

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.

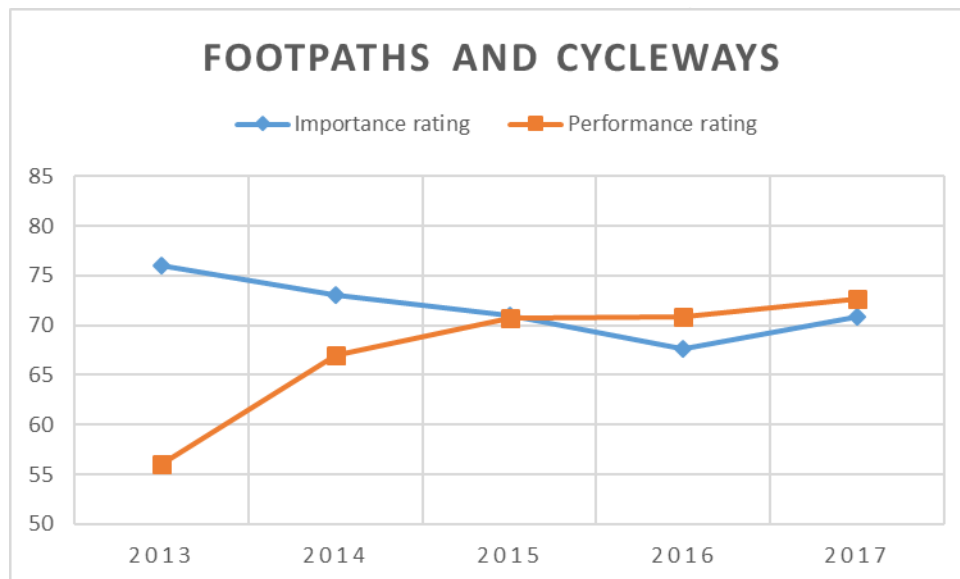
3 Background

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.

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
- Reviewed the City's Public Art process for inclusion;
- 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. 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 Children and Youth Elderly Parents with prams	Regional centres Schools and pre-schools/day-care Central Business District 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 Public Art

It is recommended that Public Art is run as an ancillary sub-project to any new footpath construction each year (but does not apply to upgrades), and is to be coordinated by the City's Community Engagement department. This does not apply to local or neighbourhood roads which are primarily connecting paths for residents – but does apply to any main, sub-main, link road or inter-suburb link, provided it reflects the culture of that suburb.

A number of mediums may be incorporated into the footpath – these can be constructed in-situ, as a retrofitted surface treatment or separate to the path altogether.

As per the City's Public Art Strategy, the Karratha Arterial Link should form a Public Art Trail and can also incorporate either in-situ or surface treatment artworks.

The following mediums may be utilised for each path provision;

- Footpath paint
- Sculptures complementing the footpath
- Sculptures constructed into the path
- Footpath design – concrete may be used to create interesting lines (but must not be at the expense of the Standard)
- Functional art that complements the path use i.e. bench seating, shade provisions, bike racks etc.
- In-situ mosaic pieces
- Phosphorescent resins/stones
- Urban art
- Informative/interpretive signage
- Temporary art
- Use of other surface treatments (i.e. use of turf)

The budget for footpath Public Art is to be separate to the path construction budget but must be considered at the time of detailed design, prior to annual budget allocations. The consideration for the path Public Art budget is to be up to 2% of that specific path construction cost (as per Councils Public Art Policy), although the Karratha Art Trail may be subject to increased budget allocations. The Public Art Selection Committee must include the path construction Project Manager as to ensure compliance and cohesion with the path design.

9.8 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.

9.9 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.

