


Pathways Forward

Works Plan 2026-2036

Projects Listing



Document Control		 Shire of Serpentine Jarrahdale			
Version No	Date	Revision Details	Author	Reviewer	Approved
1	May 2025	Draft to Director	JK	Infrastructure Director	NS
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EXECUTIVE SUMMARY

Whilst the Shire of Serpentine Jarrahdale area is vast, it remains an attractive area for walking and cycling, with its quiet residential streets, locals hills and forest and the Scarp with Serpentine and Wungong Gorges being the notable landscape features. However, the local walking network in the Shire of Serpentine Jarrahdale area has a lot more potential.

The Shire maintains 177 kilometers of pathways with a replacement cost of \$30,834,296 as of 30th June 2024. The 10 year Long Term Financial Plan (LTFP) has allocated funds of \$55,000 per year from 2025/26 for Capital path works.

The Shire 2020 Walking and Cycling Plan (WCP) 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.

The implementation program of the 2020 WCP lists each individual path link contained within the plan by locality. Each link is identified by location, category, timing, responsible agency, path distance and cost estimate.

Most of the strategic improvements identified in the Path Asset Management Plan, Version 5 (AM Plan) and 2020 Walking and Cycling Plan are underway and will likely be completed beyond 2030. Further improvements have been identified that will enhance future revisions of the plan and provide greater financial alignment with the LTFP.

The Pathways Forward Works Plan (PFWP) covers the 2026 - 2036 year period and includes the footpaths more than 10-year-old inspected in 2023, incomplete Shire funded projects included in WCP 2020, and new proposed missing links within the Shire. The condition ratings were established as a result of the footpath network assessment completed in the 2023.

The condition assessment was measured using the Western Australia Local Government Association's (WALGA) 1 – 5 path grading system with condition grading 1 to 2 being Very Good to Good, 3 being Fair and 4 to 5 being Poor to Very Poor respectively.

The Footpath condition audit completed in 2023 only included footpath assets older than 10 years old at that time. These paths will again be audited along with additional older than 10-year-old paths in 2026/27 in accordance with the Asset Management Strategy timeframes.

Also, several roads have been identified that do not have paths. These paths need to be considered and prioritised so that additional path infrastructure is developed to fill any missing links in the path network and to connect various key destinations.

Plan vision and objectives

The PFWP has been developed to align with the Shire's broad strategic vision, as set out in the Shire's Serpentine Jarrahdale 2050 document and Shire's Council Plan 2017/27, and community expectations as determined through community consultation for the additional path infrastructure to complete any missing links in the path network.

The PFWP is a program of footpath capital projects anticipated to be undertaken by the Shire in the future. The plan will be reviewed on a 2 yearly basis and has been developed based on the following principles:

- The Shire has considered the renewal of footpath assets and will ensure they are maintained in good condition in the future.
- The amount of funding the Council allocates to Capital Works is based on what the Council can afford and is sustainable in the future.
- Planning for new footpath assets in alignment with the needs of the Shire and the Council's capacity to construct identified missing links and additional treatment to improve the connectivity and safety of the infrastructure

The PFWP will guide the Infrastructure Service Directorate to continuously improve services provided, establishing best practice strategic and operational asset management methodologies across people, processes and systems.

Asset Data & Condition Analysis

The key messages from the PFWP are summarised below:

- 93.3% of the Shire's inspected footpath network is in good condition, rated as either a 1 or a 2. (Very Good or Good).
- 4.6% of inspected footpath surface have reached the renewal intervention level of condition 3 (Fair).
- The higher risk rated footpath assets 2.2% (condition 4 & 5), have mostly been completed by Shire Operations Maintenance Department.
- Footpath sites which are not included in the Visual Inspection Footpath Condition audit completed in 2023 and which are now older than 10 years need to be inspected and audited in 2026/27.
- 12.40 kilometres of footpaths have been identified as a missing links on local roads in the path network and to connect various key destinations.

Level of Service and Risk Management

Level of Service is defined service qualities for all path asset maintenance and renewal against their performance. Service levels relate to the footpath quality, reliability, responsiveness and acceptability measured through the community perceptions survey which was completed in 2022. Community satisfaction of the Shire's Footpaths, trails and cycleways condition and maintenance service is low, with 40% of those surveyed rates those assets performance either terrible or poor.

The Shire recognises the importance of its responsibility to manage path assets to achieve optimum asset life whilst maintaining the level of service and risk monitoring, managing the risk based on updated condition ratings. The higher risk rated footpaths and missing links have been examined and project developed to form the PFWP.

Financial Analysis

The current LTFP has the allocated funds identified from the 2025/26 financial year of \$55,000 per year, which is insufficient to undertake new capital footpath projects each year. The LTFP allocation of \$55,000 per year can be only used to maintain footpath assets which scored 3 and 4 in the Visual Inspection Footpath Condition audit completed in 2023.

The Implementation Program of the 2020 WCP proposed 90 projects with a targeted implementation as short (before 2025), medium (2025-2030) and long term (after 2030).

Only 33 Projects (37%) have been completed by 2025 and \$13.43Mil is required to complete “before 2025” proposed projects. Furthermore, missing footpath links of 12.4 kilometres, which are not included in 2020 WCP required an estimated fund of \$8.2Mil.

To continue to deliver path audit priorities and network upgrades, PFWP propose to:

- Continue to seek Municipal footpath maintenance budget each year to address audit priorities, \$297k proposed for 2025/26 FY (incl internal costs),
- Seek external funding opportunities from Government agencies as funding opportunities arise, e.g. WABN grants. Where successful, seek Municipal 50/50 contribution on an as needs basis each year,
- Continue to condition installation of links on development and subdivision approvals, as required and justified,
- From 2026/27 onwards the LTTP currently has a total of \$55k per year for capital path projects. Propose to increase this figure in future years.

1. Introduction

1.1. Background

This PFWP has been developed to assist the Infrastructure Services Business Unit to outline the management of path assets, compliance with regulatory requirements and to highlight the funding required to provide the appropriate Levels of Service.

The PFWP is to be read in conjunction with the following associated Shire documents:

- Council Plan 2023-2033
- Paths Asset Management Plan Version 5, January 2019
- Shire of Serpentine Jarrahdale Local Trail Plan, October 2019
- Shire of Serpentine Jarrahdale Walking and Cycling Plan – February 2020
- Community Perception Survey – November 2022
- Footpath Condition Survey 2023

1.1.1. Council Plan 2023-2033

The Council Plan 2023-2033 outlines the Council’s strategic priorities and long-term vision, shaped through the community input via workshops, surveys, and the Your Say SJ platform.

The key initiatives that the community would like to see implemented over the 2024-2028 period are improvements to maintenance and investment in roads and footpaths, which focus on connectivity within communities.

In addition to maintaining the existing levels of service, the Corporate Business Plan outlines the need for the completion of several new initiatives for implementation over the four-year period.

The project and activities occurring within the 2024-2028 period are:

- Hypergrowth Road Upgrades – Kargotich and Orton Road;
- 8 endorsed Federal and State Blackspot Road Upgrades;
- 5 endorsed Metropolitan Regional Road Group Upgrades;

- New Carpark for Gooralong Trail Precinct;
- Roads Forward Works Plan;
- **Footpath Forward Works Plan;**
- Development and maintenance of maintenance schedule for playgrounds, verges, facilities, parks, and gardens.

1.1.2. Paths Asset Management Plan Version 5, January 2019

The AM Plan endorsed by Council in January 2019 outlines all the tasks and resources required to manage and maintain the Shire's path infrastructure network to an agreed level of service, in consultation with the community's expectations.

The path infrastructure network comprises of:

- Footpaths and Shared Paths – 177km

These infrastructure assets have a replacement value of \$30.8Mill as of 30th June 2024. Figure 1.1 is a copy of Figure 3.3.1: Projected and LTFP Budgeted Renewal Expenditure taken from the AM Plan showing the projected renewals expenditure over the 20 years of the AM Plan

Figure 3.3.1: Projected and LTFP Budgeted Renewal Expenditure

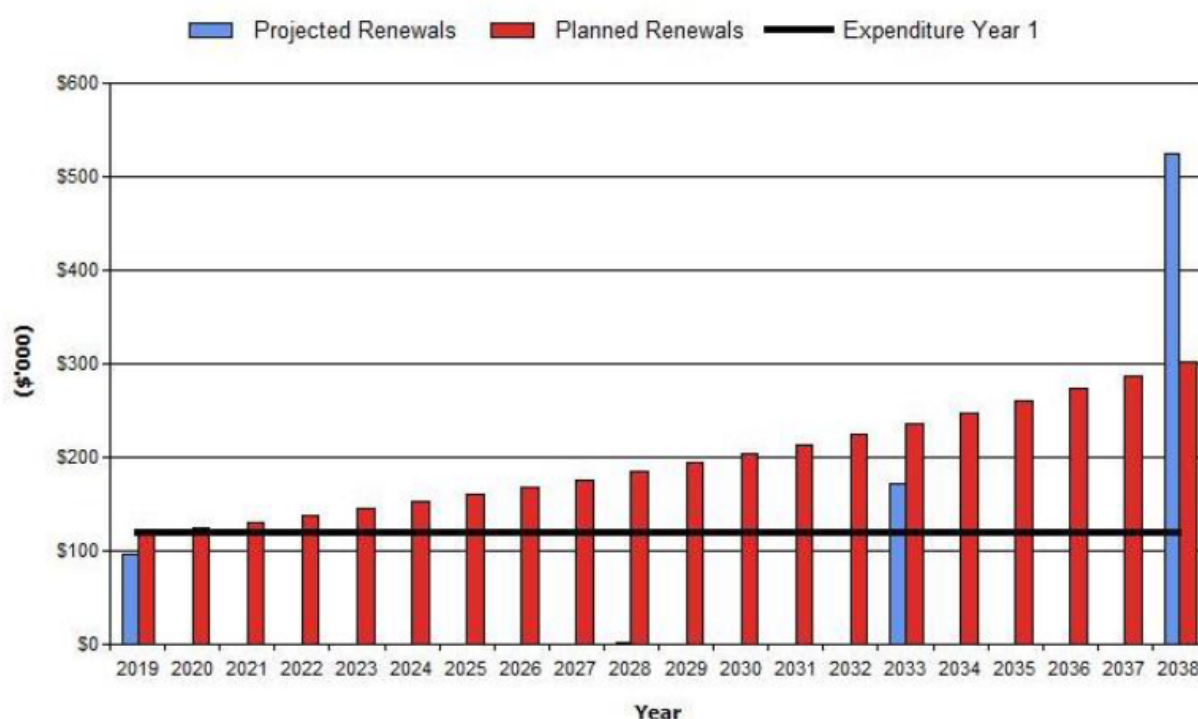


Figure 1.1 - Projected and LTFP Budgeted Renewal Expenditure 2019

The projected asset renewal and replacement expenditure is compared to renewal and replacement expenditure in the capital works program, which is accommodated in the long-term financial plan.

