



Chief Executive Officers Advisory Committee

AGENDA

to be held on
Tuesday, 19 November 2019
commencing at **12:30pm**
at the EMRC Administration Office
1st Floor, 226 Great Eastern Highway
BELMONT WA 6104

Meeting Room: Training Room 1

*** Please note that lunch will be provided at 12:00 noon ***

**EASTERN METROPOLITAN REGIONAL COUNCIL
CHIEF EXECUTIVE OFFICERS ADVISORY COMMITTEE MEETING**

NOTICE OF MEETING

Dear Chief Executive Officers

I wish to advise that a meeting of the Chief Executive Officers Advisory Committee will be held at the EMRC Administration Office, 1st Floor, 226 Great Eastern Highway, BELMONT WA 6104 on **Tuesday, 19 November 2019**, commencing at **12:30pm (lunch at 12:00pm)**.



MARCUS GEISLER
Chief Executive Officer

13 November 2019

Please Note

If any Committee Member has a **query regarding a report item** or requires additional information in relation to a report item, please **contact the responsible Director** (SOURCE OF REPORT) prior to the meeting.

CEOAC Committee Members

Ms Peta Mabbs	Chief Executive Officer	Town of Bassendean
Mr Andrew Brien	Chief Executive Officer	City of Bayswater
Mr John Christie	Chief Executive Officer	City of Belmont
Ms Rhonda Hardy	Chief Executive Officer	City of Kalamunda
Mr Jonathan Throssell	Chief Executive Officer	Shire of Mundaring
Mr Mike Foley	Chief Executive Officer	City of Swan
Mr Marcus Geisler	Chief Executive Officer	EMRC

CEOAC Committee Deputies

Mr Doug Pearson	Acting CEO	Town of Bassendean
	Director Technical Services	City of Bayswater
	Acting CEO	City of Belmont
	Acting CEO	City of Kalamunda
	Acting CEO	Shire of Mundaring
	Acting CEO	City of Swan
	Acting CEO	EMRC

CHIEF EXECUTIVE OFFICERS ADVISORY COMMITTEE

AGENDA

19 November 2019

(REF: D2019/16416)

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- 1 DECLARATION OF OPENING AND ANNOUNCEMENT OF VISITORS**

- 2 ATTENDANCE, APOLOGIES AND LEAVE OF ABSENCE (PREVIOUSLY APPROVED)**

- 3 DISCLOSURE OF INTERESTS**

- 4 ANNOUNCEMENTS BY THE CHAIRMAN OR PRESIDING MEMBER WITHOUT DISCUSSION**



5 ELECTION OF A CHAIRMAN AND DEPUTY CHAIRMAN OF THE CHIEF EXECUTIVE OFFICERS ADVISORY COMMITTEE

5.1 ELECTION OF A CHAIRMAN OF THE CHIEF EXECUTIVE OFFICERS ADVISORY COMMITTEE

REFERENCE: D2019/16680

PURPOSE OF REPORT

The purpose of this report is to provide for an election to be conducted for the Office of Chairman of the Chief Executive Officers Advisory Committee (CEOAC).

KEY POINTS AND RECOMMENDATION(S)

- It is a statutory requirement that the Committee elect a Chairman at the first meeting of the Chief Executive Officers Advisory Committee after an ordinary Council elections day.

Recommendation(s)

That the members of the Chief Executive Officers Advisory Committee elect a Chairman.

SOURCE OF REPORT

Director Corporate Services

BACKGROUND

The following CEO's make up the membership of the CEOAC for the period 2019 - 2021:

Ms Peta Mabbs	Town of Bassendean
Mr Andrew Brien	City of Bayswater
Mr John Christie	City of Belmont
Ms Rhonda Hardy	City of Kalamunda
Mr Jonathan Throssell	Shire of Mundaring
Mr Michael Foley	City of Swan
Mr Marcus Geisler	EMRC

In accordance with section 5.12(1) of the *Local Government Act 1995* (the Act), the members of a committee are to elect a presiding member from amongst themselves in accordance with Schedule 2.3, Division 1.

It is a requirement of Schedule 2.3 of the Act that the election is conducted by the Chief Executive Officer (CEO) and the nominations for the Office are to be given to the CEO in writing before the meeting or during the meeting before the close of nominations. Furthermore, if a member is nominated by another member the CEO is not to accept the nomination unless the nominee has advised the CEO, orally or in writing, that he or she is willing to be nominated for the Office.

The procedure outlined in Schedule 2.3 of the Act will be followed if there is an equality of votes.



Item 5.1 continued

REPORT

The CEO will preside at the meeting until the Office of Chairman of the CEOAC is filled.

The following material accompanies the agenda for this meeting as a means of assisting members of the Committee to nominate themselves or another member for the Office of Chairman of the CEOAC:

1. Chief Executive Officers Advisory Committee Terms of Reference
2. A blank nomination form for the Office of Chairman of the CEOAC, nominate oneself
3. A blank nomination form for the Office of Chairman of the CEOAC, nominate another
4. A blank ballot paper for Election of Chairman of the CEOAC

Ballot papers will be made available prior to voting.

