-finding signage**

Interpretive and way-finding signage is required at all key access points and points of interest, ideally with a map of the park and 'you are here' location.

The park is devoid of wayfinding and interpretive signage except for basic information on the 2013 upgrade of the oval. Visitors nowadays expect a quality theme based experience in learning about indigenous cultural history, settlement patterns and the environment. Thematic based signage can be by graphic information on site plus QR Apps and obtained previsit online. Council could consider the use of local artwork and sculptures as part of these projects.

There are several access points into the park to either side of Settlement Road, hence the need for nine 'you are here' signs at entry points and another couple along the more distant tracks.

- **Dog off-leash area and dog park**

Council has converted the existing informal dog off-leash area into a formal dog park with appropriate amenity and facilities this financial year (2019/2020). The dog park is located within the area of slashed grass to the northwest of the indoor sports stadium. The dog off-leash area includes perimeter fencing, shade trees, seating/picnic tables, dog litter bins, drinking fountains and signage.

Dogs play such an important companion factor in many people's lives and dogs themselves are social animals. The awareness of wellbeing for both humans and dogs is well acknowledged and nowadays dog access and particularly off-leash access is considered a vital part of socialisation and wellbeing for both dogs and their owners. As the park is recognised for its high level of biodiversity values (particularly birdlife), the dog off-leash area is adequately fenced.



Existing dog off-lead area and a dog park

- **Options for the former pony club site**

A large area of open space currently exists at the former pony club site. A number of options for either revegetation or development exist, some of these include:

- **A proposed environment visitor centre**

There is a community desire to establish a proposed environment visitor centre/community hub which could be run by volunteers west of the proposed dog park (at the area of current soil dumping).

The Friends of Drouin Trees suggested an environment visitor centre to be located in the current soil dumping site. The visitor centre at Blackburn Lake (a suburb of Melbourne) was used as a precedent to show how a visitor centre can be used by visitors, educational programs, school groups, bush walking groups and tourism operators by conducting educational and cultural activities.

As Bellbird Park is used by schools, walkers with or without dogs and the general community, it is important to encourage community participation in recreation for wide benefits to health, wellbeing and social cohesion.

- **Location for a potential community hub**

The need for a community hub has been identified for Drouin and council has allocated funds this financial year (2019/2020) to commence designs and feasibility for this. Council is considering Bellbird Park as one of the possible locations in Drouin for a community hub.

- **Cater for future growth of sporting fields/ facilities if required.**

- **Remove old public toilet facility**

Remove the disused former pony club's toilets and sheds.

Council advised at the on-site briefing meeting of the consultant team that public toilets are available at the sports stadium. Council's policy is to consolidate public toilet facilities and provide signage to the facilities.



Existing disused former pony club's toilets and sheds to be removed

- **Provide two bird viewing platforms to the existing wetland**

Provide two bird viewing platforms to the existing wetland. One to the north side and the other to the west side of the existing water body.



Current conditions of the north and west sides of the existing wetland

A recent bird survey at Bellbird Park recorded 51 different species of birds in less than an hour. The park offers a range of habitat for bird life from Eucalyptus and Blackwood tree canopies to large shrubs and groundcovers, including wetland zones.

Bird viewing platforms and seats can offer the local community and visitors superb opportunities to view and photograph the birds with little disturbance to their natural behaviour.

Avoid a fully enclosed bird hide. The bird viewing platforms should be facing south, slightly elevated, very short sides, no roof and each one with a small bench seat on the decking.

7.2 Recreation

- Refer to Drouin Recreation Plan Review 2019, located in the Appendix.

7.3 Environment and Drainage

Current Situation and Key Issues

- On the west and north sides of the stadium there is an area of remnant Messmates and Mountain Grey Gums about 25 metres tall, with Blackwoods, Gahnias and natives underneath surrounding the creek which flows through. Some of the large trees have many habitat hollows which make this area into a very valuable part of the Bellbird Park wildlife corridor. This needs to be considered in any expansion of the sports stadium and associated car parking.
- Many bird species identified (up to 51 different species in an hour) indicates tree canopy cover and resource in a rapidly developing residential area.
- The wetland is centrally located within the western half of the park. The area surrounding the wetland is a scenic and landscape feature of the park with high quality fauna and flora.
- The fern glade and Blackwood woodland to the south boundary is a distinctive feature.
- Two areas of mainly indigenous tree canopies, although seriously compromised by environmental woody weeds, exotic grasses and phorbes.
- Weed infestation is substantial. Particularly exotic grasses and weeds preferring wet conditions.
- Further consideration needs to be given to Council's management of the approximate one (1) hectare woodland that has some Arum Lilies and Sweet Pittosporums east of the Settlement Road and north to the soccer fields, in particular whether to allow public access or to fence off the area.
- Tree succession needs to be in place for particularly replacement of mature Swamp Gums, Strzelecki Gums, Messmate Blackwood and Manna Gums.
- Control the clump of Phragmites to the southwest edge of the wetland vegetation. It is home to the Cisticola bird, but it can become invasive.
- Due to the flat terrain, drainage is a major issue. Drainage water is largely contained within the site. Only one outflow to the west, which may be choking outflow in major rainfall events. A second outlet in the western corner of the site has been compromised with the construction of the waste water facility.
- Potential increase in stormwater inflow from the proposed 103 lot subdivision to the north side of Shillinglaw Road. Subdivisions now have to handle stormwater retention and management within the subdivision, however there will be overflow to Bellbird Park. Potential to partner with the developer and implement works within the park to detain stormwater and provide a high quality natural ephemeral marsh/wetland and floodway which could detain flows and provide habitat for water species.
- Siltation and clogging of the drainage channels over time changes the regime of filtering vegetation species and limits the capacity of channels to cope with significant rainfall events.

