

## BIBULMUN TRACK REALIGNMENT DESIGN AND IMPLEMENTATION PLAN

# INTERIM RECOMMENDATION REPORT

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## PROJECT OVERVIEW

The Shire of Serpentine Jarrahdale, recognising the potential to attract tourism and economic investment is currently working towards becoming a recognised trails destination. There are a number of projects currently underway including investigating the creation of a link between the internationally recognised Bibbulmun Track and Jarrahdale townsite.

The Bibbulmun Track is one of the world's great long-distance walk trails, stretching 1,000 kilometres from Kalamunda in the Perth hills to the historic town of Albany on the south coast. The Track passes through 22 National Parks and other reserves, offering a range of experiences from an epic eight-week adventure staying in the 49 campsites along the way, to day walks staying in comfort in one of the Southwest's rural towns. The Bibbulmun Track is walk only, with the Munda Bidli providing a similar long distance experience for cyclists.

Jarrahdale is the only town between Kalamunda and Dwellingup that is in close proximity to the Bibbulmun track, as such the opportunity has been identified to link the track into the Jarrahdale town centre. This link has potential to increase the economic benefit for the local community and provide a pickup / drop off location for trail users.

### Site description and location

The Bibbulmun Track currently lies approximately 20km as the crow flies east of Jarrahdale Town centre. The area investigated as part of this project is outlined in Figure 1 below. The vast majority of the project area is Jarrahdale State Forest, with Monadnocks Conservation Reserve in the east and Serpentine National Park located in the west. These parks and reserves are managed by the Department of Biodiversity Conservation and Attractions. Albany Highway traverses the project area north – south between the Bibbulmun Track and Jarrahdale. Jarrahdale Road is the other major road which traverses east-west linking Jarrahdale to the Albany Highway (refer to Figure 1).