The completed nomination forms are to be given to the CEO before the meeting or when the CEO calls for them when dealing with this item at the meeting.

STRATEGIC/POLICY IMPLICATIONS

Council Policy 2.1 provides for the establishment of the Chief Executive Officers Advisory Committee.

Key Result Area 3 – Good Governance

- 3.3 To provide responsible and accountable governance and management of the EMRC

FINANCIAL IMPLICATIONS

Nil

SUSTAINABILITY IMPLICATIONS

Nil

MEMBER COUNCIL IMPLICATIONS

Member Council	Implication Details
Town of Bassendean	} Nil
City of Bayswater	
City of Belmont	
City of Kalamunda	
Shire of Mundaring	
City of Swan	



Item 5.1 continued

ATTACHMENT(S)

1. Chief Executive Officers Advisory Committee Terms of Reference (Ref: D2019/16682)
2. A blank nomination form for the Office of Chairman of the CEOAC, nominate oneself (Ref: D2019/16683)
3. A blank nomination form for the Office of Chairman of the CEOAC, nominate another (Ref: D2019/16883)
4. Ballot Paper – Election of CEOAC Chairman (Ref: D2019/16685)

VOTING REQUIREMENT

Secret Ballot

RECOMMENDATION(S)

That the members of the Chief Executive Officers Advisory Committee elect a Chairman.

TERMS OF REFERENCE

CHIEF EXECUTIVE OFFICERS ADVISORY COMMITTEE

1. OBJECTIVES OF COMMITTEE:

- 1.1 The Chief Executive Officers Advisory Committee (CEOAC) is a formally appointed committee of Council and is responsible to that body. It has been established to consider matters that have an impact on the member Councils and/or EMRC's business activities.

2. RESPONSIBILITIES:

The Committee's responsibility is to:

- (a) Ensure that the EMRC conducts its operations in accordance with its Establishment Agreement; and
- (b) Give consideration, advice and make recommendations to Council in relation to:
 - Regional strategic and policy development; and
 - Matters of regional relevance.

3. MEMBERSHIP:

- 3.1 The Chief Officers Advisory Committee comprises of each of EMRC's participant member Council's Chief Executive Officer and the Chief Executive Officer of the Eastern Metropolitan Regional Council or his nominee.
- 3.2 In the event of a vacancy due to the resignation of a Committee member, the person replacing the Chief Executive Officer will automatically fill their position on the Committee.
- 3.3 A deputy member may be appointed to the Committee by each member Council Chief Executive Officer

4. MEETINGS

- 4.1 The Committee shall hold regular meetings at such times and on such days as the Council may determine by resolution.
- 4.2 Additional meetings will be convened at the discretion of the Chairperson.
- 4.3 The Committee shall also hold regular informal meetings for the purpose of sharing information and discussing matters on any topic whether related to EMRC matters or not in a friendly cooperative and confidential environment.

5. OPERATING PROCEDURES

- 5.1 All meetings of the CEOAC are to be conducted in accordance with the Local Government Act 1995, associated Regulations and the *EMRC Standing Orders Local Law 2013*.
- 5.2 A quorum for a meeting of the Committee shall be at least 50% of the number of offices (whether vacant or not) of members of the Committee.
- 5.3 Voting
- (a) All decisions of the Committee shall be made on the basis of a simple majority decision of the members present or, if another kind of majority has been prescribed by regulations for the particular kind of decision, by that kind of majority.
 - (b) If the decision results in a tied vote, the person presiding is to cast a second vote.
 - (c) Persons other than Committee members are not entitled to cast a vote.
 - (d) All other aspects related to voting procedure shall be consistent with relevant sections of the *EMRC Standing Orders Local Law 2013*
- 5.4 Other EMRC staff or member Council staff may attend meetings, at the discretion of the Chief Executive Officer and/or the Committee Chairperson, to provide advice and information when required.
- 5.5 Where officers from member Councils attend the meeting, they are to have the status of 'observer'.

6. REPORTING

- 6.1 The Committee shall after every meeting forward the minutes of that meeting to the next Ordinary Meeting of Council, including a report explaining any specific recommendations and key outcomes.

7. DELEGATED POWER

- 7.1 The Chief Executive Officers Advisory Committee has no delegated powers and no authority to implement its recommendations.

Related Documentation:

Policy 2.1 Committees of Council

EMRC Standing Orders Local Law 2013

EMRC Code of Conduct

Administration:

Adopted / Reviewed by Council:	23 September 2010
	18 September 2014
	06 December 2018

Next Review:	Following the Ordinary Elections in 2021
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Responsible Directorate	Office of the Chief Executive Officer
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Nomination for Chairman

To the Chief Executive Officer

I hereby nominate myself, _____ for the position of Chairman of the Eastern Metropolitan Regional Council Chief Executive Officers Advisory Committee for the term of Office commencing on the date of the election until the next ordinary elections days and/or other circumstances occur in accordance with section 5.11 of the *Local Government Act 1995*.