Recommendations

- **Gradual/incremental revegetation**

Continue to enhance the habitat values through gradual/incremental revegetation through clearance, smothering and revegetation with indigenous grasses, phorbes, tufting plants and shrubs. Use of wood mulch and in parts enviro-matting. Provide nest boxes to some tree groups.

For the best management system in the long term of the existing exotic grass and broad-leaved weeds, it is recommended to spray, lay a thick mulch and then dense planting of grasses, phorbes and shrubs.

Exotic grasses and broad-leaved weeds are a problem in the park. They out-compete indigenous grasses and phorbes and they don't provide the ecological biodiversity of an indigenous regime. Intensive incremental treatment of exotic vegetation with revegetation is work that can be shared by council and volunteer friends group.



Existing exotic grasses and broad-leaved weeds to be sprayed and the area incrementally revegetated with indigenous species

- **Plant additional trees and large shrubs**

Plant additional trees and large shrubs to sections of the park to create tree and canopy succession. Linked with removal of woody weeds of Pittosporum, Ligustrum, Nicotiana, Salix and Populus. New plantings or revegetation areas should consider separation by maintained grassland.



Current condition of the west side of the existing wetland

- **Plant indigenous shrubs and groundcovers to the fern glade**

Encourage planting of indigenous shrubs and groundcovers such as *Coprosma quadrifida*, *Goodenia ovata* and *Calochlaena dubia* already regenerating within the fern glade and Blackwood.

It is noted that *Coprosma quadrifida*, *Calochlaena dubia* and *Melaleuca ericifolia* are starting to regenerate within the fern glade.

It is noted that Gallium, Veldt grass, Dandelion, Arum Lily, Scarlet Pimpernel are starting to spread over the upper banks of the fern glade.



Existing fern glade and Blackwood trees

- **Plant tall growing trees to north side of fern glade**

Plant tall growing Eucalypts and Blackwoods to the north side of the fern glade and the Blackwood woodland to provide shade to the *Cyathea* tree ferns, ground ferns and small shrubs.

The fern glade is a key feature and point of difference within the park. It is the last remaining fern gully within the town and a very high value habitat area. Pittosporums and Ligustrums recently poisoned, but removal of their canopy has allowed significant light penetration to the *Cyathea* tree ferns.

Planting tall Eucalyptus to the north to ultimately provide shade, may need some immediate shrub planting i.e. *Melaleuca squarrosa*, *Bursaria spinosa* and *Dodonaea spp.*



North side of the fern glade

- **Collect habitat logs and fallen branches**

Continue with the collection of habitat logs and fallen branches, but confine the deposition to the bush canopy edges rather than to areas around single or small groups of specimen trees.

For local fauna and flora, the habitat logs and fallen branches have habitat values in providing complex structures and stable microclimates for nesting, shelter, feeding and food storage. Many birds will take advantage of the increased easy access to the insects, rodents and reptiles as well as shelter and refuge.



Some habitat logs near the playground in between the north and south soccer fields

- **Drainage improvements.**

Improve the usability of much of the area to the western half through clearance of the existing drainage channels by re-profiling and silt clearance of channels then revegetation. Two new channels are proposed to facilitate drainage of the former pony club area to flow into Channel № 3. The flows from the Channel № 3 are to be directed to a proposed ephemeral wetland to the southwest section of the park.

Construct a new crossing beneath the existing access track to allow Channel № 5 to drain out to Channel № 1. This will allow for improved drainage of the former pony club area.

A drainage channel to the south and the west boundary join without an outflow beyond the site. Water cannot drain further west as the water treatment plant has probably covered the channels that would have previously drained the park through the private property to the west.