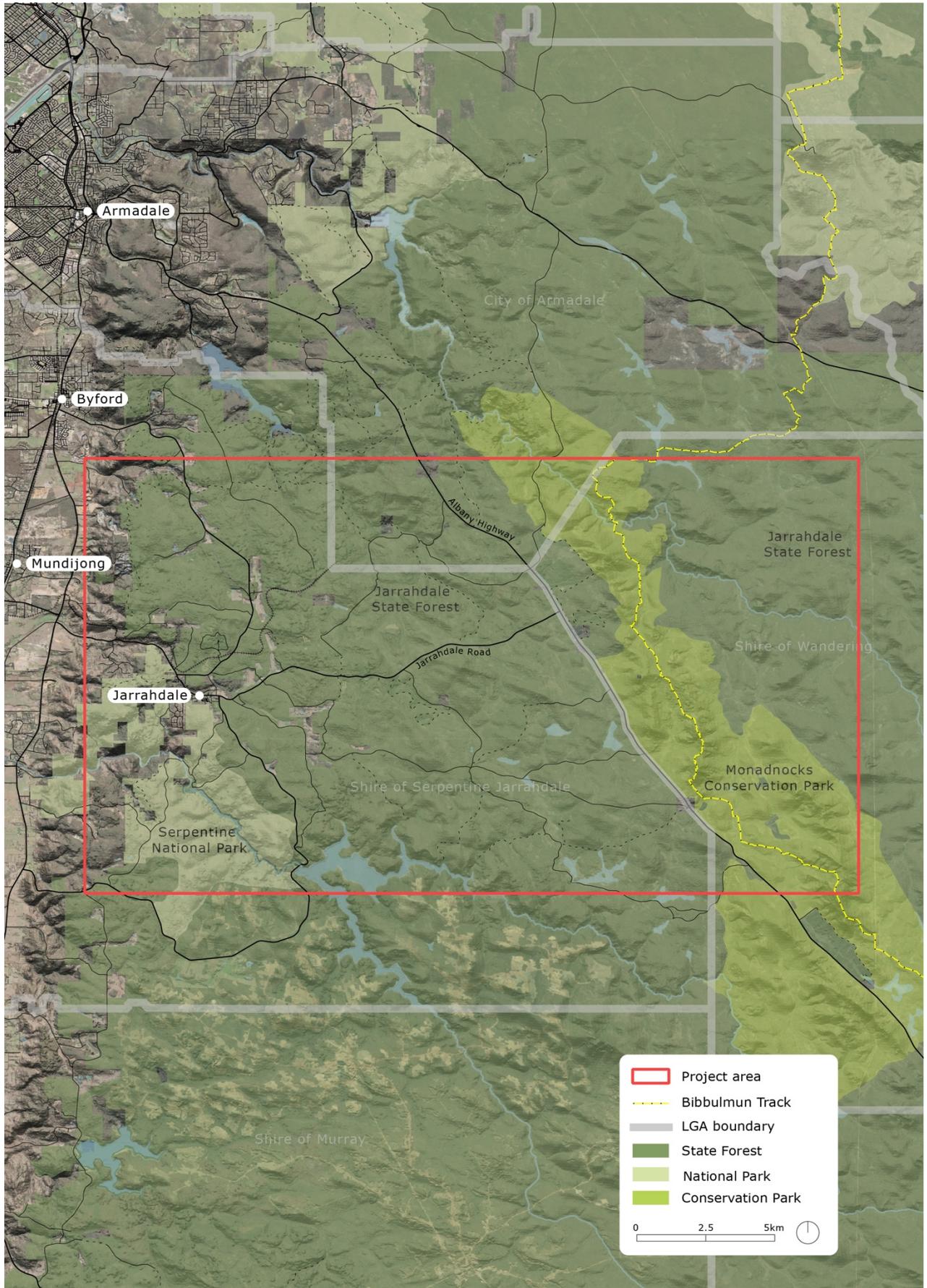


Figure 1. Project area, tenure and LGA boundaries

## Planning context

There are a number of key strategic documents that have informed this project. These are outlined in Table 1 below.

Table 1. Key documents

Document	Relevance
Shire of Serpentine Jarrahdale Strategic Community Plan 2017 – 2027	Council’s principal 10-year strategy and planning tool. It is the principal guiding document for the Shire’s strategic planning. Recognises benefits trails have in terms of economic and social impacts.
Shire of Serpentine Jarrahdale Community Infrastructure and Public Open Space Strategy	Provides a holistic assessment of the community infrastructure and public open space requirements across the whole of the Shire
Shire of Serpentine Jarrahdale Community Infrastructure Development Contribution Plan (DCP)	Acknowledges that new residential development places additional pressure on existing community facilities, as well as generating the need for additional and expanded community facilities.  Through a shared partnership between Shire funding and developer contributions, the Shire can ensure necessary community infrastructure is provided at the right time and scale, in response to growth occurring.
Shire of Serpentine Jarrahdale Tourism Strategy	The Shire of Serpentine Jarrahdale Tourism Strategy 2018 – 2023 is a strategic document for the sustainable development of tourism in the Shire. Trails feature as a key opportunity to attract visitors to the Shire.
Peel Regional Trails Strategy 2019	Provides strategic direction for trails in the Peel Region. Outlined Jarrahdale as having potential to become a Trails Town with a focus on equestrian trails. Identified a number of hike trail opportunities including a ‘Mounts Trail’ linking Jarrahdale to the Monadnocks.
Bushwalking and Trail Running in Western Australia 2020 - 2030.	Outlines the need for sustainable trail and experience development and identified a key gap in 2-3 day loop trails in proximity to Perth.
WA Strategic Trails Blueprint 2017-2021	A key State-wide document that outlines overarching direction and strategy for all recreational trails.
Trail Development Series 2019	A key State Government Document developed by DLGSC and DBCA that outlines the recommended process for developing sustainable trails. The Shire of Serpentine Jarrahdale are following the outlined process.

There are a number of other trail projects currently underway within the Shire which are part of a progression towards establishing Jarrahdale as a Trails Town, these include:

- Byford Trail Centre including linking into Wungong Regional Park;
- Mundijong to Jarrahdale Rail Trail, and;
- Jarrahdale Oval Trail Head.

These projects are the subject of a recent business case<sup>1</sup> and have been reviewed for their potential synergies with this project.

