

shire of ROEBOURNE



shire of
ROEBOURNE

Karratha

Powerhouse of the Pilbara

FUTURE WORKS REPORT FOOTPATHS 2013-2023

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1.0 Introduction

The Shire of Roebourne is committed to inclusive engagement with its community and, through employing a range of engagement techniques, sought to ensure opportunities for genuine participation with the community about issues and decisions affecting their lives. In 2011 and 2012 Community Engagement workshops were conducted in Karratha, Wickham, Roebourne, Point Samson and Dampier as part of the development of the Shire of Roebourne's Strategic Community Plan 2012-2022. The 2011 and 2012 Community Engagement workshops identified and ranked footpaths and cycle ways priority #2 'Areas Needing Improvement'. Future footpath networks are a part of the Shire of Roebourne's Community's priorities and aspirations for the liveability and sustainability of our town.

The Shire of Roebourne supports 'Liveable Neighbourhoods' a Western Australian Government sustainable cities initiative. Liveable Neighbourhoods has been prepared to implement the objectives of the State Planning Strategy which aims to guide the sustainable development of Western Australia to 2029. Liveable Neighbourhoods operates as a development control policy, or code, to facilitate the development of sustainable communities. Delivery of Liveable Neighbourhoods is an integral element of delivering the priority strategies and actions of Network City Framework. Principle aims highlight many areas specifically linked to the Shire of Roebourne's Future Footpath 10 year strategic planning such as:

- To provide a safe, convenient and legible movement network for pedestrians, principally along the street network; to provide excellent accessibility between residents and safe and efficient access to points of attraction in and beyond development.
- To design street networks to optimise the walkable access to centres, schools, public transit stops and other destinations.
- To design major routes as integrator arterials with extensive and frequent opportunity for pedestrian to move safely along and across them.
- To design and detail new developments to promote and support walking to daily activities.
- To provide pedestrian paths through parks for recreation purposes wherever practicable.

To enable a continuous, high quality and well used path network to be developed funding decisions will be needed. Easy segments have been completed with difficult sections a challenge for a number of reasons: funding, resource allocation, equity amongst the towns and main roads land.

Shire of Roebourne provides a footpath network to enable efficient and safe passage of bicycles and pedestrians across many suburbs in Karratha and in Roebourne, Wickham, Dampier and Point Samson. The network as of June 2013 consists of over 80 kilometres of footpaths and shared paths. There are many missing links in the footpath network around the Shire of Roebourne. The Shire of Roebourne's current summary of footpath networks per town, per metre averaged out - per head of population data.

Suburb/Township	Length (m)	Population	Metres per Person
Town Centre/Pegs Creek	13,013	3,759	3.46
Bulgarra	10,048	3,578	2.8
Millars Well	6,290	2,285	2.75
Nickol	7,914.5	6,296	1.26
Baynton/Baynton West	19,152	3,746	5.11
Wickham	4,979	2,370	2.1
Point Samson	6,315.5	300	21
Roebourne	6,656.5	2,443	2.72
Dampier	7,585	1,340	5.66
Total – Shire of Roebourne	81,954	26,117	3.14

Population Figures based upon Population i.d 2011

2.0 Background

This document is the result of a direct request by the CEO to provide Future Works Report to guide ongoing development of footpath networks in the Shire of Roebourne projected over the next ten years.

An internal consultative process has recently been undertaken into developing and prioritising footpath priorities and planning for the missing links between the networks. This process now permits a planned approach in the future development of footpath construction programs.

The consultation process identified those locations with the greatest pedestrian demand, being in close proximity transport nodes or other attractions such as schools, shopping centres, sporting facilities and parks and then established a list of sites for inclusion in the footpath program.

The future planning of footpaths will acknowledge current and future funding obligations and current and future work projects occurring in the Shire of Roebourne.

3.0 Methodology

A brief outline of methodology used to determine this future works program:

- Analyse the footpath data to determine needs: for neighbourhood areas, arterial networks and missing links
- Generate maps of all footpath segments and identify areas that are deficient in paths;
- Prioritise new road segments and the impact of current and future works such as, Karratha Town Centre and the Underground Power Project;
- Balance quantity of work in program against allocated budgets and resources available to manage works;
- Spatially correlate footpaths and roads where possible for cost effectiveness;
- Distribute draft program for comment at Executive Managers Group;
- Resolution of Council.

The criteria used for determining each new footpath segment were:

- Provides linkage with other paths to create a network;
- Provides access to facilities and recreational areas;
- Community concern;
- Political agendas;
- Close proximity to pedestrian generated facilities;
- Significantly enhances public safety and opportunities for promotion of healthy lifestyle habits.

In any predicative works program the degree of confidence in the program decreases with every additional year from the current year. In other words, the first year's program is relatively accurate and stable in comparison to the second and third years. The footpaths included in the second and third year and so on are subject to change particularly when the program is being internally reviewed and dependant on internal funding. This report does not include contingency measurements or costings.

4.0 Literature Review

A number of documents were reviewed to provide background information about footpaths and to ensure the future works plan is consistent with Council's strategic directions and planning processes.

Please review this document with:

- Asset Management: SOR Intranet – Infrastructure Services, Policies: TE4
- Level of Service Agreements
- Footpath Standard Specifications
- Report on Community Engagement Findings: N:\Strategic Projects\Business Improvement Plans\ISP\Community Forums
- WA Utilities Code of Practice
- WA Planning and Designing for Pedestrians www.transport.wa.gov.au
- Designing Out Crime www.planning.wa.gov.au
- Liveable Neighbourhoods www.planning.wa.gov.au
- Shawmac Report: N:\Community\Facilities\Recreation Projects\Tracks and Trails\Shared Path Signage\Final
- Bikewest document Signage, Pavement and Linemarking Guidelines, Austroads Guide to Road Design –Part 6A: Pedestrian and Cyclist Paths

Before using any documents, please ensure you have the latest version.

4.1 Glossary of Terms

Access All – A facility, amenity or service is designed, available and promoted for use by anyone, regardless of ability.

Evaluation Matrix – Assessment tool designed to rank requests for footpath construction.

Footpath – That portion of a road or street or other public space set aside for use by pedestrians only.

Pedestrian – A person walking, and including people in wheelchairs, on roller skates/blades or riding on toy vehicles such as skate boards or other vehicles, other than a bicycle, powered by human effort or a motor and with a maximum speed of 7km/h.

Roadway – That part of a road or street set aside, designed or otherwise normally used for vehicular traffic.

Shared Path – A footpath on which pedestrians and cyclists mix.

5.0 Objectives

The overall aim of this future works document is to prepare a detailed development footpath plan for the Shire of Roebourne. Future works on developing the footpath network throughout the Shire of Roebourne will acknowledge priorities, detail and provide indicative costs.

The main objective of an integrated footpath network is to:

Provide safe passage for high need community members to access key destinations.

High need community members are identified as;

- Individuals with disabilities;
- Children and youth;
- Elderly;
- Parents with prams.

Key destinations include;

- Regional centres (such as the Leisureplex)
- Schools and pre-schools/daycare
- Central business district
- Medical and essential services
- Community Bus Services

This document will not include:

- Development of directional signage;
- Development of detailed path plans beyond the depiction of preliminary path construction routes;
- 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.

6.0 Assumptions

6.1 Annual Budget

Where applicable, the annual budget for this works program has been derived from the Operational Plan 2013/2014. Target expenditure is 100%.

Council has committed around \$1.77million for the provision of new footpaths in 2013/2014. Future budget allocation assumptions are based upon \$700,000 per financial year which includes a 3% CPI increase per annum, for new footpath infrastructure, although indicative construction costs per financial year will vary around this figure due to site works and type of path.

The indicative costs per financial year outlined in this document have been factored into the Shire of Roebourne Long Term Financial Plan.

6.2 Unit Rates

The costing for this future works program in determining footpath capital works have been based upon unit rates as an approximate and should only be used as a budget guide.

Material	Area	Cost
Concrete	1m length x 1.8m width (footpath)	\$300
	1m length x 2.0m width (wider path)	\$320
	1m length x 2.5m width (shared)	\$380
Asphalt	1m length x 2.0 width (footpath)	\$410 (incl. kerbing)
	1m length x 2.5m width (shared)	\$450 (incl. kerbing)

Indicative costing only includes price to lay path and excludes drain crossings, kerbing, and other works and/or installations required.

Additional Costs	Definition	Cost
Nominal earthworks (NE)	Installation is straight-forward. Cut channel and lay surface	+ 0%
Moderate earthworks (ME)	Additional earthworks are required i.e. additional fill, slight hard digging	+ 25%
Substantial earthworks (SE)	Surface requires a large amount of preparation	+ 50%
Moderate bridge	Crossing a gully of a maximum 3 metres	+ \$20,000 ex GST
Substantial bridge	Crossing a gully of 3 – 6 metres	+ 40,000 ex GST

On-site inspection and validation of the current year's program is to be undertaken to determine final project costs prior to budget submission.

It is noted that some bridges may be longer than 6m. These bridges are to be costed one year prior to construction and are shown within the plan at an estimated cost of \$100,000.

6.3 Developer Contributions

The developer contribution model scheme, to commence 2013/14, as well as redevelopment plans for Bulgarra, Pegs Creek and Millars Well. Development contributions will address possible shortfalls for funding for community infrastructure, roads, footpaths and storm water culverts.

Therefore a number of existing footpath areas in Bulgarra, Pegs Creek and Millars Well may be subject to future development contributions. This is an effective way for Council to deliver a higher level of service from its network at a minimal cost to the rate payer. Future works planning should acknowledge the possibility of works generated in these areas by the developer contribution scheme.

6.4 Lazy Lands Project

The Department of Regional Development and Lands, in association with the Shire of Roebourne, has identified 61 parcels of surplus land reserved for parks, recreation and drainage that is under-utilised. Once re-zoned by the Shire of Roebourne, these parcels will be suitable for residential development. The development of these sites may assist with Karratha's current and future housing requirements. Proceeds from the sale of Lazy Lands are to be maintained in Trust for the purpose of capital improvements to other recreational infrastructure such as new footpath networks. It is important to note that works identified on Lazy Land is flagged in the implementation table and the issue of land control must be investigated and resolve 1 year prior to the delivery date. Additionally, the funding of those works should be investigated concurrently with the land owners responsible.

6.5 Strategic Projects

This future works program takes into consideration other related planning or construction works currently undertaken by Council. This includes but not exclusive to:

Karratha City Centre Works; Karratha Airport Upgrade; 7 Mile Waste Transfer Station Construction and continued Street Scaping Plans. It is also corresponding with any trail networks being considered or planned – Master Trails.

6.6 Directional Signage

Ideally, the directional signposting would be installed at the time of completion of staged works. However recognising that it may take many years for the entire network to be completed, the directional signposting could be installed at any time – even before any missing links are constructed.

6.7 Horizon Power PUPP

Horizon Power has provided information that the suburb of Pegs Creek will be undergoing PUPP works in 2015 and therefore any pathway development should be in 2016 and after.

Horizon Power has also determined that the suburb of Nickol will be undergoing PUPP works in 2016 and therefore any pathway development should be in 2017 and after.

There is opportunity for further discussions and research relating to special trench sharing arrangements with Horizon Power and Shire of Roebourne. Such arrangements would provide Horizon Power with the ability to lessen the depth of digging hence lowering their costs and capping the area with a footpath. An opportunity worth researching extensively especially from a risk management and maintenance perspective with the City of Darwin, Telstra and Power & Water Authority in the Northern Territory. The City of Darwin approved such a strategy in 2006-2008.

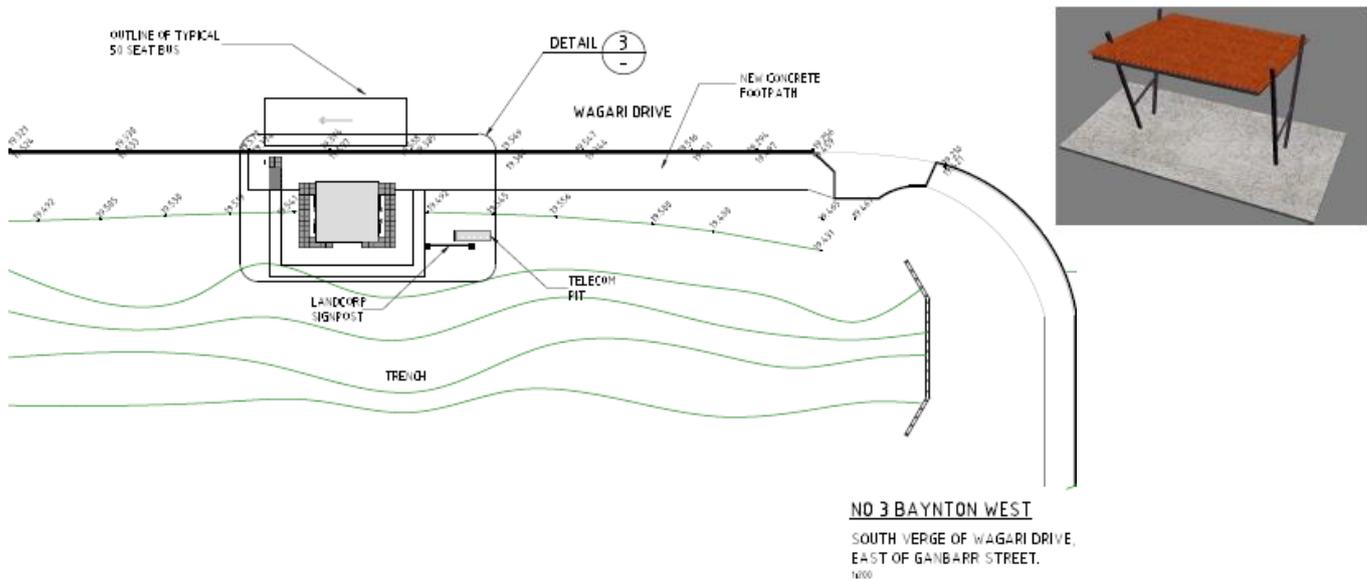
6.8 National Broadband Network (NBN)

The NBN is Australia's first national wholesale-only, open access communications network that is being built to bring high speed broadband and telephone services within reach of Australian premises. The NBN will utilise three technologies; fibre, fixed wireless and satellite, expected to make possible improved ways for individuals to connect with one another. Within the next decade, the plan is for every home, school and workplace in the country to have access to the NBN.

Referring to the NBN website for the Shire of Roebourne, the roll out map highlights that construction has commenced in Bulgarra, Pegs Creek, Millars Well, Nickol and Roebourne; and construction is due to commence within three years in the following suburbs; Dampier, Baynton, Baynton West, Roebourne and Wickham.

The maps on the website show the estimated likely coverage areas based on NBN's rollout plan and the Project Manager for the footpath network is encouraged to refer to future NBN rollout mapping as the current information on the website is only approximate.

6.9 Footpaths for new Bus Shelters, Community Bus and School Bus Stops



The new Apex bus shelters will need to be provided with footpath accessibility. South verge of Wagari Drive East of Ganbarr Street requires new footpath to support access challenges. Footpath infrastructure already exists at the other two locations. Footpath infrastructure is complete for all Community and School Bus Stops (see appendix 4 for maps).