Existing channel in the southwest corner of the park

- **Manage park drainage outflow**

The site has a single drainage outlet which flows to King Parrot Creek. The drainage outlet size and location is hampering effective drainage of the site. Digital mapping and contour evidence suggests that the site once had two outlets with the second outlet an extension of Channel № 2 flowing west to King Parrot Creek. The Gippsland Water treatment plant development has likely impeded the path of the second outlet and it is no longer allowing flow to pass through it. The elimination of the second outlet is forcing all flows from the site to the small current site drainage outlet. The current site drainage channels and single outlet is not allowing for suitable drainage of the site which is leading to high flows through the existing outlet and inundated land and waterlogged areas within the park.

Further hydraulic assessment should be undertaken of the site's stormwater infrastructure to determine if the existing outlet is impacting drainage of the site and if the second outlet is reinstated. The feasibility of an ephemeral wetland should also be undertaken in conjunction with the hydraulic assessment to determine suitability.

Work with Gippsland Water and Melbourne Water to manage outflow at the site to provide suitable site drainage.

7.4 Recommended Plant List

The following tree, shrub and groundcover species are taken from Baw Baw Shire Council's indigenous plant list.

The species listed are generally resilient to damp and wet conditions.

Species	Common Name
-TALL TREES	
<i>Acacia dealbata</i>	Silver Wattle
<i>Acacia mearnsii</i>	Black Wattle
<i>Acacia melanoxylon</i>	Blackwood
<i>Eucalyptus cypellocarpa</i>	Mountain Grey Gum
<i>Eucalyptus globulus subsp.bicostata</i>	Southern Blue Gum
<i>Eucalyptus obliqua</i>	Messmate
<i>Eucalyptus ovata</i>	Swamp Gum
<i>Eucalyptus radiata</i>	Narrow-leaf Peppermint
<i>Eucalyptus strzeleckii</i>	Strzelecki Gum
<i>Eucalyptus viminalis</i>	Manna Gum
<i>Leptospermum lanigerum</i>	Woolly Tea-tree
<i>Melaleuca ericifolia</i>	Swamp Paperbark
<i>Melaleuca squarrosa</i>	Scented Paperbark
-TALL SHRUBS	
<i>Acacia mucronata</i>	Narrow-leaf Wattle
<i>Acacia oxycedrus</i>	Spike Wattle
<i>Acacia verticilata</i>	Prickly Moses
<i>Bursaria spinosa</i>	Sweet Bursaria
<i>Cassinia aculeata</i>	Common Cassinia
<i>Cassinia longifolia</i>	Shiny Cassinia
<i>Coprosma quadrifida</i>	Prickly Currant-bush
<i>Kunzea ericoides</i>	Burgan
<i>Olearia lirata</i>	Snow Daisy-bush

Species	Common Name
<i>Ozothamnus ferrugineus</i>	Tree Everlasting
<i>Pomaderris aspera</i>	Hazel Pomaderris
<i>Solanum aviculare</i>	Kangaroo Apple

-LOW SHRUBS	
<i>Goodenia ovata</i>	Hop Goodenia
<i>Leptospermum continentale</i>	Prickly Tea-tree

-FERNS	
<i>Blechnum nudum</i>	Fishbone Water-fern
<i>Blechnum wattsii</i>	Hard Water-fern
<i>Calochlaena dubia</i>	Common Ground-fern
<i>Cyathea australis</i>	Rough Tree-fern
<i>Dicksonia antarctica</i>	Soft Tree-fern
<i>Gleichenia microphylla</i>	Scrambling Coral-fern

-GRASSES/SEDGES/RUSHES	
<i>Gahnia radula</i>	Thatch Saw-sedge
<i>Gahnia sieberiana</i>	Red-fruit Saw-sedge
<i>Isolepis inundata</i>	Swamp Club-sedge
<i>Lomandra filiformis</i>	Wattle Mat-rush
<i>Lomandra longifolia</i>	Spiny-headed Mat-rush
<i>Microlaena stipoides</i>	Weeping Grass
<i>Poa labillardierei</i>	Common Tussock-grass
<i>Poa sieberiana</i>	Grey Tussock-grass
<i>Poa ensiformis</i>	Sword Tussock-grass

Recommended Plant List (continued)

Species	Common Name
-GROUNDCOVERS	
<i>Dianella tasmanica</i>	Tasman Flax-lily
<i>Hydrocotyle hirta</i>	Hairy Pennywort
<i>Dianella tasmanica</i>	Tasman Flax-lily
<i>Hydrocotyle hirta</i>	Hairy Pennywort
-CREEPERS/VINES	
<i>Clematis aristata</i>	Mountain Clematis
<i>Comesperma volubile</i>	Love Creeper
<i>Glycine clandestina</i>	Twining Glycine
<i>Rubus parvifolius</i>	Native Raspberry