Signed: _____

Date: _____



Nomination for Chairman

To the Chief Executive Officer

I hereby nominate _____ for the position of Chairman of the Eastern Metropolitan Regional Council Chief Executive Officers Advisory Committee for the term of Office commencing on the date of the election and continuing until the next ordinary elections days and/or other circumstances occur in accordance with section 5.11 of the *Local Government Act 1995*.

Signed: _____

Date: _____

***I _____ hereby certify that I accept the above nomination to the position of Chairman of the Eastern Metropolitan Regional Council Chief Executive Officers Advisory Committee.**

Signed: _____

Date: _____

***This certificate is to be completed when a Representative is nominated by another Representative.**



**Eastern Metropolitan Regional Council
CEOAC Tuesday 19 November 2019**

**BALLOT PAPER FOR THE
ELECTION OF THE CEOAC CHAIRMAN**

HOW TO VOTE

**Place a tick ☒ in the box next to the candidate you want
to elect.**

Do not make any other marks on the ballot paper.

Lastname, Firstname

☐

Lastname, Firstname

☐

Lastname, Firstname

☐



5.2 ELECTION OF A DEPUTY CHAIRMAN OF THE CHIEF EXECUTIVE OFFICERS ADVISORY COMMITTEE

REFERENCE: D2019/16681

PURPOSE OF REPORT

The purpose of the report is to provide for an election to be conducted for the Office of Deputy Chairman of the Chief Executive Officers Advisory Committee (CEOAC).

KEY POINTS AND RECOMMENDATION(S)

- In accordance with section 5.12(2) of the *Local Government Act 1995*, the members of a committee may elect a deputy presiding member from amongst themselves.

Recommendation(s)

That the members of the Chief Executive Officers Advisory Committee elect a Deputy Chairman.

SOURCE OF REPORT

Director Corporate Services

BACKGROUND

The following CEO's make up the membership of the CEOAC for the period 2017 - 2019:

Ms Peta Mabbs	Town of Bassendean
Mr Andrew Brien	City of Bayswater
Mr John Christie	City of Belmont
Ms Rhonda Hardy	City of Kalamunda
Mr Jonathan Throssell	Shire of Mundaring
Mr Michael Foley	City of Swan
Mr Marcus Geisler	EMRC

In accordance with section 5.12(2) of the *Local Government Act 1995* (the Act), the members of a committee may elect a deputy presiding member from amongst themselves.

It is a requirement of Schedule 2.3 of the Act that the election is conducted by the Chairman and the nominations for the Office are to be given to the Chief Executive Officer (CEO) in writing before the meeting or the Chairman during the meeting before the close of nominations. Furthermore, if a member is nominated by another member, the Chairman is not to accept the nomination unless the nominee has advised the Chairman, orally or in writing, that he or she is willing to be nominated for the Office.

The procedure outlined in Schedule 2.3 of the Act will be followed if there is an equality of votes.



Item 5.2 continued

REPORT

The following material accompanies the agenda for this meeting as a means of assisting members of the Committee to nominate themselves or another member for the Office of Deputy Chairman of the CEOAC.

1. A blank nomination form for the Office of Deputy Chairman of the CEOAC, nominate oneself
2. A blank nomination form for the Office of Deputy Chairman of the CEOAC, nominate another
3. A blank ballot paper for Election of Deputy Chairman of the CEOAC

Ballot papers will be made available prior to voting.

The completed nomination forms are to be given to the CEO before the meeting or to the Chairman when the Chairman calls for them when dealing with this item at the meeting.

STRATEGIC/POLICY IMPLICATIONS

Council Policy 2.1 provides for the establishment of the Chief Executive Officers Advisory Committee.

Key Result Area 3 – Good Governance

- 3.3 To provide responsible and accountable governance and management of the EMRC

FINANCIAL IMPLICATIONS

Nil

SUSTAINABILITY IMPLICATIONS

Nil

MEMBER COUNCIL IMPLICATIONS

Member Council	Implication Details
Town of Bassendean	} Nil
City of Bayswater	
City of Belmont	
City of Kalamunda	
Shire of Mundaring	
City of Swan	

ATTACHMENT(S)

1. A blank nomination form for the Office of Deputy Chairman of the CEOAC, nominate oneself (Ref: D2019/16684)
2. A blank nomination form for the Office of Deputy Chairman of the CEOAC, nominate another (Ref: D2019/16684)
3. Ballot Paper – Election of CEOAC Deputy Chairman (Ref: D2019/16686)



Item 5.2 continued

VOTING REQUIREMENT

Secret Ballot

RECOMMENDATION(S)

That the members of the Chief Executive Officers Advisory Committee elect a Deputy Chairman.



Nomination for Deputy Chairman

To the Chief Executive Officer

I hereby nominate myself, _____ for the position of Deputy Chairman of the Eastern Metropolitan Regional Council Chief Executive Officers Advisory Committee for the term of Office commencing on the date of the election until the next ordinary elections days and/or other circumstances occur in accordance with section 5.11 of the *Local Government Act 1995*.