The following facilities are Community Bus Stops;

- Frank Butler Centre (Hunt Way)
- Karratha Centro (Sharpe Avenue)
- Karratha Leisureplex (Dampier Highway)
- Tambrey Oval (Tambrey Drive)
- Pilbara Holiday Park (Rosemary Road)
- Mara Guthara Adventure Park (Marniyarra Loop)

6.10 Point Samson

Point Samson is currently in the process of a Local Structural Plan. There are no recommended works for Point Samson within this report, although should the Local Structural Plan recommend any footpath works, these will be investigated and included should the budget allow. As stated in section 1 of this report, Point Samson has the greatest service of footpaths per person within the Shire, with 21 metres per person. This is four times as much as any other township.

6.11 Roebourne

Roebourne is currently in the process of a Local Revitalisation Plan and an area thought to have possible future works as a key destination is under investigation. This report does not currently recommend any new footpath infrastructure within the Roebourne area.

7.0 Design Guidelines

As stated in *section 5*, the key overarching objective for this plan is to provide safe passage for high need community members to access key destinations. Below is a detailed design guideline table for footpaths and shared paths that should be considered when evaluating a site to construct on.

Footpaths		
Objectives	Considerations	Guiding Principals
<p>OBJECTIVE 1. Missing links around school areas to be connected.</p> <p>OBJECTIVE 2. Expenditure of funding obligations.</p> <p>OBJECTIVE 3. Arterial links to be connected around the Shire of Roebourne.</p> <p>OBJECTIVE 4. Missing links around the bus stops, community amenities and facilities to be connected.</p> <p>OBJECTIVE 5. Remote mobilisation costs to be factored in when planning the works program.</p> <p>OBJECTIVE 6. Acknowledgment of the PUPP project and ensuring SoR comes in behind their works with footpath construction.</p> <p>OBJECTIVE 7. To use limited funds to maximise community benefit of new footpath constructions.</p>	<p>The following general design and location considerations have been taken into account to achieve the objective for every resident to have an accessible footpath:</p> <ul style="list-style-type: none"> • 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. • Identifying and managing Lazy Lands areas 	<ul style="list-style-type: none"> • The footpath should be continuous in length with opportunities for connecting to other footpath networks, acknowledging breaks due to crossing of roads where pram ramps will be included. • Footpaths should be constructed on the residential side of the street, or the shortest path between existing links. • The footpath should provide for a variety of users, recreational and commuter pedestrian, cyclists as well as people that are mobility impaired. The footpaths are not intended to provide for individuals or groups of cyclists travelling at speed. • The footpaths should provide directional signage. • The footpaths should minimise impacts on and conflicts with sensitive environments. • The footpath networks should recognise the varied landscapes around each town. • The footpath will take advantage of available public/school transport options, with educational precincts viewed as a key destination. • The footpath network will follow a hierarchical priority plan as set out in section 7.13 of this document and the Evaluation Matrix. • The footpath to provide opportunity for passive surveillance - crime prevention through environmental design. • Footpaths that meet recommended dimensions, surface requirements and that are free of obstructions which are particularly important for people with impairments and access challenges.

Shared Paths

Objectives	Considerations	Guiding Principals
<p>OBJECTIVE 1. To provide a seamless recreational and commuter circuit around the Karratha township</p> <p>OBJECTIVE 2. Expenditure of funding obligations.</p> <p>OBJECTIVE 3. Arterial links to be connected around Karratha.</p> <p>OBJECTIVE 4. Acknowledgment of the PUPP project and ensuring SoR comes in behind their works with footpath construction.</p>	<p>The following general design and location considerations have been taken into account for shared paths;</p> <ul style="list-style-type: none"> • Following and completing links to key destinations • Following existing tracks and trails where possible to minimise disturbance to the landscape. • Avoiding poorly drained 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). • Paths to meander to take advantage of natural and man made features and to create interest. • Taking note of safety hazards and avoiding where possible. • Identifying and managing Lazy Lands areas • Taking advantage of long sections to maximise funds. 	<ul style="list-style-type: none"> • The shared path should be continuous in length with opportunities for connecting to other path networks, acknowledging breaks due to crossing of roads where pram ramps will be included. • Shared paths should be constructed on the residential side of the street, or the shortest path between existing links. • The path should provide for a variety of users, recreational and commuter pedestrian, cyclists as well as people that are mobility impaired. • The paths should provide directional signage. • The paths should minimise impacts on and conflicts with sensitive environments. • The path networks should recognise the varied landscapes around each town. • The path will take advantage of available public/school transport options, with educational precincts viewed as a key destination. • The path to provide opportunity for passive surveillance - crime prevention through environmental design. • Shared paths that meet recommended dimensions, surface requirements and that are free of obstructions which are particularly important for people with impairments and access challenges.

Much of the recommended paths are within already cleared corridors – often an existing track. The intention is to construct the pathways on already disturbed land – along the old tracks and the side of verges. Careful and extensive on-the-ground examination of the proposed trail routes has enabled the best possible route to be selected that maximises use of already-disturbed locations.

Specifications

7.3 Width & Height Requirements

A general minimum footpath width of 1.2m has in the past been considered adequate for most low use road and street situations and although Councils have traditionally built footpaths to a width of 1.4m, officers have recommended that a minimum width of 1.8m be implemented into all new construction of footpaths.

Scenario	Overall width of path	Predominant path purpose
A	2.0 m	<ul style="list-style-type: none">• Typical circumstances of use• Local access• Constrained conditions• Tidal flow• Low use
B	2.5 m	<ul style="list-style-type: none">• Commuting and local access• Regular use• 20 km/h

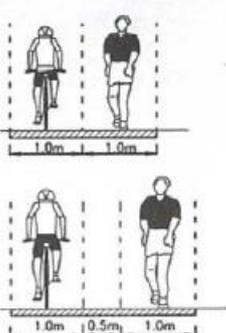


Diagram from Austroads Part 6A showing path width and clearance envelopes for shared pathways.

Increasing importance is being placed on the need for disability access. Where possible sufficient footpath width should be provided to allow 2 wheelchairs to pass, i.e. 1.8m minimum and 2m is desirable.

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.

The normal height clearances for the appropriate users should be provided. For example an absolute minimum of 2.0m is required for pedestrians.

7.4 Kerb Ramps (Pram Crossings)

Kerb ramps should always be provided in association with footpath construction – one at each end of the footpath and any road crossings. They should always comply with appropriate standards.

7.8 Gradient of surrounding earth

AS 1428.1 lists requirements for design of sloping walkways which can be applied to footpaths. Adjacent ground for all footpaths should be within 25mm of the level of the footpath. If adjacent ground has a step slope or drop off, a kerb or handrails may be required.

7.9 Cross Fall

Footpaths should be as flat as possible but should achieve an adequate drained surface. AS 1428 specifies any cross fall should not exceed 1:40.

7.10 Surface

Loose surface materials (gravel, soil, sand etc.) should be avoided on pedestrian routes other than recreational routes because some people find them 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.

Planning Principals

7.11 Hierarchy

A hierarchy of footpaths has been determined which will impact on a proposed links weighted score when evaluated using the matrix. The hierarchy ensures the best path is constructed in the best area for accessibility and pedestrians.

Type of Road	Description and Assumptions	Path Width	Risk Mitigation
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	Path set back 3m off the road
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. Linkage	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.

7.12 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 kerbs 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.

7.13 Crime Prevention through Environmental Design

Good planning of paths is a valuable strategy in reducing risk. Street lighting that adequately lights the footpaths should be provided in all streets and placement of street trees needs to consider affect 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.

8.0 Evaluation Matrix

The 2011 and 2012 Community Engagement workshops identified and ranked footpaths and cycle ways priority #2 'Areas Needing Improvement'. A consistent and efficient method of prioritising and correct identification of higher priority footpaths will ensure that Council funds are spent to achieve the greatest community benefit.

An Evaluation Matrix has been developed for this purpose which scores and ranks needs against each other. The Evaluation Matrix contains a list of criteria (refer to the table below) in the form of questions designed to prompt when considering each area. The criteria are grouped into social, environmental and economic issues in accordance with the Guiding Principles and Shire Priorities set out in the Future Works Report.

The range of scores available for each criterion varies to reflect the weighting given to each particular criterion. Minor criterion have a maximum score of 3, significant criteria 5 and major criteria 10. The higher range of potential scoring for missing links around schools for example implies a greater benefit to the community if a footpath is built around the school arterial perimeter. 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, location).

Items given a score of ten within the criterion is justified by the main objective of the footpath network; **to provide safe passage for high need community members to access key destinations.**

Criterion	Justification	Ranking System	Score
Environmental Impact			
Vegetation Removal	Will vegetation removal be required?	Significant (tree(s) over 3m) Extensive (tree(s) under 3m) Moderate (bush and scrub) Minor (largely dirt, won't affect earthworks)	-5 -3 -1 0
Social Impact			
Engagement workshops	Number of individual responses to footpath improvements	Large petition 100+ Medium Petition 50+ Petition <50	3 2 1
Disability access	Is the path specifically required to allow access by disabled or elderly people?	Extensive (would serve multiple residents daily) Minor (would occasionally be used) No	10 5 0
Road formation width	Narrow roads are more hazardous to pedestrians as are multi-lane roads. The width includes the shoulders.	Multi-lane road Narrow <6m Medium 6-6.9m Moderate 7-7.9m	3 3 2 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) 70km/hour 60km/hour 50km/hour 40km/hour	5 4 3 2 1
Site distance	Road geometry can reduce the visibility of pedestrians to drivers. Hazards include sharp bends and crests	Serious restrictions Moderate restrictions Few restrictions Unrestricted	5 2 1 0
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 road shoulder	>10,000 vehicles per day 5,001 – 10,000 vehicles per day 3,001 – 5,000 vehicles per day 2,001 – 3,000 vehicles per day 1,001 – 2,000 vehicles per day 501 – 1,000 vehicles per day 0 – 500 vehicles per day	10 8 6 5 4 2 0
Parking demand	Parked cars can force pedestrians into the middle of the road	High parking demand Frequent parked cars Occasional parked cars Minimal parked cars	3 2 1 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	Concrete path on other side of road < 5,000vpd Gravel path on either side of road < 5,000vpd Concrete path on other side of road 5,000 – 10,000vpd Gravel path of other side of road 5,000 – 10,000vpd	-10 -6 -5

	safely accessible. (Disregard multi-lane roads or roads with >10,000vpd). If there is a safe alternative, points will be deducted	Both nature strips One nature strip only None or limited	-4 -3 -2 0
Economic Impact			
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 Industrial area Low-density residential zone	0 -5 -10
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 Community facility (high use) Large offices or tertiary institute Community Hall Child care centre Local medical centre No	10 8 7 6 5 4 3 2 0
Activity node 2	Will the path serve a second separate facility (or bus stop) 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 Community facility (high use) Large offices or tertiary institute Community Hall Child care centre Local medical centre Bus stop No	10 8 7 6 5 4 3 2 2 0
Footpath 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 7.13 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. If extra cost is involved, points will be deducted on the basis of the typical conditions (<i>refer to section 6.2 for definitions and cost considerations of earthworks</i>)	Substantial earthworks Moderate earthworks Nominal earthworks	-2 -1 0
Shire Priorities			
Priorities	1. Missing links around school areas 2. Expenditure of funding obligations 3. Arterial links to be connected around Karratha 4. Missing links around bus stops, community amenities and facilities 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	10 8 6 4 3 2

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 final ranking is determined using an adjusted

score provided the conditions set out strategy relating to the minimum contribution required based on the raw score met.

The scoring system underpinning the Evaluation Matrix originally received input from selected Council officers. 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 for funding that should be given to a request. It is however, a very strong indication of the priority for funding.

8.1 Implementation

The following raw scores have been established in using the Evaluation Matrix.

- The maximum likely raw point score is 50 points. Any footpaths with this score would need to be addressed as a matter of urgency.
- Very high priority projects would have a raw score of 35 points or more. These projects should be implemented with minimum delay.
- High priority projects score between 25 and 34 points inclusive and should desirably be implemented within one to two years of being identified.
- Medium priority projects score between 10 and 24 points inclusive and will need to be implemented over a much longer period. These footpaths should proceed in normal priority order (based on raw points score) unless a significant number of residents request earlier implementation.
- Low priority projects score below 10 points. These footpaths have some general community benefit and predominantly provide for local residents.

In establishing the final priorities for funding of footpath projects the final ranking from the Evaluation Matrix is a strong indicator of the priority for funding that should be used. Where projects have a similar score and /or special circumstances exist some variation of the final priorities may be warranted. In establishing the final construction priorities the following should be considered.

1. Ranking.
2. Any external contributions and associated conditions.
3. Project cost and available funding.
4. Any other relevant issues not covered by the Evaluation Matrix.

The construction of footpaths should normally be funded by Council under the Footpaths Future Works Report in Capital Works Program or by developers as part of new developments where appropriate.

All current requests for new footpaths have been evaluated and ranked using the Evaluation Matrix. All new requests received during the duration of this document will be evaluated on a case-by-case basis and may be included if the budget for that year allows.

The total cost to Council of constructing all projects with a priority of high or above is estimated to be \$8.1 million which at current levels of funding will take around ten years to implement.

Proposed paths that scored lower than 10 points were re-ranked based on their score of Shire Priorities. These sites are less desirable to construct a footpath on however would achieve one of the identified objectives of the plan. These were ranked higher for construction at an earlier stage to meet these objectives.

9.0 Costs Considerations

In the 2012/2013 Budget the following amounts were allocated to new footpath works:

Wickham	\$316,000
Dampier	\$180,000
Roebourne	\$128,250
Point Samson	\$88,000
Karratha	\$40,500

Budget surplus of \$310,000 was recommended from December 2012 Council report to focus on completion of safety matters arising from the Shawmac Consulting Civil & Traffic Engineers Review on current pathway network.

In the 2013/2014 Budget \$1.77million is allocated to footpath infrastructure. Future planning will be based upon the assumption of a budget of \$700,000 thereafter.

Current Funding Obligations

2013/2014 BikeWest

\$90,000 of Regional Bicycle Shared Grant allocated to Stage 1 of the Dampier Hwy completion by December 2013.

2013/2014 RDAF Round 5 – Regional Development Australia

\$203,000 of RDAF Round 5 Funding is allocated to the development of Searipple Road paths.

2014/2015 RDAF Round 3- Regional Development Australia

\$100,000 of RDAF Round 3 Funding is allocated to Stage 2 of Dampier Highway estimated completion by December 2015.

10.0 Conclusion

This future works plan is consistent with the objectives set out in the Strategic Community Plan 2012-2022 and feedback received from Community Survey results 2011 and 2012. This plan will continue to contribute to Shire of Roebourne's social, economic and environmental progress for the long term benefit of making sustainable, liveable townships within the Shire of Roebourne.

Shire of Roebourne 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 Shire, particularly for casual and informal use.

The adoption of the Footpath Construction Strategy within this report and the Evaluation Matrix has enabled Council officers to evaluate and prioritise the construction of footpaths across the Shire of Roebourne.