<sup>1</sup> Serpentine Jarrahdale Trail Development Business Case June 2020

## Project methodology

To fulfil the project brief and objectives, the following methodology will be engaged:

STAGE	TASKS
Stage 1	<b>Scope Confirmation and Site Review</b> Inception Meeting Background Review
Stage 2	<b>Site Assessment</b> Stakeholder engagement Detailed understanding of site conditions issues and opportunities Environmental and Cultural Heritage desktop assessments
<b>HOLD POINT</b>	<b>Interim recommendation presented to Council</b>
Stage 3	<b>Broad Concept</b> Synthesised outcomes of project framework and site assessment Understand supporting infrastructure requirements Define recommended trail system Presentation of Broad Concept mapping and intent
Stage 4	<b>Draft Concept Plan development</b> Trail System concept plan and mapping Trail system configuration and description noting key zones and connections Individual trail summaries Outline of event use Presentation of Draft Concept
Stage 5	<b>Final Concept Plan</b> Updated concept plan Recommended construction sequencing Estimate of probable costs for construction and maintenance Concept plan report and SHP files

Given the known significant constraints within the project area it was agreed that as a first step Common Ground Trails would undertake Stage 1 and Stage 2 to provide an interim recommendation as to the feasibility of the project. This recommendation will be presented to Council to determine if the project should proceed into concept development.

## SITE ASSESSMENT

### Summary of Environmental Study

The desktop environmental study indicated that the ecological values within the study region that may be impacted by the proposed trail construction appear to be relatively limited. The species and communities predicted to occur in the project area are unlikely to be impacted by the construction of a trail.

The primary measure to reduce impacts on biodiversity values within the study area is to avoid and minimise removal of native vegetation and fauna habitat. As per the Trail Development Series established by DLGSC and DBCA once concept trail alignment corridors have been established the Shire of Serpentine Jarrahdale should undertake a corridor evaluation including detailed on ground assessment of the proposed trail corridor. Detailed design will then involve micro siting of the final trail alignment to avoid or minimise impacts to vegetation and habitat.

### Summary of Cultural Heritage Study

The desktop cultural heritage study indicated that the Project Area has both Aboriginal and historical heritage values, with sites listed on the Aboriginal Sites Register, the State Register of Heritage places and the Shire of Serpentine – Jarrahdale’s Local Heritage Survey. It is recommended that concept trail alignment avoids where possible known sites and that once concept alignment has been determined consultation is undertaken with:

- South West Aboriginal Land and Sea Council
- Heritage Council of Western Australia

To determine whether an Aboriginal heritage survey and/or a historical heritage survey of the proposed trail route will be necessary.

### Constraints

#### Tenure

The majority of the project area is within DBCA managed estate. This presents some challenge for the Shire of Serpentine Jarrahdale given a trail linking Jarrahdale to the Bibbulmun Track will need DBCA approval. Refer to Figure 1 for location of state managed land.

#### Mining

The Alcoa Huntly Bauxite mine extent currently lies south of the project area. Alcoa are currently seeking approval to expand north to Jarrahdale Road (referred to as Myara North and Holyoake mine and transport study areas. Refer to Figure 2 for area of mining interest extent), which pending approval would operate from around 2025-2035. Bauxite forms in shallow pods, which means a constantly moving mining footprint followed by progressive rehabilitation. Less than a quarter of the Myara North and Holyoake mine and transport study areas would be cleared under the Alcoa proposal, with clearing occurring sporadically through the entire proposed area and dependent on location of bauxite deposits.

Mining activity has significant implications for trail development. Should the mine approval be granted, trail development in the project area south of Jarrahdale Road would be on hold until mining operations are complete, at this stage in 2035. It should also be noted that trail user experience through recently rehabilitated forest is not high quality. In order to achieve a trail which will offer a high quality experience it would be best to assess the landscape post mining to determine the pockets of value and the most desirable trail alignment.

It should also be noted that the area immediately north of Jarrahdale Road was mined for bauxite in 1963-1966 and has since been rehabilitated. The rehabilitation has had 55 years to establish and provides a pleasant trail user experience, with the added layer of landscape history.

