



Nannup Trails Town

Economic Impact Assessment and Cost-Benefit Analysis

Prepared for the

Shire of Nannup

March 2021



lucid

/ˈluːsɪd/

adjective

1. expressed clearly; easy to understand

2. bright or luminous



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Executive Summary

Background

Lucid Economics Pty Ltd (Lucid Economics) has been engaged by the Shire of Nannup to conduct an economic impact assessment and cost-benefit assessment of the potential development of the Nannup Trails Town Project.

Nannup Trails Town Project

The Nannup Trails Town Project included a variety of infrastructure to attract visitors to the area and will be delivered across four stages:

- **Stage 1:** Completion of Tank 7 & 8 Mountain Bike Park (currently under construction)
- **Stage 2:** Southern Traffic Bridge, Freestyle Jump Park, Signage, Branding and Mapping for Gravel and Road Cycling Routes, Link to Donnelly River Village
- **Stage 3:** Native Forest Mountain Bike Park
- **Stage 4:** Principal Trailhead in Nannup

The project seeks to attract not only mountain bike visitors, but a wide variety of trails users including road cyclists, gravel cyclists, equestrian users and more.

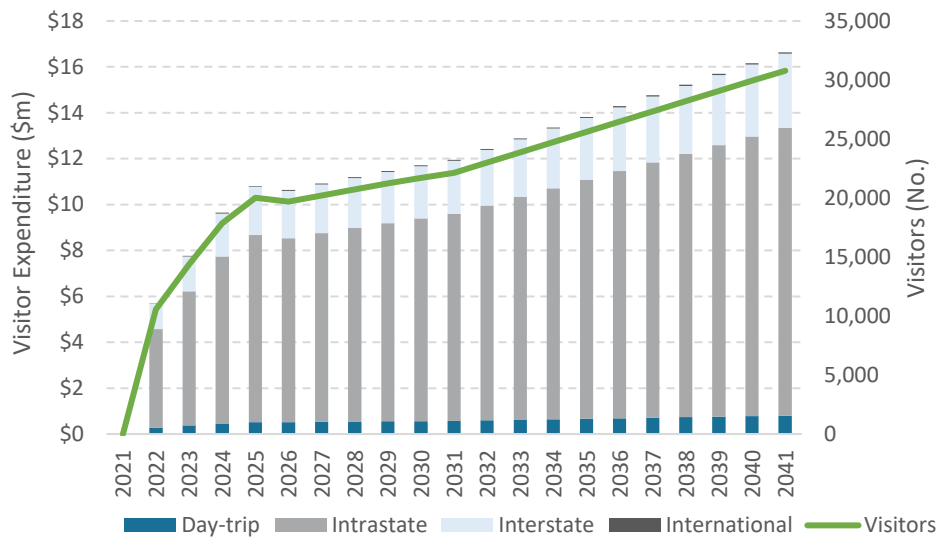
The concept of a 'trails town' goes beyond just a single network of trails or a mountain bike park. It seeks to include a wide variety of visitor experiences including trail infrastructure but also accommodation, food and beverage outlets, specialty retail and services, all catered to the visitor, providing a comprehensive experience for the visitor.

Economic Impact Assessment

By 2031, the Nannup Trails Town project will attract 22,100 visitors, 61,400 visitor nights and generate \$12.0 million in visitor expenditure for Nannup (Figure E.1). This level of expenditure will contribute (directly and indirectly) \$7.31 million to the local economy, in Gross Regional Product (GRP) terms (Figure E.2). It will also directly and indirectly support 70 full-time equivalent (FTE) positions in the area.

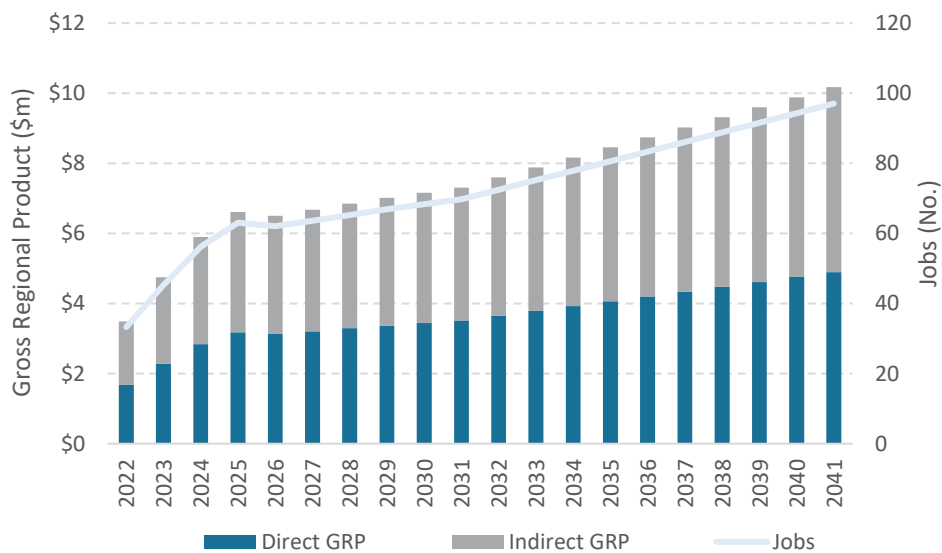
As visitation grows over time, so too will these economic impacts.

Figure E.1. Future Visitor Expenditure and Visitors, Nannup Trails Town Project



Source: Lucid Economics.

Figure E.2. Future Gross Regional Product and Employment, Nannup Trails Town Project



Note: Employment based on FTE positions and includes both direct and indirect jobs.