Signed: _____

Date: _____



Nomination for Deputy Chairman

To the Chief Executive Officer

I hereby nominate _____ for the position of Deputy Chairman of the Eastern Metropolitan Regional Council Chief Executive Officers Advisory Committee for the term of Office commencing on the date of the election until the next ordinary elections days and/or other circumstances occur in accordance with section 5.11 of the *Local Government Act 1995*.

Signed: _____

Date: _____

*I _____ hereby certify that I accept the above nomination to the position of Deputy Chairman of the Eastern Metropolitan Regional Council Chief Executive Officers Advisory Committee.

Signed: _____

Date: _____

***This certificate is to be completed when a Representative is nominated by another Representative.**



**Eastern Metropolitan Regional Council
CEOAC Tuesday 19 November 2019**

**BALLOT PAPER FOR THE
ELECTION OF THE CEOAC DEPUTY CHAIRMAN**

HOW TO VOTE

**Place a tick ☒ in the box next to the candidate you want
to elect.**

Do not make any other marks on the ballot paper.

Lastname, Firstname

☐

Lastname, Firstname

☐

Lastname, Firstname

☐



6 PETITIONS, DEPUTATIONS AND PRESENTATIONS

7 CONFIRMATION OF MINUTES OF PREVIOUS MEETINGS

Nil

8 QUESTIONS BY MEMBERS OF WHICH DUE NOTICE HAS BEEN GIVEN

9 QUESTIONS BY MEMBERS WITHOUT NOTICE

10 ANNOUNCEMENT OF CONFIDENTIAL MATTERS FOR WHICH MEETINGS MAY BE CLOSED TO THE PUBLIC

Nil

11 BUSINESS NOT DEALT WITH FROM A PREVIOUS MEETING

Nil



12 REPORTS OF EMPLOYEES

12.1 REGIONAL SERVICES PROJECT FUNDING SUMMARY 2020/2021

REFERENCE: D2019/16418

PURPOSE OF REPORT

The purpose of this report is to provide Council with the Regional Services Project Funding Summary for the 2020/2021 financial year for noting.

KEY POINTS AND RECOMMENDATION(S)

- The Regional Services Project Funding Summary for 2020/2021 has been developed and is attached for Council's consideration.
- Regional strategies around advocacy, economic development, integrated transport and the environment assist in guiding delivery of Regional Services to participating member Councils.
- The programs/projects and associated financial commitments have been prepared for member Councils' consideration.
- It is proposed that for the period 2020/2021 the following programs/projects will continue:
 - Regional Development:
 1. Regional transport strategy related projects;
 2. Regional economic development related projects;
 3. Regional events program; and
 4. Regional advocacy.
 - Environmental Services:
 1. Regional Environment Strategy related projects;
 2. Eastern Region Catchment Management Program;
 3. Sustainability programs;
 4. Regional Benchmarking Building Efficiency Project; and
 5. Understanding and Managing Flood Risk Project.
- It is also proposed that the actual funding formula will remain unchanged for the 2020/2021 financial year, with just a CPI increase of 1.6%, for programs that member Councils are participating in. The funding formula will form part of the strategic review of the EMRC operations during 2020.

Recommendation

That Council notes the programs/projects and funding commitments outlined in the Regional Services Project Funding Summary for 2020/2021, forming the attachment to this report, which establishes the basis of discussion with member Council CEOs.

SOURCE OF REPORT

Director Regional Services



Item 12.1 continued

BACKGROUND

The Regional Services Directorate delivers regionally focused projects to member Councils in the areas of environment and sustainability, economic development (including event related programs) and integrated transport. The programs/projects have varied over the years in response to the changing needs of member Councils and emerging regional issues that are deemed appropriate to be dealt with on a regional scale.

Delivery of services are driven through an annual process aligned to the business planning and budget processes of all member Councils. This annual process provides for the EMRC to deliver programs/projects in accordance with the financial contributions received from member Councils and other financial contributions, including grant funding.

The programs/projects currently being delivered in 2019/2020 include:

Regional Development

- Regional Integrated Transport Strategy related projects (RITS);
- Regional Economic Development Strategy (REDS) related projects; and
- Regional Events program.

Environmental Services

- Regional Environment Strategy related projects;
- Eastern Region Catchment Management Program; and
- Sustainability programs.

Regional Advocacy

The Regional Advocacy Strategy (RAS) outlines areas for advocacy at a local, state and federal level across the EMRC areas of waste, environment, transport and economic development. A new strategic Regional Advocacy document, encompassing priority projects across all six member Council municipalities, is being developed to provide a united front to state and federal government on the priority needs of the region.

The Regional Services Directorate coordinates, facilitates and jointly funds regionally significant projects that improve social, economic and environmental outcomes for Perth's Eastern Region. The Regional Development and Environmental Services projects are consistent with the EMRC's 10 Year Strategic Plan 2017 to 2027 adopted by Council at its meeting of 18 August 2016 (Ref: D2016/10193) and which took effect from 1 July 2017.