## Public Drinking Water Source Area (PDWSA)

Operational Policy 13 (2019) implements the Government's response to the 2010 parliamentary committee report on recreation within public drinking water source areas. It is aimed at ensuring recreational PDWSAs are conducted in ways which maximise water quality to protect public health. It identifies that:

- Existing approved recreation (i.e. events and facilities) should be maintained at September 2012 approved levels. New or enhanced recreation (i.e. events and facilities) needs to be located outside proclaimed PDWSAs
- Individuals undertaking passive land based recreation activities (not part of organised events) in PDWSAs (such as trail based activities) are:
  - Not supported in Reservoir Protection Zones (RPZ) - public access in reservoir protection zones is prohibited except along public roads
  - Supported in PDWSA outer catchments, subject to recreation compatibility requirements noting that recreation cannot exceed 2012 approved levels and new or enhanced recreation needs to be located outside proclaimed PDWSAs.
  - Supported in the wellhead protection zones and outer catchments of groundwater source areas.

The PDWSA covers a majority of the project area (refer to Figure 2) restricting trail development potential and Serpentine Dam Reservoir Protection Zone prohibits trail development in the south west corner of the project area around the Dam and Serpentine River. It is recommended that the Shire of Serpentine Jarrahdale prepare and submit a Policy 13 application to DWER and DoW as soon as practicable once a concept trail alignment is determined.

## Disease Risk Area (DRA)

Disease caused by Phytophthora species, a soil borne fungal pathogen, is wreaking havoc on susceptible native flora species in the southwest of WA, particularly the introduced Phytophthora cinnammomi. In an effort to contain it's spread; it is essential to follow strict hygiene protocols and avoid moving between infested and uninfested areas. The DRA is an administrative boundary which delineates areas of forest / vegetation subject to the risk of infection from 'dieback'. Strict quarantine and access restrictions apply to these areas. The DRA begins east of Albany Highway (refer to Figure 2), trail alignment will need to be cognisant of this and include measures to help stop the spread of dieback into the DRA such as clean down stations.

## Existing trails and facilities

There are a number of existing trails and facilities within the project area with potential to be utilised as part of the proposed trail connection (refer to Figure 3).

Existing trails and facilities with potential to be incorporated into the trail proposal include:

- Balmoral Trail – shared use trail with interpretation elements relating to the historic timber industry and railway.
- Balmoral Prisoner of War (POW) camp site – day use visitor site at the site of a former POW camp contains picnic facilities, toilets and a short interpretive walk through the camp.
- Munda Bididi Trail – long distance off road cycling trail which extends from Perth to Albany. Note walkers are permitted on this trail which shares the Balmoral alignment for part of its length.
- Wungong Munda Bididi Hut – hut designated for use by Munda Bididi cyclists.

There are also a number of key points of interest in the landscape that would allow for a creation of a unique and high quality trail experience including:

- The mounts along the Bibbulmun Track – Mt Randall, Mt Cuthbert, Mt Vincent, Mt Cook
- The Serpentine River valley
- Pockets of granite outcrops scattered throughout the project area that offer open views across the landscape and a change in landscape character.
- Aboriginal and European cultural heritage values and stories

## Site Visit

An initial site visit was undertaken in January 2021 to ground truth desktop analysis and understand the landscape character and potential trail user experience. On ground assessment confirmed condition and extent of existing facilities including the alignment of the unsanctioned Balmoral Track between the Balmoral POW site and the Bibbulmun Track. On ground assessment also confirmed the value of the potential trail user experience, with the pockets of granite outcrops offering key points of interest with a contrast between the intimate dense forest setting and the open granite outcrop setting. Refer to figure 4 for site photos.

