

Footpath Strategy

2018 - 2028



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2 Introduction

The City of Karratha is located in the dynamic Pilbara Region of northwest Western Australia. The City continually seeks to enhance its liveability with the vision of being *Australia's most liveable regional City*.

Building on the recommendations of Karratha 2020, the City of North Plan and other future implementation strategies, there have been significant investments in community amenity and essential services in the past five years. In particular, Council has committed to the expenditure of \$700,000 annually to increase the amount of path infrastructure within the five towns located in the municipality.

The City provides a path network to enable efficient and safe passage of bicycles and pedestrians across all suburbs within the townships of Karratha, Roebourne, Wickham, Dampier and Point Samson.

The *WA Department of Transport Planning and Designing for Pedestrians Guidelines* document defines footpaths as a path for the use of all pedestrians and cyclists under the age of 12 years. Shared paths are defined as a path for the use of all pedestrians and cyclists and is designated by signs. The City incorporates both footpaths and shared paths within the network – mainly being shared paths on arterial roads, and footpaths within local roads.

The network as at June 2017 consists of over 87 kilometres of footpaths and shared paths however there are many missing links in the network around the City, and many sections that have past their useful life and require upgrade. The current summary of path networks per suburb, per metre averaged out - per head of population data is outlined below;

Suburb/Township	Length (m)	Population	Metres per Person
City Centre/Pegs Creek	14,238	2,145	6.64
Bulgarra	11,563	2,735	4.23
Millars Well	6,660	1,888	3.53
Nickol	8,145	4,889	1.67
Baynton/Baynton West	20,377	4,447	4.58
Wickham	5,829	2,302	2.53
Point Samson	6,315.5	223	28.32
Roebourne	6,656.5	2,095	3.18
Dampier	7,585	1,141	6.65
Total	87,369	21,865	Average: 6.81

The objective of this report is to outline a works program for construction of both new infrastructure and upgrade of old path infrastructure, that fits within allocated budget parameters and that will increase the service level of the footpath network within the municipality.

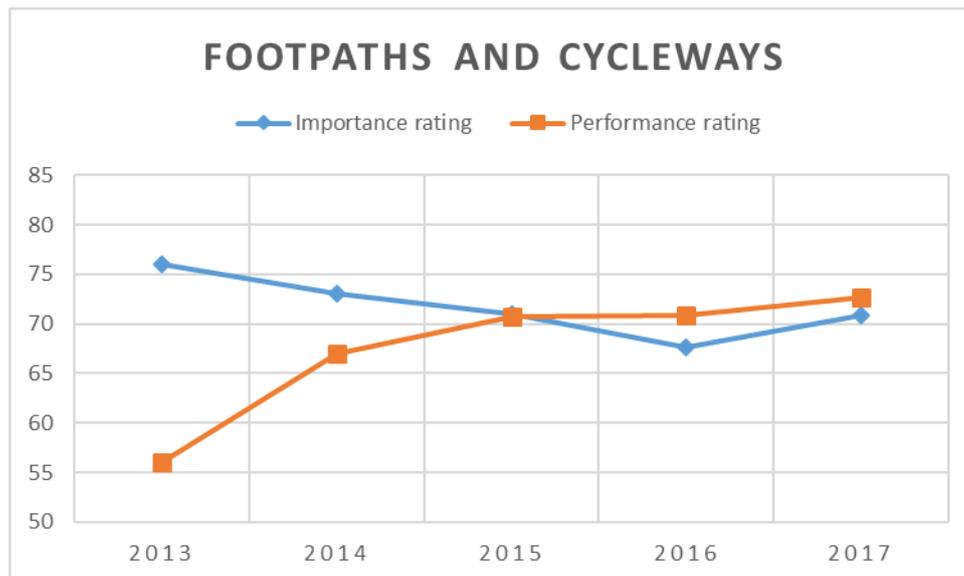
3 Background

The City utilises community surveys each year to highlight the perceived issues, service provision gaps and importance levels of facilities and services that Council provides. In 2013, footpaths and cycleways showed one of the biggest service level gaps, with an importance rating of 76/100, and a

performance rating of only 56/100 (a service gap of -20 points). From this survey, Council committed to increasing its expenditure on path infrastructure and reducing the service level gap by expending \$700,000 per year on new path construction.

A ten-year implementation plan was developed, which scored potential path provisions against a set of criteria that aligned to the WA Department of Planning Liveable Neighbourhoods initiative to provide safe passage to schools, high-use community facilities and the CBD.

Each year since 2013 the service level gap has reduced significantly. The reduction in importance and increase in performance is attributed to the commitment of annual expenditure for path construction.



Since the endorsement of the plan in 2013, the City has constructed over 6.5km of new footpath infrastructure throughout Karratha and Wickham, and has planned for further provisions to be constructed in all towns across the City.

Additional to new path construction, the City is undertaking a condition audit of all existing path infrastructure in 2018.

A significant portion of the existing paths within the City are nearing the end of design life and require an upgrade for safety purposes or to meet updated internal standards outlined in this report. The upgrade of old path infrastructure is considered to be a critical step in the Footpath Strategy to ensure that replacement paths are well considered and budgets planned for annual upgrade/replacement programs, within the City's maintenance budgets.

The condition audit will allow the City to include - as part of this report – a prioritised footpath upgrade/replacement strategy, based on condition, safety, and construction standards to align to the City's path priorities. The potential program to replace and refurbish existing paths is not included in this report and would be subject to an alternative funding commitment.

4 Strategic Context

The implementation plan and associated works align to the City's Operational Plan 2017/2018 (Current at time of writing):

Our Programs: 1.a.1.1 Civil Infrastructure Works Construction and Maintenance

Our Services: 1.a.1.1.1 Implement Footpath Improvement Plan

5 Methodology

The methodology used to determine this works program report is;

- Review the existing 10-year footpath implementation plan;
- Review strategic documents and development plans endorsed since 2013 to highlight new footpath priorities being;
 - Karratha Revitalisation Strategy
 - Tambrey Development Plan
 - Roebourne Structure Plan
 - Dampier Townsite and Foreshore Enhancement plan
 - Point Samson Foreshore Development Plan
- Refine evaluation matrix;
- Analyse and evaluate the current 10-year implementation plan data and re-prioritise;
- Determine gaps and evaluate new sections;
- Balance quantity of work in program against allocated budgets and resources available to manage works;
- Distribute draft program for comment at Executive Management Group;
- Resolution of Council;
- Receipt of Condition Audit and prioritisation of most deteriorated paths;
- Evaluate all sections and determine required annual budget for upgrades;
- Complete program

6 Assumptions and Exclusions

6.1 Assumptions

It is assumed that \$700,000 per annum will continue to be factored into the annual budget for new footpath construction until at least 2023 – this is confirmed by the City's Long Term Financial Plan. Ideally the funding commitment would be extended to 2027/28 under a revised LTFP. This would ensure the delivery of a fully integrated network that would support majority of community aspirations. Target expenditure is 100%. The City has opportunities to apply for external funding via the WA Department of Transport Regional Bicycle Network Grant Funding. Additional funding opportunities may present themselves in the future and funds should be applied for each year to reduce Council's expenditure as far as practically possible.

