



Shire of
Serpentine
Jarrahdale

Jarrahdale Trail Town

Business Case

October 2021



Acknowledgements

The Shire of Serpentine Jarrahdale acknowledge the Traditional Custodians of the land on which we work and live and recognise their connection to the land and waters of this area. We pay respect to Elders past, present and emerging.

The Shire would like to thank all of those who contributed to the development of this business case and for their ongoing commitment to making Jarrahdale a fantastic trails destination.

Version No.	Date	Purpose/Change	Editor
V1	29/03/2021	Initial Draft Report	Neil Tredwell
V2	14/05/2021	Updated Draft Report	Neil Tredwell
V3	21/05/2021	Updated Draft Report	Neil Tredwell
V4	28/05/2021	Updated Draft Report	Neil Tredwell
V5	03/06/2021	Final Draft Report	Neil Tredwell
V6	29/09/2021	Revision from consultation	Helen Sarcich

This report has been prepared by:

Tredwell Management Services

T: (08) 82346387

E: admin@tredwell.com.au

W: www.tredwell.com.au

Disclaimer

We make every reasonable effort to ensure the information we source for your report is true, correct and accurate and that we fully and properly represent our findings to you. We endeavour only to work with reputable and experienced partners to obtain information and prepare our findings. Despite these efforts, the content and information provided by any third party is outside of our control and we do not make any warranty, representation or guarantee that such information is true, correct and free from errors or omissions. We will take all reasonable steps to verify any information obtained by us from third parties however we are not liable, whether directly or indirectly, for any loss, cost, expense, claim or inconvenience arising as a result of your use of such information.

Table of Contents

Contents

Executive Summary.....	5
1. Introduction.....	9
2. Strategic Context.....	12
2. Trails and Trail Markets.....	23
3. Audit & Needs Analysis.....	40
4. Consultation and Engagement.....	62
5. Becoming a Trail Town.....	65
6. Benefits of Becoming a Trail Town.....	72
7. Funding Opportunities.....	75
8. Key Priority Areas and Recommendations.....	79
A. Landscape and Setting.....	80
B. Trails Development and Management.....	82
C. Access.....	90
D. Attractions and Activities.....	95
E. Amenities.....	97
F. Accommodation.....	101
G. Planning and Management.....	103
H. Engagement of Supporting Businesses.....	105
I. Marketing.....	107
9. Implementation Plan.....	109
10. Financial and Economic Analysis.....	124
11. References.....	128
Appendices.....	129
Appendix A - Consultation and Engagement Outcomes.....	130
Appendix B - REMPLAN Impact Summary Reports.....	141

Tables

Table 1: Overview of key strategic initiatives at a state and regional level that relate to the creation of Jarrahdale as a Trail Town.....	12
Table 2: Overview of key strategic initiatives at a local level that support the creation of Jarrahdale as a trail town.....	15
Table 3: Trail models, significance, scope and extent.....	23
Table 4: Tourism market segment comparison.....	35
Table 5: Existing Trails within the Shire of Serpentine Jarrahdale that start/finish in Jarrahdale.....	42
Table 6: Existing Trails within the Shire of Serpentine Jarrahdale that start/finish in close proximity to Jarrahdale.....	43
Table 7: Cost Estimates to upgrade the existing trails.....	47
Table 8: High level cost estimate to improve the existing trails to an excellent standard.....	47
Table 9: Bushwalking trails located within the Serpentine National Park identified as high priority for upgrade and enhancement.....	50
Table 10: Cost to implement the high priority actions over a ten year period.....	109
Table 11: Economic Impact of Direct Investment in Trail and Trail Related Infrastructure and Services in Jarrahdale.....	125
Table 12: Forecast visitations for Jarrahdale as investment is implemented and the town increases its attractiveness to visitors.....	126
Table 13: Annual Impact of Increased Visitation to Jarrahdale.....	126
Table 14: Summary of asset management costs by priority.....	127

Figures

Figure 1: Trail Models as defined in the WA Strategic Trails Blueprint.....	25
Figure 2: Eight Stages of the Trail Development Process as identified in the Trails Development Series.....	27
Figure 3: Visitor Markets and Factors Motivating Visitors from the Peel Regional Trails Strategy 2019.....	33
Figure 4: Survey results which was conducted as part of the development of the Peel Regional Trails Strategy 2019.....	38
Figure 5: Examples of the adopted Jarrahdale Trails branding.....	39
Figure 6: Forecast Population – Shire of Serpentine Jarrahdale source ProfileID.....	41
Figure 7: Map of existing trails in Jarrahdale and the surrounding area.....	44
Figure 8: Artist impression of the Jarrahdale Oval Trail Head.....	49
Figure 9: Snapshot of the Equine Sector within the Shire of Serpentine Jarrahdale Source: SJ Equine Strategy.....	52
Figure 10: Current and Proposed Land Uses/limitations in Jarrahdale.....	54
Figure 11: Historical Image of one of Jarrahdale’s many operating mills.....	56
Figure 12: Peel Region Trails Master Plan Regional Priorities.....	66
Figure 13: Trail Town Accreditation Process.....	68
Figure 14: Values commonly associated with trails.....	73
Figure 15: Trail friendly logos.....	74
Figure 16: Aerial Image of Lot 814 in Jarrahdale.....	85
Figure 17: Jarrahdale Trail Town Master Plan.....	123
Figure 18: Summary of Workshop Outcomes – ‘What is important to the Jarrahdale community?’.....	133

Executive Summary

The Shire of Serpentine Jarrahdale has an aspiration to support the further development of Jarrahdale to become a quality trails tourism destination, realising the eventual goal of achieving accreditation as a Trail Town. Jarrahdale has always been a popular trails destination and offers visitors and residents the opportunity to access equine, walking, mountain biking, running and heritage trails only 45 minutes from Perth.

Jarrahdale is easily accessible to 20 trails/networks comprising 13 bush and urban walking trails, two shared use trails, two mountain biking trails/networks and three bridle trails/networks. Two of these trails are state level, six are regional level and the remaining 12 trails are local level trails, offering a diversity of trails suitable to a range of skill levels and interests.

Jarrahdale is one of Western Australia's most historic settlements located 45 km south-east of Perth in the Darling Range. Originally a logging town that exported jarrah timber to the world, in recent years the town has seen a significant increase in the number of visitors coming to Jarrahdale to use the trails, particularly through the COVID-19 pandemic period.

There exists an opportunity for the Shire of Serpentine Jarrahdale to work in partnership with the community, trails user groups, DBCA and other government and non-government agencies to further enhance the current trails offerings and guide development of supporting infrastructure and business growth, to ensure Jarrahdale offers a high quality trails destination and achieve accreditation as a Trail Town, as sanctioned by Trails WA. This business case recognises the uniqueness of the equine trails offering in Jarrahdale and the opportunity to specifically focus on the development of the equine trail offering in order to achieve Equine Trail Town status.

This *Jarrahdale Trail Town Business Case* has been developed to provide strategic guidance to assist the Shire to support Jarrahdale to become one of Western Australia's primary trails destinations and Perth's most popular Trail Town for visitors seeking equestrian, bushwalking, mountain biking and heritage trail experiences. Key priorities and recommendations have been identified and aligned with the WA Trail Towns Accreditation Program.

Trail Towns are economic engines for community revitalisation. Through careful planning and by consciously linking trails and local businesses, as well as providing new value-adding amenities and attractions, trails can contribute to building vital, economically stable communities.

It is widely recognised that there has been a global increase in the development, use and demand for trails to service growth and change in participation patterns by visitors and locals alike in trail and outdoor activities generally within a wide range of communities.

The provision of well-constructed trails is vital to ensure that these activities are undertaken in a way that protects natural and cultural values and is environmentally and socially sustainable as well as offering excellent experiences for participants. Consumers are increasingly seeking trails that facilitate their enjoyment and appreciation of an area or trail activities through supporting services, visitor products, interpretation and accessible information.

Ongoing consultation with the community and key stakeholders has occurred in relation to the creation of Jarrahdale as a Trail Town. This has been in line with the Shire's Community Engagement Strategy which is based on the International Association of Public Participation

Spectrum of Public Participation. Key consultation mechanisms included a stakeholder workshop, two on-line community surveys, one on one meetings with key stakeholders and an Elected Members workshop.

Key opportunities identified in the research and consultation included:

- Trails Tourism is a growth market with Experience Seekers being specifically targeted by Tourism WA.
- Jarrahdale and the broader Serpentine Jarrahdale shire area has many existing trail experiences for a range of trail user types including walkers, trail runners, horse riders and mountain bikers.
- Much planning has gone into trails in the Shire in recent years and there is a clear framework for development and enhancement of the trails in the area.
- Jarrahdale has existing marketable assets including trails, heritage and equine related attractions and experiences.
- National and Regional Parks are experiencing strong and growing visitations particularly throughout the COVID-19 pandemic period and there is an opportunity to leverage off this increased interest in the outdoors and nature based experiences.
- Jarrahdale is in a strong position to capitalise on the unique equine trails and activities it has to offer.
- Creating Jarrahdale as a Trail Town will create jobs for a growing workforce and boost the local economy with increased visitor spending.
- Jarrahdale's close proximity to metropolitan Perth makes it highly accessible to over 2 million people.
- Strong support exists for the establishment of Jarrahdale as a Trail Town from the local community including the business community.
- Jarrahdale's strengths as a trails destination are its natural beauty, diversity of existing trails (e.g. walking, equine, mountain biking), history and heritage, flora and fauna, tranquillity, proximity to Perth and village like feel.
- There is a need for improved accommodation including the diversity of accommodation types on offer.
- There is a strong need for trail support infrastructure and facilities including toilets, parking, shelter, maintenance stations, camp grounds etc.
- Parking and traffic management were raised as major current issues that need to be resolved including more formalised parking.
- There is a need for additional food and beverage offerings e.g. food vans, café, markets.
- There is a need to improve trail and waymarking signage.
- Basic infrastructure improvements are required in Jarrahdale including roads, footpaths, communications and water supply.
- The opportunity exists to improve marketing and promotion of the trails.
- Strong support for establishing Lot 814 Jarrahdale Road, Jarrahdale as a trail centre which would include accommodation (e.g. camping, caravans, RVs), trail related services (equipment hire, maintenance, shuttle services), amenities (toilets, showers, laundry), parking including for horse floats and trailers, wash down areas, drinking water, shelter, food and beverage (café, vending machines, food trucks), first aid. Wi-fi, lockers etc.
- Key considerations for any form of development in relation to the Trail Town included impacts on the environment, local residents, traffic and the general feel and vibe of the town.
- Support for establishing Jarrahdale Oval as a trail head.

- There is support for the enhancement of Heritage Park and developing this into an attraction with walking trails, nature play, sculptures, picnic and BBQ facilities in a natural environment.
- There was strong support for the Mill Managers House and the No.1 Jarrahdale Mill having a role to play in the activation of Jarrahdale as a Trail Town.
- Functions suggested for these two facilities included information/visitor centre, museum, function venue, B&B, café, small bar and art gallery.
- Local businesses are interested in becoming trail friendly businesses with support from the community and the Shire.

There is a comprehensive application form which needs to be completed and assessed to become a Trail Town. The form includes eight main sections:

1. Contact Information
2. Introduction
3. Landscape and Setting
4. Existing Tracks and Trails
5. Five A's of Tourism – Access, Attractions, Activities, Amenities and Accommodation
6. Planning and Management
7. Engagement of supporting business
8. Marketing

Within each section there are essential and desirable criteria that need to be answered, assessed and met prior to becoming an Accredited Trail Town.

Trail tourism brings social, economic, environmental, health and community outcomes particularly in regional areas. The following are benefits of becoming a Trail Town:

- Trails spread economic growth to regional areas.
- Trail tourism brings people to towns.
- Trails promote healthy communities.
- Trail tourism brings new businesses, jobs and volunteer opportunities.
- Trails build community and cultural capacity.

There is a large amount of evidence demonstrating the positive economic and social impact of trails. Trail tourists are known to spend more and stay longer.

A series of key priority areas contain prioritised recommendations grouped in the themes (based around the Trail Town Accreditation criteria) required to develop a Trail Town.

The recommendations listed as *High* priority are essential criterion within the Trail Town accreditation form, or they mitigate a significant risk. The delivery of these projects should be prioritised. *Medium* priority criterion are focused around recommendations that have known external factors, are not essential for Trail Town accreditation but are desirable, or do not have the Shire resources to commence immediately, however will contribute positively to Jarrahdale becoming an accredited Trail Town. *Low* priority indicates that the recommendation is not essential for Trail Town accreditation and add some value to Jarrahdale becoming a Trail Town, but have less positive impact than medium and high priority recommendations. These projects should commence as resources are available to deliver them. A number of ongoing recommendations have also been developed which should also be implemented as required and resourced. A cost estimate has also been provided, this is a high level estimate and is provided to assist with calculating the level of investment. Each project needs to be further defined and costed once more detailed designs and information is determined. A lead agency has been

identified and this has been bolded and partners have also been identified that would play a key role in implementing the initiative.

A ten-year implementation plan for the recommendations identified as having a high priority has been developed. These are grouped under the same nine areas and a total cost for each area and year for the complete ten year period has been developed.

The direct investment estimated in this business case to develop and enhance Jarrahdale as a Trail Town is \$31.487 million which will generate positive economic benefits, both during construction and development of the trails and associated infrastructure, and through the on-going generation of visitors through tourism and the associated spend and flow-on effects generated by the visitor economy.

This investment will enable Jarrahdale to become an integrated, high quality and sustainable Trail Town in one of Western Australia's premier tourism regions. Visitors will enjoy high quality tourism experiences and will likely return with plans to further utilise the trails and spread the word to their connections to visit also. The generation of additional visitation will also increase the demand for services such as accommodation, food and beverage, and trail related services such as equipment hire and supplies, guided tours and shuttle services.

It is forecast that the total economic impact of investing in the Jarrahdale Trail Town, as a result of the direct investment, will be \$54.442m. This will support up to 124 jobs (includes 73 direct and 51 flow on/indirect jobs) over the lifespan of the implementation plan.

It is forecast that the additional economic impact as a result of the development of the visitor economy and increased visitation within Jarrahdale, will be \$452.63 million over 10 years. This includes \$260.76 million directly and \$191.86 million indirectly through the supply chain and consumption effect. This will support up to 979 jobs over a minimum 10 year period.

1. Introduction

Located approximately 45 kilometres from the Perth CBD, the Shire of Serpentine Jarrahdale is set against the picturesque backdrop of the Darling Scarp, within the Peel region of Western Australia. Home to the breathtaking Serpentine Falls and Serpentine Dam, residents and visitors enjoy the picturesque environment with bushwalks through the forested hinterland of the Darling Range. Forested hills and wetlands are complemented by areas of wilderness, and an abundance of wildflowers and wildlife. This unique landscape delivers an enviable rural setting in close proximity to a major metropolitan area. Coastal flats are dominated by rural residential properties with a mix of natural vegetation and cleared grazing land supporting a vibrant equine industry.

Home to pristine natural attractions that are ripe for tourism investment, and exciting developments across new industrial precincts, the Shire is transitioning into a prosperous metropolitan hub with strong country values. With a resilient community who is passionate about retaining a country-feel within a fast-paced environment, and a Council determined to see progress with that in mind, the future for the Shire is full of exciting opportunities.

Static and declining visitor levels into the Peel region is a current threat identified within the Peel Economic Development Infrastructure Strategy, attributed to an inability to support growth and tourism products and services. The Strategy's recommendations to close known gaps within the regions tourism offerings include (broadly) upgrading and expanding trails, developing tourist attractions (and accommodation), and specifically the recommendation to develop a stronger trail focus, immersing visitors in natural settings, including new trails, extensions and upgrades to existing trails and providing connections to amenities in towns and hubs.

Jarrahdale is one of Western Australia's most historic settlements, originally a logging town that exported jarrah timber to the world. As Western Australia's very first timber town, dating back to the 1800's, Jarrahdale was entered on the National Trust's list of heritage classified places in 1997. The town is home to walking, mountain biking and bridle trails, and boasts an eclectic mix of retail stores, restaurants and wineries.

The township of Jarrahdale is largely surrounded by forest. In recent years the town has seen a significant increase in the number of visitors coming to Jarrahdale to use the trails, particularly through the COVID-19 pandemic period. As its popularity as a trails destination grows, so do the opportunities improve the quality of the trails and supporting infrastructure and services in the town, to assist Jarrahdale on its journey to being a Trail Town.

With the Shire's hypergrowth continuing, job creation is a high priority of Council to ensure the liveability of Shire townships, and Jarrahdale's heritage and trail offerings provide an opportunity to create jobs for residents.

The Shire of Serpentine Jarrahdale, Jarrahdale Trails Town Business Case has been developed to provide strategic guidance to assist the Shire to become one of Western Australia's primary trails destinations and Perth's most popular Trails Town for visitors seeking equestrian, bushwalking, mountain biking and heritage trail experiences.

The aims of the Business Case include:

- Enhancement and further development of Jarrahdale as a Trails Destination.
- Provide a strategic direction for activities to be undertaken to achieve the final target of accreditation as an Equine Trail Town.

- Identify the gaps in a total trail visitor experience in Jarrahdale.
- Highlight the many tourism and trail assets already existing in Jarrahdale and provide a plan to capitalise on these.
- Focus strategic investment and support of trail and related infrastructure and services.
- Maximise promotion of Jarrahdale's unique offerings to a broad visitor market.

This Business Case includes broad objectives and a variety of recommendations as a framework to assist the enhancement, planning and development of trails and trail-related products to further develop Jarrahdale as a trails destination and support the efforts to achieve Trail Town accreditation.

The Business Case includes:

- Executive summary and Introduction.
- An outline of the potential market segments.
- A needs analysis for trail development and job creation in the Shire.
- An opportunity summary.
- Community consultation summary.
- Benefits including social benefits of developing a Trail Town.
- Recommendations to achieve Trail Town status including rationale.
- Financial analysis.
- Implementation plan.
- Townsite master plan.

Methodology

The development of the Business Case involved a series of key stages and processes including:

- Defining the project scope.
- Literature review of existing research, strategies, plans and documents.
- Identification of needs, market demands and trends.
- Extensive consultation including interviews with key stakeholders, a community forum with government agencies, community champions, organisations and local businesses and two online community surveys.
- Site visits to Jarrahdale, surrounding areas and specific trails.
- Workshop with Elected Members.
- Preparation of a Business Case report.

Environmental and Cultural Considerations

Trail based activities are inherently a nature-based activity and protection of environmental values is essential for delivering enjoyable trail experiences. By applying sustainable planning, design and construction principles, trails can protect these values by:

- Avoiding sensitive ecosystems and old growth trees.
- Keeping users on designated trails.

- Reducing fire management risk (i.e. knowing where users will be).
- Applying standard trail widths, minimising the disturbance footprint and associated effects.
- Development provides the opportunity to rehabilitate trails that are unsustainable and impact environmentally sensitive areas.
- Creating stewards for the environment through facilitating a sense of community ownership of the trails.
- Providing recreation opportunities to improve physical and mental health.
- Connecting people to places.
- Creating economic development opportunities through tourism and visitor services.
- Creating passive surveillance.
- Following State Government legislation regarding vegetation removal.

Locations that are popular for trail-based recreation can sometimes coincide with sites of significance for traditional owners, given they can both occur in natural, relatively undisturbed areas. Should detailed site planning progress for any of the locations recommended in this strategy, traditional owners will be consulted in accordance with the relevant legislation and any other requirements (Peel Regional Trails Strategy, 2019).

Sustainable Tourism Development

The United Nations World Tourism Organisation (UNWTO), a United Nations specialised agency and is responsible for the promotion of Sustainable Development Goals, responsible, sustainable and universally accessible tourism geared towards the achievement of the universal 2030 Agenda for Sustainable Development and the Sustainable Development Goals (SDGs). (Tourism for SDGS, 2021)

Sustainable tourism should:

1. Make optimal use of environmental resources that constitute a key element in tourism development, maintaining essential ecological processes and helping to conserve natural heritage and biodiversity.
2. Respect the socio-cultural authenticity of host communities, conserve their built and living cultural heritage and traditional values, and contribute to inter-cultural understanding and tolerance.
3. Ensure viable, long-term economic operations, providing socio-economic benefits to all stakeholders that are fairly distributed, including stable employment and income-earning opportunities and social services to host communities, and contributing to poverty alleviation.

It will be important through Jarrahdale becoming an accredited Trail Town that these goals should be adhered too in order to protect Jarrahdale's unique environment, cultural and natural heritage and provide socio-economic benefits equally to all stakeholders.

2. Strategic Context

A series of statewide, regional and local plans, strategies and documents have been prepared in recent years that guide trail development, provision and management within the broader Peel region and locally within the Shire. An overview of the key pieces of work and strategic initiatives identified have been provided as they relate to the creation of Jarrahdale as an accredited Trail Town.

State/Regional Documents

Table 1: Overview of key strategic initiatives at a state and regional level that relate to the creation of Jarrahdale as a Trail Town

Overview	Strategic Initiatives
Western Australian Strategic Trails Blueprint 2017-2021	
The Western Australian Strategic Trails Blueprint 2017–2021 (the Blueprint) is an overarching guide for consistent and coordinated planning, development and management of quality trails and trail experiences across Western Australia	<ul style="list-style-type: none"> • It provides a vision, guiding principles, strategic directions and actions for consideration across the State for government, trail managers, landholders, trail support groups, tourism operators and the community. • It highlights that quality trails have the ability to create “Trail Towns”, “Trail Centres” and “Trail Networks” which embrace and benefit communities on an economic, tourism and social level.
WA Hiking Strategy: Bushwalking and trail running in Western Australia 2020 – 2030	
The purpose of this document is to provide a strategic direction for hiking in Western Australia. It identifies the potential social, cultural, economic, environmental, health and wellbeing outcomes for the State, and articulates a direction for realising these. It seeks to maximise the opportunity for all Western Australians and visitors to benefit from access to an appropriate range of hiking experiences and will guide the sustainable development of hiking activities and associated trails’ infrastructure	<ul style="list-style-type: none"> • Research revealed that hikers cite being able to access trails close to home as a strong reason for their use. Almost 80% of WA residents live in the Perth metropolitan region, yet only about one quarter of existing hiking trails are within close proximity and are not necessarily serving the needs of users. This presents a great opportunity for Jarrahdale given its close proximity to metropolitan Perth and its diversity of walks and hikes. <p>Key strategies identified that align with the Jarrahdale Trail Town include:</p> <ul style="list-style-type: none"> • Increase hiking opportunities of varying experience and classification across targeted Western Australian locations through developing more half- and full-day loop trails near population centres and adjoining long distance trails. • Improve hiking experiences linked to public transport networks.
Taking the Reins: The Western Australian Recreational Horse Trail Strategy	
This Strategy has been developed to provide clear guidance and structure for decision makers, land managers, trails planners and the horse trail community. It is a coordinated, structured approach to horse trail access, development and management, driven by an overarching vision.	<p>A key objective of the strategy was: Easily located trails, with current and accurate trail information, that are readily and safely accessed.</p> <p>Relevant Strategies:</p> <ul style="list-style-type: none"> • Engage with Main Roads and Local Government Authorities to promote the installation of horse-friendly road crossing points, signage and horse holding bays at high priority crossings.

Overview	Strategic Initiatives
<p>Taking the Reins aims to ensure that Western Australia takes advantage of the opportunities and benefits that horse trail riding presents, whilst at the same time addressing existing and future challenges.</p>	<ul style="list-style-type: none"> • Develop agreed standards for design of float parking facilities that meet the needs of horse riders. Work with land managers to adopt and implement the designs. • Continue to promote the importance of horse trails to Australian and Western Australian cultural heritage noting the Shire has the highest rate of horse ownership in the state.
<p>Peel Regional Trails Strategy 2019</p>	
<p>The Peel Regional Trails Strategy (PRTS) has been developed to guide future strategic investment in trails recreation, tourism and event development across the Peel region of Western Australia (WA). The Strategy reflects the aspirations of the 5 local government's in the Peel Region (City of Mandurah, Shire's of Boddington, Murray, <u>Serpentine Jarrahdale</u> and Waroona) to become an economically, environmentally and socially sustainable trails destination.</p> <p>Aligned with the Western Australian Strategic Trails Blueprint 2017-2021 this Strategy considers bushwalk, urban walk, mountain bike, cycling, equestrian, 4WD, 2WD and trailbike trails.</p>	<ul style="list-style-type: none"> • The Peel Region will offer visitors and locals accessible and immersive trail experiences, supported by a suite of visitor services offered within Trail Towns, trail centres and trail networks. • <u>Development of Jarrahdale as a Trail Town has been identified as a regional priority in the PRTS.</u> • There are significant tracts of land in the Peel Region which are currently under active mining leases or in the process of rehabilitation. Discussions with Alcoa and South 32, indicated both companies are beginning to recognise the value of trails in the community and looking at the possibilities of working with stakeholders in including trails in areas of rehabilitation and on parcels of land under mining leases but yet to be mined. • There are many Equestrian trail experiences on offer in the Peel Region (primarily within the Shire of Serpentine Jarrahdale), ranging from short loops to day rides. • Based on the trail user survey a majority of horse riders are female and aged 44-54. Most rate their technical ability advanced and ride with a friend or partner and prefer defined basic camping if staying overnight. • A gap has been identified for equestrian infrastructure and facilities with the need to ensure trail developments have adequate infrastructure relevant to scale of development proposed and to develop trail opportunities focused around trail centres and visitor servicing. It notes that as trail centres, trail hubs and visitor services make horse riding more accessible, however there are currently no locations that have trail centres or locations that have infrastructure to meet equine trail centre criteria in the Peel region, creating Jarrahdale as a Trail Town will address this. • Current participation rates state-wide for walking and bushwalking are high and growing. With population expected to double in the northern Peel Region by 2050 ensuring access to walking trails will be critical. • Trail running is an emerging trail use which is growing in popularity. • National, regional and local locations have minimum infrastructure and facilities requirements, but few of the locations assessed in the Peel region meet these in particular for trailhead signage and trail markers. • Increase the quantity of sustainable purpose built equestrian trails in strategic locations including Jarrahdale. • Prioritise investment in fewer trails, with a focus on providing quality experience and facilities. • Ensure trail developments have adequate infrastructure relevant to scale of development proposed. • An estimated 264,000 (13.2%) Perth residents ride for recreation in a typical week. Perth is one of the fastest growing capital cities in the country and Peel one of the fastest regions, but less than 180,000


Overview	Strategic Initiatives
	<p>(9%) of residents have good access to purpose-built mountain bike trails. This is a great opportunity for Langford Park.</p> <ul style="list-style-type: none"> • Current participation rate state-wide for cycling is 12.4%. With population expected to double in the northern Peel Region by 2050 ensuring access to safe cycling routes for commuting and recreating will be critical. • There is opportunity to improve governance structures supporting trails within the Peel region by combining representatives from relevant organisations based on geographic distribution of trail development. Strengthening the role, representatives and resourcing of the WA Trails Reference Group as outlined in the WA Trails Blueprint is also imperative to effective management of trails going forward. • Jarrahdale captures Serpentine NP, Karnet Reserve, Gooralong Conservation Park and Jarrahdale State Forest within its development zone creating a single Nationally significant location. Proximity to a growing population and high scenic quality give this location significant potential for bushwalking and trail running. Existing trails are well used and placing a focus on improving quality of trail experience will be important in development of trails in the area. • Jarrahdale captures Serpentine NP, Gooralong Conservation Park and Karnet Reserve within its development zone creating a single regionally significant location. Proximity to a growing population, existing demand and high scenic quality give this location significant potential for mountain biking. Although there is significant potential it is constrained by conservation reserve and limited existing infrastructure. • Jarrahdale captures Serpentine NP and Karnet Reserve within its development zone creating a single Nationally significant location. Proximity to a growing population and high scenic quality give this location significant potential for equestrian trails.
Perth and Peel Mountain Bike Master Plan 2017	
<p>The Perth and Peel Mountain Bike Master Plan (PPMP) has been developed to guide future strategic investment in mountain bike recreation, tourism and event development across the combined Perth Metropolitan (Perth) and Peel regions of Western Australia (WA).</p> <p>The PPMP reflects the aspirations of a number of key stakeholders and the Western Australian mountain biking community for the Metropolitan Perth and Peel regions to become an economically, environmentally and socially sustainable international mountain biking destination.</p>	<p>This master plan proposes development of a diverse mix of trail types in a range of reserves, including as a priority:</p> <ul style="list-style-type: none"> • Development of Jarrahdale as a regionally significant mountain bike trail town with at least 30km of mountain bike trails, to attract the recreation and tourism markets from the nearby nationally significant locations. <p>These developments are intended to:</p> <ul style="list-style-type: none"> • Focus investment on providing high quality key infrastructure and trails, considering the need for rehabilitation of existing trails and sites. • Improve diversity of trail types and classifications. • Improve access and achieve growth in local participation, health and economic benefits and opportunities. <p>The development of appropriate mountain bike facilities in strategic locations will encourage visitation and expenditure, resulting in a tangible economic impact for the surrounding communities and the regions. It is imperative that revenue-based sustainable management models are established for ongoing facility management and development. Jarrahdale is a small historic timber milling town located 45km south east of</p>

Overview	Strategic Initiatives
	<p>Perth in the Darling Range. The area has existing mountain bike demand due to Langford Park and the Munda Biddi Trail being located in the area, and it could be developed to regional significance. Although there is good opportunity for development it is significantly constrained by conservation reserve and limited infrastructure. Should the constraints be overcome, the area would be capable of hosting a high quality trail network serving the southern Perth Metropolitan and Peel recreation market as well as the tourism market from nearby national locations, including the Perth Hills Precinct, Wungong Trail Centre and Dwellingup Trail town. The opportunities surrounding the township, and the existing infrastructure and services provided make Jarrahdale suited to trail town development in the future and this should be considered in all planning. Lack of land manager support is identified as the location's largest constraint.</p>

Local Documents

Table 2: Overview of key strategic initiatives at a local level that support the creation of Jarrahdale as a trail town

Overview	Strategic Initiatives
Shire of Serpentine Jarrahdale Local Trail Plan 2019	
<p>The Shire of Serpentine Jarrahdale offers visitors and locals a hills and forest experience, with the Scarp Serpentine and Wungong Gorges being the notable landscape features.</p> <p>The Shire is located on the northern boundary of the Region bordering the outer suburbs of Perth. The Shire is predicted to experience significant population growth to 2026 and beyond with population density to be above 50 people per square kilometre. Given this it will be important to focus on local trails within towns and strategic connections for recreation within, into and out of the Shire. There is also potential within the Shire to capitalise on the tourism potential of trail development. Trails focused on drawing visitors into the region should make the most of the iconic landscape experiences on offer.</p>	<p><u>The opportunities surrounding the township, and the existing infrastructure and services provided make Jarrahdale suited to Trail Town development in the future and this should be considered in all planning.</u></p> <p>A series of recommendations relate to the establishment of Jarrahdale as a Trail Town and are further elaborated on in Section 4 Trail Opportunities below.</p>

Overview	Strategic Initiatives
Shire of Serpentine Jarrahdale Strategic Community Plan 2017-2027	
<p>Council's principal 10-year strategy and planning tool. It is the principal guiding document for the Shire's strategic planning. Community engagement is central to this Plan.</p> <p>Our vision: City living offering a rural lifestyle with abundant opportunities for a diverse community.</p> <p>A strategic objective has been developed for each of four key themes of community interest, being:</p> <p><i>People: A connected, thriving, active and safe community.</i></p> <p><i>Place: A protected and enhanced natural, rural and built environment.</i></p> <p><i>Prosperity: An innovative, commercially diverse and prosperous economy.</i></p> <p><i>Progressive: A resilient organisation demonstrating unified leadership and governance.</i></p>	<p>Desired outcomes for each objective have been determined and strategies to achieve the outcomes established. Of particular relevance to the creation of Jarrahdale as a Trail Town are objectives 1.1, 1.2, 2.2, 3.1 and 3.2.</p> <p>Other key outcomes included:</p> <p><i>“Conservation of natural vegetation is important as the landscape offers an opportunity to promote the Shire as a ‘trails hub.’”</i></p> <p><i>“Actively support tourism growth within the district.”</i></p>  <p>The infographic details the following objectives:</p> <ul style="list-style-type: none"> People: <ul style="list-style-type: none"> 1.1 A healthy, active, connected and inclusive community 1.2 A recognised culture and heritage 1.3 A safe place to live Place: <ul style="list-style-type: none"> 2.1 A diverse, well planned built environment 2.2 A sustainable natural environment 2.3 A productive rural environment Prosperity: <ul style="list-style-type: none"> 3.1 A commercially diverse and prosperous economy 3.2 A vibrant tourist destination experience 3.3 An innovative, connected transport network 3.4 An innovation centre of excellence Progressive: <ul style="list-style-type: none"> 4.1 A resilient, efficient and effective organisation 4.2 A strategically focused Council
Shire of Serpentine Jarrahdale Economic Development Strategy 2018-2023	
<p>This Economic Development Strategy provides the overall direction as well as a tactical action plan to achieve the community's aspirations of "An innovative, commercially diverse and prosperous economy as expressed in the Strategic Community Plan 20107-2027 and SJ 2050."</p> <p>In summary it provides:</p> <ul style="list-style-type: none"> • A 5 year strategy and action plan to guide economic development activities. • Identifies specific competitive advantages, clusters and growth opportunities. • Provides strategies and detailed actions to deliver on the community's aspirations and goals for the future economic growth. 	<p>Despite the strong population and economic growth, many residents have to leave the Shire every day to go to work. Based on the 2016 Census data, 79% of local resident workers (10,181 people) seek employment outside of the Shire. This outflow of workers costs the local economy \$31 million in local expenditure and 411 jobs. This cost will continue to increase until more local jobs are provided. Developing Jarrahdale as a Trail Town will assist in addressing this challenge and will create local employment opportunities.</p> <p>A number of the key competitive advantages identified in the Strategy relate to trails and developing Jarrahdale into a Trail Town:</p> <ul style="list-style-type: none"> • The Shire's Strong Natural Amenity. • Emerging Tourism Markets. • Existing Equine Industry. <p>The arts and recreation sector was identified as having a both a high competitive advantage and strong likelihood of economic growth.</p> <p>Tourism, trails and events were identified as an opportunity to enhance economic development activity for the Shire along with the Equine Industry.</p> <p><i>“Further development of local tourism industry including accommodation, trails and other nature-based/adventure tourism products/experiences, including wellness tourism as well as events.”</i></p>

Overview	Strategic Initiatives
	<p>A key initiative of the Strategy is to: <i>“Proactively develop trails for mountain biking, motor cycling, horseback riding and hiking to promote tourism.”</i></p>
Shire of Serpentine Jarrahdale Tourism Strategy	
<p>The purpose of the Tourism Strategy (Strategy) is to provide direction for the sustainable development of tourism in the Shire of Serpentine Jarrahdale. Its core aims are to:</p> <ul style="list-style-type: none"> • Identify opportunities for development of new and upgrading of existing tourism product to meet future visitor expectations and demands. • Identify the need for new investment and infrastructure that supports the development of tourism in the Shire. • Provide relevant, research-based information on current and future tourism supply and demand. • Provide recommendations on the focused priorities for engagement with key industry stakeholders, potential investors, customers and the community. 	<ul style="list-style-type: none"> • A number of key areas were identified and explored, resulting in the development of eight tourism priorities that will take the Shire forward towards its goal of transforming Serpentine Jarrahdale into a high-ranking day-trip and holiday destination. All eight priorities have relevance to establishing Jarrahdale as a Trail Town. • The most relevant was: <u>Trails and expansion of the region’s trail network</u>, “<u>On the Trail</u>” – This priority reviews the existing trails network and considers the opportunity for Serpentine Jarrahdale to become a highly desirable Trail Town destination. • Branding and Wayfinding, Finding the Way – This priority identifies the need for an innovative, consistent, consumer-centric tourism brand for the Shire of Serpentine Jarrahdale. This section also considers wayfinding – the means by which potential visitors discover the locality and, once they’ve decided to visit, move easily from point to point within it, so that maximum exposure of the area’s tourism attractions is achieved. This will be an important component of establishing Jarrahdale as a Trail Town. • Food Tourism, Food for Thought – This priority leverages the region’s agricultural roots to develop opportunities in the food and wine tourism sphere. A range of food and beverage offerings will be important in Jarrahdale. • Equine Tourism, Horses for Courses – This priority recognises Serpentine Jarrahdale’s peak position in Western Australia’s equine tourism sphere and explores the potential for equine-based tourism across various areas of activity. Equine trails will be a key feature and point of difference for the Jarrahdale Trail Town. • Attractions (Natural, Cultural and Historic), Go Natural – This priority explores ways to develop sustainable tourism visitation through the significant portion of the Shire that is included in the natural estate. This includes large tracts of land in and around Jarrahdale. • Adventure Tourism, Tap into Adventure – This priority takes advantage of the topography of the land in many parts of the Shire to develop healthy activities that will attract significant numbers of tourists. Adventure tourism integrates with other tourism priorities, such as trails and a number of private sector initiatives. Trails and their associated activities can be forms of adventure tourism. • Tourist Accommodation, Stay...Just a little longer – This priority recognises that the availability of appropriate tourist accommodation in the shire is critical to the development of short-stay tourism. This priority considers options for development, including the creation of a major tourist accommodation and activities hub in Jarrahdale. This will be important for the Jarrahdale Trail Town. • Events, In the Event – This priority considers how the addition of regular and occasional events will help attract large numbers of special interest tourists to the Serpentine Jarrahdale area. This could include trail based events such as trail running and endurance rides.

Overview	Strategic Initiatives
Shire of Serpentine Jarrahdale Equine Strategy 2018	
<p>The Shire of Serpentine Jarrahdale Equine Strategy 2018 (the Strategy) seeks to understand the nature of the equine sector in the Shire, its position in relation to the Peel Region and the State, and to establish goals and strategic actions to achieve to ensure there is continued support and development of the sector into the future.</p>	<ul style="list-style-type: none"> • The Shire of Serpentine Jarrahdale is the leading Equine Region in Western Australia. The celebration of this identity would ensure the reputation become widely known, and that external funding and business investment equitably support the local equine community. • The Strategy has uncovered that not only is the equine sector strong within the Shire but that the Shire of Serpentine Jarrahdale is the leading equine hub in both the Peel and the State. • The Shire has an extensive trail network totalling more than 150km. The top equine activities of those surveyed are Trail Riding (62%) and Recreational Riding (54%). 70% of the respondents from outside the Shire had used the Shire's trails in the last 12 months, highlighting it as a clear attraction. • The Southern Equine Hub includes 6km of trails in Serpentine and the Jarrahdale Bridle Trail that heads north and covers a 28km loop through the forest. Slightly off South Western Highway, with a population of 50,000 (people) on the doorstep, is a site that can be activated as trailhead. This is the Strategic Tourism Site at the starting point of the Multi-use Rail Trail (16km return from Whitby to Jarrahdale along the servicing corridor of an old railway line). Both the Jarrahdale Bridle Trail and the Whitby to Jarrahdale Rail Trail should be realigned to start/finish at the Jarrahdale Oval. • The Jarrahdale Oval is intended to be an events space (with no riding on the oval permitted), however can easily function as a trailhead location with parking facilities.
Shire of Serpentine Jarrahdale Cycling and Walking Plan 2020	
<p>The Shire of Serpentine-Jarrahdale's Cycle and Walking Plan (the Plan) sets out an interim and long term aspirational walking and cycling network for the Shire and includes an implementation program for individual projects that will support the realisation of the Plan's vision and objectives. The entire strategy and path alignment generally follows the Department of Transport's Perth and Peel Long Term Cycle Network Plan.</p>	<p>Wherever possible, the paths included in this plan are to be off road and within the road reserve, with the exception of the route between South Western Highway and Jarrahdale, which is proposed to follow the disused railway line. No paths are proposed through multiple use corridors, through public open space, within drain reserves, Water Corporation pipeline reserve or power line reserves.</p> <p>In relation to Jarrahdale the relatively small population and the planned continuance of rural uses is likely to limit the potential for significant upgrades to the active transport network in the near future. The portion of the Shire east of the Darling Escarpment is characterised by rolling terrain and is sparsely populated. The town site is very small, so only very short sections of path would be needed to improve walking and cycling within the town centre.</p> <p>The Jarrahdale precinct has a generally good path network given its small size and relative isolation. However, like the Serpentine precinct, bicycle parking facilities are few and far between. The path along the town site section of Jarrahdale Road (between Buckland Road and Kingsbury Drive) caters for the demand to access key attractors. Recommendations include:</p> <ul style="list-style-type: none"> • Extend path on Atkins Street to Marginata Parade and Jarrahdale Road. Install crossover at Jarrahdale Cemetery. • Install path on Oak Way and Brady Road. • Any future sealing of Millars Road (to connect the town centre with the oval) should incorporate a path that should continue on to Nettleton Road and connect to Langford Park. • Install bicycle parking at key facilities within the town centre.

Overview	Strategic Initiatives
Shire of Serpentine Jarrahdale Trail Development Business Case 2020	
<p>Three key trail projects have been identified that will provide the Shire of Serpentine Jarrahdale with increased economic, employment and health benefits. These three projects include the:</p> <ul style="list-style-type: none"> • Mundijong to Jarrahdale Rail Trail. • Jarrahdale Oval Trail Head. • Byford Trail Centre 	<p>The development of the three trail projects will be highly beneficial to not only SJ's economy but also to its residents who will reap multiple health and activity benefits due to their close proximity to the proposed Mundijong to Jarrahdale Rail Trail with accompanying Jarrahdale Oval Trail Head and the Byford Trail Centre which will act as a gateway for walkers, horse riders and trail runners into the Wungong Regional Park.</p> <p>These three trail projects are detailed further in Section 4 Trail Opportunities below.</p>
Shire of Serpentine Jarrahdale Public Art Strategy and Public Art Masterplan 2019-2023	
<p>The Strategy and Masterplan have been produced to guide the Shire of Serpentine Jarrahdale (the Shire) in the development of quality public art projects, guide the use of public art contributions to the Shire, as well as in procuring relevant commissions.</p>	<p>The Shire offers residents and visitors some of the most desirable outdoor settings in the Perth and Peel regions. Given this environment, public art is a powerful way to enhance Serpentine Jarrahdale's liveability and enhance economic development opportunities.</p> <p>The Strategy and Masterplan provides a curatorial and technical framework for new commissions, ensuring that the Shire of Serpentine Jarrahdale's public art collection is cohesive, celebrates local cultural heritage and histories, and supports the development of a dynamic, liveable and viable Shire.</p>

Key Stakeholders Groups

A wide range of stakeholder groups are involved or have an association with trail planning, development, management and promotion of trails within Jarrahdale and these include:

Key Landholders / Owners

Department Biodiversity, Conservation and Attractions (DBCA)- DBCA are a primary landowner/land manager in Jarrahdale with the majority of trails under its management and maintenance, including Serpentine National Park and Jarrahdale State Forest. DBCA is recognised as a key partner for the Shire in achieving trails outcomes within Jarrahdale.

Gnaala Karla Booja Traditional Owners- The land of Jarrahdale and its surrounds are the traditional lands of the Aboriginal Southwest Nyungar Nations and specifically part of the Pindjarup (Pinjareb or Binjareb) Nyungar language group. The South West Aboriginal Land and Sea Council (SWALSC) - Southwest Nyungar Settlement Agreement acknowledges this area as part of the larger Gnaala Karla Booja region, referring to the Nyungar language or dialectical groups of the Binjareb/ Pinjarup, Wilman and Ganean.

National Trust of Australia (WA)- The National Trust of Australia (WA) is the owner of significant heritage assets in Jarrahdale including the Heritage Park, Mill Manager's House and No1 Mill.

Alcoa of Australia Ltd- Alcoa actively mines Bauxite ore within the Shire of Serpentine Jarrahdale in close proximity to the town of Jarrahdale. Alcoa has submitted plans with the State and Federal Governments to expand the Huntley mine into the Myara North region located in the Jarrahdale State Forest.

Water Corporation- Water Corporation proactively manages and protects the drinking water catchment land areas within Jarrahdale.

Local Trail and Community Groups

Jarrahdale Heritage Society - Jarrahdale Heritage Society, is based at the Old Post Office museum and is run by volunteers who are committed to preserving the area's natural and man-made history. They also conduct award-winning guided walks within and around Jarrahdale on existing trails and paths.

Jarrahdale Community Collective - Jarrahdale Community Collective Inc is an incorporated not for profit association comprising of passionate residents who wish to foster the development of Jarrahdale's community and represent the interests of its residents.

Southern Hills Mountain Bikers - The Dwellingup Trail Group and Jarrahdale Action Groups have joined forces to better provide for all mountain bikers. Southern Hills Mountain Bikers is open to any mountain biker that has an interest in the many trails located in the Southern Perth area. They cater for all levels of riders and all types of trails. Their aim to is promote, maintain and expand the network of trails.

Jarrahdale Forest Protectors - The Jarrahdale Forest Protectors is a local organisation whose objective is to establish a zone in the Northern Jarrah Forest to preserve its ecology for the benefit of our community and future generations.

Jarrahdale Business Owners and Operators - People who own and/or operate a business within or nearby to the Jarrahdale township.

Jarrahdale Residents - People who reside in or nearby to the Jarrahdale township.

Shire of Serpentine Jarrahdale Equine Advisory Group - The purpose of the Equine Advisory Group is to provide the Shire with advice in regards to the needs and priorities of the Serpentine Jarrahdale Equine Community and support Council in the delivery of projects to enhance the Serpentine Jarrahdale Equine Industry and Community.

Serpentine Jarrahdale Trails Working Group - A Trails Working Group, known as SJ Trails Incorporated has been formed and consists of representatives from local community members and groups who have a vested interest in the development and maintenance of trails within the Shire.

Perth Hills Tourism Alliance - The Perth Hills Tourism Alliance (PHTA) is a strategic alliance and demand driver to provide joint tourism marketing spread across the Perth Hills region.

Members include the Shire of Serpentine Jarrahdale, City of Armadale, City of Kalamunda, City of Swan and the Shire of Mundaring.

Key aims of the PHTA are:

- Have Perth Hills recognised as a key tourism precinct.
- Increase visitation.
- Achieve unified marketing.
- Source appropriate tourism investment funding.
- Product and industry development.
- Lobbying and advocacy, and facilitating strategic alliances to achieve all of the above.

Trail Bodies

Trails WA - Is the peak organisation for trails in Western Australia and is responsible for managing and promoting the Trails WA website, Trail Friendly Business Program and the TrailTown Accreditation.

WestCycle - WestCycle is the peak body for cycling throughout Western Australia and a representative voice for all bike riders.

HikeWest - HikeWest is the peak body and voice for bushwalking / hiking in WA.

Western Australian Endurance Riders Association - Western Australian Endurance Riders' Association (WAERA) is the peak body for horse endurance riding in Western Australia.

Australian Trail Horse Riders Association - Australian Trail Horse Riders Association is Australia's premier representative body for Trail Horse Riders.

Munda Biddi Trail Foundation - The Munda Biddi Trail Foundation works with DBCA to administers a range of Trail-related events, co-ordinate volunteers, answers enquiries and supports the wider Munda Biddi community in Western Australia and further afield. The Munda Biddi Trail is managed by DBCA.

Bibbulmun Track Foundation - The Bibbulmun Track Foundation (BTF) is an incorporated, not-for-profit organisation established to provide support to DBCA in the management, maintenance and marketing of the Bibbulmun Track.

Relevant Government Agencies and Organisations

Department of Local Government, Sport and Cultural Industries (DLGSC)- Plays a key role in the development of strategic planning in relation to trails development in Western Australia.

Department of Primary Industries and Regional Development (DPIRD)- Works to protect the sustainability of natural resources and accelerate ongoing economic growth, job creation and regional development.

Department of Water & Environmental Regulation (DWER)- Manages and regulates the state's environment and water supplies.

Main Roads Western Australia (MRWA)- Manages and regulates the state's road network.

Peel Development Committee (PDC)- Works with local government, State Government agencies, industry and the local community to create jobs, ensure a bright future and enhance prosperity of the region.

Regional Development Australia (Peel)- Works with all levels of government, business and community groups to support in economic development in the Peel Region.

Regional Development Australia (Perth)- Works with all levels of government, business and community groups to support in economic development in the Peel Region.

2. Trails and Trail Markets

What is a trail?

Trails are pathways or routes that are used for recreation, tourism and appreciation of natural and cultural values. Trails may be short or long; be part of a trail network or a single journey; be used for one activity or be shared by several different trail activities; be primarily used by local residents or form a visitor attraction; be purpose-built paths or routes designated by signage and information (Western Australian Strategic Trails Blueprint 2017-2021, 2017).

What is a Trail Town?

Trail Models

A trail model defines the extent of development for a trail facility. Depending on a number of factors, the scale of trail model can vary significantly from individual trails up to trail centres and trail towns refer Figure 1. The type of trail model should be appropriate to the significance rating of the trail facility and where possible, allow for opportunities to generate revenue that can sustain the development. Refer Table 3 for a summary of trail models relating to significance level.

Trails come in a variety of types and configurations and are defined by their model, system, use, direction and classification. They can accommodate a range of user types. Other trail models such as individual trails, trail network/s and trail centres can also be associated and integrated with a Trail Town (Peel Regional Trails Strategy, 2019).

Table 3: Trail models, significance, scope and extent

	INDIVIDUAL TRAILS	TRAIL NETWORK	TRAIL CENTRE	TRAIL TOWN	TRAIL PRECINCT
National Significance	Only if part of trail town	Only if part of trail town	✓	✓	✓
Regional Significance	Only if part of trail town	✓	✓	✓	✗
Local Significance	✓	✓	✗	✗	✗
Population centre based user services & facilities	✗	✗	✗	✓	✓
Site-based user services & facilities	✗	✗	✓	✓	✓
Associated infrastructure	✓	✓	✓	✓	✓
Multiple trail models	✗	✗	✗	✓	✓
Multiple trails	✗	✓	✓	✓	✓
Single trail	✓	✗	✗	✗	✓

Individual Trails

Individual linear or looped trails are generally not considered as a development model for a destination. Long distance trails can link individual trails and can also be the precursor to developing a destination. Small individual trails typically form part of a Trail Town, centre or network model.