Source: Lucid Economics

Beyond these quantifiable economic benefits, there would be numerous additional economic benefits stemming from the development of the Nannup Trails Town, including:

- **Economic Diversification:** business activity in small towns that rely on only a few industries can be volatile, susceptible to macroeconomic events and shocks outside of the town. The Nannup economy is very reliant upon agriculture and manufacturing (i.e. the Parkside timber mill and the Houghton winery). The Nannup Trails Town can provide greater diversity to the local economy through tourism and visitation.
- **Increased Business Confidence:** any investment that takes place in a small town such as Nannup that can diversify the local economy has significant flow-on benefits. The project has the potential to greatly increase local business confidence, which could trigger additional investments and job creation across the economy.
- **Private Sector Investment:** based on the case study analysis in the Gaps, Constraints and Opportunity Assessment (September 2020), the increase in visitation generated through the investment in trails infrastructure will encourage private sector investment into accommodation, restaurants, cafes and other specialised businesses. This investment will create additional economic benefits and jobs.
- **Population Growth:** through the increase in investment and jobs (generated by the Nannup Trails Town project), the local population of Nannup is expected to grow as families move to the district to access the new jobs and business opportunities. Population growth in Nannup has consistently been below the region and State. Increasing the local population will drive local consumption and expenditure, creating additional economic and community benefits.
- **Business Sustainability:** all businesses in Nannup are small and by nature any increase in infrastructure that generate additional activity in the town is important and will assist with the ongoing sustainability of local businesses.
- **Profile of Nannup:** if Nannup can transition into a Trails Town, then its profile as a tourism destination will greatly increase. The growing profile, brand and recognition of Nannup grows, it will attract additional visitors, which can provide further economic benefits.

Cost-Benefit Assessment

The results of the CBA for the Nannup Trails Town project are highlighted in the following table (Table E.1).

Table E.1 Present Values of Costs and Benefits, 2020/21 – 2040/41 (\$m)

	Discount Rate (4%)	Discount Rate (7%)	Discount Rate (10%)
Benefits			
Tourism Benefits	\$44.8	\$33.7	\$26.1
Health Benefits	\$0.0	\$0.0	\$0.0
Total Benefits	\$44.8	\$33.7	\$26.1
Costs			
Construction Cost	\$5.2	\$5.0	\$4.8
Maintenance	\$1.2	\$0.9	\$0.7
Total Costs	\$6.3	\$5.8	\$5.4
Net Present Value			
NPV	\$38.5	\$27.8	\$20.7
Benefit to Cost Ratio			
BCR	7.1	5.8	4.8

Source: Lucid Economics

At the selected real discount rate of 7% for this project, the analysis yields a Benefit to Cost Ratio (BCR) of 6.2 meaning that it is economically desirable and provides a net benefit. Even at the higher discount rate of 10%, the project still yields a positive NPV and BCR. At 7% discount rate, for every \$1 in costs associated with the project, there are \$5.77 of benefits.

Under the baseline scenario (without project scenario), none of the identified benefits would be captured nor any of the costs incurred. As such, the scenario with the project provides positive economic and social benefits.

Table of Contents

Executive Summary.....	ii
Table of Contents.....	vi
1. Introduction.....	1
2. Local Context	3
3. Nannup Trails Town	5
3.1 Nannup Trails Town Project	5
3.2 Expected Future Demand.....	9
4. Economic Impact Assessment	12
4.1 Modelling Approach	12
4.2 Assumptions	12
4.3 Results	14
4.4 Other Benefits	15
5. Cost-Benefit Analysis.....	16
5.1 Modelling Approach	16
5.2 Definition of Costs and Benefits	16
5.3 Results	18
6. Summary	19
References.....	20

1. Introduction

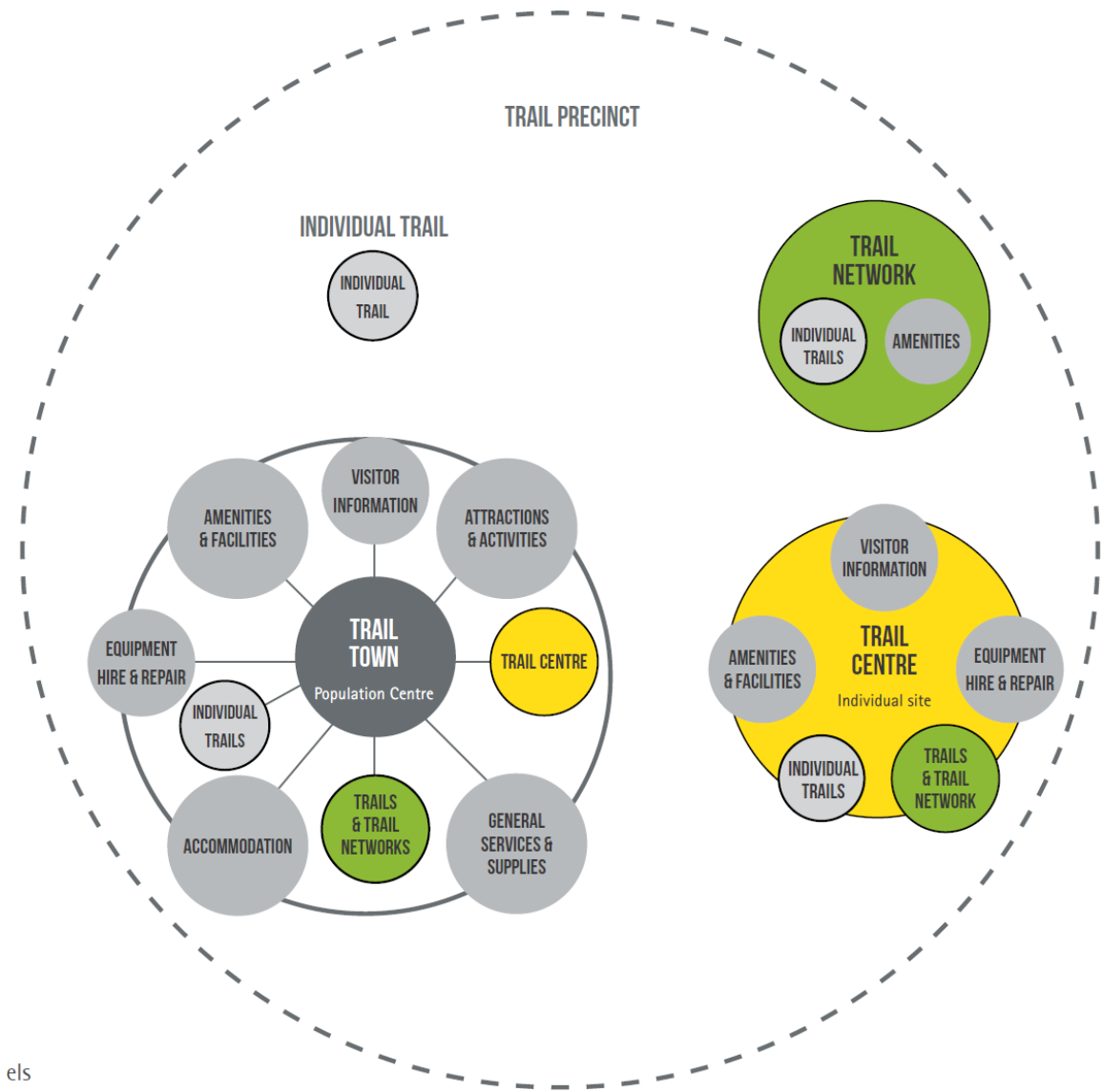
Lucid Economics Pty Ltd (Lucid Economics) has been engaged by the Shire of Nannup to conduct an economic impact assessment and cost benefit analysis of the Nannup Trails Town project.