The following strategies assist in guiding project delivery across the region:

- Regional Advocacy Strategy 2016 – 2020;
- Regional Environment Strategy 2016 – 2020;
- Regional Economic Development Strategy 2017 – 2021; and
- Regional Integrated Transport Strategy 2017 – 2021.

REPORT

The Regional Services Project Funding Summary 2020/2021 demonstrates continued delivery of Regional Development and Environmental Services programs/projects and includes the proposed financial contributions of participating member Councils. Program/project delivery is managed by the EMRC in collaboration with participating member Councils.



Item 12.1 continued

In terms of the financial contributions from member Councils, this has been increased by CPI (1.6%) to account for rising costs, however the actual funding formula will remain unchanged, for delivery of EMRC programs and projects for 2020/2021, whilst we await the outcomes from the strategic review of the EMRC.

A copy of the Regional Services Project Funding Summary 2020/2021 is attached.

Member Councils indicative support is requested for the programs/projects and associated financial contributions as outlined in the Regional Services Project Funding Summary for the 2020/2021 financial year.

STRATEGIC/POLICY IMPLICATIONS

Key Result Area 1 – Environmental Sustainability

- 1.5 To contribute towards improved regional air, water & land quality, regional biodiversity conservation and address climate change

Key Result Area 2 – Economic Development

- 2.1 To facilitate and advocate for increased investment in regional infrastructure
- 2.2 To facilitate and advocate for regional economic development activities
- 2.3 To facilitate regional cultural and recreational activities

Key Result Area 3 – Good Governance

- 3.1 To provide advice and advocacy on issues affecting Perth's Eastern Region
- 3.2 To manage partnerships and relationships with stakeholders


FINANCIAL IMPLICATIONS

The funding to facilitate Regional Services projects and services is developed and agreed with member Councils as part of the annual budget process.

SUSTAINABILITY IMPLICATIONS

The Regional Services directorate operates to pursue environmental, economic and social outcomes for Perth's Eastern Region. In pursuit of these objectives, sustainability considerations are also integrated wherever possible in all activities undertaken by the directorate.

MEMBER COUNCIL IMPLICATIONS

Member Council	Implication Details
Town of Bassendean	 Participating member Councils officers' time may be required when liaising with the EMRC on specific projects within the Regional Services directorate.
City of Bayswater	
City of Belmont	
City of Kalamunda	
Shire of Mundaring	
City of Swan	



Item 12.1 continued

ATTACHMENT(S)

Regional Services Project Funding Summary 2020/2021 (Ref: D2019/16733)

VOTING REQUIREMENT

Simple Majority

RECOMMENDATION(S)

That Council notes the programs/projects and funding commitments outlined in the Regional Services Project Funding Summary for 2020/2021, forming the attachment to this report, which will form the basis of discussion with member Council CEOs.

CEOAC RECOMMENDATION(S)

MOVED

SECONDED



Advancing Perth's Eastern Region 

REGIONAL SERVICES

PROJECT FUNDING SUMMARY 2020/2021

November 2019

EXECUTIVE SUMMARY

The Regional Services Project Funding Summary outlines the proposed projects for delivery in 2020/2021.

The Regional Services Directorate currently comprises the two positions of Director Regional Services and Regional Services Administration Officer. The remainder of staff in the Regional Services Directorate work in the Regional Development and Environmental Services business units. Regional Development is comprised of two strategic project officers and Environmental Services includes the Sustainability and Natural Resource Management Teams. These Business Units support the overall directorate and work under the four strategies:

- Regional Advocacy Strategy 2016 - 2020;
- Regional Environment Strategy 2016 - 2020;
- Regional Integrated Transport Strategy 2017 - 2021; and
- Regional Economic Development Strategy 2017 - 2021.

These strategies are underpinned by the United Nations Sustainable Development Goals Framework including targets and indicators for achieving excellence in sustainable development. The EMRC has embedded these goals within our strategies to drive innovation within actions on behalf of our member Councils.

The Regional Services Project Funding Summary 2020/2021 comprises regional development and environmental services projects and also notes participation in regional advocacy campaigns. The participating member Council contributions for the delivery of each program has been increased by CPI, which equates to a 1.6% increase for 2020/2021.

The existing Regional Services funding model has been used in the development of this funding summary for 2020/2021 as a result of the decision by Council, at its meeting of 18 October 2018, whereby it resolved as follows:

“THAT COUNCIL SUPPORTS THE CONTINUATION OF THE EXISTING REGIONAL DEVELOPMENT FUNDING MODEL TO DELIVER REGIONAL DEVELOPMENT PROGRAMS TO MEMBER COUNCILS FOR THE PERIOD 1 JULY 2019 TO 30 JUNE 2020.”

Given the pending strategic review of the EMRC, its future direction, future programs and service delivery it is considered prudent to extend the existing Regional Services offering to include the 2020/2021 financial year and to operate under the existing funding formula.