Key recommendations in this plan cannot be implemented without the support and resolution of Council. This ten year future works program will increase footpath networks in the Shire of Roebourne by 26.90 kilometres at a cost of \$8.1 million.

There is a shortfall to the Future Works Footpath Plan in which provision of a footpath on every street as guided by the 'Liveable Neighbourhoods' strategy, is not achievable with the current forecast of budget allocation over the next ten years. The justification of expenditure within the next ten years is not supported by the Evaluation Matrix.

The current \$8.1 million budget allocation over the next 10 years addresses Shire priorities;

- PRIORITY 1. Missing links around school areas to be connected.
- PRIORITY 2. Expenditure of funding obligations.
- PRIORITY 3. Arterial links to be connected around Karratha.
- PRIORITY 4. Missing links around the bus stops, community amenities and facilities to be connected.
- PRIORITY 5. Remote mobilisation costs to be factored in when planning the works program.
- PRIORITY 6. Acknowledgment of the PUP program and ensuring SoR comes in behind their works with footpath construction.
- PRIORITY 7. To use limited funds to maximise community benefit of new footpath constructions.

If the planned Future Works Footpath Strategy is implemented over the next ten years every household has access within 100 to 200mtrs to the local strategic footpath network in the Shire of Roebourne. If the Shire of Roebourne's vision is to provide a footpath for every household then there may be opportunity to address this large shortfall with the use of Developer Contribution Scheme funds or proceeds from Lazy Lands Project for future footpath network planning.

Once adopted, this future works 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.

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 on-going basis. To ensure this strategy remains relevant and reflects the need of the Shire of Roebourne, it should be reviewed annually.

11.0 Contacts

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Expenditure Overview

Proposed Works	Length (m) of Footpath Infrastructure	Budget Allocation	Proposed Costs for Council
2013/2014	3720	\$1,770,000 + \$90,000 funding +\$203,000 funding	\$1,770,000
2014/2015	2090	\$721,000 +\$100,000 funding	\$705,293 (\$15,707 contingency)
2015/2016	1227	\$742,630	\$724,409 (\$18,221 contingency)
2016/2017	1199	\$764,908.90	\$687,566 (\$77,342.90 contingency)
2017/2018	1753	\$787,856.17	\$673,437 (\$114,419.17 contingency)
2018/2019	1542	\$811,491.85	\$704,097 (\$107,394.85 contingency)
2019/2020	1905	\$835,836.61	\$697,207 (\$138,629.61 contingency)
2020/2021	1912	\$860,911.71	\$705,456 (\$155,455.71 contingency)
2021/2022	1740	\$886,739.06	\$667,081 (\$219,658.06 contingency)
2022/2023	1660	\$913,341.23	\$661,520 (\$251,821.23 contingency)
SUB TOTAL		\$9,094,715.52	
FUNDING (as at 27th September 2013)		\$393,000	
TOTAL COST TO COUNCIL			\$7,843,864

Budget is based on \$700,000 in 2013/2014 and CPI increases at 3% per annum thereafter.

*Proposed budget for contingency to increase each year with CPI increases due to increased risk with predicting cost 10 years prior

Karratha 10 year recommended works

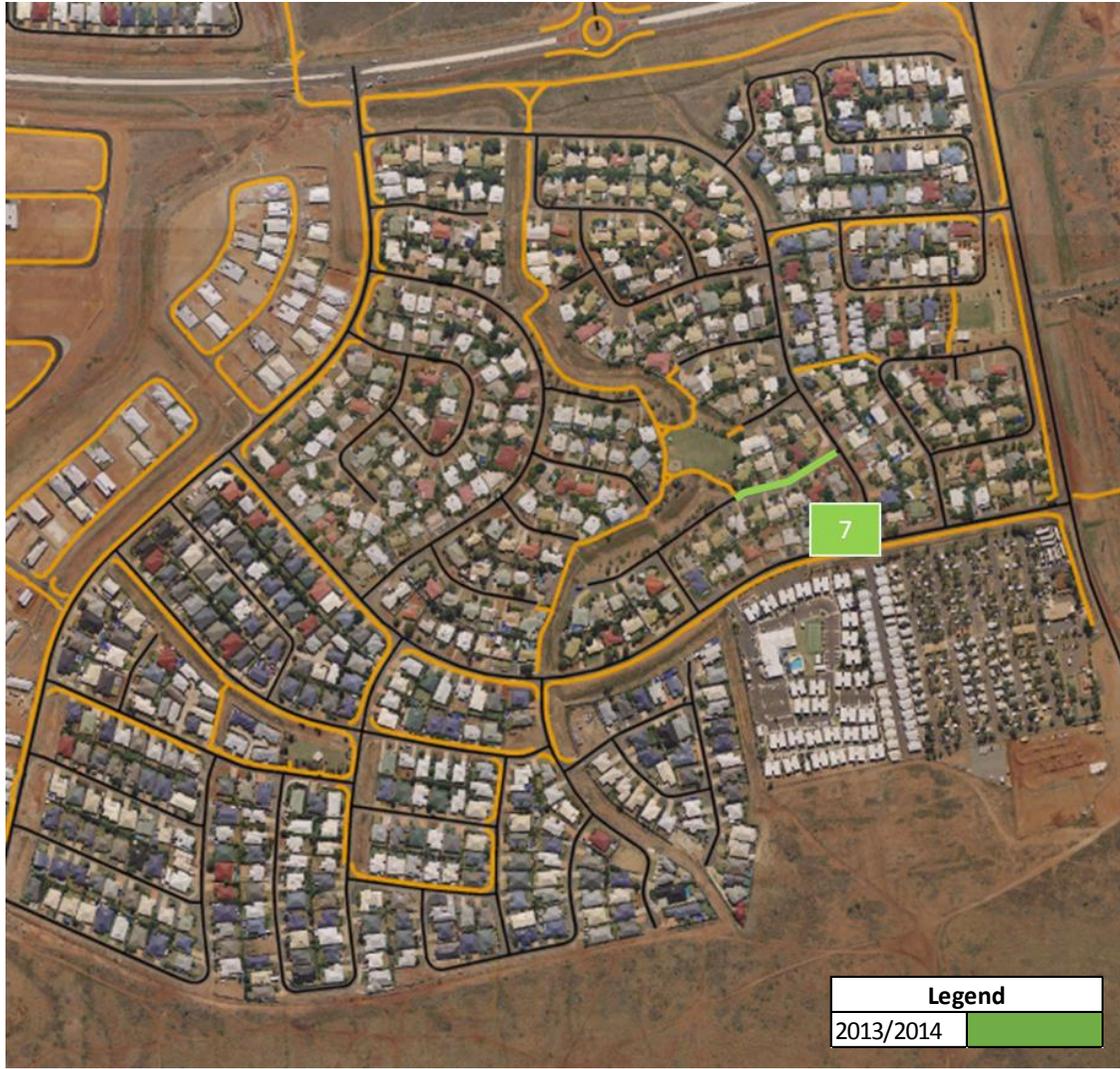


2013/2014

Recommended works









Year	Section	Location	Lazy Lands Reference	Mapping Reference	Length (m)	Path Type	Cost of build	Priority Score	Total Weighted Score
13/14	1	Dampier Highway. Cnr Galbraith Road to cnr Hillview Road - North side			800	Shared	\$605,000 (includes \$90,000 external funding)	6	47
13/14	2	Connecting to existing path along Balmoral Rd, 100m east of Hyde Rd to Bond Pl - South side			425	Shared	\$326,875	6	45
14/15	3	Searipple Road - Cnr Country Club Driveway to existing path back of McKenzie Way	P35, P41		885	Shared	\$420,375 (includes \$203,000 external funding)	8	42
13/14	4	Cnr Lewis Dr and Nickol Rd, up Nickol Rd ending at Balmoral Road - North side			230	Wider Path	\$73,600	6	31
13/14	5	Wickham - Cnr Walcott Dr and Oleander Pl, connecting to existing path at end of Oleander - North side of northern street			440	Footpath	\$132,000	10	30
13/14	6	From existing path on Atkinson Way, to Teesdale (South side), up Teesdale (East side) to existing path at car park			370	Footpath	\$111,000	4	27
13/14	7	Cnr Campbell Cr and Church Way, connecting to existing path on Church Way - North side			110	Footpath	\$33,000	3	16
13/14	Complete	Burges Road			310	Footpath	\$93,000		
13/14	Complete	Badock Place			150	Footpath	\$45,000		

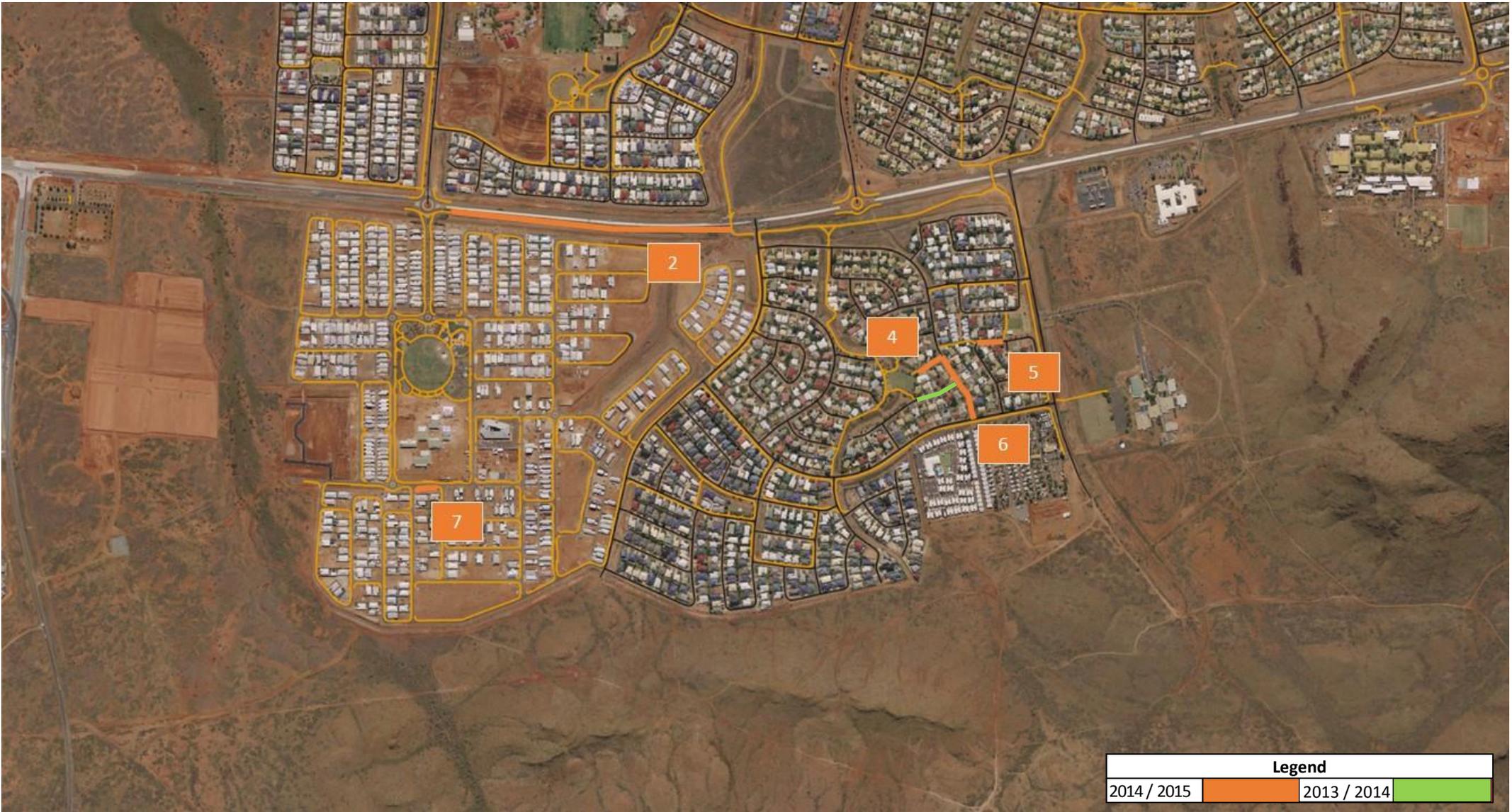
Summary 2013 / 2014

	Length	Cost
Total	3720m	\$1,839,850 (cost of works) - \$203,000 (external funding – section 3) + \$63,150 (3.7% contingency) \$1,700,000 cost to council
Additional Comments	<ul style="list-style-type: none"> • A number of recommended path sites with high-weighted scores have been delayed to later years due to Lazy Lands. These sites have been replaced to ensure budget is met for 2013/2014. • \$90,000 for section 1 was identified and included in the council 13/14 budget • \$203,000 for section 3 was identified post-budget adoption hence is shown in the financial summary as an in and out. • Section 1 includes an additional 25% in cost to allow for moderate earthworks. It also allows \$180,000 for 3 bridges • Section 2 includes an additional 25% in cost to allow for moderate earthworks and \$100,000 for one bridge • Section 3 includes an additional 25% in cost to allow for moderate earthworks • All costs are based on concrete construction. • Should the total 2013/2014 project cost fall below budget, sites in future recommended works can be elevated to ensure budget is met • Burges Road and Badock Place have been completed due to 2013/2014 schedule endorsement by EMT previously. 	