Assumed annual budgets for the upgrade/replacement program will be developed based on the outcomes of the condition audit, with an anticipated budget of \$300,000/annum to be considered within the City's Operations maintenance budget.

6.2 Unit Rates

The costs for the implementation plan have been based upon approximate unit rates, and should only be used as a budget guide. It is assumed that these rates will remain consistent throughout the life of plan.

6.2.1 Path Construction

Material	Area	Definition	Cost
Concrete	1m (l) x 1.8m (w) x 100mm (d)	Footpath	\$300
	1m (l) x 2.0m (w)	Wide Path	\$330
	1m (l) x 2.5m (w)	Shared Path	\$410
Asphalt	1m (l) x 2.0 (w) x 20mm (d)	Wide Path	\$410 (incl. kerbing)
	1m (l) x 2.5m (w)	Shared Path	\$470 (incl. kerbing)
Bridge Crossing	1m (l) x 2.5m (w)	Footbridge	\$6,000
Line marking	1m	Required for shared paths and footbridges	\$6

Costs are current as at December 2017 and are derived from preferred supplier contract rates. These rates will remain current until 2021 at which time this plan will be updated.

**The indicative costs outlined above only include the cost to lay path, and excludes kerbing and other works and/or installations required. Upgrade costs are expected to be at least 15% higher due to the increased earthworks required for removal of the path and kerb prior to construction.

Additional Costs	Definition	Cost
Nominal earthworks	Installation is straight-forward. Cut channel and lay surface	+ 0%
Minor	Minor rock cutting or earth clearing.	+10%
Removal of existing path	Costs to break concrete and dispose, prior to laying new path	+15%
Moderate earthworks	Additional earthworks are required i.e. additional fill, slight hard digging	+ 25%
Substantial earthworks	Surface requires a large amount of preparation	+ 50%

On-site inspection and validation of the current year's program is to be undertaken to determine final project costs within the detailed design phase of each path.

6.3 Exclusions

- Development of directional signage;
- Development of detailed path plans beyond the depiction of preliminary path construction routes;
- Detailed specifications for path provisions such as lighting, shade, etc.;
- Provision of detailed costing information for works required to facilitate construction of paths;
- Obtaining any required approvals for the construction of paths with WA Main Roads.

7 Objectives and Outcomes

The objective of this report is to provide details and costings for priority areas for path construction and path upgrades, accompanied by the information utilised in determining the path provisions. The report does not provide technical specifications or accompanying projects such as lighting infrastructure or bridge specifications.

The main objective of an integrated footpath network, and this plan is to *provide safe passage for high need community members to access key destinations*.

High Need Community Members	Key Destinations
Individuals with disabilities	Regional centres
Children and Youth	Schools and pre-schools/day-care
Elderly	Central Business District
Parents with prams	Medical and essential services
	Community Bus Stops

7.2 Tourism Outcomes

Tourism is an important element for the City as it enhances economic diversity, quality of life for residents and creates job opportunities. 39% of visitors to the City cite holidaying or visiting family/friends as the main purpose of their trip¹ and infrastructure must be in place to support and enhance the experience of the City.

To improve the tourist experience of all towns across the municipality, essential infrastructure must be provided to allow a range of activities and opportunities for commuting, sightseeing, and physical activity. The addition of path networks also allows opportunities for local tourism operators to utilise them for business purposes.

7.3 Local Outcomes

Paths allow safe, easily accessible, inclusive and alternative routes for commuters and other residents to partake in physical activity and reduce their effect on the environment, while enhancing the liveability of the City's townships. They encourage the use of open spaces and other recreation areas by optimising the walkable access. Paths allow pedestrians and cyclists to take more direct routes to and from destinations and provides convenient linkages to public transport, activity centres and local facilities.

8 Planning Principals and Document Review

8.1 Road Hierarchy

A hierarchy of roads has been determined which will impact on a proposed paths weighted score when evaluated – Larger, faster speed roads will be allocated higher weighting. The hierarchy ensures the best path is constructed in the best area for accessibility and pedestrians.

Type of Road	Description and Assumptions	Path Width
1. Main	The primary road network for the movement of goods and people by motor vehicle. These roads are managed by Main Roads WA and generally have a speed limit of 70km/hour and above. <i>Primary Distributor*</i>	2.5m
2. Sub-Main	A road that has been identified as being of regional importance for longer distance pedestrian movements. These roads are managed by the Local Government and have a speed limit of 70km/hour. <i>District Distributor A*</i>	2.5m
3. Link Road	These roads link to Main and Sub-Main roads and have a speed limit of 60km/hour. <i>District Distributor B*</i>	2.0m
4. Inter-Suburb	These roads connect to Linkages and Neighbourhood roads and have a general speed limit of 50 – 60km/hour. <i>Local Distributor*</i>	2.0m
5. Neighbourhood	These roads connect Inter-Suburb roads and Local streets and have a general speed limit of 50km/hour. <i>Local Distributor*</i>	1.8m
6. Local	Local streets primarily provide access to residences. <i>Access Road*</i>	1.8m

Some roads may cross more than one definition and may require a different speed limit to what is stated – The roads are categorised on the basis of their intended purpose.

*Classifications of Main Roads WA.

8.2 Crime Prevention through Environmental Design

Crime prevention through environmental design (CPTED) is a multi-disciplinary approach to deterring criminal behaviour through urban design; and the good planning of paths is a valuable strategy in reducing crime risk.

Street lighting that adequately lights the footpaths should be provided in all streets and placement of street trees needs to consider effect on lighting. Paths should create safe movement and good connections and access through clear signage, elimination of entrapment spots and continuous accessible paths throughout the town.

8.3 Healthy Active by Design

Healthy Active by Design is a joint initiative between WA Department of Planning, Education, Health, Transport, Sport and Recreation, and the Heart Foundation, to provide evidence-based strategies that promote physical activity through facility design.

HABD provides a master checklist, objectives and strategies that enables planners and urban designers to design developments that will contribute positively to improved health and wellbeing outcomes and more sustainable communities.

The evaluation matrix within this report utilises a number of these strategies to weight and prioritise potential path sections for construction.

8.4 WA Department of Transport – Planning and Designing for Pedestrians

The Planning and Designing for Pedestrians document suggests that there are five general principles for network planning;

- Connected – do walking networks provide good access to key destinations?
- Comfortable – does the path width, surface, landscaping and adjacent scale of development provide an attractive walking environment?
- Convenient – can streets be crossed easily, safely and without delay by all pedestrians?
- Convivial – are routes interesting, clean and free from threat?
- Conspicuous – are walking routes set out in a coherent network, clearly signposted and are they published in local maps?