A gap between projected asset renewal/replacement expenditure and amounts accommodated in the LTFP indicates that the Shire will not be able to sustain its current level of service. The result will be the deterioration in condition of the assets which will have a subsequent effect on the function of the pathways.

Providing services in a sustainable manner will require matching of projected asset renewal expenditure to meet agreed service levels with the corresponding capital works program accommodated in the LTFP.

1.1.3. Shire of Serpentine Jarrahdale Local Trail Plan, October 2019

The Local Trail Plan 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 focussed on drawing visitors into the region should make the most of the iconic landscape experiences on offer.

The opportunities surrounding the township, and the existing path infrastructure and services provided make the Shire suited to trail town development in the future and this should be considered in all planning. Expanding the existing path network there is potential to link existing and new planned trails.

1.1.4. Shire of Serpentine Jarrahdale Walking and Cycling Plan

In 2020, the Shire endorsed a Walking and Cycling Plan (WCP), which 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.

A set of key principles have been developed for the Shire to follow in the development of an economically efficient walking and cycling network in the Shire. These are as follows:

- Complete key missing links;
- Avoid duplication – particularly in the case of complimentary infrastructure projects;
- Ensure works by others (including urban development and road construction) contribute to the development of the network; and
- Focus on local improvements very close to major trip attractors and generators (e.g. schools, town centers, employment hubs and key tourism/activity nodes).

The implementation program of 2020 WCP lists each individual path link contained within the plan by locality. Each link is identified by location, category, timing, responsible agency for funding, path distance and a conservative cost estimate.

The Plan proposed 90 projects with targeted implementation dates set as short (before 2025), medium (2025-2030) and long term (after 2030). Table 1 below is a summary of proposed projects and number of projects completed before 2025 by location.

Location	Proposed Projects	Completed Projects by 2025	%
Byford	41	20	49%
Cardup	6	0	0%
Tonkin Highway Extension	3	0	0%
Hopeland	1	0	0%
Jarrahdale	9	3	33%
Keysbrook	1	0	0%
Mundijong	12	7	58%
Serpentine	9	3	33%
Wandi	1	0	0%
Whitby	7	0	0%
TOTAL:	90	33	37%

Table 1 - Summary of the Shire Funded path assets proposed & completed “before 2025”

1.1.5. Community Perception Survey – November 2022

The Community Perceptions Survey allows Council to receive an overview of the organisations performance in service delivery and provides Council with further input from the community to consider in the delivery of the Strategic Community Plan and annual budgets.

In September 2022 Shire Officers engaged the services of Catalyse Pty Ltd to undertake the 2022 community perceptions survey in line with the requirements of Council Policy 1.3.4 Community Perception Survey.

The community perception survey sought to:

- Measure overall perceptions of the Shire of Serpentine Jarrahdale
- Evaluate community perceptions of selected services and facilities
- Identify community priorities
- Determine whether perceptions differ across the community (by selected geo-demographics such as age, gender, where they live, etc.); and whether these differences are statistically significant.

Through the 2022 Community Perception Survey results, building and maintaining footpath, trails and cycleways network were identified as priorities by the community.

Figure 1.2 is a copy of Community Priorities inserted from the Community Perception Survey 2022 showing the Community driven actions and Community Voices.

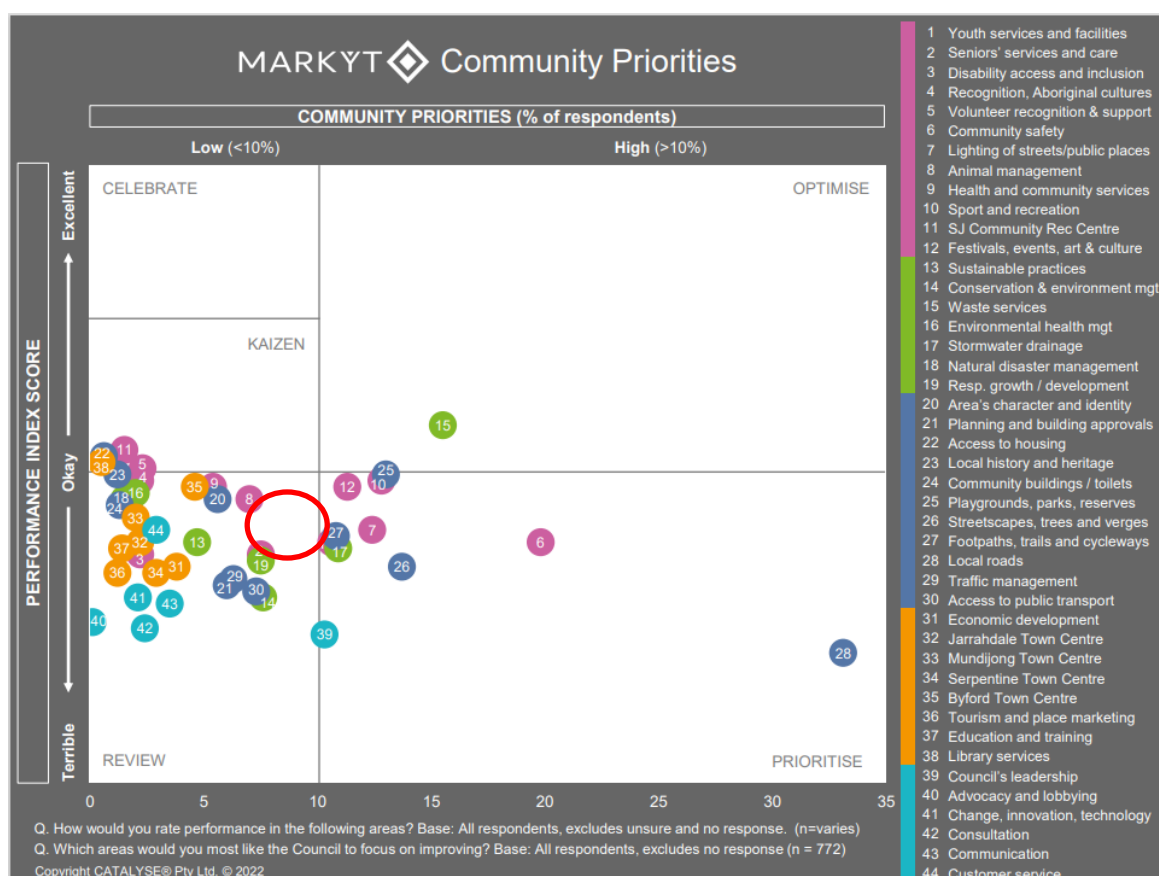


Figure 1.2 - Community Priorities

1.1.6. Footpath Condition Survey 2023

A comprehensive surface condition assessment of paths more than 10 years old was completed in 2023. The condition assessment involved a visual inspection of the path network to record defects such as poor surface texture, cracking, gaps between sections and risk of public injury due to surface deflection.

The condition assessment is measured using WALGA's 1 – 5 grading system with condition grading 1 to 2 being Very Good to Good, 3 being Fair and 4 to 5 being Poor to Very Poor.

Condition Grading	Description of Condition
1	Very Good: only planned maintenance required
2	Good: minor maintenance required plus planned maintenance
3	Fair: significant maintenance required
4	Poor: significant renewal/rehabilitation required
5	Very Poor: physically unsound and/or beyond rehabilitation

Table 2 - Simple Condition Grading Model

The condition survey of the Shire's path network completed at 702 path sites, and table below demonstrates the paths condition in according to Condition Grading.

Number of Inspected Sites	Condition 1 Very Good	Condition 2 Good	Condition 3 Fair	Condition 4 Poor	Condition 5 Very Poor
702	465	190	32	11	4
%	66.2%	27.1%	4.6%	1.6%	0.6%

Table 3 - Summary of road condition survey 2023

From the above table it can be seen that 93.3% of the Shire's inspected paths network were in good condition in 2023, rated as either a 1 or a 2. (Very Good or Good), and only 6.8% of inspected paths have reached the renewal intervention level of condition 3 (Fair).

The Footpath condition audit completed in 2023 only included footpath assets older than 10 years at that time. These paths will again be audited along with additional older than 10-year-old paths in 2026/27 in accordance with the Asset Management Strategy timeframes.

2. Methodology

Based on the Shire's current Asset Management Strategy, the Footpath condition audit data provides information such as risk of public injury due to path surface defection, outcomes from WCP implementation program and complete key missing links. The following methodology was adopted to create the FWP:

- **Identification of infrastructure renewal needs** - Review of the Visual Inspection Footpath Condition Data completed in 2023 and identified through an ongoing planning process focusing on ten-year and beyond timeframes.
- **WCP – Implementation Program - Shire incomplete Projects** - Review of the WCP – Implementation Program adopted in February 2020 and identified Shire funded incomplete projects focusing on targeted implementation dates set as short (before 2025), medium (2025-2030) and long term (after 2030).
- **Identification of key missing links** - Focus on local improvements very close to major trip attractors and generators (e.g. schools, town centers, employment hubs and key tourism/activity nodes).
- **Business Planning** - Involved justification of the project considering capital costs, funding sources (the role of the Shire) and public consultation.
- **Funding method resource allocation** - Determine funding methods, which may involve government grants and opportunities for public-private partnerships.