Evaluation Matrix Data 2013 / 2014

Year	Section	Criteria	Score	Total	Year	Section	Criteria	Score	Total
2013/2014	1	Vegetation Removal	0	47	2013/2014	3	Vegetation Removal	0	42
		Engagement Workshops	1				Engagement Workshops	1	
		Disability Access	10				Disability Access	10	
		Road Formation Width	3				Road Formation Width	0	
		Speed limit	4				Speed limit	4	
		Site distance	0				Site distance	0	
		Daily traffic	10				Daily traffic	8	
		Parking demand	0				Parking demand	0	
		Alternative access	-2				Alternative access	-2	
		Surrounding Zoning	0				Surrounding Zoning	0	
		Activity Node 1	7				Activity Node 1	6	
		Activity Node 2	6				Activity Node 2	4	
		Footpath Hierarchy	3				Footpath Hierarchy	3	
		Terrain	-1				Terrain	0	
Priorities	6	Priorities	8						
2013/2014	2	Vegetation Removal	-1	45	2013/2014	4	Vegetation Removal	0	31
		Engagement Workshops	1				Engagement Workshops	1	
		Disability Access	10				Disability Access	5	
		Road Formation Width	0				Road Formation Width	1	
		Speed limit	4				Speed limit	3	
		Site distance	0				Site distance	0	
		Daily traffic	10				Daily traffic	6	
		Parking demand	0				Parking demand	1	
		Alternative access	-3				Alternative access	0	
		Surrounding Zoning	0				Surrounding Zoning	0	
		Activity Node 1	10				Activity Node 1	0	
		Activity Node 2	6				Activity Node 2	6	
		Footpath Hierarchy	3				Footpath Hierarchy	2	
		Terrain	-1				Terrain	0	
Priorities	6	Priorities	6						

Year	Section	Criteria	Score	Total	Year	Section	Criteria	Score	Total
2013/2014	5	Vegetation Removal	-1	30	2013/2014	7	Vegetation Removal	0	16
		Engagement Workshops	1				Engagement Workshops	1	
		Disability Access	0				Disability Access	0	
		Road Formation Width	1				Road Formation Width	1	
		Speed limit	2				Speed limit	2	
		Site distance	0				Site distance	0	
		Daily traffic	4				Daily traffic	2	
		Parking demand	2				Parking demand	1	
		Alternative access	0				Alternative access	0	
		Surrounding Zoning	0				Surrounding Zoning	0	
		Activity Node 1	10				Activity Node 1	0	
		Activity Node 2	0				Activity Node 2	6	
		Footpath Hierarchy	1				Footpath Hierarchy	0	
		Terrain	0				Terrain	0	
Priorities	10	Priorities	3						
2013/2014	6	Vegetation Removal	0	27					
		Engagement Workshops	1						
		Disability Access	5						
		Road Formation Width	1						
		Speed limit	2						
		Site distance	2						
		Daily traffic	2						
		Parking demand	1						
		Alternative access	0						
		Surrounding Zoning	0						
		Activity Node 1	6						
		Activity Node 2	3						
		Footpath Hierarchy	0						
		Terrain	0						
Priorities	4								





Year	Section	Location	Lazy Lands Reference	Mapping Reference	Length (m)	Path Type	Cost of build	Priority Score	Total Weighted Score
14/15	1	Wickham - Starting at cnr Walcott Dr and Poinciana Pl, down Poinciana to connect to existing path - South side of southern street			410	Footpath	\$123,000	10	44
14/15	2	Dampier Highway, Baynton Drive to Euro Boulevard - South side			790	Shared	\$275,250	6	25
14/15	3	Cnr Searipple Rd and Shakespeare St, down west side of rd, around loop and connect to existing path - Non residential side			630	Footpath	\$189,000	4	18
14/15	4	From existing path on Campbell Cr down Gammon to existing path - South side			70	Footpath	\$21,000	3	15
14/15	5	Connecting existing paths at top of Leslie Loop - North side			80	Footpath	\$24,000	3	15
14/15	6	Cnr Campbell Cr and Church Way, down Campbell to Radley Drive – West side			110	Footpath	\$33,000	3	15
14/15	7	Cnr Nyamina Road and Wagari Drive to cnr Ganbarr St and Wagari Dr – South side			65	Footpath	\$19,500	10	39

Summary 2014 / 2015

	Length	Cost
Total	2090m	\$784,750 - \$100,000 funding (section 2) \$705,293 cost to council
Additional Comments	<ul style="list-style-type: none">• Costs are based on concrete construction• Section 2 includes \$100,000 funding and an additional 25% in cost to allow for moderate earthworks• Total cost includes 3% escalation• Should the total 2014/2015 project cost fall below budget, sites in future recommended works can be elevated to ensure budget is met	

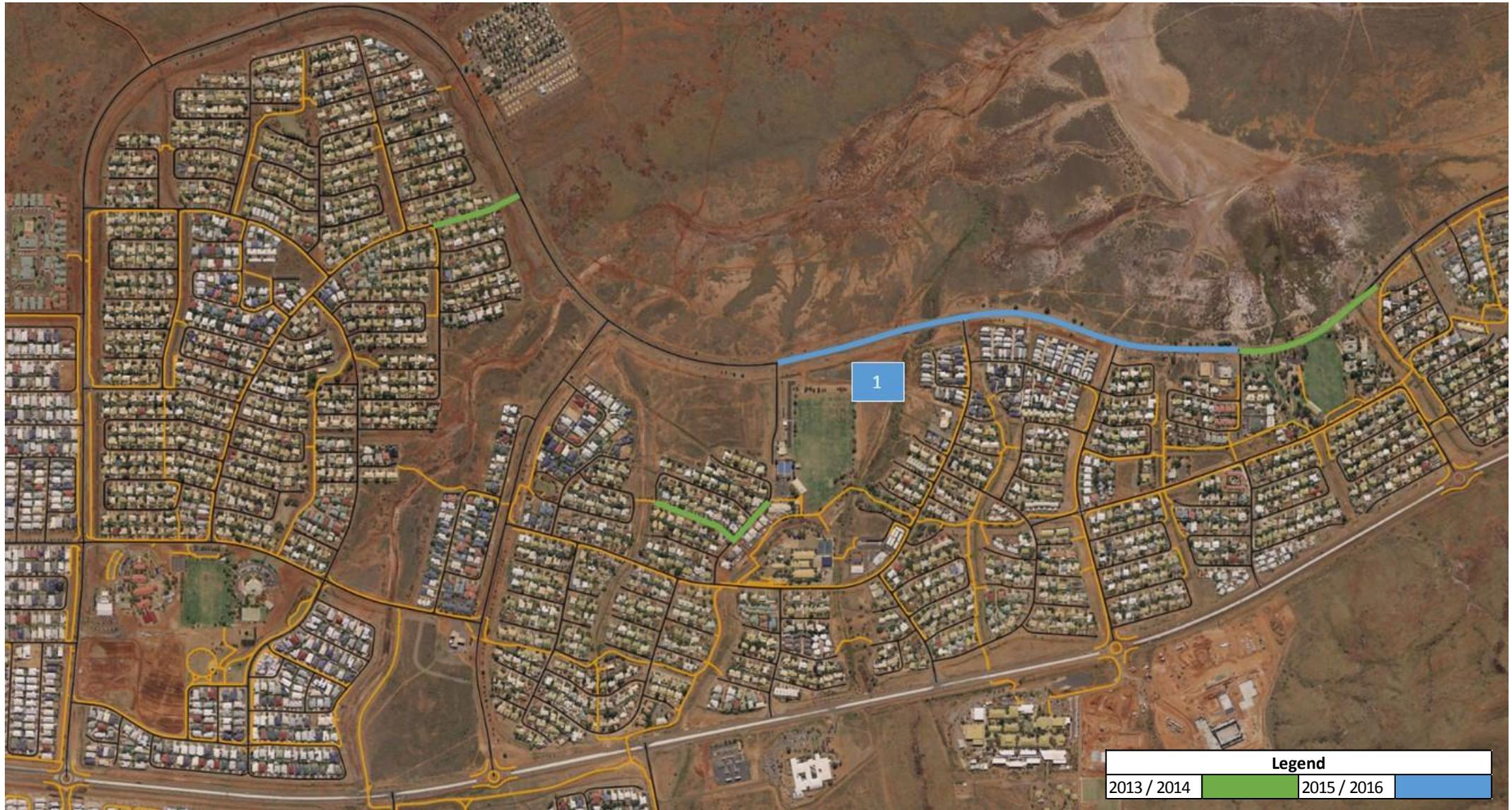
Evaluation Matrix Data 2014/2015

Year	Section	Criteria	Score	Total	Year	Section	Criteria	Score	Total
2014/2015	1	Vegetation Removal	-1	44	2014/2015	3	Vegetation Removal	0	18
		Engagement Workshops	1				Engagement Workshops	1	
		Disability Access	10				Disability Access	0	
		Road Formation Width	2				Road Formation Width	1	
		Speed limit	2				Speed limit	2	
		Site distance	2				Site distance	1	
		Daily traffic	4				Daily traffic	4	
		Parking demand	3				Parking demand	1	
		Alternative access	0				Alternative access	-2	
		Surrounding Zoning	0				Surrounding Zoning	0	
		Activity Node 1	10				Activity Node 1	0	
		Activity Node 2	0				Activity Node 2	4	
		Footpath Hierarchy	2				Footpath Hierarchy	2	
		Terrain	-1				Terrain	0	
Priorities	10	Priorities	4						
2014/2015	2	Vegetation Removal	0	25	2014/2015	4	Vegetation Removal	0	15
		Engagement Workshops	1				Engagement Workshops	1	
		Disability Access	0				Disability Access	0	
		Road Formation Width	0				Road Formation Width	2	
		Speed limit	4				Speed limit	2	
		Site distance	0				Site distance	0	
		Daily traffic	10				Daily traffic	0	
		Parking demand	0				Parking demand	1	
		Alternative access	-3				Alternative access	0	
		Surrounding Zoning	0				Surrounding Zoning	0	
		Activity Node 1	7				Activity Node 1	0	
		Activity Node 2	0				Activity Node 2	6	
		Footpath Hierarchy	3				Footpath Hierarchy	0	
		Terrain	-3				Terrain	0	
Priorities	6	Priorities	3						

Year	Section	Criteria	Score	Total	Year	Section	Criteria	Score	Total
2014/2015	5	Vegetation Removal	0	15	2014/2015	6	Vegetation Removal	0	15
		Engagement Workshops	1				Engagement Workshops	1	
		Disability Access	0				Disability Access	0	
		Road Formation Width	1				Road Formation Width	2	
		Speed limit	2				Speed limit	2	
		Site distance	1				Site distance	0	
		Daily traffic	0				Daily traffic	0	
		Parking demand	1				Parking demand	1	
		Alternative access	0				Alternative access	0	
		Surrounding Zoning	0				Surrounding Zoning	0	
		Activity Node 1	0				Activity Node 1	0	
		Activity Node 2	6				Activity Node 2	6	
		Footpath Hierarchy	0				Footpath Hierarchy	0	
		Terrain	0				Terrain	0	
Priorities	3	Priorities	3						
2014/2015	7	Vegetation Removal	0	39			Vegetation Removal	0	
		Engagement Workshops	1				Engagement Workshops	1	
		Disability Access	10				Disability Access	10	
		Road Formation Width	2				Road Formation Width	2	
		Speed limit	1				Speed limit	1	
		Site distance	0				Site distance	0	
		Daily traffic	6				Daily traffic	6	
		Parking demand	1				Parking demand	1	
		Alternative access	-5				Alternative access	-5	
		Surrounding Zoning	0				Surrounding Zoning	0	
		Activity Node 1	10				Activity Node 1	10	
		Activity Node 2	2				Activity Node 2	2	
		Footpath Hierarchy	1				Footpath Hierarchy	1	
		Terrain	0				Terrain	0	
Priorities	10	Priorities	10						

2015/2016

Recommended works



Year	Section	Location	Lazy Lands Reference	Mapping Reference	Length (m)	Path Type	Cost of Build	Priority Score	Total Weighted Score
15/16	1	Starting cnr Bond Pl, along Balmoral Road to Tilbrook Close - South side	P19, P16, P09		1227	Shared	\$682,825	10	47

Summary

Total	Length	Cost to council
	1227m	\$724,409
Additional Comments	<ul style="list-style-type: none"> • Section 1 includes an additional 25% in cost to allow for moderate earthworks and \$100,000 for one bridge • Although Section 1 has a high priority score, it has been delayed from 2013/2014 due to Lazy Lands • Costs are based on concrete construction • Total cost includes 3% escalation • Should the total 2015/2016 project cost fall below budget, sites in future recommended works can be elevated to ensure budget is met 	

Evaluation Matrix Data 2015/2016

Year	Section	Criteria	Score	Total
2015/2016	1	Vegetation Removal	0	47
		Engagement Workshops	1	
		Disability Access	10	
		Road Formation Width	1	
		Speed limit	4	
		Site distance	0	
		Daily traffic	10	
		Parking demand	0	
		Alternative access	-2	
		Surrounding Zoning	-10	
		Activity Node 1	10	
		Activity Node 2	10	
		Footpath Hierarchy	3	
		Terrain	0	
Priorities	10			

2016/2017

Recommended works





Year	Section	Location	Lazy Lands Reference	Mapping Reference	Length (m)	Path Type	Cost of Build	Priority Score	Total Weighted Score
16/17	1	Starting cnr Tilbrook Cl (existing path), along Balmoral Road to Nickol Road	P16		869	Shared	\$530,220	10	47
16/17	2	Along Harding Way, connecting to existing paths at each end - Non-residential side	P49		330	Footpath	\$99,000	4	17

Summary

Total	Length	Cost to council
	1199m	\$687,566
Additional Comments	<ul style="list-style-type: none"> • Section 1 includes an additional \$200,000 for one bridge • Although Section 1 has a high priority score, it has been delayed from 2013/2014 due to Lazy Lands • Costs are based on concrete construction • Total cost includes 3% escalation • Should the total 2016/2017 project cost fall below budget, sites in future recommended works can be elevated to ensure budget is met 	

Evaluation Matrix Data 2016/2017

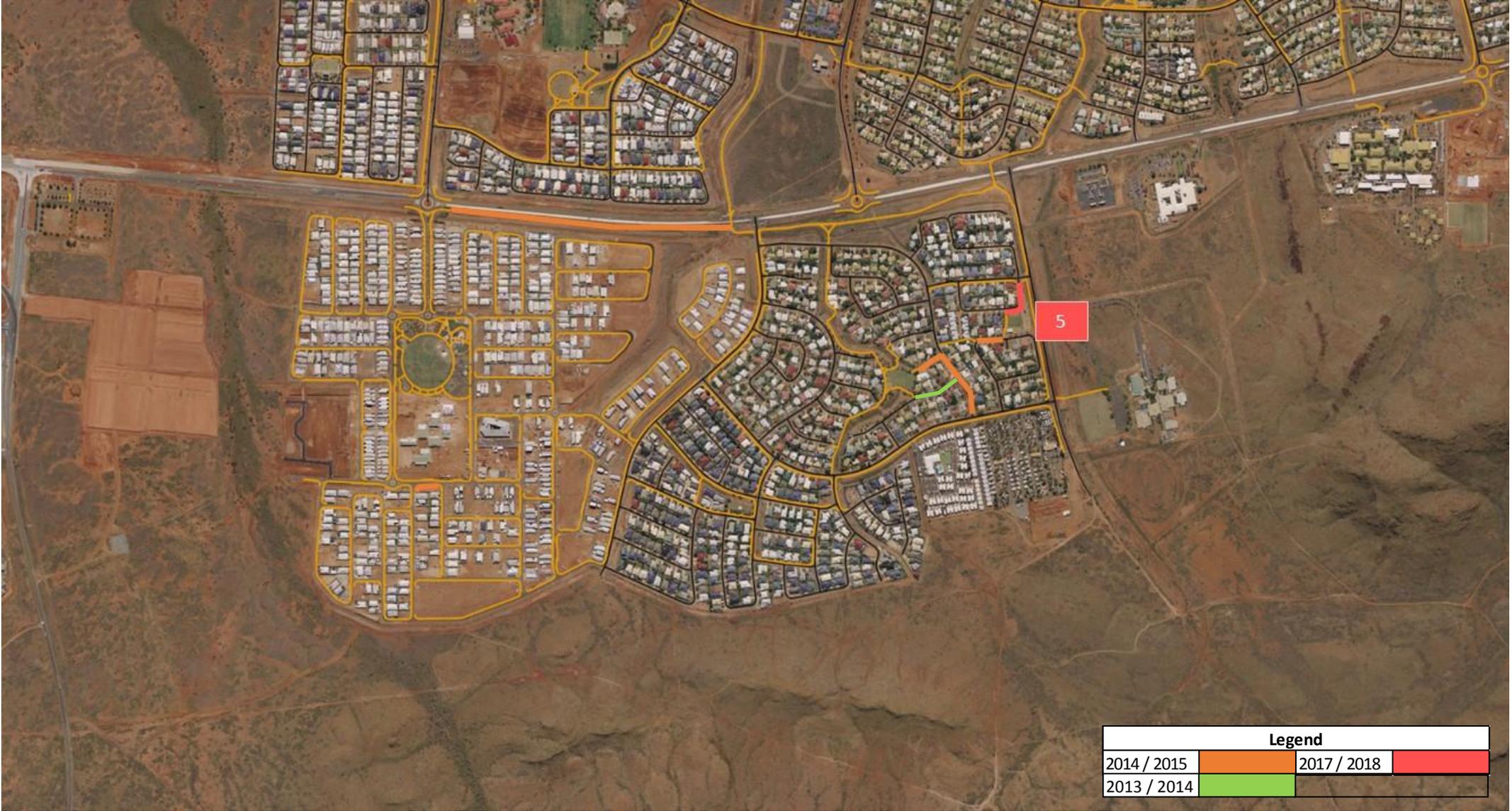
Year	Section	Criteria	Score	Total	Year	Section	Criteria	Score	Total
2016/2017	1	Vegetation Removal	0	47	2016/2017	2	Vegetation Removal	0	17
		Engagement Workshops	1				Engagement Workshops	1	
		Disability Access	10				Disability Access	0	
		Road Formation Width	1				Road Formation Width	2	
		Speed limit	4				Speed limit	2	
		Site distance	0				Site distance	0	
		Daily traffic	10				Daily traffic	2	
		Parking demand	0				Parking demand	2	
		Alternative access	-2				Alternative access	-2	
		Surrounding Zoning	-10				Surrounding Zoning	0	
		Activity Node 1	10				Activity Node 1	6	
		Activity Node 2	10				Activity Node 2	0	
		Footpath Hierarchy	3				Footpath Hierarchy	0	
		Terrain	0				Terrain	0	
Priorities	10	Priorities	4						