The Shire of Nannup has identified an opportunity to position itself as a Trails Town. The Trails Town will include new trail development but more importantly it will create marketing activities to raise awareness of the destination, craft new tourism experiences as well as attract additional supporting infrastructure such as accommodation, restaurants, cafes and other specialty businesses that cater for trail tourists. As highlighted in Figure 1.1, the Trail Town concept is superior to simply having trails or even a single hub or trail centre as it encompasses considerably more detailed and niche activities, providing a comprehensive experience for visitors.

Furthermore, the Nannup Trails Town concept goes beyond mountain biking or cycling and caters to a wide range of trail users including mountain bikers, road cyclists, gravel cyclists, equestrian riders, canoe/kayak users and others. The Nannup Trails Town will be unique in its capacity to offer a vast range of experiences for multiple different groups of trail users. Furthermore, the concept leverages Nannup's position as mid-way point on the Munda Biddi Trail, a world-class off-road cycling trail of more than 1,000 km through pristine natural forests.

This assessment evaluates the net economic impact of the creation of the Nannup Trails Town on the local economy. The geography used for this assessment is the local government boundary for the Shire of Nannup. Unless otherwise noted, 'Nannup' refers to this geographic area.

Figure 1.1 Trail Model Hierarchy



Source: Nannup Cycle Master Plan 2020

2. Local Context

The population of Nannup was estimated to be just under 1,400 people in 2019, and except for the most recent years, has experienced population growth well below the South West and State levels.

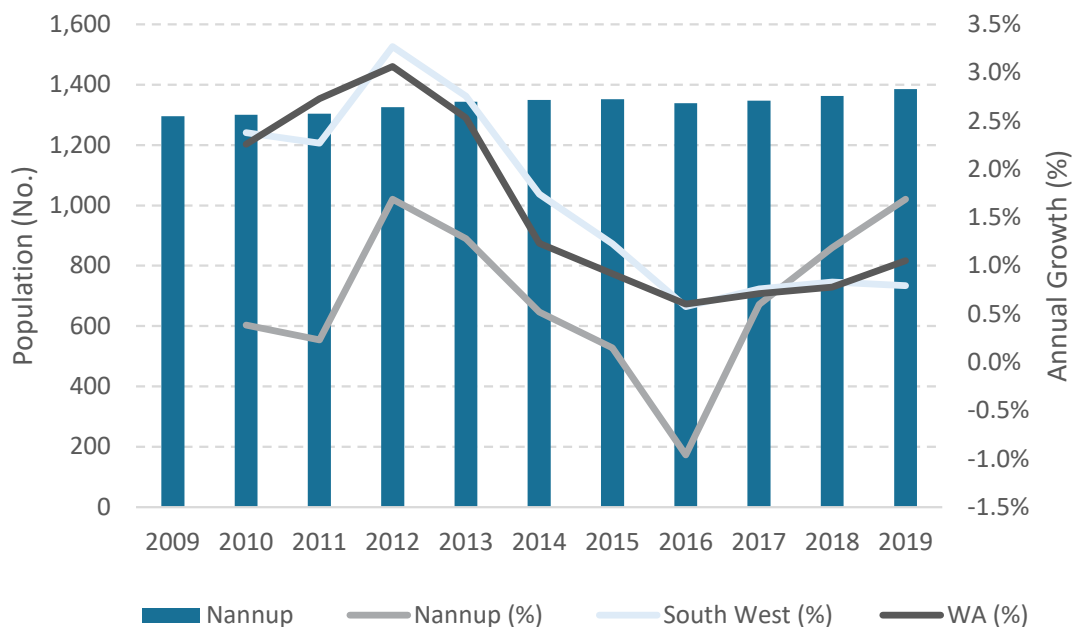
Nannup's economy was just over \$90 million in 2018-19. Economic growth in the region has averaged 1.2% per annum over the past decade, significantly below the Western Australian average of 3.2%.

Further, economic growth in Nannup has been considerably more volatile than the State average, likely owing to the region's heavy reliance on the agriculture and manufacturing industries. These two industries accounted for more than 40% of total industry value-add (IVA) in 2018-19.

Given the region's heavy reliance on these two industries to generate economic activity, it is important for Nannup to look for opportunities to diversify the local economy.