Trail Network

A trail network is a single site with multiple signed and mapped trails of varying type and classification, with no visitor centre and limited user facilities. A trail network may be standalone within a population centre or individual location, or form part of a trail centre or Trail Town. If not part of a Trail Town, trail networks are often located away from population centres, or in a location that does not provide essential visitor services.

Trail Centre

A trail centre is a single site with dedicated visitor services and trail facilities, provided by a single trail provider. It includes multiple signed and mapped trails of varying type and classification. A trail centre can be part of a Trail Town and incorporates a trail network. They are typically located close to major population centres or iconic locations.

Trail Town

Trail Towns can be defined as a population centre that offers a large range of high-quality trails, trail user related services, facilities and businesses, strong branding, supportive management and governance. Trail Towns normally host several signed and mapped trails of varying types and classifications and/or a trail network of linked trails accessed via trailheads or trail centres. Essential facilities and visitor services are available within the vicinity and are typically provided by established independent businesses or Local Governments. Trail Towns require:

- Visitor Information.
- Attractions and Activities.
- A Trail Centre.
- General Services and Supplies.
- Trail Networks.
- Accommodation.
- Individual Trails.
- Equipment Hire.
- Amenities and Facilities.

Trail Precinct

A precinct may be designated where there are a number of major opportunities within close proximity to each other and a major population centre. Models can be linked strategically through physical infrastructure or promotion and marketing to create a large and diverse trail destination. This could be a future aspiration for the Shire of Serpentine Jarrahdale.

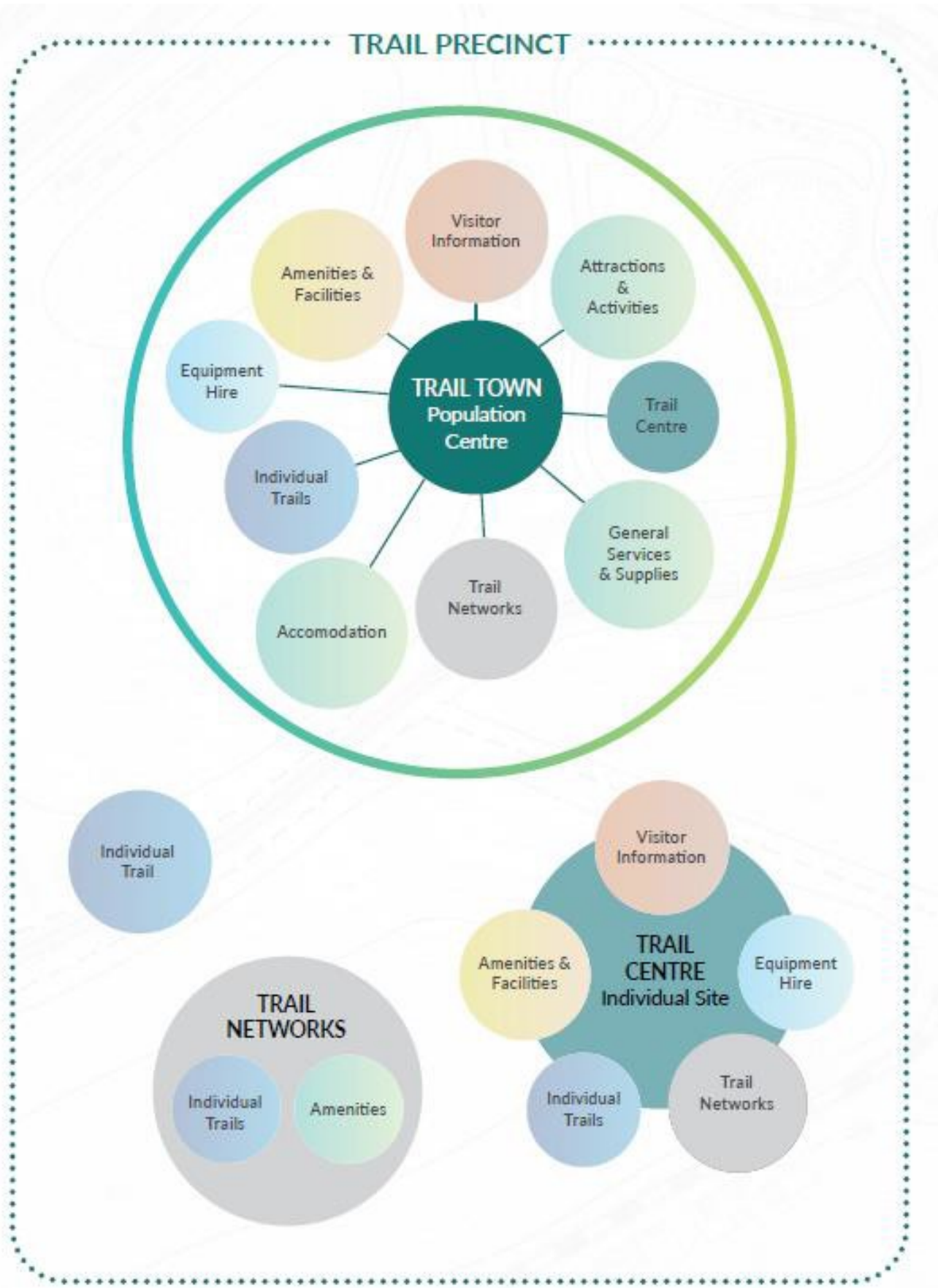


Figure 1: Trail Models as defined in the WA Strategic Trails Blueprint

Sustainable Trails Planning and Development

The *Department of Local Government, Sport and Cultural Industries* (DLGSCI) and the *Department of Biodiversity, Conservation and Attractions* (DBCA) have partnered to develop a *Trails Development Series* to provide best practice guidance to any trail proponent.

The Trails Development Series is presented in four parts:

- Part A: A Guide to the Trail Development Process.
- Part B: A Guide to Community Consultation.
- Part C: A Guide to using Multi-Criteria Decision Analysis (MCDA).
- Part D: Checklists and Templates.

The Trail Development Series contains all parts and is intended to assist groups developing a trail project to follow a standardised process, consider all issues and approvals and develop an approach to gather support from the local community and relevant government agencies.

Ensuring sustainable trails both from a management and trail experience perspective requires a thorough development process. Working within a standardised methodology is especially important in high conservation areas where trail planning, design and construction needs to be done right the first time. Building rigour into the trail development process will ensure trail proposals are transformed into high-quality, low-maintenance assets on the ground.

The Trail Development Process involves eight stages (Figure 2) and encompasses a constant evaluation, review and improvement process as trails are being developed, maintained, extended or renewed. Where possible, each stage should be completed before moving on to the next stage, although some overlaps may be possible (Trails Development Series, 2019).

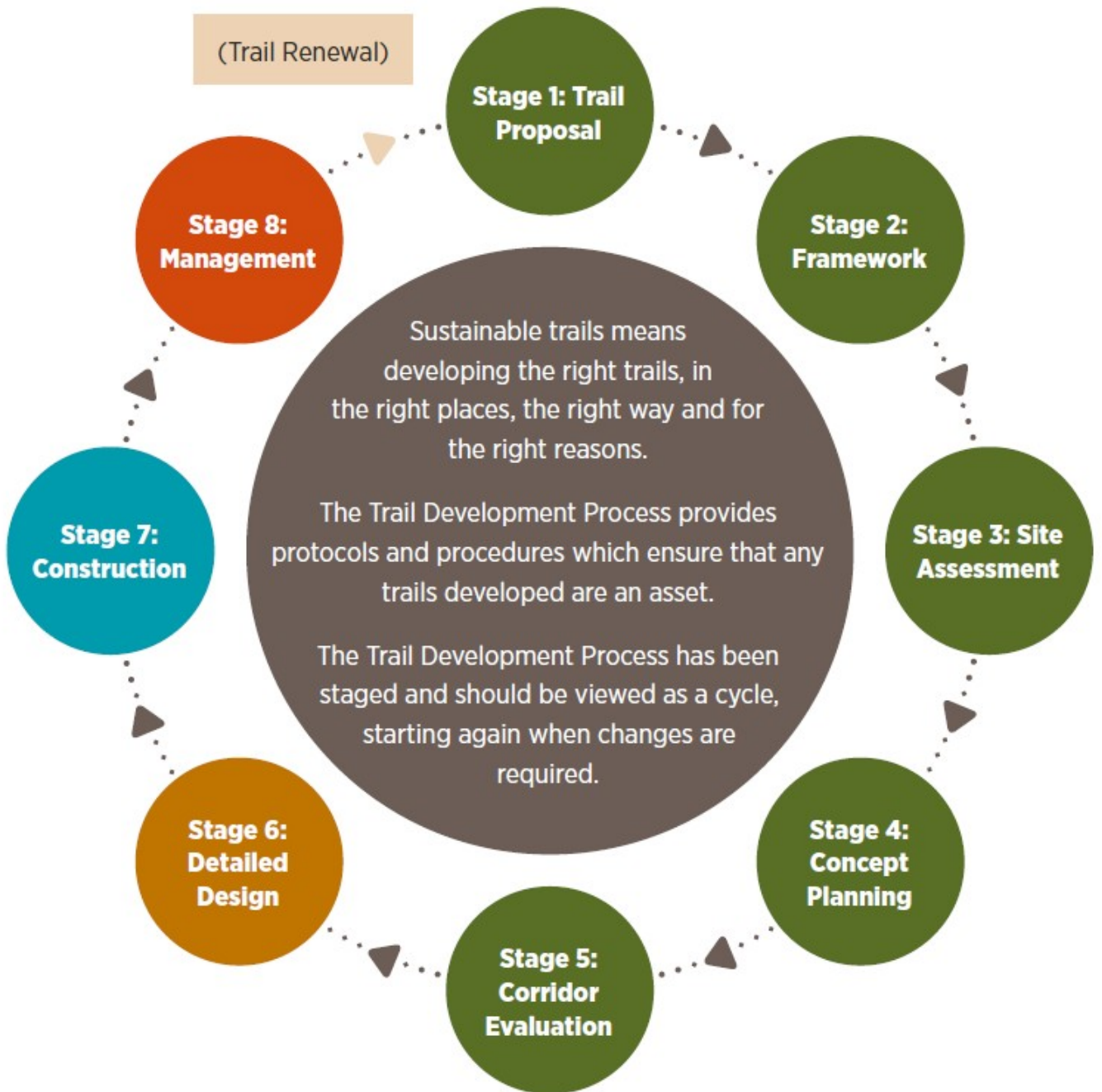


Figure 2: Eight Stages of the Trail Development Process as identified in the Trails Development Series

What Makes a Good Trail Experience?

Trails can be designed for various users. Trails provide outdoor recreational opportunities for local communities. They contribute significantly to our health and wellbeing and provide valuable commuting alternatives. There are visitors who travel around the world seeking Instagram worthy #epictrail experiences. This means that trail users today have higher expectations about their trail experience. Trail users anticipate ease of planning and fact finding, access, high quality regularly maintained infrastructure, facilities and services and complementary packaged options including accommodation, food and beverage and other value-add activities. Considering user experience is essential and central to all aspects of trail design and management. (Recreational Trail Planning, Design and Management Guidelines, 2020)

Different Types of Trail Experiences

The experiences we offer trail users are based on the planning phase of developing and understanding the broader vision, target markets and following guiding principles for trail development. The experience and the trail users will inform the type of access, materials, trail width, design and grading. The overall trail experience will need to be carefully packaged for the trail user type including facilities, signage, products and services and value-add activities.

During the planning phase of developing a trail, it is necessary to determine the needs of multiple user groups to appeal to multiple demographics. Planning will also need to anticipate usage rates and user capacity.

Trails can be single-use or shared use. It is important to carefully design trails that are shared use to ensure safety and visitor enjoyment without creating conflict between users. The different types of trail experiences that are available in Jarrahdale are outlined here:

Bushwalking/ Urban Walk and Trail Running

Enjoying a recreational trail on foot varies from leisurely strolls to a more intense and strenuous hike through rugged terrain. Walking can be done for commuting or exercising in urban areas or in national parks and reserves, offering overnight and multi-day experiences. Walkers completing a more remote activity are generally looking to immerse in nature or challenge themselves on an adventure hike.

Like walkers, runners can enjoy a range of trail types in urban and hard settings or more remote and wild settings exploring challenging cross country terrain. Trail running continues to grow in popularity with emerging trail running events occurring internationally. Trail running adventures can include orienteering and rogaining challenges.

Bushwalking and Trail Running user types fall on a spectrum from recreational to enthusiast (DLGSC, 2018). Recreational walker and runners typically use the trails close to home whereas enthusiasts are willing to travel to experience specific trails.

Mountain Biking (MTB)

Mountain biking trails provide a broad range of experiences and possibilities for beginners and family groups, to more adventurous cross-country and downhill riders. Mountain biking may be done for leisure locally or also attract major international competitions. Mountain Bikers are typically divided into five user types based on trail requirements and expectations (Department of

Biodiversity Conservation and Attractions, 2015) they are leisure, enthusiast, sport, independent and gravity.

Cycling

Cyclists often use urban trails for commuting and also enjoy longer cycle trails for short breaks and weekends solo or with family and friends. Trails can include formed bike paths or back roads and remote trails. Gravel riding is becoming a popular way to explore and experience back country adventures on e-bikes. There are cycle tourists (domestic and international) who travel from place to place with their bicycle to better explore a region.

The peak body for cycling in WA WestCycle defines the following user types, commuting, road, track, mountain bike, cyclocross, BMX, touring and race.

Horse Riding/Equestrian

Horse riding includes short recreational riding for a few hours on a weekend or endurance rides with people participating in riding competitions who may use trails for training purposes; long distance riders also enjoy overnight experiences or longer journeys on horseback.

Horse riders can be divided into four user types based on distance and recreation or event based riding. They are horse trail riding, endurance riding, horse trekking and harness driving.

Drive (2WD), Drive (4WD) and Trail Bikes

Trails for motorized vehicles such as two/four wheel drives come in various forms including maintenance and fire tracks. They also include the sealed road network where drive trails are often based on popular routes that showcase landscapes, views, heritage buildings/features, wineries, natural features and other local attractions.

Sources: (WA Department of Sport and Recreation and TRC, 2017), (Peel Regional Trails Strategy, 2019) and (Recreational Trail Planning, Design and Management Guidelines, 2020)

Visitor Economy

The visitor economy can play a big role in supporting job creation. The term 'visitor economy' refers to the production of goods and services for consumption by visitors, which includes the industries that directly serve visitors (such as hotels, transport providers, tour operators and attractions), as well as those involved indirectly, such as retail and food production. This recognises that visitor activity does not occur in isolation and contributes to investment and jobs across a range of industry sectors. The visitor economy is now recognised in Australia as an intrinsic, sustainable and a driving part of economic development. It creates long term improvements in the liveability of cities, towns and rural life and significantly improves the prosperity of communities (Why and how local government should engage with Victoria's Visitor Economy, 2018)

A report by the Australian Tourism and Transport Forum (Unlocking Our Great Outdoors, 2017) highlighted that:

- Australia's natural beauty is a key attraction for national and international visitors. Nature-based tourism is one of the fastest growing sub-sectors of the tourism sector and trails are a key component of this sector. Indeed, growth in nature-based travel by international visitors, domestic overnight visitors and day-trippers outpaced the growth rate for overall visitation numbers in all three of these visitor-type categories.
- Nature-based tourism is an important contributor to the economies of regional Australia. Natural assets are often the primary drivers of visitation to a region and are the catalyst for jobs and economic growth.
- After recording flat growth between 2005 and 2011, nature-based tourist numbers have accelerated in more recent years. This has occurred for all three main categories of tourists – international, overnight domestic and day trippers.
- Nature-based visitor expenditure also continues to grow in real terms. In 2016, international visitors spent \$20.0 billion (+6%) on nature-based activities and domestic overnight visitors spent only slightly less at \$18.9 billion (+10%). Domestic day trippers spent a more modest \$2.1 billion on nature-based activities (+3%).
- In 2016, 5.2 million international visitors, or over two-thirds of all the international visitors to Australia, engaged in some form of nature-based tourism. In addition, nature-based tourism attracted 20.1 million domestic overnight visitors in 2016 and 23.6 million domestic day trip visitors.

Other key statistics show that:

- According to Tourism WA an estimated 2.7 million overnight visitors to WA participated in a nature-based activity in 2015-2016 – 27% of all the State's overnight visitors and an increase of 15% per year from 2012-2016.
- An average of 130,000 vehicles visiting Serpentine National Park per year and recent results from Department of Biodiversity, Conservations and Attractions (DBCA) trail usage counters have calculated over 40,000 users of Langford Park Mountain Bike Trails in 2020 an estimated 100% increase (Parks & Wildlife - Serpentine National Park overview, 2020).

A report prepared by TRC Tourism recently in 2020 for Tourism WA (Cape to Cape Eco Accommodation Pre-Feasibility Study 2020, 2020) found that:

- Demand is likely to grow for short and long-distance walking trails due to general tourism growth, increasing interest in nature based and adventure activities and growth amongst markets that have a high propensity for this type of experience.
- International visitors engaging in bushwalking and rainforest walks is increasing each year.
- Domestic overnight trips in Australia involving activities such as bushwalking increased 9%-to-12.8-million-year end December 2018.
- Participating in treks, trails and / or hikes is also rated by visitors to WA as one of the Top 5 motivators for travelling to the State.
- The four target markets particularly drawn to nature and soft adventure based experiences are Women Travellers, Active 55+, Young Adults and Active Families.
- There is an existing market for nature-based activities and bushwalking in the region and considerable potential for growth in walkers. Recent evidence has shown more people getting out into nature as a result of recent COVID19 pandemic restrictions. This trend is likely to continue with more people interested in outdoor activities.
- The World Travel and Tourism Committee (WTTC) identifies walking and outdoor adventure as one of the high value tourism sectors showing strong growth. Supporting this, the United Nations World Tourism Organisation (UNWTO) estimates the outdoor adventure sector has doubled in size in the past five years. The top adventure activities are hiking, cycling, safaris, culinary activities, and wellness-focused activities, with high end custom itineraries remaining high in consumer demand.

Shire of Serpentine Jarrahdale Tourism Snapshot

The Australian Government agency *Tourism Research Australia* provides a profile for local governments for international travel, domestic overnight travel and/or domestic day travel (Tourism Research Australia, 2021). For the Shire of Serpentine Jarrahdale in 2019 the following information was provided:

- 186 existing tourism businesses operate in the Shire.
- 5,000 international visitors staying 113,000 nights in the Shire on average 23 nights per person, spending \$4 million per annum.
- 42,000 domestic short stays staying 112,000 nights in the Shire on average 3 nights per person, spending \$11 million per annum.
- 258,000 domestic day trips spending \$14 million per annum.

From the figures above, it is reasonable to assume that Jarrahdale is already catering to the domestic day trip market in some way, with 258,000 day trip visitors into the Shire per year. It would appear that a focus on the overnight and short-stay visitor market will create the largest positive impact for Jarrahdale's visitor economy.

Trail visitation in Jarrahdale occurs primarily between April and early October. These months are cooler and provides optimal experiences in the forest may create opportunities for seasonal businesses and/or events. There is also the opportunity to extend the season to make Jarrahdale an attractive place to visit for trail use all year round, this would involve improved trail services and high-quality experiences including trails that are designed to sustain year round use.

Market Segments

When trying to analyse the potential visitors of a Trail Town a broad array of options exist. The complexity associated with defining who the target market is for a mixed-use Trail Town has implications on branding, marketing and positioning, as well as business development. The following are identified as market segments to capture an understanding of potential tourists.

Local

The local trail user market includes trail users who reside in or near the Serpentine Jarrahdale region. This market is important as many local trail users have worked hard to drive the development of trails, so that others may enjoy them, and without whose efforts many trails would not exist.

There is potential for growth in participation within the local trail user market through ensuring the trails provided are high quality and safe, and community volunteer, sporting and trail care groups are supported to activate the trails.

The local segment is likely to participate in local events and will use trails as a way to connect with their community and area. A trail user survey conducted to inform the *Peel Regional Trails Strategy* received 753 responses from users within the Peel region (46%) and outside the Peel region (54%). The survey indicates that the top three reasons that people use trails are:

1. Experience the outdoors.
2. Fitness.
3. Socialising.

It is therefore important that Trail Town provisions are coupled with community spaces and facilities to enable these users to come together and value-add to their trail experience.

The key visitor markets identified for the Shire within the *Peel Regional Trails Strategy* were:

- Nature based day trippers.
- Heritage day trippers.
- Family holidaymakers.
- Business travellers.
- School/corporate groups.

Factors motivating these visitors included:

- Active and passive outdoor activities.
- Heritage sites, drive routes and guided tours.
- Nature, marine, sightseeing and hospitality.
- Group facilities, nature and outdoor activities.

Figure 3 outlines the visitor markets and factors motivating visitors to the Peel Region including the Shire of Serpentine Jarrahdale as identified in the *Peel Regional Trails Strategy 2019*.

LGA/Shire	Visitor Markets	Factors motivating visitors
Shire of Murray [^]	<ul style="list-style-type: none"> ▪ Nature based day trippers 	<ul style="list-style-type: none"> ▪ Active and passive outdoor activities
Shire of Serpentine Jarrahdale ⁺	<ul style="list-style-type: none"> ▪ Heritage day trippers ▪ Mandurah day trippers ▪ Family holidaymakers ▪ Business travelers ▪ School and corporate 	<ul style="list-style-type: none"> ▪ Heritage sites, drive routes and guided tours ▪ Nature, marine, sightseeing and hospitality ▪ Lowcost accommodation and outdoor activities ▪ Value-for-money accommodation and hospitality ▪ Group facilities, nature and outdoor activities
Shire of Boddington and City of Mandurah [#]	<ul style="list-style-type: none"> ▪ Dedicated discoverers ▪ Aspirational achievers ▪ Grey explorers ▪ Family connectors 	<ul style="list-style-type: none"> ▪ Adventure, observation, discovery ▪ Indulgence, connection, variety ▪ Relaxation, connection, observation ▪ Variety, connection, relaxation

Figure 3: Visitor Markets and Factors Motivating Visitors from the Peel Regional Trails Strategy 2019

Destination Trail Users

The destination trail user market includes experienced trail users who regularly travel with the trails as a primary motivator. They have likely visited other Australian or international trails destinations. They seek high quality trails with good supporting infrastructure such as hospitality services, accommodation and events or attractions. These users are usually found in trails destinations and seek good terrain. Locations that combine desirable terrain with tourist activities and infrastructure have the best market appeal for destination trail users. This group also includes event participants who travel to a destination specifically for the event, typically spending additional time pre or post event to explore the area. Destination Trail Users are more likely to be “Dedicated Discoverers” under Tourism WA’s segmentation of “Experience Seekers” (Peel Regional Trails Strategy, 2019).

Trail Users While on Holidays

The trail users while on holidays market includes typically less experienced trail users, whose primary motivator for travel is not the trails. They generally comprise the leisure market and **represent the largest market potential**. This market views trail use as a secondary motivation for their visit, and will participate in trail activities incidentally. They will likely hire equipment as required. They may place less emphasis on the trail and more on accessibility of the facility, the setting and nearby attractions and amenities. These users are usually found in ‘holiday’ destinations and are seeking a unique holiday experience, relating to either culture, nature, cities, comfort, leisure and cafes/restaurants etc. Locations that combine these tourist attractions with trail opportunities have the best market appeal for this market segment. Trail Users While on Holiday can be both “Dedicated Discoverers” and “Aspirational Achievers” under Tourism WA’s segmentation of Experience Seekers (the key tourism market identified by Tourism Australia). (Peel Regional Trails Strategy, 2019).

Table 4 compares these two tourism market segments.

Table 4: Tourism market segment comparison

IDENTIFIED TOURISM MARKET	DESTINATION TRAIL USERS	TRAIL USERS WHILE ON HOLIDAY
Experience Seekers		
International visitors that prefer to travel to new and different places	✓	✓
Highly predisposed to Australia's offer	✓	✓
More likely to stay longer, spend more and disperse to regional areas	✓	
Found among all age groups, income levels and geographic locations	✓	✓
And are seeking:		
Authentic personal experiences	✓	✓
Social interactions	✓	✓
Meeting and interacting with the locals	✓	✓
Experiencing something different from their normal day-to-day life	✓	✓
Understanding and learning about different lifestyles and cultures	✓	✓
Participating in the lifestyle and experiencing it, rather than observing it	✓	✓
Challenging themselves – physically, emotionally and/or mentally	✓	
Visiting authentic destinations that are not necessarily part of the tourist route	✓	✓
Exposure to unique and compelling experiences	✓	✓
Dedicated discoverers		
Visitors travelling primarily for learning and new experiences	✓	✓
Those who want to discover something new	✓	✓
Aspirational Achievers		
Visitors travelling primarily for relaxation and indulgence		✓
Those who view travel and holidays as a reward for their hard work and success in life	✓	✓

International

It is relevant to consider this a key market segment that has been identified by Tourism Australia. The traditional target market segments grouped by age, physical features or location have been replaced by the consideration of a combination of characteristics, which brings this segment together under the title of “Experience Seeker” and have the following characteristics:

- Are experienced international travellers.
- Seek out and enjoy authentic personal experiences they can talk about.
- Involve themselves in holiday activities, are sociable and enjoy engaging with the locals.
- Are active in their pursuits and come away having learnt something.
- Are somewhat adventurous and enjoy a variety of experiences on any single trip.
- Place high importance on value and hence critically balance benefit with costs.
- Place high value on contrasting experiences (i.e. different from their day-to-day lives).

This segment constitutes around 30 to 50 percent of all potential long haul outbound travellers from key source markets.

Additional characteristics of the “Experience Seeker” are:

- Being experienced travellers, these people have an expectation of value and access to information.
- They investigate holiday options thoroughly and therefore are knowledgeable consumers.
- They are more likely to engage with local people and lifestyle than the average consumer. They want to absorb and get involved in day to day culture.
- Irrespective of age or nationality, are substantial consumers of non-traditional and mainstream media, being attracted to current affairs, topical, and special interest programs.
- They value the opinions of other travellers.
- They are comfortable accessing information and being exposed to digital information.
- They are more predisposed towards activities that contribute to enhancing them as individuals, through understanding or learning new things.
- Being tertiary educated and inquisitive, these individuals understand how brands work and operate. As such, they understand and would expect brand messages to be succinct, focused on their motivations, and provide a credible compelling message. In such environments, the development of strong brand associations is critical.

Market Motivators and Needs

Depending on the market, different motivators and experiences will be placed as the primary decision for engaging in the activity. Different user groups are driven by varying motivators, depending on whether they are undertaking travel or using the trails for recreation. Further research is required to understand the primary motivators for travel for all trail activities. The needs of the various markets will be different for different trail user groups, and need to be considered when developing a location such as Jarrahdale. Broadly, the primary motivators are controllable factors that influence destination choice, and can include:

- Diversity - A large quantity and variety of trail types and classifications located in varied terrain and topography.
- Uniqueness - Iconic, memorable and fun experiences in a unique setting. Typically in a natural landscape, with high visual and emotional value and often connected to an attraction.
- Quality - A range of high quality experiences, predominantly on purpose designed trail. Also relates to the provision of quality information, services and infrastructure.
- Accessibility - Trails located within close proximity of residences and short stay accommodation. Also relates to the provision of cohesive, well signed, mapped and promoted trails. Connectivity to other trails, transport, services and infrastructure increase accessibility to trails. Visitor services to improve accessibility for less experienced users.
- Community- An established user group community offering market credibility, a sense of belonging and camaraderie through events, volunteer support and social engagement.

Source: (Peel Regional Trails Strategy, 2019)

The Trail User Survey conducted as part of the development of the *Peel Regional Trails Strategy* 2019 indicated that trail users are willing to travel larger distances to reach trails with 60% of respondents indicating they would be willing to travel 50km or more. With Jarrahdale being located only 45kms from Perth, this segment can be readily captured with appropriate marketing and high quality infrastructure and experiences. This market includes:

- National visitors travelling for trails.
- Perth and wider WA visitors who are seeking a new experience.
- Perth families seeking a low-cost holiday option.
- Families or couples looking for day-trip / long weekend opportunities.

Other common survey responses that relate to establishing Jarrahdale as a Trail Town were:

- Trail users are multi-disciplinary participating in a range of trail based recreation activities.
- By developing trails and facilities, many locations throughout the project area (including in urban settings) have the potential to encourage and attract new people to trail based activities.
- There is a preference for trails in scenic locations and unique environments.
- Visits to trails in the Peel region are regular with most respondents indicating they visit weekly, monthly or several times a year.



Figure 4: Survey results which was conducted as part of the development of the Peel Regional Trails Strategy 2019

Trails Brand

The Shire of Serpentine Jarrahdale has adopted a Trails Brand Plan for Jarrahdale with the aim to position the Jarrahdale Trails as:

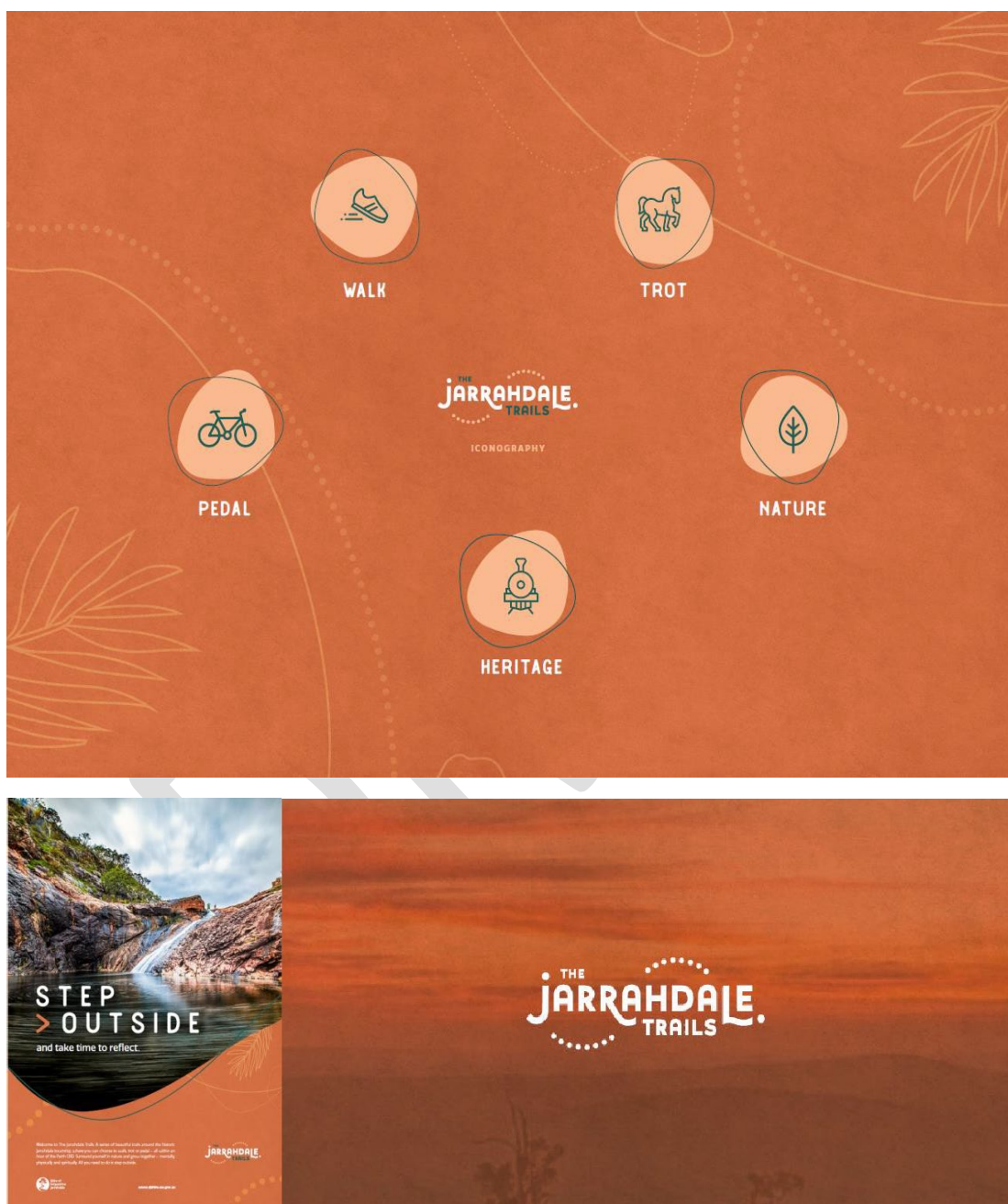
“The most enjoyable trails experience in Perth”.

Our goals:

To promote Jarrahdale as a destination of choice for people who understand the importance of heritage and are seeking an enjoyable trails experience - by foot, horse or bike.

To attract public and private engagement in Jarrahdale via engagement with the Shire’s trail network.

Figure 5: Examples of the adopted Jarrahdale Trails branding



Signage and Wayfinding style guide:

The Shire has identified the need for a cohesive and cost effective signage system to meet the needs of increased foot traffic and visitation to the Shire, and as part of this project, the enhancement of the “visitor experience” to Jarrahdale town centre and associated trails.

Through the development of a Signage and Wayfinding Style Guide it will:

- Develop a visual identity using clear and legible contemporary graphic design principles.
- Limit the number of signs through better location and integration.
- Create contextual and sympathetic design outcomes.

3. Audit & Needs Analysis

In recent years the town has seen a significant increase in the number of visitors coming to Jarrahdale to use the trails, particularly through the COVID-19 pandemic period. Trails are (generally) free to use and family- friendly. They allow users to connect to nature and country, learn stories and be active. The benefits of trails have been particularly prevalent during the COVID-19 pandemic, where trails use has increased dramatically, with some agencies believing that trails will contribute to the community and economic recovery. Jarrahdale has seen the effects of the pandemic where visitation to the town has increased. This is evident through the high number of vehicles parked on roadside verges and private properties not only during weekends, but during weekdays also.

DBCA reported recently that 40,000 users traversed the Langford Park trails in 2020, an increase of around 100% from previous years.

Population Profile

The Shire contains 13 localities, from Byford and Darling Downs in the north to Keysbrook in the southern area, including the townships of Serpentine, Byford, Mundijong and **Jarrahdale**. The Shire is one of the fastest growing local governments within Western Australia, and previously the fastest growing area in Australia, with significant residential population growth occurring in the past 10 years.

The Shire’s latest population estimate in 2019 was 32,562 people and the population for 2021 is forecast to be 36,403. Hyper-growth is projected to continue with resident numbers anticipated to increase by 88% from 2021 to 2036, to a population of 68,335. This represents approximately 14,760 new dwellings over the next 15 years.

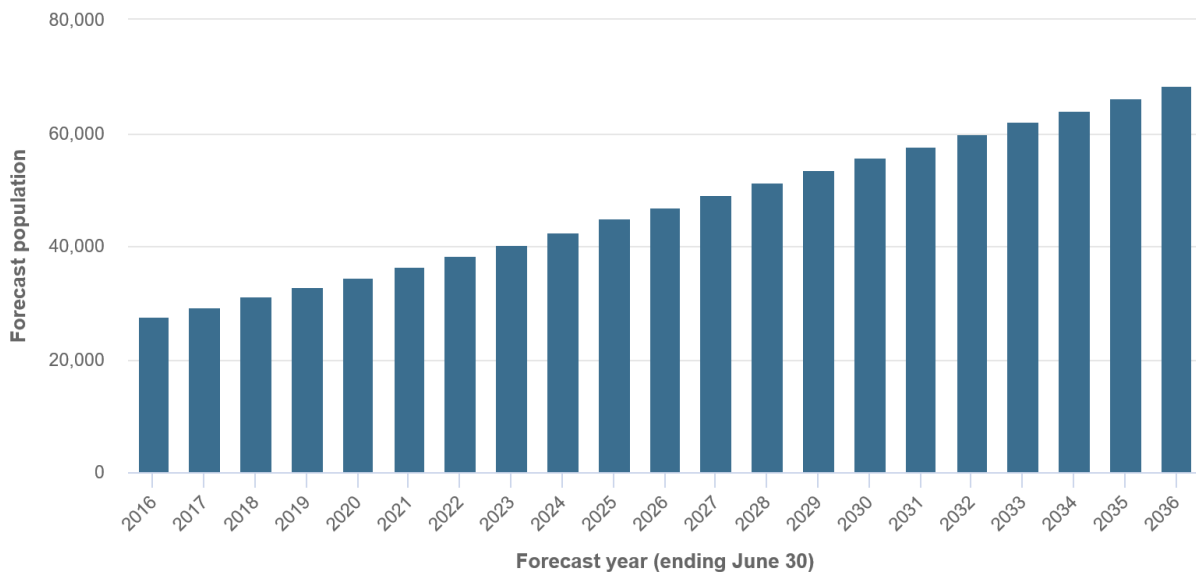
As the Shire is experiencing a rapid population increase, which will be predominately young couples and families building their first home, the median age group of people living in the Shire is 32 years which is significantly younger than Greater Perth at 36 years. As a result the Shire has a large proportion of young people aged under 25 years of age compared with Greater Perth [9,884, or 36.8% of the total Shire population in 2016]; and over the next 10 years, it is estimated an additional 4,700 young people (aged between 0 to 16 years) will be living in the Shire.

A key initiative such as the Jarrahdale Trail Town will be an important strategic project to support the growth and cater for recreation and leisure needs of both the local community and also visitors to the Shire.

Source: (Shire of Serpentine Jarrahdale Population Forecast, 2021)

Forecast population

Shire of Serpentine Jarrahdale



Population and household forecasts, 2016 to 2036, prepared by .id, November 2017.

.id informed decisions

Figure 6: Forecast Population – Shire of Serpentine Jarrahdale source ProfileID

Employment and Job Creation

Currently, less than 20% of the Shire's residents are employed locally and the vast majority of residents are commuting outside of the Shire for work. It is estimated that around 1000 people are unemployed currently and for those that are employed, 60% are working full time and 28% are working part time (Economic Development Strategy 2018 - 2023, 2018).

Through developing Jarrahdale as trails destination and Trail Town, the Shire can focus on growing local businesses and job opportunities in the area that can provide and sustain employment for young people moving into the workforce, and other residents of the Shire, to underpin a strong local economy and allow residents to live and work in their towns. As can be seen from other Trail Town developments throughout the world, economic development including employment, generated by Trail Towns, can increase through the development of trail and tourism related businesses such as accommodation providers, coffee shops, breweries, restaurants, tour operators, equipment hire stores and other retail offerings.

Existing Trails

Jarrahdale and the surrounding area is fortunate to have many existing trails for walking, trail running, horse riding (equine), mountain biking and cycling. The main trails in the shire of Serpentine Jarrahdale area as identified recently in the *Peel Trails Strategy 2019* and the *Shire of Serpentine Jarrahdale Local Trail Plan* included 32 trails/networks comprising 20 bush and urban walking trails; 2 shared use trails; 2 mountain biking trails/networks and 8 bridle trails/networks. Two of these trails are state level, seven are regional level and the remaining 23 trails are local level trails. 14 of these trails start/finish in Jarrahdale as detailed below. Table 5 outlines the existing trails that start/finish in Jarrahdale and Table 6 outlines the existing trails that are located in close proximity to Jarrahdale. Figure 7 provides an outline of the trail network in and around Jarrahdale.

Table 5: Existing Trails within the Shire of Serpentine Jarrahdale that start/finish in Jarrahdale

Trail Name	Type	Location	Hierarchy	Quality*
Kitty's Gorge Trail	Bush Walking	Jarrahdale/Serpentine National Park	Regional	Average
Mundlimup Timber Trails	Bush Walking	Jarrahdale	Regional	Poor
Jubb Trail	Bush Walking	Jarrahdale	Local	Average
Ken Jones Trail	Bush Walking	Jarrahdale (Langford Park)	Local	Poor
Korribinjal Brook Trails	Bush Walking	Jarrahdale	Local	Poor
Tallow-wood Trail	Bush Walking	Jarrahdale	Local	Poor
WWII Prisoner of War Camp Trail	Bush Walking	Jarrahdale	Local	Poor
Jarrahdale Bridle Trail	Horse riding/equine	Jarrahdale	Regional	Average
Munda Biddi Trail: Jarrahdale section	Mountain Biking	Jarrahdale	State	Poor
Langford Park Mountain Bike Trails	Mountain Biking	Jarrahdale (Langford Park)	Regional	Average
Balmoral Trail	Shared Use	Jarrahdale	Local	Poor
Jarrahdale 1872 Heritage Rail Trail	Shared Use	Jarrahdale	Local	Average
Tony Henniker Long Walk	Walk	Jarrahdale	Local	Poor
Jarrahdale Heritage Town Walk	Walk	Jarrahdale	Local	Average

* High level of assessment of the quality of the trail undertaken as part of the SJ Trails Plan

Table 6: Existing Trails within the Shire of Serpentine Jarrahdale that start/finish in close proximity to Jarrahdale

Trail Name	Type	Location	Hierarchy
Bibbulmun Track	Bush Walking	East of Jarrahdale	State
Serpentine Bridle Trails	Horse riding/equine	Serpentine	Local
Baldwins Bluff Nature Trail	Bush Walking	Serpentine National Park	Regional
Serpentine Falls Walk	Bush Walking	Serpentine National Park	Local
Stacey's Track	Bush Walking	Serpentine National Park	Regional
Wungong Valley Bridle Trail	Horse riding/equine	Wungong Valley	Local

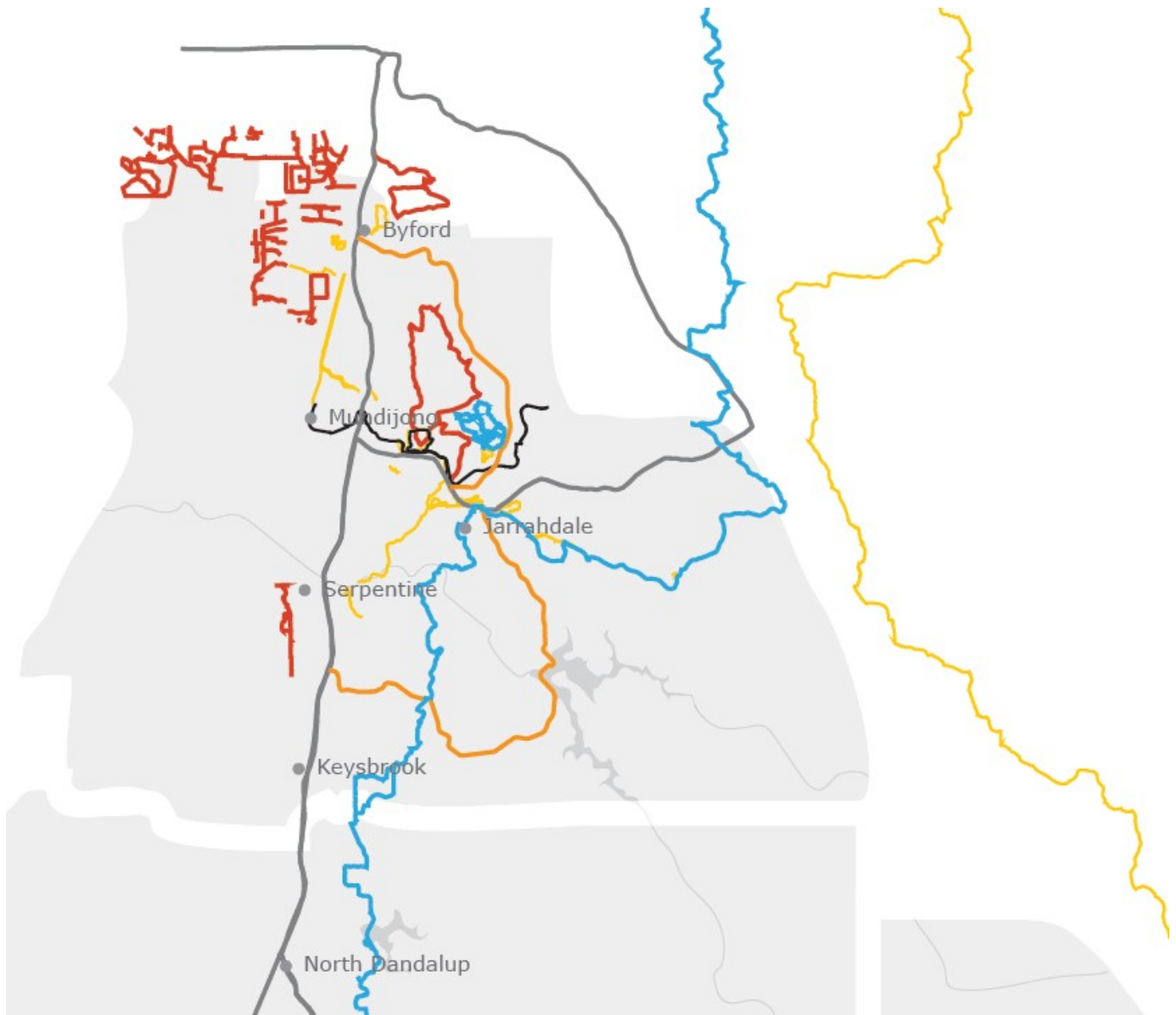


Figure 7: Map of existing trails in Jarrahdale and the surrounding area

A brief outline of the existing trails situated within Jarrahdale is provided below.

Kitty's Gorge Trail

The 16km return Kitty's Gorge Trail is accessible from the historic town of Jarrahdale and is close to the Millbrook Winery and local cafés. The trail follows the Serpentine River and Gooralong Brook and along the way, it passes impressive granite outcrops and many waterfalls. It can be accessed from either the carpark opposite the cemetery in Jarrahdale or from the Falls carpark in the Serpentine National Park.

Mundlimup Timber Trail

The Mundlimup Timber Trail is an easy 3km walk through some narrow bush trails. The forest is regrowth jarrah and in spring there are many wildflowers. The trail starts at the 1890s timber tramway and highlights the history of the timber industry. There is a picnic area, and the trail goes over a small bridge and up some steps. There is interpretive signage around the timber industry features such as the log landing and saw pit.

Ken Jones Trail

The Ken Jones Trail is a 4.5km loop which is suitable for most fitness levels and ages, although some bushwalking experience is required. The trail features trees such as tallowwood, gum trees (spotted and blue) and pine trees. The trail also takes you past Alcoa's first bauxite mine pit from 1963. There is parking, picnic tables, Barbecue's, toilets and play area available at the start of the trail.

Korribinjal Brook Trail

This trail consists of a 3km loop with gentle gradients which weave around the Korribinjal Brook.

Tallow-Wood Trail

The Tallow-Wood Trail is a part of the Langford Park walking trails. This trail is an easy walk consisting of a compacted surface with gentle gradients and the length of the trail is a 2km loop. The Trail takes you near Alcoa's old 1963 bauxite mine pit. There are picnic tables, toilets, barbecue's, play area and parking at the beginning of the trail.

WWII Prisoner of War Camp Trail

This historical trail is a 0.5km loop from Balmoral Road which is suitable for wheelchairs and prams. There is parking and a toilet on site. The trail meanders through the camp and the different foundations are sign- posted so you can get an idea of how the camp would have functioned.

Jarrahdale Bridle Trail

Langford Park in Jarrahdale is the focal area for this 26km bridle trail that showcases the changing character of the jarrah forest in this section of the Darling Range. The Trail is rocky and steep with gravel tracks, so horses need to be booted or shod and breastplates are recommended (graded as difficult). Several small creeks seasonally flow west where there are views across the farmlands to the coastal plain and south over the expanse of forest. The Trail is well marked but minimal float parking is available at the corner of Buckland and Jarrahdale Roads and no facilities are available here. The trail is currently interrupted due to the expansion of nearby quarry.

Munda Biddi Trail: Jarrahdale section

There are two main sections of the trails that pass-through Jarrahdale as part of the Munda Biddi Trail. The first trail is the Mundaring to Jarrahdale Trail. This Trail includes sections of pea gravel and several relatively difficult ascents and descents through the forest. The last 25km to Jarrahdale (north to south) is relatively easy and flat for the most part, with many single tracks following the railway cutting from the Balmoral Prisoner of War Camp. The total distance of this Trail is 103km. The second trail is the Jarrahdale to Nanga Trail. With easy access to Perth this picturesque section of Trail offers some steep and challenging sections. As well as passing through the magnificent Lane Poole Reserve with its swimming, camping and canoeing opportunities, the Trail also takes cyclists through the historic timber towns of Jarrahdale and Dwellingup. The total distance of this Trail is 104km.

Langford Park Mountain Bike Trails

Fast and flowing signifies the trails at Langford Park in Jarrahdale. These trails are a popular mountain biking destination for beginners and advanced riders alike due to the gradual hills and fast, flowing single-track (although the trail is rated as more difficult). Recent upgrades have seen a network of trails signposted making this venue even more attractive to newcomers to the sport. In addition, there are toilets, picnic tables and barbeques near the car park. The main loop is 12km

in length, but there are shorted trail loops such as The Spine (0.5km), Lovers Lane (1.4km), Woodley's Loop (4.4km), Reflectors (0.7km), Valley of Opportunity (0.8km), Button's Fall (0.7km), Watch Your Head (0.7km), The Fox (4.1km) and Yellow Brick Road (5.1km).