Under the EMRC's Establishment Agreement, notice of withdrawal by a member Council under clause 9.6 is required to be given at any time between 1 July and 31 December in any year, becoming effective from 1 July in the following year (e.g. 1 July 2020).

To date, no notices of intention to withdraw from any programs for 2020/2021 have been received from any of the EMRC's member Councils, however such notice is not required until the end of the 2019 calendar year.

REGIONAL ADVOCACY PROGRAM

OVERVIEW

The Regional Advocacy Strategy 2016 - 2020 outlines key components that will be used to develop advocacy campaigns, and identifies the focus areas to address advocacy priorities. The priority areas and corresponding areas of focus are shown in the table below:

Advocacy priorities	Areas of focus
Regional Waste Management Priorities	<ul style="list-style-type: none">• Waste reduction and resource recovery• Environmentally sustainable solutions• Capacity for the future
Regional Environmental Priorities	<ul style="list-style-type: none">• Swan and Helena Rivers• Natural resource management• Environmentally sustainable solutions• Climate change
Regional Economic Development Priorities	<ul style="list-style-type: none">• Business growth, investment and innovation• Infrastructure to support strategic centres and population growth• Maximise infrastructure benefits
Regional Integrated Transport Priorities	<ul style="list-style-type: none">• Increase and maximise benefits of infrastructure and services• Behaviour change• Safety

The Regional Advocacy Program seeks to build capacity within the EMRC and its member Councils to attract an increased share of benefits and services to Perth's Eastern Region through a framework that delivers effective regional advocacy campaigns. The major advocacy campaign for 2019/2020, in particular the unfunded projects outlined in the "Connect Perth's East" City Deal proposal, remained a focus. The remaining unfunded project from this campaign will continue to be an advocacy focus for the EMRC during 2020/2021 along with a new advocacy initiative for 2020/2021 and beyond that includes member Council's priorities. This new advocacy effort "Grow, Connect, Protect" will include, but not necessarily be limited to; infrastructure projects, environmental and waste initiatives and community initiatives.

How will member Councils benefit?

Advocacy and relationship building is aimed at increasing awareness of Perth's Eastern Region and identifying future funding and/or sponsorship opportunities to support regional scale projects and activities.

What impact/support will advocacy have on member Councils?

Member Councils will be invited to participate in regional advocacy campaigns. This may require providing information or making officers available to attend meetings, events or other advocacy activities. Elected members will also have a critical role to play in regional advocacy which may require them to attend events and delegations and to advocate on key regional issues needing to be addressed.

REGIONAL DEVELOPMENT BUSINESS UNIT

OVERVIEW

The Regional Development Business Unit works to achieve the following objectives of the EMRC's 10 Year Strategic Plan 2017 to 2027:

- To facilitate and advocate for increased investment in regional infrastructure;
- To facilitate and advocate for regional economic development activities;
- To facilitate regional cultural and recreational activities;
- To provide advice and advocacy on issues affecting the region;
- To address climate change issues within the region, and
- To manage partnerships and relationships with stakeholders.

The Regional Development team also delivers on the objectives arising from the actions:

- Regional Advocacy Strategy 2016 - 2020,
- Regional Economic Development Strategy 2017 - 2021
- Regional Integrated Transport Strategy 2017 – 2021

The Regional Services Team also provides regional coordination of projects to member Councils through the Economic Development Officers Group (EDOG) and the Regional Integrated Transport Strategy Implementation Advisory Group (RITS IAG).

The team works collaboratively with the EMRC's six member Councils, key regional stakeholders and government partners to:

- Encourage sustainable economic development in the region;
- Support regional cultural and recreational activities;
- Encourage integrated transport planning initiatives to provide an efficient, safe and integrated regional transport network;
- Address potential climate change issues within the region, and
- Advocate on regional issues and opportunities to maximise benefits for member Councils and their communities and make the region a better place to live, work, play and do business.

Delivery of Regional Development is undertaken by the Regional Services directorate, which includes the Regional Services Director and two Strategic Projects Officers. The Officers assist with planning, developing and implementing key strategic projects to be delivered by the EMRC, in consultation with member Councils and key stakeholders.

Member Council officers provide input to the EMRC on the development and delivery of strategic projects and relevant strategies through participation on advisory groups as follows:

Programs/Projects	Regional Advisory Groups
Regional integrated transport and land use development	<p>Regional Integrated Transport Strategy Implementation Advisory Group (RITS IAG).</p> <p><i>Comprising Directors/Officers from participating member Councils, Department of Transport, Department of Planning, Lands and Heritage, Road Safety Commission, Main Roads WA, Public Transport Authority, Western Roads Federation, WALGA, RAC, Westcycle, Perth Airport Pty Ltd, and the Freight and Logistics Council.</i></p>
TravelSmart (including Active and Public Transport) initiatives	Regional TravelSmart Working Group, as required.
Regional Economic Development	<p>Economic Development Officers Group (EDOG)</p> <p><i>Comprising Economic Development Managers/Officers from participating member Councils.</i></p>
Regional Events Program	<p>Avon Descent Family Fun Days Project Team</p> <p><i>Comprising Events, Recreation and Marketing Officers from participating member Councils, non-member Councils and participating organisations.</i></p> <p><i>Online portal that promotes events, themed under the 'seasons' e.g. Hello Spring.</i></p>