3. Project Identification and Priorities

3.1 Path Condition Grading and infrastructure renewal needs

Path condition grading was applied to develop projects and form the PFWP. Sites have been identified from a comprehensive surface condition assessment of paths more than 10 years old completed in the 2022/23 financial year.

The condition assessment involved a visual inspection of the path network to record defects such as poor surface texture, cracking, gaps between sections and risk of public injury due to surface defection.

The PFWP considered only paths rated condition 3, 4 & 5, where the Condition 4 and 5 was analysed in detail and the path projects were defined. 9.6 kilometers and 47 projects, which make up this PFWP, have been developed.

Upgrade of the higher risk rated path assets 2.2% (condition 4 & 5) have now mostly been completed by the Shires Operations Team as part of the footpath maintenance program, working off the asset maintenance schedule data in OneComm.

The table below shows a summary of roads and projects by Condition 3, 4 & 5 Grading.

#	ASSET No.	ROADS	LOCATION	LENGTH (M)	COND. RATING	COST ESTIMATE	NOTE
1	40061669	Clondyke Dr, Byford	Lot 115 Clondyke Dr(Within the park)	19.63	5		Completed
2	40061674	Clondyke Dr, Byford	Lot 115 Clondyke Dr(Within the park)	21.34	5		Completed
3	40061677	Clondyke Dr, Byford	Lot 115 Clondyke Dr(Within the park)	145.73	5		Completed
4	40063160	Warrington Rd, Byford	#4 Warrington Rd to Colesbrook Dr	39.05	5		Completed
5	40061643	King Jarrah Cir, Jarrahdale	60 King Jarrah Circle (Reserve)	15.08	4		Included in
6	40061662	Coulterhand Cir, Byford	Lot 115 Clondyke Dr(Within the park)	111.84	4		Completed
7	40061663	Clondyke Dr, Byford	Lot 115 Clondyke Dr(Within the park)	12.67	4		Completed
8	40061668	Burgess Dr, Byford	Lot 115 Clondyke Dr(Within the park)	200.78	4		Completed
9	40061673	Clondyke Dr, Byford	Lot 115 Clondyke Dr(Within the park)	382.83	4		Completed
10	40061678	Clondyke Dr, Byford	Lot 115 Clondyke Dr(Within the park)	59.43	4		Completed
11	40061679	Clondyke Dr, Byford	Lot 115 Clondyke Dr(Within the park)	137.23	4		Completed
12	40061806	Nettleton Rd, Byford	Sout Western Hwy to Millbrace Glen	437	4		Completed
13	40062956	Wellard St, Serpentine	Wellard St from #42 to #50 east	71.82	4	\$ 74,000	
14	40062957	Wellard St, Serpentine	Wellard St from #26 to #42 east	137.49	4	\$ 300,000	
15	40062999	Lefroy St, Serpentine	Wellard St to Tonkin St	185.08	4	\$ 77,000	
16	40061595	Malarkey Rd, Byford	Shine Rd to Racy Prince Ct	254.54	3	\$ 144,000	
17	40061628	Old Brickworks Rd, Byford	Waterside Pass to White Gum Rise	418.87	3	\$ 232,000	
18	40061629	Marginata Pde, Jarrahdale	Atkins St to Carex Walk	254.14	3	\$ 1,440,000	
19	40061635	Old Brickworks Rd, Byford	Nettleton Rd to Waterside Pass	311.71	3	\$ 172,000	
20	40061636	Marginata Pde, Jarrahdale	Carex Walk to Darwinia Ct	144.09	3	\$ 107,000	
21	40061644	King Jarrah Cir, Jarrahdale	King Jarrah Cir - all footpath in park	630.99	3	\$ 450,000	
22	40061648	Hall Rd, Serpentine	Karnup Rd to Beacham Rd	408.69	3	\$ 234,000	
23	40061652	Marginata Pde, Jarrahdale	Darwinia Ct to King Jarrah Cir	379.2	3	\$ 215,000	
24	40061653	Coral Vine Loop, Jarrahdale	King Jarrah Cir to Ghost Gum Hts	246.3	3	\$ 160,000	
25	40061670	Clondyke Dr, Byford	Lot 115 Clondyke Dr(Within the park)	19.53	3		Completed
26	40061681	Clondyke Dr, Byford	Lot 115 Clondyke Dr(Within the park)	16.36	3		Completed
27	40061763	Quinine Cr, Byford	Madeira Turn to Peach Street	48.29	3	\$ 76,000	
28	40061808	Nettleton Rd, Byford	Millbrace Glen to Old Brickworks Rd	289.49	3	\$ 152,000	
29	40061809	Karnup Rd, Serpentine	Karnup Rd - from #1587 to #1621	547	3	\$ 298,000	
30	40061829	Madeira Turn, Byford	Portwine Av to Redcurrant St	71.52	3	\$ 78,000	
31	40061849	Watkins Rd, Mundijong	25M After Cowen St to Lupino St	201.87	3	\$ 136,000	
32	40061850	Watkins Rd, Mundijong	Lupino St to Rose Rd	188.76	3	\$ 132,000	
33	40061869	Hall Rd, Serpentine	Leslie St to Wattle Rd	1429.6	3	\$ 584,000	
34	40061952	Benalla Cr, Byford	Vickers Pass to Bandin Way	287.9	3	\$ 170,000	
35	40061961	Benalla Cr, Byford	Benalla Cr to Enfield Elbow	45.1	3	\$ 77,000	
36	40062021	Bren Cl, Byford	Diamantina Bvd to Quiberon Link	148.19	3	\$ 115,000	
37	40062022	Quiberon Link, Byford	Vickers Pass to Bandin Way	261.46	3	\$ 174,000	
38	40062727	Coulterhand Cir, Byford	Lot 115 Coulterhand Cir	241.1	3		Completed
39	40062749	Atkins St, Jarrahdale	Atkins St to Marginata Parade	76.37	3	\$ 84,000	
40	40062756	Atkins St, Jarrahdale	Atkins St to Marginata Parade	98.84	3	\$ 91,000	
41	40062941	Wanliss St, Jarrahdale	Wanliss St to Cousens St	7.68	3	\$ 28,000	
42	40062952	Munro St, Jarrahdale	Jarrahdale Rd to Munro St, Driveway	43.37	3	\$ 49,000	
43	40062968	Wellard St, Serpentine	Lefroy St to Recreation Centre	36.72	3	\$ 42,000	
44	40063024	Lefroy St, Serpentine	Fairbairn Rd to Rangeview Loop	126.4	3	\$ 74,000	
45	40063138	Clifton St, Byford	South Western Hwy to #9 Clifton St	68.26	3	\$ 63,000	
46	40063155	Amy St, Byford	Clifton St to Beenypur Rd	135.09	3	\$ 79,000	
47	40063157	Edward Cr, Byford	Blytheswood Av to Byford Dr	202.68	3	\$ 114,000	
						TOTAL: \$ 6,221,000	

Table 4 – Condition Grading 3, 4 & 5 Projects

3.2.WCP – Implementation Program - Shire incomplete Projects

This WCP which was adopted by Council in February 2020 integrates a broad analysis to formulate a vision for walking and cycling within the Shire. The Plan sets out that broad vision, along with an interim and long-term aspirational walking and cycling network for the Shire.

The Shires ultimate Walking and Cycling Network is shown overleaf as Figure 1. in WCP. Key recommendations of the WCP include:

- Completion of **Primary Routes** along Tonkin Highway, the South West Railway and Rowley Road (mostly as part of large infrastructure projects by State Government Agencies),
- Completion of **Secondary Routes** between the Shire's urban centres, mainly along east-west roads. These are expected to be funded through grants, road construction projects and developer contributions,

- Completion of **Local Routes** to provide access to community facilities, shops and to facilitate leisure cycling within existing and emerging residential areas.

The proposed ultimate path network is detailed within Figure 3.1 provided in Appendix A.

The implementation program (Appendix B – Figure 3.2) has been developed that lists each individual path link contained within the plan by locality and listed responsible agency for funding.

Tables 5, 6 and 7 below detail the WCP projects yet to be completed.

There are seven incomplete Shire funded paths projects included in WCP – Implementation Program scheduled for Completion “Before 2025”.

\$13.43Mill (per cost estimate completed in 2020) funding is required to complete “before 2025” outstanding projects. The Table 5 below shows a summary of those projects.

#	Location	Road	Recommendation	Actions	Estimated Cost	Year/Priority
1	Byford	Gordin Way	Install link from aged care facility to connect to existing path along Soldiers Rd	Install concrete path on Gordin Way to connect to existing concrete path that ends at corner of Soldiers Rd/Gordin Wy	\$114,800	2025/26
2	Serpentine	Falls Road	Create trail route to Serpentine Falls	To be developed either as a trail route or as a secondary route	\$1,433,700	2025/26
3	Serpentine	Karnup Road East	Install link between railway and SW Hwy	Install shared red asphalt path	\$1,109,700	2025/26
4	Byford	South Western Highway	Install link between Beenyup Road and Wilaring Street	Install shared red asphalt path	\$696,110	
5	Byford	Eleventh Road	Install link from the PSP to SW Hwy	Install shared red asphalt path	\$558,700	
6	Cardup	Cardup Siding Road and path	Connect existing path to Tonkin Hwy extension PSP and Soldiers Rd PSP and facilitate its use	Install shared red asphalt path and remove gates at each end and replace with bollards	\$483,200	
7	Byford	Rowley Road	Construct path from western Shire boundary to connect to Armadale Line extension PSP	Install shared red asphalt path	\$9,039,600	
TOTAL:					\$13,435,810	

Table 5 – WCP Implementation Program - Shire incomplete Projects Scheduled for Completion “Before 2025”

\$1.5M (Election promise) for Karnup Rd & Falls Rd and \$185K (Municipal Funded) for Gordin Way are currently proposed in the 2025/26 draft budget.

Fourteen incomplete projects scheduled for Completion between 2025 and 2030 are presented in Table 6 below. \$17.13Mill (per cost estimate completed in 2020) funding is required to complete those projects.