Balmoral Trail

This 11km rail trail follows a former tramway from the Balmoral Prisoner of War Camp. It makes up part of the Munda Biddi Trail and can either start or end at the Prisoner of War Camp. The Trail is easy and accessible to both walkers and mountain bikers. The Trail goes through bushland and some farmland, and along the way it passes a log loading ramp and several "shield trees". These shield trees have numbers carved into them and were used by foresters in the 1920s as a grid reference system. There is signage available which describes its operation and explains the ruins that remain.

Jarrahdale 1872 Heritage Rail Trail and Jubb Trail

The 1872 Heritage Railway Trail is made up of two sections including a 9.8km return and a shorter 4km loop, commencing at Jubb Road (the Trail is rated as grade 3). The walk explores the railway line between Western Australia's first ever timber mill, to its purpose-built jetty in Rockingham. This trail played a major role in WA's development through timber exportation. The trails feature old railway sleepers, historic trail markers, vistas and picnic spots amongst wandoo bushland. There are lovely views through the valley and along the Darling Scarp, as the trail follows the old line, traverses up a steep climb, then turning back to the start, offering a denser section along the Gingagup Brook.

Tony Henniker Long Walk

This Trail is a long walk (approximately 20km) which goes through and around the town of Jarrahdale. The Trail is rated as class 3. The main highlights of the Trail include the historical features of the Jarrahdale Heritage Park and the Gooralong Brook.

Jarrahdale Heritage Town Walk

The Jarrahdale Heritage Town Walk is a 4.5km loop which starts and finishes at the Jarrahdale Old Post Office car park. The walk explores the Jarrahdale town streets visiting all the main heritage buildings and sites including the Mill Managers House and the 1920's Timber Mill. The walk splits between gravel trails and paved pathways, visiting 23 different heritage attractions in the Jarrahdale town. No bushwalking experience is required, and the track is a compacted surface which may have gentle hill/steep sections. The walk has interpretive signage with information about each attraction. Facilities include parking and public toilets.

Existing Trail Upgrades and Enhancements

The *Shire of Serpentine Jarrahdale Trails Plan* rated the quality of each of the existing trails in the Shire including those located in Jarrahdale. They were rated as either poor, average, good or excellent. It noted that for existing trails a detailed trail audit will be required to accurately determine the trail condition and amount of work required to bring the overall trail quality up to excellent refer Table 7.

Table 7: Cost Estimates to upgrade the existing trails

Current Trail Quality	Cost to Upgrade per metre*
Excellent	\$0/m
Good	\$5/m
Average	\$10/m
Poor	\$15/m

* Cost estimates sourced from the Serpentine Jarrahdale Trails Plan

It is estimated that to upgrade all of the trails within Jarrahdale it would require an investment of \$3.87m. Noting that many of the trails are located on DBCA land not the Shires land and as such collaboration would need to occur between both parties.

Table 8: High level cost estimate to improve the existing trails to an excellent standard

Trail Name	Quality	Length (km)	Rate/metre	Amount (\$)	Land Owner/Manager
Kitty's Gorge Trail	Average	7	\$10	70,000	DBCA
Mundlimup Timber Trails	Poor	9	\$15	135,000	DBCA
Jubb Trail	Average	4	\$10	40,000	DBCA
Ken Jones Trail	Poor	4.5	\$15	67,500	DBCA
Korribinjal Brook Trails	Poor	5	\$15	75,000	SSJ
Tallow-wood Trail	Poor	2	\$15	30,000	DBCA
WWII Prisoner of War Camp Trail	Poor	0.5	\$15	7,500	DBCA
Jarrahdale Bridle Trail	Average	28	\$10	280,000	DBCA
Munda Biddi Trail: Jarrahdale section	Poor	172	\$15	2,580,000	DBCA/Munda Biddi Trail Foundation
Langford Park Mountain Bike Trails	Average	17	\$10	170,000	DBCA
Balmoral Trail	Poor	11	\$15	165,000	DBCA
Jarrahdale 1872 Heritage Rail Trail	Average	10	\$10	100,000	SSJ/DBCA
Tony Henniker Long Walk	Poor	7	\$15	105,000	SSJ
Jarrahdale Heritage Town Walk	Average	4.5	\$10	45,000	SSJ
Total		281.50km		\$3,870,000	

Trail Opportunities

The Shire of Serpentine Jarrahdale offers visitors and locals a hills and forest experience, with the Scarp, Serpentine and Wungong Gorges being the notable landscape features. The Shire is located on the northern boundary of the Peel Region bordering the outer suburbs of Perth. The Shire is predicted to experience significant population growth to 2026 and beyond with population density to be above 50 people per square kilometre. Given this it will be important to focus on local trails within towns and strategic connections for recreation within, into and out of the Shire. There is also potential within the Shire to capitalise on the tourism potential of trail development. Trails focused on drawing visitors into the region should make the most of the landscape experiences on offer. (Peel Regional Trails Strategy, 2019)

The *Peel Regional Trail Strategy* identified the following:

- The opportunities surrounding the Jarrahdale township, and the existing infrastructure and services provided make Jarrahdale suited to Trail Town development in the future and this should be considered in all planning.
- The most significant opportunities for trail development in the Shire lie within Wungong Regional Park, Serpentine National Park, and Jarrahdale State Forest.
- Trail development in Jarrahdale State Forest is considerably constrained by Public Drinking Water Source Area (PDWSA) restrictions, Disease Risk Area (DRA) restrictions and mining operations. There is potential however to improve and build upon the existing trail offering and DBCA is planning on upgrading and re-routing the Jarrahdale Park Bridle Trail to improve its quality and condition and to re-route it around the mining area.
- Serpentine National Park contains the impressive Serpentine Gorge, which is already a popular visitor site and has potential with the right trail proposal to become a significant destination for bushwalking.

The following trails are identified as priorities for upgrade and enhancement. This was based on an assessment of Economic Impact; Community Tourism; Opportunity; and Redevelopment need/deliverability. (Shire of Serpentine Jarrahdale Local Trail Plan, 2019)

Serpentine Trail

Jarrahdale has potential to become a nationally significant bushwalking and trail running destination. Current gaps in trail supply include longer day and multi day options. Serpentine National Park presents trail users with challenging terrain and scenic vistas which currently attracts many trail users. There is potential to extend Kitty's Gorge Trail south of Serpentine River creating a challenging day walk option. It is noted that a recreation master planning process will need to be undertaken to determine suitability of this trail within Serpentine National Park. There are also significant infrastructure constraints.

Identified as a **high priority** in the Shire's Trails Master Plan

The Mounts Trail/s

Jarrahdale is ideally positioned to provide a gateway to the Mounts located on the eastern edge of the Peel Region. Offering a unique experience traversing the highest points on the Darling Scarp, through open marri-jarrah forests with granite outcrops, a trail in this area will add significantly to the trails offer and help to make Jarrahdale a regionally significant bushwalking destination. This project also provides an opportunity for a connection to the Bibbulmun Track from Jarrahdale. Note PDWSA, DRA and mining constraints impact significantly on this proposal.

Identified as a **high priority** (Shire of Serpentine Jarrahdale Local Trail Plan, 2019)

Jarrahdale Mountain Bike Network

Expanding the existing Langford Park network there is potential to link north into the proposed Wungong (Byford) Trail Centre and south into town through Jarrahdale State Forest. The terrain offers potential for all classifications and cross country, all mountain and downhill trail types. This proposal is also identified in the Perth and Peel Mountain Bike Master Plan.

Identified as a **medium priority** (Shire of Serpentine Jarrahdale Local Trail Plan, 2019)

Gravel Riding

Cyclocross or gravel style riding is gaining in popularity. Establishing a series of routes from Jarrahdale using existing roads will provide those new to the style of riding an easy entry level experience removing the need to plan and navigate. Investigate provision of GPS routes available online which could be updated regularly.

Identified as a **high priority** (Shire of Serpentine Jarrahdale Local Trail Plan, 2019)

Jarrahdale Oval Trail Head

Jarrahdale Oval should be established as a formal trail head for bridle trails within Jarrahdale State Forest. With considered planning this site also has potential to host events. The Shire recently developed a concept plan for the Jarrahdale Oval Trail Head refer Figure 8.

Identified as a **high priority** (Shire of Serpentine Jarrahdale Local Trail Plan, 2019)



Figure 8: Artist impression of the Jarrahdale Oval Trail Head

Jarrahdale Equine Trail Network

The existing equine trail network in Jarrahdale is a unique point of difference for the Jarrahdale as a trail destination. The Peel Regional Trails Strategy 2019 identifies the region as a significant location and potential development zone for an equestrian network of National significance.

Realignment of the Jarrahdale Equine Trail and investigation of the creation of a network of bridle trails within Jarrahdale State Forest, starting and ending at Jarrahdale Oval trailhead are considered high priority recommendations of this business case. Trails should include a range of classifications.

At the time of preparing this business case the Shire of Serpentine Jarrahdale was working in partnership with DBCA, community and trails user groups to develop a bridle trail network concept plan.

Identified as a medium priority in the Shire of Serpentine Jarrahdale Local Trail Plan, 2019, equine trail development is considered a **high priority** for this business case.

Serpentine National Park Trails

The following existing bush walking trails located within the Serpentine National Park were identified as a **high priority** for upgrade and enhancement (Shire of Serpentine Jarrahdale Local Trail Plan, 2019) refer Table 9. The Kitty's Gorge Trail and Stacey's Track are accessible from Jarrahdale and whilst the other trails are not located within Jarrahdale they are within close proximity and can add to the Trail Town offerings.

Table 9: Bushwalking trails located within the Serpentine National Park identified as high priority for upgrade and enhancement

Trail/Project Name	Type	Priority
Baldwins Bluff Nature Trail	Bushwalking	Very high
Kitty's Gorge Trail	Bushwalking	Very high
Stacey's Track	Bushwalking	Very high
Serpentine Falls Walk Trail	Bushwalking	Very high

Mundijong to Jarrahdale Rail Trail

The Peel Regional Trail Strategy identified investigating and formalising a trail along the old railway connecting Mundijong to Jarrahdale, noting tenure constraints will need to be resolved.

Identified as a **medium priority** (Shire of Serpentine Jarrahdale Local Trail Plan, 2019)

In 2020 a business case was developed for the Mundijong to Jarrahdale Rail Trail and it identified that the existing rail trail requires substantial works to ensure it meets the needs of users. The current trail essentially follows the maintenance/access track along the railway corridor. An extension of the new trail is also required into the Mundijong Township as it currently terminates where it intersects the South Western Highway.

The Rail Trail has the potential to create a family friendly and highly accessible rail trail experience for walkers, cyclists and horse riders. The development of a continuous link from Mundijong through to Jarrahdale and vice versa will help to benefit local businesses. The trail also provides an opportunity to link to the soon to be developed Keirnan Park Sporting Precinct.

Benefits include providing a safe and relatively easy off-road connection to enable commuting between the two towns and also provide new experiences for both locals and visitors alike. The Rail Trail will provide an opportunity to hold events such as guided walks, horse rides, cycling rides and other compatible activities.

The scope of work for this trail includes upgrading the rail trail track itself to make it safe for users, an extension of the trail, wayfinding signage, road crossing safety points and two trail heads located in Jarrahdale and Mundijong which will include shade shelters, trail head signage, seating, carparking and a horse tie up area in Mundijong. The rail trail will also feature a connection into the proposed Jarrahdale Oval Trail Head.

Based on the concept plan developed the order of cost estimate is \$9,508,550.00 with the project

forecast to generate 44,660 additional visits per annum, 16 additional jobs and an increase of \$1.776m in the Gross Regional Product.

Kitty's Gorge Trail Head

The Shire is developing plans to upgrade the amenities provision at Kitty's Gorge Trail head in Jarrahdale. The works will include improvements to existing and provision of additional parking and will also include a public toilet. These works will respond to community and visitor feedback, improve traffic management and address anti-social behaviours in the area.

Edge of Scarp Trail

The scarp presents a unique experience in the Peel Region, with varying rocky terrain and forests with views of the plains towards the west. The potential for a bushwalk / trail running / mountain bike / equestrian trail along the edge of the scarp from Jarrahdale to Wungong Regional Park should be investigated.

Identified as a **medium priority** (Shire of Serpentine Jarrahdale Local Trail Plan, 2019)

Equine Trails

As identified in the Equine Strategy the Shire is the leading equine region in Western Australia. The Equine Strategy has uncovered that not only is the equine sector strong within the Shire but that the Shire of Serpentine Jarrahdale is the leading equine hub in both the Peel and the State. As can be seen in Figure 9 below the Equine sector in the Shire is substantial.

The Shire has an extensive equine trail network totalling more than 150km. The top equine activities of those surveyed are Trail Riding (62%) and Recreational Riding (54%). 70% of the respondents from outside the Shire had used the Shire's trails in the last 12 months, highlighting it as a clear attraction.

Key existing equine trails in Jarrahdale include the Jarrahdale Bridle Trail in Langford Park that heads north and covers a 26km loop through the forest. The trail is currently interrupted by the development of a quarry and requires realignment around the quarry. This is causing some difficulty for riders who are regularly getting lost.

Nearby are the Serpentine Bridle Trails and Wungong Valley Bridle Trail. As identified above the Jarrahdale Oval Trail Head and Jarrahdale Trail Network is identified for development, expansion and enhancement. The Shire is also working with DBCA to investigate the feasibility of developing new equine trail networks in the Jarrahdale State Forest.

Along with the trail developments identified in the previous section, the Shire is undertaking a project to develop an Equine Master Plan for the Shire, mapping current equine trails and providing a strategic document for the enhancement of existing trails and development of future additions to the equine trails network.

The network of equine trails and strength of the local equine community are unique to Jarrahdale and offer a clear point of difference to other existing and potential Trail Towns throughout Australia and possibly worldwide.



Figure 9: Snapshot of the Equine Sector within the Shire of Serpentine Jarrahdale Source: SJ Equine Strategy

Trail Bikes and Off-Road Vehicles

Jarrahdale is a popular area for recreational trail and quad bike users and 4wd users. The Jarrahdale State Forest and an area known as Blue Rock, are regularly frequented by recreational trail bike riders and 4wd users. At the time of preparing this business case there were no designated Off Road Vehicle (ORV) areas in Jarrahdale and no sanctioned trail bike trails, with the majority of riding and four wheel driving being undertaken on State owned land.

Opportunities for trail bike riding and 4wd in Jarrahdale are limited to road-registered bikes and vehicles with opportunities to ride on open public roads including those in State forests, national parks and drinking water catchment areas.

The recreational trail bike riding community recognise a shortage of approved riding areas particularly in proximity to metropolitan Perth and have been advocating for the provision of a designated ORV area within Jarrahdale and support for ORV trails within the Jarrahdale State Forest.

The Peel Regional Trail Strategy 2019 listed the Jarrahdale State Forest as one of two highest priority locally significant locations for 4WD trail use and trailbike use, however listed Dwellingup as having the potential to become a regionally significant 4wd and trail bike location. The Strategy recognised the lack of suitable areas on public land and the need to investigate partnerships with private land owners to provide an Off Road Vehicle area in the Peel Region.

In 2020 the Control of Vehicles (Off-road Areas) Act 1978 Advisory Committee began a process of locating possible areas of land for the creation of new off road vehicle areas. This process included consideration of two potential sites in Jarrahdale both of which were deemed unsuitable through the assessment process.

Consideration of land use opportunities for off road trails in Jarrahdale indicates significant limitations in supporting the development of off road areas and trails. As shown in Figure 10, the area to the west of Jarrahdale townsite is dominated by land where riding/driving is prohibited/discouraged including drinking water exclusion areas, Alcoa Myara North mining lease, disease risk areas and protection zones. To the south west of Jarrahdale townsite is the Serpentine National Park and to the northwest the land use is predominantly for mountain biking, bushwalking and equine purposes. The Shire and DBCA are working in partnership to further develop equine trails opportunities in this area, therefore off road uses are not supported.

Due to these land use issues and a significant shortage of both staff and financial resources, DBCA as the owner and manager of the Jarrahdale State Forest and other significant areas of land in Jarrahdale do not support the development of off road trails or riding areas in Jarrahdale. As per the recommendation in the Peel Regional Trail Strategy, DBCA recognise that there may be merit in a private lease arrangement for DBCA land for the operations of a private, safe and secure off road bike and 4wd facility.

Given these limitations the Jarrahdale Trail Town Business Case does not anticipate the establishment of trails or riding areas for trail bikes or 4wd trails in Jarrahdale within a ten year period, after which time it is suggested that a review be undertaken to assess need and available land opportunities. Should future opportunities arise, comprehensive community consultation with the Jarrahdale community would need to be undertaken, as the community consultation undertaken for this business case has not focussed on off road opportunities.

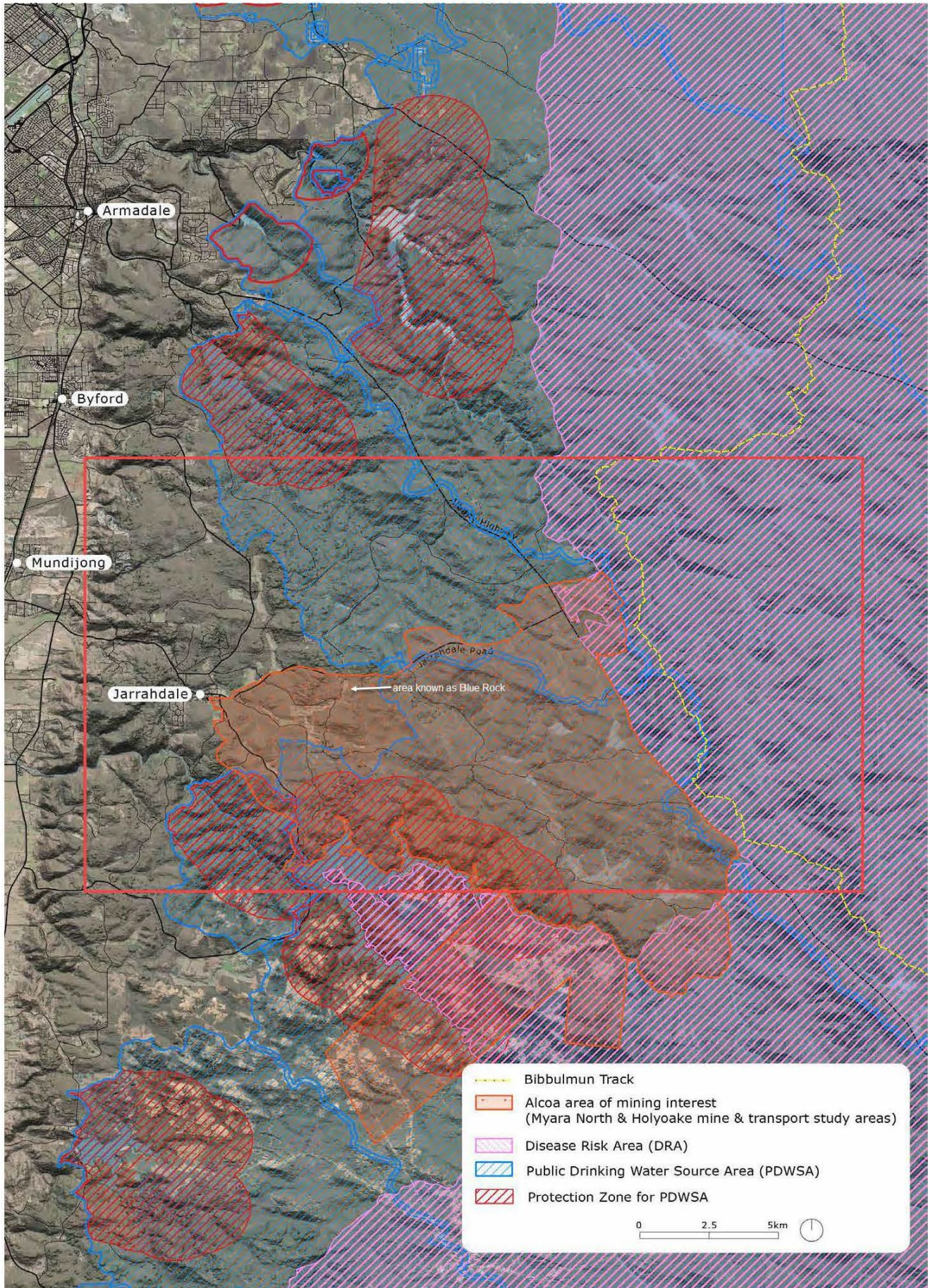


Figure 10: Current and Proposed Land Uses/limitations in Jarrahdale

Cultural Heritage

Heritage and History Trails and Walks

An additional point of difference to that of the equine sector that Jarrahdale can benefit from as a Trail Town is the heritage and history of the town and surrounding area. According to the Jarrahdale Heritage Society, the town is one of Western Australia's oldest settlements. Established in the late 1800s as the state's first major timber town, it played a key role in the development of Western Australia through the exportation of jarrah around the world.

P8488 Jarrahdale Townsite & Heritage Park is included in the Heritage Council's Assessment Program, meaning it was determined the place warrants further assessment for possible inclusion in the State Register of Heritage Places. An assessment has not been scheduled at this time.

The Mill Manager's House is included on the State Register of Heritage Places.

There are a series of existing trails and walks in the town that showcase the heritage and history of the area, these include the Mundlimup Timber Trails, WWII Prisoner of War Camp Trail, Balmoral Trail, Jarrahdale 1872 Heritage Rail Trail and the Jarrahdale Heritage Town Walk. The Jarrahdale Heritage Society has been operating guided walks within and around Jarrahdale since 1988.

Indigenous Heritage

The original inhabitants of the Serpentine Jarrahdale area are the Nyungar Aboriginal people. In Gnaala Karla Booja the Barragup mungah – fish weir on the Serpentine River has long been recognised by local Noongar people as amongst the most important traditional meeting places for Noongar from the Swan, Peel and Darling Ranges area (South West Aboriginal Land and Sea Council, 2021).

Long before European settlement, Noongar Aborigines of the Whadjuk, Gnaala Karla Booja and probably, Bindjareb tribes hunted and camped in the woodlands between modern-day Perth and Pinjarra. The Serpentine River, the surrounding hills and the wetlands of the coastal plain provided the Nyugars with fresh water, fish and other food resources such as tortoises, lizards and birds. The Serpentine River runs through the Serpentine National Park, through the Dam and over the Serpentine Falls, and onto the Swan Coastal Plain. (Serpentine National Park, 2021).

The land of Jarrahdale and it's surrounds are the traditional lands of the Aboriginal Southwest Nyungar Nations and specifically part of the Pindjarup (Pinjareb or Binjareb) Nyungar language group.

The South West Aboriginal Land and Sea Council (SWALSC) - Southwest Nyungar Settlement Agreement acknowledges this area as part of the larger Gnaala Karla Boodja region, referring to the Nyungar language or dialectical groups of the Binjareb/ Pinjarup, Wilman and Ganean.

Sites in Jarrahdale listed on the Aboriginal Heritage Register are (no sites are restricted areas):

- Tonkin highway- Mundijong Road scatter #15, (ID 18191) artefacts/scatter site.
- Serpentine River (ID 3582) ceremonial/mythological site.

Other Heritage Places in Jarrahdale listed on the Aboriginal Heritage Register are:

- Jarrahdale (ID 3563) artefacts/scatter/quarry site.
- Serpentine Dam (ID3192) sign shows aboriginal design.
- Yarrabah (ID 3591) artefacts/scatter site.

- Other Heritage Place 38900 (ID 38900) artefacts/scatter site.

Consultation with the Traditional Owners of Jarrahdale lands in regard to the aspirations contained within this document is a high priority.

This business case recognises the importance of engaging and partnering with the traditional owner group to document, protect and where appropriate share the aboriginal history and heritage values of Jarrahdale. The business case also recognises opportunities to support Aboriginal lead trails tour experiences.

Key Attractions and Associated Opportunities

In addition to the many trails in the region the town of Jarrahdale and surrounding area has many attractions that are not directly related to trails but add to the trail and broader tourism experience. These include:

- Balmoral Prisoner of War Camp
- Environmental Centre
- Farm and Orchard Produce
- Gooralong Park
- Heritage Park
- Heritage Railway
- Historic Electric Mill
- Jarrah Forest
- Jarrahdale General Store
- Jarrahdale No1 Mill
- Jarrahdale Tavern
- Jarrahdale Guided Walks
- Langford Park
- Mill Manager's House
- Millbrook Winery
- Old Post Office Museum
- Pipehead Dam
- Serpentine Dam
- Serpentine National Park including Serpentine Falls
- Single Men's Quarters
- St Paul's Anglican Church
- Timber Yards
- Wildflowers



Many of the trails pass through or near these attractions and some are also based on one or more of these attractions and features e.g. the Jarrahdale Heritage Town Walk and the WWII Prisoner of War Camp Trail. A brief outline of the attractions is provided below.



Figure 11: Historical Image of one of Jarrahdale's many operating mills

Balmoral Prisoner of War Camp

The prisoner of war working camp was built in 1944 housing 220 Italian prisoners of war from the Northern African campaign of World War II. The prisoners worked in the forest cutting firewood and lived and worked at the camp. It closed in 1946 at which point prisoners were repatriated to Italy. The WWII Prisoner of War Camp Trail meanders through the camp and the different foundations are sign-posted so you can get an idea of how the camp would have functioned.

Environmental Centre

The environmental centre is a short-term accommodation option for larger groups such as schools, trail walkers/riders groups and is located adjoining Heritage Park.

Farm and Orchard Produce

Jarrahdale has a number of farms and orchards producing food, wine and agricultural products, some providing direct products for purchase by the community.

Gooralong Park

Gooralong Park is situated in Serpentine National Park. Offering many walk trails throughout the park.

Heritage Park

Jarrahdale Heritage Park sits within the heart of the historic town of Jarrahdale and spans 29.6 hectares. On the edge of the Gooralong Brook, the Park is a place to explore Western Australia's unique jarrah forests, heritage buildings, the historical Jarrahdale timber industry, and to experience farmland, waterfalls and trails. The land was gifted to the National Trust by Millars/Bunnings and includes bushland north of Gooralong Brook and east along the brook. The National Trust's vision for Jarrahdale Heritage Park is a "conserved, interpreted and activated heritage site contributing to the sense of place and wellbeing of the Jarrahdale community and its visitors".

The Shire has a long history of working with the National Trust and the Jarrahdale community to progress the development of the Jarrahdale Heritage Park. There exists a significant library of documentation, including development and activation plans for the Park. Unfortunately, the development and activation outcomes for the Park have not been realised, other than the upgrade works at the Mill Managers House. In various consultation forums, the community has expressed disappointment and frustration with the lack of action in the development of the Jarrahdale Heritage Park. The Shire is considering leasing the Park which will allow the Shire to progress with development of the Park, which due to its location, is anticipated to play a key role in the development of Jarrahdale as a Trail Town.

Development opportunities for the park that have been identified in documentation for further investigation include an amphitheatre, improved and new trail offerings, flying fox, parking, gardens and areas to support market activities, and pedestrian bridges.

Heritage Railway

This is a feature of the Jarrahdale 1872 Heritage Rail Trail which traverses along the old heritage railway corridor.

Historic Electric Mill

The Historic Electric Mill was built in 1968 to replace the old No1 Mill.

Jarrah Forest

The Jarrah Forest at Jarrahdale is home to the Northern Jarrah Forest found solely in Western Australia. The forest is home to a range of flora and fauna and is a known location of mainland quokkas. The forest provides a range of trails opportunities in unique and historical setting.

Jarrahdale General Store

The historic general store was built in 1872 and now incorporates an Olde Store Café and Tourist Information Centre. The store is located at 701 Jarrahdale Road in Jarrahdale.

Jarrahdale No1 Mill

Significant for its association with the opening of the timber industry in Jarrahdale which was the basis for the development of the Jarrahdale townsite. Part of the group of historical buildings in the historic Jarrahdale townsite.

The Mill requires significant development works and the National Trust have recognised ongoing issues in relation to the site being used as a working mill in close proximity to residential area. There is potential for place activation and contribution to economic and trails outcomes through appropriate uses of the mill including through complementary commercial development opportunities that can enhance the historical nature of the building, and provide a tourism offering to the town of Jarrahdale. Most recently the National Trust ran an expression of interest process for the lease of the Mill and Mill Manager's house.

Jarrahdale Tavern

Once the Murray Arms, the hub of a thriving mill town now the historic Jarrahdale Tavern is the perfect place to relax with a cold drink, good food and unwind from city life.

Jarrahdale Guided Walks

The Jarrahdale Heritage Society has been offering guided walks since 1988. The volunteer leaders are trained and experienced who can provide insight into the wildflowers, fungi and bird life. Generally, the walks start at the Old Post Office museum and are conducted between March and October.

Langford Park

A popular mountain biking destination for beginners and advanced riders alike due to the gradual hills and fast, flowing single track. Recent upgrades have seen a network of trails signposted making this venue even more attractive to newcomers to mountain biking.

Mill Manager's House

Built c1889 to house the Mill Manager around the time of Neil McNeil's association with the mill, which began in 1889. Neil McNeil, originally from Victoria, was a prominent business man who contributed significantly to the development of the timber industry in Western Australia and was convinced that timber was the ideal building product. The Mill Manager's Residence would have been built to meet the demands and growth associated with the timber mill at the time when it was developing in the most successful timber mill in the state.

The National Trust has undertaken \$340,000 worth of development and maintenance works at the Mill Mangers House in recent times. The upgrade works included an electrical upgrade, universal access toilet and kitchen upgrades, painting, roof insulation and general repairs. At the time of writing this business case the house is approved for short stay accommodation, with a current residential lease including a commercial component to support activation of the building.

It is expected that should the Shire secure a lease over the House any further upgrade or works that would be required to be undertaken to make the building fit for purpose would need to be coordinated by the Shire and the costs associated with these works met by the Shire.

Initial planning for the Mill Manager's House has resulted in an intention to use the facility for community, tourism, history and arts purposes. The House sits central to the Heritage Park and would provide an ideal location for a centralised trailhead, with a possible visitor centre, gallery, bike cafe and other activation opportunities. The proposed amphitheatre development as shown in strategic planning documents is indicated as being located in close proximity to the house.

Millbrook Winery

Millbrook is an award-winning winery and restaurant located in the historic town of Jarrahdale. The winery is situated at the picturesque Chestnut Farm, a property that backs on to the Serpentine River and is nestled among jarrah forests, with stunning vistas of the rolling landscape.

Old Post Office Museum

The Old Post Office is the starting point of many guided walks, run by the Jarrahdale Heritage Society. Built in 1896, the Old Post Office provides a wealth of information on the attractions of Jarrahdale, its rich history, as well as a range of local crafts at reasonable prices.

The Old Post Office not only serves as a tourist centre, but also as a museum, documenting the history of the area. It is home to a large collection of historical records and photos, unique to this museum. Located on Jarrahdale Road, Jarrahdale

Pipehead Dam

This is the smaller of the two dams located on the scenic Serpentine River. Enjoy the natural bush theme while you have lunch in the cleared gravel picnic area surrounded by shady native plants. There is a nearby playground for kids. Walk down the steps to the recreation lake and enjoy hours of fun sailing model boats or watching the native birdlife.

Serpentine Dam

The dam is a part of Serpentine National Park. It has places to have picnics with an adjoining playground. There are free gas barbecues located in the grassed lower picnic area downstream of the dam wall. If you prefer a relaxed indoor setting, try the restaurant near the main car park for a casual meal.

It also offers a series of nature walks on the marked trails and scenic lookouts. It has great bird-watching for kookaburras, black cockatoos, parrots, magpies, and wrens.

Serpentine National Park including Serpentine Falls

Serpentine Falls is located within the beautiful Serpentine National Park. You can enjoy a picnic, swim, take a walk on one of the trails and enjoy the local wildlife, including friendly kangaroos. The Serpentine Falls are the crowning jewel of the picturesque Serpentine National Park. Entrance to the Serpentine National Park is via Falls Rd Serpentine, and a National Park entrance fee applies.

A 400m walk along the gravel Falls Walk Trail, which leaves from the car park, will lead you to the Serpentine Falls viewing platform. From here you can marvel at the falls, and if it is a beautiful day, cool off in the water. From the falls you can also venture onto to Kitty's Trail and Baldwins Bluff Trail.

Single Men's Quarters

Significant because the cottages and quarters are typical of the worker's accommodation provided for the people, both single and married, who worked in the timber industry. Particularly important as a cohesive group of cottages and quarters forming a small precinct. Significant for their association with the timber industry in Jarrahdale, and the workforce required for its operations, which was the basis for the development of the Jarrahdale townsite. Part of the group of historic buildings in the historic Jarrahdale townsite.

St Paul's Anglican Church

St. Paul's Church, which is almost 120 years old, is part of the Jarrahdale Historic Precinct. Located next to the Old Post Office on Jarrahdale Road, St. Paul's is ideal for intimate weddings and can seat up to 70 people. All in the historic and beautiful surroundings of Jarrahdale.

Timber Yards

The timber yards associated with the mills are also located throughout the town.

Wildflowers

Wildflowers are located throughout the Shire including in and around Jarrahdale and can be seen by foot on trails and in reserves as well as in the car with some great flora roads within the Shire. There are also a number of groups who carry out wildflower walks.

Summary of Key Opportunities

The following is a list of the key opportunities identified to facilitate the creation of Jarrahdale as a Trail Town:

- Trails Tourism is a growth market with Experience Seekers being a key target market identified by Tourism WA.
- Jarrahdale and the broader Serpentine Jarrahdale Shire area has many existing high quality trail experiences for a range of trail user types including walkers, trail runners, horse riders and mountain bikers.
- Much planning has gone into trails in the Shire in recent years and there is a clear framework for development and enhancement of the trails in the area.
- Jarrahdale has existing marketable assets including trails, heritage and equine related experiences.
- National and Regional Parks are experiencing strong visitations particularly since COVID-19 and there is an opportunity to leverage off this increased interest in the outdoors and nature based experiences.
- Creating Jarrahdale as a Trail Town will create jobs for a growing workforce and boost the local economy with visitor spending.
- Jarrahdale's close proximity to greater Perth make it highly accessible to over 2 million people.
- Opportunities exist to connect with the Traditional Owners of Jarrahdale and capture the heritage values of Jarrahdale and Aboriginal lead trail experiences.
- Jarrahdale is one of WA's oldest towns and has an amazing European and Indigenous heritage.
- Jarrahdale and the broader shire is the leading region for the equine sector in WA and has an existing and well established equine trail network which can be a clear point of difference to other Trail Towns in Australia.
- There is an opportunity to establish a Trail Centre in the Jarrahdale township which can be the centre for trail activity and services such as equipment hire and servicing, food and beverage offerings, accommodation and other trail and visitor services.

4. Consultation and Engagement

Ongoing consultation with the community and key stakeholders has occurred over a long period of time in relation to the creation of Jarrahdale as a Trail Town. Most recently consultation has been in line with the Shire's *Community Engagement Strategy* which is based on the *International Association of Public Participation Spectrum of Public Participation*.

Key consultation mechanisms included:

- Stakeholder Workshop.
- On-line Community Survey.
- One on one meetings with key stakeholders.
- Elected Members workshops.

A summary of the key findings from each of the key consultation processes is included here and a summary of the responses to the community survey are included in Appendix A – Consultation and Engagement Outcomes.

Stakeholder Workshop

A comprehensive stakeholder session and workshop was conducted in Jarrahdale through the development of this Business Case. 41 people attended including representatives from State Government agencies, tourism agencies, political parties, community groups and the broader community.

The purpose of the workshop was to capture ideas on the development of Jarrahdale as a Trail Town from various viewpoints. Groups of attendees were developed to generate discussion amongst differing sectors/interest groups to allow ideas to be further elaborated on as they were raised.

Attendees were also requested to define what values are most important to them, in relation to developing Jarrahdale as a Trail Town, to ensure that the development and enhancement of existing and new trails, associated infrastructure and provision of services align to the values and identity of Jarrahdale. The highest rated values included:

- Build upon Jarrahdale's existing assets.
- Protect and celebrate Jarrahdale's heritage.
- Supporting new and existing local businesses.
- Existing infrastructure and services to be more fit for purpose.
- Environmental sustainability.

Community Survey

An online survey was undertaken in the community as part of the development of this Business Case. The survey was widely promoted on the Shire's website, communication and social media platforms. 24 people responded to the survey. The survey contained questions which sought feedback on specific topics/opportunities considered for inclusion in this business case. A summary of the key findings are included below and within Appendix A.

Meetings with key Stakeholders

A series of meetings were held with key stakeholders to inform the Business Case, the key findings from this consultation have been summarised below and are included in Appendix A.

Elected Members Workshop

- There was strong support for establishing Jarrahdale as a Trail Town.
- There is a great opportunity to work with the town's and Shire's strengths including the equine trails and sector, the heritage of Jarrahdale and the strong bushwalking culture in the Jarrahdale and surrounding community.
- There is an opportunity to significantly increase tourism in the Shire through the establishment of Jarrahdale as a Trail Town.
- Jarrahdale has always been known for its trails and heritage and is essentially already a Trail Town, by achieving accreditation this will be a natural progression.
- There is an opportunity to link in with the other communities in the Shire such as Darling Downs, Byford, Mundijong and Serpentine which all offer their own trail experiences.
- Jarrahdale has experienced strong growth in trails usage particularly post COVID-19 pandemic lockdown and this is expected to continue.

Public Comment Period for the draft Business Case

A public comment period was undertaken from 22 June 2021 to 20 August 2021, to allow for comment and feedback in relation to this business case in its draft form. The public comment period included releasing the document for comment, accepting online and email submission responses, in person meetings with key stakeholders, and individual public consultation sessions.

Overall the consultation and feedback supported the recommendations contained in the draft Business Case and the positions expressed in the initial community and stakeholder consultation.

Discussion with community members and groups provided an overview of their further consideration of the actions in the business case. Overall the business case was well received by the community, with high levels of excitement and anticipation at the Shire's commitment to achieving trails and economic outcomes in Jarrahdale.

Discussions with State Government Agencies were varied. There was general concern expressed with the aspiration to achieve Trail Town accreditation given the close proximity to Dwellingup and the level of investment in developing Dwellingup and Collie as Trail Towns. There was support for focussing on the development of equine trail opportunities and a recognition of this as a strong point of difference for Jarrahdale. There was also caution in relation to the proposed three year time frame to achieve accreditation given the level of investment and coordination needed to meet the accreditation requirements. Dwellingup as an example has been a process of over seven years and still has not met all criteria to achieve Trail Town Status. Officers were encouraged to consider a longer time period with an initial focus on Jarrahdale becoming a quality trails destination with a ten year target to meet Trail Town accreditation. There was however support for the coordination of trails maintenance and development in Jarrahdale and efforts to enhance Jarrahdale as a trails destination.

Community responses through surveying were dominated by off road trail bike riders advocating for off road trails and riding areas. Many indicated that they currently ride in Jarrahdale and were advocating for the inclusion of off-road trails in the business case.

Other points of feedback during the consultation period include the importance of working in partnership with Traditional Owners, capturing the key role that DBCA plays in trails and land management in Jarrahdale and the partnership required between the Shire and DBCA. The interruption of the current Jarrahdale Bridle Trail and the need for its realignment around a quarry, the impact of the proposed expansion of Alcoa mining into the Myara North lease area, the need to include possible funding opportunities in the business case, the benefits of a working group consisting of a range of stakeholders, and the need to work with Trails WA to establish equine trails requirements to be included in the Trail Town accreditation package.

Summary of Key Consultation Findings

- Strong support for the establishment of Jarrahdale as a Trail Town from the local community including the business community.
- Strong support for the development of bridle trails and equine uses in Jarrahdale as a point of difference to other trails destinations including Dwellingup and Collie.
- Jarrahdale's strengths as a trails destination are its natural beauty, diversity of existing trails (e.g. walking, equine, mountain biking), history and heritage, flora and fauna, tranquillity, proximity to Perth and village like feel.
- There is a need for improved accommodation including the diversity of accommodation types on offer.
- There is a strong need for trail support infrastructure and facilities including toilets, parking, shelter, maintenance stations, camp grounds etc.
- Parking and traffic management were raised as major current issues that need to be resolved including more formalised parking.
- There is a need for additional food and beverage offerings e.g. food vans, café, markets.
- There is a need to improve trail and waymarking signage.
- Basic infrastructure improvements are required in Jarrahdale including roads, footpaths, communications and water supply.
- Opportunity to improve marketing and promotion of the trails.
- Strong support for establishing Lot 814 as a trail centre which would include accommodation (e.g. camping, caravans, RVs), trail related services (equipment hire, maintenance, shuttle services), amenities (toilets, showers, laundry), parking including for horse floats and trailers, wash down areas, drinking water, shelter, food and beverage (café, vending machines, food trucks), first aid. Wi-fi, lockers etc.
- Key considerations for any form of development in relation to the Trail Town included impacts on the environment, local residents, traffic and the general feel and vibe of the town.
- Support for establishing Jarrahdale Oval as a trail head provided it did not compete with local businesses and did not duplicate facilities within the township itself. Therefore it needs to be a more scaled down development with basic amenities (toilets, shelter), parking, events space etc.
- There is support for the enhancement of Heritage Park and creating this into an attraction with walking trails, adventure park, nature play, sculptures, picnic and BBQ facilities in a natural environment.
- There was strong support for the Mill Managers house and the No.1 Jarrahdale Mill having a role to play in the activation of Jarrahdale as a Trail Town.
- Functions suggested for these two facilities included information/visitor centre, museum, function venue, B&B, café, small bar and art gallery.
- Local businesses are interested in becoming trail friendly businesses with support from the

community and the Shire.

- There was strong support to establish trails/ riding areas for off-road trail bikes.
- There was support for establishing a trail from Jarrahdale to the Mounts.
- There was support for the improvement of the Kitty's Gorge trail head parking area.

5. Becoming a Trail Town

Overview

A Trail Town is a population centre or popular recreation destination that offers a wide range of high quality trails as well as related services, facilities, businesses, strong branding and supportive governance. They can incorporate trail centres and typically have multiple trail networks. A Trail Town may consist of a number of sites, hosting several signed and mapped trails of varying type and classification.

Trail facilities such as car parking and visitor services are available within the vicinity, typically provided by independent businesses. In order to appeal to the market majority, it is important Trail Towns are user friendly and have high quality directional signage and maps.

Trail Towns benefit from having a single central information and service centre to promote and provide access to trails. Although different, these can act similarly to a trail centre. Trail Towns should have at least one cohesive trail network offering multiple classifications and trail types within a single uninterrupted area (for example, with no major road crossings).

The outcomes of becoming a Trail Town for the local community will be:

- Economic (jobs and business growth).
- Environmental (improved environmental outcomes through.
- Better management and increased awareness of user impacts).
- Health (healthier communities).
- Social (cultural cohesion through awareness and volunteering opportunities).

As identified in the Literature Review within Section 1 of this report a range of planning documents have identified Jarrahdale as a future Trail Town, these include:

- *Peel Regional Trails Strategy* where it is one of the regional priorities refer Figure 12.
- *Perth and Peel Mountain Bike Master Plan*.
- *Shire of Serpentine Jarrahdale Local Trail Plan*.
- *Shire of Serpentine Jarrahdale Economic Development Strategy*.
- *Shire of Serpentine Jarrahdale Tourism Strategy*.

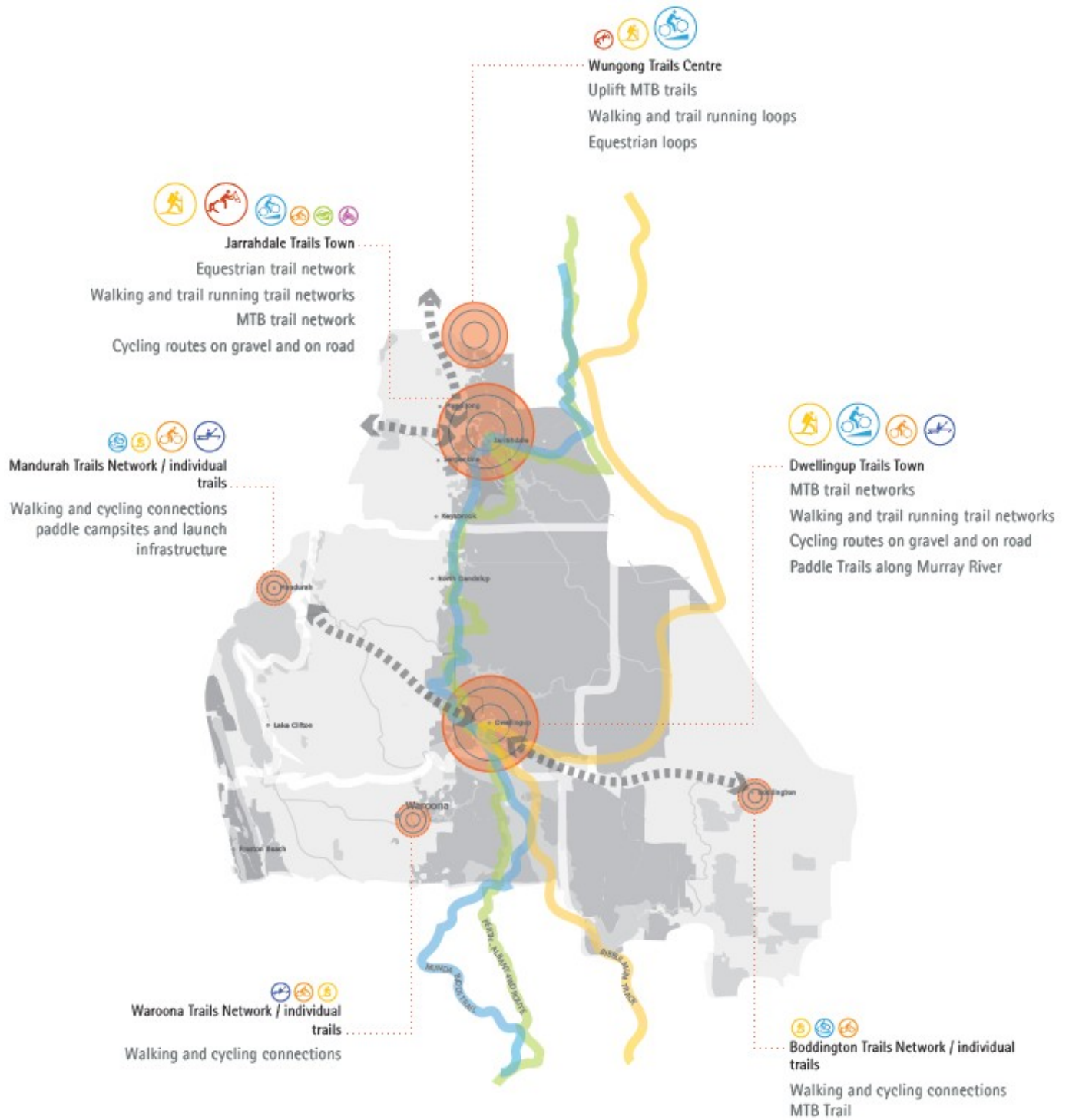


Figure 12: Peel Region Trails Master Plan Regional Priorities

Trail Town Assessment Criteria

Trails WA worked in conjunction with the Western Australian State Government specifically the Department of Local Government, Sport and Cultural Industries and the Department of Biodiversity Conservation and Attractions to develop an accreditation program designed to help regional communities become world class trail destinations.

The Trails WA Trail Town accreditation program is a tailored, best practice accreditation system developed following a comprehensive study of international best practice in trails and trail tourism which resulted in the development of the World Class Trails Hub Strategy for WA.

The Vision for WA is:

Western Australia is recognized throughout the world as an internationally significant trails destination offering amazing trail experiences in exceptional locations across the state (World Class Trails Hubs Strategy 2012).

By undertaking this accreditation program the Jarrahdale community has access to a unique comprehensive assessment program which is essentially a step-by-step guide to building capacity in trail tourism.

As a result of the community going through this application process they will undoubtedly realise improvements in the community's capacity to support trail tourism in Jarrahdale resulting in increased visitation, capacity building for businesses and community building.

Even if Jarrahdale is not yet ready to become fully accredited, the process of working towards accreditation involves capacity building opportunities which will enhance social and economic parameters within the community.

It is recognised that the Trail Town accreditation criteria specifically outlines the requirements for both mountain biking and walking trails in order to achieve accreditation. As the focus of this Business Case is to capitalise on the point of difference of equine trails it will be necessary to work in partnership with Trails WA and other relevant bodies in order to determine the level of equine trails required to be included in the Trail Town assessment criteria for a Trail Town.

What does the Trail Town accreditation involve?

Based on international best practice, the Trail Town Accreditation process focuses on improvements to the destination (Jarrahdale) across a range of parameters. It's a comprehensive destination-development guide targeted at attracting existing and potential trail users.

Once accreditation has been achieved the Trail Town branding and Trails WA website will highlight and promote Jarrahdale to trail users in WA and beyond. Joint promotion of WA's trails and Trail Towns will raise the profile of WA to interstate and overseas visitors. The process will make Jarrahdale tourist-ready.

Step 1: Gets your 'product' ready for sale i.e. Jarrahdale and trails ready for the visitors.

Step 2: Promotes Jarrahdale to those potential visitors

This is an insight into what the process covers:

- *How to make your trails best-practice in design and management.*
- *What amenities, facilities and services you need in your town to service the trail user.*
- *How can businesses get involved with this lucrative market?*

- *What governance structure do you need to make the trails sustainable over the long term?*
- *How do we promote our town to the trails tourist?*

What is the process to become accredited?

The Trail Town initiative consists of the following components:

1. Introduction to Trail Tourism

The first step will be to contact trailswa@gmail.com who will direct your enquiry to a member of the Trail Town Assessment panel. A panel member will liaise with the Shire to establish a meeting to introduce the benefits of trail tourism and the process for becoming a Trail Town.

Ongoing engagement and opportunities for a facilitated self-assessment and capacity audit session will also be discussed. This process aims to assist the Jarrahdale community to identify the areas where further focus might be needed in order to begin to embrace the opportunities of trail tourism.