8 Key Directions Plan

KEY DIRECTIONS

INFRASTRUCTURE

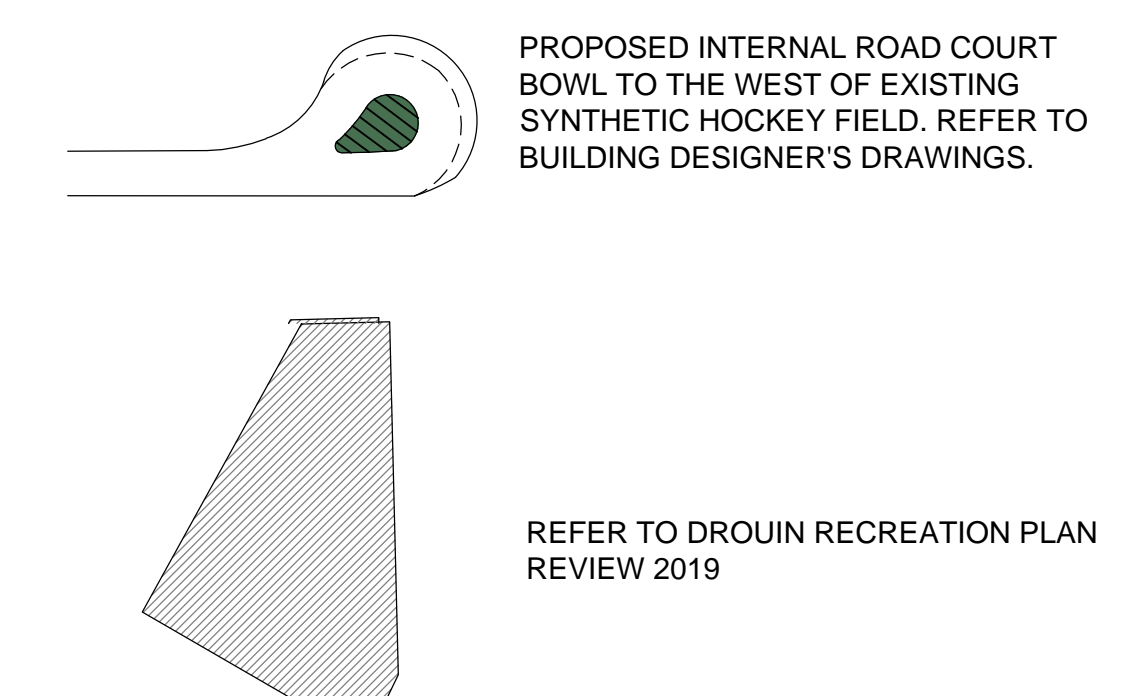
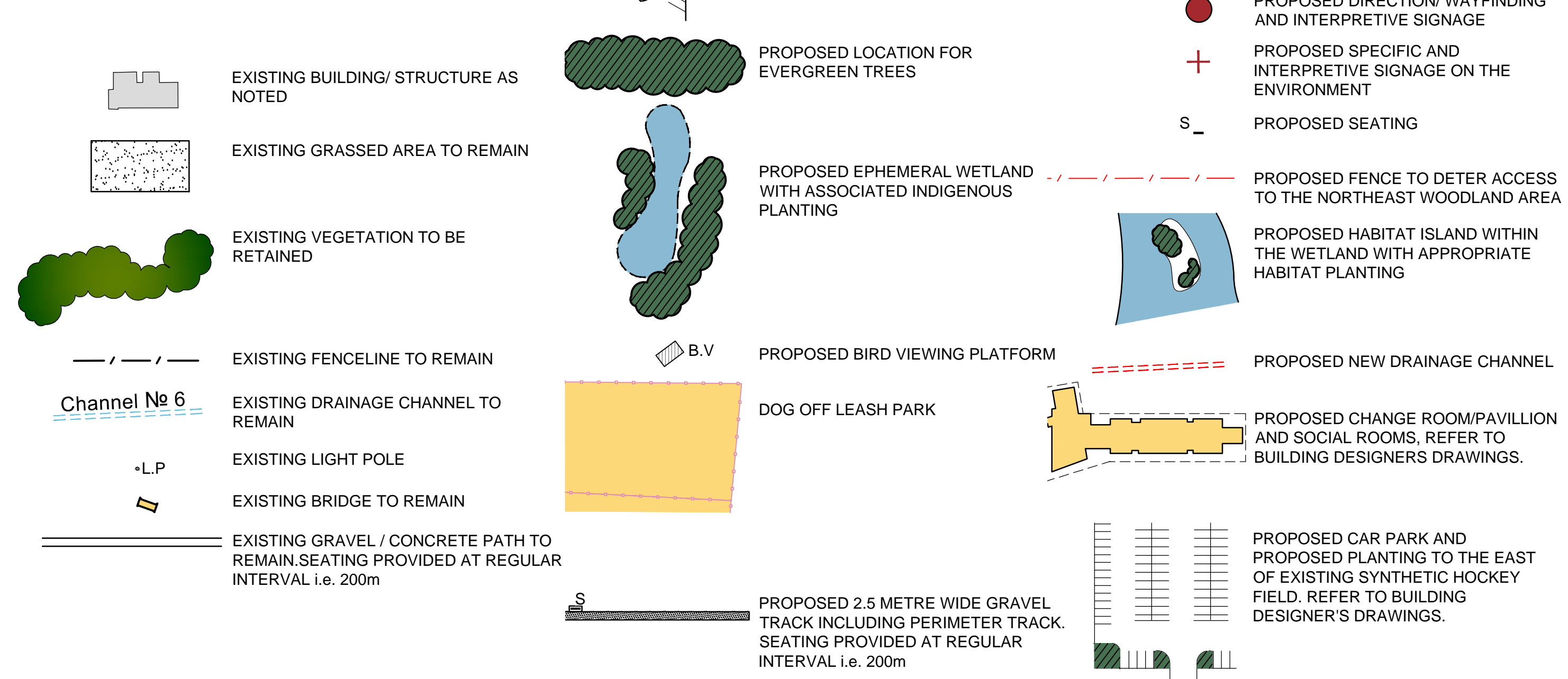
- ① Establish well defined walking tracks, some with boardwalks.
- ② Provide boardwalks to the south west section of the park which is frequently inundated with stormwater.
- ③ Provide interpretive and direction/way-finding signage at the interface to boundaries and within the path networks.
- ④ Dog off leash park.
- ⑤ Consider future use of the former pony club site - options include revegetation, a possible location for an environment visitor centre, a location for a potential community hub or allowing future sporting infrastructure to accommodate growth.
- ⑥ Consolidate public toilet facilities and provide signage to the existing public toilet facility located externally to the sports stadium.
- ⑦ Provide two bird viewing platforms to the existing wetland.
- ⑧ Provide a new multi-use pavilion and social rooms at the existing car park site with new car parking constructed to the east of the synthetic pitch as a replacement.
- ⑨ Construct a sealed car park.