2017/2018

Recommended works









Year	Section	Location	Lazy Lands Reference	Mapping Reference	Length (m)	Path Type	Cost of Build	Priority Score	Total Weighted Score
17/18	1	Bathgate Road - Dampier Hwy to Gawthorne Dr - East side			630	Wider Path	\$201,600	6	29
17/18	2	From Lockyer Street, along Millstream Rd, to Searipple Road - North side			748	Shared	\$284,240	6	25
17/18	3	Back end of Frinderstein Way, connecting two existing paths			45	Footpath	\$13,500	3	14
17/18	4	Starting cnr Maitland Rd and Kestral Way, along Kestral and connecting to existing path at end	P59		80	Footpath	\$24,000	3	13
17/18	5	From the roundabout of Miles Loop (South), down and around bend of Miles Lp, connecting to existing path - South			120	Footpath	\$36,000	3	13
17/18	6	Dampier - Cnr Hospital Dr and Portland Cr, along Portland and up East Ave to cnr Elliott Cr			130	Footpath	\$39,000	3	9

Summary 2017 / 2018

Total	Length	Cost to council
	1753m	\$673,437
Additional Comments	<ul style="list-style-type: none">• Costs are based on concrete construction• Total cost includes 3% escalation• Should the total 2017/2018 project cost fall below budget, sites in future recommended works can be elevated to ensure budget is met	

Evaluation Matrix Data 2017 / 2018

Year	Section	Criteria	Score	Total	Year	Section	Criteria	Score	Total
2017/2018	1	Vegetation Removal	0	29	2017/2018	3	Vegetation Removal	0	14
		Engagement Workshops	1				Engagement Workshops	1	
		Disability Access	5				Disability Access	0	
		Road Formation Width	0				Road Formation Width	1	
		Speed limit	3				Speed limit	2	
		Site distance	0				Site distance	0	
		Daily traffic	8				Daily traffic	0	
		Parking demand	0				Parking demand	2	
		Alternative access	-3				Alternative access	-2	
		Surrounding Zoning	0				Surrounding Zoning	0	
		Activity Node 1	0				Activity Node 1	0	
		Activity Node 2	7				Activity Node 2	7	
		Footpath Hierarchy	2				Footpath Hierarchy	0	
		Terrain	0				Terrain	0	
Priorities	6	Priorities	3						
2017/2018	2	Vegetation Removal	-1	25	2017/2018	4	Vegetation Removal	0	13
		Engagement Workshops	1				Engagement Workshops	1	
		Disability Access	5				Disability Access	0	
		Road Formation Width	1				Road Formation Width	2	
		Speed limit	5				Speed limit	2	
		Site distance	0				Site distance	1	
		Daily traffic	6				Daily traffic	0	
		Parking demand	0				Parking demand	0	
		Alternative access	-3				Alternative access	-2	
		Surrounding Zoning	0				Surrounding Zoning	0	
		Activity Node 1	3				Activity Node 1	0	
		Activity Node 2	0				Activity Node 2	6	
		Footpath Hierarchy	2				Footpath Hierarchy	0	
		Terrain	0				Terrain	0	
Priorities	6	Priorities	3						

Year	Section	Criteria	Score	Total	Year	Section	Criteria	Score	Total
2017/2018	5	Vegetation Removal	0	13	2017/2018	6	Vegetation Removal	-1	9
		Engagement Workshops	1				Engagement Workshops	1	
		Disability Access	0				Disability Access	0	
		Road Formation Width	1				Road Formation Width	1	
		Speed limit	2				Speed limit	2	
		Site distance	1				Site distance	1	
		Daily traffic	0				Daily traffic	2	
		Parking demand	0				Parking demand	1	
		Alternative access	-2				Alternative access	0	
		Surrounding Zoning	0				Surrounding Zoning	0	
		Activity Node 1	0				Activity Node 1	0	
		Activity Node 2	7				Activity Node 2	0	
		Footpath Hierarchy	0				Footpath Hierarchy	0	
		Terrain	0				Terrain	0	
Priorities	3	Priorities	2						

2018 / 2019

Recommended works





Year	Section	Location	Lazy Lands Reference	Mapping Reference	Length (m)	Path Type	Cost of Build	Priority Score	Total Weighted Score
18/19	1	From Maitland Rd, along Millstream Rd, to cnr Lockyer Street - North side	P58, P59		1232	Shared	\$468,160	6	25
18/19	2	Bathgate Road - from existing path on Walkington Circle to Balmoral Rd			310	Wider Path	\$139,200	6	22

Summary

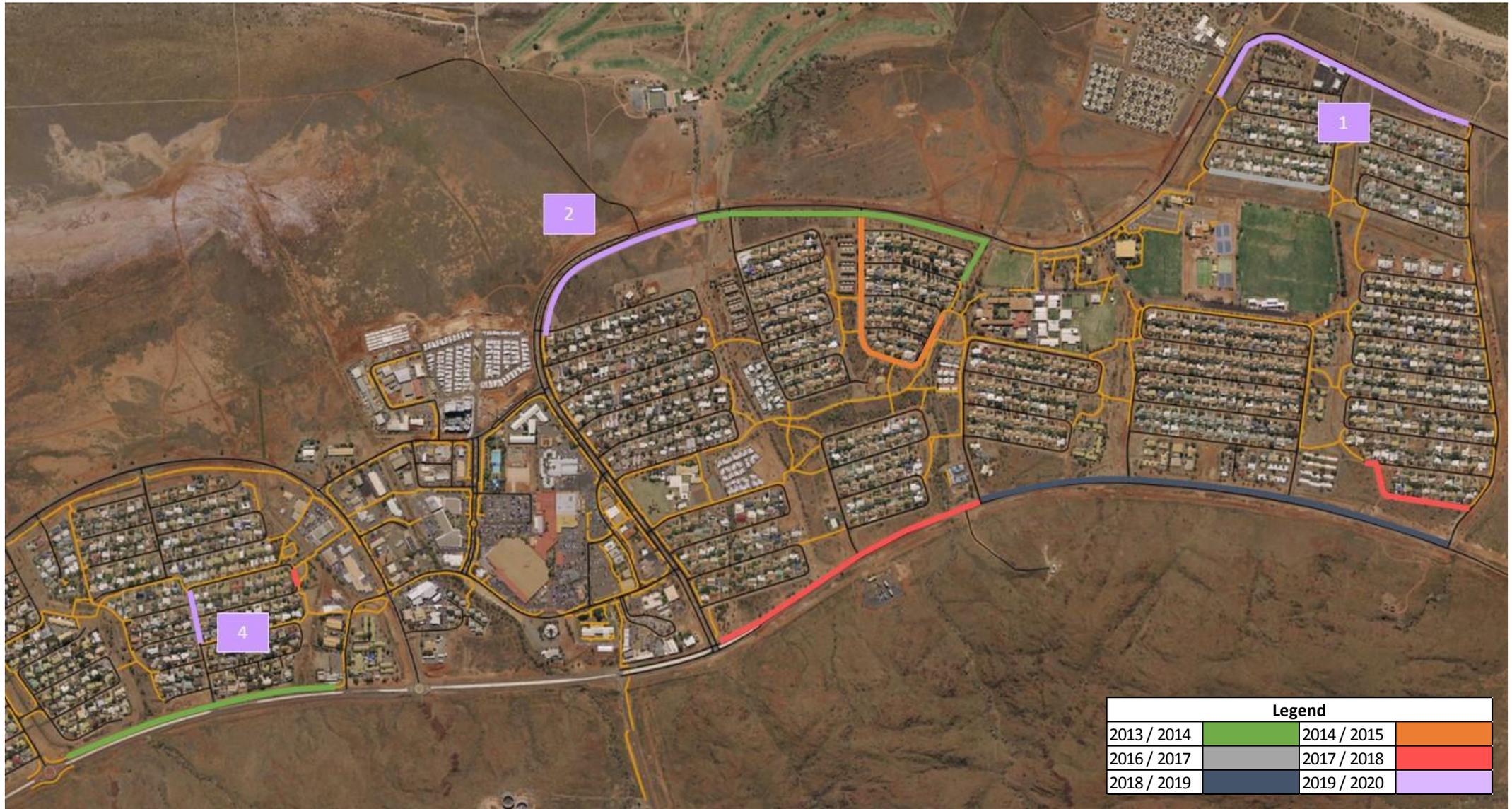
Total	Length	Cost to council
	1542m	\$704,097
Additional Comments	<ul style="list-style-type: none"> • Costs are based on concrete construction • Section 2 includes an additional \$40,000 for one bridge • Total cost includes 3% escalation • Should the total 2018/2019 project cost fall below budget, sites in future recommended works can be elevated to ensure budget is met 	

Evaluation Matrix Data 2018 / 2019

Year	Section	Criteria	Score	Total	Year	Section	Criteria	Score	Total
2018/2019	1	Vegetation Removal	0	29	2018/2019	2	Vegetation Removal	0	22
		Engagement Workshops	1				Engagement Workshops	1	
		Disability Access	5				Disability Access	5	
		Road Formation Width	0				Road Formation Width	0	
		Speed limit	3				Speed limit	3	
		Site distance	0				Site distance	0	
		Daily traffic	8				Daily traffic	8	
		Parking demand	0				Parking demand	0	
		Alternative access	-3				Alternative access	-3	
		Surrounding Zoning	0				Surrounding Zoning	0	
		Activity Node 1	0				Activity Node 1	0	
		Activity Node 2	7				Activity Node 2	0	
		Footpath Hierarchy	2				Footpath Hierarchy	2	
		Terrain	0				Terrain	0	
Priorities	6	Priorities	6						

2019 / 2020

Recommended works





Year	Section	Location	Lazy Lands Reference	Mapping Reference	Length (m)	Path Type	Cost of Build	Priority Score	Total Weighted Score
19/20	1	Cnr Maitland and Mystery Road, connecting to existing path from Walcott Way to Searipple - South Side	P47, P48, P49, P50		780	Shared	\$206,400	6	20
19/20	2	From existing path on Searipple Rd (Country Club), connecting to existing path on Richardson Way - South side	P35		500	Shared	\$190,000	8	20
19/20	3	Starting at existing path on Zanetti Way, down to cnr Zanetti (North side) and Dixon St, up Dixon and down Bailey Ct (North side), connecting to existing path			350	Footpath	\$105,000	2	11
19/20	4	From existing path at Carlsen Way, up O'Keefe Rd to existing path - West side			175	Footpath	\$52,500	2	11
19/20	5	Cnr Higham St and Tue Pl, down Tue, connecting to existing path - North side			100	Footpath	\$30,000	3	8

Summary

Total	Length	Cost to council
	1905m	\$697,207
Additional Comments	<ul style="list-style-type: none"> • Costs are based on concrete construction • Total cost includes 3% escalation • Should the total 2014/2015 project cost fall below budget, sites in future recommended works can be elevated to ensure budget is met 	

Evaluation Matrix Data 2019 / 2020

Year	Section	Criteria	Score	Total	Year	Section	Criteria	Score	Total
2019/2020	1	Vegetation Removal	-1	20	2019/2020	3	Vegetation Removal	-1	11
		Engagement Workshops	1				Engagement Workshops	1	
		Disability Access	5				Disability Access	0	
		Road Formation Width	1				Road Formation Width	2	
		Speed limit	4				Speed limit	2	
		Site distance	0				Site distance	2	
		Daily traffic	4				Daily traffic	2	
		Parking demand	1				Parking demand	1	
		Alternative access	-3				Alternative access	0	
		Surrounding Zoning	-10				Surrounding Zoning	0	
		Activity Node 1	7				Activity Node 1	0	
		Activity Node 2	6				Activity Node 2	0	
		Footpath Hierarchy	2				Footpath Hierarchy	0	
		Terrain	-3				Terrain	0	
Priorities	6	Priorities	2						
2019/2020	2	Vegetation Removal	-1	20	2019/2020	4	Vegetation Removal	0	11
		Engagement Workshops	1				Engagement Workshops	1	
		Disability Access	5				Disability Access	0	
		Road Formation Width	3				Road Formation Width	1	
		Speed limit	4				Speed limit	2	
		Site distance	0				Site distance	1	
		Daily traffic	6				Daily traffic	2	
		Parking demand	0				Parking demand	1	
		Alternative access	-3				Alternative access	0	
		Surrounding Zoning	-10				Surrounding Zoning	0	
		Activity Node 1	7				Activity Node 1	0	
		Activity Node 2	0				Activity Node 2	0	
		Footpath Hierarchy	3				Footpath Hierarchy	1	
		Terrain	-3				Terrain	0	
Priorities	8	Priorities	2						