9.10 General

The following general design considerations have been taken into account to select priority path sections for construction;

- 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

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
		0 – 500 vehicles per day	0
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 Formalised Gravel path on either side of road Nature strip on either side of the road None or limited	-10 -6 0 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 Low-density residential zone Industrial area	1 0 -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 Secondary school Shopping centre Local medical centre Child care centre Bus Stop Community facility (high use) Large offices or tertiary institute Community Hall No	10 10 7 7 7 7 6 5 4 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 Sub-Main Linkage Inter-Suburb Neighbourhood Local	3 3 2 2 1 0
Terrain	The type of terrain will influence construction costs. For example, a steep cross-fall will add cost to the construction with retaining walls or a boardwalk required.	Substantial earthworks Moderate earthworks Nominal earthworks	-2 -1 0
Bridge	The requirement for a pedestrian bridge over a culvert will heavily influence construction costs.	Bridge > 6m long Bridge < 6m long No bridge	-3 -2 0
City Priorities			
Priorities	1. Missing links around school areas 2. Shared Path arterial links to be connected 3. Missing links around bus stops, community amenities and facilities 4. Community requests 5. Connecting missing links on path networks 6. Providing every household with a footpath	Priority 1 Priority 2 Priority 3 Priority 4 Priority 5 Priority 6	6 5 4 3 2 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.

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.

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.

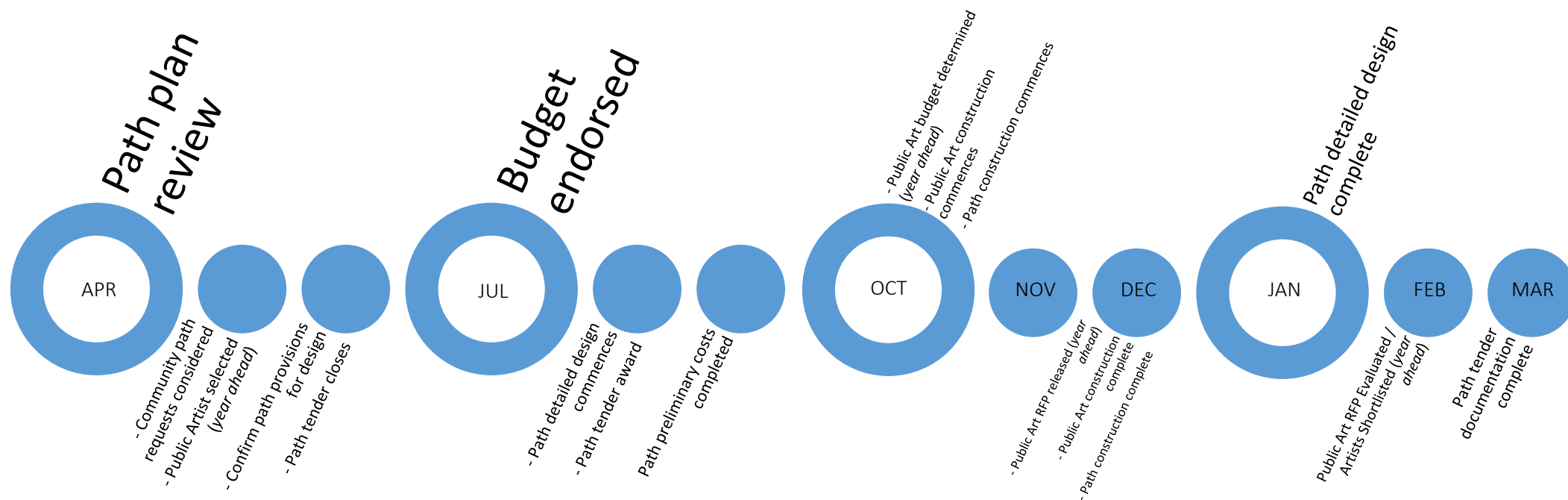
The Request and Recommendation form can be found in Promapp.

11.2 Timeframe

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

- Path confirmation and design
- Path construction tender
- Public Art tender
- Path construction
- Public Art 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.