Pedestrian networks should be planned to:

- Minimise walking distances between land uses
- Provide a clear route to entrances of large development (rather than surrounding car park areas)
- Avoid conflicts with vehicular movements where possible
- Provide appropriate pedestrian crossing facilities on busy roads
- Provide paths on most streets (with the exception of lightly trafficked local streets), preferably on both sides.

The Planning and Designing for Pedestrians document should be reviewed during the Detailed Design phase of all new path provisions.

8.5 WA Department of Planning – Liveable Neighbourhoods

To encourage people to walk, a place must have high pedestrian amenity and efficiency, be stimulating, legible and safe for pedestrians. Liveable Neighbourhoods recognises the complexity of daily movement patterns and the need to make pedestrian trips as short and pleasant as possible.

The primary pedestrian network is the street system, which is detailed to support pedestrian movement. Footpaths should ideally be provided on both sides of all streets. For cost reasons, footpaths may be omitted from one side of lower order access streets, unless the street forms an important pedestrian link.

Footpaths should have ramps at all kerb corners for wheelchairs and pram access and cater for people with disabilities. Pedestrian crossing distances in local streets should be limited through kerb extensions and tight turning radii which ensure vehicular traffic will slow to negotiate the tighter corners.

9 Design Considerations

Detailed design must be carried out for all path sections in the year preceding construction, to determine their appropriateness, cost and potential risks associated with the project.

9.1 Width and Height Requirements

Previous to the 2013 Future Works Report (FWR), Council traditionally constructed footpaths to a width of 1.4m. The FWR and this implementation plan support the construction of 1.8m wide paths, to enable dual-use of paths throughout the network and provide more opportunities for usage. Increasing importance is being placed on the need for disability access and where possible, sufficient footpath width should be provided to allow two wheelchairs to pass.

In high activity areas such as commercial and shopping areas, wider than minimum widths are likely to be necessary, as well as at locations where pedestrians gather such as entrances to schools and associated crossings, recreational facilities and important bus stops.

9.2 Kerb Ramps

Kerb ramps should always be provided in association with path construction – one at each end of the path and at any road crossings, and should always comply with the associated Standards.

Consideration should be taken when constructing paths around bus stops, to adhere to the *Public Transport Authority Bus Stop Site Layout Guidelines 2010* – The guidelines document must be referenced in this instance. Consideration should also be taken when constructing paths in areas of high pram or wheelchair traffic, such as health clinics, or the CBD.

9.3 Bicycle Parking

Bicycle parking should be considered in areas of high-traffic and longer dwell times, such as outside schools and other local activity centres as a component of path construction.

9.4 Drainage and Gradients

Any path provisions should be as flat as possible but should achieve an adequately drained surface. A 1% cross fall is preferred, however cross falls can be up to 2.5% (1:40).

Paths can be constructed perpendicular to, or follow natural or man-made drainage swales. Paths should follow the land contours (as appropriate) as to not obstruct water flow through floodways.

9.5 Surface

Loose surface materials (gravel, soil, sand etc.) should be avoided on pedestrian routes other than recreational routes, as some pedestrians may find it difficult to walk on, and they can impose severe difficulties for people in wheelchairs. Crushed rock is only suitable as a temporary path or for a specific purpose such as a recreational route. Crushed rock paths should not be provided under this strategy.

9.6 Accessibility

According to 2016 ABS Data, 1.2% of the City's population reports needing help in their day-to-day lives due to a disability. Consultation with the community has highlighted that a barrier to access and

inclusion within the City, is the inadequate access to business, shops and restaurants, as well as some City infrastructure.

Shared paths that provide access around arterial loops and other important linkages for people with disabilities will have a higher priority and higher weighted score within the evaluation matrix.

Any path construction must be built with consideration of the City's Disability Access and Inclusion Plan and must adhere to applicable Australian Standards for wheelchair users, visually impaired, or other disability. It is suggested that once Shared Path construction has been completed, the City's Community Engagement Team is notified as to inform the community.

9.7 Austroads Guide to Road Design: Pedestrian and Cyclist Paths

The Austroads Guide to Road Design: Pedestrian and Cyclist Paths provides both strategy for path design, and good high-level technical information for design and construction.

This document should be reviewed during the Detailed Design phase of all new path provisions.

9.8 Lighting

Although this report does not include provision for path lighting, it should be noted that for good CPTED (*Section 8.2*) practices, solar lighting should be ancillary to path construction.

Where a path section is constructed on a Main, Sub-Main, Link or Inter-Suburb Road (and is not lit by street lighting); where there is dense surrounding development (being flora, fencing or other); and crime hotspots, lighting should be constructed as a priority in conjunction with the path construction. For all path construction irrespective of its location, the City's (future) Footpath Lighting Strategy should be consulted.

9.9 General

The following general design considerations have been taken into account to select priority path sections for construction. These considerations, where possible, have been included in Section 10, alternatively they will form internal discussion points for Officers when considering the implementation of the path;

- Following and completing links to key destinations;
- Providing linkages with other paths to create a network;
- Following existing tracks and trails where possible to minimise disturbance to the landscape;
- Avoiding poorly drained areas;
- Providing access to facilities and recreational areas;
- Ensuring local drainage is maintained along natural watercourses where possible;
- Avoiding dense understory where possible;
- Avoiding areas of vegetation that require clearing or minimise the need for clearing vegetation;
- Avoiding environmentally sensitive areas (e.g. areas of endangered flora);
- Avoiding long straight sections with long steady grades (Footpaths to meander to take advantage of natural and man-made features and to create interest);
- Taking note of safety hazards and avoiding where possible.

10 Evaluation

10.1 Priority Definitions

To minimise the risk of subjectivity when evaluating paths, the Priorities outlined and scored within the Evaluation Matrix need to be defined as far as practically possible.

The Priorities are defined as;

Priority	Description	Definition
PRIORITY 1	Missing links around school areas to be connected.	Any missing links within 400m of any school gate entrance.
PRIORITY 2	Shared path arterial links to be connected.	Any townships arterial link roads that require a shared path to be constructed.
PRIORITY 3	Missing links around bus stops, community amenities and facilities to be connected.	Any missing links within 400m of any bus stop, sporting complex, park, city-owned facility, medical centre, boat ramp, community centre, halls or libraries and formal trails.
PRIORITY 4	Community request for path construction.	Any community member request for a specific path to be constructed.
PRIORITY 5	Connect all missing links on the path networks.	Any land area between two formal paths without a path is to be connected.
PRIORITY 6	Provide every household with a path.	Every residential dwelling has access to a path from the driveway.

10.2 Evaluation Matrix

The Evaluation Matrix is used to score and rank path needs against each other, for both new path construction and path upgrades. The Matrix contains a list of criteria designed to prompt consideration when considering each potential path.

The range of scores available for each criterion varies to reflect the weighting given to each particular criterion. Minor criteria have a maximum score of 3, significant criteria 5 and major criteria 10. The higher range of potential scoring implies a greater benefit to the community. All positive scores imply a community benefit while negative scores relate to situations in which the criteria would mitigate against building the footpath; (i.e. need, cost, purpose or location).