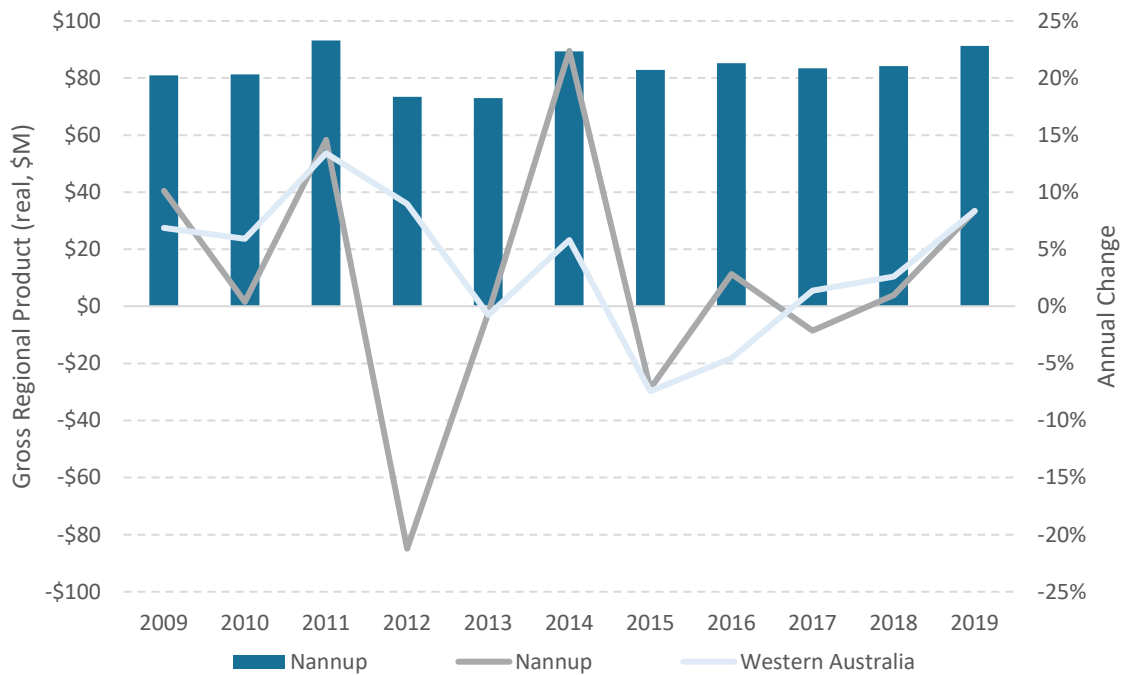
Currently, Nannup receives an estimated 85,200 visitors per year (TRA, 2020).

Figure 2.1. Population



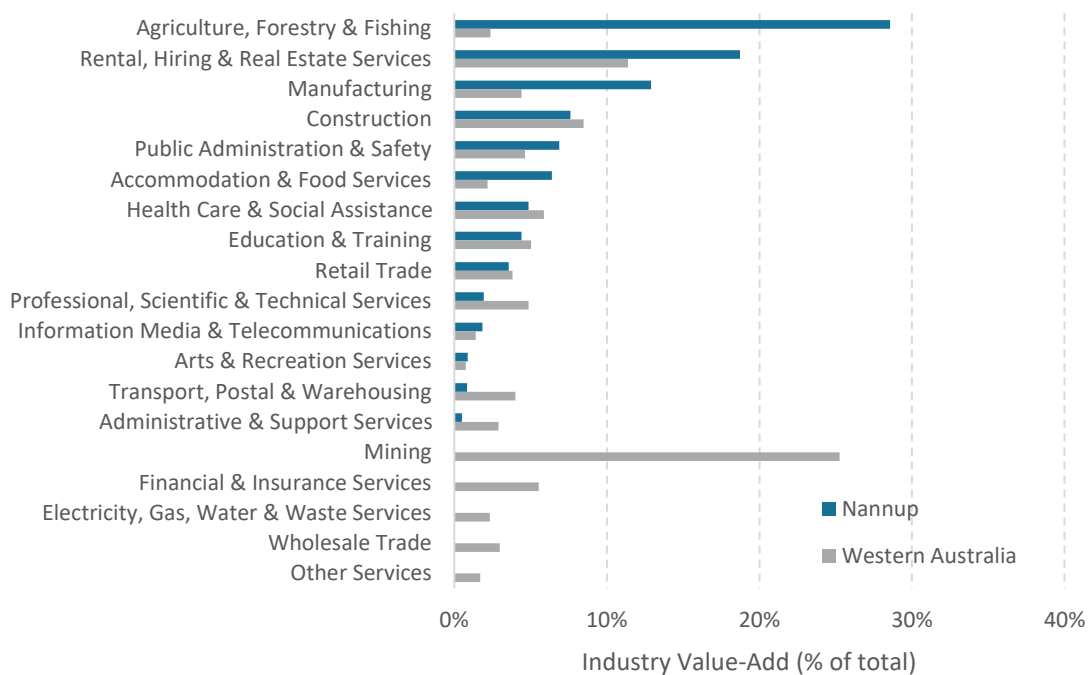
Source: REMPLAN (2020).

Figure 2.2. Gross Regional Product



Source: REMPLAN (2020).

Figure 2.3. Industry Value-Add, 2018-19



Note: The 'rental, hiring and real estate services' industry includes 'ownership of dwellings'.

Source: REMPLAN (2020).

3. Nannup Trails Town

3.1 Nannup Trails Town Project

In 2014, the Western Australian Mountain Bike Strategy identified the future potential (and immediate need) for an expansion of mountain biking infrastructure in the South West region. The South West Mountain Bike Master Plan was then carried out in 2017 and identified Nannup as regionally significant hub for mountain biking. The Nannup Cycle Master Plan was completed in 2020 and provided a number of recommendations so that Nannup can become a premier destination for all forms of cycling. The Nannup Cycle Master Plan identified a total of 31 infrastructure projects.

These projects were then assessed in order to identify the most important infrastructure to assist Nannup in becoming a Trails Town. The following projects were identified:

- Tank 7 & 8 Mountain Bike Park
- Freestyle Jump Park
- Southern Traffic Bridge
- Native Forest Mountain Bike Park (referred to as Tank 1 and Tank 5 in Master Plan)
- Principle Trailhead
- Adventure Trail Link Nannup to Donnelly
- Signage, Branding and Mapping for Gravel Routes
- Signage for Road Cycling Routes

These projects were then organised and sequenced to form four stages of Nannup Trails Town project.

- **Stage 1:** Completion of Tank 7 & 8 Mountain Bike Park (currently under construction)
- **Stage 2:** Southern Traffic Bridge, Freestyle Jump Park, Signage, Branding and Mapping for Gravel and Road Cycling Routes, Link to Donnelly River Village
- **Stage 3:** Native Forest Mountain Bike Park
- **Stage 4:** Principal Trailhead in Nannup

These stages and projects are explained further in the table below.