This updated plan generally favours Karratha due to the significant land area that does not have an existing footpath, the town's population, and the priority to connect 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 \$6.79million through to the year 2028;

Year	Expenditure	Year	Expenditure
2018/2019	\$681,934	2023/2024	\$686,490
2019/2020	\$671,148	2024/2025	\$661,845
2020/2021	\$699,539	2025/2026	\$689,025
2021/2022	\$685,470	2026/2027	\$679,020
2022/2023	\$691,757	2027/2028	\$640,440
TOTAL		\$6,786,668	

The current \$6.79million 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.

DRAFT

13 Existing Transport Network

13.1 Karratha



13.2 Dampier



13.3 Roebourne



13.4 Wickham



13.5 Point Samson



14 Footpath Construction Program

Year	ID	Path Section	Location	Path Length	Path Type	Path Cost	Bridge length	Bridge Cost	Earthworks allowance	Earthworks Cost	Line marking	Total Cost	Priority Score	Weighted Score
17/18	1.1	Bathgate Road - Tambrey Drive to Gawthorne Drive	East	300	Wide	\$99,000.00	0	\$-	Nominal	\$-	\$-	\$99,000.00	5	23
17/18	1.5	Miles Loop - From roundabout, connecting to park	East/South	95	Path	\$28,500.00	0	\$-	Nominal	\$-	\$-	\$28,500.00	4	13
17/18	1.3	Frinderstein Way - Back end, connecting two paths	-	100	Path	\$30,000.00	0	\$-	Minor	\$3,000.00	\$-	\$33,000.00	4	-3
17/18	2.5	Portland Cres		347	Path	\$104,100.00	0	\$-	Nominal	\$-	\$-	\$104,100.00	3	0
17/18	1.4	Kestral Way	South	330	Path	\$99,000.00	0	\$-	Nominal	\$-	\$-	\$99,000.00	2	15
18/19/20	1.6	Millstream Road - From Lockyer Street to Mailand Road	North	1198	Shared	\$491,180.00	34	\$204,000.00	Nominal	\$-	\$7,188.00	\$702,368.00	5	33
18/19	1.35	Dampier Highway - Rosemary to existing path	North	245	Path	\$73,500.00	35	\$210,000.00	Minor	\$7,350.00	\$-	\$290,850.00	6	29
18/19	1.37	Grant Street - From existing path to Dampier Highway	West	133	Path	\$39,900.00	0	\$-	Nominal	\$-	\$-	\$39,900.00	4	27
18/19	4.1	Jacaranda Place Link	East	111	Path	\$33,300.00	0	\$-	Minor	\$3,330.00	\$-	\$36,630.00	4	23
19/20	1.8	Bayview Road - Maitland Road to Searipple path	North	679	Shared	\$278,390.00	0	\$-	Nominal	\$-	\$4,074.00	\$282,464.00	5	27
19/20	1.38	Warrier Street - Millstream Road to existing path	West	125	Path	\$37,500.00	0	\$-	Nominal	\$-	\$-	\$37,500.00	4	27
20/21	1.36	Dampier Highway - Rosemary Road to High School	South	921	Shared	\$377,610.00	37	\$222,000.00	Moderate	\$94,402.50	\$5,526.00	\$699,538.50	6	19
21/22	1.34	Dampier Highway to Welcome Road (Along Dampier Hwy, up to Welcome)	North/West	265	Path	\$79,500.00	6	\$36,000.00	Minor	\$7,950.00	\$-	\$123,450.00	5	29
21/22	1.33	Bayview Road - Searipple Camp to ex High-School site	North	994	Path	\$298,200.00	39	\$234,000.00	Minor	\$29,820.00	\$-	\$562,020.00	6	13
22/23	1.40	Bayview Road - Nickol Road to Lewis Drive	South	922	Shared	\$378,020.00	19	\$114,000.00	Nominal	\$-	\$5,532.00	\$497,552.00	5	32
22/23	1.7	Bathgate Road - Existing path north of Gawthorne to Bayview Road	West	535	Wide	\$176,550.00	0	\$-	Minor	\$17,655.00	\$-	\$194,205.00	5	17
23/24	1.12	Bayview Road - Lewis Drive to Legendre Road	South	660	Shared	\$270,600.00	13	\$78,000.00	Nominal	\$-	\$3,960.00	\$352,560.00	5	29
23/24	4.8	Carse Street - Precinct to Shopping Centre	West	58	Path	\$17,400.00	0	\$-	Nominal	\$-	\$-	\$17,400.00	4	25
23/24	3.4	Cleaverville Road - From Andover Way to Cleaver Terrace, Across to Gus Jager	North	191	Path	\$57,300.00	0	\$-	Minor	\$5,730.00	\$-	\$63,030.00	4	21
23/24	4.7	Wickham Drive - Adjacent to Mulga Way (outside RTIO Wickham Lodge)	South	215	Path	\$64,500.00	0	\$-	Nominal	\$-	\$-	\$64,500.00	4	20
23/24	5.1	Vitenbergs Drive - From private thoroughfare to park	South West	206	Path	\$61,800.00	0	\$-	Nominal	\$-	\$-	\$61,800.00	4	18