REGIONAL INTEGRATED TRANSPORT

The EMRC and its six member Councils are committed to working with government and commercial partners to *“advocate and support the development of a safe, efficient and effective transport system that supports and enhances the region's economic, social and environmental wellbeing.”*

BACKGROUND

The Regional Integrated Transport Strategy 2017 - 2021 (RITS) examines transport and access issues affecting economic growth, liveability of the region and the wellbeing of the community. The RITS identifies objectives to address integrated transport issues and opportunities in Perth's Eastern Region and for the EMRC to advocate to key stakeholders and government. The Regional Integrated Transport Strategy Implementation Advisory Group provides an important source of information and advice to the EMRC to ensure advocacy activities are well aligned with the requirements of the region. The EMRC also provides advocacy for key state road projects in the region through participation on state advisory groups such as NorthLinkWA, and the Westport Reference Group.

Regional Integrated Transport Strategy Actions 2020/2021

The EMRC will continue to initiate projects aligned with the Regional Integrated Transport Strategy, the Regional Road Safety Plan and the Regional Congestion Action Management Plan. Projects proposed for 2020/2021 include:

- **Regional Integrated Transport Strategy 2017 - 2021 (RITS)** – The objectives and priority actions from the RITS will be implemented over the life of the strategy.
- **Regional Integrated Transport Strategy Implementation Advisory Group** – The group will continue to provide input and guidance to the EMRC on all integrated transport and land use matters. The group membership comprises technical officers from member Councils and representatives from the Department of Transport, Department of Lands, Planning and Heritage, Public Transport Authority, Main Roads WA, WALGA, Road Safety Commission, RAC, Western Roads Federation, Westcycle, Perth Airport Pty Ltd and the Freight and Logistics Council.
- **Regional Transport Advocacy Priorities** – Transport advocacy priorities identified in the “Connect Perth's East” City Deal proposal, including active and public transport will continue to be promoted and communicated across all levels of government and with key stakeholders. Such advocacy includes, but is not limited to, the Perth – Adelaide National Highway, upgrades to major freight networks in the region, active and public transport (including METRONET), public transport education initiative, “Your Move” and the Station Access Strategies. A new advocacy document ‘Grow, Connect, Protect’ will be developed to continue this advocacy work.
- **Regional TravelSmart Working Group** – This group only meets on an as-needs basis and was largely inactive during 2019/2020. Projects this group historically gets involved with include Regional Active/Public Transport projects and campaigns and/or development of key regional projects as determined by the group.
- **Regional Congestion Management Action Plan** – The Action Plan will be promoted and implemented in conjunction with the RITS and will guide the implementation of identified actions to reduce traffic congestion and improve efficiency on the Region's roads.
- **Active/Public Transport Campaigns** – Campaigns will be developed to promote awareness of walking, cycling and public transport to encourage smarter and more sustainable travel options and practices throughout the Region. This may include encouraging more sustainable transport options at community events and exploring opportunities in line with the State-wide Bike Week promotion.
- **Regional Road Safety Plan** – A new Plan has recently been developed and the actions will be implemented based on the safe systems approach.

- **Regional Road Safety Awareness Campaign** – Regional awareness campaigns relating to the regional road safety issues identified in the Regional Road Safety Plan will be undertaken in consultation with member Councils and external organisations such as WALGA. This promotion may include driver safety, reducing speeds, safe road use and an opportunity for local governments to highlight key successes and advocacy to state government and other relevant stakeholders for better road and roadsides to improve road safety.

Participating member Councils will benefit through the provision of an efficient and safe transport network in Perth's Eastern Region, which is a critical issue for both local and state government particularly with the predicted population and transport growth for Perth in the medium to longer term. The EMRC will continue to advocate on behalf of the Region to secure ongoing transport investment and awareness in the Region.

What impact/support will this project have on participating member Councils?

In-kind support will be required from participating member Councils in 2020/2021 in the form of officer time as members of the RITS IAG as well as a financial contribution from member Councils.

Member Council support for 2020/2021 Regional Integrated Transport projects is presented as follows:

SUMMARY OF PROPOSED TRANSPORT RELATED PROJECTS 2020/2021

Member Council financial support is sought for the following projects:

Regional Integrated Transport Actions	Member Council contribution required
<ul style="list-style-type: none"> Regional Integrated Transport Strategy 2017 – 2021, delivery of priority actions and initiatives Regional Integrated Transport Strategy Implementation Advisory Group meeting/forums Regional Advocacy Strategy 2016 – 2020, delivery of transport advocacy priorities “Connect Perth’s East” City Deal advocacy and the new advocacy proposal “Grow Connect Protect (currently under development) TravelSmart Working Group, meetings and information sharing Regional Congestion Management Action Plan, promotion of plan and implementation of actions Active/Public Transport Promotion (including Bike Week) Regional Road Safety Plan actions Regional Road Safety Awareness Campaign, to be developed for 2020/2021 Regional Road Safety Report Card, to be updated 	74,326
Total Member Council Financial Support Required for Transport Related Projects 2020/2021	\$74,326