ENVIRONMENT AND DRAINAGE

- ⑩ Gradual/incremental eradication of weeds and revegetation with indigenous grasses, tufting plants and shrubs.
- ⑪ Clear the existing drainage channels in the western half of the park, create an ephemeral wetland.
- ⑫ Work with Gippsland Water & Melbourne Water to manage park drainage outflow from the existing outlet.
- ⑬ Plant additional indigenous trees and large shrubs, linked with removal of Salix trees (Willows). New plantings or revegetation areas should consider separation by maintained grassland.
- ⑭ Plant indigenous shrubs and groundcovers to the fern glade and the Blackwood woodland.
- ⑮ Plant tall growing Gums and Blackwoods to the north side of the fern glade to provide shade.
- ⑯ Group of Phragmites retained as bird habitat. Monitor and deter spread.
- ⑰ Demolish the former pony club's toilet block and shed.
- ⑱ Create two habitat islands within the wetland.



LEGEND



Amendments:
 16.01.2020 Rev A - Amendments based on council's comments and Building Designers's drawings
 22.01.2020 Rev B - Amendments to tracks and some notes based on council's comments
 07.07.2020 Rev C Amendments to tracks, ledged and notes
 07.07.2020 Rev D Amendments to notes based on Council feedback
 31.08.2020 Rev E Notes on playspace and gazebo
 04.09.2020 Rev F Building and tree colours amended and 'Draft' removed

Print Issue:
 08.01.2020 Emailed to G.McBain
 16.01.2020 Rev A - Emailed to G.McBain
 22.01.2020 Rev B - Emailed to G.McBain
 07.07.2020 Rev C - Emailed to S Paynter
 22.07.2020 Rev D - Emailed to S Paynter
 31.08.2020 Rev E - Emailed to S Paynter
 04.09.2020 Rev F - Emailed to S. Paynter

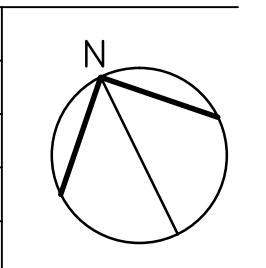
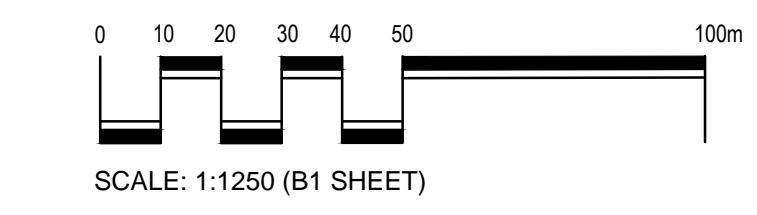
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In association with:
 Storm Consulting