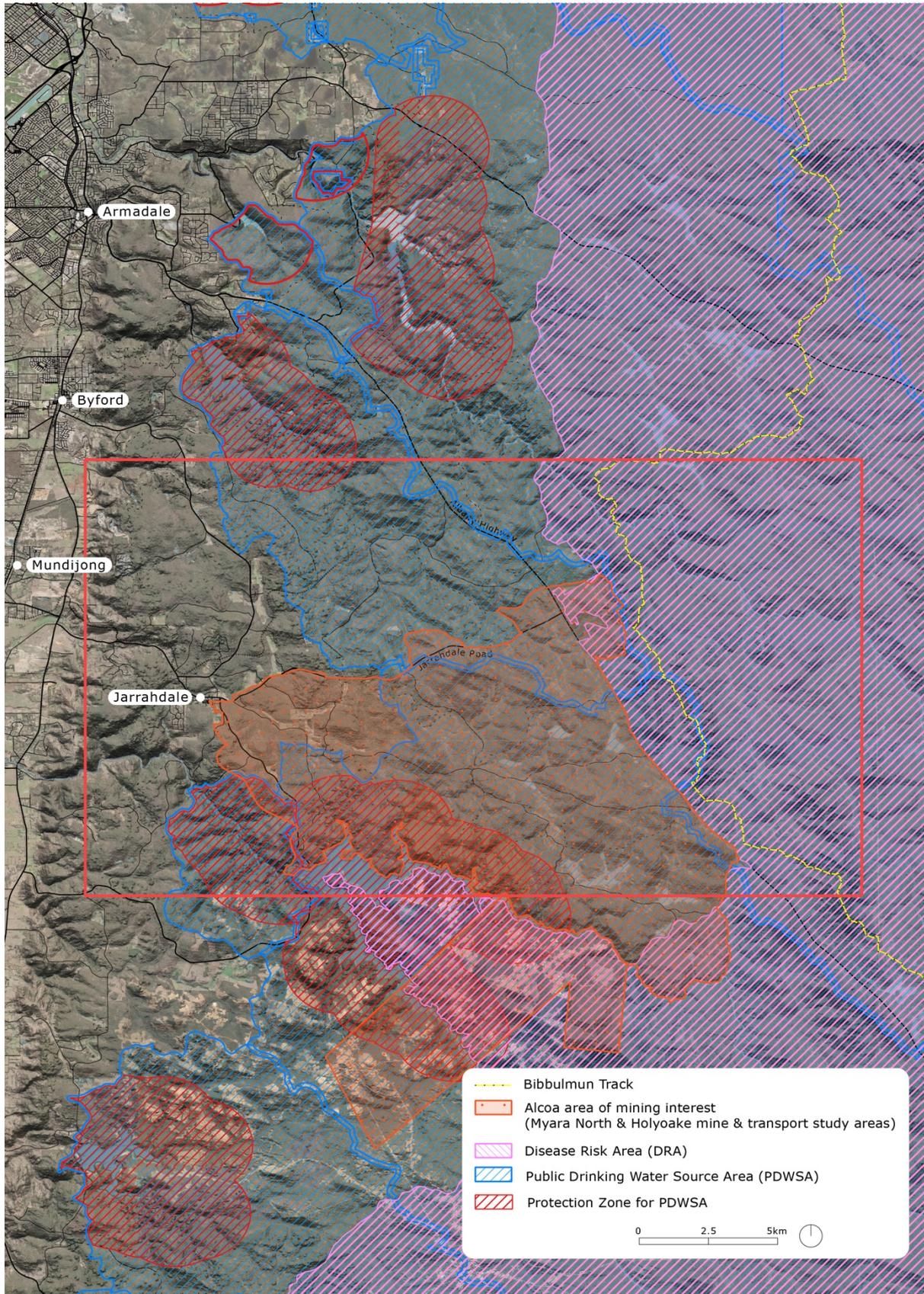


Figure 2 Project area constraints

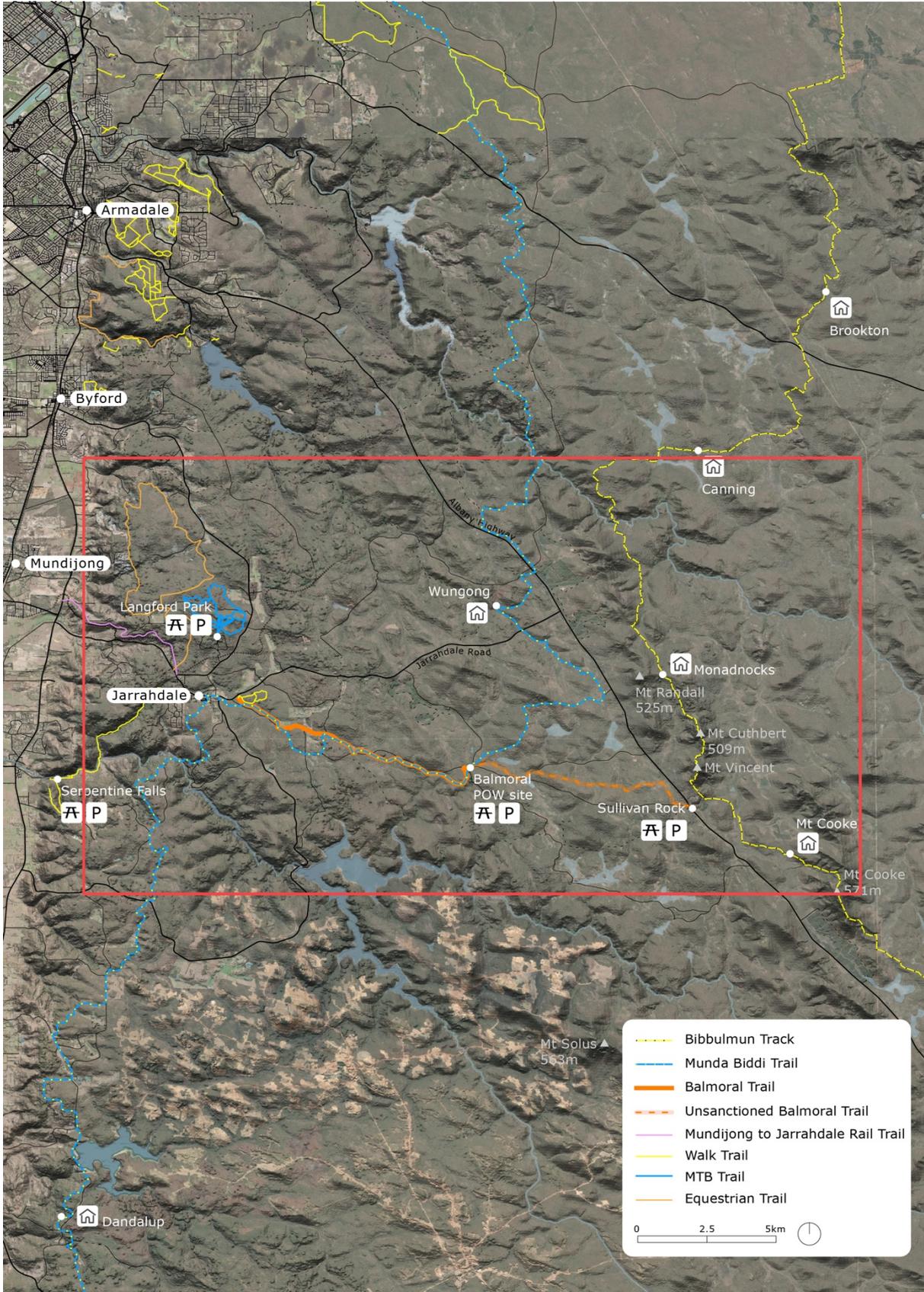


Figure 3. Existing trails and recreation facilities.



Figure 4. Photos from initial site visit.

## Initial Stakeholder Engagement

There are a number of key stakeholders with an interest in this project. As part of informing the interim recommendation Common Ground Trails met with a number of key stakeholders to understand the current situation and level of support for the proposal. Outcomes are outlined below in table 2.

Table 2.