2. Trail Friendly Business Program

Information and criteria to help develop new and existing businesses in your town to meet the needs of trail users.

3. Trail Town Accreditation Program (TTAP)

This program enables a town to achieve the status of an accredited Trail Town and therefore receive the full benefits including use of the Trail Town logo.

The following steps describe the process:

STEP 1: Purchase the Application Pack.

Cost \$500. Documentation includes:

- i. Application form including explanatory information
- ii. Guidelines to the accreditation process
- iii. Supporting information

STEP 2: Applicant reviews the documentation.

STEP 3: Site visit by Trails WA assessors to meet with community members to discuss the process and the town's readiness for assessment.

STEP 4: Applicant completes the application process. During this stage there is ongoing liaison between the town and the assessment team to assist with the necessary capacity building for the town to achieve accreditation. When ready, the applicant is provided with a version of the application form with supporting information removed for ease of completion.

STEP 5: The Applicant submits the application form.

STEP 6: The Assessment Panel² will evaluate the application to ensure the minimum requirements are met. The panel may approve the application or undertake an onsite verification or request changes if required. Any areas of discrepancy will be outlined in an Assessment Report which can be used by the Applicant to assist with completing those missing requirements. Applications which initially do not meet the minimum requirement will need to pay \$100 for each additional application³.

STEP 7: The Application is approved by Trails WA.

Figure 13: Trail Town Accreditation Process

The following costs are applicable:

- a. Application Pack \$500.
- b. Following approved Accreditation: Licence fee of \$500 for use of the Trail Town logo and promotion on Trails WA website for two years.
- c. Renewal fee: every two years a renewal fee of \$200 is payable to Trails WA for an assessor to review the town's performance according to all the required criteria in the Application Form. If the town continues to meet all the requirements, then an additional two-year licence is purchased (\$500) for ongoing use of the logo and promotion on Trails WA website.

Accreditation Application

There is a comprehensive application form which needs to be completed and assessed to become a Trail Town. The form includes eight main sections:

1. Contact Information
2. Introduction
3. Landscape and Setting
4. Existing Tracks and Trails
5. Five A's of Tourism – Access, Attractions, Activities, Amenities and Accommodation
6. Planning and Management
7. Engagement of supporting business
8. Marketing

Within each section there are essential and desirable questions that need to be answered. A summary of the essential questions/criterion for each section are included below.

Landscape and Setting

- Are the town's trails set in landmark locations and distinct landscapes (e.g. expansive vistas, rocky outcrops, water bodies, significant vegetation)?
- Does the setting for trails provide year round appeal?
- Describe the character of the trail experience. What factors contribute to and define the trail experience? (e.g. fun, landscape/seascape, culture, history, interpretation, isolation, wilderness, flora and/or fauna, challenge).
- Sense of place – some features in the trail network or town provide inspiration, mystery or moments of personal discovery; some features in the trail network, town or landscape provide exhilaration, exceptional fun or challenge; some features in the town or trail network are of unusual peacefulness, remoteness or vastness; and significant cultural heritage is featured and interpreted in the town or on trails.
- How are you engaging with the traditional owners of the land? (Trails WA encourage interpretation of significant sites, traditional owner involvement in interpreting trails, guided tours and/or service delivery).
- Are there any discordant elements?

Existing Tracks and Trails

- Does your town/location have trail heads (in town or nearby), trail networks, trail centres?
- Demonstrate that there is at least three days of trail activity with a mix of trail grades for different user groups.
- Demonstrate Trail construction accentuates and enhances the natural features of the landscape and is in line with best practice construction guidelines.
- Trail significance and planning has been according to the appropriate planning documentation (e.g. Trail Development Series, WA Mountain Bike Strategy, WAQ Hiking Strategy etc.)
- There is a critical mass of trail activity or networks close to the town and/or commencing in the town.
- Are some of the trails accessible from the town centre?
- Is access to the trails obvious and identified by signs from the following: town centre/trail head/trail centre/entry roads.
- Are trail maps available through multiple media and highly accessible for key trails in your location?
- Trail safety design: your trail network needs to be designed and managed to be safe (with consideration being given to the grade of trail and type of user and their expectations). For example are road crossings safe? Do signs and maps clearly outline the risks associated with specific trail grades or types? Do you have a risk management plan for the trail networks? Provide detail of the planning in place to ensure visitor safety e.g. a Risk Management Plan/Track Maintenance Schedule.

Five A's of Tourism – Access, Attractions, Activities, Amenities and Accommodation

- Are there entry statements to the town on major roads that clearly identify the town as a Trail Town (ie is the Trail Town logo clearly displayed on entry statements)?
- Is there a sealed road connecting major population centres to the Trail Town?
- Can the town be easily accessed by public transport, air or train?
- Are the scheduled transport services regular/consistent and reliable?
- Are there built attractions and activities (museum, heritage attraction, shopping, craft market, breweries, wineries and other tourism product) and organised tours (including themed, self-guided and tag along tours, four wheel drive tours, mountain bike clinics and guided rides, interpretive bus tours) in the town that enhance the tourism offering and that appeal to a range of visitor markets (ie families/children, adults, seniors)?
- Are there regionally significant features and attractions (natural, built or tourism product) within half day distances that complement the Trail Town? (e.g. zip lining, major dams, steam train, sky diving, parasailing, surfing, gold prospecting, wineries, breweries).
- Are there any (current or future) planned significant events and festival that complement trails activities, nature and/or adventure?
- Does the town have a visitor information service providing information (maps, trail information) 7 days per week and in a central location?
- Does the town provide meal services 7 days per week, night time provision, day trip provision? Or how is this need met?
- Does the town provide the following trail services?
 - Relevant trail equipment hire (i.e. canoes, bikes, walking packs).
 - Equipment repair.

- Equipment sales (e.g. camping, fuel services, supplies, hiking boots, bike chains, spare tyres, pumps).
- Shuttles to trails.
- Group or guided activities.
- Logistical support (equipment, food delivery).
- Short term luggage/equipment/parcel storage or holding.
- Access to free water.
- Does the town provide transport services (e.g. fuel, bike/car maintenance)?
- Are there basic amenities supplied at Trail Town for trail users? (e.g. secure parking, toilets, shade and shelter), for mountain biking (e.g. bike racks, bike wash facilities, bike repair stations), for bridle towns (water troughs, horse harness station, horse float parking)?
- Are there sufficient supporting services and amenities in the town (e.g. laundry, pharmacy, grocery, phone charging station, internet, atm)?
- Are there basic amenities supplied at the trail centre for trails users? (e.g. secure parking, toilets, showers, shade and shelter, picnic table, bike racks).
- Are there medical services within 30 minutes' drive (e.g. hospital, doctor, nursing centre or ambulance station)?
- Is there a range of accommodation types within 30 minutes and different price categories of the town (i.e. caravan park, backpackers, bed and breakfast, self-contained cottage)?

Planning and Management

- Demonstrate the planning framework that underpins and supports the Trail Town?
 - Planning framework (state or regional).
 - Master Plan (local).
 - Land manager involvement in Trail Town/trail development (adopted by the land manager).
- Is there an agreed governance structure that underpins the management and maintenance of the Trail Town?
- Demonstrate how the community is supportive of the Trail Town concept (i.e. quote surveys, attendance of forums).

Engagement of Supporting Businesses

- Is there a strategy in place to encourage businesses within the town to understand the needs of the target market and to become accredited Trail Friendly Businesses?
- List the accredited trail friendly businesses for your town and the services they provide, or demonstrate there are multiple and recognisable Trail Friendly Businesses in the town or how the business community is engaged with the Trail Town concept and trail user markets (e.g. letter of support, research, questionnaire).

Marketing

- Is there a comprehensive, brand and marketing plan for your Trail Town/network? Does it cover website, promotional material, brand, distribution channels and how is the plan realised/implemented?
- Is there a website that provides trail information, clear directions and hospitality booking information for your trails or Trail Town/network (i.e. via a visitor centre)?
- Does your town have a Trail Town profile on Trails WA website?
- Are all the trails and trail network information on the Trails WA website?
- Is there a link on your website to the Trails WA website and app (and each trail description links to the detailed profile and Trails WA)?
- Demonstrate how the Trail Town logo will be incorporated in the signage and marketing planned for the town.
- How does your Trail Town provide pre-visit promotional information (other than online) and how does it all work together to create demand and manage expectations?

6. Benefits of Becoming a Trail Town

Multiple Benefits

Trail tourism brings social, economic, environmental, health and community outcomes particularly in regional areas.

The following are benefits of becoming a Trail Town:

- Trails spread economic growth to regional areas.
- Trail tourism brings people to towns.
- Trails promote healthy communities.
- Trail tourism brings new businesses, jobs and volunteer opportunities.
- Trails build community and cultural capacity.

There is a large amount of evidence demonstrating the positive economic and social impact of trails. Trail tourists are known to spend more and stay longer.

They are low impact tourists with a high dispersal rate and they tend to engage in a broader range of experiences than the average visitor. As such trail tourists are an important growth market for the tourism industry in Western Australia.

In addition to economic benefits, trails are widely known to provide a range of social benefits including community cohesion, improved physical and mental health, youth engagement and increased environmental appreciation, awareness and education.

Importantly, much of these benefits are experienced in regional areas.

The key to harnessing this opportunity is having a range of targeted services and offerings which meet the needs of the trail user.

In addition to a good supply of well-maintained trails, these offerings include and range from coffee and food services to equipment hire, accommodation and tours.

Source: (Trails WA Trail Town Accreditation, Becoming a Trail Town, 2020)

Values commonly associated with trails		
Environment values	Social values	Economic values
<ul style="list-style-type: none"> • Biodiversity • International significance • Landscape and visual amenity • Wilderness • Wetland/waterway 	<ul style="list-style-type: none"> • Recreation • Education • Aboriginal heritage • Health and wellbeing • Nature interaction • Wilderness interaction • Local sense of place 	<ul style="list-style-type: none"> • Basic raw materials • Public water resources • Tourism • Pay per use • Local employment • Mining • Management cost • Liability • Initial costs

Figure 14: Values commonly associated with trails

Source: (Trails Development Series, 2019)

Benefits of trails that are generally recognised include:

- Encouraging more frequent outdoor physical activity leading to improved physical and mental wellbeing and a reduction in lifestyle diseases and associated medical costs.
- Improved lifestyle due to opportunities for outdoor recreation by individuals, groups, education and community organisations.
- Providing low cost facilities for recreation accessible to many different groups in the community.
- Improved awareness and appreciation of the natural environment and support for its conservation and protection.
- Economic benefits from employment and business opportunities in trail development, management, maintenance, events and supporting products and services.
- Tourism growth to trail destinations with resulting economic stimulus of local economies.
- Trails adding to the value of nearby properties.
- Protection and showcasing of natural, cultural and historic areas by providing for sustainable access routes.
- Improved sustainability of local communities by making them more attractive places to live.
- Opportunities for social interaction and development of community identity through participation in trail activities, maintenance and conservation.

Sources: (Peel Regional Trails Strategy, 2019), (Recreational Trail Planning, Design and Management Guidelines, 2020), (Western Australian Strategic Trails Blueprint 2017-2021, 2017), (Trails WA Trail Town Accreditation, Becoming a Trail Town, 2020)

What is a Trail Friendly Business?

Being trail friendly is easy, providing trail users with a warm welcome and facilities to refresh, refill and re-energise are the main aims.

Trails WA has developed criteria for accommodation, cafes and restaurants, hire, transport providers and tour operators. From providing laundry facilities and bike racks to packed lunches and camping supplies Trails WA can assist in attracting trail users.

The Trail Friendly Business program has been designed to:

- Help businesses offer services and amenities to meet the needs of trail users.
- Create a community of like-minded businesses who share knowledge and cross-promote each other.
- Identify businesses as trail friendly by displaying the trail friendly logo.



Figure 15: Trail friendly logos

What is a Top Trail?

The aim of the Top Trails project is to identify the best trails in each region, and promote them cooperatively to bring more visitors to regional areas of Western Australia.

To be selected a trail needs to be of a high standard and provide a memorable or unique experience. Additionally, the trail will have:

- Appropriate signage - directional trail marking, distance and locational.
- Maps, guide books and track notes if required.
- Interpretative material and information if appropriate.
- Management and maintenance plans.
- Community support (e.g. friends group or Shire involvement).
- A promotional brochure.

The following factors are also taken into consideration:

- The quality of the experience.
- Point of difference.
- Accessibility.
- Community involvement.
- Cultural awareness.
- Nearby facilities and services.
- Safety.



Source: (Trails WA Trail Talk, 2021)

7. Funding Opportunities

A range of external funding sources are available to support the development and implementation of the Jarrahdale Trail Town Business Case and Implementation Plan. Funding and funding partnerships can be procured from a variety of sources locally and at state and federal levels.

Federal Government Funding

2022 Federal Election Advocacy/Commitment

The Shire is advocating through the 2022 Australian Federal Election for a commitment of \$16.3 million to implement the priority recommendations of the Jarrahdale Trail Town Business Case.

Partnership with Regional Development Australia (Peel)

RDA Peel is advocating through the 2022 Australian Federal Election for a commitment of \$30m for trails enhancement and development in the Peel region. It is anticipated that the Shire will be in a position to access some of these funds should a commitment be made.

The Department of Infrastructure, Transport, Regional Development and Communications – Building Better Regions Fund

The \$1.29 billion Building Better Regions Fund (BBRF) supports the Australian Government's commitment to create jobs, drive economic growth and build stronger regional communities into the future.

The fund invests in projects located in, or benefiting eligible areas outside the major capital cities of Sydney, Melbourne, Brisbane, Perth, Adelaide, and Canberra.

Grant funding is available through two funding streams:

The Infrastructure Projects Stream. Supports projects that involve construction of new infrastructure, or the upgrade or extension of existing infrastructure.

The Community Investments Stream. Funds community development activities including, but not limited to, new or expanded local events, strategic regional plans, leadership and capability building activities.

For further information refer: <https://www.regional.gov.au/regional/program s/building-better-regions-fund.aspx>

Business Australia – Stronger Communities Programme

The Stronger Communities Programme provides each of the 151 federal electorates with \$150,000 to fund small capital projects. These projects aim to improve local community participation and contribute to vibrant and viable communities. Federal Members of Parliament (MPs) identify potential projects and invite applications from their electorate.

The grant amount for small capital projects is up to 100% of eligible project costs except for local governments where grant funding will be up to 50% of eligible projects costs. Grant requests must be between \$2500 and \$20,000.

For further information refer: <https://business.gov.au/grants-and-programs/stronger-communities-programme>

State Government Funding

2021 State Election Commitments

Through the 2021 State Elections the Shire and Community received funding commitments from the State Government for a number of projects including some contained within this business case. They are anticipated to be delivered in the 2021/2022-2022/2023 financial years.

2025 State Election Advocacy

The Shire may choose to advocate through the 2025 State Government Election for financial commitment to projects contained within the Business Case.

Community Heritage Grants (CHG) – Department of Planning, Lands and Heritage

The Heritage Grants Program offers funding for the conservation, future planning and promotion of heritage places and their cultural heritage significance. The CHG stream provides assistance for community engagement and interpretation projects related to State Registered places.

Partnerships with Department of Biodiversity, Conservations and Attractions

Through partnerships with DBCA, funding may be accessible for the maintenance of existing trails and possible funds for the maintenance and development of new trails.

Tourism Western Australia – Regional Events Scheme

The Regional Events Scheme (RES) is an annual funding round for smaller and developing regional events across WA.

The RES supports events that:

- Bring more people to the region, which means more tourism dollars for the community
- Attract media coverage which helps promote the region as an exciting destination
- Involve and inspire the local community
- Encourage people to come to the region outside of the typical tourist season
- Add vibrancy and excitement to the region
- Support jobs in regional WA
- Showcase a strong point of difference and/or profile the unique features of the town and/or region

For further information refer: <https://www.tourism.wa.gov.au/industry-support-and-events/resources-for-event-holders/Funding-for-regional-events/Pages/Regional-Events-Program-funding.aspx#/>

Department of Local Government, Sport and Cultural Industries – Community Sporting and Recreation Facilities Fund

The Community Sporting and Recreation Facilities Fund (CSRFF) exemplifies the WA Government's commitment to the development of sustainable infrastructure for sport and recreation across the State.

The purpose of the program is to provide WA Government financial assistance to community groups and local government authorities to develop basic infrastructure for sport and recreation.

The program aims to increase participation in sport and recreation, with an emphasis on physical activity, through rational development of sustainable, high quality, well-designed and well utilised facilities.

Through CSRFF, the State Government will invest annually in the development of high quality physical environments in which people can enjoy sport and recreation.

For further information refer: <https://www.dlgsc.wa.gov.au/funding/sport-and-recreation-funding/community-sporting-and-recreation-facilities-fund>

Department of Primary Industries and Regional Development- Regional Economic Development (RED) Grants

The RED Grants program is a State Government initiative that invests in community-driven projects that support efforts to create long-term economic growth and job sustainability in our regions.

The State Government's Royalties for Regions program will invest \$40.8 million towards the RED Grants program over seven years for projects that will directly benefit regional communities.

Each of the Regional Development Commissions (RDC) manage the grant round process for their region and will provide advice to applicants during the application process

For further information refer: <http://www.drd.wa.gov.au/rfr/REDG/Pages/default.aspx>

Lotterywest / Healthway – Community Investment Framework

Lotterywest / Healthway provide three grant programs under the Community Investment Framework.

The three grant programs are:

- Grassroots and Community Initiatives: help build stronger and healthier communities by supporting local activities and regional community initiatives.
- Developing Solutions: to assist the development of solutions that will have a greater community impact.
- Community Legacy: to invest in collaborative initiatives that will make lasting and significant change for the community.

The grant programs support outcomes under five priority areas being, inclusive thriving community, connected cultural experiences, protected sustainable ecosystems, smart innovative sociality and activity healthy people.

For further information refer: <https://www.lotterywest.wa.gov.au/grants/grant-opportunities>.

Local Government Funding

Local governments make significant investments in facilities, programs and services. Where funding objectives align with Council's objectives, funding is often allocated to support the development of successful trails, recreation and community facilities in the local area. This may be through a capital works program, grant or loan (sometimes low interest). There is a provision within the Local Government Act (1995) to raise a levy to fund specific projects.

Annual Budget commitments

Year 1 Implementation actions in the Jarrahdale Trail Town Business Case have been funded in the Shire of Serpentine Jarrahdale 2021 / 2022 Financial Year Budget.

The Shire of Serpentine Jarrahdale Long Term Financial Plan 2021-2031 includes an annual amount for trails renewal.

There may also be the opportunity to access funds within Shire Reserves for some elements of delivery of projects contained within this business case and consideration through the annual budget process.

Funds raised through commercial activities

There are potential opportunities for re-investment of funds raised from commercial leasing and subdivision/sale of Shire land holdings in Jarrahdale, into the trail town and its development and ongoing maintenance costs.

Commercial and Private Sector Funding

Commercial and private sector funding is often used to assist with a variety of projects and their ongoing operations. Opportunities such as naming rights and in-kind donations are available.

There may also be opportunities to explore user- pay arrangements for trail experiences depending on the trail provision.

8. Key Priority Areas and Recommendations

A series of key priority areas contain prioritised recommendations grouped in the themes (based around the Trail Town Accreditation criteria) required to develop a Trail Town.

The recommendations listed as High priority are essential criterion within the Trail Town accreditation form, or they mitigate a significant risk. The delivery of these projects should be prioritised. Medium priority criterion are focused around recommendations that have known external factors, are not essential for Trail Town accreditation but are desirable, or do not have the Shire resources to commence immediately, however will contribute positively to Jarrahdale becoming an accredited Trail Town. Low priority indicates that the recommendation is not essential for Trail Town accreditation and add some value to Jarrahdale becoming a Trail Town, but have less positive impact than medium and high priority recommendations. These projects should commence as resources are available to deliver them. A number of ongoing recommendations have also been developed which should also be implemented as required and resourced. A cost estimate has also been provided, this is a high level estimate and is provided to assist with calculating the level of investment. Each project needs to be further defined and costed once more detailed designs and information is determined. A lead agency has been identified and this has been bolded and partners have also been identified that would play a key role in implementing the initiative.

A lead agency has been identified and this has been **bolded** and partners have also been identified that would play a key role in implementing the initiative. It should be noted that a collaborative approach should be taken to implementing many of the recommendations between the Shire, government agencies, organisations and the local Jarrahdale community.

Abbreviations:

SSJ	Shire of Serpentine Jarrahdale
DBCA	Department of Biodiversity Conservation and Attractions (WA)
DoT	Department of Transport (WA)
PTA	Public Transport Authority (WA)
DLGSCI	Department of Local Government, Sport and Cultural Industries
LGA	Local Government Authority
WALGA	Western Australian Local Government Association
DPIRD	Department of Primary Industries and Regional Development
PHTA	Perth Hills Tourism Alliance
PCC	Peel Chamber of Commerce
DFES	Department of Fire and Emergency Services
WAERA	Western Australian Endurance Riders Association
ATHRA	Australian Trail Horse Riders Association

A. Landscape and Setting

1. Sense of Place/Identity and Cultural Heritage Factors

Sense of place enables the town's identity to be communicated through many different mediums, to spark intrigue in visitors. The identity can wrap around infrastructure and services to immerse visitors in the Jarrahdale experience. The recommendations in this Business Case to build sense of place will increase the experience for tourists, providing a theme for the town which creates 'touch points' in each experience that a visitor has.

Drawn from community engagement, it is understood that Jarrahdale's identity is focused around the natural environment, heritage, community and to an extent, equine and walking. Public art, signage and building design can also support placemaking. For example, the integration of public art along Jarrahdale Road that has themes of heritage and equine, will remind visitors of Jarrahdale's offerings as they walk down the street to buy a coffee or have a snack. It is this sense of place that provides an immersive experience for visitors.

A Trail Town must have character to add to the trail experience and is an essential criterion within the accreditation process. The below recommendations enable the Shire to continue to develop Jarrahdale's sense of place and brand which should be undertaken in partnership with the local community to ensure that it is authentic.

“An integrated approach to creative placemaking can prove very effective in making residents feel attached to their localities. Through a combination of urban design and public art, the Shire can develop or rejuvenate streets, central squares, parks and other public spaces to give a sense of belonging, excitement or respite. Footpaths linking larger areas, trailheads marking gathering spots, public benches offering comfort to slow people down and to facilitate interaction. Public art developed for a purpose can shift public perception by making a place more welcoming, and inform new ways to engage with it.” Source Shire of Serpentine Jarrahdale Public Art Strategy

Jarrahdale has a proud history from the traditional owners cultural history through to European history of timber and logging with the town being recognised as a heritage place by the National Trust.

Recommendations

No.	Recommendation	Cost Estimate	Priority	Lead Agency/ Partners
1.1	Engage and work with traditional owners to identify opportunities to provide advice and guidance on features of cultural significance, to inform trails planning, maintenance and development and to establish the Aboriginal heritage values of the area.	Existing SSJ Resources	High	SSJ/DBCA
1.2	Identify/confirm landmark locations (e.g. National Parks/areas of cultural/biodiversity significance and distinct landscapes (e.g. valleys/water bodies/peaks/ man made landmarks of significance) and ensure trails (existing and planned) acknowledge and are linked to these locations and landscapes. Prepare a map representing these.	Existing SSJ Resources	High	SSJ

No.	Recommendation	Cost Estimate	Priority	Lead Agency/ Partners
1.3	Identify any discordant elements (e.g. heavy industry, landfill sites, mines) that detract from the user experience and develop strategies to manage these elements (e.g. signage or interpretation/providing alternate routes).	Existing SSJ resources	High	SSJ/Alcoa/ DBCA
1.4	Undertake an Aboriginal history project to capture Indigenous culture and the history of Jarrahdale for inclusion in interpretive signage, public art works and interpretation of significant sites along the trails.	\$50,000	High	SSJ
1.5	Prepare a business case to inform Council decision making regarding the feasibility of entering into a lease of Heritage Park. The business case is to consider capture any improvement works necessary, future development opportunities (e.g. nature play, cultural heritage interpretation, amphitheatre, sculptures and picnic areas), proposed arrangements for maintenance and management of the park, commercial opportunities and associated costings.	\$10,000	High	SSJ/ Jarrahdale Heritage Society/National Trust
1.6	Engage with Jarrahdale Heritage Society to develop public art briefs consistent with Opportunity 1 of the Shire's Public Art Masterplan (Heritage Tourism).	Existing SSJ resources	Medium	SSJ/ Jarrahdale Heritage Society
1.7	Undertake Public Art project Opportunity 9 within the Shire's Public Art Master Plan (ground based painted road/car parking locations and small scale wayfinding).	\$20,000	Medium	SSJ
1.8	Prepare a plan and associated costings for the operation of the No 1 Jarrahdale Mill and Mill Managers house, complementing the desired outcomes of the activation of Jarrahdale Heritage Park, proposed Trail Centre at LOT 814 and accreditation as a Trail Town. Use the plan to support an expression of interest process to the National Trust of Western Australia, to lease both facilities when the opportunity arises.	\$10,000	High	SSJ/National Trust/Jarrahdale Community
1.9	Explore the opportunity to support the delivery of guided indigenous cultural heritage trails activities.	Existing SSJ resources	Medium	SSJ/DBCA
1.10	Ensure that development of Jarrahdale as a Trail Town follows United Nations World Tourism Organisation (UNWTO) Sustainable Development Goals as outlined above in Section 1 above.	Existing SSJ resources	Ongoing	SSJ/Tourism Operators/ Investors
1.11	Maintain, protect and celebrate existing heritage assets where feasible.	TBC	Ongoing	SSJ/ National Trust/DBCA
1.12	Ensure when upgrading, enhancing and developing trails that they include features that are inspiring, mystical, exhilarating, peaceful and culturally sensitive and accessible all year.	TBC	Ongoing	SSJ/DBCA

B. Trails Development and Management

2. Trails

As part of becoming a Trail Town it is necessary to have trails including individual trails, trail networks and trail centre/s. Trail head/s are the beginning of a single trail and it is important for a Trail Town to have at least some trails beginning from the town or nearby to the town.

Trails come in a variety of types and configurations and are defined by their model, system, use, direction and classification. They can accommodate a range of user types.

Individual linear or looped trails are generally not considered as a development model for a destination. Long distance trails can link individual trails and can also be the precursor to developing a destination. Small individual trails typically form part of a Trail Town, centre or network model. Trails are generally either short or long-distance linear trails or loop trails.

Short linear trails are linear, marked routes which can be completed in under a day and are of varying lengths. They are generally marked in two directions as they need to be used as a return journey. Short linear trails are often associated with key visitor attractions such as summits, vistas, gorges and water bodies, and may include picnic and rest areas. Jarrahdale and the broader Shire area has numerous short linear trails, an example includes the Kitty's Gorge Walk Trail.

Long distance trails often connect towns or locations. These are long multi-day routes which start and finish in different locations and may be broken up into smaller sections. They can be iconic tourism products however the market for end-to-end use is relatively limited and often specialised. The Munda Biddi Trail which traverses through Jarrahdale is a good example of a long-distance trail.

Loop trails have generally the same attributes as linear trails except they start and finish in the same location. The Jarrahdale Heritage Town Walk is a good example of a loop trail.

A trail network is a single site with multiple signed and mapped trails of varying type and classification, with no visitor centre and limited user facilities. A trail network may be standalone within a population centre or individual location, or form part of a trail centre or Trail Town. The Langford Park Mountain Bike trails are a good example of a trail network.

Jarrahdale and the surrounding area has many existing trails for walking, trail running, horse riding (equine), mountain biking and cycling. The main trails as identified recently in the Peel Trails Strategy and the Shire of Serpentine Jarrahdale Local Trail Plan included 32 trails/networks comprising:

- 20 bush and urban walking trails.
- 2 shared use trails.
- 2 mountain biking trails/networks.
- 8 bridle trails/networks.

Two of these trails are state level, seven are regional level and the remaining 23 trails are local level trails. The existing 32 trails that would form part of the Jarrahdale Trail Town are outlined above in the Needs Analysis Section. The Jarrahdale Trail Town will have individual trails, trail networks and trail centres (one at Jarrahdale and one at Byford).

Jarrahdale is located on the Munda Biddi Trail alignment, and is classified as a Munda Biddi Trail Town. The trail runs in on the eastern side of Jarrahdale and out via the southern side of the town.

The recommendations within this Business Case will help to capture users of the trail to spend time in Jarrahdale, or use the town as an end/start point.

The Bibbulmun Track previously ran through the township, however due to bauxite mining, was realigned to pass Jarrahdale on the eastern side. A project considering the development of the Mounts Trail will provide an opportunity to link Jarrahdale to the Bibbulmun Track and will open up new possibilities for users of the Track as it provides an excellent location for visitors wanting to walk a small section of the Track as a trial or weekend adventure. It also provides a logical stopping point within the Bibbulmun Tracks' Darling Range Section, halfway between Kalamunda and Dwellingup.

Recommendations

No.	Recommendation	Cost Estimate	Priority	Lead Agency/ Partners
2.1	Develop a Trails Priority Plan to plan for new and/or upgraded trails as per the Peel Regional Trails Strategy/Serpentine Jarrahdale Trails Plan and based on the audit findings (refer recommendation 2.4).	\$30,000	High	SSJ/DBCA
2.2	Work collaboratively with DBCA and user groups to enhance and upgrade the mountain biking trails in Langford Park.	Existing SSJ resources	High	DBCA/SSJ/ Trail User Groups
2.3	Promote that there is at least three days of trail activity with a mix of trail grades for different user groups within and nearby to Jarrahdale, that there is a critical mass of trail activity or networks close to Jarrahdale and/or commencing in the town and that some of the trails are accessible from Jarrahdale.	\$5000	High	SSJ
2.4	Conduct a detailed on ground trail audit of all 20 trails identified in this Business Case that are relevant to the creation of Jarrahdale as a Trail Town. This should include signage, risks/hazards, upgrades, determine grading, surface type, usage, trail type etc.	\$50,000	High	SSJ/DBCA/ Jarrahdale Heritage Society
2.5	Develop a wayfinding strategy for Jarrahdale and the associated trails, to address the lack of signage and wayfinding in the town.	\$50,000	High	SSJ
2.6	Upgrade and enhance existing high priority trails in-line with the Shire of Serpentine Jarrahdale Trails Plan and outcomes of the Trail Priority Plan identified in 2.1. i.e. the Munda Biddi Trail – Jarrahdale Section and Kitty's Gorge Trail.	\$2.65m	High	SSJ/DBCA /DLGSCI
2.7	Work with DBCA to implement improvements to existing equine trails i.e. realignment of the Jarrahdale Bridle Trail and development of new equine trail networks in Jarrahdale to achieve a strong focus on equine trails provision in Jarrahdale.	\$1.73m	High	SSJ/DBCA WAERA/ ATHRA
2.8	Continue to work with Alcoa and the Munda Biddi Foundation to ensure that the Munda Biddi Trail continues to traverse through Jarrahdale and that Jarrahdale remains as a Munda Biddi Trail Town. Investigate opportunities to upgrade this section of the Munda Biddi Trail.	Existing SSJ resources	High	SSJ/ DBCA/ Alcoa/ Munda Biddi Trail Foundation,

No.	Recommendation	Cost Estimate	Priority	Lead Agency/ Partners
2.9	Complete the development of the Mounts Loop Trail Feasibility and Implementation plan, detailing a trail development that links Jarrahdale to the Mounts and the Bibbulmun Track.	\$31,000 (study currently underway).	High	SSJ/DBCA/ Bibbulmun Track Foundation
2.10	Investigate the feasibility of establishing the Serpentine Trail (there is potential to extend Kitty's Gorge Trail south of Serpentine River creating a challenging day walk option).	\$50,000	High	SSJ/DBCA
2.11	Identify and develop a network of gravel riding routes around Jarrahdale.	\$255,000	High	SSJ/DBCA Main Roads WA
2.12	Work with DBCA to develop a concept plan for new Jarrahdale Equine networks.	\$30,000	High	SSJ/DBCA
2.13	Develop a self-guided heritage tour trail for Jarrahdale with associated signage and collateral.	\$20,000	Medium	Jarrahdale Heritage Society/SSJ
2.14	Develop a self-guided equine tour through Jarrahdale for leisure and equine riders and associated collateral.	\$20,000	Medium	SSJ/ DBCA/ SSJ Equine Group
2.15	Develop the Mundijong to Jarrahdale Rail Trail as detailed in the endorsed <i>Trails Development Business Case 2020</i> .	\$10m	Medium	SSJ/Alcoa
2.16	Upgrade and enhance existing medium priority trails in-line with the Shire of Serpentine Jarrahdale Trails Plan and outcomes of the Trail Priority Plan identified in 2.1. i.e. the Mundlimup Timber Trails, Langford Park Mountain Bike Trails, Balmoral Trail, Tony Henniker Long Walk and Jarrahdale Heritage Town Walk.	\$620,000	Medium	SSJ/DBCA/ Jarrahdale Heritage Society
2.17	Expand the existing Jarrahdale Mountain Bike Network in Langford Park where there is potential to link north into the proposed Wungong (Byford) Trail Centre and south into town through Jarrahdale State Forest. The terrain offers potential for all classifications and cross country, all mountain and downhill trail types.	\$504,000	Medium	SSJ/DBCA/ DLGSCI
2.18	Investigate the feasibility of establishing an Edge of Scarp Trail for bushwalking/trail running/mountain biking/equestrian along the edge of the scarp from Jarrahdale to Wungong Regional Park.	\$50,000	Medium	SSJ/DBCA
2.19	Upgrade and enhance existing low priority trails in-line with the Shire of Serpentine Jarrahdale Trails Plan and outcomes of the Trail Priority Plan identified in 2.1. i.e. the Jubb Trail, Ken Jones Trail, Korribinjal Brook Trails, Tallow-wood Trail, WWII Prisoner of War Camp Trail and Jarrahdale 1872 Heritage Rail Trail.	\$320,000	Low	SSJ/DBCA/ DLGSCI
2.20	Implement the actions relating to Jarrahdale contained in the Equine Trails Master Plan (currently being prepared) once complete and endorsed by Council, to further enhance Jarrahdale as an Equine Trail Town.	TBC	Ongoing	SSJ/DBCA

3. Trail-related Infrastructure

A trail centre is a single site with dedicated visitor services and trail facilities, provided by a single trail provider. It includes multiple signed and mapped trails of varying type and classification. A trail centre is required to be part of a Trail Town and incorporates a trail network/s and individual trails. They are typically located close to major population centres or iconic locations. It is proposed that a trail centre is established in Jarrahdale at Lot 814 Jarrahdale Road (refer Figure 16). This parcel of land is owned in freehold by the Shire and is the location of the Timber Mill Rotunda and Single Men's Quarters. A Trail Centre at this location will compliment the Jarrahdale Oval trail head development and the proposed Byford (Wungong) Trail Centre that has already had a business case prepared for it. The two trail centres can be linked through the Langford Park trail networks.

Although visitors often access the internet to plan their trips, it is important that visitors intending to use the trails have a central information and services point in town. A trail centre provides a space where trail and visitor-related information, services and facilities come together to create a one-stop shop. Because trails are free to use, a Trail Centre can provide an opportunity to generate income, which can then be invested back into trails to enhance the experience and safely maintain the trails. Trail Centres generally include end of trip facilities such as hot showers and toilets, retail spaces for local products, hireable spaces for commercial operations (guided tours etc.) and hireable lockers. In Jarrahdale, a Trail Centre would benefit from a secure 24-hour car park to alleviate the current parking issues across Jarrahdale. A Trail Centre is a requirement for Trail Town accreditation. A trail head for all trails that start/finish in Jarrahdale should also be incorporated into the Trail Centre.



Figure 16: Aerial Image of Lot 814 in Jarrahdale

There are no formal trailheads and signage is generally lacking across the Jarrahdale township and this needs to be addressed to improve the user experience and general way finding in and around the town.

Recommendations

No.	Recommendation	Cost Estimate	Priority	Lead Agency/ Partners
3.1	Work with Trails WA, WAERA and ATHRA to develop the criteria for Equine Trail Town accreditation.	Existing SSJ Resources	High	SSJ/Trails WA/ATHRA/WAERA
3.2	Develop a master plan including costings for the establishment of the Jarrahdale Trail Centre at Lot 814, Jarrahdale. This Trail Centre should comprise of accommodation in the form of caravanning and camping, a café that also provides visitor information particularly focusing on trails and associated services, retail services, equipment hire, public ablutions and amenities including showers, hireable lockers, parking including for horse floats and trailers, secure bike storage, shelter, wash bays for bikes and horses, rest areas and maintenance services/tools. This Trail Centre should also integrate a trails head for the trails that start/finish in Jarrahdale.	\$40,000	High	SSJ/DBCA/DLGSCI
3.3	Develop the Jarrahdale Oval Trail Head with a linkage into the Jarrahdale Trail Centre. This should be in line with the concept plans developed as part of the Trail Business Case in 2020 and complement not duplicate the functions of the Trail Centre to be established at Lot 814. This should focus as a site for commencing trail activity in this area.	\$350,000	High	SSJ/DBCA/DLGSCI
3.4	Advocate for the upgrades to the water and power supply to Jarrahdale as the current infrastructure is unlikely to cope with additional increases in visitation and pressures from new development and increasing tourism.	Existing SSJ Resources	High	SSJ/ State/ WA State Government/ Federal Govt.
3.5	Install a public toilet at the Jarrahdale Cemetery for Cemetery and Kitty's Gorge Trail users.	\$185,000	High	SSJ/ WA State Government
3.6	Investigate the commercial feasibility of developing LOT 814 Jarrahdale to support the Jarrahdale Trail Town Initiative, including a land feasibility study for the development of residential lots at LOT 814 Jarrahdale by the Shire or by a State Government Agency.	\$20,000	High	SSJ/WA State Government

4. Trail Signage and Mapping

Currently, the existing safety on the trails is a concern for users and trail managers. Trail safety includes safe road crossings for people and horses, signage, maps for visitors and emergency services, risk management and trail grading. The highest priority for immediate attention are trail heads and trail markers. The most well utilised and longest trails should be signposted first, followed by the shorter trails. Signage should include advice about the trail grade, distance, average time to complete, and a map and should be located at the trail heads at the commencement and termination of the trail. There are relevant industry and Australian standards that need to be met for example walking track signage should meet *Australian Standard Walking Tracks Part 1: Classification and Signage* and equine trails should be in-line with the equine trails classification adopted by DBCA.

Trail markers may include unique identifiers (for example a reference number or other) to identify the site where the trail marker is located. These unique identifiers can help trail users identify where they are along the trail, or emergency services in the event of injury or exhaustion. It is recommended above in the Trails section that a trail audit of all relevant trails be undertaken to determine the current status of the signage and its compliance with the relevant standards for each trail type.

The Jarrahdale Heritage Society produces 14 trail maps and one trail booklet that are available for purchase from the Jarrahdale Heritage Society website or the Old Post Office. The maps are a source of income for the Heritage Society. They detail the trail grading, distance and dog information; and are the only trail maps currently available for visitors. They would benefit from GPS integration to provide scalable and accurate maps.

Recommendations

No.	Recommendation	Cost Estimate	Priority	Lead Agency/ Partners
4.1	As part of the trail audit determine the current status of the signage and its compliance with the relevant standards for each trail type (i.e. walking, mountain biking, horse riding).	Included in recommendation 2.4	High	SSJ/DCBA/Trail Managers
4.2	Provide support to the Jarrahdale Heritage Society to enable the ongoing production of the Jarrahdale Trail Booklet and Trail Maps.	\$5,000	High	SSJ/Jarrahdale Heritage Society
4.3	Develop a signage design suite for each trail type integrating the Jarrahdale Trail branding and relevant information to meet industry and Australian standards for signage.	\$20,000	High	SSJ/DCBA/Trail Managers
4.4	Design a new or retrofit the existing entry statement signs to reflect Jarrahdale's status as a 'Trail Town' once accredited.	\$20,000	High	SSJ/Main Roads WA
4.5	Develop a graphic design template for a trail map to ensure brand and information consistency which can be used for digital and hard copy maps.	\$5,000	High	SSJ/DBCA
4.6	Upgrade the Jarrahdale Town Walk Signage.	\$5,000	High	SSJ/ WA State Government/ Jarrahdale Historical Society

5. Risk Management

The Shire currently does not take accountability for people wishing to walk trails, however has a duty of care to ensure users are fully informed about the risks associated with each specific trail they intend to use. Therefore, it is recommended the Shire prepare a risk management plan for trails that sets out the Shire's position in relation to various risks, this is also an essential requirement to become a Trail Town. The risk management plan may include actions required during bushfire events (i.e. social media and website posts encouraging visitors to not use trails), minimum level of information to be included in signage, construction standards for safety and identifying trail-specific risks and control strategies.

Recommendations

No.	Recommendation	Cost Estimate	Priority	Lead Agency/ Partners
5.1	Develop a risk management plan for sanctioned/formalised trails in Jarrahdale and surrounds.	\$20,000	High	SSJ/DBCA
5.2	Develop bushfire management and emergency evacuation plans for sanctioned/ formalised trails. This should emphasise the danger associated with trail use during the fire danger season, and that evacuation in a rapidly developing fire situation may not be possible. This should also aim to educate people about such risks, to ensure that use is not permitted/ encouraged especially on days of extreme or catastrophic fire risk.	\$10,000	High	SSJ/SES/DBCA
5.3	Further refine a response process for the search and rescue of trail users who get lost or injured.	Existing SSJ resources	High	SSJ/DBCA/ DFES
5.4	Ensure inclusion of information about 'what to do in an emergency' in trails information such as websites, brochures and maps.	Existing SSJ resources	Medium	SSJ/Jarrahdale Heritage Society/ DBCA/Other Trail Managers
5.5	Advocate for/ investigate the feasibility of establishing a Trails Identification Number system (TIN), similar to the existing Beach Emergency Number system (BEN), to allow for the easy identification of trails to emergency services personnel.	Existing SSJ resources	Medium	SSJ/DBCA/ DFES

6. Maintenance and Asset Management

There are 15 trails across the Shire that are registered in the Shire's asset database, which mainly consist of drainage and equine trails in addition to this there are the trails that are owned/managed by DBCA. Currently, the Shire undertakes slashing and pruning works on these trails in line with budget provision, but do not maintain any surface treatments due to the lack of resources (e.g. funding, people, plant and equipment), the difficulty in bringing machinery onto the trails and the lack of asset data relating to trails. A number of the trails are also located on non-Shire owned/controlled land e.g. DBCA owned/managed land and DBCA manage and maintain these trails, but they also have resourcing issues. Community members who have an interest in the trails undertake maintenance also and without these community members and their volunteer work, the trails would be deteriorating at a much faster rate.

\$50,000 per year is currently budgeted in the Shire's Long Term Financial Plan 2020-2030 for Trail Renewal, however there is no work plan for trails maintenance. Projects are currently underway to map and capture trails to input into the Shire's asset management system; and assess the condition of the trails to help inform the asset management plans.

The Shire will be assisted in its efforts by existing management guidelines and guidelines currently in development. At the time of preparing this document mountain bike trails management guidelines existed, hiking and horse trail guidelines were under development and a trail maintenance and construction training program was being developed by DBCA. Discussions with DBCA have resulted in conversations about training staff in the maintenance of trails to increase the Shire's capabilities. Here, opportunity arises for training to extend to community volunteers

that are interested in adopting a trail, though a policy and Memorandum of Understanding (MOU) needs to be developed to ensure the safety of volunteers, and agree to a standard of work to be undertaken, which ultimately ensures the safety of visitors who are unfamiliar with the trails.

Recommendations

No.	Recommendation	Cost Estimate	Priority	Lead Agency/ Partners
6.1	Develop a Trails Maintenance Workplan, including costings for annual maintenance and detailing levels of service for the various trail types in Jarrahdale and surrounds, including equine trails, bushwalking trails and mountain biking trails. Allocate an annual budget to trail maintenance within the Long-Term Financial Plan reflective of actual costs as captured in the Trails Maintenance Work Plan.	Existing SSJ resources	High	SSJ
6.2	Continue to map existing trails using GIS/GPS and incorporate trails into the Shire's asset management plan to adequately plan for maintenance, upgrade and renewal.	Existing SSJ resources	Medium	SSJ
6.3	Engage DBCA to train Shire Operations staff in trail maintenance.	\$5000	Medium	SSJ/DBCA
6.4	Develop an MOU and standard of work guide for community volunteers who maintain trails.	Existing SSJ resources	Medium	SSJ
6.5	Work to develop MOU arrangements between the Shire and DBCA to allow the Shire to undertake development and maintenance works on DBCA owned land/ trails as agreed between both parties.	Existing SSJ resources	Low	SSJ/DBCA
6.6	Allocate Shire resources including persons and equipment to undertake trail maintenance.	New staff and trail resources \$200,000/year	Ongoing	SSJ

C. Access

7. Public Transport

One local business operates a charter service in Jarrahdale. This service is important for providing transport for visitors who do not have their own mode of transport. The only form of public transport into and out of Jarrahdale is a bus service. As at the time of writing this Business Case, Transperth operates only one public service per day (that does not deviate via secondary schools). The 2019/2020 financial year saw 291 passengers boarding the bus in Jarrahdale; and 223 passengers alighting (hopping off) the bus in Jarrahdale.

Visitors wishing to use the Transperth service are scheduled to arrive into Jarrahdale at 5:51pm on weekdays, or 5:17pm on Saturdays. There are no services into Jarrahdale on a Sunday. This can create barriers for the day-trip market who may use public buses on weekends, as no services operate for visitors to arrive in Jarrahdale in the morning for a day of walking and/or riding. The bus service is scheduled to leave Jarrahdale at 6:26am each weekday, 7:04am each Saturday, and provides no service on Sundays. This is likely to create a barrier for visitors who are looking to use public transport to get to and from Jarrahdale to use trails in the daylight; and forces visitors to find accommodation in town. The service commences and terminates at the corner of Kingsbury Drive and Jacaranda Avenue which is an informal bus drop off area, surfaced with gravel and no connecting footpaths. The Jarrahdale starting point of the Munda Biddi Trail is adjacent to the bus stop.

An essential requirement of Trail Town accreditation is that the town be easily accessed by public transport, therefore it is recommended that the Shire initiate discussions with Transperth / Public Transport Authority to gauge an understanding of the process to amend the service times, to ensure the bus arrives in Jarrahdale in the morning, and departs Jarrahdale in the early evening and to provide additional bus stop facilities.

Recommendations

No.	Recommendation	Cost Estimate	Priority	Lead Agency/ Partners
7.1	Design and construct a new public bus terminal with a continuous shared use path to Lot 814 (proposed location of the Trails Centre).	\$500,000	High	SSJ/ Transperth/PTA
7.2	Advocate to PTA/Transperth to amend public bus service times to better service visitors and residents with more convenient and regular times.	Existing SSJ resources	Medium	Transperth/PT A/SSJ
7.3	Advocate for a cycle/mountain bike friendly Metronet station and Metronet services into Byford and future stations.	Existing SSJ resources	Medium	Transperth/PT A/SSJ
7.4	Advocate to the PTA to include mechanism for the transportation of mountain bikes on Transperth buses servicing Jarrahdale.	Existing SSJ resources	Medium	SSJ/Transperth /PTA/SSJ

8. Footpaths and Pedestrian Access Ways

Footpaths allow trails to be more accessible to a wider population, as well as providing safe passage from accommodation, community facilities and transport services to trails. Footpaths may also act as a trail themselves. The Shire's Cycling and Walking Plan recommends construction of footpaths in the Jarrahdale area which will support the Trail Town vision and are included in the recommendations below.

Recommendations

No.	Recommendation	Cost Estimate	Priority	Lead Agency/ Partners
8.1	Connect the proposed Trail Centre to the Jarrahdale Town Centre via a pathway network.	\$100,000	High	SSJ
8.2	Connect the Jarrahdale Oval Trail Head to the Town Centre via a pathway network	\$200,000	Medium	SSJ/DBCA
8.3	Implement the proposed footpaths/shared use paths as proposed in the Shire's Cycling and Walking Plan.	As per Cycling and Walking Plan	Ongoing	SSJ
8.4	Review the footpath provision in Jarrahdale linking the key infrastructure sites and develop a footpath plan.	\$25,000	High	SSJ

9. Roads and Road Crossings

Road crossings are a key safety consideration when trails or paths leading to trails approach a road. The Shire's Trails Business Case indicates safe crossing infrastructure at the Jarrahdale Oval Trailhead, over both Nettleton and Millars Roads is required. New trail facility designs must incorporate traffic calming treatments and safe road crossing infrastructure or avoid road crossings where possible.

In order to support both the safe movement of people and animals on trails and in the Jarrahdale township it is important to give consideration to safe shared road use, including crossing of roads, and walking and riding of both horses and bikes on roads as required.

Opportunities to slow traffic on Jarrahdale Road, Nettleton Road and Millars Road, and minimise large vehicle movement must be investigated to ensure minimal risk and encourage a pedestrian/ rider friendly environment. This will result in greater activation of the Jarrahdale businesses and ease of access between trail networks.

The Jarrahdale road network is experiencing an increase in usage as a result of increased visitation to the town due to the increasing use of the trails and this is anticipated to increase through efforts to develop the Jarrahdale as a Trail Town. It is important also that road conditions and safety are improved in response to the increased traffic being experienced and forecast.