L1 - KEY DIRECTIONS PLAN BELLBIRD PARK LANDSCAPE PLAN BAW BAW SHIRE COUNCIL

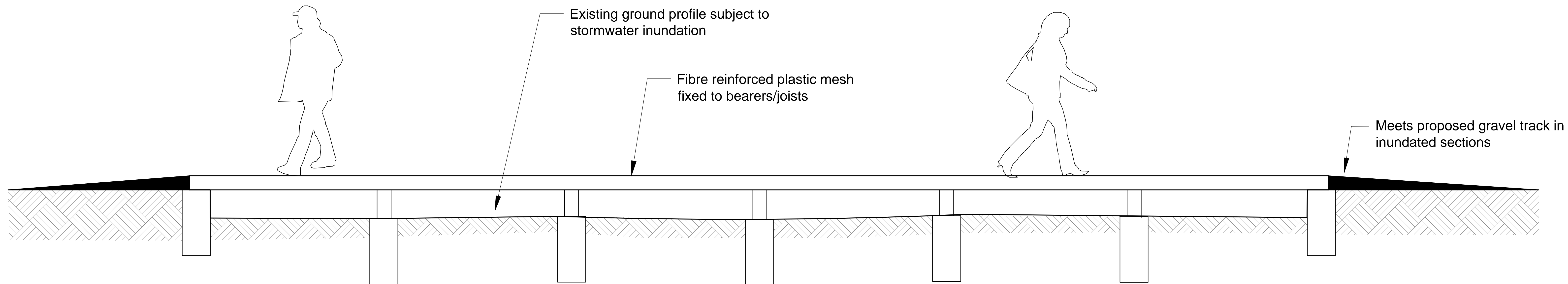


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Date: 04/09/2020
Project No.: 19-60
Cad File:
Drawing No.: Sheet 1 of 2

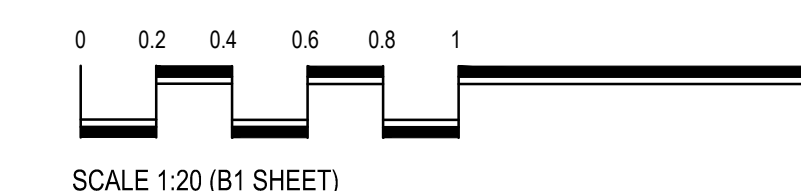
Title: L1 - FINAL KEY DIRECTIONS PLAN, BELLBIRD PARK LANDSCAPE PLAN
Client: BAW BAW SHIRE COUNCIL



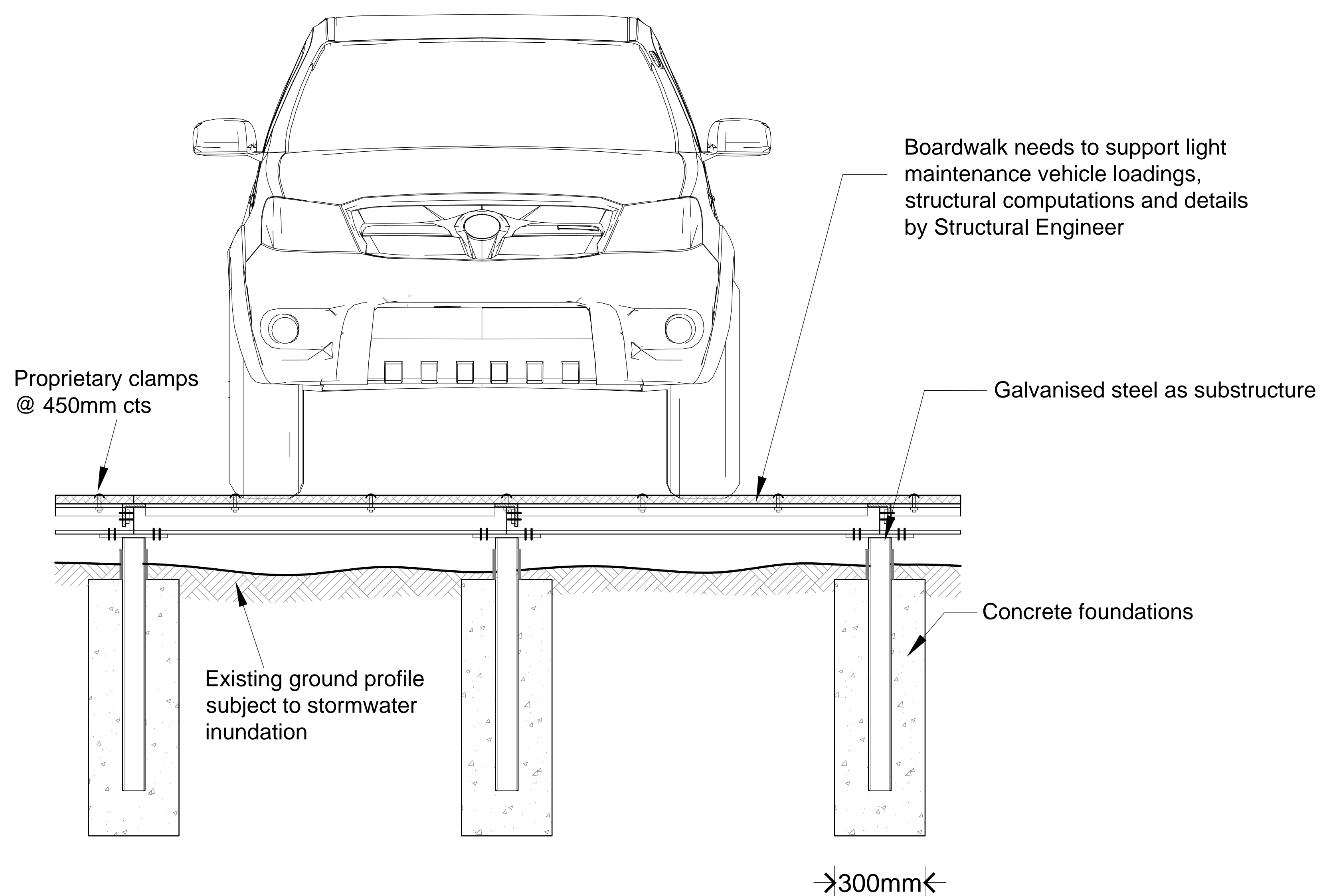
Proposed viewing platform , Bellbird Park Drouin