Stakeholder	Notes from discussion	Level of support
Department of Biodiversity Conservation and Attractions (DBCA)	<ul style="list-style-type: none"> <li>Concerned that investment in a trail that then gets destroyed by mining activity is not a good use of public funds.</li> <li>Concerned about impact of proposed mining on trail user experience post mining</li> <li>Disease Risk Area – concern about potential for a link trail into the DRA to spread dieback</li> <li>Noted there are plenty of access points along the Bibbulmun Track for long distance walkers to drop supplies, considered unlikely that walkers would walk the day into Jarrahdale to resupply and then a day back to the Bibbulmun Track.</li> <li>Don't consider that the trail experience is unique enough to warrant investment</li> <li>Linking the Bibbulmun Track to Jarrahdale is not currently considered a priority project within DBCA</li> <li>Would be open to discussing management agreement where Shire manages Trail on DBCA estate.</li> <li>Noted the Peel Regional Trails Strategy outlined the Shire should have a focus on equestrian opportunities as a priority.</li> </ul>	Low
Department of Water and Environmental Regulation (DWER)	<ul style="list-style-type: none"> <li>Don't support proposal if DBCA aren't supportive</li> <li>Will need to go through Policy 13 Application process for development of new trail and facilities within PDWSA. Need to demonstrate why the trail/facilities are required and can't occur outside of PDWSA.</li> </ul>	Low
ALCOA	<ul style="list-style-type: none"> <li>Indicated area of interest for mining doesn't extend north of Jarrahdale Road</li> <li>Indicated an interest in working with the Shire to realise community benefits of recreation development in the mine rehabilitation process.</li> <li>Noted pending approvals, mining in the area would start 2025/26 and it is anticipated that it would be a short life of mine region – estimate 4-5 years.</li> <li>Noted a trail experience through rehabilitated mine area is not overly desirable from a scenic point of view as</li> </ul>	High

	<p>establishing vegetation can often appear scrappy.</p> <ul style="list-style-type: none"> <li>• If mining application successful Alcoa would need to realign the Munda Biddi Trail north of Jarrahdale Road into Jarrahdale – potential to make this trail shared use. Noted Alcoa would fund this.</li> </ul>	
Hike West	<ul style="list-style-type: none"> <li>• Excited by the potential for a loop walk option from Jarrahdale to the Bibbulmun Track.</li> <li>• Consider the Balmoral Track the obvious route, as it exists and has heritage value to add to the experience</li> <li>• Noted the constraints being in PDWSA</li> <li>• Noted parking in Jarrahdale rather than at base of Sullivan Rock would appeal to walkers due to security issues</li> </ul>	High
Jarrahdale Heritage Society	<ul style="list-style-type: none"> <li>• Have done a lot of work recently in defining the Balmoral Trail from the Balmoral POW camp out to Sullivan Rock</li> <li>• Supportive of the link and of Jarrahdale as a Trails Town.</li> </ul>	High
Bibbulmun Track Foundation	<ul style="list-style-type: none"> <li>• Support the proposal from point of view of another access point and town on the Bibbulmun Track route.</li> <li>• Noted for end to end users only those that don't have local support for food drops would do the 2 day diversion into Jarrahdale and back to the Bibbulmun Track</li> <li>• If link was to be shared use wouldn't want it promoted as Bibbulmun Track link as the Bibbulmun Track is walk only</li> <li>• Existing Balmoral Track provides the link currently – has interesting heritage value that could provide an added level of interest.</li> <li>• Would need a campsite along the link due to distance from close by designated Bibbulmun Track campsites. The closest Bibbulmun Track Campsite (Monadnocks) is approximately 20km as the crow flies (trail would highly likely be much longer) from Jarrahdale, comfortable walking distance with a loaded backpack for one day is 15km.</li> </ul>	Moderate

## INTERIM RECOMMENDATIONS

Based on the background review, initial site assessment, stakeholder discussions and our industry knowledge, Common Ground Trails provide the following options for the Trail Advisory Committee consideration.

### Options

#### Option 1

Continue with current contract and scope, progressing Stage 3-5 (refer methodology) to establish a concept trail alignment for a link trail between Jarrahdale and the Bibbulmun Track. Given the mining proposals Common Ground Trails suggest the trail alignment investigations be focussed north of Jarrahdale Road. An alternative approach would be to hold off on planning until mining is confirmed so that it is known if the higher quality landscape south of Jarrahdale Road is available for trail alignment.

The proposal of a trail linking the Bibbulmun Track to Jarrahdale is considered to be feasible however there are significant constraints and given the current lack of key stakeholder support there is significant risk in moving forward with concept design. In addition, Common Ground Trails don't believe such a link would be well used by Bibbulmun Track hikers given the distance and the various other access points along the Bibbulmun Track, and as such not achieve the desired economic benefits for the town of Jarrahdale.

#### Option 2

Revise the remaining contract scope to look more broadly at an assessment of the Mounts Loop. Revised scope to be determined in consultation with Shire, however Common Ground suggest a master plan level of detail including broad trail alignment and infrastructure needs, assessment of tourism markets and development of a vision to enable further discussion with key stakeholders to improve level of project support.