Criterion	Consideration	Ranking System	Score
Vegetation Removal	Will vegetation removal be required?	Significant (tree(s) over 3m)	-5
		Extensive (tree(s) under 3m)	-3
		Moderate (bush and scrub)	-1
		Minor (largely dirt, won't affect earthworks)	0
Informal path	Is there an existing informal path?	Yes	3
		No	0
Disability access	Is the path specifically required to allow access by disabled or elderly people?	Extensive (would serve multiple residents daily)	10
		Minor (would occasionally be used)	5
		No	0
Road width	Narrow roads are more hazardous to pedestrians, as are multi-lane roads. The width includes the shoulders.	Multi-lane road	3
		Narrow/Residential Road <6m	3
		Medium 6-6.9m	2
		Moderate 7-7.9m	1

Speed limit	The higher the speed limit, the greater the risk to pedestrians. In high-risk areas, pathways on both sides of the road should be encouraged.	80km/hour or over (to be set back 3m)	5
		70km/hour	4
		60km/hour	3
		50km/hour	2
		40km/hour	1
Blind spots	Road geometry can reduce the visibility of pedestrians to drivers. Hazards include sharp bends and crests.	Complete blind spots	5
		Some blind spots	3
		No blind spots	1
Daily traffic	A higher volume of vehicles travelling along a road increases the risk to pedestrians who may be forced to walk on a road or verge. This data can be obtained from Technical Services.	>10,000 vehicles per day	10
		5,001 – 10,000 vehicles per day	8
		3,001 – 5,000 vehicles per day	6
		2,001 – 3,000 vehicles per day	5
		1,001 – 2,000 vehicles per day	4
		501 – 1,000 vehicles per day	2
Parking demand	Parked cars can force pedestrians into the middle of the road	High parking demand	3
		Occasional parked cars	1
		Minimal parked cars	0
Alternative access	Is alternative access available off the road formation that can be used by most pedestrians? There may be a serviceable path on the other side of the road that is safely accessible. (Disregard multi-lane roads or roads with >10,000vpd).	Concrete path on other side of road	-10
		Formalised Gravel path on either side of road	-6
		Nature strip on either side of the road	0
		None or limited	2
Surrounding zoning	The density and type of surrounding development will influence the level of usage. Select the option that best describes the surrounding development (or would generate a similar level of pedestrian activity) while disregarding any activity nodes	Residential zone	1
		Low-density residential zone	0
		Industrial area	-5
Activity node 1	Will the path serve an adjacent facility that attracts pedestrians and cater for a significant number of them? If facility is not listed, choose a facility with similar pedestrian activity	Primary school	10
		Secondary school	10
		Shopping centre	7
		Local medical centre	7
		Child care centre	7
		Bus Stop	7
		Community facility (high use)	6
		Large offices or tertiary institute	5
		Community Hall	4
		No	0
Road hierarchy	Specific provision is made for cases when the function of a footpath varies significantly from that of the street of road it is located on (<i>refer to section 8.1 for definitions</i>)	Main	3
		Sub-Main	3
		Linkage	2
		Inter-Suburb	2
		Neighbourhood	1
		Local	0
Terrain	The type of terrain will influence construction costs. For example, a steep cross-fall will add	Substantial earthworks	-2
		Moderate earthworks	-1

	cost to the construction with retaining walls or a boardwalk required.	Nominal earthworks	0
Bridge	The requirement for a pedestrian bridge over a culvert will heavily influence construction costs.	Bridge > 6m long	-3
		Bridge < 6m long	-2
		No bridge	0
City Priorities			
Priorities	1. Missing links around school areas	Priority 1	6
	2. Shared Path arterial links to be connected	Priority 2	5
	3. Missing links around bus stops, community amenities and facilities	Priority 3	4
	4. Community requests	Priority 4	3
	5. Connecting missing links on path networks	Priority 5	2
	6. Providing every household with a footpath	Priority 6	1

The Evaluation Matrix calculates a raw score by adding all scores together. This raw score is used to calculate the basic ranking of a footpath location request or need. If an external funding contribution is confirmed, the footpath may increase in ranking on the basis that it reduces the cost to Council. The maximum score of a path section is 55.

The Evaluation Matrix and current criteria and weightings are considered to provide fair and equitable ranking of all footpath locations evaluated. It should be noted however, that the ranking on its own cannot always indicate the final priority of a path. It is however, a very strong indication. The priority of any footpath can easily be re-evaluated if circumstances change. The listing of footpaths for construction is consequently tentative and will be reviewed annually and updated on an ongoing basis.

11 Implementation

11.1 Community Requests

Any new requests for footpaths should be evaluated against the matrix and a recommendation should be made for construction should the score of that path section increase significantly. The Request and Recommendation form acts as a formal amendment to the Implementation Plan.

The process for new requests is;

1. Community Projects receives and responds to the request
2. Community Projects review and evaluate requested provisions
3. Request and Recommendation form to be completed (in the case of a required amendment to the plan) which details;
 - a. Rationale – Criteria scores
 - b. Recommended year for construction
 - c. Technical commentary
 - d. Approval by Director Strategic Projects & Infrastructure, Director Community Services – Finalised Request and Recommendation form due November to Technical Services for action.

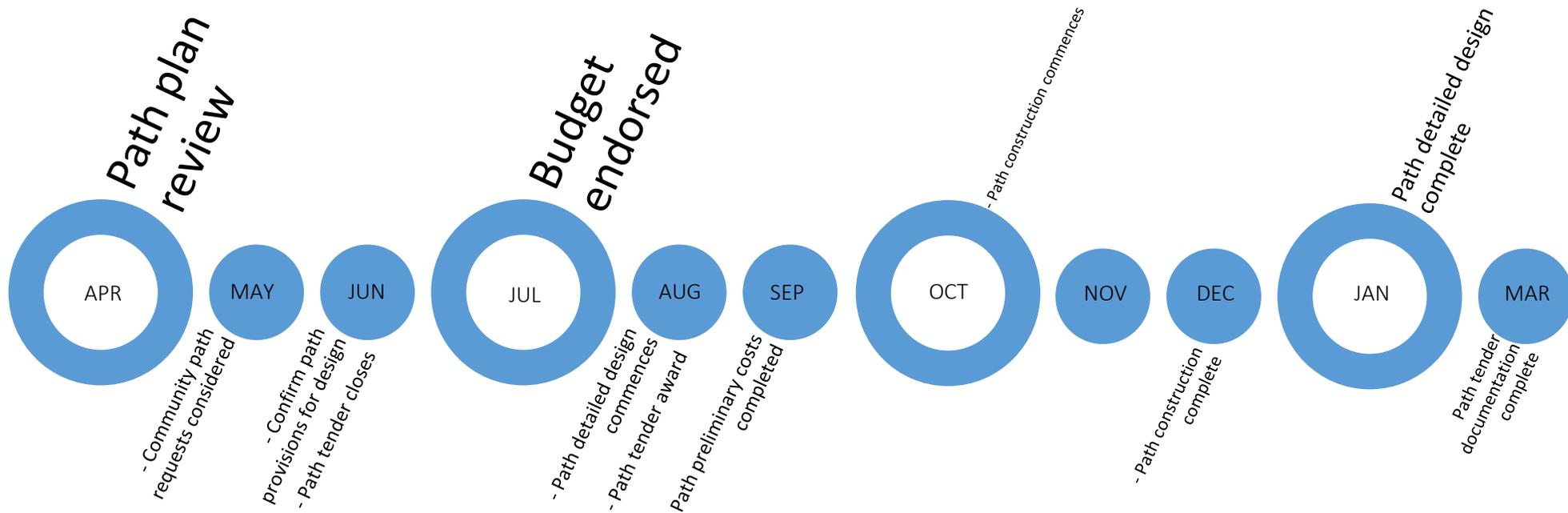
The Request and Recommendation form can be found in Promapp.