Table 3.1. Nannup Trails Town Components

Stage/Element	Description
Stage 1	
Completion of Tank 7 & 8 (currently under construction)	<p>The Tank 7 & 8 mountain biking park will be a regionally significant trail network made up of 30km of trail. It is currently under construction and due for completion in 2021.</p> <p>Deliverables:</p> <ul style="list-style-type: none"> • Stacked loop trail network (30km in total) • 100% single MTB use • 80% single direction, 20% dual direction • Multiple trail opportunities allowing different riding lengths and difficulty • Trails to fit within landscape and focus on natural features • Steel/timber features would only be considered if required to protect specific environmental values • Consider alternate lines and optional technical features to increase difficulty of trails • Continuous, non-compounding trail alignments to maximise event opportunities • Trail design to feature and interpret the natural landscape in providing an experience of riding through a pine tree forest • Sealing of the Trail Town Link • Primary Trail Head (parking, water and signage) • Four secondary Trail Heads (vehicle turnaround and signage)
Stage 2	
Southern Traffic Bridge	The project includes completing a missing section of a pathway linking the Vasse Highway and the Brockman Highway on the southern end of town. The project requires two small bridges and an extension of an existing concrete pathway to connect trail users to East Nannup Road (current alignment of the Munda Biddi Trail).
Freestyle Jump Park	At the intersection between the Timberline Trail, Kondil Park and Munda Biddi, 300m from the Nannup Principal Trail Head is a parcel of land owned by DBCA that has a disused motocross track located on it. While motorbikes are now prohibited in this area, it would be suitable for development as a freestyle jump park, providing an alternative experience to traditional mountain biking. The site currently has parking and sealed road access from the Vasse Highway.
Signage, Branding and Mapping for Gravel and Road Cycling Routes	<p>As highlighted in the Nannup Cycle Master Plan (2020), a range of signage (for road cycling, gravel cycling and mountain biking) is required as well better mapping and branding.</p> <p>The Nannup Tool will be an app that has access to a wide range of general and specific information as well as a variety of maps. The Tool is geocoded so that it can function in areas without mobile phone coverage.</p> <p>The Nannup Tool content will be very flexible and can easily be changed during and after it has been released.</p>

Stage/Element	Description
Signage, Branding and Mapping for Gravel and Road Cycling Routes (cont.)	<p>Anticipated categories and listings per category will include:</p> <ul style="list-style-type: none"> • General Information. Subsections for Towns, Getting There, Climate & Weather, History, etc. • Geography and Amenities (e.g. toilets, BBQs). • Swimming. Black Point Area including safety warnings, Barrabup Pool, etc. • Sightseeing. Up to 20 Non-business Listings. • Attractions & Activities. Can be a mix of non-business and business listings. Up to 10 non-business and any number of business listings. • Self-Guided Tours. Up to 8 non-business listings. Will include wine tours, wildflower walks and food trails if desired. • Mountain Biking. Loading up to 8 trails. Will include the section of the Munda Biddi that runs through the map area. • Events. Capacity to list up to 30 events per year. • Road Biking. Loading up to 6 trails. • Hiking and Horse Trails. Loading up to 10 trails. • Includes the section of Bibbulmun that runs through the map area. • Will include the section of the horse trail from Nannup that runs through the map area. • For Kids. Up to 10 non-business and any number of business listings. • Food and Drink. Any number of business listings. Businesses can periodically update their listings. Menus and prices can be found by going to restaurant web pages from web links in the Nannup Tool. Can include the new brewery • Galleries. 5 non-business listings and any number of business listings. • Tours. Any number of business listings. • Camping. 5 non-business listings and any number of business listings. • Accommodation. Any number of business listings. • Cellar Doors. Any number of business listings. <p>To accompany the release of the Nannup Tool, a dedicated marketing campaign will be undertaken across all identified target markets.</p>
Donnelly Village Link	<p>Leveraging the existing Munda Biddi Trail, provide a link for riders to visit the Village. The experience would include a day ride to the Village from Nannup, overnight accommodation at the Village, and a return ride to Nannup. The link would leverage the existing infrastructure at the Village (i.e. accommodation, general store, restaurant) and provide access to much needed accommodation for riders travelling to Nannup.</p> <p>To attract riders to the Village, a number of improvements would be made, including adding trails, loops and other features (i.e. jumps, skills courses, etc.) within and directly around the Village. Additionally, bike storage, washdown facilities and other bespoke bike infrastructure would also be added.</p> <p>The Link will be created through leveraging the Nannup Tool as well as the appropriate signage and way finding around Nannup and Tank 7 & 8. The realignment of the Munda Biddi will also provide a loop experience, so riders are not riding the same trail to and from the Village (please note, only part of the Munda Biddi Trail from Nannup to Donnelly River Village will be impacted by the realignment).</p>

Stage/Element	Description
Stage 3	
Native Forest Mountain Bike Park	<p>Located approximately 5 km from town, the Cambray State Forest provides a unique opportunity to develop a niche mountain bike park among the native Karri forest. A 40 km network of trails could be developed in the State Forest to the west of the old golf course. This portion of the forest would provide a large area (approximately 7 sq km) extending to the north-west, west and south-west from the old golf course. This forest provides an alternative riding experience compared to the pine plantation of Tank 7 & 8, adding another unique riding experience for Nannup.</p> <p>Deliverables:</p> <ul style="list-style-type: none"> • Trail development (approximately 40km in total) • Primary Trail Head (parking, shelter, BBQ, toilets, water and signage) • Secondary Trail Head (parking, shelter, water and signage) • Directional signage • Trail network entry archway
Mountain Bike Resort	<p>The old Nannup Golf Course provides a unique opportunity to create a resort directly adjacent to the Native Forest Mountain Bike Park. A variety of clearing took place to initially develop the golf course and other infrastructure may still be of use for future development.</p> <p>The resort would be designed and developed with mountain bikers in mind. The accommodation would be provided through individual, demountable cabins that would each include secure bike storage. The cabins would be arranged to enjoy the natural scenery, provide privacy as well as provide access to a central facility that would provide reception as well as a restaurant and café/bar. It would be designed with the highest environmental standards and using the most environmentally friendly technology (i.e. solar power/battery systems, rainwater collection, bio-friendly septic systems, etc.). The resort could also deliver a jump park, pump track and/or skills course to provide riders ever further experiences.</p> <p>Deliverables:</p> <ul style="list-style-type: none"> • 30 individual cabin style units • Central reception • Restaurant, café and bar • Jump park/pump track and/or skills course • Parking and associated utility infrastructure