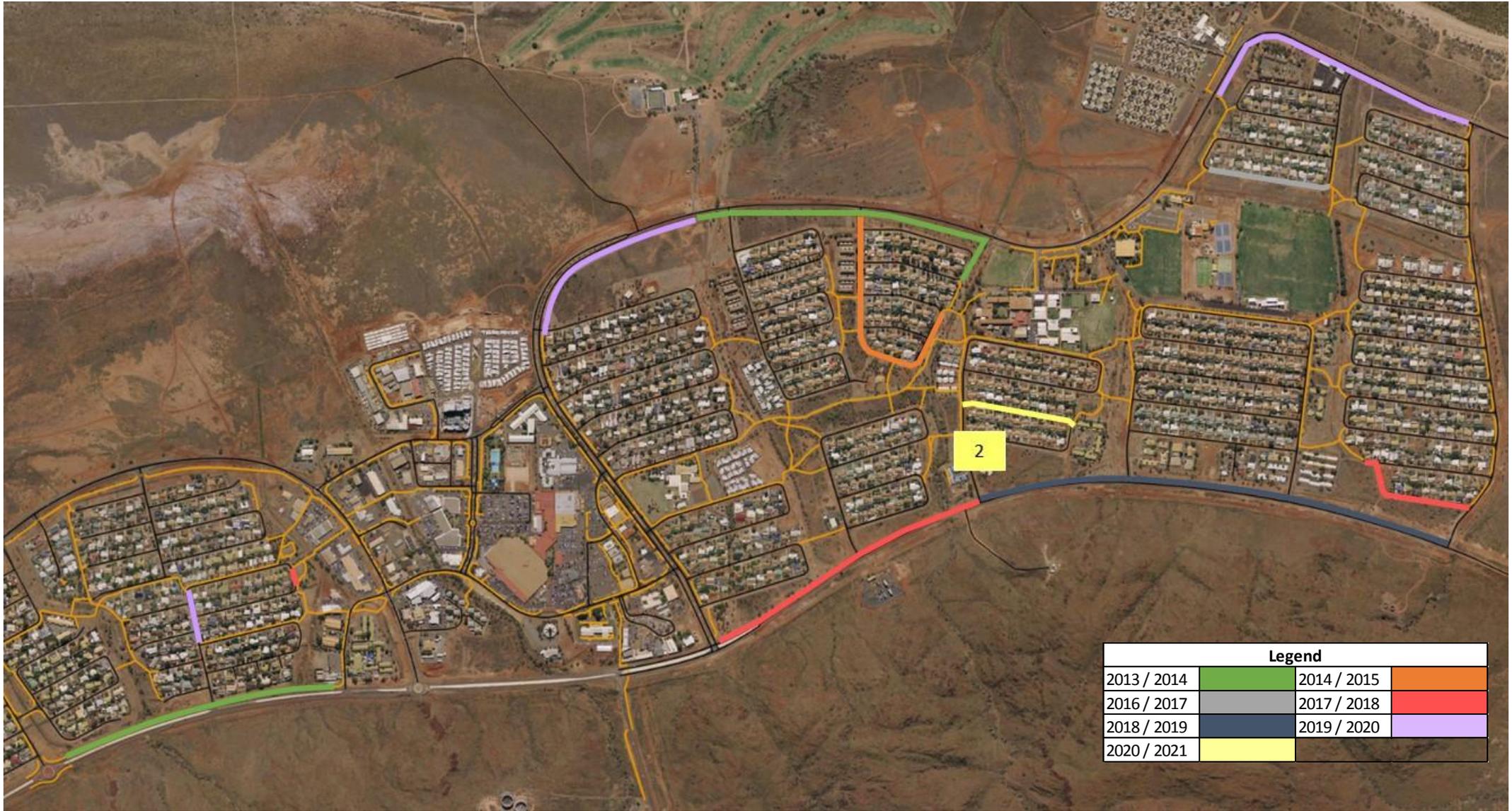
Year	Section	Criteria	Score	Total
2019/2020	5	Vegetation Removal	0	9
		Engagement Workshops	1	
		Disability Access	0	
		Road Formation Width	2	
		Speed limit	2	
		Site distance	1	
		Daily traffic	0	
		Parking demand	1	
		Alternative access	0	
		Surrounding Zoning	0	
		Activity Node 1	0	
		Activity Node 2	0	
		Footpath Hierarchy	0	
		Terrain	0	
Priorities	2			

2020 / 2021

Recommended works



pre



Year	Section	Location	Lazy Lands Reference	Mapping Reference	Length (m)	Path Type	Cost of Build	Priority Score	Total Weighted Score
20/21	1	Cnr Nickol Rd and Balmoral, along Balmoral ending at Legendre Rd -South side	P11, P12, P03, P02, P01		1592	Shared	\$477,600	6	20
20/21	2	Cnr Lockyer St and Samson Way, along Samson Way, connecting to existing path	P44		320	Footpath	\$96,000	3	15

Summary

Total	Length	Cost to council
	1912m	\$705,456
Additional Comments	<ul style="list-style-type: none"> • Costs are based on concrete construction. • Total cost includes 3% escalation • Should the total 2017/2018 project cost fall below budget, sites in future recommended works can be elevated to ensure budget is met 	

Evaluation Matrix Data 2020 / 2021

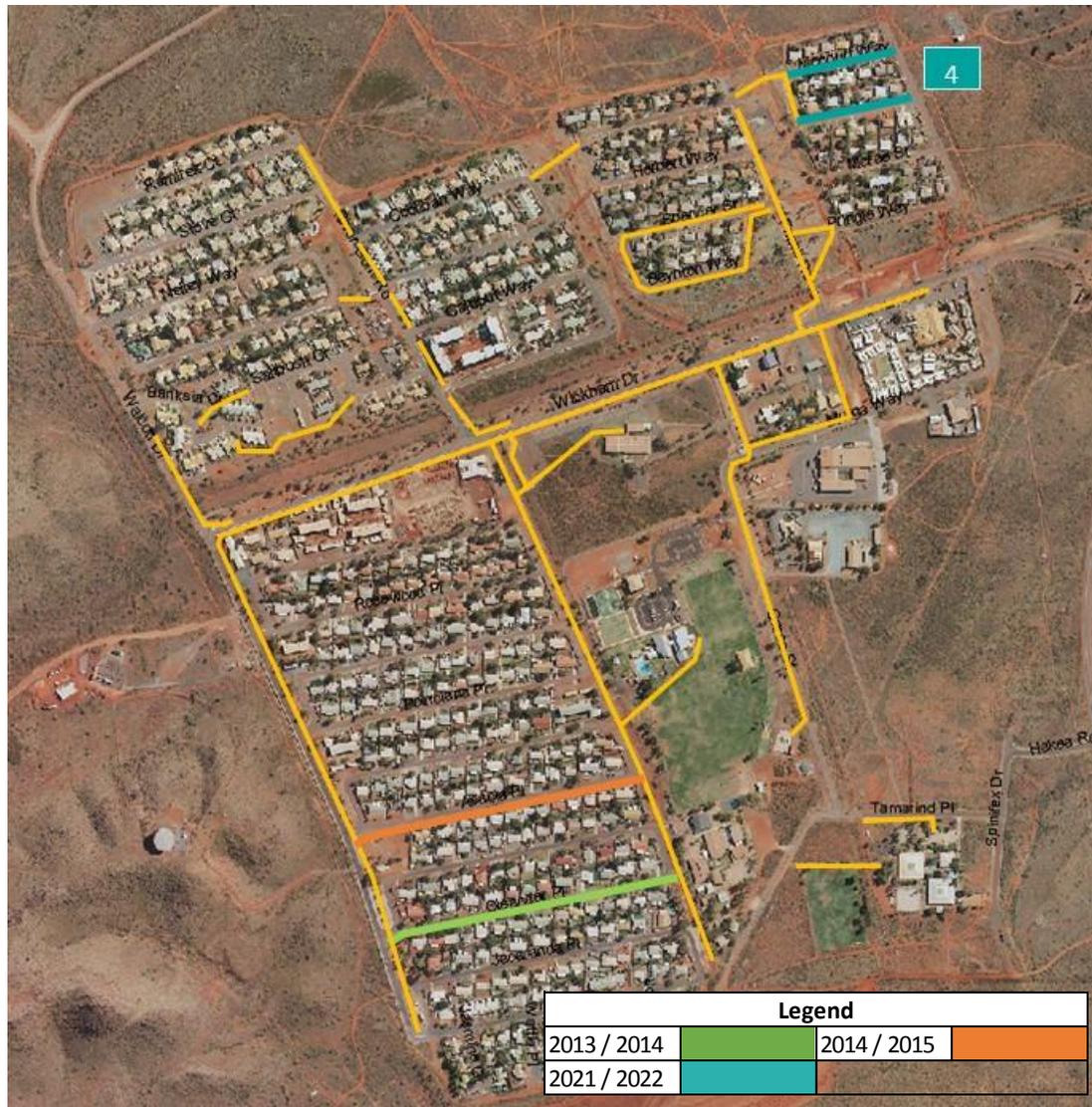
Year	Section	Criteria	Score	Total	Year	Section	Criteria	Score	Total
2020/2021	1	Vegetation Removal	0	20	2020/2021	2	Vegetation Removal	0	15
		Engagement Workshops	1				Engagement Workshops	1	
		Disability Access	5				Disability Access	5	
		Road Formation Width	1				Road Formation Width	1	
		Speed limit	4				Speed limit	2	
		Site distance	0				Site distance	0	
		Daily traffic	6				Daily traffic	4	
		Parking demand	0				Parking demand	1	
		Alternative access	-3				Alternative access	-3	
		Surrounding Zoning	-10				Surrounding Zoning	0	
		Activity Node 1	7				Activity Node 1	0	
		Activity Node 2	0				Activity Node 2	0	
		Footpath Hierarchy	3				Footpath Hierarchy	1	
		Terrain	0				Terrain	0	
Priorities	6	Priorities	3						

2021 / 2022

Recommended works







Year	Section	Location	Lazy Lands Reference	Mapping Reference	Length (m)	Path Type	Cost of Build	Priority Score	Total Weighted Score
21/22	1	Cnr Dixon St and Lewis Dr, following Dixon St down to Legendre Rd - North and west side			450	Footpath	\$135,000	3	18
21/22	2	Cnr Searipple Rd and Richardson Wy, connecting to existing path at end of Richardson - South side of southern street			420	Footpath	\$126,000	3	17
21/22	3	From cnr Demetre Cr and Snook Way to back of Snook, to existing path	P33		230	Wider Path	\$73,600	3	14
21/22	4	Wickham - Starting at both corners of McCourt and Pringle Way, and connecting to each end of existing path on McCourt - North side of northern street, north side of southern street			320	Footpath	\$96,000	2	14
21/22	5	From existing path on Lewis Dr, across and up Pelusey connecting to existing path on Balmoral Rd - South side of south street			320	Footpath	\$96,000	3	14

Summary

Total	Length	Cost to council
	1740m	\$667,081
Additional Comments	<ul style="list-style-type: none"> • Costs are based on concrete construction. • Total cost includes 3% escalation • Should the total 2017/2018 project cost fall below budget, sites in future recommended works can be elevated to ensure budget is met 	

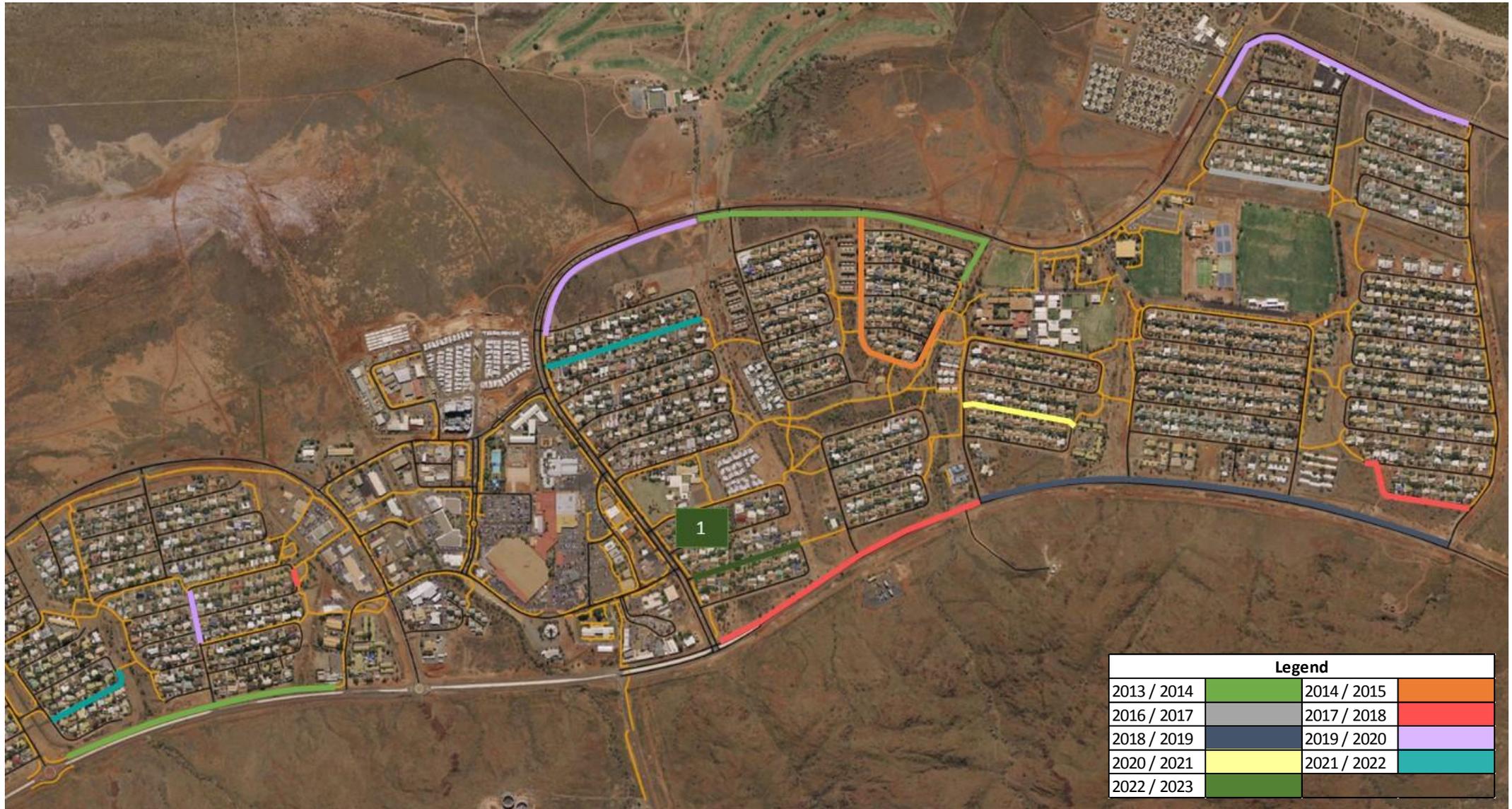
Evaluation Matrix Data 2021 / 2022

Year	Section	Criteria	Score	Total	Year	Section	Criteria	Score	Total
2021/2022	1	Vegetation Removal	0	18	2021/2022	3	Vegetation Removal	0	14
		Engagement Workshops	1				Engagement Workshops	1	
		Disability Access	0				Disability Access	0	
		Road Formation Width	1				Road Formation Width	1	
		Speed limit	2				Speed limit	2	
		Site distance	1				Site distance	1	
		Daily traffic	2				Daily traffic	0	
		Parking demand	1				Parking demand	4	
		Alternative access	0				Alternative access	0	
		Surrounding Zoning	0				Surrounding Zoning	0	
		Activity Node 1	0				Activity Node 1	0	
		Activity Node 2	6				Activity Node 2	0	
		Footpath Hierarchy	1				Footpath Hierarchy	2	
		Terrain	0				Terrain	0	
Priorities	3	Priorities	3						
2021/2022	2	Vegetation Removal	0	17	2021/2022	4	Vegetation Removal	0	14
		Engagement Workshops	1				Engagement Workshops	1	
		Disability Access	0				Disability Access	5	
		Road Formation Width	1				Road Formation Width	2	
		Speed limit	2				Speed limit	2	
		Site distance	0				Site distance	1	
		Daily traffic	0				Daily traffic	0	
		Parking demand	1				Parking demand	2	
		Alternative access	0				Alternative access	0	
		Surrounding Zoning	0				Surrounding Zoning	0	
		Activity Node 1	0				Activity Node 1	0	
		Activity Node 2	7				Activity Node 2	0	
		Footpath Hierarchy	2				Footpath Hierarchy	0	
		Terrain	0				Terrain	-1	
Priorities	3	Priorities	2						