11.2 Timeframe

This strategy should be considered as guideline for five separate processes;

- Path confirmation and design
- Path construction tender
- Path construction

The suggested implementation of this plan is as follows;



12 Summary

Although minor changes to the Evaluation Matrix have been implemented, the evaluation of all existing missing links has demonstrated significantly lower scores than the previous Future Works Plan. This verifies that the implementation of the plan has been successful to date.

As articulated within the Strategy, the priority generally favours areas that do not have an existing footpath, it considers population and catchment, and prioritises the connection of arterial links for tourism purposes. It is these arterial links that require the most funding, therefore delaying other potential path construction.

At the completion of this plan, the total path lengths per town will be as follows;

Suburb/Township	Length (m)	Population (est. 2031)	Metres per Person
City Centre/Pegs Creek	17,067	2,775	6.15
Bulgarra/Mulataga	21,598	5,923	3.65
Millars Well	12,487	2,494	5.01
Nickol	14,847	5,998	2.48
Baynton/Baynton West	22,891	7,603	3.01
Wickham	6,380	3,065	2.08
Point Samson	6,521.5	301	21.67
Roebourne	8,012.5	2,304	3.48
Dampier	8,543	1,360	6.28
Total	118,347	31,823	5.98 (average)

This future works program will increase footpath networks in the City of Karratha by 17.05 kilometres at a cost of \$6.89million through to the year 2028;

Year	Expenditure	Year	Expenditure
2018/2019	\$684,000	2023/2024	\$674,000
2019/2020	\$647,000	2024/2025	\$696,000
2020/2021	\$700,000	2025/2026	\$688,000
2021/2022	\$703,000	2026/2027	\$704,000
2022/2023	\$696,000	2027/2028	\$698,000
TOTAL			\$6,890,000

The current \$6.89million budget allocation over the next ten years addresses City priorities;

- PRIORITY 1. Missing links around school areas to be connected.
- PRIORITY 2. Shared path arterial links to be connected.
- PRIORITY 3. Missing links around bus stops, community amenities and facilities to be connected.
- PRIORITY 4. Community path request construction.
- PRIORITY 5. Connect all missing links on the path networks in all towns.
- PRIORITY 6. Providing every household with a footpath.

City of Karratha values footpath networks and recognises that well designed and maintained footpaths foster community connectivity, wellbeing and pride. There is exciting potential in increasing

all aspects of footpath networks throughout the City, particularly for tourism, and the increased health of our residents. To ensure this strategy remains relevant and reflects the need of the City of Karratha, it should be reviewed every two years.

Once adopted, this program will be the responsibility of Council's relevant Project Manager for delivery. This project manager will be accountable for budget, timing and quality of end of project.

This future works plan is consistent with the objectives set out in the Strategic Community Plan 2016-2026 and will continue to contribute to City's social, economic and environmental progress for the long term benefit of making sustainable, liveable townships within the City of Karratha.

13 Existing Transport Network

13.1 Karratha



13.2 Dampier



13.3 Roebourne



13.4 Wickham



13.5 Point Samson



14 Footpath Construction Program

Actual-Year	ID	Path Section	Suburb	Location	Path Length	Path Type	Path Cost	Bridge length	Bridge Cost	Earthworks allowance	Earthworks Cost	Linemarking	Total Cost
18/19	1.37	Grant Street - From existing path to Dampier Highway		West	133	Path	\$ 39,900			Nominal			\$39,900
18/19	4.8	Carse Street - Precinct to Shopping Centre		West	58	Path	\$ 17,400			Nominal			\$17,400
18/19	1.38	Warrior Street - Millstream Road to existing path		West	125	Path	\$ 37,500			Nominal			\$37,500
18/19	1.35	Dampier Highway - Rosemary to existing path (Stage 5)		North	245	Path	\$ 73,500	35	\$210,000	Minor	\$ 7,350		\$290,850
18/19/20	1.6	Millstream Road - From Lockyer Street to Maitland Road		North	1198	Shared	\$ 491,180	34	\$204,000	Nominal		\$7,188	\$702,368
19/20	1.46	Bayview Road - Nickol Road to Boyd Close		West	330	Path	\$ 99,000	15	\$90,000	Nominal			\$189,000
19/20	1.40	Bayview Road - Boyd Close to Lewis Drive			460	Shared	\$ 188,600	19	\$114,000	Nominal		\$2,760	\$305,360
19/20	1.12	Bayview Road - Lewis Drive to Legendre Road		South	660	Shared	\$ 270,600	13	\$78,000	Nominal		\$ 3,960	\$352,560
20/21	1.33	Bayview Road 6A- Searipple Camp to ex High-School site - Bridges only	Bulgarra	North		Shared		46	\$276,000	Minor			\$378,000
20/21	1.34	Dampier Highway to Welcome Road (Along Dampier Hwy, up to Welcome)	CBD	North/West	265	Shared	\$108,650	6	\$36,000	Minor	\$10,865	\$1,590	\$157,105
20/21	1.45	Teesdale Place, from existing path to Gawthorne Drive	Millars	East	125	Path	\$ 37,500			Nominal			\$37,500
20/21	1.43	Tambrey Drive: From Pavilion car park west to Bayview Road roundabout intersection	Nickol	South	242	Path	\$ 72,600			Nominal			\$72,600
20/21	3.4	Cleaverville Road - From Andover Way to Cleaver Terrace, Across to Gus Jager	Roebourne	North	191	Path	\$ 57,300			Minor	\$5,730.00		\$63,030
21/22	1.33	Bayview Road - Ex High-School site to Golf club	Bulgarra		1880	Shared	\$ 770,800					\$11,280	\$782,080
21/22	1.8	Bayview Road - Maitland Road to Searipple path	Bulgarra	North	550	Shared	\$ 225,500			Moderate	\$58,000	\$3,300	\$286,800
22/23	1.36	Dampier Highway - Rosemary Road to High School	Millars	South	974	Shared	\$ 399,340	37	\$222,000		\$ 145,664	\$ 5,844	\$ 772,848
23/24	3.1	Lot 772 Sholl Street - From Sholl Street to Roe Street	Roebourne	South	143	Path	\$ 42,900			Nominal			\$ 42,900
23/24	1.7	Bathgate Road - Existing path north of Gawthorne to Bayview Road	Nickol	West	535	Wide	\$ 176,550			Minor	\$ 17,655		\$ 194,205
23/24	4.7	Wickham Drive - Adjacent to Mulga Way (outside RTIO Wickham Lodge)	Wickham	South	418	Path	\$ 125,400			Nominal			\$ 125,400
23/24	1.22	Delambre Drive: Tambrey Drive intersection north connecting to existing footpath at Smith Delambre Park	Nickol	West	574	Path	\$ 172,200			Minor	\$17,220		\$ 189,420
23/24	1.14	Dixon Street - From Lewis Drive to Legendre Road	Nickol	North/West	450	Path	\$ 135,000			Nominal			\$ 135,000
23/24	5.1	Vitenbergs Drive - From private thoroughfare to park	Point Samson	South West	206	Path	\$ 61,800			Nominal			\$ 61,800
24/25	3.3	Cleaverville Road - From Andover Way to Harding Street	Roebourne	North	377	Path	\$113,100	16	\$96,000	Moderate	\$ 28,275		\$ 237,375
24/25	4.5	Nelley Way - River Gum Road to Walcott Drive	Wickham	South	360	Path	\$108,000			Nominal			\$ 108,000
24/25	3.2	Hampton Street/Queen Street - Hampton Street to Sholl Street	Roebourne	West/North	285	Path	\$85,500			Moderate	\$ 21,375		\$ 106,875
24/25	3.5	Crawford Way - Crawford Way to Todd Street	Roebourne	West/North	365	Path	\$109,500			Moderate	\$ 27,375		\$ 136,875
24/25	1.32	Ridley Street	Bulgarra	North	440	Path	\$132,000			Nominal			\$ 132,000
25/26	1.25	Blinco Road - Galbraith Road to Dampier Highway	Pegs Creek	East	273	Path	\$81,900			Nominal			\$ 81,900
25/26	1.19	Strickland Drive - Gawthorne Drive to Strickland	Millars Well	West	835	Path	\$250,500			Minor	\$ 25,050		\$ 275,550