Stage/Element	Description
Stage 4	
Principal Trailhead	<p>The Principal Trailhead within the townsite should be a prominent vibrant feature of the Trails Town's cycling activity from which riders begin their journey into the broader trail network. Foreshore Park will be the location of the Principal Trailhead given its proximity to the centre of Town, its central location to the various trail networks and the existing infrastructure at Foreshore Park (i.e. car parking and public toilets). The Principal Trailhead will contain a challenge park (i.e. pump track, jump lines, learn to ride track, skills loop) and support facilities such as expanded parking, toilets and picnic areas as well as a playground. Space for an event marshalling area is also included. At this stage in the development, it is expected that the project has generated significant enough visitation to warrant a specific visitor information centre, specifically for visitors accessing the trails and other trail support infrastructure.</p> <p>Deliverables:</p> <ul style="list-style-type: none"> • Challenge park • Toilets • Directional signage • Car parking • Picnic tables and shelters • Nature play playground • Trail information centre

Source: Shire of Nannup

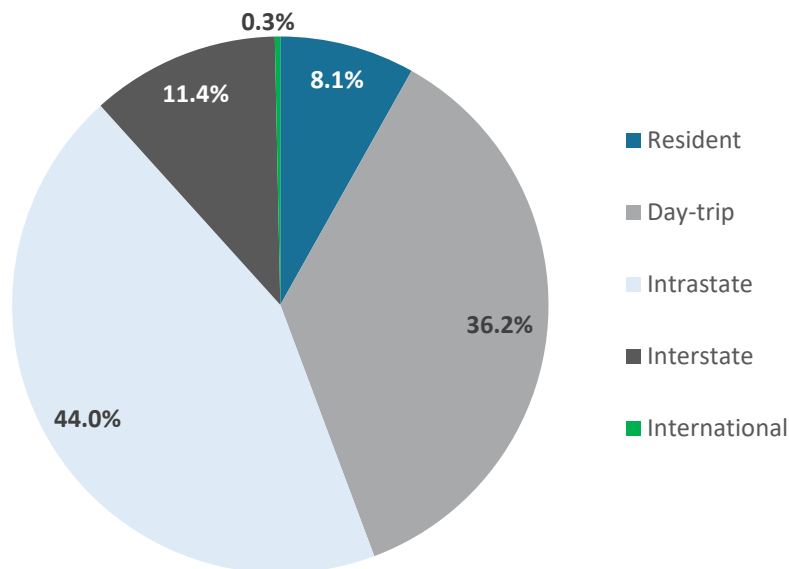
3.2 Expected Future Demand

Future demand for the Nannup Trails Town project was established through future estimates of users by Common Ground (i.e. author of the Nannup Cycle Master Plan and Tank 7 & 8 Concept Plan) and Three Chillies (i.e. designer and builder for Tank 7 & 8).

Estimates were provided for overall utilisation of the Tank 7 & 8 Mountain Bike Park and the average estimate was a total 11,500 annual users.

The Shire conducted a user survey as part of the development of Tank 7 & 8 and data from this was used in order to identify future users as local residents or visitors to Nannup. Just over 8% of users were local residents, with the remainder being visitors to the area (Figure 3.1).

Figure 3.1. Trail Users by Type, Nannup



Source: Shire of Nannup

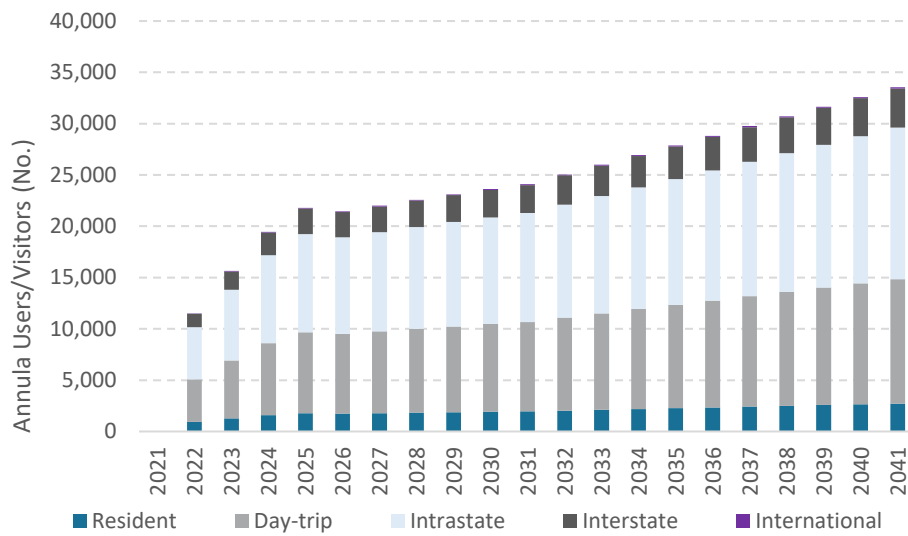
Further consultation with Common Ground and Three Chillies also informed the capacity of future stages of the project as provided. In terms of annual visitation, only 20% of visitors for Stages 2, 3 and 4 were assumed to be net new visitors to Nannup. It was assumed that the majority of visitors from Stage 1 would simply utilise the infrastructure provided in Stages 2, 3 and 4. Estimates of future visitation are highlighted in Table 3.2 and Figure 3.2. Once fully developed, the Nannup Trails Town project is expected to generate just over 20,000 new visitors to the town. On-going annual growth is based on data from Tourism Research Australia (TRA) for visitors to Western Australia that are participating in cycling.

Table 3.2. Future Net New Visitation, by Stage

	2022	2023	2024	2025
Stage 1	10,564	11,202	11,840	12,478
Stage 2		3,169	3,906	4,254
Stage 3			2,113	2,227
Stage 4				1,056
Total	10,564	14,371	17,858	20,015

Source: Lucid Economics

Figure 3.2. Future Visitors and Users to Nannup



Source: Lucid Economics

The estimate of future users and visitors was also compared to various case studies, as highlighted in Table 3.3.

Table 3.3. Visitation Case Studies

	Annual Trail Visitors
Derby, Tasmania	30,000
Bright, Victoria	103,000
Rotorua, NZ	500,000
Thredbo, NSW	300,000
Gold Coast	58,026

Notes: Visitation to Derby and the Gold Coast include only mountain biking visitors. Visitors to Rotorua include all trail visitors. Visitation to Thredbo is total summer visitors and visitation to Bright includes all cyclists.