2020 Walking & Cycling Plan - Implementation Program - 2025 - 2030 Shire Funding Projects						
#	Location	Road	Recommendation	Actions	Estimated Cost	Year/Priority
1	Byford	Stanley Road	Install link between Larsen and Linton Street	Install shared red asphalt path	\$604,000	
2	Jarrahdale	Oak Way	Install a link between local paths	Extend concrete path	\$101,500	
3	Jarrahdale	Kingsbury Drive	Install a link between Jarrahdale Rd and George St	Extend concrete path	\$156,800	
4	Jarrahdale	Brady Road	Install a link between Jarrahdale Rd and George St	Extend concrete path	\$192,500	
5	Jarrahdale	Millars Road	Install a link between Jarrahdale Rd and Rail Trail	Install shared red asphalt path	\$1,434,500	
6	Byford	Warrington Road	Install link between Abernethy and Orton Roads	Install shared red asphalt path	\$1,238,200	
7	Byford	Nicholson Road N	Install link between Rowley and Thomas Roads	Install shared red asphalt path	\$2,138,400	
8	Darling Downs	Masters Road	Install link between Rowley and Thomas Roads	Install shared red asphalt path	\$2,249,900	
9	Byford	Linton Street	Install link between SW Hwy and Beenyp Rd	Install shared red asphalt path	\$2,023,400	
10	Byford	Orton Road East	Install link between Tonkin Hwy PSP and SW Hwy	Install shared red asphalt path	\$2,511,000	
11	Byford	Orton Road central	Install link between Kargotich Road and Tonkin Hwy PSP	Install shared red asphalt path	\$1,411,850	
12	Cardup	Bishop Road	Complete link between future Tonkin Highway and Rail Primary Routes	Install shared red asphalt path	\$1,381,650	
13	Mundijong	Richardson Street west	Install link between Butcher Street and Tonkin Hwy PSP	Install link between Butcher Street and Tonkin Hwy PSP	\$936,200	
14	Whitby	South Western Highway	Install link between Falls Rd and Keirnan St	Install shared red asphalt path	\$748,960	
TOTAL:					\$17,128,860	

Table 6 – 2020 WCP Implementation Program - Shire incomplete Projects Scheduled for Completion “2025 - 2030”

Table 7 below shows a summary of those projects scheduled for completion after 20230 at an estimated cost of \$40.2Mill.

2020 Walking & Cycling Plan - Implementation Program - After 2030 Shire Funding Projects						
#	Location	Road	Recommendation	Actions	Estimated Cost	Year/Priority
1	Mundijong	Adonis Street	Install link between Cockram Street and Mundijong Road	Install shared red asphalt path	\$641,750	
2	Serpentine	Hardey Road	Install link between Leslie St and Lefroy Rd	Install shared red asphalt path	\$644,015	
3	Byford	Orton Road West	Install link between Kargotich and Nicholson Roads	Install shared red asphalt path	\$4,884,850	
4	Byford	Abernethy Road west	Construct path from Kargotich Road to Nicholson Road	Install shared red asphalt path	\$2,038,500	
5	Byford	Nicholson Road South	Install link between Thomas Roads and Mundijong Roads	Install shared red asphalt path	\$8,626,500	
6	Cardup	Gossage Road	Install link from Tonkin Hwy to Shire's western boundary	Install shared red asphalt path	\$6,828,300	
7	Cardup	Cardup Siding Road	Install link from Railway PSP to Tonkin Hwy PSP	Install shared red asphalt path	\$2,091,350	
8	Cardup	Bett Road	Install link between Orton Rd and New East-west Road	Install shared red asphalt path	\$3,246,500	
9	Keysbrook	Elliott Road	Install a link between Primary route and SW Hwy	Install shared red asphalt path	\$551,150	
10	Mundijong	Mundijong Road	Install link from Railway PSP to Shire's western boundary	Install shared red asphalt path	\$7,265,700	
11	Serpentine	Karnup Road West	Install link between Railway PSP and Tonkin Hwy PSP	Install shared red asphalt path	\$3,426,300	
TOTAL:					\$40,244,915	

Table 7 – 2020 WCP Implementation Program - Shire incomplete Projects Scheduled for Completion “After 2030”

3.3. Identification of key missing links

Over time, the Shire should incrementally deliver a footpath on at least one side of every access road within every town site. This is particularly the case within established parts of Byford, Cardup, Mundijong, and Serpentine.

However, it was noted that there are numerous missing connections where new developments are yet to occur. Missing connections discourage people from choosing walking and cycling for particular journeys if they perceive that it will be difficult or unsafe

The development of routes should focus on key missing links between trip generators (housing and public transport stops) and trip attractors (schools, shops, and community facilities). These paths need to be considered and prioritised so that additional path infrastructure is developed to fill any missing links in the path network and to connect various key destinations.

A further 12.40 kilometers of footpaths have been identified as being missing links in the path network to connect various key destinations within the Shire. Preliminary cost estimates indicate \$8.20M is required for completion of these missing links.

The PFWP consider the missing link projects as a lower priority order for funding and delivery following delivery of the nominated renewal path projects and incomplete projects from the WCP 2020. Community consultation on the proposed missing links plan will be undertaken prior to delivery on the site.

The Tables below show a summary of proposed missing links projects by location.

Byford Missing Links & Projects by Location						
#	Roads	Location	Road 1	Road 2	Length M	Estimated Cost
1	Catherine Street	Byford	Beenup Rd	Clifton St	160	\$ 132,000
2	Blytheswood Road	Byford	Helen Cr	Linton St N	270	\$ 145,000
3	Blytheswood Road	Byford	Helen Cr	John Cr	130	\$ 94,000
4	Brown Street	Byford	Helen Cr	Burrell St	360	\$ 214,000
5	Kardan Bvd	Byford	Koolbardi Loop	Koolbardi Loop	240	\$ 177,000
6	Hunt Rd	Byford	Ballagar Rd	Pomera Dr	95	\$ 78,000
7	Batty Rd	Byford	Ballagar Rd	Ballawarra Av	200	\$ 127,000
8	Waterside Pass	Byford	Old Brickworks Rd	End of Waterside Pass	720	\$ 387,000
9	Soldiers Rd	Byford	Cardup Siding Rd	Pinebrook Rd	130	\$ 110,000
10	Eurythmic Rd	Byford	Delianuova St	Briggs Rd	190	\$ 143,000
11	Briggs Rd	Byford	Eurythmic Rd	Caspian Ch	240	\$ 169,000
12	Briggs Rd	Byford	Binshaw Av	Larsen Rd	400	\$ 275,000
13	Briggs Rd	Byford	#27 Briggs Rd	Abernethy Rd	250	\$ 178,000
14	John Cr	Byford	Park Rd	Park Rd	300	\$ 233,000
15	Binshaw Av	Byford	#24A Binshaw Av	Thatcher Rd	150	\$ 115,000
16	Thatcher Rd	Byford	Binshaw Av	Abernethy Rd	720	\$ 429,300
TOTAL:					4555	\$ 3,006,300

Table 8 – Byford Missing Links

Cardup Missing Links & Projects by Location						
#	Roads	Location	Road 1	Road 2	Length M	Estimated Cost
1	Soldiers Rd	Cardup	Pinebrook Rd (red seal shoulder)	Bishop Rd footpath	3264	\$ 2,154,240
TOTAL:					3264	\$ 2,154,240

Table 9 – Cardup Missing Links

Mundijong Missing Links & Projects by Location						
#	Roads	Location	Road 1	Road 2	Length M	Estimated Cost
1	Tonkin St	Mundijong	Rigoll Ct	Baskerville Rd	210	\$ 138,600
2	Baskerville Rd	Mundijong	Tonkin St	Livesey St	400	\$ 264,000
3	Butcher St	Mundijong	Cockram St	Richardson ST	470	\$ 310,200
TOTAL:					1080	\$ 712,800

Table 10 – Mundijong Missing Links

Serpentine Missing Links & Projects by Location						
#	Roads	Location	Road 1	Road 2	Length M	Estimated Cost
2	Hardey Rd	Serpentine	Leslie St	Lefroy St	900	\$ 594,000
3	Tranby Av	Serpentine	Lefroy St	Lefroy St	780	\$ 514,800
4	Rangeview Loop	Serpentine	Tranby Av	Lefroy St	139	\$ 91,740
5	Fielder Rd	Serpentine	Hall Rd	Egerton Dr	113	\$ 74,580
6	Egerton Dr	Serpentine	75 Egerton Dr	Hall Rd	820	\$ 541,200
TOTAL:					2752	\$ 1,816,320

Table 11 – Serpentine Missing Links

Whitby Missing Links & Projects by Location						
#	Roads	Location	Road 1	Road 2	Length M	Estimated Cost
1	Keirnan St	Whitby	Tinspar Av	Evelyn St	200	\$ 132,000
2	Evelyn St	Whitby	Galvin Rd	Robertson Rd	540	\$ 356,400
TOTAL:					740	\$ 488,400

Table 12 - Whitby Missing Links

3.4 Financial Capacity

To continue to deliver path condition audit priorities, WCP network upgrades and proposed missing links projects Shire proposes to:

- Continue to seek Municipal footpath maintenance budget each year to address audit priorities, \$297k proposed for 2025/26 FY (incl internal costs),
- Seek external funding opportunities from Government agencies as funding opportunities arise, e.g. WABN grants. Where successful, prepare Business Cases to seek Shires contribution on a 50/50 basis each year as needed,
- Continue to condition installation of links on development and subdivision approvals, as required and justified,
- From 2026/27 onwards the LTFFP currently has a total of \$55k per year for capital path projects. Work to increase this figure in future years, to enable additional future path projects delivery.

4. Level of Service and Risk Management

4.1. Level of Service

Service levels have been defined in two terms Community Levels of Service and Technical Levels of Service.

Community Levels of Service is a measurable target which determines the type and extent of services delivered to the Community. Footpath, trails and cycleways network levels are measured internally and by the community to determine adequate provision.

The following findings have been drawn from the community perceptions survey that was completed in 2022. Community satisfaction with the Shire's path condition and maintenance level is low, with 40% of those surveyed indicating either terrible or poor (Appendix C – Figure 4.1 and 4.2).