25/26	1.42	Goshawk Circle: running from Bayview Road/Malus intersection, west along Goshawk, finishing at intersection with Falcon Parade footpath	Nickol West	South	211	Path	\$63,300	0		Nominal			\$ 63,300
25/26	1.44	Shadwick Drive - From Dampier Highway path to Gawthorne Drive	Millars Well	Eastern	480	Path	\$ 144,000	0		Nominal			\$ 144,000
25/26	2.4	Running length of Namatjira Road	Dampier	South	260	Path	\$ 78,000	0		Minor	\$ 7,800		\$ 85,800
25/26	1.27	Enderby Street: connecting existing path/bridge on Enderby which crosses from Leonard way, running south, follow bend and connect to Delambre road	Nickol	West	411	Path	\$ 123,300	0		Nominal			\$ 123,300
26/27	1.24	Broadhurst Road - Edney Way to Bayview Road	Millars Well	West	110	Path	\$ 33,000	0		Moderate	\$ 8,250		\$ 41,250
26/27	1.39	Boyd Close: Lewis Drive to bridge at the end of Boyd Cl	Nickol	South	178	Path	\$ 53,400	0		Nominal			\$ 53,400
27/28	1.28	Nairn Street - Searipple Road to Nairn Street	Bulgarra	West	500	Path	\$ 150,000	0		Nominal			\$ 150,000
27/28	1.10	O'Keefe Road - Frinderstein Way to Dampier Highway	Pegs Creek	East	290	Path	\$ 87,000	0		Nominal			\$ 87,000
27/28	1.21	Lawrence Way - Existing path on Lawrence, down Straker, up Ettie Cl	Millars Well	South/West/North	322	Path	\$ 96,600	0		Nominal			\$ 96,600
27/28	1.18	Lewis Drive: Bayview Road to Boyd Close	Nickol	West	450	Path	\$ 135,000	26	\$ 156,000	Moderate	\$33,750		\$ 324,750
27/28	1.23	Parton Close - To Delambre Drive	Nickol	South	105	Path	\$ 31,500	0		Nominal			\$ 31,500
27/28	2.3	Dawson Road	Dampier	South	270	Path	\$ 81,000	0		Minor	\$ 8,100		\$ 89,100
27/28	1.2	Swetman Way: Nickol Road to end of Swetman Way Loop finishing opposite existing footpath/bridge coming from Ryder Ct	Nickol	South (St) / North	229	Path	\$ 68,700	0		Minor	\$ 6,870		\$ 75,570
27/28	1.29	Finnerty Street - Millstream to Viveash Way	Bulgarra	West	300	Path	\$ 90,000	0		Nominal			\$ 90,000
27/28	1.31	Brockman Street - Walcott Way to Mystery Road	Bulgarra	West	210	Path	\$ 63,000	0		Nominal			\$ 63,000
27/28	1.13	Samson Way - Existing path to Lockyer Street	Bulgarra	North	320	Path	\$ 96,000	0		Nominal			\$ 96,000
27/28	2.2	Elliot Cres - From East Avenue, along Elliot Cr finishing on Lawson Drive at existing path	Dampier	South	412	Path	\$ 123,600	0		Minor	\$ 12,360		\$ 135,960
27/28	1.15	Richardson Way - Searipple to Path	Bulgarra	South/South	410	Path	\$ 123,000	0		Nominal			\$ 123,000
28/29	1.17	Consists of two parts - • DiCarlo Way: Start at left end of cul-de-sac, running length of Di-Carlo Way, finishing at intersection with Legendre Rd • Criddle Way: start at existing path which connects Di Carlo/Criddle Way, running east along Criddle and finish at intersection with Lewis Dr	Nickol	North	482	Path	\$ 144,600	0		Minor	\$ 14,460		\$ 159,060
28/29	1.11	Tue Place	Millars Well	North	118	Path	\$ 35,400	0		Nominal			\$ 35,400
28/29	1.16	Snook Way - Connecting existing paths	Pegs Creek	North	260	Path	\$ 78,000	0		Minor	\$ 7,800		\$ 85,800
28/29	4.6	Coolibah Way	Wickham	North	266	Path	\$ 79,800	0		Minor	\$ 7,980		\$ 87,780
28/29	1.26	Cowan Way/Marsh Way - Galbraith Road to Dampier Highway	Pegs Creek	West	182	Path	\$ 54,600	30	\$ 180,000	Nominal			\$ 234,600

Notes and Legend

- Some sections have been programed for construction earlier than higher priority paths where budget has been available