Source: Lucid Economics

4. Economic Impact Assessment

4.1 Modelling Approach

This assessment considers the net economic gain created from the development of the Nannup Trails Town. Future economic activity associated with new visitors to Nannup has been used to identify the net economic impact.

The estimated cost to develop all stages of the project is \$5.5 million. Given the temporary nature of the development and the fact that the majority of project expenditure will be based outside of Nannup, this assessment only considers the operational phase of the project.

The operational impact is measured through the likely future visitor impact and leverages the latest regional Tourism Satellite Account (TSA) data (TRA, 2020a). The operational impact only considers net new activities and excludes any economic activity that, in the absence of the development of all four stages of the project, would have taken place in the region.

Economic impact analysis identifies a series of economic metrics. For this assessment, the following metrics have been used:

- **Gross Regional Product:** value of the total economic output minus the costs of goods and services used as inputs, plus net taxes. Gross regional product is a preferred measure of the economy as it focuses on the net contribution of the local economy. This value is most closely associated with Gross State Product (GSP) or Gross Domestic Product (GDP).
- **Employment:** employment positions generated, expressed on a full-time equivalent (FTE) basis.

These metrics are measured in terms of the direct impact as well as the indirect (flow-on) impact. For this assessment, both Type I and Type II impacts have been considered, which include:

- **Type I:** Production effect or supply chain impacts linked to the direct impact.
- **Type II:** Consumption induced effect, which measures expenditure paid by employees related to the project in the broader economy.

4.2 Assumptions

Future visitation to Nannup based on the Trails Town project is the key driver for this assessment. The economic impact of these future visitors is generated by the money they spent in town during their visit. Table 4.1 shows the expenditure and length of stay assumptions used, which are based on data from TRA for visitors to Western Australia engaging in cycling as an activity. Given the uncommon results in the TRA data due to COVID-19 and various restrictions, data is based on the calendar year 2019. The interstate visitor length of stay was assumed for international visitors (as the length of stay in the State was considerably longer than what a trip to Nannup would usually generate).

Figure 4.1 shows the estimated visitor expenditure in Nannup as well as total estimated visitors. Once fully developed, the Nannup Trails Town project is expected to inject \$10.8 million into the local economy.

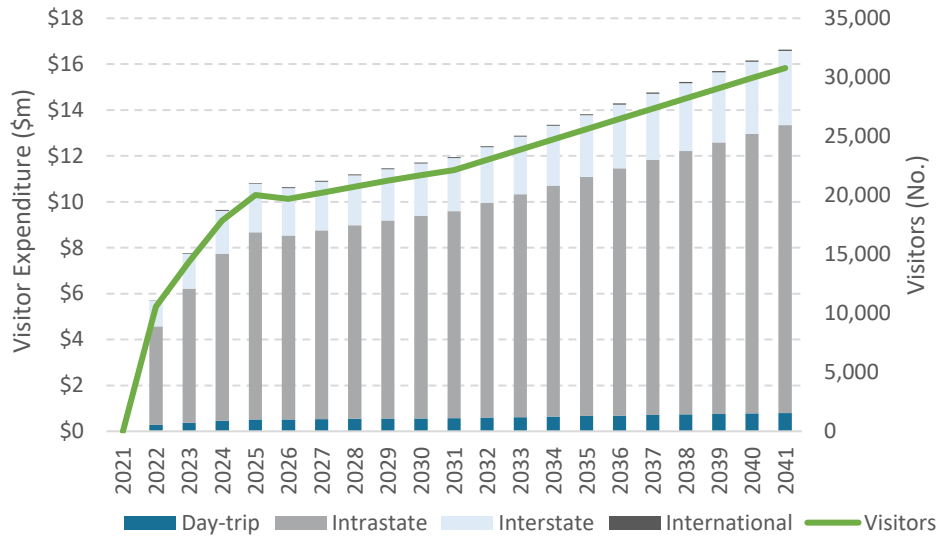
Table 4.1. Expenditure and Length of Stay Assumptions

	Expenditure per Visitor Night (\$)	Length of Stay (Nights)
Day-trip	\$66	0.0
Intrastate	\$194	4.4
Interstate	\$161	5.3
International	\$99	5.3

Notes: Day-trip visitor expenditure is per day/trip.

Source: TRA (2020); Lucid Economics

Figure 4.1. Future Visitor Expenditure, Nannup Trails Town Project



Note: Figures exclude residents and any expenditure from them.

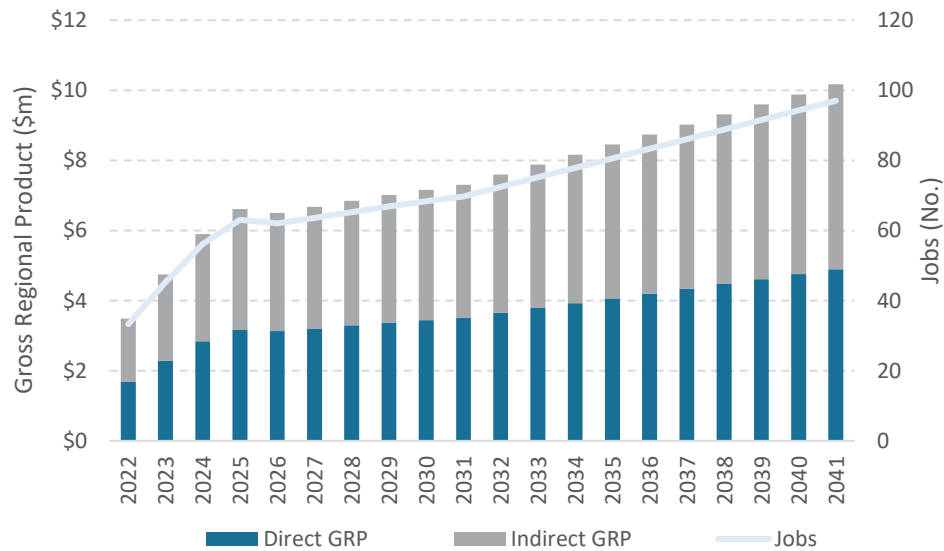
Source: Lucid Economics.

4.3 Results

The results of the economic impact assessment are highlighted in Figure 4.2.