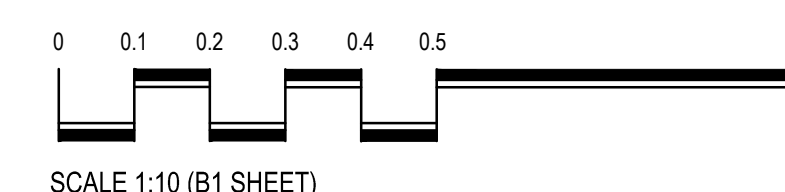
TYPICAL BOARDWALK -LONGITUDINAL SECTION



width 3000mm



SIDE ELEVATION CROSS-SECTION



**L2 CROSS-SECTIONS OF PROPOSED BOARDWALK,
BELLBIRD PARK LANDSCAPE PLAN
BAW BAW SHIRE COUNCIL**

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In association with:
Storm Consulting

Amendments:
16.01.2020 Rev A - Amendments to notes

Print Issue:
08.01.2020 Emailed to G.McBain
16.01.2020 Rev A - Emailed to G.McBain

Title: L2 - CROSS-SECTIONS OF PROPOSED BOARDWALK, BELLBIRD PARK LANDSCAPE PLAN
Client: BAW BAW SHIRE COUNCIL

Drawn: JZ
Date: 16/01/2020
Project No.: 19-60
Cad File:
Drawing No.: Sheet 2 of 2

9 Implementation Plan and Opinion of Probable Costs

**BELLBIRD PARK MASTER PLAN
BAW BAW SHIRE SHIRE COUNCIL**

IMPLEMENTATION PLAN AND OPINION OF PROBABLE COSTS

Based on plan (dated 06.07.2020)

DATE 06.07.2020

PRIORITIES: H=HIGH; M=MEDIUM; L=LOW

1. INFRASTRUCTURE				
ACTION	PRIORITY (H/M/L)	TIMEFRAME	OPINION OF PROBABLE COSTS (2020 COSTS)	COUNCIL NOTES
1. Establish well defined walking tracks, some with boardwalks.	H	1-4 years	\$140,000	Includes 6 seats approx. one every 200LM
2. Provide boardwalks to the south west section of the park which is frequently inundated with stormwater.	H	1-4 years	\$340,000	
3. Provide interpretive and direction/way finding signage at the interface to boundaries and within the path networks	H	1-4 years	\$120,000	
4. Dog off leash park	H	1-4 years	N/A	Complete
5. Consider future use of the former pony club site- options include revegetation, a possible location for an environment visitor centre, a location for a potential community hub, or allowing future sporting infrastructure to accommodate growth.	M	5-9 years	N/A	
6. Consolidate public toilet facilities and provide signage to the existing public toilet facility located externally to the sports stadium.	H	1-4 years	\$50,000	Internal modifications of existing
7a Provide bird viewing platform to the existing wetland.	H	1-4 years	\$15,000	
7b Provide second bird viewing platform to the existing wetland.	M	5-9 years	\$15,000	
8. Provide a new multi-use pavilion and social rooms at the existing car park site with new car parking constructed to the east of the synthetic pitch as a replacement.	H	1-4 years	\$2,634,656	Pavillion, Entrance Way, BBQ and Playground
9. Construct a sealed car park.	H	1-4 years	\$1,030,000	