ID Reference	
Karratha	1
Dampier	2
Roebourne	3
Wickham	4
Point Samson	5

14.1 Footpath Construction Program by Suburb

Dampier



Dampier Works Table

Year	Colour	ID	Path Section	Suburb	Location	Path length	Path Type	Path Cost	Bridge Length	Bridge Cost	Earthworks allowance	Earthworks Cost	Line marking	Total Cost
27/28	Orange	2.2	Elliot Cres - From East Avenue, along Elliot Cr finishing on Lawson Drive at existing path	Dampier	South	412	Path	\$123,600	0	0	Minor	\$12,360	0	\$135,960
26/27	Blue	2.3	Dawson Road	Dampier	South	270	Path	\$81,000	0	0	Minor	\$8,100	0	\$89,100
25/26	Purple	2.4	Running length of Mamatjira Road	Dampier	South	260	Path	\$78,000	0	0	Minor	\$7,800	0	\$85,800



Nickol Works Table

Year	Colour	ID	Path Section	Suburb	Location	Path length	Path Type	Path Cost	Bridge Length	Bridge Cost	Earthworks allowance	Earthworks Cost	Line marking	Total Cost
20/21		1.43	Tambrey Drive: From Pavilion car park west to Bayview Road roundabout intersection	Nickol	South	242	Path	\$72,600	-	-	Nominal	-	-	\$72,600
20/21		1.45	Teesdale Place, from existing path to Gawthorne Drive	Nickol/ Millars	East	125	Path	\$37,500	-	-	Nominal	-	-	\$37,500
23/24		1.14	Dixon Street – from Lewis Drive to Legendre Road	Nickol	North / West	450	Path	\$135,000	-	-	Nominal	-	-	\$135,000
23/24		1.7	Bathgate Road: Existing path north of Gawthorne to Bayview Road	Nickol	West	535	Wide	\$176,550	-	-	Minor	\$17,655	-	\$194,205
23/24		1.22	Delambre Drive: Tambrey Drive intersection north connecting to existing footpath at Smith Delambre Park	Nickol	West	574	Path	\$172,200	-	-	Minor	\$17,220	-	\$189,420
25/26		1.27	Enderby Street: connecting existing path/bridge on Enderby which crosses from Leonard way, running south, follow bend and connect to Delambre road	Nickol	West	411	Path	\$123,300			Nominal	-	-	\$123,300
25/26		1.42	Goshawk Circle: running from Bayview Road/Malus intersection, west along Goshawk, finishing at intersection with Falcon parade footpath	Nickol West	South	211	Path	\$63,300	-	-	Nominal	-	-	\$63,300
25/26		1.44	Shadwick Drive – From Dampier Highway path to Gawthorne Drive	Millars Well	Eastern	480	Path	\$144,000	-	-	Nominal	-	-	\$144,000
26/27		1.18	Lewis Drive: Bayview Road to Boyd Close	Nickol	West	450	Path	\$135,000	26	156,000	Moderate	33,750	-	\$324,750
26/27		1.23	Parton Close – to Delambre Drive	Nickol	South	105	Path	\$31,500	-	-	Nominal	-	-	\$31,500
26/27		1.21	Lawrence Way – Existing path on Lawrence, down Straker, up Ettie Cl	Nickol / Millars	South / West / North	322	Path	\$96,600	-	-	Nominal	-	-	\$96,600
26/27		1.39	Boyd Close: Lewis Drive to bridge at the end of Boyd Cl	Nickol	South	178	Path	\$53,400	-	-	Nominal	-	-	\$53,400
27/28		1.17	Consists of two parts – • DiCarlo Way: Start at left end of cul-de-sac, running length of diCarlo Way, finishing at intersection with Legendre Road • Criddle Way: start at existing path which connects DiCarlo/Criddle Way, running east along Criddle and finish at intersection with Lewis Dr	Nickol	North	482	Path	\$144,600	-	-	Minor	14,460	-	\$159,060
27/28		1.2	Swetman Way: Nickol Road to end of Swetman Way Loop finishing opposite existing footpath/bridge coming from Ryder Ct	Nickol	South (St) / North	229	Path	\$68,700	-	-	Minor	\$6,870	-	\$75,570

Millars Well



Millars Works Table

Year	Colour	ID	Path Section	Suburb	Location	Path length	Path Type	Path Cost	Bridge Length	Bridge Cost	Earthworks allowance	Earthworks Cost	Line marking	Total Cost
22/23	Yellow	1.36	Dampier Highway – Rosemary Road to High School	Millars Well	South	974	Shared	\$399,340	37	\$222,000	Moderate	\$145,664	\$5,844	\$772,848
25/26	Purple	1.19	Strickland Drive – Gawthorne Drive to Strickland	Millars Well	West	835	Path	\$250,500	-	-	Minor	\$25,050	-	\$275,550
25/26	Purple	1.25	Blinco Road: Starting at Galbraith Road connecting through to Dampier Highway	Pegs Creek	East	273	Path	\$81,900	-	-	Nominal	-	-	\$81,900
26/27	Blue	1.24	Broadhurst Road: Edney way to Bayview Road	Millars Well	West	110	Path	\$33,000	-	-	Moderate	\$8,250	-	\$41,250
28/29	Green	1.11	Tue Place	Millars Well	North	118	Path	\$35,400	-	-	Nominal	-	-	\$35,400
28/29	Green	1.26	Cowan Way/Marsh Way to Galbraith Road to Dampier Highway	Pegs Creek	West	182	Path	\$54,600	30	\$180,000	Nominal	-	-	\$234,600