Once fully developed, the Nannup Trails Town Project will generate \$10.8 million in new visitor expenditure, which will contribute (directly and indirectly) \$6.6 million to the local economy, in Gross Regional Product (GRP) terms. It will also directly and indirectly support 63 full-time equivalent (FTE) positions in the area.

Figure 4.2. Future Gross Regional Product and Employment, Nannup Trails Town Project



Note: Employment based on FTE positions and includes both direct and indirect jobs.

Source: Lucid Economics

4.4 Other Benefits

Beyond the quantifiable economic benefits presented above, there would be numerous additional economic benefits stemming from the development of the Nannup Trails Town, including:

- **Economic Diversification:** business activity in small towns that rely on only a few industries can be volatile, susceptible to macroeconomic events and shocks outside of the town. The Nannup economy is very reliant upon agriculture and manufacturing (i.e. the Parkside timber mill and the Houghton winery). The Nannup Trails Town can provide greater diversity to the local economy through tourism and visitation.
- **Increased Business Confidence:** any investment that takes place in a small town such as Nannup that can diversify the local economy has significant flow-on benefits. The project has the potential to greatly increase local business confidence, which could trigger additional investments and job creation across the economy.
- **Private Sector Investment:** based on the case study analysis in the Gaps, Constraints and Opportunity Assessment (September 2020), the increase in visitation generated through the investment in trails infrastructure will encourage private sector investment into accommodation, restaurants, cafes and other specialised businesses. This investment will create additional economic benefits and jobs.
- **Population Growth:** through the increase in investment and jobs (generated by the Nannup Trails Town project), the local population of Nannup is expected to grow as families move to the district to access the new jobs and business opportunities. Population growth in Nannup has consistently been below the region and State. Increasing the local population will drive local consumption and expenditure, creating additional economic and community benefits.
- **Business Sustainability:** all businesses in Nannup are small and by nature any increase in infrastructure that generate additional activity in the town is important and will assist with the ongoing sustainability of local businesses.
- **Profile of Nannup:** if Nannup can transition into a Trails Town, then its profile as a tourism destination will greatly increase. The growing profile, brand and recognition of Nannup grows, it will attract additional visitors, which can provide further economic benefits.

5. Cost-Benefit Analysis

5.1 Modelling Approach

Cost-Benefit Analysis (CBA) is an analytical tool used to inform decisions regarding complex investment projects. A CBA has advantages over other modelling techniques (like an Economic Impact Assessment), in that a CBA seeks to measure not just the net benefits but also the net costs of a project. Equally, through a CBA framework, it is possible to measure multiple costs and benefits derived from a project.

This CBA was carried out using a discounted cashflow (DCF) approach to analyse all costs and benefits that would occur if the project were to proceed. In this sense, two scenarios were considered, a baseline ('without the project') scenario and a 'with the project' scenario. The CBA considered the effect of real costs and benefits, which excludes inflation, taxes or subsidies.

The geographic boundary for this assessment is the Shire of Nannup.

In a CBA framework, decisions are made based on two criteria, net present value (NPV) and the benefit cost ratio (BCR). The NPV shows the difference between the present value of all future benefits and all future costs. The BCR is calculated by dividing the present value of future benefits by the present value of the future costs. In such a manner a project is deemed 'desirable' if the NPV is positive and the BCR is above '1'. In general, if the NPV is negative and the BCR is below '1', the project is deemed as undesirable as the future costs will outweigh the future benefits.

5.2 Definition of Costs and Benefits

The assumptions underpinning the CBA model are highlighted in Table 5.1.

Table 5.1: Definition of Costs and Benefits, Nannup Trails Town Project

Impact	Description	Assumption	Source
Costs			
Capital Expenditure	Cost of new infrastructure for Stages 1-4 as outlined in Section 3.1	<ul style="list-style-type: none"> \$5.5 million in capital expenditure over all stages 	Three Chillies (2020), Shire of Nannup (2020)
Maintenance Costs	Ongoing maintenance costs associated with maintaining the new infrastructure	<ul style="list-style-type: none"> \$97,500 per year (once fully developed), 1.5% of capital expenditure 	Shire of Nannup (2020)
Benefits			
Tourism Benefits	Increase in visitation to Nannup through the deployment of infrastructure across Stages 1-4	<ul style="list-style-type: none"> Estimated increase of 20,015 visitors (once fully developed) Estimated increase of 55,512 visitor nights (once fully developed) Estimated total increase in visitor expenditure of \$10.8 million once fully developed Estimated increase in direct gross value added (net of input costs) of \$3.0 million once fully developed 	TRA (2020) Shire of Nannup (2020) Lucid Economics

Source: Lucid Economics

5.3 Results

The results of the CBA for the Nannup Trails Town Project are highlighted in the following table (Table 5.2).

Table 5.2 Present Values of Costs and Benefits, 2020/21 – 2040/41 (\$m)

	Discount Rate (4%)	Discount Rate (7%)	Discount Rate (10%)
Benefits			
Tourism Benefits	\$44.8	\$33.7	\$26.1
Health Benefits	\$0.0	\$0.0	\$0.0
Total Benefits	\$44.8	\$33.7	\$26.1
Costs			
Construction Cost	\$5.2	\$5.0	\$4.8
Maintenance	\$1.2	\$0.9	\$0.7
Total Costs	\$6.3	\$5.8	\$5.4
Net Present Value			
NPV	\$38.5	\$27.8	\$20.7
Benefit to Cost Ratio			
BCR	7.1	5.8	4.8

Source: Lucid Economics

At the selected real discount rate of 7% for this project, the analysis yields a Benefit to Cost Ratio (BCR) of 6.2 meaning that it is economically desirable and provides a net benefit. Even at the higher discount rate of 10%, the project still yields a positive NPV and BCR. At 7% discount rate, for every \$1 in costs associated with the project, there are \$5.77 of benefits.

Under the baseline scenario (without project scenario), none of the identified benefits would be captured nor any of the costs incurred. As such, the scenario with the project provides positive economic and social benefits.

6. Summary

The analysis has demonstrated that the Nannup Trails Town project will bring numerous benefits to the local community, creating an important catalyst for the local tourism sector. As part of the recovery from the COVID-19 crisis, growing the local tourism sector can provide immediate benefits for local businesses.

References

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Lucid Economics Pty Ltd

www.lucideconomics.com.au

info@lucideconomics.com.au