Year	ID	Path Section	Location	Path Length	Path Type	Path Cost	Bridge length	Bridge Cost	Earthworks allowance	Earthworks Cost	Line marking	Total Cost	Priority Score	Weighted Score
23/24	1.25	Blinco Road - Galbraith Road to Dampier Highway	East	267	Path	\$80,100.00	0	\$-	Nominal	\$-	\$-	\$80,100.00	4	12
24/25	4.5	Nelley Way - River Gum Road to Walcott Drive	South	350	Path	\$105,000.00	0	\$-	Nominal	\$-	\$-	\$105,000.00	4	17
24/25	1.22	Delambre Drive - Tambrey Drive to Smith Delambre Park	West	559	Path	\$167,700.00	0	\$-	Minor	\$16,770.00	\$-	\$184,470.00	4	18
24/25	3.3	Cleaverville Road - From Andover Way to Harding Street	North	377	Path	\$113,100.00	16	\$96,000.00	Moderate	\$28,275.00	\$-	\$237,375.00	4	17
24/25	1.14	Dixon Street - From Lewis Drive to Legendre Road	North/West	450	Path	\$135,000.00	0	\$-	Nominal	\$-	\$-	\$135,000.00	4	15
25/26	3.2	Hampton Street/Queen Street - Hampton Street to Sholl Street	West/North	285	Path	\$85,500.00	0	\$-	Moderate	\$21,375.00	\$-	\$106,875.00	4	15
25/26	3.1	Lot 772 Sholl Street - From Sholl Street to Roe Street	South	143	Path	\$42,900.00	0	\$-	Nominal	\$-	\$-	\$42,900.00	4	11
25/26	3.5	Crawford Way - Crawford Way to Todd Street	West/North	360	Path	\$108,000.00	0	\$-	Moderate	\$27,000.00	\$-	\$135,000.00	4	11
25/26	1.19	Strickland Drive - Gawthorne Drive to Strickland	West	700	Path	\$210,000.00	0	\$-	Minor	\$21,000.00	\$-	\$231,000.00	3	26
25/26	1.24	Broadhurst Road - Edney Way to Bayview Road	West	110	Path	\$33,000.00	0	\$-	Moderate	\$8,250.00	\$-	\$41,250.00	3	13
25/26	1.32	Ridley Street	North	440	Path	\$132,000.00	0	\$-	Nominal	\$-	\$-	\$132,000.00	3	7
26/27	1.27	Enderby Street - Delambre Drive to Nickol Road	West	411	Path	\$123,300.00	0	\$-	Nominal	\$-	\$-	\$123,300.00	2	15
26/27	1.39	Boyd Close - Lewis Drive to bridge	South	178	Path	\$53,400.00	0	\$-	Nominal	\$-	\$-	\$53,400.00	2	14
26/27	1.10	O'Keefe Road - Frinderstein Way to Dampier Highway	East	258	Path	\$77,400.00	0	\$-	Nominal	\$-	\$-	\$77,400.00	2	13
26/27	1.28	Nairn Street - Searipple Road to Nairn Street	West	497	Path	\$149,100.00	0	\$-	Nominal	\$-	\$-	\$149,100.00	2	13
26/27	1.18	Lewis Drive - Bayview Road to Boyd Close	West	450	Path	\$135,000.00	0	\$-	Moderate	\$33,750.00	\$-	\$168,750.00	2	12
26/27	1.2	Swetman Way - Nickol Road to end of Swetman Way Loop	South (St)	229	Path	\$68,700.00	0	\$-	Minor	\$6,870.00	\$-	\$75,570.00	2	12
26/27	1.23	Parton Close - To Delambre Drive	South	105	Path	\$31,500.00	0	\$-	Nominal	\$-	\$-	\$31,500.00	2	8
27/28	1.21	Lawrence Way - Existing path on Lawrence, down Straker, up Ettie Cl	South/West	322	Path	\$96,600.00	0	\$-	Nominal	\$-	\$-	\$96,600.00	2	12
27/28	1.29	Finnerty Street - Millstream to Viveash Way	West	300	Path	\$90,000.00	0	\$-	Nominal	\$-	\$-	\$90,000.00	2	11
27/28	1.13	Samson Way - Existing path to Lockyer Street	North	320	Path	\$96,000.00	0	\$-	Nominal	\$-	\$-	\$96,000.00	2	8
27/28	1.31	Brockman Street - Walcott Way to Mystery Road	West	206	Path	\$61,800.00	0	\$-	Nominal	\$-	\$-	\$61,800.00	2	8
27/28	1.11	Tue Place	North	118	Path	\$35,400.00	0	\$-	Nominal	\$-	\$-	\$35,400.00	2	7