Common Ground Trails suggest that the Shire of Serpentine Jarrahdale consider a reframing of the proposal with a long term objective of creating a 'Mounts Loop'. The 'Mounts Loop' would be a 4-5 day loop walk from Jarrahdale linking to the Bibbulmun Track and taking in the mounts along the Bibbulmun Track before heading west into Monadnocks Conservation Reserve, returning to Jarrahdale via the Serpentine River Valley and the Balmoral POW site. We suggest that this would be a long term vision, with stage 1 being the link from Jarrahdale to the Bibbulmun Track.

It should be noted that this reframing doesn't diminish any of the site constraints outlined in this report, it does however have potential to improve the level of stakeholder support. We believe that reframing the proposal will present a stronger argument for a necessary development in terms of the potential benefits for Jarrahdale and filling an identified gap in the hiking trail offer of 3-4 day loop trails close to Perth (refer Bushwalking and Trail Running in Western Australia 2020 – 2030). A trail linking Jarrahdale to the Mounts was also proposed in the Peel Regional Trails Strategy, giving further weight to the proposal.

### Considerations

The best outcome in terms of visitor experience will be a trail alignment south of Jarrahdale Road through untouched forest and traversing the pockets of granite outcrops that provide open views towards the Mounts to the East. However, this area is the subject of Alcoa's area of mining interest and if approved mining would severely impact the potential visitor experience.

Considerations for further planning in both options include:

- Extending the Mundijong to Jarrahdale Rail Trail to the end of the rail corridor as part of the trail alignment
- If mining went ahead, potential to consider shared use for the section north of Jarrahdale Road to accommodate the need to realign the Munda Biddi from the mining area. Pending timing this will allow funding partnership with Alcoa for trail design and construction for this section of trail.
- Investigate management agreement with DBCA whereby Shire would manage the trail corridor on behalf of DBCA

## Risk Assessment

A brief risk Assessment for both options is provided below.

Risk	Impact	Consequence	Likelihood	Risk
Key stakeholders don't support proposal	Trail project won't proceed beyond planning without stakeholder support as it traverses DBCA estate.	Major	Option 1 - Almost Certain	Option 1 - Extreme
			Option 2 - Possible	Option 2 - High
Trail development doesn't get construction approval under Policy 13	Trail project won't proceed beyond planning.	Major	Option 1 - Almost Certain	Option 1 - Extreme
			Option 2 - Possible	Option 2 - High
Trail if constructed doesn't get used	Little economic benefit for Jarrahdale	Moderate	Option 1 - Likely	Option 1 - High
			Option 2 - Unlikely	Option 2 - Moderate

## Timeframes

In regards to timeframes for the options outlined above the below table provides an overview of approximate timeframe for project stages/tasks.

Stage/task	Approx timeframe	Notes
Master Planning	3 months	Broad level master planning is recommended for option 2.
Concept Design	3 months	Required for both options. Recommend continued conversations with key stakeholders throughout process.
Policy 13 Application	2 months minimum	Required for both options. This is an unknown timeframe as dependant on overall key stakeholder support. DWER recommend that applications be submitted as early as possible in the planning and design process.
Corridor Evaluation	3 months	Required for both options
Detailed Design	3 months	Required for both options
Construction	TBD	Will vary depending on trail alignment and length.

Mining proposals have a significant impact on the trail timeframes for both options. Option 1 could proceed immediately with a focus on investigating options north of Jarrahdale Road. Option 2 is considered to be a longer term vision given that a significant proportion of the loop occurs in the area of interest for mining, that if approved, is forecast to be actively mined until 2030/31. Note that Option 2 could be staged.

## Recommendation

Common Ground Trails recommend that the Shire of Serpentine Jarrahdale proceed with Option 2. The 'Mounts Loop', while a long term vision, will provide for a trail experience that has been identified as missing in the Perth and Peel Region and as such potentially provide a more convincing argument for trail need in key stakeholder perceptions. The objective to connect Jarrahdale townsite with the Bibbulmun Track can still be realised with this option, however additional trail and tourism opportunities complementing the Jarrahdale Trails Town work can potentially provide greater return value for investment.