Pegs Creek Works

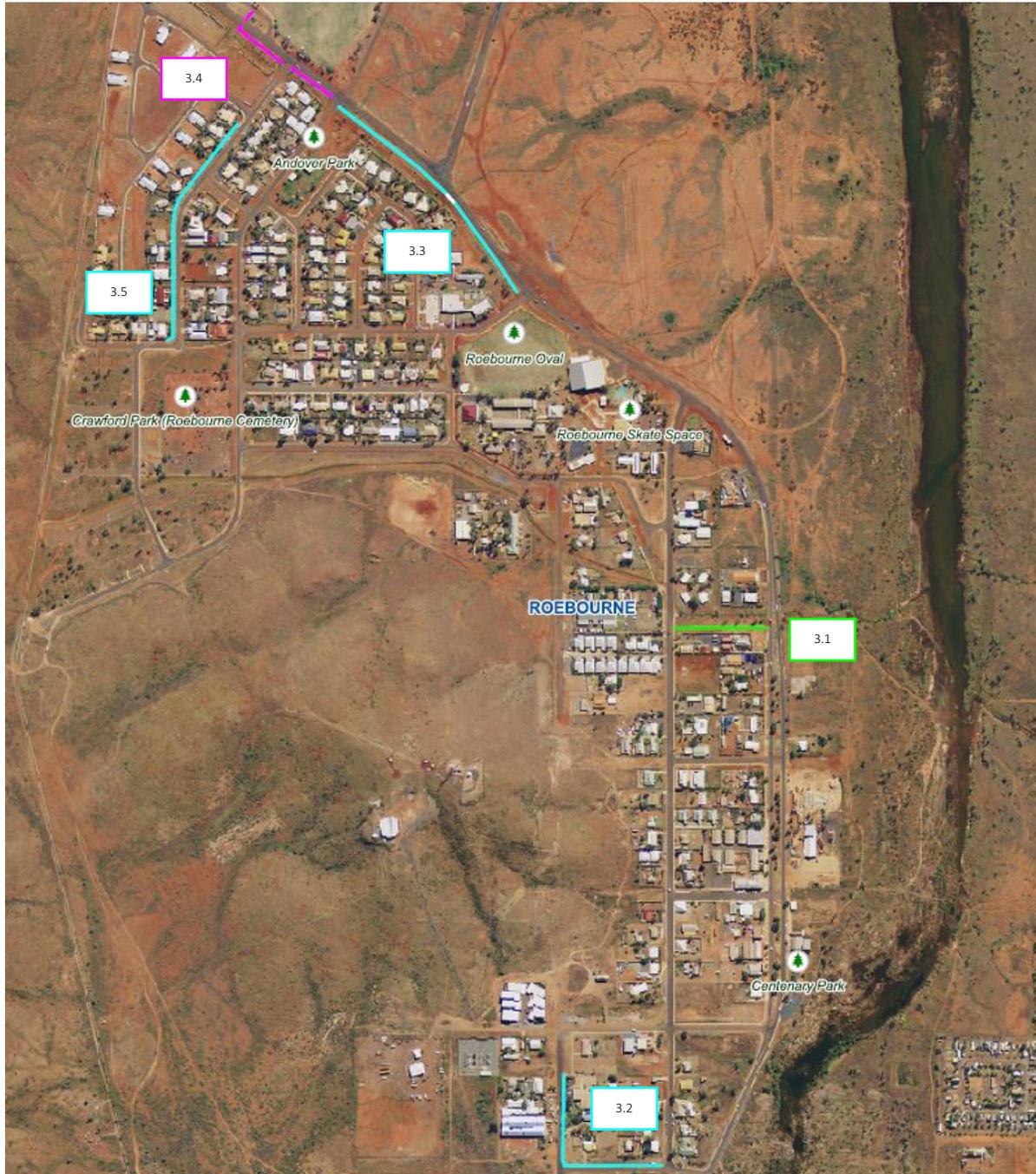
Year	Colour	ID	Path Section	Suburb	Location	Path length	Path Type	Path Cost	Bridge Length	Bridge Cost	Earthworks allowance	Earthworks Cost	Line marking	Total Cost
20/21		1.34	Dampier Highway to Welcome Road (along Dampier Highway, up Welcome to Road	CBD/Pegs Creek	North/West	265	Shared	\$108,650	6	\$36,000	Minor	\$10,865	\$1,590	\$157,105
26/27		1.10	O'Keefe Road – Frinderstein Way to Dampier Highway	Pegs Creek	East	290	Path	\$87,000	-	-	Nominal	-	-	\$87,000
28/29		1.11	Snook Way – Connecting existing paths	Pegs Creek	North	260	Path	\$78,000	-	-	Minor	\$7,800	-	\$85,800



Bulgarra Works

Year	Colour	ID	Path Section	Suburb	Location	Path length	Path Type	Path Cost	Bridge Length	Bridge Cost	Earthworks allowance	Earthworks Cost	Line marking	Total Cost
21/22		1.33	Bayview Road – Ex High-school site to Golf Club	Bulgarra	North	1880	Shared	\$770,800					\$11,280	\$782,080
21/22		1.8	Bayview Road – Maitland Road to Searipple Path	Bulgarra	North	550	Shared	\$225,500	-	-	Moderate	\$58,000	\$3,300	\$286,800
24/25		1.32	Ridley Street	Bulgarra	North	440	Path	\$132,000	-	-	Nominal	-	-	\$132,000
26/27		1.28	Nairn Street – Searipple Road to Nairn Street	Bulgarra	West	500	Path	\$150,000	-	-	Nominal	-	-	\$150,000
27/28		1.13	Samson Way – Existing path to Lockyer Street	Bulgarra	West	320	Path	\$96,000	-	-	Nominal	-	-	\$96,000
27/28		1.15	Richardson Way – Searipple to path	Bulgarra	South / South	410	Path	\$123,000	-	-	Nominal	-	-	\$123,000
27/28		1.29	Finnerty Street – Millstream to Viveash Way	Bulgarra	West	300	Path	\$90,000	-	-	Nominal	-	-	\$90,000
27/28		1.31	Brockman Street – Walcott Way to Mystery Road	Bulgarra	West	210	Path	\$63,000	-	-	Nominal	-	-	\$63,000

Roebourne



Roebourne Works

Year	Colour	ID	Path Section	Suburb	Location	Path length	Path Type	Path Cost	Bridge Length	Bridge Cost	Earthworks allowance	Earthworks Cost	Line marking	Total Cost
20/21		3.4	Cleaverville Road – From Andover Way to Cleaver Terrace, Across to Gus Jager	Roebourne	North	191	Path	\$57,300	-	-	Minor	\$5,730	-	\$63,030
23/24		3.1	Lot 772 Sholl Street – From Sholl Street to Roe Street	Roebourne	South	143	Path	\$42,900	-	-	Nominal	-	-	\$42,900
24/25		3.2	Hampton Street/Queen Street – Hampton Street to Sholl Street	Roebourne	West / North	285	Path	\$85,500	-	-	Moderate	\$21,375	-	\$106,875
24/25		3.3	Cleaverville Road – From Andover Way to Harding Street	Roebourne	North	377	Path	\$113,100	16	\$96,000	Moderate	\$28,275	-	\$237,375
24/25		3.5	Crawford Way – Crawford Way to Todd Street	Roebourne	West / North	365	Path	\$109,500	-	-	Moderate	\$27,375		\$136,875



Wickham Works

Year	Colour	ID	Path Section	Suburb	Location	Path length	Path Type	Path Cost	# of Bridge	Bridge Length	Bridge Cost	# of Culverts	Earthworks allowance	Earthworks Cost	Line marking	Total Cost
23/24		4.7	Wickham Drive – Adjacent to Mulga Way (outside RTIO Wickham Lodge)	Wickham	South	418	Path	\$125,400	-	-	-	-	Nominal	-	-	\$125,400
24/25		4.5	Nelley Way – River Gum Road to Walcott Drive	Wickham	South	360	Path	\$108,000	-	-	-	-	Nominal	-	-	\$108,000
28/29		4.6	Coolibah Way	Wickham	North	266	Path	\$79,800	-	-	-	-	Minor	\$7,980	-	\$87,780

Point Samson



Point Samson Works

Year	Colour	ID	Path Section	Suburb	Location	Path length	Path Type	Path Cost	# of Bridge	Bridge Length	Bridge Cost	# of Culverts	Earthworks allowance	Earthworks Cost	Line marking	Total Cost
23/24		5.1	Vitensbergs Drive – From private thoroughfare to park	Point Samson	South West	206	Path	\$61,800	-	-	-	-	Nominal	-	-	\$61,800