Existing controls and expenditure to mitigate risk are considered inadequate and need to be prioritised, improving on meeting the needs of a growing population.

Technical Levels of Service supporting the community service levels are operational or technical measures of performance. These technical measures relate to the allocation of resources to service activities that the Shire undertakes to best achieve the desired community outcomes and demonstrate effective performance.

Technical service measures are linked to annual budgets allocation and the activities that return the service capability of an asset up to that which it had originally (frequency and cost of path renewal)

The key messages regarding the Level of Services that came from available references to form the PFWP are summarised below:

- The Footpath condition audit completed in 2023 only included footpath assets older than 10 years at that time. These paths will again be audited along with additional older than 10-year-old paths in 2026/27 in accordance with the Asset Management Strategy timeframes.
- The Shire did not have adequate funding to renew path assets at the end of their useful life and maintain existing path network assets to ensure consistent service delivery.
- Currently only 33 (37%) of the projects nominated in WCP 2020 due to be completed by 2025, have been completed by 2025.

4.2. Risk Management

In 2015 the Council endorsed the Shire's Strategic Risk Register and revised Council Policy Risk Management (OCM281/09/20) in which all operational and strategic risks are captured, rated, and monitored based on their level of risk.

These are important achievements towards improving the risk management processes at the Shire as they provide a mechanism for Shire Executive to manage risk at a strategic level and an avenue for the Committee and Council to monitor strategic risk through quarterly reporting.

A key strategic risk identified on the Shire's Strategic Risk Register is that the Shire does not implement Asset Lifecycle Management to obtain quality long-term asset life. Actions such as Footpath Asset Condition Survey and Pathways Renewal Program identified by Shire's Asset Management Strategy (AMS) for inclusion in LTFP, have been completed and AMP and LTFP need to be revised to achieve the objectives of the AMS.

There are currently significant risks associated with unclear level of service/community need, and Asset life cycle cost are not budgeted, rated as a Moderate risk within the Risk Register that need to be reviewed and rated to appropriate level of risk.

Further information on these risks, including their ratings, control and mitigation strategies, are detailed in Appendix C - Figure 4.3.

5. Monitoring

This PRWP will be a reference document to the Asset Management Working Group and Infrastructure Service to assist in management of the Shire's path assets.

The PFWP is a program of path capital projects driven from the report of Visual Inspection Footpath Condition Data completed in 2023, WCP – Implementation Program, Shire incomplete Projects and identified path missing links to be undertaken by the Council in the future.

The Footpath condition audit completed in 2023 only included footpath assets older than 10 years at that time. These paths will again be audited along with additional older than 10-year-old paths in 2026/27 in accordance with the Asset Management Strategy timeframes.

The PFWP will be revised and updated periodically on an as needed basis to align with the budget process and review of the Long term Financial Plan.

6. Appendices

- Appendix A - Figure 3.1 - Copy of WCP Figure 1: Proposed Ultimate Network inserted from the Walking and Cycling Plan showing the key recommendations for Shire path network**
- Appendix B - Figure 3.2 - 2020 Walking and Cycling Plan – Implementation Program**
- Appendix C - Figure 4.1 - Shire of Serpentine Jarrahdale 2022 Community Perception Survey results,
Figure 4.2 - Shire of Serpentine Jarrahdale 2022 Community Perception Survey results &
Figure 4.3 - Shire of Serpentine Jarrahdale Asset Management Strategy Risk Register**

Appendix A - Figure 3.1 - Copy of WCP Figure 1: Proposed Ultimate Network inserted from the Walking and Cycling Plan

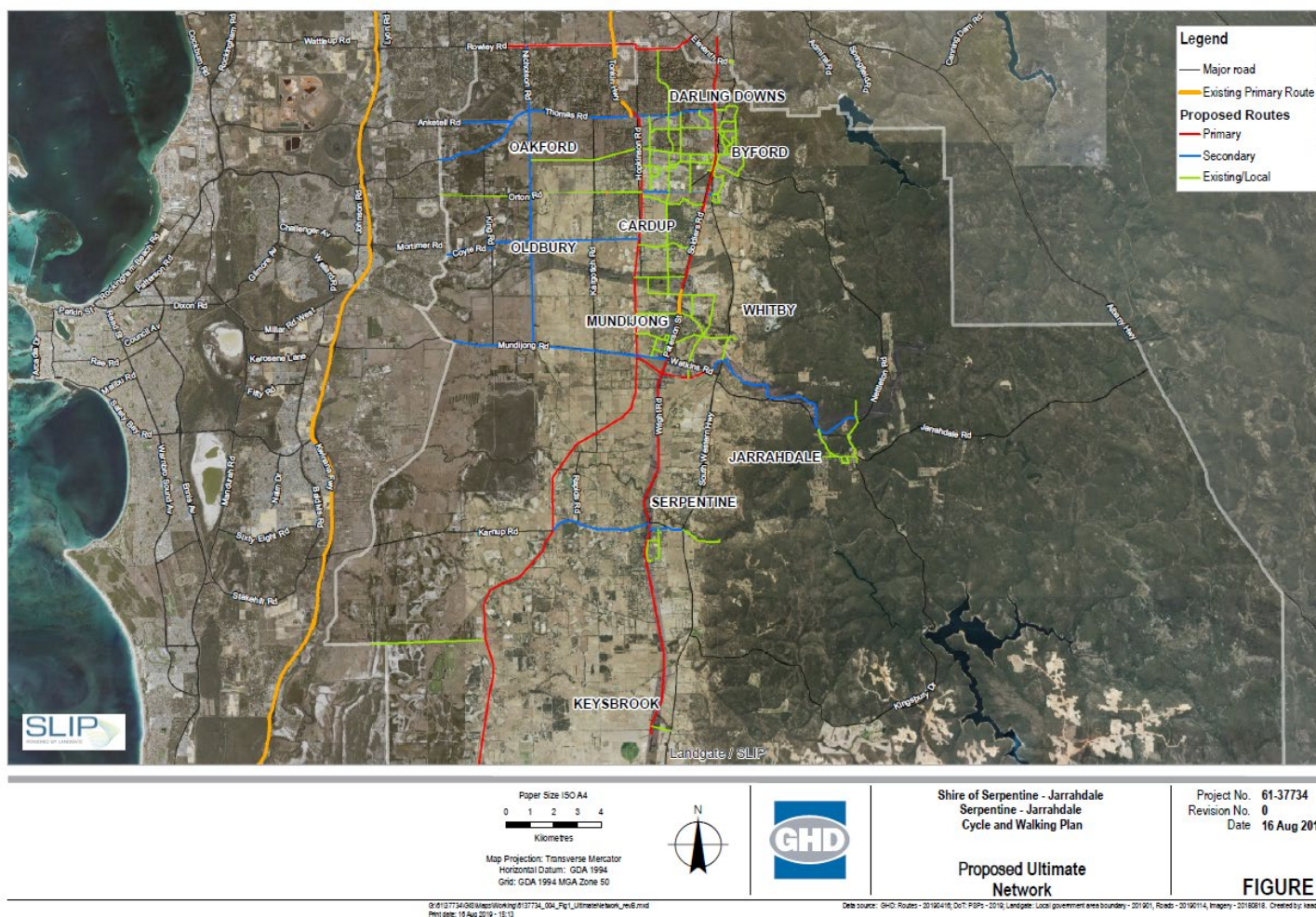


Figure 3.1 Copy of WCP Figure 1: Proposed Ultimate Network inserted from the Walking and Cycling Plan showing the key recommendations for Shire path network

Appendix B - Figure 3.2 - 2020 Walking and Cycling Plan – Implementation Program

ID	Locality	Location	Recommendation	Route Type	Specific benefits	Actions	Timing	Responsible Agency	Path Distance (m)	Preliminary Estimated Cost
Byford		Abernethy Road	Provide quality cycling link between Hopkinson Road (Future Tonkin Highway) and railway line	Secondary	Access to Byford Secondary College, future Byford Train Station, future Tonkin PSP	Install red asphalt path on south side, placing adjacent to concrete paths where they exist	Underway	Shire/DoT	3420	\$2,770,200
Byford		Plaistowe Boulevard	Link between Thomas and Larsen Roads	Local	Link through residential area	Utilise existing concrete path	Ongoing	Shire	878	N/A
Byford		Benalla Crescent/Burgess Dr/Coulterhand Cir	Install link between Wilaring Street and SW Hwy	Local	North-south link through residential area for students to get to school	Utilise existing concrete and red asphalt shared path	Ongoing	Shire	1,600	N/A
Byford		Tourmaline Boulevard	Install link between Abernethy and Orton Roads	Local	North-south link through residential area	Utilise existing concrete path. Complete missing links	Ongoing	Developer	1,790	N/A
Byford		Kokoda Boulevard	Install link between Kinsella Ave and Tourmaline Boulevard	Local	Provide a link to Primary School	Utilise existing concrete path	Ongoing	Shire	600	N/A
Byford		Kinsella/McMillan/Copper	Install link from Doley Road to Tonkin Hwy PSP	Local	Provide a link to Primary School	Utilise existing concrete path	Ongoing	Shire	1,360	N/A
Byford		Doley Road	Install link from Abernethy Road to Orton Road	Local	Link two east-west routes via a neighbourhood centre	Utilise existing concrete path. Complete missing links	Ongoing	Developer	1,760	N/A
Byford		Old Brickworks Road	Install link between Beenypur and Nettleton Roads	Local	Link between two east-west routes	Utilise existing concrete path	Ongoing	Shire	1,050	N/A
Byford		Malarkey Road South	Install link between Ballagar and Abernethy Roads	Local	Link between two east-west routes	Utilise existing concrete path	Ongoing	Shire	1,000	N/A
Byford		Walters Road	Install link between Larsen and Linton Street	Local	Connection to railway PSP	Utilise existing concrete path	Ongoing	Shire	828	N/A
Byford		Park Road	Maintain existing path between Walters Rd and South Cr	Local	Provides a connection to kindergarten and tennis courts	Maintain existing concrete path	Ongoing	Shire	600	N/A
Byford		Thomas Road East	Complete shared path between Tonkin Highway and SW Hwy	Secondary	Connect PSP with urban centres	Install shared red asphalt path	Before 2025	Shire/Main Roads/DoT	4,000	\$3,240,000
Byford		Soldiers Road	Complete link between Mundijong and Shire's northern bounday (following rail access track)	Primary	Completes major missing commuting link	Complete separated path	Before 2025	Shire/DoT/PTA	10,770	\$9,854,550
Byford		Beenypur Road	Install path from Old Brickworks Road to railway line	Local	Link Byford east with Armadale Line extension PSP and Byford west	Install shared red asphalt path	Before 2025	Shire	1,140	\$860,700
Byford		Rowley Road	Construct path from western Shire boundary to connect to Armadale Line extension PSP	Primary	Provide an east-west route that links key north-south routes	Install shared red asphalt path	Before 2025	Shire	11,160	\$9,039,600
Byford		Ballagar Road	Install link between Kardan Blvd and Briggs Rd	Local	Provide an east-west route along southern edge of new residential development that connects to north-south routes	Install shared red asphalt path	Before 2025	Shire	1,360	\$1,026,800
Byford		Kardan Boulevard	Install link between Thomas and Abernethy Roads	Local	Provides a connection between two key east-west routes	Install shared red asphalt path	Before 2025	Shire	1,390	\$1,049,450
Byford		Larsen Road	Install link between Briggs Road and SW Highway	Local	Provide a link to Primary School	Install shared red asphalt path	Before 2025	Shire	1,640	\$1,238,200