Recommendations

No.	Recommendation	Cost Estimate	Priority	Lead Agency/ Partners
9.1	As part of the trails audit identify all existing and potential road crossings including consideration of safe crossing mechanisms and signage, or if possible avoidance of road crossing.	Included in recommendation 2.4	High	SSJ/Main Roads WA

9.2	For any new trail development minimise or avoid road crossings and if they are unavoidable then implement appropriate interventions in line with Australian standards and road rules.	To be confirmed	Medium	SSJ/Main Roads WA/Trail Manager
9.3	Investigate and implement options for slowing of traffic on Jarrahdale, Millars and Nettleton Roads, and diversion of large vehicle movements away from Jarrahdale Road.	Existing SSJ resources	Medium	SSJ/Mainroads WA
9.4	Provide signage along primary roadways alerting drivers to the presence of walkers, cyclists and horse riders.	\$10,000	Medium	SSJ/MainroadsWA
9.5	Undertake a review of road use and conditions of roads at the locations of current and proposed trail heads in Jarrahdale, and primary thoroughfares for access to trails and develop remediation/ improvement plans as required.	Existing SSJ resources	Medium	SSJ/Mainroads WA

10. Parking

Parking was highlighted through community engagement as one of the biggest challenges to achieving Trail Town accreditation and increasing the tourism potential of Jarrahdale in general. Jarrahdale's public parking is confined to Bruno Gianatti Hall and the Old Post Office, both of which are owned by the Shire. More parking is available at business locations, although this is not considered suitable for public car parking for trail use. There are less than 50 available parking bays (most of them are unmarked), plus some additional parking along streets and road verges throughout the town, again this is informal. The community consultation highlighted the need for additional formalised parking in town to support the influx of visitors. A secure car park could provide for overnight visitors and people attending events and generate revenue which could then be reinvested back into the trails to improve their safety and quality.

Electric charging stations for vehicles should be incorporated at prominent locations such as the proposed Trail Centre at Lot 814 to cater for the increasing popularity of electric vehicles.

The Shire is currently in the process of investigating the feasibility and costs associated with upgrading the car parking at the Kitty's Gorge Walk Trail Head on Atkins Street, Jarrahdale.

Another important need that was identified was the need for horse float parking.

Recommendations

No.	Recommendation	Cost Estimate	Priority	Lead Agency/ Partners
10.1	Upgrade the Kitty's Gorge trail head car parking and provide additional carparking bays in the road reserve located north of Atkins Street (locally known as Myrtle Way).	\$211,000	High	SSJ
10.2	Include provision for secure 24 hour car park in the design for the Lot 814 Trails Centre.	Included within planning for Lot 814 (refer 3.2)	High	SSJ
10.3	Review parking provision throughout the town of Jarrahdale to determine if more efficient parking can be provided.	Existing SSJ resources	High	SSJ

No.	Recommendation	Cost Estimate	Priority	Lead Agency/ Partners
10.4	Develop a traffic management and parking plan for Jarrahdale to alleviate the current pressures the traffic places on the town.	\$25,000	High	SSJ
10.5	Improve and extend the parking arrangements at the Old Post Office Museum, including consideration of extension of the current car park and improvements to the location and sign posting of the entry and exit point of the car park.	\$200,000	Medium	SSJ
10.6	Review requirements for horse float parking areas allowing for easy access to equine trails, including ensuring provision of horse float parking areas through the Jarrahdale Oval Master Plan, Jarrahdale Oval Trail Head and at the Trail Centre Lot 814 Jarrahdale Road.	Existing SSJ resources	Medium	SSJ
10.7	Install electric charging stations for vehicles within the Trails Centre.	Included within planning for Lot 814 (refer 3.2)	Low	SSJ
10.8	Improve pedestrian, cycling and horse-riding linkages throughout the town to reduce reliance on motor vehicles as per the Cycling and Walking Plan.	As per Cycling and Walking Plan (refer 8.3)	Ongoing	SSJ

11. Conflicts of Use

Engagement with the Jarrahdale community revealed that users experience conflicts when using trails, most often between mountain bikers and horse riders, which can cause safety concerns for both user groups. This is likely due to a lack of awareness, signage and education about how the two users can interact in a safe and respectful way on trails. It is a common belief within the equine community that horses have a right of way in these encounters; however, there are no standards or guides available that confirm this.

The International Mountain Bicycling Association provides a video guide for mountain bike users when interacting with horses, which suggests:

- A rider cannot predict what a horse will do.
- Some horses, particularly younger horses, may be uncomfortable around mountain bikers.
- Mountain bikers are encouraged to greet a horse and the rider announce themselves when approaching from behind or in front.
- Mountain bikers are encouraged to slow down and make the horse riders aware of their presence.
- Horse riders are encouraged to communicate how their horse is reacting to the mountain bike rider.
- Mountain bikers are encouraged to continue to be natural, rather than becoming still or silent.
- All users are encouraged to be respectful of the other users and be polite.

There are no known trail etiquette signs in Jarrahdale at present. These messages can be incorporated into signage at trailheads and on trails where there are known multiple uses. The Shire may also opt to incorporate the messages into future trail maps or on the Shire's website.

Recommendations

No.	Recommendation	Cost Estimate	Priority	Lead Agency/ Partners
11.1	Develop information on trail etiquette and incorporate this information in trail head signage, maps, trail websites/pages and trail brochures.	Existing SSJ resources	High	SSJ/DBCA/Trails WA
11.2	Develop a warning sign that explains who provides right of way on multiuse trails	\$5,000	Medium	SSJ/DBCA/Trails WA/Trail managers
11.3	Provide education and training sessions for trail user groups.	\$5,000	Low	SSJ/Trails WA/Trail managers

D. Attractions and Activities

12. Attractions

There are many attractions in Jarrahdale and the surrounding region these include the trails themselves but also the many heritage assets within the township and other attractions as identified in Section 4 above. Serpentine National Park with the Serpentine Falls is a very popular place for people to visit and includes a number of the key trails in the area within it including a trail which links the Park to Jarrahdale.

By creating Jarrahdale as a Trail Town this provides an opportunity to create more attractions some initial ideas include a high ropes and abseiling adventure course and adventure nature play ground in Heritage Park, a pump/BMX track and mountain biking skills park within Lot 814. There is also the opportunity to create a number of tours throughout the town and region to showcase the environmental values of the area.

Recommendations

No.	Recommendation	Cost Estimate	Priority	Lead Agency/ Partners
12.1	Redevelop Jarrahdale Oval in response to community use and to support Trail Town activities.	\$4m	High	SSJ
12.2	Incorporate a BMX/pump track and mountain biking skills park within the design for the proposed Trail Centre in Jarrahdale (Lot 814) to educate and develop the skills of mountain bike riders and provide for recreational activities.	Included within planning for Lot 814 (refer 3.2)	Medium	SSJ
12.3	Develop an educational environmental tour product in conjunction with the Jarrahdale Forest Protectors.	Existing SSJ resources	Medium	SSJ/Jarrahdale Forest Protectors
12.4	Design and construct an adventure nature playground in Heritage Park or at another location deemed suitable.	\$4m	Medium	SSJ
12.5	Design and construct a boardwalk trail from the Centenary Log, through Jarrahdale Heritage Park to the Trail Centre at Lot 814, providing an accessible trail link through the Heritage Park.	\$1m	Low	SSJ
12.6	Support Jarrahdale Heritage Society Walks.	Existing SSJ resources	Ongoing	SSJ
12.7	Activate St Pauls' Church as a tourist attraction and function facility for community hire.	Existing SSJ resources	Ongoing	SSJ/Jarrahdale Heritage Society

13. Events

A number of annual events take place in Jarrahdale, which are planned and operated by local groups. These include;

Jarrahdale Log Chop – The Log Chop is a traditional axemen's competition organised by the Central and Jarrahdale Axemen's Clubs, and a Country Fair run by the Serpentine Jarrahdale Lions Club. It remains WA's biggest wood chop with a country fair. There are usually over 70 stalls, which include small goods sales, agriculture displays, sales of local produce, demonstrations by local groups, and rides for children, licensed bar and musical entertainment. A shuttle bus service operates from designated car parks in Jarrahdale. The Log Chop event draws crowds of over 10,000 people every year.

WA Endurance Riders – The WA Endurance Ride is a 100-person equine event with five endurance rides occurring on the one-day event. The event is held at Jarrahdale Oval where informal parking around the oval provides space for horse floats.

Light Car Club Rally - The Darling Car Rally is unique within WA as it is a two-wheel drive only event. The rally is based in Jarrahdale using the state forests and plantations in the area. The mid November run event date signals the last rally of the season and is often the decider for the state two wheel drive championship and Clubman Cup.

Guided Walks – Jarrahdale Heritage Society opens the annual walking season with their Ghost Walk. The walk centres around a different theme each year to entertain attendees with a story highlighting the history of Jarrahdale. The Ghost Walk draws upon local actors as ghosts who tell the stories as attendees reach their station on the walk. The event is a fundraiser for the Heritage Society and is well loved by the whole Shire community. They also operate a range of local guided walks in and around the town from March/April through to September/October.

A number of events have been suggested for Jarrahdale. These include a Forest Fest Event, Park Run and Ultra Series WA. There may also be other ideas for events that have a strong link to trails such as adventure races, horse riding and mountain biking. Having events linked to the Trail Town will be an important component in attracting visitors to Jarrahdale.

Recommendations

No.	Recommendation	Cost Estimate	Priority	Lead Agency/ Partners
13.1	Create a branding concept and support program for localised events and activities that activate Jarrahdale. Ensure that events are programmed evenly throughout the year to avoid clashes and ensure the public is aware about what events are planned for the area.	\$360,000	High	SSJ
13.2	Utilise the Jarrahdale Oval as an event space for trail based events along with other community events that are compatible with the site.	Existing SSJ resources	High	SSJ/Event Organisers
13.3	Continue to work with community members to support the development of a Forest Fest event concept or similar.	Existing SSJ resources	Medium	SSJ
13.4	Continue to work with Ultra Series WA to develop a trail running event in Jarrahdale.	Existing SSJ resources	Medium	SSJ/Ultra Series WA
13.5	Develop a signature event concept that has the trails as its major theme.	\$5,000	Medium	SSJ/Trails WA

No.	Recommendation	Cost Estimate	Priority	Lead Agency/ Partners
13.6	Develop an Events Venue Prospectus in order to outline facilities and benefits to delivering events in Jarrahdale, and actively work to attract and secure the delivery of major events in Jarrahdale.	\$5,000	Low	SSJ
13.7	Provide a range of trails activation activities and events throughout the year.	\$200,000	Ongoing	SSJ/Event Organisers

E. Amenities

14. Visitor Information

Having accurate and informative visitor information is an essential requirement for a Trail Town. This can be provided through existing visitor information sources or new channels can be created. It is important that visitor information is provided both online and in hard copy (e.g. brochures and maps). New social media profiles/accounts should be created for the Jarrahdale Trail Town along with a new website. Many trail users now only access online information and this also provides a great opportunity to market the trails and the Trail Town in a cost effective manner. Many trail users now also use GPS watches and wearable devices.

Having an understanding of trail usage is also important as it will assist in both marketing the trails but also managing use on the trails.

Recommendations

No.	Recommendation	Cost Estimate	Priority	Lead Agency/ Partners
14.1	Create social media profiles for Jarrahdale Trail Town on platforms such as Facebook, Instagram and Twitter.	\$5,000	High	SSJ
14.2	Develop a Jarrahdale Trail Destination page on the Trails WA website.	\$5,000	High	SSJ
14.3	Procure trail counters for key trails to measure usage.	\$50,000	Medium	SSJ/DBCA/Trail Managers
14.4	Include the development of a visitor centre as part of the Trail Centre to be developed at Lot 814.	Included within planning for Lot 814 (refer 3.2)	Medium	SSJ/PHTA
14.5	Undertake an annual online survey to ascertain Jarrahdale trails usage.	Existing SSJ resources	Ongoing	SSJ/DBCA/Trail Managers
14.6	Provide visitor information in line with Accessibility Standards and alternative languages.	Existing SSJ resources	Ongoing	SSJ

15. Equipment Hire and Repair

Increasing the accessibility of the trails helps to capture larger visitor markets and equipment hire is one key way to make trails more accessible to people that may not have access to suitable equipment. Having walking poles, saddles, bikes, helmets and camping gear available is a key requirement of Trail Town Accreditation. Offering a repair service for these items also can support users who have their own equipment and additionally encourage visitors to spend additional time in town whilst equipment is being repaired. It is recommended that provision is made within or the proposed Trails Centre to enable a new equipment hire and repair business to establish.

Recommendations

No.	Recommendation	Cost Estimate	Priority	Lead Agency/ Partners
15.1	Incorporate in the planning for a Trails Centre a space for provision of retail services including equipment hire, repair, maintenance, stock feed and other retail services.	Included within planning for Lot 814 (refer 3.2)	High	SSJ/Private sector

16. Food and Beverages

Capturing the domestic short-stay market will require additional food and beverage providers in town to ensure that meals are available in the evening.

Currently, one restaurant provides hot meals and beverages after 6pm. In anticipation of an additional 25,000 short-stay visitors per year (totalling an expected 67,000 overnight stays in Jarrahdale), means a potential 183 hot meals per night are required, every night of the year. Dinners between 5pm – 9pm equate to an average 45 meals per hour or 0.76 meals every minute.

It is likely that one operator can accommodate the visitors in the short term, however once demand increases, additional restaurant services will be required. To ensure that visitors do not have a poor experience when dining in Jarrahdale once demand does pick up, it is recommended that the Shire facilitate new mobile food vendors, and advocates for new restaurants/cafes to move into Jarrahdale.

There appears to be a sufficient number of operators for breakfast and lunch meal services currently however as demand increases additional operators may be required and an increasing diversity of food and beverage offerings made available.

Recommendations

No.	Recommendation	Cost Estimate	Priority	Lead Agency/ Partners
16.1	Develop a prospectus that outlines the benefits that will be generated by the Jarrahdale Trail Town to encourage food and beverage businesses to set-up or expand into Jarrahdale.	\$10,000	High	SSJ
16.2	Encourage local restaurants and cafes to provide daily dinner service, expand their offerings and attract alternative dinner options such as food trucks.	Existing SSJ resources	Medium	SSJ

No.	Recommendation	Cost Estimate	Priority	Lead Agency/ Partners
16.3	Investigate the feasibility of installing and constructing free water stations at St Pauls Church/Heritage Park, Jarrahdale Oval Trailhead site, and Kitty's Gorge car park.	Existing SSJ resources	Low	SSJ/DBCA
16.4	Encourage pop-up locations for mobile vendors e.g. food trucks at key sites such as Jarrahdale Oval and the proposed Trail Centre at Lot 814 and potentially the upgraded parking area at the Kitty's Gorge Trail Head.	Existing SSJ resources	Low	SSJ

17. General Services and Supplies

There are generally sufficient general services and supplies within Jarrahdale or within 15 minutes' drive including:

- Mechanics.
- Fuel services – Jarrahdale.
- Laundromat – Byford.
- Pharmacy – Mundijong.
- Banking –Byford.
- Groceries – Mundijong and Byford.
- Medical services – Serpentine, Mundijong and Byford.

As Jarrahdale progresses as a Trail Town it is likely there will be more demand for general services and supplies as visitor numbers increase. Additionally the development of the Trail Centre will allow for general service and supplies to be set up and commercialised from this site.

Recommendations

No.	Recommendation	Cost Estimate	Priority	Lead Agency/ Partners
17.1	Include within the prospectus that outlines the benefits that will be generated by the Jarrahdale Trail Town, a section on the opportunity to provide general services and supplies.	Included within recommendati on 16.1.	High	SSJ
17.2	Incorporate in the planning for a Trails Centre provision for general services and supplies.	Included within planning for Lot 814 (refer 3.2)	Medium	SSJ

18. Communications

A survey conducted in June 2020 sought to understand the issues experienced by Shire residents with their phone and internet connection and coverage. 97 of the 551 responses were from residents of Jarrahdale.

The report indicates that when power is lost for more than one hour in Jarrahdale, 67 Jarrahdale respondents said they lose mobile reception because the mobile phone tower generator runs out after one hour. They stated that this is dangerous with the area prone to fire.

“The overhead wires in our area [Jarrahdale] are in a terrible state of repair with a lot of them having fallen off the poles or the poles falling leaving the cables on the ground and in some cases over the roads.”

It is imperative that visitors on the trails have mobile reception so that in the event of an emergency situation they are able to make and receive calls and messages regarding warnings.

Trail users predominantly now access trail information using a phone or other device such as a tablet or laptop computer using wi-fi or mobile phone coverage.

Recommendations

No.	Recommendation	Cost Estimate	Priority	Lead Agency/ Partners
18.1	Install free WiFi provision to provide internet access to Lot 814, Jarrahdale Heritage Park, Jarrahdale Oval and Kitty's Gorge car park.	\$100,000	High	SSJ
18.2	Continue to advocate for improved telecommunications in Jarrahdale from providers, particularly mobile phone reception.	Existing SSJ resources	High	SSJ/Telecommunication providers
18.3	Advocate with WALGA, DPIRD and the Peel Development Commission about the importance of the Jarrahdale communications tower, and that this should be targeted for early funding for battery backup improvement as part of the Federal Government STAND program.	Existing SSJ resources	High	SSJ/WALGA/DPIRD/PDC

F. Accommodation

19. Accommodation Types

There are a small number of existing accommodation options in the Jarrahdale township:

- Three private rooms available through Airbnb – These are suitable only for couples or singles and range from \$90-\$160 per night.
- A further nine Airbnb's within a 12km radius (and more in Byford) – These are predominantly entire houses available for hire and they are appropriate for families. There are three boutique-style accommodation options, which would provide a unique experience for visitors. These properties range from \$80-\$590 per night and can host between 2 and 14 guests at a time.
- One Bed and Breakfast in Jarrahdale.
- Serpentine Falls Holiday Park in Serpentine – appropriate for families and offering cabins, holiday homes and caravan sites (powered and unpowered).
- 22-bed hostel-style accommodation at the Jarrahdale Environmental Centre operated by Jarrahdale Primary School.
- Jarrahdale RV Park.

For Trail Town status, there is a requirement to have a broad-range of accommodation options within 30 minutes of town. The accreditation requires two accommodation types for three different market segments across two price categories: budget and midrange.

There are many accommodation providers within a 30-minute drive from Jarrahdale – at least 26 options on TripAdvisor and 19 on Airbnb, which will meet the requirement. There is no gap in this regard. The following localities are located within one hours drive of Jarrahdale with drive times being:

- Rockingham – 30 minutes.
- Pinjarra – 30 minutes.
- Mandurah – 40 minutes.
- Coogee Beach – 44 minutes.
- Perth Airport – 48 minutes.
- Perth – 50 minutes.

It is important to have a range of accommodation options for visitors, from budget level (e.g. camp sites/backpackers) through to high end options (e.g. four star plus hotels and luxury AirBNB/BNB places).

To support future growth of the Trail Town offerings, the below recommendations will assist in facilitating additional accommodation within Jarrahdale township itself. This will drive extra visitor spending in local businesses, and longer stays within the township as it becomes more accessible to different markets.

Recommendations

No.	Recommendation	Cost Estimate	Priority	Lead Agency/ Partners
19.1	Include the provision of a RV Park that provides horse float parking, horse yards and water troughs as a component of the planning for the Trail Centre proposal at Lot 814.	Included within planning for Lot 814 (refer 3.2)	High	SSJ
19.2	Investigate the feasibility of the Shire or private sector reconstructing the four Single Man's Quarters as boutique chalets.	\$50,000	Medium	Private sector/SSJ
19.3	Advocate for boutique and high-end accommodation operators to take up land within Jarrahdale and incorporate this within the prospectus.	Included in recommendation 16.1	Low	SSJ/PHTA
19.4	Include budget accommodation options (bunk house, camp sites) as a component of the planning for the trail centre proposed at Lot 814.	Included within planning for Lot 814 (refer 3.2)	Low	SSJ/PHTA

G. Planning and Management

20. Planning

Over the past couple of decades the Shire of Serpentine Jarrahdale and Peel Region has undertaken a number of trail related planning studies. A regional trails strategy for the Peel Region was developed in the mid 2000s and has recently been updated in 2019, also a local trails strategy was prepared for the Shire of Serpentine Jarrahdale also in the mid 2000s and has also been recently updated. In 2020 a Trails Development Business Case was developed for three major trail initiatives the Jarrahdale to Mundijong Rail Trail and the Jarrahdale Oval Trail Head Master Plan. This Business Case has been informed by these planning documents as well as the relevant state level strategic plans for equine trails, hiking and mountain biking which have been well considered and supported by the Shire.

Recommendations

No.	Recommendation	Cost Estimate	Priority	Lead Agency/ Partners
20.1	Ensure that the planning framework is reviewed and where consistent with the town planning objectives for the town make adjustments to enable such opportunities to be considered.	Existing SSJ resources	High	SSJ
20.2	Advocate for the provision of leases of 50 years with a 50 year option or longer, for National Trust controlled land, particularly the No 1 Jarrahdale Mill, Mill Managers House and Heritage Park, with full capacity for commercial subleasing.	Existing SSJ resources	High	SSJ/National Trust
20.3	Investigate subdivision of portions of Lot 814 to generate funds to be invested into the development of Jarrahdale Trail Town.	\$50,000	Medium	SSJ
20.4	Advocate to the State Government to support income generation from Crown Land throughout the Shire of Serpentine Jarrahdale, to deliver revenue in order to implement the Trail Town Business Case.	Existing SSJ resources	Medium	SSJ
20.5	Develop a Place Plan for Jarrahdale.	\$30,000	Low	SSJ
20.6	Review and update the local and regional trails plans.	\$50,000	Low	SSJ/Adjoining LGAs
20.7	Continue to utilise the guiding principles, directions and recommendations contained within these trail planning documents.	Existing SSJ resources	Ongoing	SSJ/DLGSCI

21. Governance

An overarching governance framework is an essential requirement to obtain Trail Town accreditation. It is recommended that a reference group be established to support the Shire in oversee the development of Jarrahdale as a Trail Town. This reference group could also be charged with advocating on behalf of the community to upgrade and develop new trails and associated infrastructure. The body should comprise 6-8 representatives including DBCA as land manager with at least one representative of each of the main trail groups (equine, mountain biking and walking), a representative from Jarrahdale Heritage Society and other

representatives should offer specialist skill sets such as finance, marketing, risk management, business development and a public expression of interest process should be implemented to recruit these members.

Recommendations

No.	Recommendation	Cost Estimate	Priority	Lead Agency/ Partners
21.1	Establish a Trail Town reference group to assist the Shire in the development of Jarrahdale as a Trail Town.	\$5,000	High	SSJ/DBCA
21.2	Develop role statements for reference group members and recruit appropriate members.	\$0	High	SSJ

22. Community Engagement

The Shire as part of the development of the Peel Regional Trails Strategy and the Serpentine Jarrahdale Trails Strategy both prepared in 2019 consulted extensively with the community. Also in late 2020 and early 2021 the Shire held a successful public engagement process with the Jarrahdale community and the details and outcomes are included above in the consultation and engagement section. Further community engagement will occur also as part of this draft Business Case and regularly as the Trail Town is developed.

Recommendations

No.	Recommendation	Cost Estimate	Priority	Lead Agency/ Partners
22.1	Develop a community engagement plan for the establishment of Jarrahdale as a Trail Town in line with the Shire's Community Engagement Strategy which utilises the IAP2 methodology.	Existing SSJ resources	High	SSJ
22.2	Utilise the Trail Town website and social media platforms (once established) to engage with the local, trails and broader community.	Existing SSJ resources	High	SSJ/Trails WA/Peak trail bodies

H. Engagement of Supporting Businesses

23. Business Support and Development

Provide support to local businesses to increase their capacity to service visitors in general, increase their presence on the internet and their marketing strategies. Facilitating access to workshop sessions and one on one business development is important.

Destination and Perth and Tourism WA and how we partner to develop businesses.

Recommendations

No.	Recommendation	Cost Estimate	Priority	Lead Agency/ Partners
23.1	Include in the prospectus in 16.1 opportunities to establish businesses in Jarrahdale, particularly trail based businesses.	Included in recommendation 16.1	High	SSJ/PCC/Local Businesses
23.2	Work in partnership with the Peel Chamber of Commerce, Business SJ and Jarrahdale Community Collective to support the development and operations of Jarrahdale Businesses.	Existing SSJ resources	High	SSJ/PCC/ Business SJ/ JCC/Local Businesses
23.3	Develop a marketing campaign that highlights businesses and opportunities, such as seasonal campaigns and special deals (e.g. a package where people can stay the night in Jarrahdale, eat dinner and breakfast at a local venue).	\$20,000	Medium	SSJ/PCC/ Local Businesses

24. Trail-Friendly Businesses

Working with local businesses is key to ensuring that the Trail Town vision is a collaborative goal, rather than a top-down initiative. A trail-friendly business program teaches local operators to understand the needs of the target market, and allows them to incentivise trail users to visit their store, or utilise their service. Trail-friendly businesses become accredited and in return, may provide:

- Free water.
- Public restrooms.
- Discounts or promotions.

The Shire can support this initiative by adopting the Trails WA policy for establishing a trail-friendly business program, including developing a logo and an online business directory which links to trail pages on the Shire's website, creating additional exposure for the businesses.

Trail Town accreditation requires a strategy to be in place to ensure the town is focused on capacity building within the town and increase the level of services available for trail users.

Recommendations

No.	Recommendation	Cost Estimate	Priority	Lead Agency/ Partners
24.1	Continue to develop the Jarrahdale Trails brand identity project.	\$36,000	High	SSJ

No.	Recommendation	Cost Estimate	Priority	Lead Agency/ Partners
24.2	Develop a database of potential businesses that may be eligible to become a Trail Friendly business.	Existing SSJ resources	High	SSJ/local businesses
24.3	Conduct an information session for interested businesses to inform them on the requirements to become a Trail Friendly business.	Existing SSJ resources	High	SSJ/local businesses/Trails WA
24.4	Adopt and implement the recommendations within the Trails WA Trails-Friendly-Business program, in consultation with local tourism businesses and Trails WA.	Existing SSJ resources	Ongoing	SSJ/ Trails WA

I. Marketing

25. Marketing and Promotion

There is minimal up to date trail marketing information available within Jarrahdale and online and where it is available it seems to be ad-hoc and not consistently presented information. Some informal services include:

- A static information bay on the corner of Nettleton Road and Jarrahdale Road, which provides car parking for up to six cars. The bay contains a map of Jarrahdale trails and other information relating to the area.
- Jarrahdale Heritage Society at the Old Post Office, which provides some trail maps and some visitor information. The Old Post Office is operated by volunteers.
- Minimal directional/wayfinding signage around town relating to trails, parking or other interpretive, educational or information signage.

A one-stop-shop website for Jarrahdale Trail Town including hospitality information, accommodation information and trail maps which increases the accessibility of the tourism product should be developed. It is recommended that this website is operated by the SSJ.

Recommendations

No.	Recommendation	Cost Estimate	Priority	Lead Agency/ Partners
25.1	Prepare a marketing plan for the Jarrahdale Trail Town.	\$20,000	High	SSJ
25.2	Implement the Jarrahdale Trail Brand and utilise on all signage, mapping, interpretation and promotional material and social media.	\$10,000	High	SSJ
25.3	Develop social media platforms as per recommendation 14.1	Included in recommendation 14.1	High	SSJ
25.4	Leverage promotional campaigns in partnership with Tourism WA, Perth Hills Tourism Alliance and Destination Perth.	90,000	High/Ongoing	SSJ/Tourism WA/PHTA/Destination Perth

26. Digital Trail Information

There is some online trail information across various websites including;

- Alltrails.com – this website/application provides a comprehensive summary of each trail including length, a map, elevation, images and reviews from users. It also includes tags to enable the trail to be found through searches on the website, and provides weather for the trail location. It contains 13 Jarrahdale trails including bridle trails. To see information about the trails, users are required to sign up. This website contains the most reviews of Jarrahdale trails and is the most comprehensive in its information provision.
- TripAdvisor.com – Six Jarrahdale trails are indicated on this website. Reviews and local weather are also available.

- Trailforks.com refines trail maps by use and contains minimal information that is crowd-sourced and therefore not completely reliable.
- TrailsWA.com.au includes information on nine Jarrahdale trails including reviews, grade, metatags, time, length and a map. To achieve Trail Town accreditation, all Jarrahdale trails must be added to the website and a Trail Town profile added. This requires consultation with TrailsWA.
- Jarrahdale Heritage Society's website provides a platform to purchase trail maps and provides information about their guided walks.

The common sentiments across the reviews of Jarrahdale trails relate to:

- Beautiful scenery.
- Lots of shade.
- Abundant wildlife.

Understanding what users like most about the trails can help when developing a brand identity. Overall, the amount of digital information about Jarrahdale trails provides enough detail for visitors to make informed decisions about using the trails, however there is not a significant amount of information relating to equine trails, or indicating the trails appropriateness for equine use, across all websites reviewed. Most websites have the ability to update the information, and it is recommended that the websites be reviewed to ensure that all information is up to date and consistent.

The Shire website contains a page for bridle trails however does not reference Jarrahdale equine trails. It is recommended that this be updated to include the bridle trails. The Shire website is the only digital platform to highlight trails facilities (car parking, BBQs, public toilets) which is particularly useful for visitors planning day trips or overnight trips. The Trail Town accreditation requires links from the Shires trails pages to their respective trail pages on Trails WA.

Recommendations

No.	Recommendation	Cost Estimate	Priority	Lead Agency/ Partners
26.1	Link Shire website trail pages to respective TrailsWA trail pages.	Existing SSJ resources	High	SSJ/Trails WA
26.2	Add Jarrahdale equine trails to Shire website.	Existing SSJ resources	High	SSJ
26.3	Include facility information on all trail pages on Shire website based on the trail audit findings.	Existing SSJ resources	High	SSJ
26.4	Complete trail mapping project and collate all information into Shire's GIS system.	Existing SSJ resources	Medium	SSJ/DBCA/Trail Managers

9. Implementation Plan

A ten-year implementation plan for the recommendations identified as having a high priority has been developed. These are grouped under the same nine areas and a total cost for each area, year and for the complete ten-year period has been developed refer Table 10.

The high priorities were all assessed against further criteria to determine the year they would be implemented noting some of the major capital works projects are allocated over more than one year.

Each criteria was rated out of three with a total of nine being the highest priority that can be achieved. The criteria used was:

Criteria 1 Readiness to implement (e.g. design complete, planning approvals received)

Criteria 2 Level of support (community, political, government)

Criteria 3 Strategic importance to achieving Trail Town accreditation

Table 10: Cost to implement the high priority actions over a ten year period.

High Priority Area	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Total Cost Years 1-10
A. Landscape and Setting	\$ 7,000	\$ 23,000	\$ 40,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 70,000
B. Trails Development and Management	\$ 276,000	\$ 1,340,000	\$ 1,485,000	\$ 800,000	\$ 1,255,000	\$ 1,226,000	\$ 201,000	\$ 456,000	\$ 251,000	\$ 221,000	\$ 7,511,000
C. Access	\$ 50,000	\$ 161,000	\$ 25,000	\$ 25,000	\$ -	\$ -	\$ -	\$ 100,000	\$ 300,000	\$ 200,000	\$ 861,000
D. Attractions and Activities	\$ 60,000	\$ 60,000	\$ 2,060,000	\$ 2,020,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 4,560,000
E. Amenities	\$ -	\$ 10,000	\$ -	\$ -	\$ -	\$ 100,000	\$ -	\$ 10,000	\$ -	\$ -	\$ 120,000
F. Accommodation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
G. Planning and Management	\$ 2,500	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 20,500
H. Engagement of Supporting Businesses	\$ 36,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 36,000
I. Marketing	\$ -	\$ 12,000	\$ 12,000	\$ 12,000	\$ 32,000	\$ 12,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 120,000
	\$ 431,500	\$ 1,608,000	\$ 3,624,000	\$ 2,859,000	\$ 1,349,000	\$ 1,400,000	\$ 273,000	\$ 638,000	\$ 623,000	\$ 493,000	\$ 13,298,500

A. Landscape and Setting

No	Recommendation	Cost	Lead Agency/ Partners	Criteria 1	Criteria 2	Criteria 3	Total Rating	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Total Cost Years 1-10
1.1	Engage and work with traditional owners to identify opportunities to provide advice and guidance on features of cultural significance, to inform trails planning, maintenance and development and to establish the Aboriginal heritage values of the area.	Existing SSJ Resources	SSJ/DBCA	3	3	3	9	\$0	\$0									\$0
1.2	Identify/confirm landmark locations (e.g. National Parks/areas of cultural/biodiversity significance and distinct landscapes (e.g. valleys/water bodies/peaks/ man made landmarks of significance) and ensure trails (existing and planned) acknowledge and are linked to these locations and landscapes. Prepare a map representing these.	Existing SSJ Resources	SSJ	3	3	3	9	\$0	\$0	\$0								\$0
1.3	Identify any discordant elements (e.g. heavy industry, landfill sites, mines) that detract from the user experience and develop strategies to manage these elements (e.g. signage or interpretation/providing alternate routes).	Existing SSJ resources	SSJ/Alcoa/DBCA	3	3	3	9	\$0	\$0	\$0								\$0
1.4	Undertake an Aboriginal history project to capture Indigenous culture and the history of Jarrahdale for inclusion in interpretive signage, public art works and interpretation of significant sites along the trails.	\$50,000	SSJ	1	3	3	7		\$10,000	\$40,000								\$50,000
1.5	Prepare a business case to inform Council decision making regarding the feasibility of entering into a lease of Heritage Park. The business case is to consider capture any improvement works necessary, future development opportunities (e.g. nature play, cultural heritage interpretation, amphitheatre, sculptures and picnic areas), proposed arrangements for maintenance and management of the park, commercial opportunities and associated costings.	\$10,000	SSJ/ Jarrahdale Heritage Society/National Trust	3	3	2	8	\$7,000	\$3,000									\$10,000
1.8	Prepare a plan and associated costings for the operations of the No1 Jarrahdale Mill and the Mill Managers House, complementing the desired outcomes of the activation of Jarrahdale Heritage Park, proposed Trail Centre at LOT 814 and accreditation as a Trail Town. Use the plan to support an expression of interest to the National Trust of Western Australia, to lease both facilities when the opportunity arises	\$10,000	SSJ/ Jarrahdale Heritage Society/National Trust	3	3	2	8		\$10,000									\$10,000
								\$7,000	\$23,000	\$40,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$70,000

B. Trails Development and Management

No	Recommendation	Cost	Lead Agency/ Partners	Criteria 1	Criteria 2	Criteria 3	Total Rating	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Total Cost Years 1-10
2.1	Develop a Trails Priority Plan to plan for new and/or upgraded trails as per the Peel Regional Trails Strategy/Serpentine Jarrahdale Trails Plan and based on the audit findings (refer recommendation 2.4).	\$30,000	SSJ/DBCA	3	3	3	9		\$10,000	\$20,000								\$30,000
2.2	Work collaboratively with DBCA and user groups to enhance and upgrade the mountain biking trails in Langford Park.	Existing SSJ resources	DBCA/SSJ/ Trail User Groups	2	3	3	8				\$0							\$0
2.3	Promote that there is at least three days of trail activity with a mix of trail grades for different user groups within and nearby to Jarrahdale, that there is a critical mass of trail activity or networks close to Jarrahdale and/or commencing in the town and that some of the trails are accessible from Jarrahdale.	\$5,000	SSJ	3	3	3	9						\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$5,000
2.4	Conduct a detailed on ground trail audit of all 20 trails identified in this Business Case that are relevant to the creation of Jarrahdale as a Trail Town. This should include signage, risks/hazards, upgrades, determine grading, surface type, usage, trail type etc.	\$50,000	SSJ/DBCA/Jarrahdale Heritage Society	3	3	3	9	\$15,000	\$35,000									\$50,000
2.5	Develop a wayfinding strategy for Jarrahdale and the associated trails, to address the lack of signage and wayfinding in the town.	\$50,000	SSJ	2	3	3	8			\$50,000								\$50,000
2.6	Upgrade and enhance existing high priority trails in-line with the Shire of Serpentine Jarrahdale Trails Plan and outcomes of the Trail Priority Plan identified in 2.1. i.e. the Munda Biddi Trail – Jarrahdale Section and Kitty's Gorge Trail.	\$2,650,000	SSJ/DBCA/DLGSCI	1	2	3	6				\$600,000	\$1,025,000	\$1,025,000					\$2,650,000

B. Trails Development and Management

No	Recommendation	Cost	Lead Agency/ Partners	Criteria 1	Criteria 2	Criteria 3	Total Rating	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Total Cost Years 1-10
2.7	Work with DBCA to implement improvements to existing equine trails i.e. realignment of the Jarrahdale Bridle Trail and development of new equine trail networks in Jarrahdale to achieve a strong focus on equine trails provision in Jarrahdale.	\$1,730,000	SSJ/DBCA/AERA/ ATHRA	1	2	2	5		\$865,000	\$865,000								\$1,730,000
2.8	Continue to work with Alcoa and the Munda Biddi Foundation to ensure that the Munda Biddi Trail continues to traverse through Jarrahdale and that Jarrahdale remains as a Munda Biddi Trail Town. Investigate opportunities to upgrade this section of the Munda Biddi Trail.	Existing SSJ resources	SSJ/Alcoa/Munda Biddi Trail Foundation, DBCA	3	3	3	9	\$0	\$0	\$0	\$0							\$0
2.9	Complete the development of the Mounts Loop Trail Feasibility and Implementation plan, detailing a trail development that links Jarrahdale to the Mounts and the Bibbulmun Track.	\$31,000 (study currently underway)	SSJ/DBCA/Bibbul mun Track Foundation	3	3	3	9	\$31,000										\$31,000
2.10	Investigate the feasibility of establishing the Serpentine Trail (there is potential to extend Kitty's Gorge Trail south of Serpentine River creating a challenging day walk option).	\$50,000	SSJ/DBCA	1	1	2	4									\$50,000		\$50,000
2.11	Identify and develop a network of gravel riding routes around Jarrahdale.	\$255,000	SSJ/Main Roads WA	1	1	1	3								\$255,000			\$255,000
2.12	Work with DBCA to develop a concept plan for new Jarrahdale Equine networks.	\$30,000 (Currently underway)	SSJ/DBCA	3	3	3	9	\$30,000										\$30,000
3.1	Work with Trails WA, WAERA and ATHRA to develop the criteria for Equine Trail Town accreditation.	Existing SSJ Resources	SSJ/Trails WA/ATHRA/WAE RA	2	3	3	8	\$0	\$0	\$0								\$0

B. Trails Development and Management

No	Recommendation	Cost	Lead Agency/ Partners	Criteria 1	Criteria 2	Criteria 3	Total Rating	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Total Cost Years 1- 10
3.2	Develop a master plan including costings for the establishment of the Jarrahdale Trail Centre at Lot 814, Jarrahdale. This Trail Centre should comprise of accommodation in the form of caravanning and camping, a café that also provides visitor information particularly focusing on trails and associated services, retail services, equipment hire, public ablutions and amenities including showers, hireable lockers, parking including for horse floats and trailers, secure bike storage, shelter, wash bays for bikes and horses, rest areas and maintenance services/tools. This Trail Centre should also integrate a trails head for the trails that start/finish in Jarrahdale.	\$60,000	SSJ/DBCA/DLGSCI	3	3	3	9		\$40,000									\$40,000
3.3	Develop the Jarrahdale Oval Trail Head with a linkage into the Jarrahdale Trail Centre. This should be in line with the concept plans developed as part of the <i>Trail Business Case in 2020</i> and complement not duplicate the functions of the Trail Centre to be established at Lot 814. This should focus as a site for special events and for commencing trail activity in this area.	\$350,000	SSJ/DBCA/DLGSCI	2	3	2	7			\$350,000								\$350,000
3.4	Advocate for the upgrades to the water and power supply to Jarrahdale as the current infrastructure is unlikely to cope with additional increases in visitation and pressures from new development and increasing tourism.	Existing SSJ Resources	SSJ/ State/ WA State Government/ Federal Govt.	3	3	3	9	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3.5	Install a public toilet at the Jarrahdale Cemetery for Cemetery and Kitty's Gorge Trail users.	\$185,000	SSJ/ WA State Government	2	3	2	7		\$185,000									\$185,000

B. Trails Development and Management

No	Recommendation	Cost	Lead Agency/ Partners	Criteria 1	Criteria 2	Criteria 3	Total Rating	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Total Cost Years 1- 10
3.6	Investigate the commercial feasibility of developing LOT 814, Jarrahdale to support the Jarrahdale Trail Town Initiative.	\$20,000	SSJ/ WA State Government	3	3	3	9	\$20,000										\$20,000
4.1	As part of the trail audit determine the current status of the signage and its compliance with the relevant standards for each trail type (i.e. walking, mountain biking, horse riding).	Included in recommendation 2.4	SSJ/DCBA/Trail Managers	3	3	3	9		\$0									\$0
4.2	Provide support to the Jarrahdale Heritage Society to enable the ongoing production of the Jarrahdale Trail Booklet and Trail Maps.	\$5,000	SSJ/Jarrahdale Heritage Society	3	3	3	9	\$5,000										\$5,000
4.3	Develop a signage design suite for each trail type integrating the Jarrahdale Trail branding and relevant information to meet industry and Australian standards for signage.	\$20,000	SSJ/DCBA/Trail Managers	2	2	3	7	\$20,000										\$20,000
4.4	Design a new or retrofit the existing entry statement signs to reflect Jarrahdale's status as a 'Trail Town' once accredited.	\$20,000	SSJ/Main Roads WA	1	1	1	3										\$20,000	\$20,000
4.5	Develop a graphic design template for a trail map to ensure brand and information consistency which can be used for digital and hard copy maps.	\$5,000	SSJ/DBCA	2	2	3	7		\$5,000									\$5,000
4.6	Upgrade the Jarrahdale Town Walk Signage.	\$5,000	SSJ/ WA State Government/ Jarrahdale Historical Society	3	3	2	8	\$5,000										\$5,000
5.1	Develop a risk management plan for sanctioned/formalised trails in Jarrahdale and surrounds.	\$20,000	SSJ/DBCA	2	3	2	7					\$20,000						\$20,000

B. Trails Development and Management

No	Recommendation	Cost	Lead Agency/ Partners	Criteria 1	Criteria 2	Criteria 3	Total Rating	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Total Cost Years 1- 10
5.2	Develop bushfire management and emergency evacuation plans for all trails. This should emphasise the danger associated with trail use during the fire danger season, and that evacuation in a rapidly developing fire situation may not be possible. This should also aim to educate people about such risks, to ensure that use is not permitted/ encouraged especially on days of extreme or catastrophic fire risk.	\$10,000	SSJ/SES/ DBCA	2	3	2	7					\$10,000						\$10,000
5.3	Further refine a response process for the search and rescue of trail users who get lost or injured.	Existing SSJ resources	SSJ/DBC A/DFES	2	3	2	7					\$0						\$0
6.1	Develop a Trails Maintenance Workplan, including costings for annual maintenance and detailing levels of service for the various trail types in Jarrahdale and surrounds including equine trails, bushwalking trails and mountain biking trails. Allocate an annual budget to trail maintenance within the Long-Term Financial Plan reflective of actual costs as captured in the Trails Maintenance Work Plan.	Existing SSJ resources	SSJ	3	3	3	9		\$0	\$0								\$0
6.6	Allocate Shire resources including persons and equipment to undertake trail maintenance.	New staff and trail resources \$200,000/ year	SSJ	3	3	3	9	\$150,000	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$1,950,000
								\$276,000	\$1,340,000	\$1,485,000	\$800,000	\$1,255,000	\$1,226,000	\$201,000	\$456,000	\$251,000	\$221,000	\$7,511,000

C. Access

No	Recommendation	Cost	Lead Agency/ Partners	Criteria 1	Criteria 2	Criteria 3	Total Rating	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Total Cost Years 1-10
7.1	Design and construct a new public bus terminal with a continuous shared use path to Lot 814 (proposed location of the Trails Centre).	\$500,000	Transport/PTA/SSJ	1	1	1	3								\$100,000	\$200,000	\$200,000	\$500,000
8.1	Connect the proposed Trail Centre to the Jarrahdale Town Centre via a pathway network.	\$100,000	SSJ	1	1	2	4									\$100,000		\$100,000
8.4	Review the footpath provision in Jarrahdale linking the key infrastructure sites and develop a footpath plan.	\$25,000	SSJ	2	3	2	7				\$25,000							\$25,000
9.1	As part of the trails audit identify all existing and potential road crossings including consideration of safe crossing mechanisms and signage or if possible avoidance of road crossing.	Included in recommendation 2.4	SSJ/Main Roads WA	2	3	2	7	\$0	\$0									\$0
10.1	Upgrade the Kitty's Gorge trail head car parking and provide additional carparking bays in the road reserve located north of Atkins Street (locally known as Myrtle Way).	\$211,000	SSJ	3	3	1	7	\$50,000	\$161,000									\$211,000
10.2	Include provision for secure 24 hour car park in the design for the Lot 814 Trails Centre.	Included within planning for Lot 814 (refer 3.2)	SSJ	3	3	2	8	\$0	\$0									\$0
10.3	Review parking provision throughout the town of Jarrahdale to determine if more efficient parking can be provided.	Existing SSJ resources	SSJ	2	3	2	7				\$0							\$0
10.4	Develop a traffic management and parking plan for Jarrahdale to alleviate the current pressures the traffic places on the town.	\$25,000	SSJ	2	3	2	7				\$25,000							\$25,000
11.1	Develop information on trail etiquette and incorporate this information in trail head signage, maps, trail websites/pages and trail brochures.	Existing SSJ resources	SSJ/DBC A/Trails WA	2	2	2	6				\$0							\$0
								\$50,000	\$161,000	\$25,000	\$25,000	\$0	\$0	\$0	\$100,000	\$300,000	\$200,000	\$861,000

D. Attractions and Activities

No	Recommendation	Cost	Lead Agency/ Partners	Criteria 1	Criteria 2	Criteria 3	Total Rating	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Total Cost Years 1- 10
12.1	Redevelop Jarrahdale Oval in response to community use and to support Trail Town activities.	\$4,000,000	SSJ	3	3	2	8	\$40,000		\$2,000,000	\$1,960,000							\$4,000,000
13.1	Create a branding concept and support program for localised events and activities that activate Jarrahdale. Ensure that events are programmed evenly throughout the year to avoid clashes and ensure the public is aware about what events are planned for the area.	Existing SSJ resources	SSJ	2	1	1	4		40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	\$360,000
13.2	Utilise the Jarrahdale Oval as an event space for trail based events along with other community events that are compatible with the site.	Existing SSJ resources	SSJ/Event Organisers	2	2	2	6			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
13.7	Provide a range of trails activation activities and events throughout the year.	\$20,000	SSJ/Event Organisers	1	2	2	5	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$200,000
								\$60,000	\$60,000	\$2,060,000	\$2,020,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$4,560,000

E. Amenities

No	Recommendation	Cost	Lead Agency/ Partners	Criteria 1	Criteria 2	Criteria 3	Total Rating	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Total Cost Years 1-10
14.1	Create social media profiles for Jarrahdale as a trails destination on platforms such as Facebook, Instagram and Twitter.	\$5,000	SSJ	2	3	3	8		\$5,000									\$5,000
14.2	Develop a Jarrahdale Trail Destination page on the Trails WA website	\$20,000	SSJ	2	3	3	8		\$5,000									\$5,000
15.1	Incorporate in the planning for a Trails Centre an equipment hire, repair, maintenance, stock feed and retail space.	Included within planning for Lot 814 (refer 3.2)	SSJ/Private sector	3	3	2	8	\$0	\$0									\$0
16.1	Develop a prospectus that outlines the benefits that will be generated by the Jarrahdale Trail Town to encourage food and beverage businesses to set-up or expand into Jarrahdale.	\$10,000	SSJ	2	2	2	6								\$10,000			\$10,000
17.1	Include within the prospectus that outlines the benefits that will be generated by the Jarrahdale Trail Town a section on the opportunity to provide general services and supplies.	Included within recommendation 16.1.	SSJ	2	1	1	4								\$0			\$0
18.1	Install free WiFi provision to provide internet access to Lot 814, Jarrahdale Heritage Park, Jarrahdale Oval and Kitty's Gorge car park.	\$100,000	SSJ	2	2	3	7						\$100,000					\$100,000
18.2	Continue to advocate for improved telecommunications in Jarrahdale from providers particularly mobile phone reception.	Existing SSJ resources	SSJ/Telecommunication providers	3	3	3	9	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
18.3	Advocate with WALGA, DPIRD and the Peel Development Commission about the importance of the Jarrahdale communications tower, and that this should be targeted for early funding for battery backup improvement as part of the Federal Government STAND program.	Existing SSJ resources	SSJ/WALGA/DDPIRD/PDC	3	3	3	9	\$0	\$0	\$0	\$0							\$0
								\$0	\$10,000	\$0	\$0	\$0	\$100,000	\$0	\$10,000	\$0	\$0	\$120,000

F. Accommodation

No	Recommendation	Cost	Lead Agency/ Partners	Criteria 1	Criteria 2	Criteria 3	Total Rating	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Total Cost Years 1-10	
19.1	Include the provision of a RV Park that provides horse float parking, horse yards and water troughs as a component of the planning for the Trail Centre proposal at Lot 814.	Included within planning for Lot 814 (refer 3.2)	SSJ	1	2	1	4		\$0										\$0
								\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

G. Planning and Management

No	Recommendation	Cost	Lead Agency/ Partners	Criteria 1	Criteria 2	Criteria 3	Total Rating	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Total Cost Years 1-10
20.1	Ensure that the planning framework is reviewed and where consistent with the town planning objectives for the town make adjustments to enable such opportunities to be considered.	Existing SSJ resources	SSJ	3	3	3	9			\$0	\$0	\$0						\$0
20.2	Advocate for the provision of leases of 50 years with a 50 year option or longer, for National Trust controlled land, particularly the No 1 Jarrahdale Mill, Mill Managers House and Heritage Park, with full capacity for commercial subleasing.	Existing SSJ resources	SSJ	3	3	2	8	\$0	\$0	\$0	\$0							\$0
21.1	Establish a Trail Town reference group to assist the Shire in the development of Jarrahdale as a Trail Town.	\$5,000	SSJ/DBCA	2	3	3	8	\$2,500	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$20,500
21.2	Develop role statements for reference group members and recruit appropriate members.	\$5,000	SSJ	2	3	3	8	\$0	\$0									\$0
22.1	Develop a community engagement plan for the establishment of Jarrahdale as a Trail Town in line with the Shire's Community Engagement Strategy which utilises the IAP2 methodology.	Existing SSJ resources	SSJ	3	3	2	8		\$0									\$0
22.2	Utilise the Trail Town website and social media platforms (once established) to engage with the local, trails and broader community.	Existing SSJ resources	SSJ/Trails WA/Peak trail bodies	2	2	3	7	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
								\$2,500	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$20,500

H. Engagement of Supporting Businesses

No	Recommendation	Cost	Lead Agency/ Partners	Criteria 1	Criteria 2	Criteria 3	Total Rating	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Total Cost Years 1- 10	
23.1	Include in the prospectus in 16.1 opportunities to establish businesses in Jarrahdale, particularly trail based businesses.	Included in recommendation 16.1	SSJ/PCC/Local Businesses	1	1	2	4											\$0	\$0
23.2	Work in partnership with the Peel Chamber of Commerce, Business SJ and Jarrahdale Community Collective to support the development and operations of Jarrahdale Businesses.	Existing SSJ resources	SSJ/PCC/ Business SJ/ JCC/Local Businesses	2	1	1	4											\$0	\$0
24.1	Continue to develop the Jarrahdale Trails brand identity project.	\$36,000	SSJ	3	3	3	9	\$36,000											\$36,000
24.2	Develop a database of potential businesses that may be eligible to become a Trail Friendly business.	Existing SSJ resources	SSJ/local businesses	2	1	1	4											\$0	\$0
24.3	Conduct an information session for interested businesses to inform them on the requirements to become a Trail Friendly business.	Existing SSJ resources	SSJ/local businesses/Trai ls WA	1	2	2	5											\$0	\$0
								\$36,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$36,000

I. Marketing

No	Recommendation	Cost	Lead Agency/ Partners	Criteria 1	Criteria 2	Criteria 3	Total Rating	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Total Cost Years 1-10
25.1	Prepare a marketing plan for the Jarrahdale Trail Town.	\$20,000	SSJ	2	2	3	7					\$20,000						\$20,000
25.2	Implement the Jarrahdale Trail Brand and utilise on all signage, mapping, interpretation and promotional material and social media.	\$10,000	SSJ	3	2	3	8		\$2,000	\$2,000	\$2,000	\$2,000	\$2,000					\$10,000
25.3	Develop social media platforms as per recommendation 14.1	Included in recommendation 14.1	SSJ	3	3	3	9	\$0										\$0
25.4	Leverage promotional campaigns in partnership with Tourism WA, Perth Hills Tourism Alliance and Destination Perth.	\$20,000	SSJ/Tourism WA/PHTA/Destination Perth	1	1	3	5		\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$90,000
26.1	Link Shire website trail pages to respective TrailsWA trail pages.	Existing SSJ resources	SSJ/Trails WA	2	2	3	7		\$0	\$0	\$0	\$0						\$0
26.2	Add Jarrahdale equine trails to Shire website.	Existing SSJ resources	SSJ	3	3	2	8		\$0	\$0	\$0	\$0						\$0
26.3	Include facility information on all trail pages on Shire website based on the trail audit findings.	Existing SSJ resources	SSJ	1	1	1	3				\$0	\$0						\$0
								\$0	\$12,000	\$12,000	\$12,000	\$32,000	\$12,000	\$10,000	\$10,000	\$10,000	\$10,000	\$120,000

Jarrahdale Trail Town Master Plan

The following Master Plan outlines the key high priority recommendations to enable Jarrahdale to become an accredited Trail Town.