2. ENVIRONMENT AND DRAINAGE

	ACTION	PRIORITY (H/M/L)	OPINION OF PROBABLE COSTS (2020 COSTS)	
10.	Gradual/incremental eradication of weeds and revegetation with indigenous grasses, tufting plants and shrubs.	M	\$50,000	
11.	Clear the existing drainage channels in the western half of the park, create an ephemeral wetland	L	\$150,000	
12.	Work with Gippsland Water and Melbourne Water to manage park drainage outflow from the existing outlet.	L	\$5,000	Council time only
13.	Plant additional indigenous trees and large shrubs, linked to the removal of Salix trees (Willows). New plantings or revegetation areas should consider separation by maintained grassland.	H-L	\$10,000	10K divided b/w priority cost
14.	Plant indigenous shrubs and groundcovers to the fern glade and the Blackwood wetland.	M	\$20,000	
15.	Plant tall growing Gums and Blackwood trees to the north side of the fern glade to provide shade.	M	\$5,000	
16.	Group of Phragmites retained as bird habitat. Monitor and deter spread.	M	\$8,000	
17.	Demolish the former pony club's toilet block and shed.	M	\$10,000	
18.	Create two habitat islands within the wetland	L	\$20,000	

TOTAL - HIGH PRIORITY ACTIONS (Excluding GST)	\$4,332,989	
TOTAL - MEDIUM PRIORITY ACTIONS (Excluding GST)	\$111,333	
TOTAL - LOW PRIORITY ACTIONS (Excluding GST)	\$178,333	
SUBTOTAL (Excluding GST)	\$4,622,656	
Add 10% Contingency Sum	\$462,266	
TOTAL (Excluding GST)	\$5,084,922	

10 References

'Request for Quote: Bellbird Park Landscape Plan' prepared by Baw Baw Shire Council

'Drouin Recreation Plan Review, 2019 Review' prepared by Baw Baw Shire Council

<https://www.bawbawshire.vic.gov.au/Resident-Information/Rubbish-and-Environment/Environment/Baw-Baw-Significant-Tree-Register> accessed on 2nd January 2020

11 Appendices

1. Bellbird Park Recreation Reserve Masterplan, from Drouin Recreation Plan Review 2019

Appendix 1

Bellbird Park Recreation Reserve Masterplan, 2019

Bellbird Park

1. New soccer field lights to match standard. Consider whether junior pitch can meet minimum senior size and place lights accordingly
2. Investigate current drainage issues at senior soccer pitch
3. Improve the surface profile of the 2 soccer pitches to improve natural drainage
4. Future expansion of carpark (between soccer and hockey) as required to cater for growth, including lighting
5. Retain multi-purpose fields (soccer, cricket, hockey) in natural grass and consider future lighting
6. New female friendly multi-use pavilion for users of eastern section- exact location to be determined and playground relocated if necessary
7. Implement traffic calming measures, including possible median strip and enhanced pedestrian crossing from the new pavilion to the fields
8. Ongoing maintenance of existing vegetation
9. Security lighting required between existing soccer and hockey pavilions and carpark
10. Replace vehicle access gate to hockey pavilion with removable bollard/s
11. New perimeter fencing for both soccer fields
12. New goal netting for behind junior soccer goals (to be club / CoM funded)
13. Drinking fountain near soccer changeroom
14. Upgrade oval lighting to training standard (with the capacity to upgrade to 100 lux in future)
15. Consider new safety lighting between the oval and carpark
16. Undertake detailed designs for a 2-court stadium expansion with consideration to increased storage and competition administration space
17. Upgrade oval player change rooms and amenities to provide 2 x unisex facilities and separate umpires space
18. Consider some outdoor fitness equipment - exact location to be determined
19. Investigate traffic calming and speed reduction options for whole precinct including the intersection of Settlement and Lampard Roads
20. Delineate existing gravel car parking to the north of the stadium to optimise car parking spaces. Long term, if a stadium expansion was to occur, a new carpark would be located to the north of the site
21. Tiered seating area for oval to be near main pavilion and include appropriate drainage
22. Additional bay on existing storage shed for other users
23. Investigate pedestrian crossing and signage on Settlement Road to safely link the western and eastern parts of Bellbird Park
24. Link missing footpaths
25. Upgrade paving along stadium and Andrew's Lounge to meet disabled access requirements
26. Additional bollards between undercover shelter and oval to prevent vehicle access
27. AFL goal netting for northern end of oval (to be club / CoM funded)
28. Investigate upgrading synthetic field lights to LED
29. Prepare a landscape plan for the area to the north and west of the existing oval. Plan to detail suitable locations and designs for walking tracks, revegetation works and other open space
30. Consider bollard lighting along Jamescott Drive Linear Reserve for improved safety between Bellbird Park and residential areas
31. Undertake tree replacement works in Forrest and Blackwood Court reserve
32. Premium dog off-leash area- install fencing, dog litter bin and bags, signage, agility equipment and drinking fountain



Drouin Recreation Plan Bellbird Park Recreation Reserve

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