Byford	Mary Street	Install link between Walters and Beenyup Roads	Local	Provide a link to Primary School	Install shared red asphalt path	Before 2025	Shire	1,000	\$755,000
Byford	Amy Street	Install link between Linton and Beenyup Roads	Local	Provide a link to Primary School	Install shared red asphalt path	Before 2025	Shire	978	\$738,390
Byford	South Western Highway	Install link between Beenyup Road and Wilaring Street	Local	Provide a link to Primary School	Install shared red asphalt path	Before 2025	Shire	922	\$696,110
Byford	Wilaring Street	Install link between SW Highway and Benalla Crescent	Local	Provides a connector for students to get to school	Install shared red asphalt path	Before 2025	Shire	301	\$205,205
Byford	Clondyke Drive	Install link between Denalla Cr and SW Hwy and crossing of SW Hwy	Local	Connects local routes to Secondary route	Utilise existing path	Before 2025	Shire	230	\$0
Byford	Gordin Way/Soldiers Road	Install link from aged care facility to connect to existing path along Soldiers Rd	Local	Completes missing link that allows aged care residents to access path network	Install concrete path on Gordin Way to connect to existing concrete path that ends at corner of Soldiers Rd/Gordin Wy	Before 2025	Shire	164	\$114,800
Darling Downs	Eleventh Road	Install link from the PSP to SW Hwy	Local	Provides a link from path network to the trails network east of SW Hwy	Install shared red asphalt path	Before 2025	Shire	740	\$558,700
Byford	Thomas Road central	Install shared path between Tonkin Highway and Nicholson Road	Secondary	Connect key north-south PSPs	Install shared red asphalt path	2025-2030	Shire/Main Roads/DoT	4,630	\$3,750,300
Byford	Warrington Road	Install link between Abernethy and Orton Roads	Local	Link tow east-west routes via a school	Install shared red asphalt path	2025-2030	Shire	1,640	\$1,238,200
Byford	Malarkey Road North	Install link between Thomas and Ballagar Roads	Local	Provides a link through the new residential area to connect to secondary east-west route on Thomas	Install concrete path missing link to Thomas Rd once development occurs	2025-2030	Developer	553 total 236 missing	N/A
Byford	Nettleton Road	Install link between Old Brickworks Road and Tonkin Hwy PSP	Local	Connection to railway PSP	Install shared red asphalt path	2025-2030	Shire	1,160	\$875,800
Byford	Abernethy Road central	Construct path from Tonkin Hwy PSP to Kargotich Road	Local	Connection to railway PSP	Install shared red asphalt path	2025-2030	Shire	1,900	\$1,434,500
Byford	Nicholson Road North	Install link between Rowley and Thomas Roads	Secondary	Provides a connection between two key east-west routes	Install shared red asphalt path	2025-2030	Shire	2,640	\$2,138,400
Darling Downs	Masters Road	Install link between Rowley and Thomas Roads	Local	Provides a connection between two key east-west routes	Install shared red asphalt path	2025-2030	Shire	2,980	\$2,249,900
Byford	Stanley Road	Install link between Larsen and Linton Street	Local	Connection to railway PSP	Install shared red asphalt path	2025-2030	Shire	800	\$604,000
Byford	Linton Street	Install link between SW Hwy and Beenyup Rd	Local	Connection along eastern perimeter of residential area	Install shared red asphalt path	2025-2030	Shire	2,680	\$2,023,400
Byford	Orton Road East	Install link between Tonkin Hwy PSP and SW Hwy	Secondary	Connects two key north-south routes	Install shared red asphalt path	2025-2030	Shire	3,100	\$2,511,000
Byford	Orton Road central	Install link between Kargotich Road and Tonkin Hwy PSP	Local	Connects two key north-south routes	Install shared red asphalt path	2025-2030	Shire	1,870	\$1,411,850
Byford	Orton Road West	Install link between Kargotich and Nicholson Roads	Local	Connects two key north-south routes	Install shared red asphalt path	After 2030	Shire	6,470	\$4,884,850
Byford	Abernethy Road west	Construct path from Kargotich Road to Nicholson Road	Local	Connection to railway PSP	Install shared red asphalt path	After 2030	Shire	2,700	\$2,038,500
Byford	Briggs Road	Install link between Thomas and Abernethy Roads	Local	Provides a connection between two key east-west routes	Install shared red asphalt path	After 2030	Shire	1,720	\$1,208,600
Byford	Nicholson Road South	Install link between Thomas Roads and Mundijong Roads	Secondary	Provides a connection between two key east-west routes	Install shared red asphalt path	After 2030	Shire	10,650	\$8,626,500
Byford	Thomas Road West	Complete shared path between Nicholson Road and Shire's western boundary	Secondary	Connect key north-south PSPs	Install shared red asphalt path	After 2030	Shire/Main Roads/DoT	4,470	\$3,620,700
Byford	Anketell Road	Install link from Thomas Road to Shire's western boundary	Secondary	Connection to Kwinana Fwy PSP	Install shared red asphalt path	After 2030	Shire/Main Roads/DoT	3,000	\$2,430,000

ID	Locality	Location	Recommendation	Route Type	Specific benefits	Actions	Timing	Responsible Agency	Path Distance (m)	Preliminary Estimated Cost
	Cardup	Cardup Siding Road and path	Connect existing path to Tonkin Hwy extension PSP and Soldiers Rd PSP and facilitate its use	Local	Fills missing links and facilitates its use	Install shared red asphalt path and remove gates at each end and replace with bollards	Before 2025	Shire	640	\$483,200
	Cardup	Bishop Road	Complete link between future Tonkin Highway and Rail Primary Routes	Local	Connects school with north-south primary routes	Install shared red asphalt path	2025-2030	Shire	1,830	\$1,381,650
	Cardup	Karbro Drive	Install link between Hopkinson Rd and railway line	Local	Will connect future Soldiers Rd path with future Tonkin Hwy PSP and include a crossing of railway to connect industrial development	Install shared red asphalt path and a crossing of the railway	2025-2030	Shire/ARC/PTA	2,270	\$1,713,850
	Cardup	Gossage Road	Install link from Tonkin Hwy to Shire's western boundary	Secondary	Connects Tonkin Hwy PSP with Kwinana Fwy PSP	Install shared red asphalt path	After 2030	Shire	8,430	\$6,828,300
	Cardup	Cardup Siding Road	Install link from Railway PSP to Tonkin Hwy PSP	Local	Connects Tonkin Hwy PSP with Railway PSP	Install shared red asphalt path	After 2030	Shire	2,770	\$2,091,350
	Cardup	Bett Road	Install link between Orton Rd and New East-west Road	Local	Provides local N-S connector between Byford and Whitby	Install shared red asphalt path	After 2030	Shire	4,300	\$3,246,500
ID	Locality	Location	Recommendation	Route Type	Specific benefits	Actions	Timing	Responsible Agency	Path Distance (m)	Preliminary Estimated Cost
	Entire Shire		Complete bus stop concrete pads		Ensures universal access to public transport	Install concrete bus stop pad (Shire to then link to path network)	Before 2025	PTA	N/A	-
	Entire Shire	Tonkin Highway extension stage 1	Install PSP adjacent Tonkin Hwy extension to SW Hwy	Primary	Provides a primary spine route through the Shire	Install shared red asphalt path	Before 2025	MRWA	13500	\$12,352,500
	Entire Shire	Tonkin Highway extension stage 2	Install PSP adjacent Tonkin Hwy extension	Primary	Provides a primary spine route through the Shire	Install shared red asphalt path	After 2030	MRWA	21000	\$19,215,000
ID	Locality	Location	Recommendation	Route Type	Specific benefits	Actions	Timing	Responsible Agency	Path Distance (m)	Preliminary Estimated Cost
	Hopeland	Henderson West Road	Install link from Tonkin Hwy to Shire's western boundary	Local		Install shared red asphalt path	After 2030	Shire	3,100	\$2,340,500