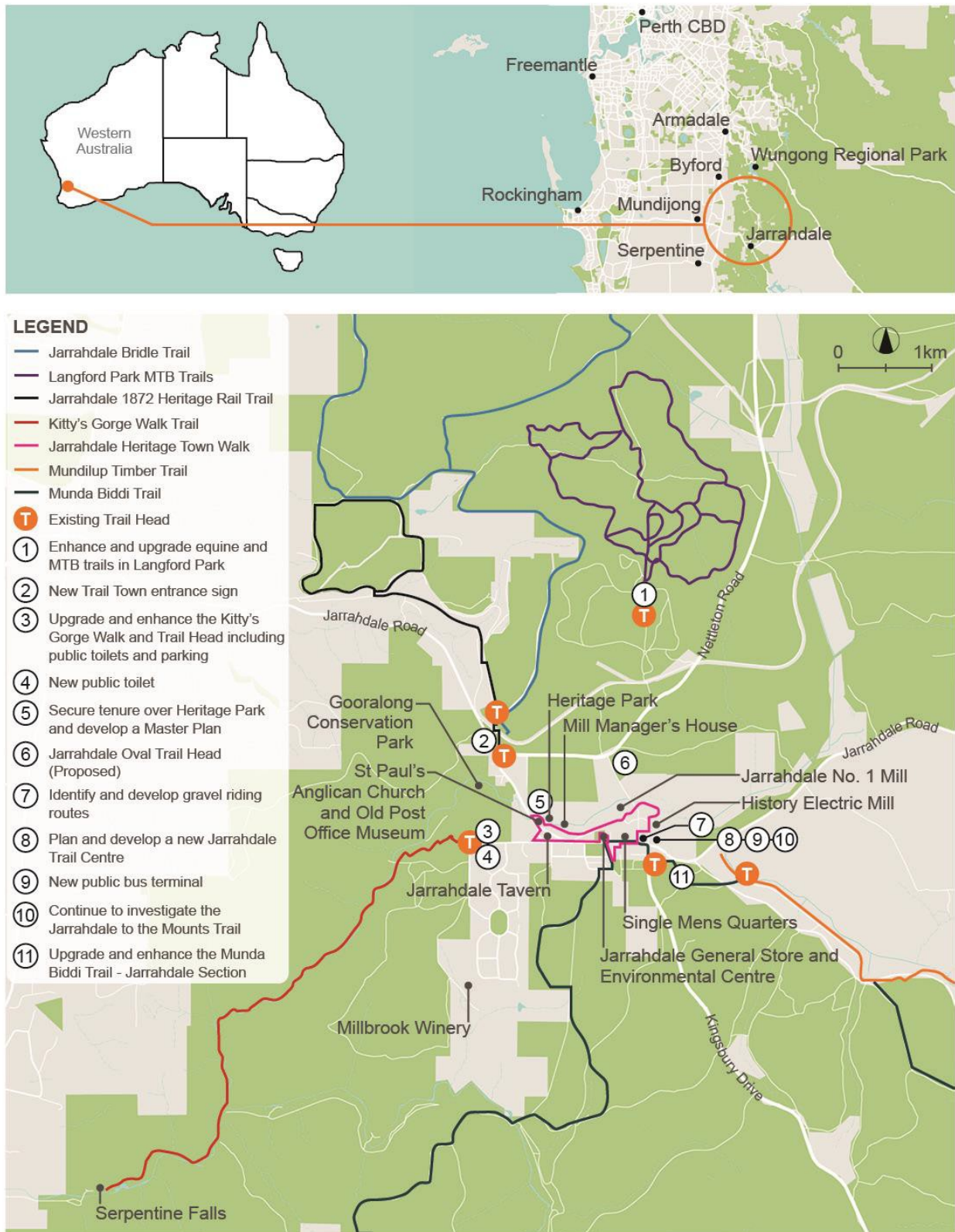


Figure 17: Jarrahdale Trail Town Master Plan

10. Financial and Economic Analysis

The Jarrahdale Trail Town, whilst not yet formally accredited, still generates significant financial and economic benefits to the Shire of Serpentine Jarrahdale through its role as a major tourism destination in the Peel Region.

Many visitors to the region take part in trail activities, either as part of a broader trip or as a specific focus of their visit. For example, DBCA recorded over 40,000 people using the Langford Park trails in 2020.

The direct investment estimated in this business case to develop and enhance Jarrahdale as a Trail Town is \$31.487 million which will generate positive economic benefits, both during construction and development of the trails and associated infrastructure, and through the on-going generation of visitors through tourism and the associated spend and flow-on effects generated by the visitor economy.

This investment will enable Jarrahdale to become an integrated, high quality and sustainable Trail Town in one of Western Australia's premier tourism regions. Visitors will enjoy high quality tourism experiences and will likely return with plans to further utilise the trails and spread the word to their connections to visit also. The generation of additional visitation will also increase the demand for services such as accommodation, food and beverage, and trail related services such as equipment hire and supplies, guided tours and shuttle services.

Modelling Process

Economic Impact Modelling has been undertaken using REMPLAN Economy to quantify the anticipated impacts of the proposed investment (\$31.487m) in Jarrahdale, in relation to:

- Regional tourism, as a result of the additional visitation to the region
- Regional economic impact, as a result of the direct investment in the region.

These estimates reflect the total economic benefit to the Shire of Serpentine Jarrahdale as a result of the proposed investment.

REMPPLAN Economy uses Australian Bureau of Statistics datasets and an input/output methodology to generate estimates of industrial economic data for defined geographic regions. For this project, a specific Shire of Serpentine Jarrahdale dataset was used to generate the estimates for the Shire.

Modelling is based on various inputs derived through REMPLAN Economy, as well as the following estimates:

- **Total investment** - The direct investment figure used is \$31.487m which reflects the estimated costs of implementation of the business case over the 10 year period. The investment includes construction costs, retail spend, professional and other services.
- **Visitors per annum** - forecast visitation has been estimated for Jarrahdale as a Trail Town, this includes domestic day and overnight visitors and international visitors. It is estimated

that after the proposed investment in Jarrahdale's trails and associated infrastructure, there will be an increase in additional visitors per annum to the Shire of Serpentine Jarrahdale over the 10 year life of the plan. These visitor estimates, and the associated assumptions, are detailed below.

- **Estimated expenditure per visitor per day** - Expenditure data has been sourced from Tourism Research Australia's Tourism Profiles (weighted averages) for the Shire of Serpentine Jarrahdale (2019). This data shows that the average domestic day visitor to the region spends \$56 per day, the average domestic overnight visitor spends \$99 per day and \$263 per trip, and the average international traveller spends \$36 per night and \$838 per trip.

Economic Impact

Economic Impact of Direct Investment

It is forecast that the total economic impact of investing in the Jarrahdale Trail Town, as a result of the direct investment, will be \$54.442m. This includes the direct injection of \$31.487 million, plus \$19.230m through the supply chain effect and \$3.725m as a result of the consumption effect.

This will support up to 124 jobs (includes 73 direct and 51 flow on/indirect jobs) over the lifespan of the implementation plan. This assumes the works are completed over a minimum of 10 years by local suppliers. The key figures contributing to this are provided in 11.

Table 11: Economic Impact of Direct Investment in Trail and Trail Related Infrastructure and Services in Jarrahdale

Economic Impact of Direct Investment				
Impact	Output	Jobs	Wages & Salaries	Value-added
Direct	\$31.487m	73	\$5.877m	\$10.413
Supply-Chain Effect	\$19.230m	45	\$4.128m	\$7.277
Consumption	\$3.725m	6	\$0.708m	\$2.248
Total	\$54.442m	124	\$10.713m	\$19.938

The REMPLAN Impact Summary Report is included in Appendix B which provides more detail and explanation of the modelling, assumptions and outputs.

Economic Impact of Increased Visitation (Visitor Economy)

The investment in Jarrahdale to become an accredited Trail Town will result in a stronger visitor economy for the town and Shire resulting in increasing domestic visitors from within Western Australia and interstate and international visitors. This will also have a direct and indirect economic effect on the local economy and create long term employment (jobs).

Based on the existing visitor information, participation rates in trail activities (bushwalking, cycling and horse riding) and visitation growth rates in Western Australia forecast visitor numbers were estimated for the duration of the implementation plan (minimum 10 years). This was undertaken for domestic day and overnight visitors along with international visitors (assuming they will return to Australia and Western Australia once the international borders re-open) refer Table 12.

Table 12: Forecast visitations for Jarrahdale as investment is implemented and the town increases its attractiveness to visitors

Year	Domestic Day Visitors	Domestic Overnight Visitors	International Visitors	Total Visitors
1	64,758	10,172	1,255	76,185
2	80,948	12,349	1,382	94,678
3	101,184	14,991	1,521	117,697
4	126,480	18,200	1,675	146,355
5	158,101	22,094	1,844	182,039
6	197,626	26,823	2,030	226,479
7	247,032	32,563	2,235	281,830
8	308,790	39,531	2,461	350,782
9	385,988	47,991	2,710	436,688
10	482,485	58,261	2,984	543,729
Total	2,153,391	282,973	20,098	2,456,462

It is forecast that the additional economic impact as a result of the development of the visitor economy and increased visitation within Jarrahdale, will be \$452.63 million over 10 years. This includes \$260.76 million directly and \$191.86 million indirectly through the supply chain and consumption effect. This will support up to 979 jobs over a minimum 10 year period, refer Table 13.

Table 13: Annual Impact of Increased Visitation to Jarrahdale

Annual Impact of Increased Visitation					
Year	Output (\$m)	Wages & Salaries (\$m)	Value-added (\$m)	Total (\$m)	Jobs
1	\$9.973	\$2.649	\$4.69	\$17.31	37
2	\$12.277	\$3.261	\$5.773	\$21.31	47
3	\$15.119	\$4.015	\$7.109	\$26.24	56
4	\$18.627	\$4.947	\$8.759	\$32.33	69
5	\$22.958	\$6.098	\$10.795	\$39.85	86
6	\$28.307	\$7.518	\$13.310	\$49.14	106
7	\$34.914	\$9.273	\$16.417	\$60.60	132
8	\$31.309	\$8.315	\$14.722	\$54.35	117
9	\$38.910	\$10.334	\$18.296	\$67.54	147
10	\$48.364	\$12.845	\$22.742	\$83.95	182
Total	\$260.76	\$69.25	\$122.61	\$452.63	979

The REMPLAN Tourism Impact Summary Reports are included in Appendix B

Asset Management

A key consideration when investing in assets such as trails and associated infrastructure is to understand the asset management costs of the project. Indicative ongoing asset management costs to the Shire for each recommendation that relates to the development of an asset has been calculated. The calculations are based on an estimate of the ongoing costs as a percentage of the initial cost over a 25 year period and have been sourced from RLB Cost Management Consultants based on industry benchmarks. A summary of the costs by recommendation priorities are included in Table 14.

Table 14: Summary of asset management costs by priority

Priority of Recommendation	1-5 years	6-10 years	11-15 years	16-20 years	21-25 years	Total Asset Management Cost
High	\$44,424	\$172,760	\$256,672	\$370,200	\$419,560	\$1,263,616
Medium	\$140,481	\$546,315	\$811,668	\$1,170,675	\$1,326,765	\$3,995,904
Low	\$11,880	\$46,200	\$68,640	\$99,000	\$112,200	\$337,920
Total	\$196,785	\$765,275	\$1,136,980	\$1,639,875	\$1,858,525	\$5,597,440

11. References

- Australian Bureau of Statistics. (2021, May). *Shire of Serpentine Jarrahdale Population Forecast*. Retrieved from Forecast ID: <https://forecast.id.com.au/serpentine-jarrahdale>
- Common Ground. (2019). *Peel Regional Trails Strategy*. City of Mandurah, Shire of Boddington, Shire of Murray, Shire of Serpentine Jarrahdale and Shire of Waroona.
- Common Ground. (2019). *Shire of Serpentine Jarrahdale Local Trail Plan*. Shire of Serpentine Jarrahdale. DBCA and DLGSC. (2019, August). *Trails Development Series*. State of Western Australia. Retrieved from DBCA.
- Department Biodiversity, Conservation and Attractions. (2020). Parks & Wildlife - Serpentine National Park overview.
Department Biodiversity, Conservation and Attractions.
- Parks and Wildlife Service. (2021, May). *Serpentine National Park*. Retrieved from Explore Parks WA: <https://parks.dpaw.wa.gov.au/comment/27>
- Shire of Serpentine Jarrahdale and Lucid Economics. (2018). *Economic Development Strategy 2018 - 2023*. Shire of Serpentine Jarrahdale.
- South West Aboriginal Land and Sea Council. (2021, May). *About the Gnaala Karla Booja Region*. Retrieved from Kaartdijin Noongar - Noongar Knowledge - Sharing Noongar Culture: <https://www.noongarculture.org.au/gnaala-karla-booja/>
- Tourism & Transport Forum Australia. (2017). *Unlocking Our Great Outdoors*. Sydney: Tourism & Transport Forum. Tourism Research Australia. (2021, May). *Local Government Area Profiles 2019*. Retrieved from Tourism Research Australia: www.tra.gov.au/Regional/local-government-area-profiles
- Tourism WA and TRC. (2020). *Cape to Cape Eco Accommodation Pre-Feasibility Study 2020*. TRC Tourism. Trails WA. (2020). *Trails WA Trail Town Accreditation, Becoming a Trail Town*. Perth: Trails WA.
- Trails WA. (2021). *Trails WA Trail Talk*. Trails WA.
- TRC Tourism. (2020). *Recreational Trail Planning, Design and Management Guidelines*. TRC Tourism.
- United Nations World Tourism Organisation (UNWTO). (2021, May). *Tourism for SDGS*. Retrieved from Join us on the 2030 Journey: <https://tourism4sdgs.org/>
- Victoria Tourism Industry Council. (2018). *Why and how local government should engage with Victoria's Visitor Economy*. Victoria: Victoria Tourism Industry Council.
- WA Department of Sport and Recreation and TRC. (2017). *Western Australian Strategic Trails Blueprint 2017-2021*. Perth: WA Department of Sport and Recreation.
- Wayfound. (2017, May). *Could a trail revitalise your town or region?* Retrieved from Wayfound: <https://www.wayfound.com.au/could-a-trail-revitalise-your-town-or-region/>

Appendices

Appendix A - Consultation and Engagement Outcomes

Ongoing consultation with the community and key stakeholders has occurred over a long period of time in relation to the creation of Jarrahdale as a Trail Town. This has been in line with the Shire's *Community Engagement Strategy* which is based on the *International Association of Public Participation Spectrum of Public Participation*.

Key consultation mechanisms included:

- Stakeholder Workshop.
- On-line Community Survey.
- One on one meetings with key stakeholders.
- Elected Members workshops.

A summary of the key findings from each of the key consultation processes is included below.

Stakeholder Workshop

A comprehensive stakeholder session and workshop was conducted in Jarrahdale through the development of this Business Case. 41 people attended including representatives from State Government agencies, tourism agencies, political parties, community groups and the broader community.

The purpose of the workshop was to capture ideas on the development of Jarrahdale as a Trail Town from various viewpoints. Groups of attendees were developed to generate discussion amongst differing sectors/interest groups to allow ideas to be further elaborated on as they were raised.

Throughout the session, attendees were asked to submit ideas and feedback on the six subjects that make up a Trail Town within the DBCA Trails Development Series. The below sentiments were commonly heard across all subjects:

- New and existing developments must be accessible for all including those living with a disability.
- There are ongoing parking issues across the whole of Jarrahdale which would need to be rectified.
- Developments should be sympathetic to the natural environment and environmentally sustainable.
- There is a significant gap in informative and trail signage along exiting trails and within the town itself.
- The Mill Managers House should be activated for tourism purposes.
- Telecommunications/mobile phone reception continues to be an issue.
- Community members have an appetite for more food offerings including food trucks.
- More Indigenous recognition should be incorporated into the township.
- The existing tourism information about Jarrahdale and its trails is not up to date or sufficient.

Attendees were also requested to define what values are most important to them, in relation to developing Jarrahdale as a Trail Town, to ensure that the development and enhancement of

existing and new trails, associated infrastructure and provision of services align to the values and identity of Jarrahdale. The highest rated values included;

Build upon Jarrahdale's existing assets

The Shire can demonstrate this by:

- Undertaking maintenance and upgrading existing trails to increase the level of service provided to visitors.
- Incorporating amenities such as signage to existing trails.
- Promoting the timber milling heritage through interpretive signage and well-thought out design.
- Consulting with the community during development of the projects to understand the assets.
- Providing innovative facilities that enable increased accessibility for equine users.
- Upgrading existing facilities to make them more fit for purpose.

Protect and celebrate Jarrahdale's heritage

The vision for the Trail Town is to promote Jarrahdale's rich heritage to WA and the world. This heritage includes Aboriginal country and history, colonial timber milling history, and local heroes.

Heritage can be celebrated in many ways including incorporating heritage values into new designs, undertaking active conservation of historical buildings, engaging with local Noongar people, building interpretive signage and supporting community members to tell their stories.

Supporting new and existing local businesses

The Trail Town vision aims to assist in creating jobs for local residents. With 80% of the Shire's residents commuting outside of the Shire for work, and 25% of Jarrahdale's population being under the age of 24, supporting Jarrahdale's businesses to grow through the Trail Town initiative will assist Shire residents to work locally.

Trail tourism supports various industries and it is expected that the development of Jarrahdale as a Trail Town will have flow-on effects in generating demand for trail and trail related services including accommodation, food and beverage offerings, retail, maintenance and transport services which will encourage new businesses to start their operations and existing businesses to expand their businesses in Jarrahdale.

The Shire and Jarrahdale community can embrace this value together by continuing to collaboratively work with local businesses to build and grow the local economy together based on the emerging trail industry.

Support existing infrastructure and services to be more fit for purpose

Optimising existing facilities and services to not only support future increased visitation to the town (for example, creating better facilities for people with RV's and caravans to stay within the town), is vital to ensure that the investment in capital and ongoing costs to develop the Trail Town is a feasible and sustainable option for Council and ratepayers.

Environmental sustainability

In a time of significant climate events due to climate change, environmental sustainability is more important than ever. Initiatives to support environmental sustainability should include education signage, reminders about how to look after the environment around the town (for example, litter or

not picking wildflowers), clean energy infrastructure (such as solar cells for electricity) and tourism products such as tours that educate and interest visitors in protecting the environment; are all supported by the Jarrahdale community. Additionally, supporting the efforts of local groups that protect the environment is particularly important though must be balanced with the priorities of State Government and progression.

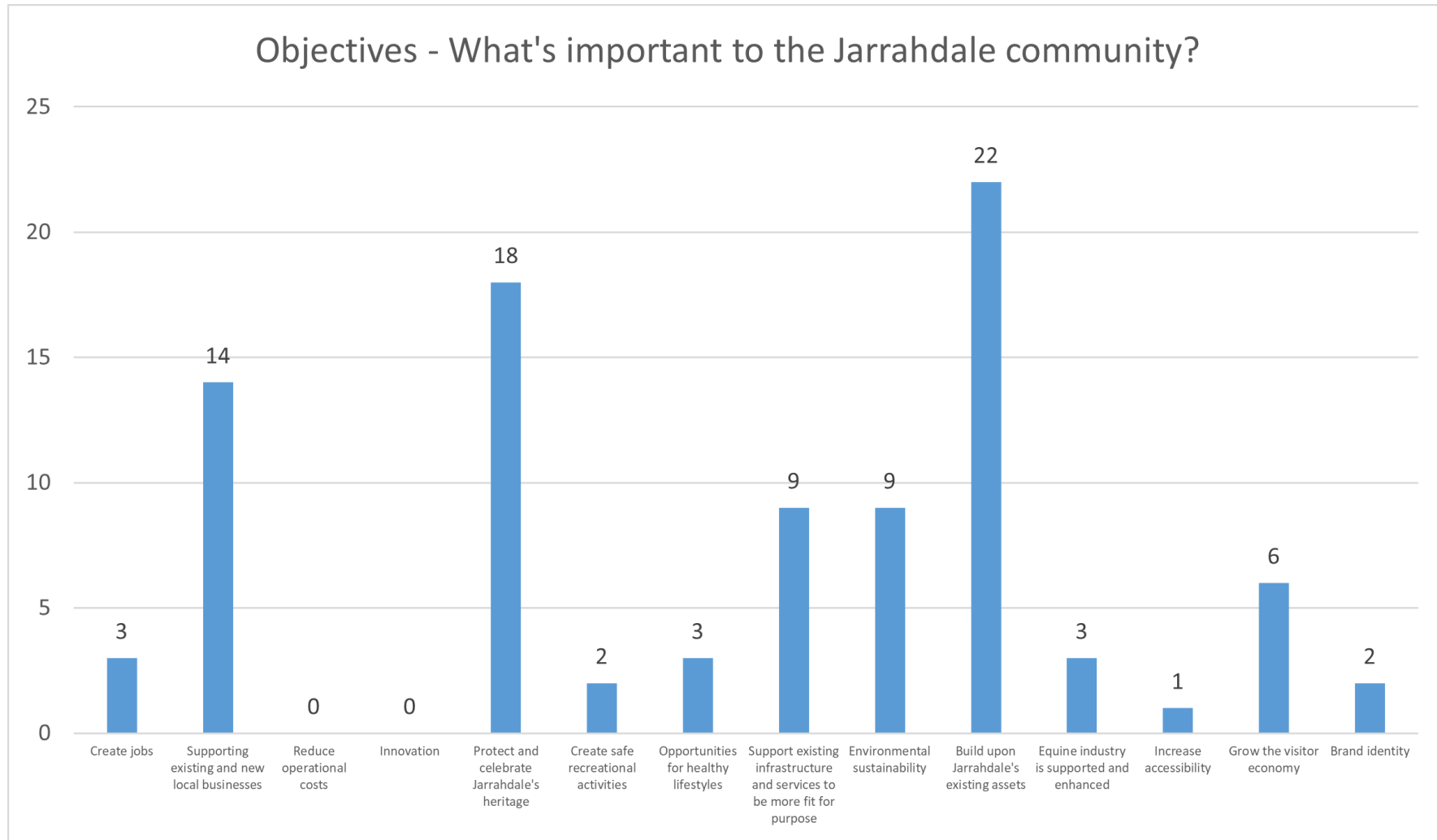


Figure 18: Summary of Workshop Outcomes – ‘What is important to the Jarrahdale community?’

Community Survey

A comprehensive online survey was undertaken in the community as part of the development of this Business Case. The survey was widely promoted on the Shire's website, communication and social media platforms. 24 people responded to the survey. The survey contained questions which sought feedback on specific topics/opportunities considered for inclusion in this business case. A summary of the key findings are included below.

Please note these are the views of the community and not necessarily those of the consulting team.

Jarrahdale's Strengths as a Trails Destination

- Natural beauty
- Existing trails and tracks some are very popular
- Strong volunteer network who maintain the trails
- History and heritage
- Flora (forests, wild flowers) and fauna
- Location and close proximity to Perth
- Quiet and tranquil
- Local business support of trails
- Easy access to trails
- Unique experiences
- Existing tourism infrastructure
- Village like feel
- Biodiversity hotspot
- Variety of trails on offer of differing durations and experiences
- Already a popular trails destination

Opportunities in Jarrahdale for Trails

- Improved signage and waymarking on trails
- Improved trail maintenance
- Weed control
- Celebrate the local history e.g. logging, POW camp, timber mills
- Supporting local businesses to benefit from the visitation as a result of the trails
- Expand trails to cater for all trail disciplines i.e. equine, mountain biking, hiking, 4WD and off road motorcycling
- Need for additional and improved parking
- Need for additional accommodation (e.g. RV Park, chalets, camping, caravan park)
- Short stay accommodation in which you can access trails directly
- Increased tourism and visitors
- Host the Tom Quilty Endurance ride
- Further development of the trails within Langford Park
- Equine trails development
- Link trails to a central hub in the town
- Create multi-day hikes
- Associated employment and job opportunities
- Better promotion and marketing
- Alternative to mining as an economic driver in the town

- Improve access to existing trails
- Improved amenities such as toilets
- Improved visitor infrastructure
- Additional multi-use trails
- Connect existing trail to the Jarrahdale town centre
- Improve traffic management within the town
- Improved communications

Development of Lot 814 as a Trails Centre

- There was unanimous support for the establishment of Lot 814 as a Trail Centre
- All but one respondent supported the development of accommodation at Lot 814
- 20 of 24 respondents thought the shire should develop and operate this accommodation
- Services and facilities to include:
 - bike rental/hire
 - shuttle services
 - accommodation (e.g. camping/caravan park)
 - parking including for horse floats
 - toilets
 - recycling
 - security
 - trail information including maps
 - laundry facilities
 - gardens
 - wash down areas for bikes and horses
 - showers
 - bike tools for maintenance
 - drinking water
 - vending machines
 - basic camp kitchen
 - first aid
 - shelter
 - parent rooms
 - free camping
 - Public transport e.g. electric bus, more frequent services
 - community function area
 - basic supplies
 - path network
 - Café
 - Improved roads
 - Retail – food/beverage, local arts and crafts
 - Trail equipment hire
 - Bike maintenance
 - Outdoor seating
 - BBQs
 - Bike racks
 - Information centre
 - Lockers
 - Wi-fi

- Telecommunications
- Other considerations include:
 - Environmental impact
 - Ongoing consultation with residents
 - Improved access to trails from this site
 - On site management
 - Utilise current buildings on site
 - Staged development

Jarrahdale Oval

- 20 of 24 respondents supported the development of Jarrahdale Oval as a trail head
- Jarrahdale Oval can support the Jarrahdale as a Trail Town through
 - Parking
 - Events space
 - Picnics
 - Upgraded toilets
 - Entry statement
 - Trail provision
 - Nature park
 - Playground
 - Equine Centre
 - Group camping
 - Supporting Lot 814 and not duplicating what is proposed there
- Support for the development of a master plan for Jarrahdale
- Functionalities should include:
 - Toilets
 - Parking
 - Picnic tables
 - Water
 - Electricity
 - Playground with shade
 - Showers
 - Information bay/board
 - Equine warm-up track and horse yards
 - Formalised parking
 - Camping areas and facilities
 - BBQs
 - Secure bike parking
 - Shelter
 - Café
 - Formal link back into Jarrahdale
 - Horse stalls
- Be careful to not separate the town's facilities

Heritage Park

- 21 of 24 respondents support the Shire entering into a lease agreement with the National Trust for portions of Heritage Park
- Suggestions for activities and opportunities for development in Heritage Park included:

- Parking off the main road
- Environmental restoration and preservation
- Adventure Park for all ages
- Walk trails
- Information on the history
- Treetop walk
- Amphitheatre
- Enhance Wattle Trail
- Bins
- Water fountains
- Picnic and BBQ facilities
- Guided walks
- Seating
- Nature play
- Zip line
- Accessible paths
- Museum
- Sculptures
- Improved maintenance
- Better footpaths
- Improved signage

Mill Managers House and No. 1 Jarrahdale Mill

- Strong support for the Mill Managers house and the No.1 Jarrahdale Mill having a role to play in the activation of Jarrahdale as a Trail Town.
- Suggestions on how they could contribute include:
 - Information/Visitor Centre
 - No longer should be a private residence
 - The Mill should be a camp site
 - Museum
 - Function Venue
 - Bed and Breakfast offering
 - Markets
 - Performing arts
 - Café
 - Small bar
 - Art gallery
 - Activity and climbing centre
- 19 of 24 respondents thought that the Shire should submit an expression of interest to lease one or both assets should the opportunity arise.
- If the Shire does not lease the assets the following actions are suggested for the National Trust to undertake to assist Jarrahdale become a Trail Town
 - Public access
 - Restore the buildings
 - Rehabilitate the natural environment
 - Markets
 - Events space

- Guided tours
- Educate visitors on the town's history
- Open air cinema
- Accommodation

General Support for Development Options

- 23 of the 24 respondents supported development of additional amenities and accommodation.
- Reasons provided included
 - *The town won't develop without investment*
 - *It is evident these facilities are necessary as tourism increases*
 - *If people are increasing in the area parking needs to be increased, the current cafes/shops need to be supported first as they have committed to the area already and only businesses that work with the bush environment, no fast food outlets*
 - *We already have local food/beverage businesses that definitely could support further tourist numbers*
 - *Jarrahdale definitely needs services such as equipment hire, parts/supply (for bikes etc), accommodation, car parking, recreational activities*
 - *It would be great to see these services supporting an economy in Jarrahdale that celebrates the natural beauty of the town. Establishing industry around trails will also bring further respect and support for the natural environment that brings in business*
 - *I think controlled and well thought out development and growth would be good for the town and the trail industry*
 - *Current accommodation options and facilities do not support expansion, more short stay accommodation and dedicated small businesses are needing to grow as at the same rate as Trail Town infrastructure is rolled out*
 - *The five A's are great*
 - *It will bring people to Jarrahdale and the surrounding towns. They will support local businesses which in turn employ local people*
 - *It is a commonsense solution*
 - *It promotes more business and more things for people to do. Not just locals but day trips for some*
 - *Overall Jarrahdale is well managed by the community, but better funding might allow for more progress to better utilise it's unique assets*
 - *Jarrahdale should not become a 'dormitory town'; need to provide employment opportunities. Has a good vibe and limited land for housing growth this will ensure it remains small and 'neighbourly' with visitors providing financial input*
 - *I believe this would benefit the area and bring local employment and business opportunities*
 - *Jarrahdale already has a number of visitors. Parking is an issue around the area of the museum and pub. Mainly because the pub does not have sufficient parking. Car parking is available at Munro Street but people are not aware of this - or too lazy to walk from there to the pub. More parking could be available at the RV centre. There is a requirement for more cafes at the weekends. Retail offerings should be in keeping with the nature of the town*

- *The town needs some more entertainment options for the community and visitors. There is also limited accommodation so difficult to stay*
- *Only "no" in so far as it seems too prescriptive - organic growth preferred to overplanning*

Current opportunities for further development in Jarrahdale

- Focus on securing land to develop walking infrastructure not walking trails
- Accommodation e.g. short stay, B&Bs, various types/options
- Dining, café, tavern
- Eco tourism
- History tourism
- Trail activity businesses
- Upgrade Jarrahdale Road to support the increase in traffic
- Trails that link food, wine, orchards, pubs, equine etc
- All day walks
- Potential for the Gooralong Park grounds for trail and camp development
- Short stay accommodation
- Trail Town accreditation
- Fuel station
- Improved public bus service
- More diverse use of the trails
- Bike maintenance
- Bike pump track
- Road infrastructure
- Signage
- Toilets
- Parking particularly at Kitty's Gorge Trail and cemetery area
- Upgrade heritage town walk
- Connect town walk and Kitty's Gorge Walk

Impact of the development of a Trail Town on the Jarrahdale townsite and surrounds

- Increasing pressure on the surrounding forests and national parks
- Increased traffic this needs to be managed
- Water supply capacity
- Environmental and ecological impact
- The development needs to be keeping with the natural area so not to spoil the environment
- Positive impact
- Car parking capacity
- Accommodation options need to be increased
- Rising property prices
- Increase in tourism
- It will be important to control development in a way that the historical character of the town is maintained
- Employment growth
- Business opportunities

- Maintaining a clean town
- Upgrade of footpaths will be required
- Improved services in the town
- Good reputation for the town
- Greater investment in the town

Trail Friendly Businesses

- 5 of the 19 respondents were business owners in Jarrahdale
- 4 of the 5 businesses were interested in becoming a trail friendly business
- The support outlined that would be required to become a trail friendly business included:
 - Guidance requiring environmental impacts
 - Consistent and clear information
 - Establish a business group
 - Some co-branded advertising
 - Advertising on Shire/trails website to promote the local businesses
 - Improved parking
 - Education on what a trail friendly business is
 - Funding
 - Reasonable rents
- The other 19 respondents all thought that it would be of benefit to Jarrahdale to have trail friendly businesses

Jarrahdale to the Mounts Trail

- 22 of 24 respondents supported the development of a trail from Jarrahdale to the Mounts
- The 2 respondents that didn't cited that this already exists, it will place additional pressure on the Bibbulmun Track and the mining that is to take place there
- Some of the area is used to ride off road motorcycles which would conflict with other trail users
- Additional considerations for the Shire to be aware of in when establishing this trail include:
 - Environmental impact
 - Shuttle services
 - Mobile food delivery
 - Improved information signage
 - Appropriate access for bikes and horses
 - Use for hiking, equestrian and cycling no motorized use
 - Link through to Byford Scarp to Wungong
 - Provide hut style accommodation for multi-day hikes
 - Amenities
 - High quality track maintenance
 - Parking
 - Shelter
 - Rubbish collection
 - Easy trail to follow
 - Mining

Kitty's Gorge Walk trail head parking improvements

- 23 of 24 respondents support this development
- Key considerations that the Shire needs to be aware of in the planning for this parking area are:
 - Consider the impacts on residents
 - Litter management
 - Environmental impact
 - Increase in traffic in the area
 - Toilets
 - Makes sense
 - Traffic management
 - Angled parking
 - One way entry and exit loop
 - Make sure that they are suitable for horses also including float parking
 - Planting
 - Adequate lighting
 - Don't lose its heritage feel
 - No large buildings or infrastructure
 - Will be better than the current situation
 - Must be in keeping with the nature of the area
 - Sympathetic to the aesthetics

Meetings with key Stakeholders

A series of meetings were held with key stakeholders to inform the Business Case, the key findings from this consultation have been summarised and are included below:

- Supportive of establishing Lot 814 as a Trail Centre providing it is well designed and complements the heritage rotunda and men's quarters and the water capacity is addressed at the site
 - Some support for accommodation on the site however it needs to be sympathetic to the town and site and combined with other features and services
 - Should be privately operated
 - Should include community area, equipment hire and repairs, starting point/meeting point
 - Amenities – toilets and showers
 - Trees and shade for campers
 - Horse yards at the campgrounds
- Supportive of establishing Jarrahdale Oval as a Trails Head provided:
 - Toilets, picnic tables and water are provided
 - Caters for horse riders
 - Create as an events space
 - It does not become the visitor centre
 - Priority to be developed over Lot 814
 - Concern it could compete with Lot 814 and vice versa

- Supportive of the Shire entering into a lease agreement with the National Trust for portions of Heritage park for 21 year term and the following activities are suggested:
 - Picnics
 - Walks
 - Nature play
 - Boardwalk
 - History and heritage interpretation
 - Amphitheatre
 - Tree top walk
 - Festivals
 - Sculpture park
 - Celebrate biodiversity within the forest and the park

- Would like to see in Heritage Park:
 - Cleaned up and well maintained
 - Scheme for removal of fallen wood
 - Work and support the volunteers currently engaged in the park
 - Manage the park, maintain and curate the park not just basic maintenance, needs a plan
 - Needs enhancing
 - Involve the town in the development
 - Have natural and industrial heritage sculptures but not all of it

- Mill Managers House and No. 1 Jarrahdale Mill
 - Possible event space but it needs a lot of investment i.e. power and water infrastructure
 - Small arts in the space
 - Markets
 - Mill Managers House would be best suited to a visitor centre, right in the heart of the town
 - No.1 Mill – tourist hub, museum walk through
 - Event space, plays, productions
 - Brewery
 - Amphitheatre
 - Infrastructure needs to be in place first
 - Tourist hub
 - Water issue - Watercorp need to up-grade the pipes. Shire needs to make this an advocacy project
 - Functions at the Mill, dinner, markets, concerts, consider impact on residents
 - Arts and writers in residence, university students (environment and climate change)
 - Better for private investor. There is only so much Council can do
 - Council is too risk adverse
 - Must have someone living at the Mill to keep eyes on it
 - Nurses quarters have dorm accommodation
 - The Mill Managers house would be good for a Heritage Park manager to keep eyes on the place

- Do you think that the Shire should submit an expression of interest to lease either or both assets should the opportunity arise?
 - Yes – Mill Managers house when vacant, tourist centre, maybe museum. Lots of restrictions due to it's heritage status. Artist in residence, not a community or playgroup centre
 - No.1 Mill - Yes – has potential but needs infrastructure
 - Not if Shire has to pay commercial rent
 - Shire to lease and be able to sub lease
 - Needs so much work
- What do you believe are the current opportunities for further development in Jarrahdale?
 - Accommodation, food and beverage. Needs to be a slow development responding to demand
 - Accommodation, specifically camping accommodation
 - Gooralong Brook needs to be utilised as a formal camping space
 - Build up equestrian in consultation with the equine community
 - Mountain biking facilities
 - Keep the ambience there – relaxation space
 - Scientists from Murdoch, students come to town – joint opportunities
 - Develop the charm side, promote general wellness concept
 - New sciences – forest bathing concept, relieve anxieties
 - Lot 815 subdivide and sell for businesses
- What do you believe will be the impact of this development on Jarrahdale Townsite and surrounds?
 - Has to be in keeping with the heritage feel of the town. Draw on the Mill style
- What support do you believe that Jarrahdale based businesses would require to achieve accreditation as a Trail Friendly Business?
 - The shower at the café is closed and not offered for use - can we support them to re-open? In Dwellingup you turn up and say need a shower they give you a pack for \$10 including a towel
 - The businesses here are fine, but there is a need for more, wait an hour for coffee on the weekend
 - The parking needs to be marked out in places to allow more orderly parking
 - Signage for parking to support access to businesses
 - The carpark at the store needs some work and marking out
 - Nurses quarters is accommodation set up- need to list this as a positive in town
 - Hire business and repair business and cross promote themselves
 - Work with businesses to facilitate sessions with Trails WA to help with exposure to the programme
 - Accommodation – how can we be more regulatory friendly?
- There is support for the development of a trail from Jarrahdale to the Mounts
- There is support for the proposal to improve and create additional parking in the road reserve at Kitty's Gorge and the Jarrahdale Cemetery provided there is consultation with residents, it doesn't impact on the forest and vegetation and there is sensible clearing

- Other comments include the need for public transport, support services, first aid, process to find lost people, need for maintenance of existing trails and associated infrastructure

Elected Members Workshop

- There was strong support for establishing Jarrahdale as a Trail Town
- There is a great opportunity to work with the town's and Shire's strengths including the equine trails and sector, the heritage of Jarrahdale and the strong bushwalking culture in the Jarrahdale and surrounding community
- There is an opportunity to significantly increase tourism in the Shire through the establishment of Jarrahdale as a Trail Town
- Jarrahdale has always been known for its trails and heritage and is essentially already a Trail Town, by achieving accreditation this will be a natural progression
- There is an opportunity to link in with the other communities in the Shire such as Darling Downs, Byford, Mundijong and Serpentine which all offer their own trail experiences
- Jarrahdale has experienced strong growth in trails usage particularly post COVID-19 pandemic lockdown and this is expected to continue

Summary of Key Consultation Findings

- Strong support for the establishment of Jarrahdale as a Trail Town from the local community including the business community
- Jarrahdale's strengths as a trails destination are its natural beauty, diversity of existing trails (e.g. walking, equine, mountain biking), history and heritage, flora and fauna, tranquility, proximity to Perth and village like feel
- There is a need for improved accommodation including the diversity of accommodation types on offer
- There is a strong need for trail support infrastructure and facilities including toilets, parking, shelter, maintenance stations, camp grounds etc
- Parking and traffic management were raised as major current issues that need to be resolved including more formalised parking
- There is a need for additional food and beverage offerings e.g. food vans, café, markets
- There is a need to improve trail and waymarking signage
- Basic infrastructure improvements are required in Jarrahdale including roads, footpaths, communications and water supply
- Opportunity to improve marketing and promotion of the trails
- Strong support for establishing Lot 814 as a trail centre which would include accommodation (e.g. camping, caravans, RVs), trail related services (equipment hire, maintenance, shuttle services), amenities (toilets, showers, laundry), parking including for horse floats and trailers, wash down areas, drinking water, shelter, food and beverage (café, vending machines, food trucks), first aid. Wi-fi, lockers etc
- Key considerations for any form of development in relation to the Trail Town included impacts on the environment, local residents, traffic and the general feel and vibe of the town
- Support for establishing Jarrahdale Oval as a trail head provided it did not compete with local businesses and did not duplicate facilities within the township itself. Therefore it needs to be a more scaled down development with basic amenities (toilets, shelter), parking, events space etc

- There is support for the enhancement of Heritage Park and creating this into an attraction with walking trails, adventure park, nature play, sculptures, picnic and BBQ facilities in a natural environment
- There was strong support for the Mill Managers house and the No.1 Jarrahdale Mill having a role to play in the activation of Jarrahdale as a Trail Town
- Functions suggested for these two facilities included information/visitor centre, museum, function venue, B&B, café, small bar and art gallery
- Local businesses are interested in becoming trail friendly businesses with support from the community and the Shire
- There was support for establishing a trail from Jarrahdale to the Mounts
- There was support for the improvement of the Kitty's Walk parking area

Appendix B - REMPLAN Impact Summary Reports

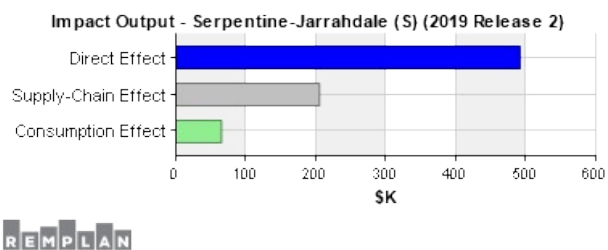


Impact Report for Serpentine-Jarrahdale (S)

Advanced Impact Scenario - Year 1

Industry Sector	Direct Change Jobs	Direct Change Output (\$K)	Direct Change Wages (\$K)
Construction Services		\$50.000	
Information Media & Telecommunications		\$46.000	
Professional, Scientific & Technical Services		\$87.000	
Sports, Recreation & Gambling		\$308.500	

Impact on Output - Year 1



From a direct increase in output of \$491.500 thousand in year 1, it is estimated that the demand for intermediate goods and services would rise by \$204.962 thousand. This represents a Type 1 Output multiplier of 1.417. These supply-chain effects include multiple rounds of flow-on effects, as servicing sectors increase their own output and demand for local goods and services in response to the direct change to the economy.

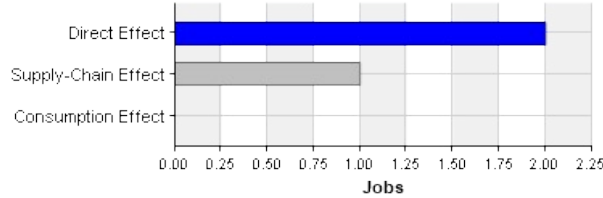
The increases in direct and indirect output would typically correspond to the creation of jobs in the economy. Corresponding to this change in employment would be an increase in the total of wages and salaries paid to employees. A proportion of these wages and salaries are typically spent on consumption and a proportion of this expenditure is captured in the local economy. The consumption effects under this scenario are estimated at \$65.078 thousand.

Total output in year 1, including all direct, supply-chain and consumption effects is estimated to increase by up to \$761.540 thousand. This represents a Type 2 Output multiplier of 1.549.



Impact on Employment Year 1

Impact Employment Total - Serpentine-Jarrahdale (\$) (2019 Release 2)



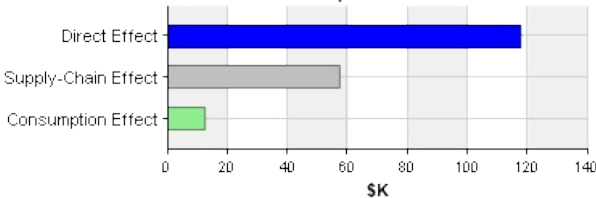
From a direct increase in output of \$491.500 thousand in year 1, the corresponding creation of direct jobs is estimated at 2 jobs. From this direct expansion in the economy, flow-on supply-chain effects in terms of local purchases of goods and services are anticipated, and it is estimated that these indirect impacts would result in the gain of a further 1 job. This represents a Type 1 Employment multiplier of 1.500.

The increase in direct and indirect output and the corresponding creation of jobs in the economy are expected to result in an increase in the wages and salaries paid to employees. A proportion of these wages and salaries are typically spent on consumption and a proportion of this expenditure is captured in the local economy. The consumption effects under this scenario are estimated to further boost employment by 0 jobs.

Total employment in year 1, including all direct, supply-chain and consumption effects is estimated to increase by up to 3 jobs. This represents a Type 2 Employment multiplier of 1.500.

Impact on Wages and Salaries - Year 1

Impact Wages and Salaries Total - Serpentine-Jarrahdale (\$) (2019 Release 2)



From a direct increase in output of \$491.500 thousand in year 1, it is estimated that direct wages and salaries would increase by \$117.514 thousand. From this direct expansion in the economy, flow-on supply-chain effects in terms of local purchases of goods and services are anticipated, and it is estimated that these indirect impacts would result in the gain of a further 1 job and a further increase in wages and salaries of \$57.269 thousand. This represents a Type 1 Wages and Salaries multiplier of 1.487.

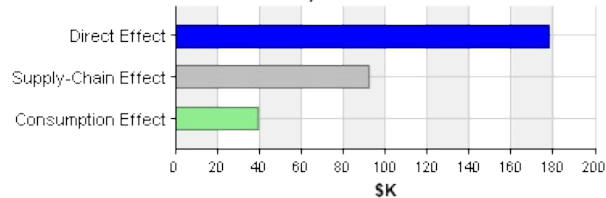
The increase in direct and indirect output and the corresponding creation of jobs in the economy are expected to result in an increase in the wages and salaries paid to employees. A proportion of these wages and salaries are typically spent on consumption and a proportion of this expenditure is captured in the local economy. The consumption effects under this scenario are expected to further boost employment in sectors such as retail therefore further increasing wages and salaries by \$12.367 thousand.

Total wages and salaries in year 1, including all direct, supply-chain and consumption effects is estimated to increase by up to \$187.150 thousand. This represents a Type 2 Wages and Salaries multiplier of 1.593.



Impact on Value-Added - Year 1

Impact Value-Added Total - Serpentine-Jarrahdale (S) (2019 Release 2)



From a direct increase in output of \$491.500 thousand in year 1, the corresponding increase in direct value-added is estimated at \$177.742 thousand. From this direct expansion in the economy, flow-on supply-chain effects in terms of local purchases of goods and services are anticipated, and it is estimated that these indirect impacts would result in a further increase to value-added of \$91.957 thousand. This represents a Type 1 Value-added multiplier of 1.517.