27/28	1.15	Richardson Way - Searipple to Path	South/South	420	Path	\$126,000.00	0	\$-	Nominal	\$-	\$-	\$126,000.00	2	7
Year	ID	Path Section	Location	Path Length	Path Type	Path Cost	Bridge length	Bridge Cost	Earthworks allowance	Earthworks Cost	Line marking	Total Cost	Priority Score	Weighted Score
27/28	2.2	Elliot Cres - From East Avenue to Lawson Drive	South	408	Path	\$122,400.00	0	\$-	Minor	\$12,240.00	\$-	\$134,640.00	2	7
	2.3	Dawson Road	South	266	Path	\$79,800.00	0	\$-	Minor	\$7,980.00	\$-	\$87,780.00	2	7
	1.16	Snook Way - Connecting existing paths	North	230	Path	\$69,000.00	0	\$-	Minor	\$6,900.00	\$-	\$75,900.00	2	6
	1.17	DiCarlo Way and Criddle Way	North	343	Path	\$102,900.00	0	\$-	Minor	\$10,290.00	\$-	\$113,190.00	2	6
	2.4	Namatjira Road	South	250	Path	\$75,000.00	0	\$-	Minor	\$7,500.00	\$-	\$82,500.00	2	5
	4.6	Coolibah Way	North	266	Path	\$79,800.00	0	\$-	Minor	\$7,980.00	\$-	\$87,780.00	2	5
	1.26	Cowan Way/Marsh Way - Galbraith Road to Dampier Highway	West	147	Path	\$44,100.00	30	\$180,000.00	Nominal	\$-	\$-	\$224,100.00	2	3

Notes and Legend

- Some sections have been programed for construction earlier than higher priority paths where budget has been available
- 2017/2018 construction program was confirmed prior to re-evaluation

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