ID	Locality	Location	Recommendation	Route Type	Specific benefits	Actions	Timing	Responsible Agency	Path Distance (m)	Preliminary Estimated Cost
Jarrahdale	Jarrahdale	Jarrahdale Road	Maintain concrete path	Local	Local connectivity	Maintain existing	Ongoing	Shire	1700	-
Jarrahdale	Jarrahdale	Atkins Street	Maintain concrete path	Local	Local connectivity	Maintain existing	Ongoing	Shire	678	-
Jarrahdale	Jarrahdale	Jarrahdale Road	Complete missing path links on Jarrahdale Road between Buckland Road and Lang Street	Local	Last part of rail trail	Install shared red asphalt path	2025-2030	Shire/DoT	500	\$377,500
Jarrahdale	Jarrahdale	Jarrahdale Road	Construct a "rail trail" suitable for recreational and commuter cycling between Mundijong and Jarrahdale	Local	Tourism potential, access to trail networks, potential for cycle commuting	Seal or compact and install signage along existing railway alignment between Rose Road and Buckland Road, improve link along Watkins Road	2025-2030	Shire/DoT	7,250	\$5,872,500
Jarrahdale	Jarrahdale	Oak Way	Install a link between local paths	Local	Link local desire line	Extend concrete path	2025-2030	Shire	145	\$101,500
Jarrahdale	Jarrahdale	Kingsbury Drive	Install a link between Jarrahdale Rd and George St	Local	Local connectivity	Extend concrete path	2025-2030	Shire	224	\$156,800
Jarrahdale	Jarrahdale	Brady Road	Install a link between Jarrahdale Rd and George St	Local	Local connectivity	Extend concrete path	2025-2030	Shire	275	\$192,500
Jarrahdale	Jarrahdale	Munro/George St	Maintain concrete path	Local	Connects skate park and Jarrahdale PS	Maintain existing	Ongoing	Shire	515	-
Jarrahdale	Jarrahdale	Millars Road	Install a link between Jarrahdale Rd and Rail Trail	Local	Connection to Langford Park	Install shared red asphalt path	2025-2030	Shire	1,900	\$1,434,500
ID	Locality	Location	Recommendation	Route Type	Specific benefits	Actions	Timing	Responsible Agency	Path Distance (m)	Preliminary Estimated Cost
Keysbrook	Keysbrook	Elliott Road	Install a link between Primary route and SW Hwy	Local	Will provide a connection to the Keysbrook Fire Station Hall and future playspace on corner of Elliott Rd/SW Hwy	Install shared red asphalt path	After 2030	Shire	730	\$551,150
ID	Locality	Location	Recommendation	Route Type	Specific benefits	Actions	Timing	Responsible Agency	Path Distance (m)	Preliminary Estimated Cost
Mundijong	Mundijong	Livesey St	Maintain footpath between Paterson and Butcher Streets	Local	Provide connection to primary school	Maintain existing footpath	Ongoing	Shire	290	—
Mundijong	Mundijong	Anstey Street	Maintain link along boundary of primary school	Local	Provide connection to primary school and oval	Maintain existing footpath	Ongoing	Shire	740	—
Mundijong	Mundijong	Keirnan Street	Install pedestrian maze at existing level crossing	Crossing	Reduce severance and barriers to walking	Install standard maze and link to PSP and existing path on Keirnan Street	Before 2025	PTA/ARG	80	—

Mundijong	Soldiers Road	Extend existing PSP to SJ Grammar School Entry	Primary	Access to school, completes missing link	Install short segment of PSP	Before 2025	Shire/DoT/PTA	500	\$457,500	
Mundijong	Butcher Street	Install link along boundary of primary school	Local	Provide connection to primary school	Provide concrete footpath	Before 2025	Shire	233	\$163,100	
Mundijong	Richardson Street east	Install link between Railway PSP and Butcher Street	Local	Connects Primary School and two north-south routes	Install shared red asphalt path	Before 2025	Shire	350	\$264,250	
Mundijong	Cockram Street	Install link between Paterson and Adonis Streets	Local	Connects oval	Install shared red asphalt path	Before 2025	Shire	600	\$453,000	
Mundijong	Richardson Street west	Install link between Butcher Street and Tonkin Hwy PSP	Local	Completes link	Install shared red asphalt path	2025-2030	Shire	1,240	\$936,200	
Mundijong	Richardson Street	Ensure crossing is not blocked by standing trains	Crossing	Ensures connectivity across the town	Install footbridge over rails or move siding	2025-2030	PTA/ARC	0 -		
Mundijong	Railway reserve	Extend link from Watkins Rd to Serpentine	Primary	Connects the two townsites	Install shared red asphalt path	2025-2030	Shire/PTA	7370	\$6,743,550	
Mundijong	Adonis Street	Install link between Cockram Street and Mundijong Road	Local	Provides connectivity	Install shared red asphalt path	After 2030	Shire	850	\$641,750	
Mundijong	Mundijong Road	Install link from Railway PSP to Shire's western boundary	Secondary	East-west connectivity	Install shared red asphalt path	After 2030	Shire	8,970	\$7,265,700	
ID	Locality	Location	Recommendation	Route Type	Specific benefits	Actions	Timing	Responsible Agency	Path Distance (m)	Preliminary Estimated Cost
Serpentine	Lefroy Street	Maintain existing path	Local	Local connectivity	Maintain existing path	Ongoing	Shire	1,940 -		
Serpentine	Leslie Street	Maintain existing path	Local	Local connectivity	Maintain existing path	Ongoing	Shire	434 -		
Serpentine	Wellard Street, Karnup Road	Install link between railway and SW Hwy	Secondary	Tourism potential, also services Holiday Park, General Store and Community Centre	Re-seal path on Karnup Road, construct bike parking and repair station at each end	Before 2025	Shire/DoT	1400	\$1,134,000	
Serpentine	Falls Road	Create trail route to Serpentine Falls	Trail/Secondary	Tourism potential	To be developed either as a trail route or as a secondary route	Before 2025	Shire	1770	\$1,433,700	
Serpentine	Karnup Road	Install pedestrian maze at existing level crossing	Crossing	Reduce severance and barriers to walking	Install standard maze	Before 2025	PTA/ARC	50	-	
Serpentine	Karnup Road east	Install link between railway and SW Hwy	Secondary	Connect townsites with falls	Install shared red asphalt path	Before 2025	Shire	1,370	\$1,109,700	
Serpentine	Karnup Road West	Install link between Railway PSP and Tonkin Hwy PSP	Secondary	Connection between key N-S routes	Install shared red asphalt path	After 2030	Shire	4,230	\$3,426,300	
Serpentine	Hardey Road	Install link between Leslie St and Lefroy Rd	Local	Local connectivity	Install shared red asphalt path	After 2030	Shire	853	\$644,015	
Serpentine	Railway reserve	Extend link from Serpentine to Keysbrook	Primary	Connects the two townsites	Install shared red asphalt path	After 2030	Shire/PTA	8,780	\$8,033,700	

ID	Locality	Location	Recommendation	Route Type	Specific benefits	Actions	Timing	Responsible Agency	Path Distance (m)	Preliminary Estimated Cost
	Whitby	Keirnan Street	Link Whitby Falls with the emerging Whitby urban development	Local	Access to University campus, supports future urban development	Install asphalt path between Tinspar Avenue and South West Highway	Before 2025	Shire/DoT	2,140	\$1,615,700
	Whitby	Skyline Boulevard	Install link between Keirnan St and new east-west road	Local	Will provide a connection for the new Whitby residential development	Extend existing on-road cycle lanes	2025-2030	Developer	860	
	Whitby	Evelyn/Galvin Road	Install link from Railway PSP to Keirnan St	Local	Connection along southern edge of new residential area	Install shared red asphalt path	2025-2030	Developer	1,370	\$1,034,350
	Whitby	New North-South Road	Install link between new East-West Road and Tonkin Hwy PSP	Local	Will provide a connection along eastern edge of new development	Install shared red asphalt path	2025-2030	Developer/Shire	3,700	\$2,793,500
	Whitby	Taylor Road	Install link between new east-west road and Bishop Road	Local	Connects two east-west routes	Install shared red asphalt path	2025-2030	Developer	625	\$471,875
	Whitby	South Western Highway	Install link between Falls Rd and Keirnan St	Local	Provides connection from Jarrahdale rial trail to east-west routes	Install shared red asphalt path	2025-2030	Shire	992	\$748,960
	Whitby	New East-West Road	Install link from New North-South Road to Taylor Road	Local	Connects new residential development on east side of railway with new development on west side	Install shared red asphalt path	2025-2030	Developer	2,770	\$2,091,350

Figure 3.2 - 2020 Walking and Cycling Plan – Implementation Program

*Strikethrough texts are completed projects

Appendix C - Figure 4.1 - Shire of Serpentine Jarrahdale 2022 Community Perception Survey results & Figure 4.2 - Shire of Serpentine Jarrahdale 2022 Community Perception Survey results

Community Action Plan Footpaths, trails and cycleways

Community driven actions

- Provide a more extensive network of **well-connected footpaths** for the safety of pedestrians, parents with prams, walkers etc.
- Provide a safe system of well-connected **cycleways to encourage safe cycling** for commuting and leisure.
- Keep all footpaths and cycleways **clean and well maintained** so they are safe for all users.
- Create more **bushwalks, trails and bridle paths**.

Community Voices

"Once you leave any of the townsite's main areas, there is little or no evidence of footpaths, trails and cycleways."

"We don't have footpaths in our street, so people need to walk on the road, which is a hazard."

"The majority of footpaths within the town of Byford are in poor condition, making walking with a pram or walker difficult at times."

"Footpaths in old Byford are in disrepair & tripping hazards."

"Footpaths need to be put in place in Serpentine downs, and the existing footpaths need to be cleaned. Either covered in rocks or debris from trees."

"Hardly any trails or paths to be enjoyed in our area, please create an attractive area. It's not even possible to walk or cycle to our nearest town, Armadale."

"Provide safe trails and cycle paths so that people of all ages can ride bikes safely and stay off the roads."

"Safe cycleways along the major roads and streets so kids/parents can go to shops, schools etc., without running the risk of being hit by cars or trucks."

"There should be more footpaths to encourage people to get out, up and walk safely. More trails and cycleways will encourage people to get out, exercise, and socialise, building a strong and safer community."