The increase in direct and indirect output and the corresponding boost to jobs in the economy are expected to result in an increase in the wages and salaries paid to employees. A proportion of these wages and salaries are typically spent on consumption and a proportion of this expenditure is captured in the local economy. The consumption effects under this scenario are expected to further boost value-added by \$39.270 thousand.

Total value-added in year 1, including all direct, supply-chain and consumption effects is estimated to increase by up to \$308.970 thousand. This represents a Type 2 Value-added multiplier of 1.738.

Impact Summary - Year 1

Impact Summary	Direct Effect	Supply-Chain Effect	Consumption Effect	Total Effect	Type 1 Multiplier	Type 2 Multiplier
Output (\$K)	\$491.500	\$204.962	\$65.078	\$761.540	1.417	1.549
Employment (Jobs)	2	1	0	3	1.500	1.500
Wages and Salaries (\$K)	\$117.514	\$57.269	\$12.367	\$187.150	1.487	1.593
Value-added (\$K)	\$177.742	\$91.957	\$39.270	\$308.970	1.517	1.738

Disclaimer

All figures, data and commentary presented in this report are based on data sourced from the Australia Bureau of Statistics (ABS), most of which relates to the 2016, 2011, 2006 and 2001 Censuses.

Using ABS datasets and an input / output methodology industrial economic data estimates for defined geographic regions are generated.

This report is provided in good faith with every effort made to provide accurate data and apply comprehensive knowledge. However, REMPLAN does not guarantee the accuracy of data nor the conclusions drawn from this information. A decision to pursue any action in any way related to the figures, data and commentary presented in this report is wholly the responsibility of the party concerned. REMPLAN advises any party to conduct detailed feasibility studies and seek professional advice before proceeding with any such action and accept no responsibility for the consequences of pursuing any such action.

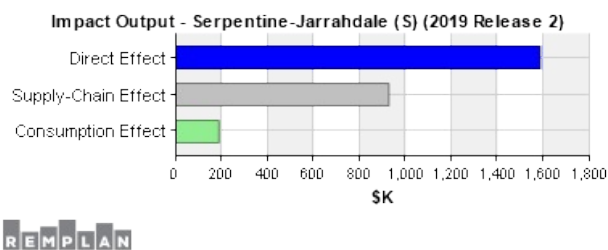


Impact Report for Serpentine-Jarrahdale (S)

Advanced Impact Scenario - Year 2

Industry Sector	Direct Change Jobs	Direct Change Output (\$K)	Direct Change Wages (\$K)
Construction Services		\$1,211.000	
Information Media & Telecommunications		\$82.000	
Professional, Scientific & Technical Services		\$33.000	
Sports, Recreation & Gambling		\$257.500	

Impact on Output - Year 2



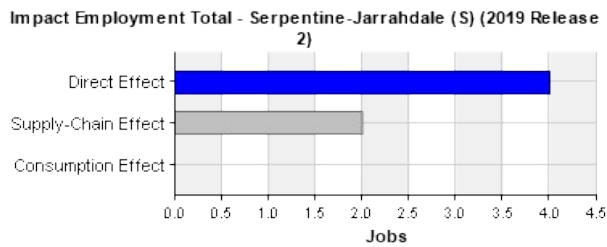
From a direct increase in output of \$1,583.500 thousand in year 2, it is estimated that the demand for intermediate goods and services would rise by \$926.892 thousand. This represents a Type 1 Output multiplier of 1.585. These supply-chain effects include multiple rounds of flow-on effects, as servicing sectors increase their own output and demand for local goods and services in response to the direct change to the economy.

The increases in direct and indirect output would typically correspond to the creation of jobs in the economy. Corresponding to this change in employment would be an increase in the total of wages and salaries paid to employees. A proportion of these wages and salaries are typically spent on consumption and a proportion of this expenditure is captured in the local economy. The consumption effects under this scenario are estimated at \$187.139 thousand.

Total output in year 2, including all direct, supply-chain and consumption effects is estimated to increase by up to \$2,697.532 thousand. This represents a Type 2 Output multiplier of 1.704.



Impact on Employment Year 2

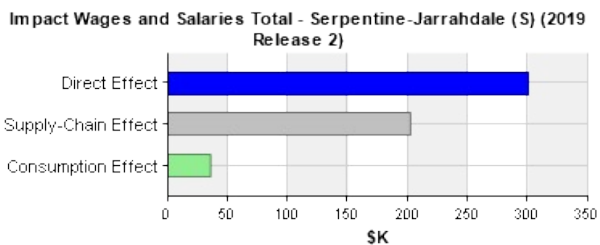


From a direct increase in output of \$1,583.500 thousand in year 2, the corresponding creation of direct jobs is estimated at 4 jobs. From this direct expansion in the economy, flow-on supply-chain effects in terms of local purchases of goods and services are anticipated, and it is estimated that these indirect impacts would result in the gain of a further 2 jobs. This represents a Type 1 Employment multiplier of 1.500.

The increase in direct and indirect output and the corresponding creation of jobs in the economy are expected to result in an increase in the wages and salaries paid to employees. A proportion of these wages and salaries are typically spent on consumption and a proportion of this expenditure is captured in the local economy. The consumption effects under this scenario are estimated to further boost employment by 0 jobs.

Total employment in year 2, including all direct, supply-chain and consumption effects is estimated to increase by up to 6 jobs. This represents a Type 2 Employment multiplier of 1.500.

Impact on Wages and Salaries - Year 2



From a direct increase in output of \$1,583.500 thousand in year 2, it is estimated that direct wages and salaries would increase by \$300.352 thousand. From this direct expansion in the economy, flow-on supply-chain effects in terms of local purchases of goods and services are anticipated, and it is estimated that these indirect impacts would result in the gain of a further 2 jobs and a further increase in wages and salaries of \$202.259 thousand. This represents a Type 1 Wages and Salaries multiplier of 1.673.

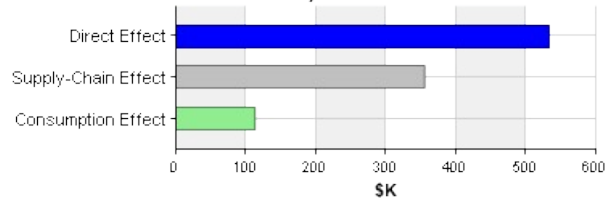
The increase in direct and indirect output and the corresponding creation of jobs in the economy are expected to result in an increase in the wages and salaries paid to employees. A proportion of these wages and salaries are typically spent on consumption and a proportion of this expenditure is captured in the local economy. The consumption effects under this scenario are expected to further boost employment in sectors such as retail therefore further increasing wages and salaries by \$35.563 thousand.

Total wages and salaries in year 2, including all direct, supply-chain and consumption effects is estimated to increase by up to \$538.174 thousand. This represents a Type 2 Wages and Salaries multiplier of 1.792.



Impact on Value-Added - Year 2

Impact Value-Added Total - Serpentine-Jarrahdale (\$) (2019 Release 2)



From a direct increase in output of \$1,583.500 thousand in year 2, the corresponding increase in direct value-added is estimated at \$533.307 thousand. From this direct expansion in the economy, flow-on supply-chain effects in terms of local purchases of goods and services are anticipated, and it is estimated that these indirect impacts would result in a further increase to value-added of \$355.225 thousand. This represents a Type 1 Value-added multiplier of 1.666.

The increase in direct and indirect output and the corresponding boost to jobs in the economy are expected to result in an increase in the wages and salaries paid to employees. A proportion of these wages and salaries are typically spent on consumption and a proportion of this expenditure is captured in the local economy. The consumption effects under this scenario are expected to further boost value-added by \$112.926 thousand.

Total value-added in year 2, including all direct, supply-chain and consumption effects is estimated to increase by up to \$1,001.458 thousand. This represents a Type 2 Value-added multiplier of 1.878.

Impact Summary - Year 2

Impact Summary	Direct Effect	Supply-Chain Effect	Consumption Effect	Total Effect	Type 1 Multiplier	Type 2 Multiplier
Output (\$K)	\$1,583.500	\$926.892	\$187.139	\$2,697.532	1.585	1.704
Employment (Jobs)	4	2	0	6	1.500	1.500
Wages and Salaries (\$K)	\$300.352	\$202.259	\$35.563	\$538.174	1.673	1.792
Value-added (\$K)	\$533.307	\$355.225	\$112.926	\$1,001.458	1.666	1.878

Disclaimer

All figures, data and commentary presented in this report are based on data sourced from the Australia Bureau of Statistics (ABS), most of which relates to the 2016, 2011, 2006 and 2001 Censuses.

Using ABS datasets and an input / output methodology industrial economic data estimates for defined geographic regions are generated.

This report is provided in good faith with every effort made to provide accurate data and apply comprehensive knowledge. However, REMPLAN does not guarantee the accuracy of data nor the conclusions drawn from this information. A decision to pursue any action in any way related to the figures, data and commentary presented in this report is wholly the responsibility of the party concerned. REMPLAN advises any party to conduct detailed feasibility studies and seek professional advice before proceeding with any such action and accept no responsibility for the consequences of pursuing any such action.

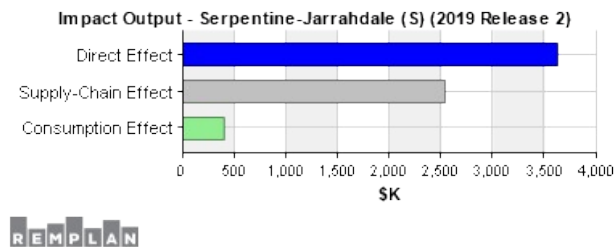


Impact Report for Serpentine-Jarrahdale (S)

Advanced Impact Scenario - Year 3

Industry Sector	Direct Change Jobs	Direct Change Output (\$K)	Direct Change Wages (\$K)
Non-Residential Building Construction		\$2,000.000	
Construction Services		\$1,215.000	
Information Media & Telecommunications		\$52.000	
Professional, Scientific & Technical Services		\$135.000	
Sports, Recreation & Gambling		\$220.000	

Impact on Output - Year 3



From a direct increase in output of \$3,622.000 thousand in year 3, it is estimated that the demand for intermediate goods and services would rise by \$2,536.065 thousand. This represents a Type 1 Output multiplier of 1.700. These supply-chain effects include multiple rounds of flow-on effects, as servicing sectors increase their own output and demand for local goods and services in response to the direct change to the economy.

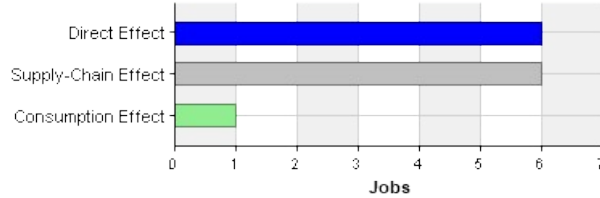
The increases in direct and indirect output would typically correspond to the creation of jobs in the economy. Corresponding to this change in employment would be an increase in the total of wages and salaries paid to employees. A proportion of these wages and salaries are typically spent on consumption and a proportion of this expenditure is captured in the local economy. The consumption effects under this scenario are estimated at \$400.016 thousand.

Total output in year 3, including all direct, supply-chain and consumption effects is estimated to increase by up to \$6,558.081 thousand. This represents a Type 2 Output multiplier of 1.811.



Impact on Employment Year 3

Impact Employment Total - Serpentine-Jarrahdale (\$) (2019 Release 2)



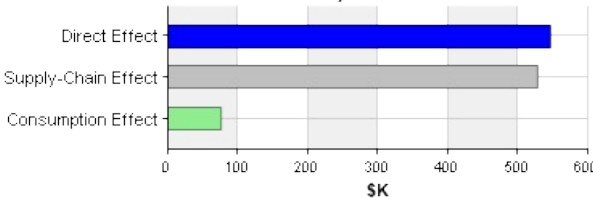
From a direct increase in output of \$3,622.000 thousand in year 3, the corresponding creation of direct jobs is estimated at 6 jobs. From this direct expansion in the economy, flow-on supply-chain effects in terms of local purchases of goods and services are anticipated, and it is estimated that these indirect impacts would result in the gain of a further 6 jobs. This represents a Type 1 Employment multiplier of 2.000.

The increase in direct and indirect output and the corresponding creation of jobs in the economy are expected to result in an increase in the wages and salaries paid to employees. A proportion of these wages and salaries are typically spent on consumption and a proportion of this expenditure is captured in the local economy. The consumption effects under this scenario are estimated to further boost employment by 1 job.

Total employment in year 3, including all direct, supply-chain and consumption effects is estimated to increase by up to 13 jobs. This represents a Type 2 Employment multiplier of 2.167.

Impact on Wages and Salaries - Year 3

Impact Wages and Salaries Total - Serpentine-Jarrahdale (\$) (2019 Release 2)



From a direct increase in output of \$3,622.000 thousand in year 3, it is estimated that direct wages and salaries would increase by \$546.007 thousand. From this direct expansion in the economy, flow-on supply-chain effects in terms of local purchases of goods and services are anticipated, and it is estimated that these indirect impacts would result in the gain of a further 6 jobs and a further increase in wages and salaries of \$528.340 thousand. This represents a Type 1 Wages and Salaries multiplier of 1.968.

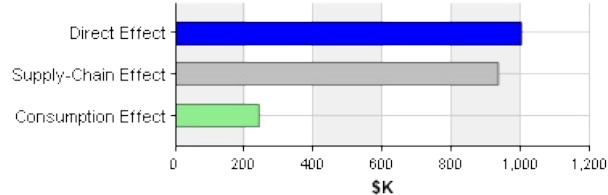
The increase in direct and indirect output and the corresponding creation of jobs in the economy are expected to result in an increase in the wages and salaries paid to employees. A proportion of these wages and salaries are typically spent on consumption and a proportion of this expenditure is captured in the local economy. The consumption effects under this scenario are expected to further boost employment in sectors such as retail therefore further increasing wages and salaries by \$76.018 thousand.

Total wages and salaries in year 3, including all direct, supply-chain and consumption effects is estimated to increase by up to \$1,150.364 thousand. This represents a Type 2 Wages and Salaries multiplier of 2.107.



Impact on Value-Added - Year 3

Impact Value-Added Total - Serpentine-Jarrahdale (S) (2019 Release 2)



From a direct increase in output of \$3,622.000 thousand in year 3, the corresponding increase in direct value-added is estimated at \$1,001.728 thousand. From this direct expansion in the economy, flow-on supply-chain effects in terms of local purchases of goods and services are anticipated, and it is estimated that these indirect impacts would result in a further increase to value-added of \$935.161 thousand. This represents a Type 1 Value-added multiplier of 1.934.

The increase in direct and indirect output and the corresponding boost to jobs in the economy are expected to result in an increase in the wages and salaries paid to employees. A proportion of these wages and salaries are typically spent on consumption and a proportion of this expenditure is captured in the local economy. The consumption effects under this scenario are expected to further boost value-added by \$241.384 thousand.

Total value-added in year 3, including all direct, supply-chain and consumption effects is estimated to increase by up to \$2,178.273 thousand. This represents a Type 2 Value-added multiplier of 2.175.

Impact Summary - Year 3

Impact Summary	Direct Effect	Supply-Chain Effect	Consumption Effect	Total Effect	Type 1 Multiplier	Type 2 Multiplier
Output (\$K)	\$3,622.000	\$2,536.065	\$400.016	\$6,558.081	1.700	1.811
Employment (Jobs)	6	6	1	13	2.000	2.167
Wages and Salaries (\$K)	\$546.007	\$528.340	\$76.018	\$1,150.364	1.968	2.107
Value-added (\$K)	\$1,001.728	\$935.161	\$241.384	\$2,178.273	1.934	2.175

Disclaimer

All figures, data and commentary presented in this report are based on data sourced from the Australia Bureau of Statistics (ABS), most of which relates to the 2016, 2011, 2006 and 2001 Censuses.

Using ABS datasets and an input / output methodology industrial economic data estimates for defined geographic regions are generated.

This report is provided in good faith with every effort made to provide accurate data and apply comprehensive knowledge. However, REMPLAN does not guarantee the accuracy of data nor the conclusions drawn from this information. A decision to pursue any action in any way related to the figures, data and commentary presented in this report is wholly the responsibility of the party concerned. REMPLAN advises any party to conduct detailed feasibility studies and seek professional advice before proceeding with any such action and accept no responsibility for the consequences of pursuing any such action.

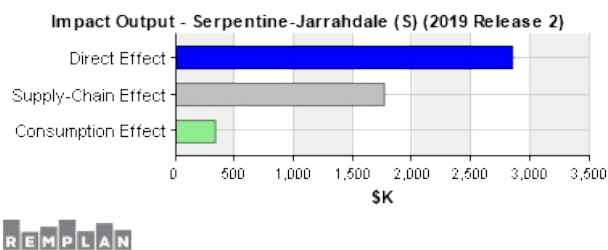


Impact Report for Serpentine-Jarrahdale (S)

Advanced Impact Scenario - Year 4

Industry Sector	Direct Change Jobs	Direct Change Output (\$K)	Direct Change Wages (\$K)
Construction Services		\$2,560.000	
Information Media & Telecommunications		\$42.000	
Professional, Scientific & Technical Services		\$25.000	
Sports, Recreation & Gambling		\$220.000	

Impact on Output - Year 4



From a direct increase in output of \$2,847.000 thousand in year 4, it is estimated that the demand for intermediate goods and services would rise by \$1,763.978 thousand. This represents a Type 1 Output multiplier of 1.620. These supply-chain effects include multiple rounds of flow-on effects, as servicing sectors increase their own output and demand for local goods and services in response to the direct change to the economy.

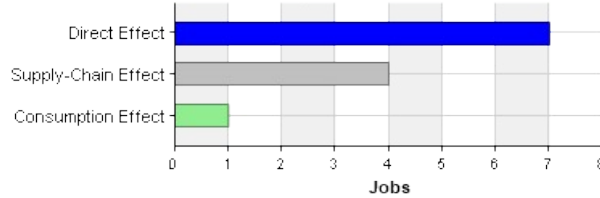
The increases in direct and indirect output would typically correspond to the creation of jobs in the economy. Corresponding to this change in employment would be an increase in the total of wages and salaries paid to employees. A proportion of these wages and salaries are typically spent on consumption and a proportion of this expenditure is captured in the local economy. The consumption effects under this scenario are estimated at \$334.253 thousand.

Total output in year 4, including all direct, supply-chain and consumption effects is estimated to increase by up to \$4,945.231 thousand. This represents a Type 2 Output multiplier of 1.737.



Impact on Employment Year 4

Impact Employment Total - Serpentine-Jarrahdale (\$) (2019 Release 2)



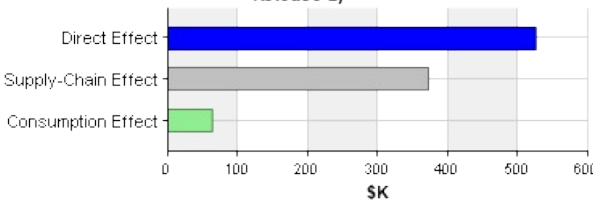
From a direct increase in output of \$2,847.000 thousand in year 4, the corresponding creation of direct jobs is estimated at 7 jobs. From this direct expansion in the economy, flow-on supply-chain effects in terms of local purchases of goods and services are anticipated, and it is estimated that these indirect impacts would result in the gain of a further 4 jobs. This represents a Type 1 Employment multiplier of 1.571.

The increase in direct and indirect output and the corresponding creation of jobs in the economy are expected to result in an increase in the wages and salaries paid to employees. A proportion of these wages and salaries are typically spent on consumption and a proportion of this expenditure is captured in the local economy. The consumption effects under this scenario are estimated to further boost employment by 1 job.

Total employment in year 4, including all direct, supply-chain and consumption effects is estimated to increase by up to 12 jobs. This represents a Type 2 Employment multiplier of 1.714.

Impact on Wages and Salaries - Year 4

Impact Wages and Salaries Total - Serpentine-Jarrahdale (\$) (2019 Release 2)



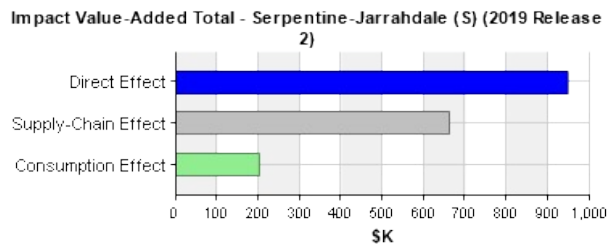
From a direct increase in output of \$2,847.000 thousand in year 4, it is estimated that direct wages and salaries would increase by \$525.485 thousand. From this direct expansion in the economy, flow-on supply-chain effects in terms of local purchases of goods and services are anticipated, and it is estimated that these indirect impacts would result in the gain of a further 4 jobs and a further increase in wages and salaries of \$372.238 thousand. This represents a Type 1 Wages and Salaries multiplier of 1.708.

The increase in direct and indirect output and the corresponding creation of jobs in the economy are expected to result in an increase in the wages and salaries paid to employees. A proportion of these wages and salaries are typically spent on consumption and a proportion of this expenditure is captured in the local economy. The consumption effects under this scenario are expected to further boost employment in sectors such as retail therefore further increasing wages and salaries by \$63.520 thousand.

Total wages and salaries in year 4, including all direct, supply-chain and consumption effects is estimated to increase by up to \$961.243 thousand. This represents a Type 2 Wages and Salaries multiplier of 1.829.



Impact on Value-Added - Year 4



From a direct increase in output of \$2,847.000 thousand in year 4, the corresponding increase in direct value-added is estimated at \$947.393 thousand. From this direct expansion in the economy, flow-on supply-chain effects in terms of local purchases of goods and services are anticipated, and it is estimated that these indirect impacts would result in a further increase to value-added of \$661.224 thousand. This represents a Type 1 Value-added multiplier of 1.698.

The increase in direct and indirect output and the corresponding boost to jobs in the economy are expected to result in an increase in the wages and salaries paid to employees. A proportion of these wages and salaries are typically spent on consumption and a proportion of this expenditure is captured in the local economy. The consumption effects under this scenario are expected to further boost value-added by \$201.700 thousand.

Total value-added in year 4, including all direct, supply-chain and consumption effects is estimated to increase by up to \$1,810.317 thousand. This represents a Type 2 Value-added multiplier of 1.911.

Impact Summary - Year 4

Impact Summary	Direct Effect	Supply-Chain Effect	Consumption Effect	Total Effect	Type 1 Multiplier	Type 2 Multiplier
Output (\$K)	\$2,847.000	\$1,763.978	\$334.253	\$4,945.231	1.620	1.737
Employment (Jobs)	7	4	1	12	1.571	1.714
Wages and Salaries (\$K)	\$525.485	\$372.238	\$63.520	\$961.243	1.708	1.829
Value-added (\$K)	\$947.393	\$661.224	\$201.700	\$1,810.317	1.698	1.911

Disclaimer

All figures, data and commentary presented in this report are based on data sourced from the Australia Bureau of Statistics (ABS), most of which relates to the 2016, 2011, 2006 and 2001 Censuses.

Using ABS datasets and an input / output methodology industrial economic data estimates for defined geographic regions are generated.

This report is provided in good faith with every effort made to provide accurate data and apply comprehensive knowledge. However, REMPLAN does not guarantee the accuracy of data nor the conclusions drawn from this information. A decision to pursue any action in any way related to the figures, data and commentary presented in this report is wholly the responsibility of the party concerned. REMPLAN advises any party to conduct detailed feasibility studies and seek professional advice before proceeding with any such action and accept no responsibility for the consequences of pursuing any such action.

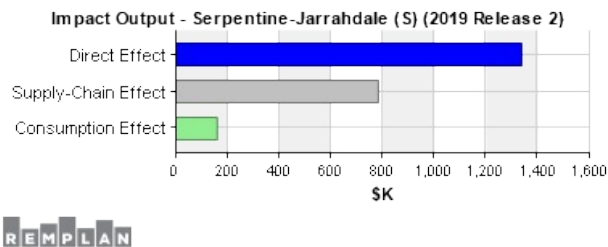


Impact Report for Serpentine-Jarrahdale (S)

Advanced Impact Scenario - Year 5

Industry Sector	Direct Change Jobs	Direct Change Output (\$K)	Direct Change Wages (\$K)
Construction Services		\$1,025.000	
Information Media & Telecommunications		\$42.000	
Professional, Scientific & Technical Services		\$50.000	
Sports, Recreation & Gambling		\$220.000	

Impact on Output - Year 5



From a direct increase in output of \$1,337.000 thousand in year 5, it is estimated that the demand for intermediate goods and services would rise by \$783.159 thousand. This represents a Type 1 Output multiplier of 1.586. These supply-chain effects include multiple rounds of flow-on effects, as servicing sectors increase their own output and demand for local goods and services in response to the direct change to the economy.

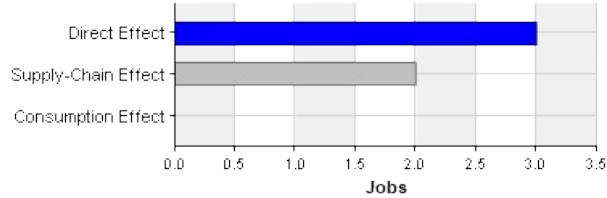
The increases in direct and indirect output would typically correspond to the creation of jobs in the economy. Corresponding to this change in employment would be an increase in the total of wages and salaries paid to employees. A proportion of these wages and salaries are typically spent on consumption and a proportion of this expenditure is captured in the local economy. The consumption effects under this scenario are estimated at \$160.111 thousand.

Total output in year 5, including all direct, supply-chain and consumption effects is estimated to increase by up to \$2,280.270 thousand. This represents a Type 2 Output multiplier of 1.706.



Impact on Employment Year 5

Impact Employment Total - Serpentine-Jarrahdale (\$) (2019 Release 2)



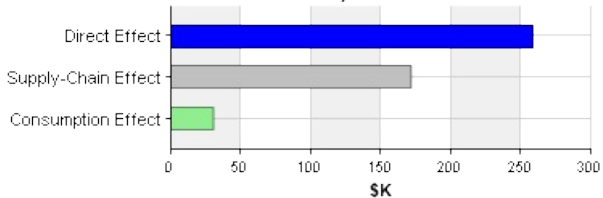
From a direct increase in output of \$1,337,000 thousand in year 5, the corresponding creation of direct jobs is estimated at 3 jobs. From this direct expansion in the economy, flow-on supply-chain effects in terms of local purchases of goods and services are anticipated, and it is estimated that these indirect impacts would result in the gain of a further 2 jobs. This represents a Type 1 Employment multiplier of 1.667.

The increase in direct and indirect output and the corresponding creation of jobs in the economy are expected to result in an increase in the wages and salaries paid to employees. A proportion of these wages and salaries are typically spent on consumption and a proportion of this expenditure is captured in the local economy. The consumption effects under this scenario are estimated to further boost employment by 0 jobs.

Total employment in year 5, including all direct, supply-chain and consumption effects is estimated to increase by up to 5 jobs. This represents a Type 2 Employment multiplier of 1.667.

Impact on Wages and Salaries - Year 5

Impact Wages and Salaries Total - Serpentine-Jarrahdale (\$) (2019 Release 2)



From a direct increase in output of \$1,337,000 thousand in year 5, it is estimated that direct wages and salaries would increase by \$258,539 thousand. From this direct expansion in the economy, flow-on supply-chain effects in terms of local purchases of goods and services are anticipated, and it is estimated that these indirect impacts would result in the gain of a further 2 jobs and a further increase in wages and salaries of \$171,481 thousand. This represents a Type 1 Wages and Salaries multiplier of 1.663.

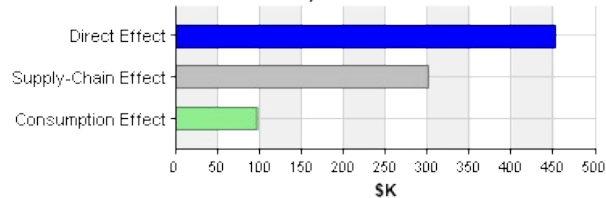
The increase in direct and indirect output and the corresponding creation of jobs in the economy are expected to result in an increase in the wages and salaries paid to employees. A proportion of these wages and salaries are typically spent on consumption and a proportion of this expenditure is captured in the local economy. The consumption effects under this scenario are expected to further boost employment in sectors such as retail therefore further increasing wages and salaries by \$30,427 thousand.

Total wages and salaries in year 5, including all direct, supply-chain and consumption effects is estimated to increase by up to \$460,447 thousand. This represents a Type 2 Wages and Salaries multiplier of 1.781.



Impact on Value-Added - Year 5

Impact Value-Added Total - Serpentine-Jarrahdale (S) (2019 Release 2)



From a direct increase in output of \$1,337.000 thousand in year 5, the corresponding increase in direct value-added is estimated at \$451.785 thousand. From this direct expansion in the economy, flow-on supply-chain effects in terms of local purchases of goods and services are anticipated, and it is estimated that these indirect impacts would result in a further increase to value-added of \$300.355 thousand. This represents a Type 1 Value-added multiplier of 1.665.

The increase in direct and indirect output and the corresponding boost to jobs in the economy are expected to result in an increase in the wages and salaries paid to employees. A proportion of these wages and salaries are typically spent on consumption and a proportion of this expenditure is captured in the local economy. The consumption effects under this scenario are expected to further boost value-added by \$96.617 thousand.

Total value-added in year 5, including all direct, supply-chain and consumption effects is estimated to increase by up to \$848.757 thousand. This represents a Type 2 Value-added multiplier of 1.879.

Impact Summary - Year 5

Impact Summary	Direct Effect	Supply-Chain Effect	Consumption Effect	Total Effect	Type 1 Multiplier	Type 2 Multiplier
Output (\$K)	\$1,337.000	\$783.159	\$160.111	\$2,280.270	1.586	1.706
Employment (Jobs)	3	2	0	5	1.667	1.667
Wages and Salaries (\$K)	\$258.539	\$171.481	\$30.427	\$460.447	1.663	1.781
Value-added (\$K)	\$451.785	\$300.355	\$96.617	\$848.757	1.665	1.879

Disclaimer

All figures, data and commentary presented in this report are based on data sourced from the Australia Bureau of Statistics (ABS), most of which relates to the 2016, 2011, 2006 and 2001 Censuses.

Using ABS datasets and an input / output methodology industrial economic data estimates for defined geographic regions are generated.

This report is provided in good faith with every effort made to provide accurate data and apply comprehensive knowledge. However, REMPLAN does not guarantee the accuracy of data nor the conclusions drawn from this information. A decision to pursue any action in any way related to the figures, data and commentary presented in this report is wholly the responsibility of the party concerned. REMPLAN advises any party to conduct detailed feasibility studies and seek professional advice before proceeding with any such action and accept no responsibility for the consequences of pursuing any such action.

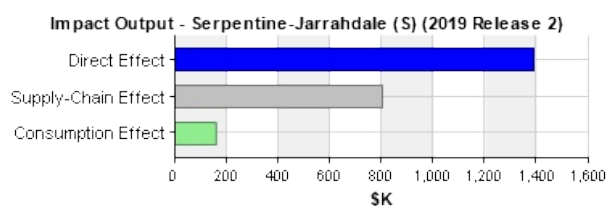


Impact Report for Serpentine-Jarrahdale (S)

Advanced Impact Scenario - Year 6

Industry Sector	Direct Change Jobs	Direct Change Output (\$K)	Direct Change Wages (\$K)
Construction Services		\$1,025.000	
Information Media & Telecommunications		\$143.000	
Sports, Recreation & Gambling		\$220.000	

Impact on Output - Year 6



From a direct increase in output of \$1,388.000 thousand in year 6, it is estimated that the demand for intermediate goods and services would rise by \$802.446 thousand. This represents a Type 1 Output multiplier of 1.578. These supply-chain effects include multiple rounds of flow-on effects, as servicing sectors increase their own output and demand for local goods and services in response to the direct change to the economy.

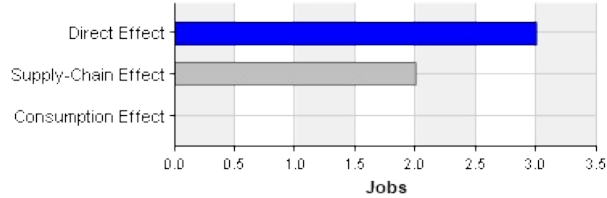
The increases in direct and indirect output would typically correspond to the creation of jobs in the economy. Corresponding to this change in employment would be an increase in the total of wages and salaries paid to employees. A proportion of these wages and salaries are typically spent on consumption and a proportion of this expenditure is captured in the local economy. The consumption effects under this scenario are estimated at \$160.106 thousand.

Total output in year 6, including all direct, supply-chain and consumption effects is estimated to increase by up to \$2,350.553 thousand. This represents a Type 2 Output multiplier of 1.693.



Impact on Employment Year 6

Impact Employment Total - Serpentine-Jarrahdale (\$) (2019 Release 2)



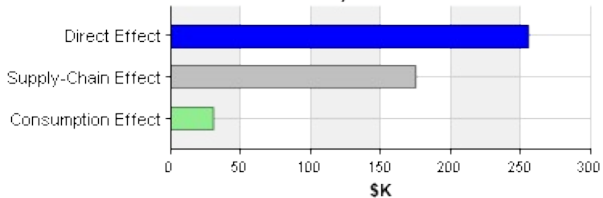
From a direct increase in output of \$1,388,000 thousand in year 6, the corresponding creation of direct jobs is estimated at 3 jobs. From this direct expansion in the economy, flow-on supply-chain effects in terms of local purchases of goods and services are anticipated, and it is estimated that these indirect impacts would result in the gain of a further 2 jobs. This represents a Type 1 Employment multiplier of 1.667.

The increase in direct and indirect output and the corresponding creation of jobs in the economy are expected to result in an increase in the wages and salaries paid to employees. A proportion of these wages and salaries are typically spent on consumption and a proportion of this expenditure is captured in the local economy. The consumption effects under this scenario are estimated to further boost employment by 0 jobs.

Total employment in year 6, including all direct, supply-chain and consumption effects is estimated to increase by up to 5 jobs. This represents a Type 2 Employment multiplier of 1.667.

Impact on Wages and Salaries - Year 6

Impact Wages and Salaries Total - Serpentine-Jarrahdale (\$) (2019 Release 2)



From a direct increase in output of \$1,388,000 thousand in year 6, it is estimated that direct wages and salaries would increase by \$255,231 thousand. From this direct expansion in the economy, flow-on supply-chain effects in terms of local purchases of goods and services are anticipated, and it is estimated that these indirect impacts would result in the gain of a further 2 jobs and a further increase in wages and salaries of \$174,776 thousand. This represents a Type 1 Wages and Salaries multiplier of 1.685.

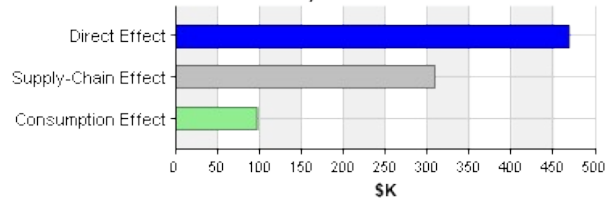
The increase in direct and indirect output and the corresponding creation of jobs in the economy are expected to result in an increase in the wages and salaries paid to employees. A proportion of these wages and salaries are typically spent on consumption and a proportion of this expenditure is captured in the local economy. The consumption effects under this scenario are expected to further boost employment in sectors such as retail therefore further increasing wages and salaries by \$30,426 thousand.

Total wages and salaries in year 6, including all direct, supply-chain and consumption effects is estimated to increase by up to \$460,433 thousand. This represents a Type 2 Wages and Salaries multiplier of 1.804.



Impact on Value-Added - Year 6

Impact Value-Added Total - Serpentine-Jarrahdale (S) (2019 Release 2)



From a direct increase in output of \$1,388.000 thousand in year 6, the corresponding increase in direct value-added is estimated at \$467.861 thousand. From this direct expansion in the economy, flow-on supply-chain effects in terms of local purchases of goods and services are anticipated, and it is estimated that these indirect impacts would result in a further increase to value-added of \$308.253 thousand. This represents a Type 1 Value-added multiplier of 1.659.

The increase in direct and indirect output and the corresponding boost to jobs in the economy are expected to result in an increase in the wages and salaries paid to employees. A proportion of these wages and salaries are typically spent on consumption and a proportion of this expenditure is captured in the local economy. The consumption effects under this scenario are expected to further boost value-added by \$96.614 thousand.

Total value-added in year 6, including all direct, supply-chain and consumption effects is estimated to increase by up to \$872.728 thousand. This represents a Type 2 Value-added multiplier of 1.865.

Impact Summary - Year 6

Impact Summary	Direct Effect	Supply-Chain Effect	Consumption Effect	Total Effect	Type 1 Multiplier	Type 2 Multiplier
Output (\$K)	\$1,388.000	\$802.446	\$160.106	\$2,350.553	1.578	1.693
Employment (Jobs)	3	2	0	5	1.667	1.667
Wages and Salaries (\$K)	\$255.231	\$174.776	\$30.426	\$460.433	1.685	1.804
Value-added (\$K)	\$467.861	\$308.253	\$96.614	\$872.728	1.659	1.865

Disclaimer

All figures, data and commentary presented in this report are based on data sourced from the Australia Bureau of Statistics (ABS), most of which relates to the 2016, 2011, 2006 and 2001 Censuses.

Using ABS datasets and an input / output methodology industrial economic data estimates for defined geographic regions are generated.

This report is provided in good faith with every effort made to provide accurate data and apply comprehensive knowledge. However, REMPLAN does not guarantee the accuracy of data nor the conclusions drawn from this information. A decision to pursue any action in any way related to the figures, data and commentary presented in this report is wholly the responsibility of the party concerned. REMPLAN advises any party to conduct detailed feasibility studies and seek professional advice before proceeding with any such action and accept no responsibility for the consequences of pursuing any such action.

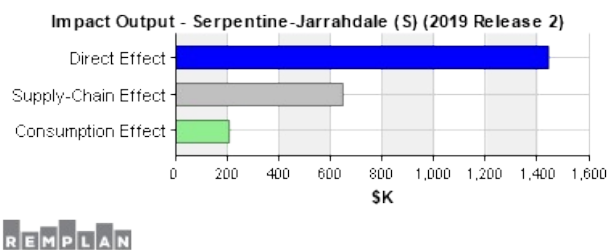


Impact Report for Serpentine-Jarrahdale (S)

Advanced Impact Scenario - Year 7

Industry Sector	Direct Change Jobs	Direct Change Output (\$K)	Direct Change Wages (\$K)
Construction Services		\$415.000	
Information Media & Telecommunications		\$81.000	
Professional, Scientific & Technical Services		\$700.000	
Sports, Recreation & Gambling		\$245.000	

Impact on Output - Year 7



From a direct increase in output of \$1,441.000 thousand in year 7, it is estimated that the demand for intermediate goods and services would rise by \$646.290 thousand. This represents a Type 1 Output multiplier of 1.449. These supply-chain effects include multiple rounds of flow-on effects, as servicing sectors increase their own output and demand for local goods and services in response to the direct change to the economy.

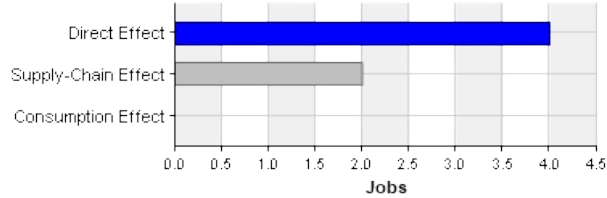
The increases in direct and indirect output would typically correspond to the creation of jobs in the economy. Corresponding to this change in employment would be an increase in the total of wages and salaries paid to employees. A proportion of these wages and salaries are typically spent on consumption and a proportion of this expenditure is captured in the local economy. The consumption effects under this scenario are estimated at \$206.189 thousand.

Total output in year 7, including all direct, supply-chain and consumption effects is estimated to increase by up to \$2,293.479 thousand. This represents a Type 2 Output multiplier of 1.592.



Impact on Employment Year 7

Impact Employment Total - Serpentine-Jarrahdale (\$) (2019 Release 2)



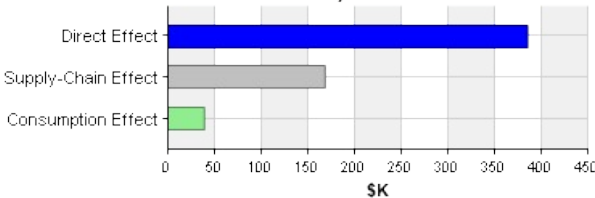
From a direct increase in output of \$1,441.000 thousand in year 7, the corresponding creation of direct jobs is estimated at 4 jobs. From this direct expansion in the economy, flow-on supply-chain effects in terms of local purchases of goods and services are anticipated, and it is estimated that these indirect impacts would result in the gain of a further 2 jobs. This represents a Type 1 Employment multiplier of 1.500.

The increase in direct and indirect output and the corresponding creation of jobs in the economy are expected to result in an increase in the wages and salaries paid to employees. A proportion of these wages and salaries are typically spent on consumption and a proportion of this expenditure is captured in the local economy. The consumption effects under this scenario are estimated to further boost employment by 0 jobs.

Total employment in year 7, including all direct, supply-chain and consumption effects is estimated to increase by up to 6 jobs. This represents a Type 2 Employment multiplier of 1.500.

Impact on Wages and Salaries - Year 7

Impact Wages and Salaries Total - Serpentine-Jarrahdale (\$) (2019 Release 2)



From a direct increase in output of \$1,441.000 thousand in year 7, it is estimated that direct wages and salaries would increase by \$385.238 thousand. From this direct expansion in the economy, flow-on supply-chain effects in terms of local purchases of goods and services are anticipated, and it is estimated that these indirect impacts would result in the gain of a further 2 jobs and a further increase in wages and salaries of \$168.536 thousand. This represents a Type 1 Wages and Salaries multiplier of 1.437.

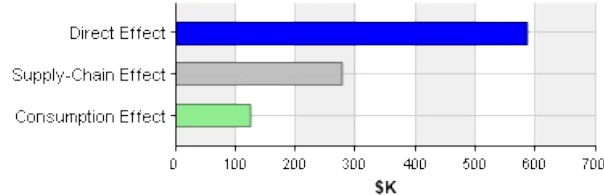
The increase in direct and indirect output and the corresponding creation of jobs in the economy are expected to result in an increase in the wages and salaries paid to employees. A proportion of these wages and salaries are typically spent on consumption and a proportion of this expenditure is captured in the local economy. The consumption effects under this scenario are expected to further boost employment in sectors such as retail therefore further increasing wages and salaries by \$39.183 thousand.

Total wages and salaries in year 7, including all direct, supply-chain and consumption effects is estimated to increase by up to \$592.957 thousand. This represents a Type 2 Wages and Salaries multiplier of 1.539.



Impact on Value-Added - Year 7

Impact Value-Added Total - Serpentine-Jarrahdale (S) (2019 Release 2)



From a direct increase in output of \$1,441.000 thousand in year 7, the corresponding increase in direct value-added is estimated at \$585.647 thousand. From this direct expansion in the economy, flow-on supply-chain effects in terms of local purchases of goods and services are anticipated, and it is estimated that these indirect impacts would result in a further increase to value-added of \$277.073 thousand. This represents a Type 1 Value-added multiplier of 1.473.

The increase in direct and indirect output and the corresponding boost to jobs in the economy are expected to result in an increase in the wages and salaries paid to employees. A proportion of these wages and salaries are typically spent on consumption and a proportion of this expenditure is captured in the local economy. The consumption effects under this scenario are expected to further boost value-added by \$124.422 thousand.

Total value-added in year 7, including all direct, supply-chain and consumption effects is estimated to increase by up to \$987.142 thousand. This represents a Type 2 Value-added multiplier of 1.686.

Impact Summary - Year 7

Impact Summary	Direct Effect	Supply-Chain Effect	Consumption Effect	Total Effect	Type 1 Multiplier	Type 2 Multiplier
Output (\$K)	\$1,441.000	\$646.290	\$206.189	\$2,293.479	1.449	1.592
Employment (Jobs)	4	2	0	6	1.500	1.500
Wages and Salaries (\$K)	\$385.238	\$168.536	\$39.183	\$592.957	1.437	1.539
Value-added (\$K)	\$585.647	\$277.073	\$124.422	\$987.142	1.473	1.686

Disclaimer

All figures, data and commentary presented in this report are based on data sourced from the Australia Bureau of Statistics (ABS), most of which relates to the 2016, 2011, 2006 and 2001 Censuses.

Using ABS datasets and an input / output methodology industrial economic data estimates for defined geographic regions are generated.

This report is provided in good faith with every effort made to provide accurate data and apply comprehensive knowledge. However, REMPLAN does not guarantee the accuracy of data nor the conclusions drawn from this information. A decision to pursue any action in any way related to the figures, data and commentary presented in this report is wholly the responsibility of the party concerned. REMPLAN advises any party to conduct detailed feasibility studies and seek professional advice before proceeding with any such action and accept no responsibility for the consequences of pursuing any such action.

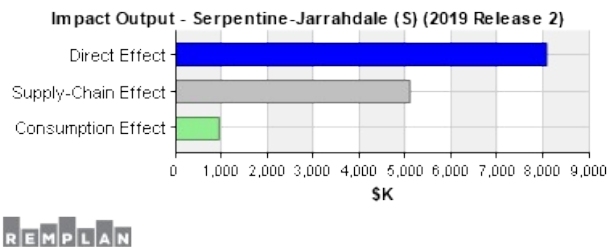


Impact Report for Serpentine-Jarrahdale (S)

Advanced Impact Scenario - Year 8

Industry Sector	Direct Change Jobs	Direct Change Output (\$K)	Direct Change Wages (\$K)
Construction Services		\$7,625.000	
Information Media & Telecommunications		\$81.000	
Professional, Scientific & Technical Services		\$10.000	
Sports, Recreation & Gambling		\$350.000	

Impact on Output - Year 8



From a direct increase in output of \$8,066.000 thousand in year 8, it is estimated that the demand for intermediate goods and services would rise by \$5,091.362 thousand. This represents a Type 1 Output multiplier of 1.631. These supply-chain effects include multiple rounds of flow-on effects, as servicing sectors increase their own output and demand for local goods and services in response to the direct change to the economy.

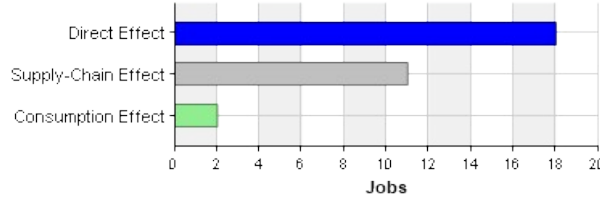
The increases in direct and indirect output would typically correspond to the creation of jobs in the economy. Corresponding to this change in employment would be an increase in the total of wages and salaries paid to employees. A proportion of these wages and salaries are typically spent on consumption and a proportion of this expenditure is captured in the local economy. The consumption effects under this scenario are estimated at \$940.722 thousand.

Total output in year 8, including all direct, supply-chain and consumption effects is estimated to increase by up to \$14,098.084 thousand. This represents a Type 2 Output multiplier of 1.748.



Impact on Employment Year 8

Impact Employment Total - Serpentine-Jarrahdale (\$) (2019 Release 2)



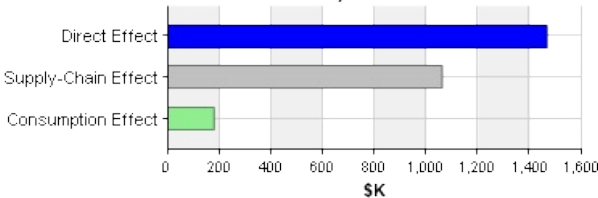
From a direct increase in output of \$8,066.000 thousand in year 8, the corresponding creation of direct jobs is estimated at 18 jobs. From this direct expansion in the economy, flow-on supply-chain effects in terms of local purchases of goods and services are anticipated, and it is estimated that these indirect impacts would result in the gain of a further 11 jobs. This represents a Type 1 Employment multiplier of 1.611.

The increase in direct and indirect output and the corresponding creation of jobs in the economy are expected to result in an increase in the wages and salaries paid to employees. A proportion of these wages and salaries are typically spent on consumption and a proportion of this expenditure is captured in the local economy. The consumption effects under this scenario are estimated to further boost employment by 2 jobs.

Total employment in year 8, including all direct, supply-chain and consumption effects is estimated to increase by up to 31 jobs. This represents a Type 2 Employment multiplier of 1.722.

Impact on Wages and Salaries - Year 8

Impact Wages and Salaries Total - Serpentine-Jarrahdale (\$) (2019 Release 2)



From a direct increase in output of \$8,066.000 thousand in year 8, it is estimated that direct wages and salaries would increase by \$1,465.446 thousand. From this direct expansion in the economy, flow-on supply-chain effects in terms of local purchases of goods and services are anticipated, and it is estimated that these indirect impacts would result in the gain of a further 11 jobs and a further increase in wages and salaries of \$1,061.108 thousand. This represents a Type 1 Wages and Salaries multiplier of 1.724.

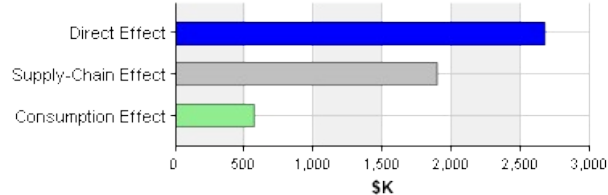
The increase in direct and indirect output and the corresponding creation of jobs in the economy are expected to result in an increase in the wages and salaries paid to employees. A proportion of these wages and salaries are typically spent on consumption and a proportion of this expenditure is captured in the local economy. The consumption effects under this scenario are expected to further boost employment in sectors such as retail therefore further increasing wages and salaries by \$178.771 thousand.