Year	Section	Criteria	Score	Total
2021/2022	5	Vegetation Removal	-1	14
		Engagement Workshops	1	
		Disability Access	0	
		Road Formation Width	1	
		Speed limit	2	
		Site distance	0	
		Daily traffic	2	
		Parking demand	0	
		Alternative access	0	
		Surrounding Zoning	0	
		Activity Node 1	0	
		Activity Node 2	6	
		Footpath Hierarchy	0	
		Terrain	0	
Priorities	3			

2022 / 2023

Recommended works





Year	Section	Location	Lazy Lands Reference	Mapping Reference	Length (m)	Path Type	Cost of Build	Priority Score	Total Weighted Score
22/23	1	Cnr Searipple Rd and Gregory Way, to back of Gregory Way, connecting to existing path - Northern side of northern street			300	Footpath	\$90,000	2	13
22/23	2	Starting at existing path on Balmoral Road, follow down Lewis Dr to Boyd Cl, connecting to existing path at Lewis end of Boyd - West side			450	Wider Path	\$144,000	2	13
22/23	3	Cnr Strickland Dr and Gawthorne Dr, down Strickland, connecting to existing path to Dampier Hwy - West side			700	Footpath	\$210,000	3	13
22/23	4	Starting at existing path on loop of Swetman Way down to cnr Nickol Rd and Swetman - South side of northern street			210	Footpath	\$63,000	2	11

Summary 2022 / 2023

Total	Length	Cost to council
	1660m	\$661,520
Additional Comments	<ul style="list-style-type: none"> • Costs are based on concrete construction • Total cost includes 3% escalation • Should the total 2018/2019 project cost fall below budget, sites in future recommended works can be elevated to ensure budget is met 	

Evaluation Matrix Data 2022 / 2023

Year	Section	Criteria	Score	Total	Year	Section	Criteria	Score	Total
2022/2023	1	Vegetation Removal	-1	13	2022/2023	3	Vegetation Removal	0	13
		Engagement Workshops	1				Engagement Workshops	1	
		Disability Access	0				Disability Access	5	
		Road Formation Width	1				Road Formation Width	1	
		Speed limit	2				Speed limit	2	
		Site distance	1				Site distance	0	
		Daily traffic	4				Daily traffic	2	
		Parking demand	1				Parking demand	1	
		Alternative access	0				Alternative access	0	
		Surrounding Zoning	0				Surrounding Zoning	0	
		Activity Node 1	0				Activity Node 1	0	
		Activity Node 2	0				Activity Node 2	0	
		Footpath Hierarchy	1				Footpath Hierarchy	0	
		Terrain	0				Terrain	-1	
Priorities	3	Priorities	2						
2022/2023	2	Vegetation Removal	0	13	2022/2023	4	Vegetation Removal	0	11
		Engagement Workshops	1				Engagement Workshops	1	
		Disability Access	0				Disability Access	0	
		Road Formation Width	1				Road Formation Width	2	
		Speed limit	2				Speed limit	2	
		Site distance	1				Site distance	0	
		Daily traffic	0				Daily traffic	2	
		Parking demand	1				Parking demand	2	
		Alternative access	-2				Alternative access	0	
		Surrounding Zoning	0				Surrounding Zoning	0	
		Activity Node 1	0				Activity Node 1	0	
		Activity Node 2	7				Activity Node 2	0	
		Footpath Hierarchy	0				Footpath Hierarchy	0	
		Terrain	0				Terrain	0	
Priorities	2	Priorities	2						

Appendix 1 – School Locations

Shire Priority One – School locations. Council’s ten year works program for footpaths based on adopted service levels and best-practice.

Dampier Primary School – Church Road

Dampier Primary School footpath network provide connection throughout the town of a 1km radius from the Primary School. Footpath works for strategic local footpaths planned for 2020/2021.



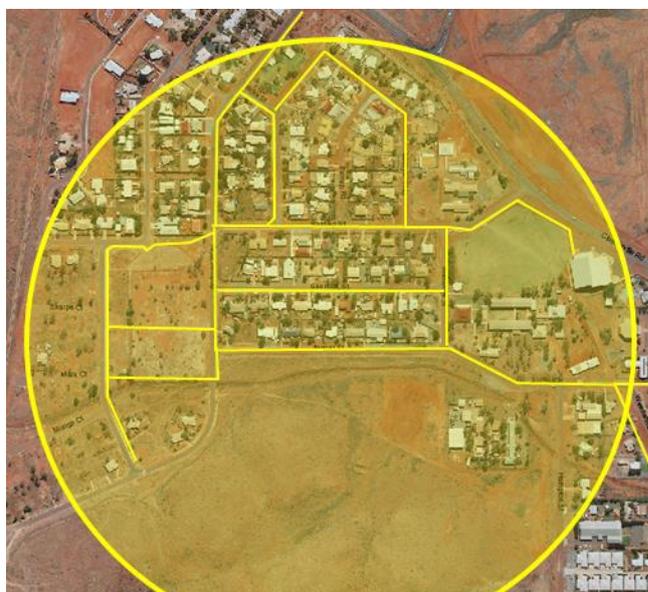
Wickham Primary School – Oleander Place

Wickham Primary School has strategic local footpath missing. The missing strategic local footpaths are planned for works in 2016 to 2019.



Roebourne Primary School – Fraser Street

Roebourne Primary School has access to a network of strategic local footpaths.



Karratha Locations

Karratha Primary School- Turner Way, Bulgarra

Extensive footpath networks exist in a 1km radius from the school. There are missing links with local footpaths beyond a 1km radius. These missing links are programmed in future works for 2013/2014, 2014/2015, 2015/2016, 2018/2019, 2020/2021, 2021/2022 and 2022/2023 ensuring works occur after PUPP. *Fig. 1.*

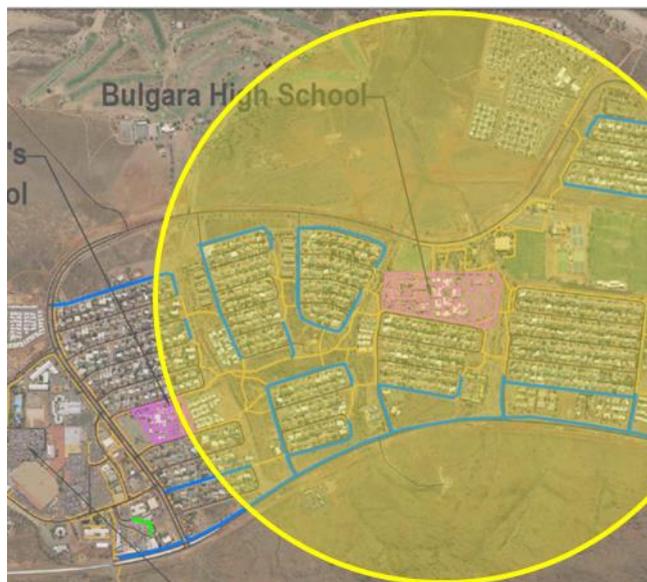


Figure 1

Karratha Senior High School – Dampier Highway

Karratha Senior High School is relocating to the complex area next to the Karratha Leisureplex/ Pilbara Institute. The area connects to a network of footpaths. *Fig. 1.*

Millars Well Primary School – Gawthorne Drive

Millars Well Primary School has many missing links apart of the strategic local path network which have been planned for 2013/2014, 2015/2016, 2019/2020 and 2020/2021 works. *Fig. 2.*

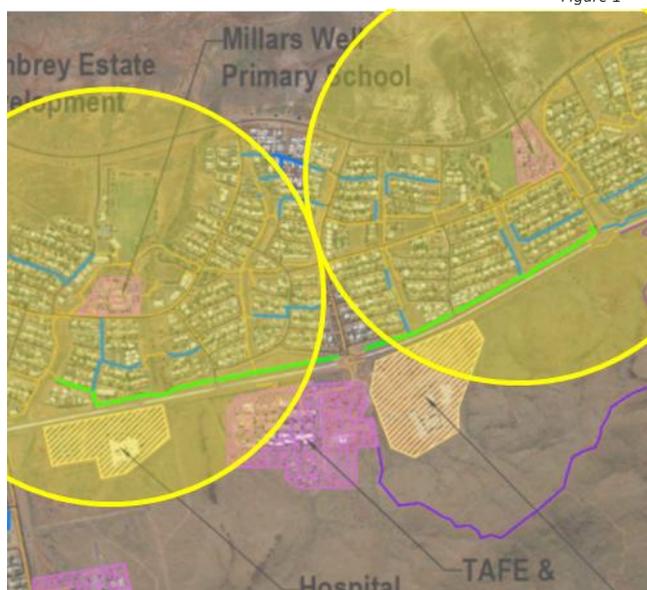


Figure 2

Pegs Creek Primary School – Galbraith Road

Pegs Creek Primary School is missing an arterial link running along Balmoral Road, the missing link is planned for 2013/2014 works. *Fig. 2.*

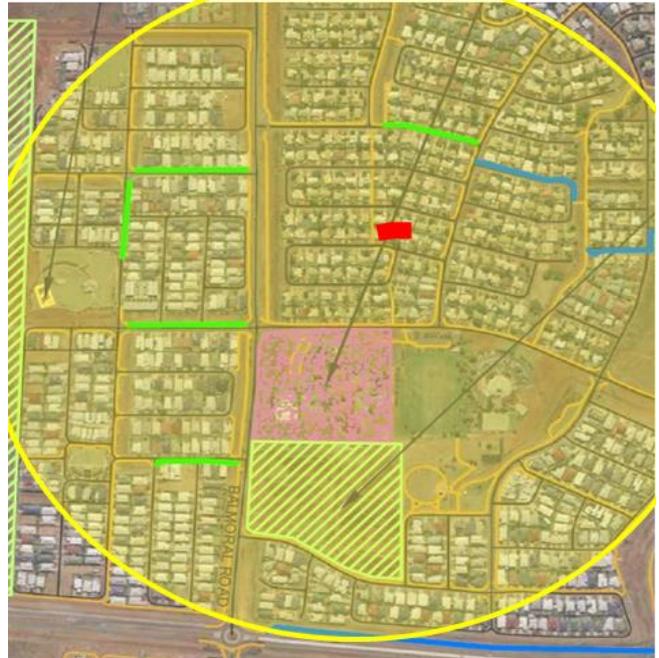
Baynton West Primary School – Marniyarra Loop

Baynton West Primary School has extensive footpath networks within the 1 km radius from the school. South verge of Wagari Drive East of Ganbarr Street requires new footpath to support the new bus stop in the radius area. Works planned for 2013/2014. *Fig. 3.*



Tambrey Primary School – Tambrey Drive

Tambrey Primary School has extensive network of footpaths in the 1 km radius with 2 missing strategic local footpaths missing. The 2 missing strategic local footpaths were a part of the 2012/2013 and 2016/2017 footpath works program.



St Luke's Catholic College – Rosemary Road, Baynton

St Luke's Catholic College has connection to footpath networks. There are local footpaths just outside the 1km radius, with local traffic and works planned in 2021/2022.

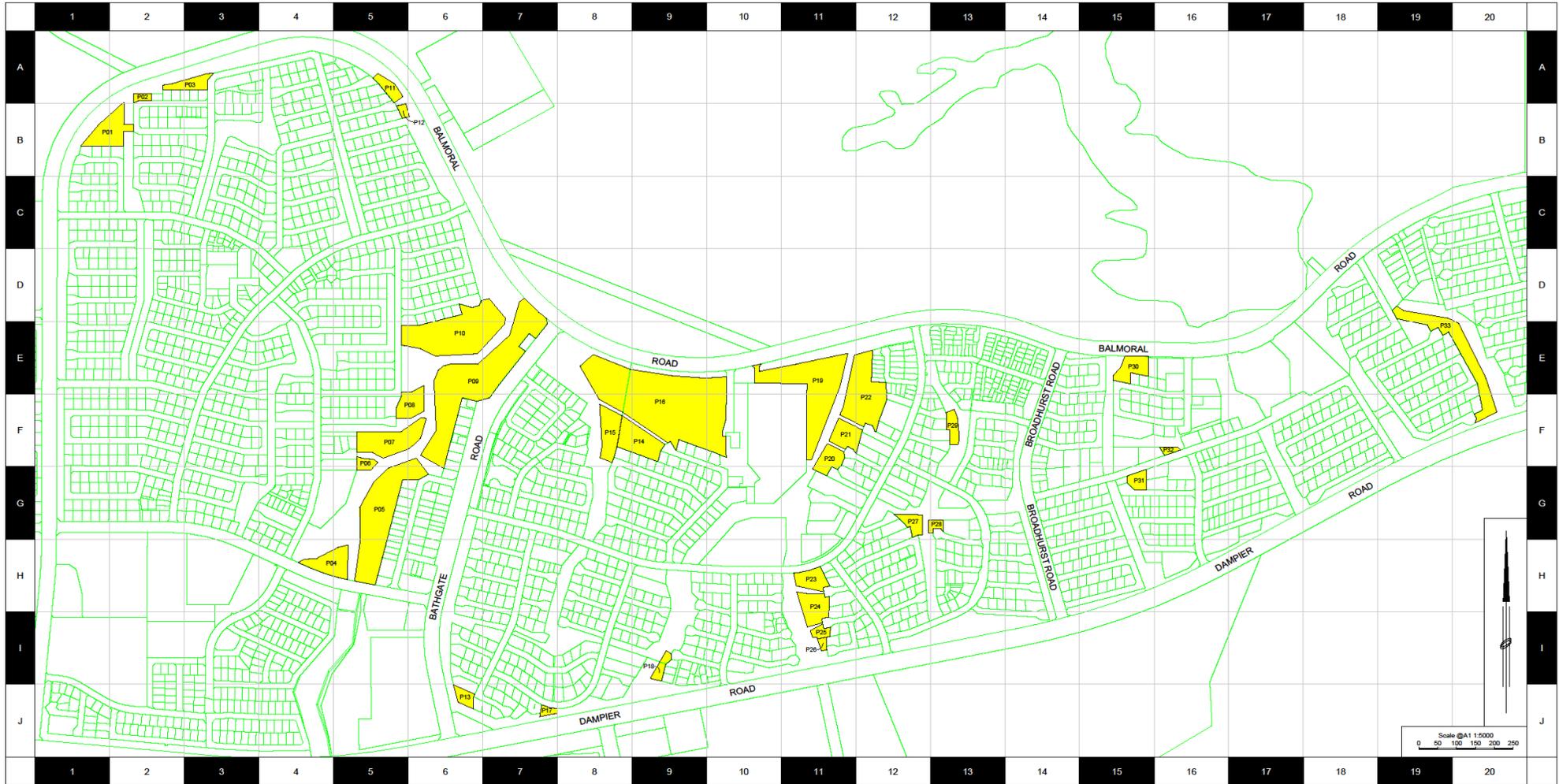


St Pauls Primary School – Wellard Way, Bulgarra

St Pauls Primary School has access to a network of footpaths work on the missing strategic local footpaths links will occur 2013/2014, 2014/2015, 2015/2016, 2018/2019, 2020/2021, 2021/2022 and 2022/2023.