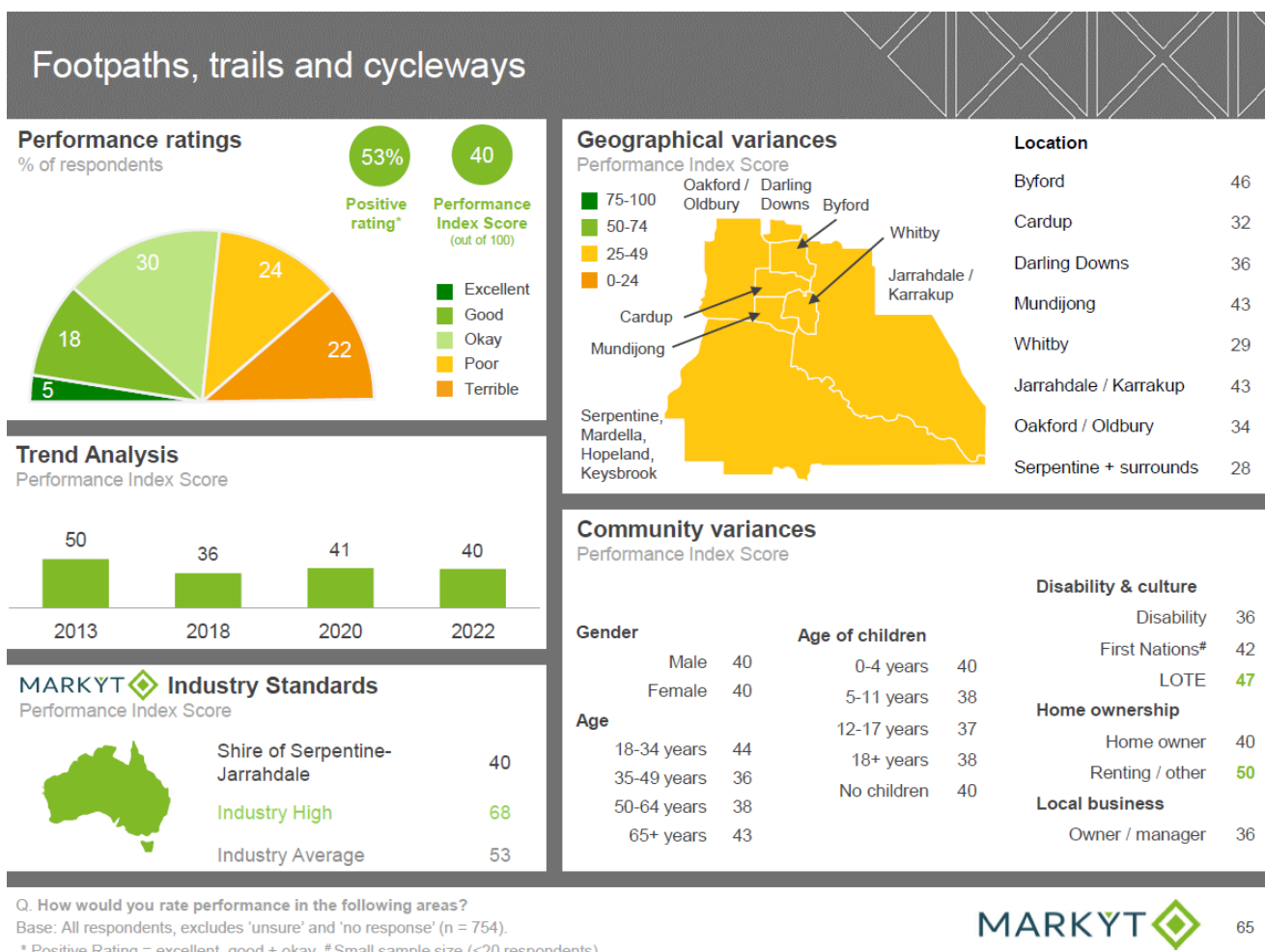
"This is an active community, but there is only so far we can walk, cycle or scoot with our kids. The pathways are clogged with rubbish and weeds and in the dark mornings of winter, are poorly lit."

"Mow the grass on the trails. Especially the one between Rowley, Masters, Thomas and Hopkins Road. It's close to snake season, and lots of people use those paths daily."

"Develop better co-use bridle trails and path management outside of Byford. Stop blocking trails that are used by all and/or making access unsafe due to being too narrow or too overgrown."

MARKYT  32

Figure 4.1 – Shire of Serpentine Jarrahdale 2022 Community Perception Survey results



Q. How would you rate performance in the following areas?
 Base: All respondents, excludes 'unsure' and 'no response' (n = 754).
 * Positive Rating = excellent, good + okay * Small sample size (<20 respondents)

MARKYT 65

Figure 4.2 – Shire of Serpentine Jarrahdale 2022 Community Perception Survey results

Appendix C - Figure 4.3 - Shire of Serpentine Jarrahdale Asset Management Strategy Risk Register

Risk Description	Causes	Consequences	Objective Threatened	Risk Owner	Controllability	Controls	Risk Assessment				Control Rating	Acceptability (refer risk appetite)	Risk mitigation strategies (to further lower the risk rating if required)		
							Consequence Category	Consequence	Likelihood	Risk Rating			Action *indicates a key project	Responsible Officer	Target Date
Unclear level of service / knowledge of community need	<ul style="list-style-type: none"> Lack of Councillor buy-in Population growth Suitability of historical assets Volume of Councillor requests Lack of strategic direction / community representation No understanding of current level of service Lack of criteria to determine level of service Lack of renewal programs 	<ul style="list-style-type: none"> Inconsistent application of maintenance costs (e.g. overspends and underspends) Community Dissatisfaction (reputation) Early onset deterioration of assets 	1	AM-TAG	Controllable	<ul style="list-style-type: none"> Community Perceptions Survey Action Request System Budget Process and allocation of resources 	Reputation / Financial	Moderate	Likely	SIGNIFICANT	Inadequate	Action Required	Maintenance Service Level Plan (Refer CBP)	Manager Operations	30 June 2021
													Rationalisation of Assets (Refer CBP)	Director Infrastructure Services	30 June 2022
													OneComm Works Asset Module	OneComm Asset Key User	30 April 2021
													OneComm CRM module	OneComm CRM Key User	31 May 2021
													Monthly Reporting Finance and Assets and Works	Manager Finance	30 June 2021
Assets life-cycle costs are not budgeted	<ul style="list-style-type: none"> Inadequate Methods of calculation due to lack of availability of data Not planning for life cycle costs from the outset (e.g. council reports) Community education and the impact of rapid growth 	<ul style="list-style-type: none"> Inadequate renewal programs Inability to forecast real costs 	4	AM-TAG	Controllable	<ul style="list-style-type: none"> Budget Process and allocation of resources AM-TAG Business Case Template including life cycle cost estimates 	Financial	Major	Unlikely	MODERATE	Adequate	Action Required	Council Report Update (Refer Infrastructure Service Team Plan)	Director Infrastructure Services	30 June 2021

Risk Description	Causes	Consequences	Objective Threatened	Risk Owner	Controllability	Controls	Risk Assessment				Control Rating	Acceptability (refer risk appetite)	Risk mitigation strategies (to further lower the risk rating if required)		
							Consequence Category	Consequence	Likelihood	Risk Rating			Action *indicates a key project	Responsible Officer	Target Date
Poor financial management	<ul style="list-style-type: none"> Poor budgeting of asset maintenance and renewal costs Unclear roles and responsibilities Political pressure to deliver unplanned infrastructure Lack of pre-planning for projects 	<ul style="list-style-type: none"> Unfunded projects Poor community outcomes e.g. asset delivery, inadequate level of service Negative community perception / reputation damage Reactive works rather than proactive 	All	Executive Management Group	Controllable	<ul style="list-style-type: none"> Integrated Planning and Reporting Framework (Budget, CBP, Asset Management Strategy, LTTP etc.) Asset Management Plans Database of asset and financial information (OneComm) AM-TAG Advocacy Strategies 	Financial	Major	Possible	SIGNIFICANT	Adequate	No - Action Required	Implement Asset Data Integration and Reporting		

Risk Description	Causes	Consequences	Objective Threatened	Risk Owner	Controllability	Controls	Risk Assessment				Control Rating	Acceptability (refer risk appetite)	Risk mitigation strategies (to further lower the risk rating if required)		
							Consequence Category	Consequence	Likelihood	Risk Rating			Action *indicates a key project	Responsible Officer	Target Date
Inadequate record keeping on asset inspections, maintenance, renewals and decision making	<ul style="list-style-type: none"> Inconsistent application of record keeping technologies Lack of streamlined / integrated processes for asset management across whole business Lack of resources to implement processes and systems 	<ul style="list-style-type: none"> Staff Retention / turnover from frustration Uninformed decisions Ineffective expenditure of funds i.e. capital upgrade vs ongoing maintenance 	All	Director Infrastructure Services	Controllable	<ul style="list-style-type: none"> Asset Management Strategy and Improvement Action Plan Asset Register OneComm Review and verification of renewals identified in Asset Management Plans jointly between operations team and asset coordinator 	Organisational Performance / Financial	Moderate	Almost Certain	HIGH	Inadequate	No - Action Required	<ul style="list-style-type: none"> Coordinate the AM-TAG to implement AMS actions Implement Works Module in OneComm Implement a resourced (people and process) structure that covers the review and implementation process for asset management 	<ul style="list-style-type: none"> Asset Management Coordinator OneComm Asset Key User Director Infrastructure Services 	<ul style="list-style-type: none"> June 2024 April 2021 June 2022
Lack of knowledge of the Assets the Shire has	<ul style="list-style-type: none"> Data gaps and missing assets Lack of process for identification Lack of communication between business units when new assets are recognised 	<ul style="list-style-type: none"> Unmaintained assets Inadequate information for forward planning renewals Liability Uninformed decisions 	1,2,3	Asset Management Coordinator	Controllable	<ul style="list-style-type: none"> Four Year Asset Condition Inspection Program Handover process of assets for subdivisions and capital works 	Organisational Performance	Moderate	Possible	MODERATE	Adequate	No - Action Required	<ul style="list-style-type: none"> Begin implementing the condition survey program for each asset class (subject to works in OneComm) 	<ul style="list-style-type: none"> Asset Management Coordinator 	<ul style="list-style-type: none"> June 2021

Figure 4.3 - Shire of Serpentine Jarrahdale Asset Management Strategy Risk Register