Total wages and salaries in year 8, including all direct, supply-chain and consumption effects is estimated to increase by up to \$2,705.326 thousand. This represents a Type 2 Wages and Salaries multiplier of 1.846.



Impact on Value-Added - Year 8

Impact Value-Added Total - Serpentine-Jarrahdale (\$) (2019 Release 2)



From a direct increase in output of \$8,066.000 thousand in year 8, the corresponding increase in direct value-added is estimated at \$2,673.245 thousand. From this direct expansion in the economy, flow-on supply-chain effects in terms of local purchases of goods and services are anticipated, and it is estimated that these indirect impacts would result in a further increase to value-added of \$1,894.157 thousand. This represents a Type 1 Value-added multiplier of 1.709.

The increase in direct and indirect output and the corresponding boost to jobs in the economy are expected to result in an increase in the wages and salaries paid to employees. A proportion of these wages and salaries are typically spent on consumption and a proportion of this expenditure is captured in the local economy. The consumption effects under this scenario are expected to further boost value-added by \$567.666 thousand.

Total value-added in year 8, including all direct, supply-chain and consumption effects is estimated to increase by up to \$5,135.068 thousand. This represents a Type 2 Value-added multiplier of 1.921.

Impact Summary - Year 8

Impact Summary	Direct Effect	Supply-Chain Effect	Consumption Effect	Total Effect	Type 1 Multiplier	Type 2 Multiplier
Output (\$K)	\$8,066.000	\$5,091.362	\$940.722	\$14,098.084	1.631	1.748
Employment (Jobs)	18	11	2	31	1.611	1.722
Wages and Salaries (\$K)	\$1,465.446	\$1,061.108	\$178.771	\$2,705.326	1.724	1.846
Value-added (\$K)	\$2,673.245	\$1,894.157	\$567.666	\$5,135.068	1.709	1.921

Disclaimer

All figures, data and commentary presented in this report are based on data sourced from the Australia Bureau of Statistics (ABS), most of which relates to the 2016, 2011, 2006 and 2001 Censuses.

Using ABS datasets and an input / output methodology industrial economic data estimates for defined geographic regions are generated.

This report is provided in good faith with every effort made to provide accurate data and apply comprehensive knowledge. However, REMPLAN does not guarantee the accuracy of data nor the conclusions drawn from this information. A decision to pursue any action in any way related to the figures, data and commentary presented in this report is wholly the responsibility of the party concerned. REMPLAN advises any party to conduct detailed feasibility studies and seek professional advice before proceeding with any such action and accept no responsibility for the consequences of pursuing any such action.

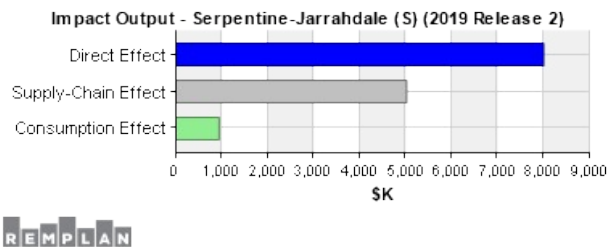


Impact Report for Serpentine-Jarrahdale (S)

Advanced Impact Scenario - Year 9

Industry Sector	Direct Change Jobs	Direct Change Output (\$K)	Direct Change Wages (\$K)
Construction Services		\$7,454.000	
Information Media & Telecommunications		\$81.000	
Professional, Scientific & Technical Services		\$150.000	
Sports, Recreation & Gambling		\$315.000	

Impact on Output - Year 9



From a direct increase in output of \$8,000.000 thousand in year 9, it is estimated that the demand for intermediate goods and services would rise by \$5,016.919 thousand. This represents a Type 1 Output multiplier of 1.627. These supply-chain effects include multiple rounds of flow-on effects, as servicing sectors increase their own output and demand for local goods and services in response to the direct change to the economy.

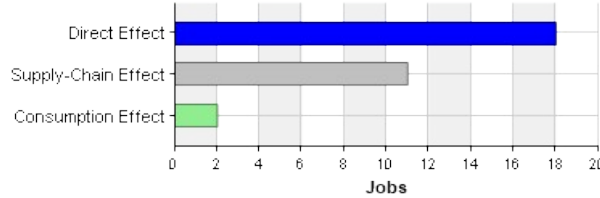
The increases in direct and indirect output would typically correspond to the creation of jobs in the economy. Corresponding to this change in employment would be an increase in the total of wages and salaries paid to employees. A proportion of these wages and salaries are typically spent on consumption and a proportion of this expenditure is captured in the local economy. The consumption effects under this scenario are estimated at \$940.019 thousand.

Total output in year 9, including all direct, supply-chain and consumption effects is estimated to increase by up to \$13,956.938 thousand. This represents a Type 2 Output multiplier of 1.745.



Impact on Employment Year 9

Impact Employment Total - Serpentine-Jarrahdale (\$) (2019 Release 2)



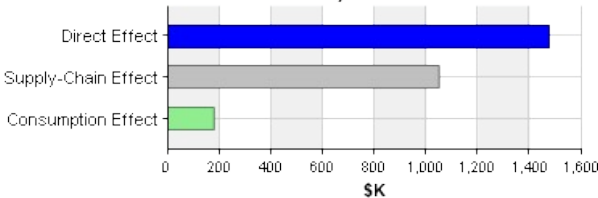
From a direct increase in output of \$8,000,000 thousand in year 9, the corresponding creation of direct jobs is estimated at 18 jobs. From this direct expansion in the economy, flow-on supply-chain effects in terms of local purchases of goods and services are anticipated, and it is estimated that these indirect impacts would result in the gain of a further 11 jobs. This represents a Type 1 Employment multiplier of 1.611.

The increase in direct and indirect output and the corresponding creation of jobs in the economy are expected to result in an increase in the wages and salaries paid to employees. A proportion of these wages and salaries are typically spent on consumption and a proportion of this expenditure is captured in the local economy. The consumption effects under this scenario are estimated to further boost employment by 2 jobs.

Total employment in year 9, including all direct, supply-chain and consumption effects is estimated to increase by up to 31 jobs. This represents a Type 2 Employment multiplier of 1.722.

Impact on Wages and Salaries - Year 9

Impact Wages and Salaries Total - Serpentine-Jarrahdale (\$) (2019 Release 2)



From a direct increase in output of \$8,000,000 thousand in year 9, it is estimated that direct wages and salaries would increase by \$1,475.027 thousand. From this direct expansion in the economy, flow-on supply-chain effects in terms of local purchases of goods and services are anticipated, and it is estimated that these indirect impacts would result in the gain of a further 11 jobs and a further increase in wages and salaries of \$1,049.639 thousand. This represents a Type 1 Wages and Salaries multiplier of 1.712.

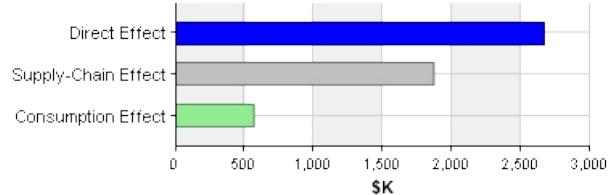
The increase in direct and indirect output and the corresponding creation of jobs in the economy are expected to result in an increase in the wages and salaries paid to employees. A proportion of these wages and salaries are typically spent on consumption and a proportion of this expenditure is captured in the local economy. The consumption effects under this scenario are expected to further boost employment in sectors such as retail therefore further increasing wages and salaries by \$178.638 thousand.

Total wages and salaries in year 9, including all direct, supply-chain and consumption effects is estimated to increase by up to \$2,703.303 thousand. This represents a Type 2 Wages and Salaries multiplier of 1.833.



Impact on Value-Added - Year 9

Impact Value-Added Total - Serpentine-Jarrahdale (\$) (2019 Release 2)



From a direct increase in output of \$8,000.000 thousand in year 9, the corresponding increase in direct value-added is estimated at \$2,672.395 thousand. From this direct expansion in the economy, flow-on supply-chain effects in terms of local purchases of goods and services are anticipated, and it is estimated that these indirect impacts would result in a further increase to value-added of \$1,870.793 thousand. This represents a Type 1 Value-added multiplier of 1.700.

The increase in direct and indirect output and the corresponding boost to jobs in the economy are expected to result in an increase in the wages and salaries paid to employees. A proportion of these wages and salaries are typically spent on consumption and a proportion of this expenditure is captured in the local economy. The consumption effects under this scenario are expected to further boost value-added by \$567.241 thousand.

Total value-added in year 9, including all direct, supply-chain and consumption effects is estimated to increase by up to \$5,110.429 thousand. This represents a Type 2 Value-added multiplier of 1.912.

Impact Summary - Year 9

Impact Summary	Direct Effect	Supply-Chain Effect	Consumption Effect	Total Effect	Type 1 Multiplier	Type 2 Multiplier
Output (\$K)	\$8,000.000	\$5,016.919	\$940.019	\$13,956.938	1.627	1.745
Employment (Jobs)	18	11	2	31	1.611	1.722
Wages and Salaries (\$K)	\$1,475.027	\$1,049.639	\$178.638	\$2,703.303	1.712	1.833
Value-added (\$K)	\$2,672.395	\$1,870.793	\$567.241	\$5,110.429	1.700	1.912

Disclaimer

All figures, data and commentary presented in this report are based on data sourced from the Australia Bureau of Statistics (ABS), most of which relates to the 2016, 2011, 2006 and 2001 Censuses.

Using ABS datasets and an input / output methodology industrial economic data estimates for defined geographic regions are generated.

This report is provided in good faith with every effort made to provide accurate data and apply comprehensive knowledge. However, REMPLAN does not guarantee the accuracy of data nor the conclusions drawn from this information. A decision to pursue any action in any way related to the figures, data and commentary presented in this report is wholly the responsibility of the party concerned. REMPLAN advises any party to conduct detailed feasibility studies and seek professional advice before proceeding with any such action and accept no responsibility for the consequences of pursuing any such action.

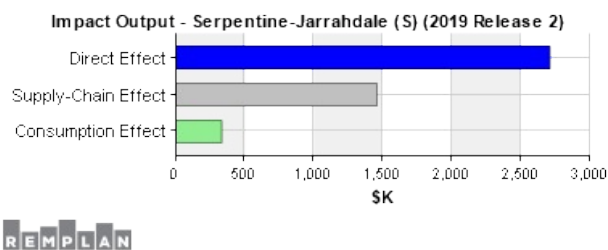


Impact Report for Serpentine-Jarrahdale (S)

Advanced Impact Scenario - Year 10

Industry Sector	Direct Change Jobs	Direct Change Output (\$K)	Direct Change Wages (\$K)
Construction Services		\$1,520.000	
Information Media & Telecommunications		\$61.000	
Professional, Scientific & Technical Services		\$30.000	
Sports, Recreation & Gambling		\$1,100.000	

Impact on Output - Year 10



From a direct increase in output of \$2,711.000 thousand in year 10, it is estimated that the demand for intermediate goods and services would rise by \$1,458.047 thousand. This represents a Type 1 Output multiplier of 1.538. These supply-chain effects include multiple rounds of flow-on effects, as servicing sectors increase their own output and demand for local goods and services in response to the direct change to the economy.

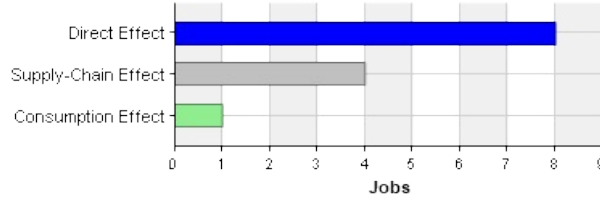
The increases in direct and indirect output would typically correspond to the creation of jobs in the economy. Corresponding to this change in employment would be an increase in the total of wages and salaries paid to employees. A proportion of these wages and salaries are typically spent on consumption and a proportion of this expenditure is captured in the local economy. The consumption effects under this scenario are estimated at \$331.720 thousand.

Total output in year 10, including all direct, supply-chain and consumption effects is estimated to increase by up to \$4,500.768 thousand. This represents a Type 2 Output multiplier of 1.660.



Impact on Employment Year 10

Impact Employment Total - Serpentine-Jarrahdale (\$) (2019 Release 2)



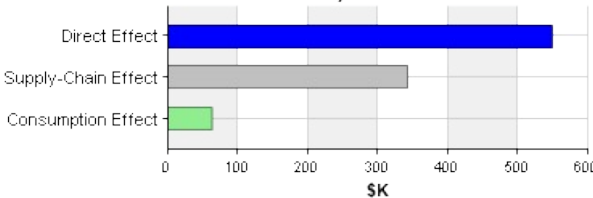
From a direct increase in output of \$2,711.000 thousand in year 10, the corresponding creation of direct jobs is estimated at 8 jobs. From this direct expansion in the economy, flow-on supply-chain effects in terms of local purchases of goods and services are anticipated, and it is estimated that these indirect impacts would result in the gain of a further 4 jobs. This represents a Type 1 Employment multiplier of 1.500.

The increase in direct and indirect output and the corresponding creation of jobs in the economy are expected to result in an increase in the wages and salaries paid to employees. A proportion of these wages and salaries are typically spent on consumption and a proportion of this expenditure is captured in the local economy. The consumption effects under this scenario are estimated to further boost employment by 1 job.

Total employment in year 10, including all direct, supply-chain and consumption effects is estimated to increase by up to 13 jobs. This represents a Type 2 Employment multiplier of 1.625.

Impact on Wages and Salaries - Year 10

Impact Wages and Salaries Total - Serpentine-Jarrahdale (\$) (2019 Release 2)



From a direct increase in output of \$2,711.000 thousand in year 10, it is estimated that direct wages and salaries would increase by \$548.645 thousand. From this direct expansion in the economy, flow-on supply-chain effects in terms of local purchases of goods and services are anticipated, and it is estimated that these indirect impacts would result in the gain of a further 4 jobs and a further increase in wages and salaries of \$342.276 thousand. This represents a Type 1 Wages and Salaries multiplier of 1.624.

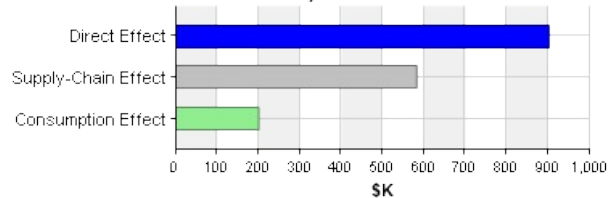
The increase in direct and indirect output and the corresponding creation of jobs in the economy are expected to result in an increase in the wages and salaries paid to employees. A proportion of these wages and salaries are typically spent on consumption and a proportion of this expenditure is captured in the local economy. The consumption effects under this scenario are expected to further boost employment in sectors such as retail therefore further increasing wages and salaries by \$63.039 thousand.

Total wages and salaries in year 10, including all direct, supply-chain and consumption effects is estimated to increase by up to \$953.960 thousand. This represents a Type 2 Wages and Salaries multiplier of 1.739.



Impact on Value-Added - Year 10

Impact Value-Added Total - Serpentine-Jarrahdale (S) (2019 Release 2)



From a direct increase in output of \$2,711.000 thousand in year 10, the corresponding increase in direct value-added is estimated at \$902.122 thousand. From this direct expansion in the economy, flow-on supply-chain effects in terms of local purchases of goods and services are anticipated, and it is estimated that these indirect impacts would result in a further increase to value-added of \$582.527 thousand. This represents a Type 1 Value-added multiplier of 1.646.

The increase in direct and indirect output and the corresponding boost to jobs in the economy are expected to result in an increase in the wages and salaries paid to employees. A proportion of these wages and salaries are typically spent on consumption and a proportion of this expenditure is captured in the local economy. The consumption effects under this scenario are expected to further boost value-added by \$200.172 thousand.

Total value-added in year 10, including all direct, supply-chain and consumption effects is estimated to increase by up to \$1,684.821 thousand. This represents a Type 2 Value-added multiplier of 1.868.

Impact Summary - Year 10

Impact Summary	Direct Effect	Supply-Chain Effect	Consumption Effect	Total Effect	Type 1 Multiplier	Type 2 Multiplier
Output (\$K)	\$2,711.000	\$1,458.047	\$331.720	\$4,500.768	1.538	1.660
Employment (Jobs)	8	4	1	13	1.500	1.625
Wages and Salaries (\$K)	\$548.645	\$342.276	\$63.039	\$953.960	1.624	1.739
Value-added (\$K)	\$902.122	\$582.527	\$200.172	\$1,684.821	1.646	1.868

Disclaimer

All figures, data and commentary presented in this report are based on data sourced from the Australia Bureau of Statistics (ABS), most of which relates to the 2016, 2011, 2006 and 2001 Censuses.

Using ABS datasets and an input / output methodology industrial economic data estimates for defined geographic regions are generated.

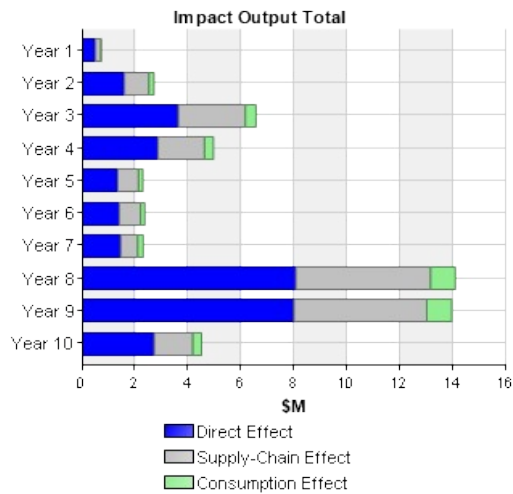
This report is provided in good faith with every effort made to provide accurate data and apply comprehensive knowledge. However, REMPLAN does not guarantee the accuracy of data nor the conclusions drawn from this information. A decision to pursue any action in any way related to the figures, data and commentary presented in this report is wholly the responsibility of the party concerned. REMPLAN advises any party to conduct detailed feasibility studies and seek professional advice before proceeding with any such action and accept no responsibility for the consequences of pursuing any such action.



10 Year Impact Scenario

Year	Industry Sector	Direct Change Jobs	Direct Change Output (\$M)
1	Construction Services		\$0.050
1	Information Media & Telecommunications		\$0.046
1	Professional, Scientific & Technical Services		\$0.087
1	Sports, Recreation & Gambling		\$0.309
2	Construction Services		\$1.211
2	Information Media & Telecommunications		\$0.082
2	Professional, Scientific & Technical Services		\$0.033
2	Sports, Recreation & Gambling		\$0.258
3	Non-Residential Building Construction		\$2.000
3	Construction Services		\$1.215
3	Information Media & Telecommunications		\$0.052
3	Professional, Scientific & Technical Services		\$0.135
3	Sports, Recreation & Gambling		\$0.220
4	Construction Services		\$2.560
4	Information Media & Telecommunications		\$0.042
4	Professional, Scientific & Technical Services		\$0.025
4	Sports, Recreation & Gambling		\$0.220
5	Construction Services		\$1.025
5	Information Media & Telecommunications		\$0.042
5	Professional, Scientific & Technical Services		\$0.050
5	Sports, Recreation & Gambling		\$0.220
6	Construction Services		\$1.025
6	Information Media & Telecommunications		\$0.143
6	Sports, Recreation & Gambling		\$0.220
7	Construction Services		\$0.415
7	Information Media & Telecommunications		\$0.081
7	Professional, Scientific & Technical Services		\$0.700
7	Sports, Recreation & Gambling		\$0.245
8	Construction Services		\$7.625
8	Information Media & Telecommunications		\$0.081
8	Professional, Scientific & Technical Services		\$0.010
8	Sports, Recreation & Gambling		\$0.350
9	Construction Services		\$7.454
9	Information Media & Telecommunications		\$0.081
9	Professional, Scientific & Technical Services		\$0.150
9	Sports, Recreation & Gambling		\$0.315
10	Construction Services		\$1.520
10	Information Media & Telecommunications		\$0.061
10	Professional, Scientific & Technical Services		\$0.030
10	Sports, Recreation & Gambling		\$1.100

Impact on Output



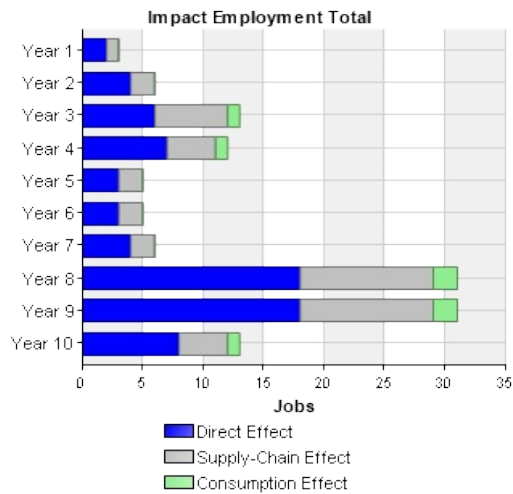
	Direct Effect	Supply-Chain Effect	Consumption Effect	Total Effect	Type 1 Multiplier	Type 2 Multiplier
Year 1	\$0.492	\$0.205	\$0.065	\$0.762	1.417	1.549
Year 2	\$1.584	\$0.927	\$0.187	\$2.698	1.585	1.704
Year 3	\$3.622	\$2.536	\$0.400	\$6.558	1.700	1.811
Year 4	\$2.847	\$1.764	\$0.334	\$4.945	1.620	1.737
Year 5	\$1.337	\$0.783	\$0.160	\$2.280	1.586	1.706
Year 6	\$1.388	\$0.802	\$0.160	\$2.351	1.578	1.693
Year 7	\$1.441	\$0.646	\$0.206	\$2.293	1.449	1.592
Year 8	\$8.066	\$5.091	\$0.941	\$14.098	1.631	1.748
Year 9	\$8.000	\$5.017	\$0.940	\$13.957	1.627	1.745
Year 10	\$2.711	\$1.458	\$0.332	\$4.501	1.538	1.660
Years 1 - 10	\$31.487	\$19.230	\$3.725	\$54.442	1.611	1.729

From a direct increase in output of \$31.487 million over the 10-year period, it is estimated that the demand for intermediate goods and services would rise by \$19.230 million. This represents a Type 1 Output multiplier of 1.611. These supply-chain effects include multiple rounds of flow-on effects, as servicing sectors increase their own output and demand for local goods and services in response to the direct change to the economy.

The increases in direct and indirect output would typically correspond to the creation of jobs in the economy. Corresponding to this change in employment would be an increase in the total of wages and salaries paid to employees. A proportion of these wages and salaries are typically spent on consumption and a proportion of this expenditure is captured in the local economy. The consumption effects under this scenario are estimated at \$3.725 million.

Total output over the 10-year period, including all direct, supply-chain and consumption effects is estimated to increase by up to \$54.442 million. This represents a Type 2 Output multiplier of 1.729.

Impact on Employment



	Direct Effect	Supply-Chain Effect	Consumption Effect	Total Effect	Type 1 Multiplier	Type 2 Multiplier
Year 1	2	1	0	3	1.500	1.500
Year 2	4	2	0	6	1.500	1.500
Year 3	6	6	1	13	2.000	2.167
Year 4	7	4	1	12	1.571	1.714
Year 5	3	2	0	5	1.667	1.667
Year 6	3	2	0	5	1.667	1.667
Year 7	4	2	0	6	1.500	1.500
Year 8	18	11	2	31	1.611	1.722
Year 9	18	11	2	31	1.611	1.722
Year 10	8	4	1	13	1.500	1.625

There is a net direct increase in output of \$31.487 million over the 10-year period.

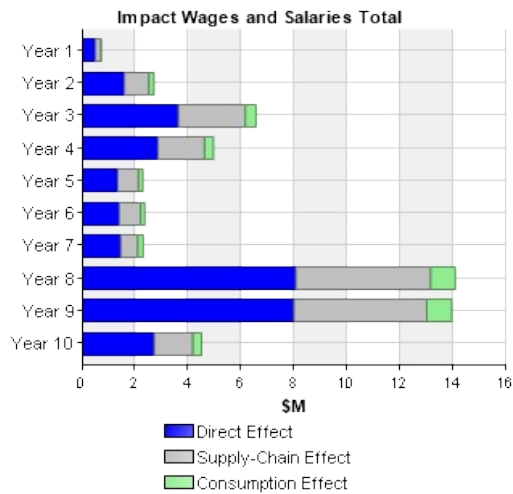
Peak Employment Gain occurs in year 8

In year 8 there is an estimated net 18 direct jobs supported. From this direct expansion in employment, flow-on supply-chain effects in terms of local purchases of goods and services are anticipated, and it is estimated that these indirect impacts will support 11 jobs. This represents a Type 1 Employment multiplier of 1.611.

The direct and indirect output and the corresponding jobs in the economy are expected to support the payment of wages and salaries paid to employees. A proportion of these wages and salaries are typically spent on consumption and a proportion of this expenditure is captured in the local economy. The consumption effects under this scenario are estimated to support 2 jobs in year 8.

In year 8, under this scenario, there is an expansion in overall employment, including all direct, supply-chain and consumption effects, estimated at 31 jobs. This represents a Type 2 Employment multiplier of 1.722.

Impact on Wages and Salaries



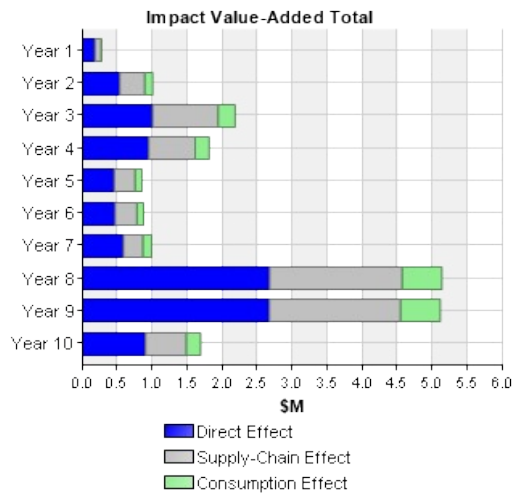
	Direct Effect	Supply-Chain Effect	Consumption Effect	Total Effect	Type 1 Multiplier	Type 2 Multiplier
Year 1	\$0.118	\$0.057	\$0.012	\$0.187	1.487	1.593
Year 2	\$0.300	\$0.202	\$0.036	\$0.538	1.673	1.792
Year 3	\$0.546	\$0.528	\$0.076	\$1.150	1.968	2.107
Year 4	\$0.525	\$0.372	\$0.064	\$0.961	1.708	1.829
Year 5	\$0.259	\$0.171	\$0.030	\$0.460	1.663	1.781
Year 6	\$0.255	\$0.175	\$0.030	\$0.460	1.685	1.804
Year 7	\$0.385	\$0.169	\$0.039	\$0.593	1.437	1.539
Year 8	\$1.465	\$1.061	\$0.179	\$2.705	1.724	1.846
Year 9	\$1.475	\$1.050	\$0.179	\$2.703	1.712	1.833
Year 10	\$0.549	\$0.342	\$0.063	\$0.954	1.624	1.739
Years 1 - 10	\$5.877	\$4.128	\$0.708	\$10.713	1.702	1.823

From a direct increase in output of \$31.487 million over the 10-year period, it is estimated that direct wages and salaries would increase by \$5.877 million. From this direct impact on the economy, flow-on supply-chain effects in terms of local purchases of goods and services are anticipated, and it is estimated that these indirect impacts would result in the net increase in wages and salaries of \$4.128 million paid to workers. This represents a Type 1 Wages and Salaries multiplier of 1.702.

The net increase in direct and indirect output and the corresponding jobs in the economy are expected to correspond to an increase in the wages and salaries paid to employees. A proportion of these wages and salaries are typically spent on consumption and a proportion of this expenditure is captured in the local economy. The consumption effects under this scenario are expected to result in an overall increase in wages and salaries by \$0.708 million.

Total wages and salaries over the 10-year period, including all direct, supply-chain and consumption effects is estimated to increase by up to \$10.713 million. This represents a Type 2 Wages and Salaries multiplier of 1.823.

Impact on Value-Added



	Direct Effect	Supply-Chain Effect	Consumption Effect	Total Effect	Type 1 Multiplier	Type 2 Multiplier
Year 1	\$0.178	\$0.092	\$0.039	\$0.309	1.517	1.738
Year 2	\$0.533	\$0.355	\$0.113	\$1.001	1.666	1.878
Year 3	\$1.002	\$0.935	\$0.241	\$2.178	1.934	2.175
Year 4	\$0.947	\$0.661	\$0.202	\$1.810	1.698	1.911
Year 5	\$0.452	\$0.300	\$0.097	\$0.849	1.665	1.879
Year 6	\$0.468	\$0.308	\$0.097	\$0.873	1.659	1.865
Year 7	\$0.586	\$0.277	\$0.124	\$0.987	1.473	1.686
Year 8	\$2.673	\$1.894	\$0.568	\$5.135	1.709	1.921
Year 9	\$2.672	\$1.871	\$0.567	\$5.110	1.700	1.912
Year 10	\$0.902	\$0.583	\$0.200	\$1.685	1.646	1.868
Years 1 - 10	\$10.413	\$7.277	\$2.248	\$19.938	1.699	1.915

From a direct increase in output of \$31.487 million over the 10-year period, the corresponding increase in direct value-added is estimated at \$10.413 million. From this direct expansion in the economy, flow-on supply-chain effects in terms of local purchases of goods and services are anticipated, and it is estimated that these indirect impacts would result in a further increase to value-added of \$7.277 million. This represents a Type 1 Value-added multiplier of 1.699.

The increase in direct and indirect output and the corresponding boost to jobs in the economy are expected to result in an increase in the wages and salaries paid to employees. A proportion of these wages and salaries are typically spent on consumption and a proportion of this expenditure is captured in the local economy. The consumption effects under this scenario are expected to further boost value-added by \$2.248 million.

Total value-added over the 10-year period, including all direct, supply-chain and consumption effects is estimated to increase by up to \$19.938 million. This represents a Type 2 Value-added multiplier of 1.915.



Impact Summary - Year 1 to Year 10

Impact Summary	Direct Effect	Supply-Chain Effect	Consumption Effect	Total Effect	Type 1 Multiplier	Type 2 Multiplier
Output (\$M)	\$31.487	\$19.230	\$3.725	\$54.442	1.611	1.729
Employment (Jobs) Peak Gain - Year 8	18	11	2	31	1.611	1.722
Wages and Salaries (\$M)	\$5.877	\$4.128	\$0.708	\$10.713	1.702	1.823
Value-added (\$M)	\$10.413	\$7.277	\$2.248	\$19.938	1.699	1.915

Under this scenario Gross Regional Product is estimated to increase by \$19.938 million over the 10-year period. Contributing to this is a direct increase in output of \$31.487 million, \$5.877 million more in wages and salaries and a boost in value-added of \$10.413 million.

From this direct expansion in the economy, flow-on supply-chain effects in terms of local purchases of goods and services are anticipated, and it is estimated that these indirect impacts would result in a further increase to output valued at \$19.230 million, \$4.128 million more paid in wages and salaries, and a gain of \$7.277 million in terms of value-added.

These supply-chain effects represent the following Type 1 economic multipliers:

Impact	Type 1 Multipliers
Output	1.611
Employment Peak Gain - Year 8	1.611
Wages and Salaries	1.702
Value-added	1.699

The increase in direct and indirect output and the corresponding change in jobs in the economy are expected to result in an increase in the wages and salaries paid to employees. A proportion of these wages and salaries are typically spent on consumption and a proportion of this expenditure is captured in the local economy. The consumption effects under the scenario are expected to further boost output by \$3.725 million, wages and salaries by \$0.708 million, and value-added by \$2.248 million.

Under this scenario, total output is expected to rise by \$54.442 million. Corresponding to this are anticipated increases in employment of jobs, \$10.713 million wages and salaries, and \$19.938 million in terms of value-added.

The total changes to economic activity represent the following Type 2 economic multipliers:

Impact	Type 2 Multipliers
Output	1.729
Employment Peak Gain - Year 8	1.722
Wages and Salaries	1.823
Value-added	1.915



Disclaimer

All figures, data and commentary presented in this report are based on data sourced from the Australia Bureau of Statistics (ABS), most of which relates to the 2016, 2011, 2006 and 2001 Censuses.

Using ABS datasets and an input / output methodology industrial economic data estimates for defined geographic regions are generated.

This report is provided in good faith with every effort made to provide accurate data and apply comprehensive knowledge. However, REMPLAN does not guarantee the accuracy of data nor the conclusions drawn from this information. A decision to pursue any action in any way related to the figures, data and commentary presented in this report is wholly the responsibility of the party concerned. REMPLAN advises any party to conduct detailed feasibility studies and seek professional advice before proceeding with any such action and accept no responsibility for the consequences of pursuing any such action.



Tourism Impact Summary Report for Serpentine-Jarrahdale (S) (Tourism Activity: 365 days)

Tourism Impact Scenario

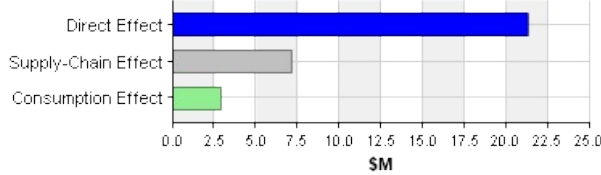
Name Jarrahdale Trail Town Visitors Year 8
 Duration 365 days

Direct Impact	Domestic Day	Domestic Overnight	International	Total
Number of Visitors	308,790	39,531	2,461	350,782
Number of Nights	n/a	1.00	1.00	
Estimated Expenditure per Visitor per Day (\$)	\$56	\$99	\$36	
Total Estimated Expenditure (\$)	\$17,292,240	\$3,913,569	\$88,596	\$21,294,405

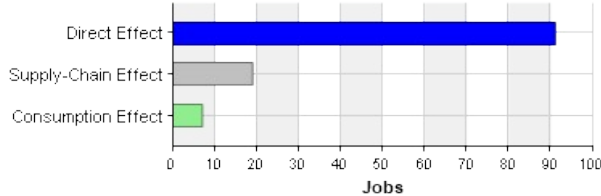
Estimated Expenditure per Visitor per Day data sourced from:
 TRA 2019 Serpentine-Jarrahdale (S) Local Government Area Tourism Profile

Tourism Impacts

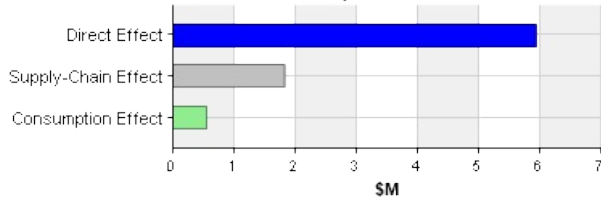
Impact Output - Serpentine-Jarrahdale (S) (2019 Release 2)



Impact Employment Total - Serpentine-Jarrahdale (S) (2019 Release 2)

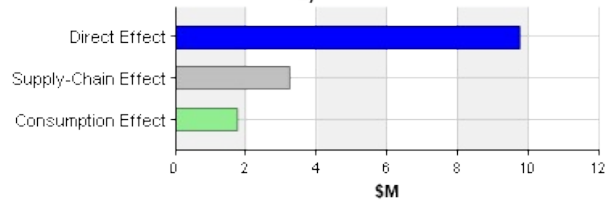


Impact Wages and Salaries Total - Serpentine-Jarrahdale (S) (2019 Release 2)





Impact Value-Added Total - Serpentine-Jarrahdale (\$) (2019 Release 2)



Under this scenario Gross Regional Product is estimated to increase by \$14.722 million (1.33%) to \$1,118.594 million. Contributing to this is a direct increase in output of \$21.294 million, 91 additional jobs , \$5.939 million more in wages and salaries and a boost in value-added of \$9.745 million.

From this direct expansion in the economy, flow-on supply-chain effects in terms of local purchases of goods and services are anticipated, and it is estimated that these indirect impacts would result in a further increase to output valued at \$7.123 million, 19 more jobs , \$1.827 million more paid in wages and salaries, and a gain of \$3.233 million in terms of value-added.

These supply-chain effects represent the following Type 1 economic multipliers:

Impact	Type 1 Multipliers
Output	1.334
Employment	1.209
Wages and Salaries	1.308
Value-added	1.332

The increase in direct and indirect output and the corresponding creation of jobs in the economy are expected to result in an increase in the wages and salaries paid to employees. A proportion of these wages and salaries are typically spent on consumption and a proportion of this expenditure is captured in the local economy. The consumption effects under the scenario are expected to further boost output by \$2.892 million, employment by 7 jobs , wages and salaries by \$0.549 million, and value-added by \$1.745 million.

Under this scenario, total output is expected to rise by \$31.309 million. Corresponding to this are anticipated increases in employment of 117 jobs , \$8.315 million wages and salaries, and \$14.722 million in terms of value-added.

The total changes to economic activity represent the following Type 2 economic multipliers:

Impact	Type 2 Multipliers
Output	1.470
Employment	1.286
Wages and Salaries	1.400
Value-added	1.511

Tourism Impact Summary (Tourism Activity: 365 days)

Impact	Direct Effect	Supply-Chain Effect	Consumption Effect	Total Effect	Type 1 Multiplier	Type 2 Multiplier
Output (\$M)	\$21.294	\$7.123	\$2.892	\$31.309	1.334	1.470
Long Term Employment (Jobs)	91	19	7	117	1.209	1.286
Wages and Salaries (\$M)	\$5.939	\$1.827	\$0.549	\$8.315	1.308	1.400
Value-added (\$M)	\$9.745	\$3.233	\$1.745	\$14.722	1.332	1.511



Disclaimer

All figures, data and commentary presented in this report are based on data sourced from the Australia Bureau of Statistics (ABS), most of which relates to the 2016, 2011, 2006 and 2001 Censuses, and data sourced from the National Visitor Survey (NVS) and International Visitor Survey (IVS) published by Tourism Research Australia.

Using ABS datasets and an input / output methodology industrial economic data estimates for defined geographic regions are generated.

This report is provided in good faith with every effort made to provide accurate data and apply comprehensive knowledge. However, REMPLAN does not guarantee the accuracy of data nor the conclusions drawn from this information. A decision to pursue any action in any way related to the figures, data and commentary presented in this report is wholly the responsibility of the party concerned. REMPLAN advises any party to conduct detailed feasibility studies and seek professional advice before proceeding with any such action and accept no responsibility for the consequences of pursuing any such action.



Tourism Impact Summary Report for Serpentine-Jarrahdale (S) (Tourism Activity: 365 days)

Tourism Impact Scenario

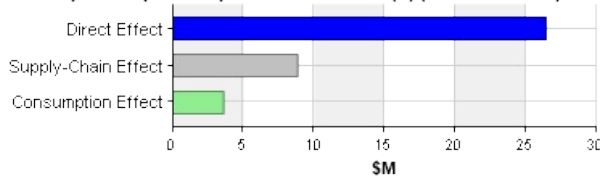
Name Jarrahdale Trail Town Visitors Year 9
 Duration 365 days

Direct Impact	Domestic Day	Domestic Overnight	International	Total
Number of Visitors	385,988	47,991	2,710	436,689
Number of Nights	n/a	1.00	1.00	
Estimated Expenditure per Visitor per Day (\$)	\$56	\$99	\$36	
Total Estimated Expenditure (\$)	\$21,615,328	\$4,751,109	\$97,560	\$26,463,997

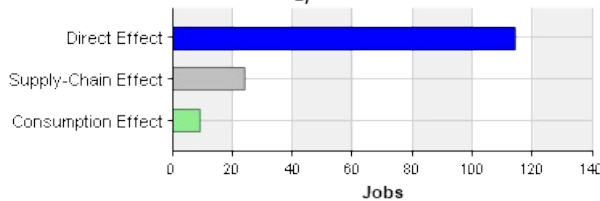
Estimated Expenditure per Visitor per Day data sourced from:
 TRA 2019 Serpentine-Jarrahdale (S) Local Government Area Tourism Profile

Tourism Impacts

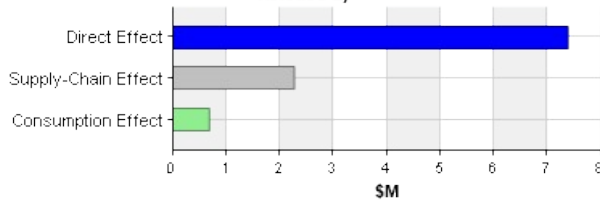
Impact Output - Serpentine-Jarrahdale (S) (2019 Release 2)



Impact Employment Total - Serpentine-Jarrahdale (S) (2019 Release 2)

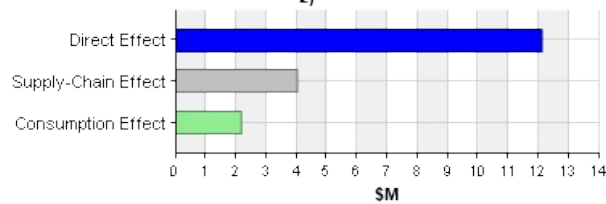


Impact Wages and Salaries Total - Serpentine-Jarrahdale (S) (2019 Release 2)





Impact Value-Added Total - Serpentine-Jarrahdale (S) (2019 Release 2)



Under this scenario Gross Regional Product is estimated to increase by \$18.296 million (1.66%) to \$1,122.168 million. Contributing to this is a direct increase in output of \$26.464 million, 114 additional jobs , \$7.381 million more in wages and salaries and a boost in value-added of \$12.110 million.

From this direct expansion in the economy, flow-on supply-chain effects in terms of local purchases of goods and services are anticipated, and it is estimated that these indirect impacts would result in a further increase to output valued at \$8.852 million, 24 more jobs , \$2.271 million more paid in wages and salaries, and a gain of \$4.017 million in terms of value-added.

These supply-chain effects represent the following Type 1 economic multipliers:

Impact	Type 1 Multipliers
Output	1.334
Employment	1.211
Wages and Salaries	1.308
Value-added	1.332

The increase in direct and indirect output and the corresponding creation of jobs in the economy are expected to result in an increase in the wages and salaries paid to employees. A proportion of these wages and salaries are typically spent on consumption and a proportion of this expenditure is captured in the local economy. The consumption effects under the scenario are expected to further boost output by \$3.593 million, employment by 9 jobs , wages and salaries by \$0.683 million, and value-added by \$2.168 million.

Under this scenario, total output is expected to rise by \$38.910 million. Corresponding to this are anticipated increases in employment of 147 jobs , \$10.334 million wages and salaries, and \$18.296 million in terms of value-added.

The total changes to economic activity represent the following Type 2 economic multipliers:

Impact	Type 2 Multipliers
Output	1.470
Employment	1.289
Wages and Salaries	1.400
Value-added	1.511

Tourism Impact Summary (Tourism Activity: 365 days)

Impact	Direct Effect	Supply-Chain Effect	Consumption Effect	Total Effect	Type 1 Multiplier	Type 2 Multiplier
Output (\$M)	\$26.464	\$8.852	\$3.593	\$38.910	1.334	1.470
Long Term Employment (Jobs)	114	24	9	147	1.211	1.289
Wages and Salaries (\$M)	\$7.381	\$2.271	\$0.683	\$10.334	1.308	1.400
Value-added (\$M)	\$12.110	\$4.017	\$2.168	\$18.296	1.332	1.511



Disclaimer

All figures, data and commentary presented in this report are based on data sourced from the Australia Bureau of Statistics (ABS), most of which relates to the 2016, 2011, 2006 and 2001 Censuses, and data sourced from the National Visitor Survey (NVS) and International Visitor Survey (IVS) published by Tourism Research Australia.

Using ABS datasets and an input / output methodology industrial economic data estimates for defined geographic regions are generated.

This report is provided in good faith with every effort made to provide accurate data and apply comprehensive knowledge. However, REMPLAN does not guarantee the accuracy of data nor the conclusions drawn from this information. A decision to pursue any action in any way related to the figures, data and commentary presented in this report is wholly the responsibility of the party concerned. REMPLAN advises any party to conduct detailed feasibility studies and seek professional advice before proceeding with any such action and accept no responsibility for the consequences of pursuing any such action.



Tourism Impact Summary Report for Serpentine-Jarrahdale (S) (Tourism Activity: 365 days)

Tourism Impact Scenario

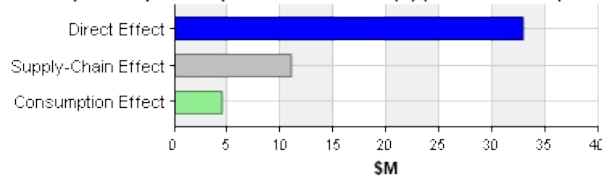
Name Jarrahdale Trail Town Visitors Year 10
 Duration 365 days

Direct Impact	Domestic Day	Domestic Overnight	International	Total
Number of Visitors	482,485	58,261	2,984	543,730
Number of Nights	n/a	1.00	1.00	
Estimated Expenditure per Visitor per Day (\$)	\$56	\$99	\$36	
Total Estimated Expenditure (\$)	\$27,019,160	\$5,767,839	\$107,424	\$32,894,423

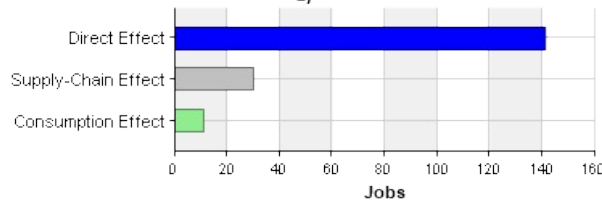
Estimated Expenditure per Visitor per Day data sourced from:
 TRA 2019 Serpentine-Jarrahdale (S) Local Government Area Tourism Profile

Tourism Impacts

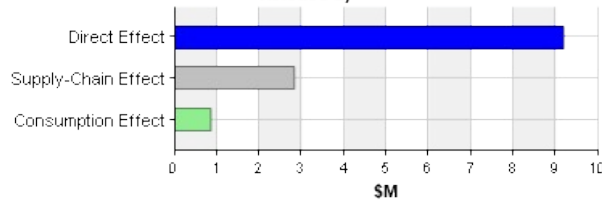
Impact Output - Serpentine-Jarrahdale (S) (2019 Release 2)



Impact Employment Total - Serpentine-Jarrahdale (S) (2019 Release 2)

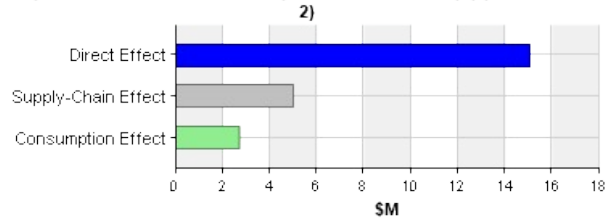


Impact Wages and Salaries Total - Serpentine-Jarrahdale (S) (2019 Release 2)





Impact Value-Added Total - Serpentine-Jarrahdale (\$) (2019 Release



Under this scenario Gross Regional Product is estimated to increase by \$22.742 million (2.06%) to \$1,126.614 million. Contributing to this is a direct increase in output of \$32.894 million, 141 additional jobs , \$9.174 million more in wages and salaries and a boost in value-added of \$15.053 million.

From this direct expansion in the economy, flow-on supply-chain effects in terms of local purchases of goods and services are anticipated, and it is estimated that these indirect impacts would result in a further increase to output valued at \$11.003 million, 30 more jobs , \$2.822 million more paid in wages and salaries, and a gain of \$4.993 million in terms of value-added.

These supply-chain effects represent the following Type 1 economic multipliers:

Impact	Type 1 Multipliers
Output	1.334
Employment	1.213
Wages and Salaries	1.308
Value-added	1.332

The increase in direct and indirect output and the corresponding creation of jobs in the economy are expected to result in an increase in the wages and salaries paid to employees. A proportion of these wages and salaries are typically spent on consumption and a proportion of this expenditure is captured in the local economy. The consumption effects under the scenario are expected to further boost output by \$4.467 million, employment by 11 jobs , wages and salaries by \$0.849 million, and value-added by \$2.695 million.

Under this scenario, total output is expected to rise by \$48.364 million. Corresponding to this are anticipated increases in employment of 182 jobs , \$12.845 million wages and salaries, and \$22.742 million in terms of value-added.

The total changes to economic activity represent the following Type 2 economic multipliers:

Impact	Type 2 Multipliers
Output	1.470
Employment	1.291
Wages and Salaries	1.400
Value-added	1.511

Tourism Impact Summary (Tourism Activity: 365 days)

Impact	Direct Effect	Supply-Chain Effect	Consumption Effect	Total Effect	Type 1 Multiplier	Type 2 Multiplier
Output (\$M)	\$32.894	\$11.003	\$4.467	\$48.364	1.334	1.470
Long Term Employment (Jobs)	141	30	11	182	1.213	1.291
Wages and Salaries (\$M)	\$9.174	\$2.822	\$0.849	\$12.845	1.308	1.400
Value-added (\$M)	\$15.053	\$4.993	\$2.695	\$22.742	1.332	1.511



Disclaimer

All figures, data and commentary presented in this report are based on data sourced from the Australia Bureau of Statistics (ABS), most of which relates to the 2016, 2011, 2006 and 2001 Censuses, and data sourced from the National Visitor Survey (NVS) and International Visitor Survey (IVS) published by Tourism Research Australia.

Using ABS datasets and an input / output methodology industrial economic data estimates for defined geographic regions are generated.

This report is provided in good faith with every effort made to provide accurate data and apply comprehensive knowledge. However, REMPLAN does not guarantee the accuracy of data nor the conclusions drawn from this information. A decision to pursue any action in any way related to the figures, data and commentary presented in this report is wholly the responsibility of the party concerned. REMPLAN advises any party to conduct detailed feasibility studies and seek professional advice before proceeding with any such action and accept no responsibility for the consequences of pursuing any such action.