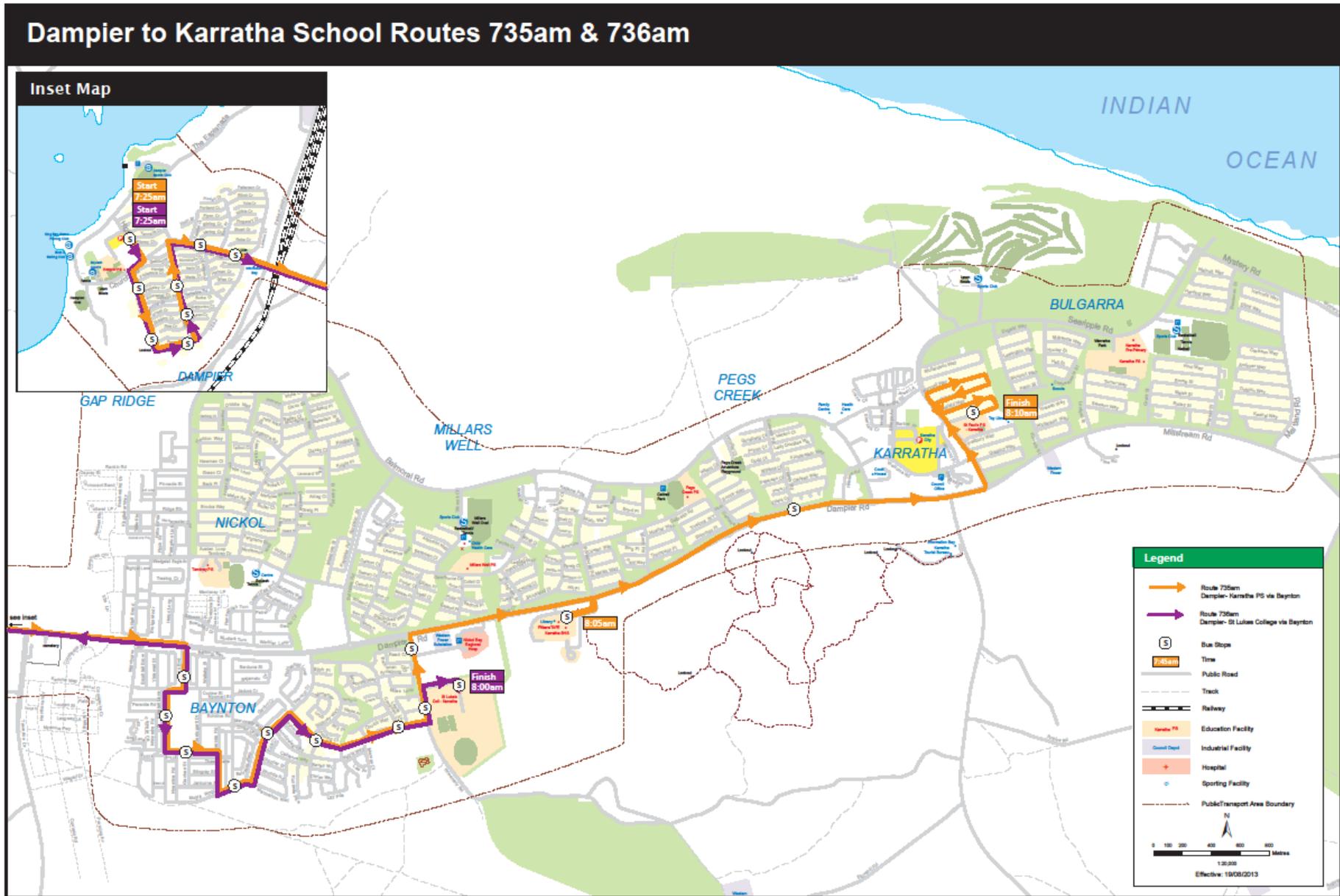
Appendix 2 – Lazy Lands Maps



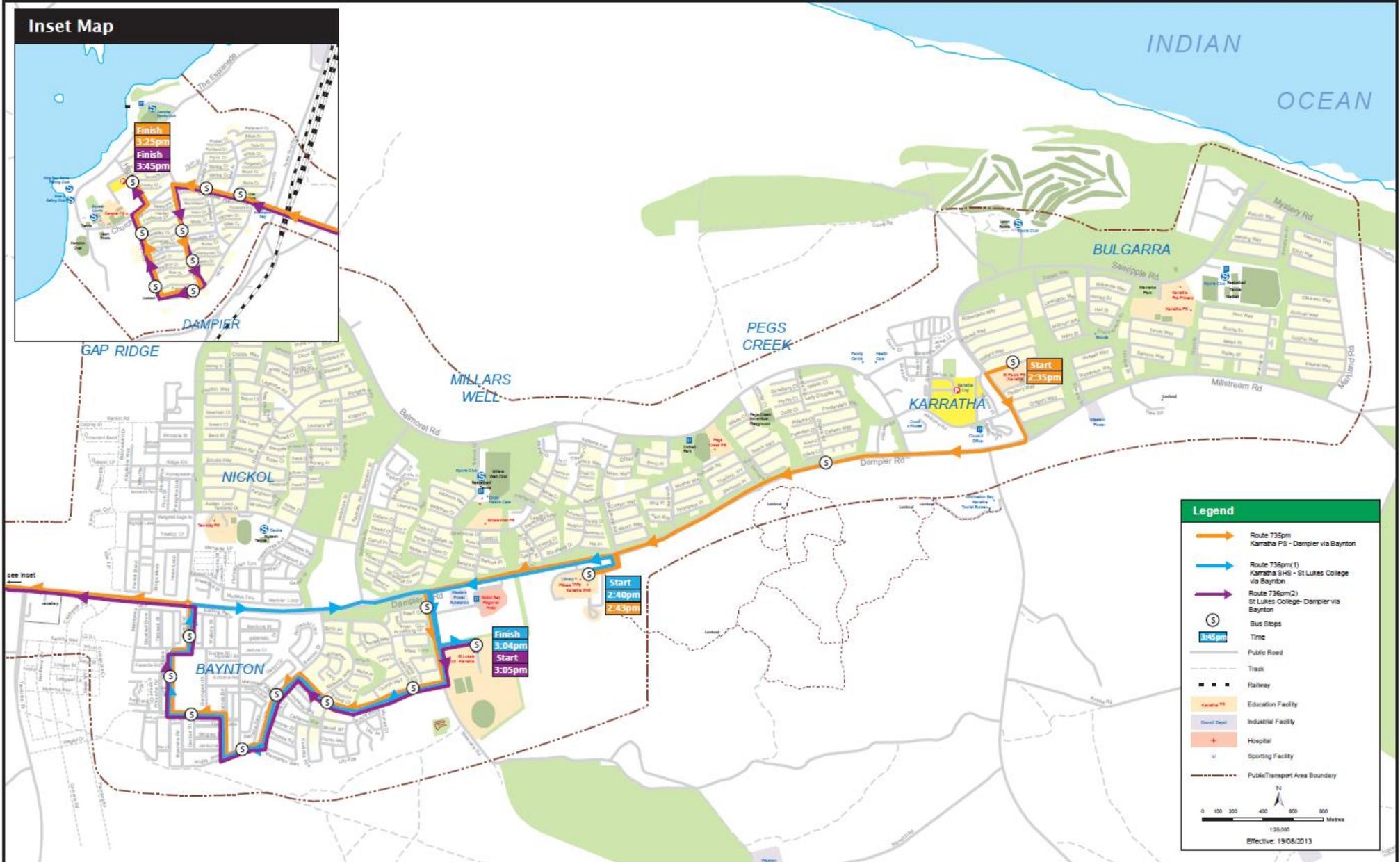
LEGEND			DRAWING REFERENCE TABLE												
Proposed Lot Location	LOT IDENTIFIER	PLAN NUMBER	GRID REFERENCE(S)	LOT IDENTIFIER	PLAN NUMBER	GRID REFERENCE(S)	LOT IDENTIFIER	PLAN NUMBER	GRID REFERENCE(S)	LOT IDENTIFIER	PLAN NUMBER	GRID REFERENCE(S)	LOT IDENTIFIER	PLAN NUMBER	GRID REFERENCE(S)
Existing Lot Boundaries	P01	P01	B1, B2	P11	P11	A6	P21	P21	F11	P31	P31	G15			
	P02	P02	A3	P12	P12	B6	P22	P22	E12, F12	P32	P32	F16			
	P03	P03	A2, A3	P13	P13	J6	P23	P23	H11	P33	P33	E20			
	P04	P04	H4, H5	P14	P14	F8, F9	P24	P24	H11, I11						
	P05	P05	G6, H5	P15	P15	F8	P25	P25	I11						
	P06	P06	F5	P16	P16	E8	P26	P26	I11						
	P07	P07	F5	P17	P17	J7	P27	P27	G12						
	P08	P08	F8, F9	P18	P18	I0	P28	P28	G13						
	P09	P09	E6, E7, F0	P19	P19	E11, F11	P29	P29	F13						
	P10	P10	E8	P20	P20	F11, G11	P30	P30	E16						

CLIENT			NOTES		Amendments			Title		Project		
 128 Deplar Ave Salter Point WA 6152 Ph: 94507188 Fax: 9450 7199 email: mail@jbasurveys.com.au web: www.jbasurveys.com.au			1. Cadastral boundary plotted from DL1 supplied SCDB data. 2. True cadastral boundary position is subject to re-establishment survey.		No.	Date	By	KARRATHA LOCATION SKETCH		Scale @A1	1:5000	
 DEVELOPING THE FUTURE			1	18.02.2011	RMM	Issued for information		Project	Location SKETCH 1 OF 2	Client	N/A	
								Drawn By:	NICKOL, MILLARS WELL & PEGS CREEK	Job No.	MGA 250	
								Checked By:	KARRATHA, WA	Job No.	117989	
								Drawn By:		Drawing No.	LS01	
											01	

Appendix 4 – School Bus Route Maps



Karratha to Dampier School Routes 735pm, 736am(1) & 736pm(2)



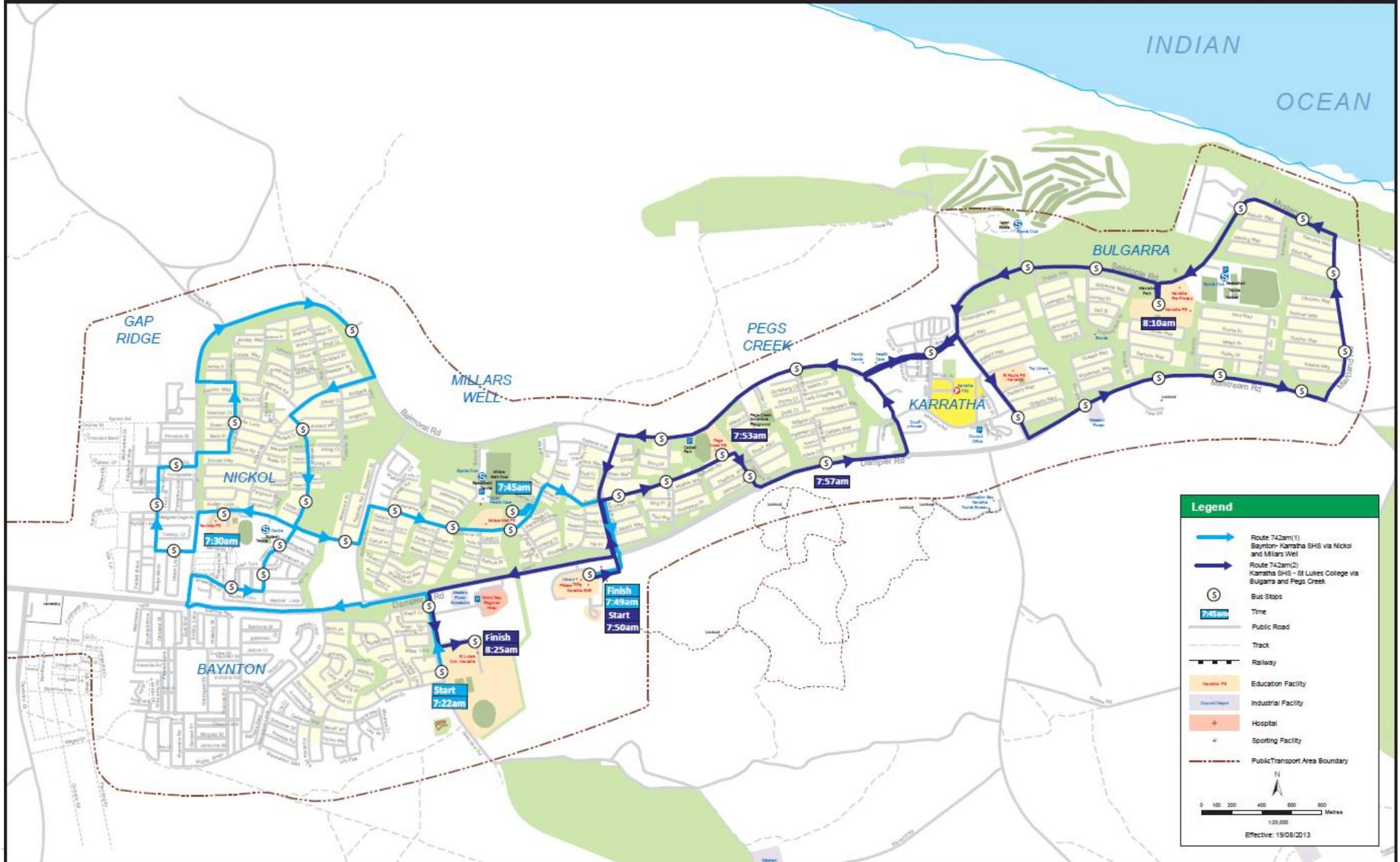
Karratha School Routes 740am(1) & 740am(2)



Karratha School Routes 740pm(1) & 740pm(2)



Karratha School Routes 742am(1) & 742am(2)



Karratha School Routes 742am(1) & 742am(2)



Karratha School Routes 741am & 741pm