REGIONAL INTEGRATED TRANSPORT

PROPOSED 2020/2021 PROJECTS BUDGET – INDIVIDUAL COUNCIL BASIS

Regional Integrated Transport Strategy Actions		
Adopted Budget 2019/2020 (\$)	Operating Income	Proposed Budget 2020/2021 (\$)
	Member Council (MC) Contribution: RITS Projects	
6,259	Town of Bassendean	6,359
12,599	City of Bayswater	12,800
10,648	City of Belmont	10,818
11,379	City of Kalamunda	11,561
9,917	Shire of Mundaring	10,076
22,354	City of Swan	22,712
\$73,156	Total MC Contributions: RITS Projects	\$74,326
	Operating Expenditure	
123,757	Cost of delivering transport related projects	133,957
\$123,757	Total Expenditure	\$133,957
\$50,601	Net EMRC Contribution (delivery cost less MC contributions)	\$59,631

REGIONAL ECONOMIC DEVELOPMENT

The EMRC and its participating member Councils are working to achieve and maintain a prosperous future for the region and its residents. A range of activities that enable infrastructure and investment to meet the needs of industry are delivered to support economic growth.

BACKGROUND

The EMRC has supported member Councils and industry stakeholders to achieve regional economic development outcomes since 1998. Through the establishment of the Economic Development Officers Group (EDOG) in 2007, regional economic development activities undertaken by the EMRC are those that are considered by the member Councils as important to address barriers to business, industry growth, investment attraction and capitalising on opportunities.

The Regional Economic Development Strategy 2017 - 2021 (REDS) sets in place a structured framework for the delivery of regional economic development activities. The basis for 2020/2021 activities relies on continuation of the most successful projects and additional activities developed in consultation with EDOG.

REGIONAL ECONOMIC DEVELOPMENT STRATEGY ACTIONS 2020/2021

The EMRC will continue to undertake projects aligned with the Regional Economic Development Strategy (REDS) 2017-2021 as approved by EDOG members and will include:

- **Regional Economic Development Strategy 2017-2021 (REDS)** – The objectives and actions from the REDS will be implemented over the life of the strategy to help guide economic development projects and outcomes.
- **Economic Development Officers Group (EDOG)** – EDOG meetings will continue to be facilitated on a bi-monthly basis, providing a forum for relevant guest speakers to address the group and for discussion of current/future projects and issues/opportunities for the Region. The EMRC will deliver projects deemed relevant to participating member Councils and the EMRC.
- **Provision of Regional Profiling Tools** – Subscriptions to REMPLAN and id. profile, area-specific data and modelling software programs, for use in economic development and planning. THE EMRC subscription with REMPLAN affords member Councils' significant discounts if they choose to subscribe. Ongoing software training will continue to be coordinated by the EMRC to provide member Councils access to economic and socio-demographic profiling data relating to Perth's Eastern Region.
- **Advancing Perth's Eastern Region Events** – Tours, events and forums will continue to be provided, including access to examples of best practice, to aid in the development and/or awareness of future local and regional projects.
- **Business Exemplar Project** – Promoting the winners of local business awards in the Region, in consultation with EDOG and the Region's Business Support Service Organisations, Chambers of Commerce and Business Associations will continue. The promotion includes assisting business winners in profiling their businesses through development of professional media releases.
- **Business and Investment Attraction** – The EMRC's Business and Investment Attraction booklet is being reproduced in consultation with EDOG. In addition to this, various forums, workshops, research and advocacy will be undertaken to identify and attract appropriate businesses and investment to the Region with a focus on job creation.
- **Digital Technology and Innovation** – Hosting future forums that highlight opportunities to enhance digital capacity and identify emerging trends and innovation will be explored.
- **Regional Youth Advocacy Priorities** – Continue to advocate for regional youth priorities and actions identified by EDOG, RITS IAG, and/or Youth Officers that will build on the direction and initiatives outlined in the Regional Economic Development Strategy and the Regional Integrated Transport Strategy.

- **The Perth's Eastern Region website** (perthseasternregion.com.au) – This online portal provides a valuable point of presence and a call to action for community events. At any time during the year participating member Councils and community groups can register their events on the perthseasternregion.com.au website.
- **Recreational Walking and Cycling Campaigns** – Continue to develop regional campaigns promoting recreational walking and cycling trails in the region. Promotion will focus on promoting the Region as a great place to live, work and play and complements the regional events campaign. This will also include maintaining, reviewing and expanding the outcomes of the Swan River Ramble project.

REGIONAL EVENTS

The EMRC supports regional events by pooling resources to provide collaborative promotion and through securing and administering regional event funding. The EMRC will continue promotion of regional events and co-ordination of regional funding in partnership with the Avon Descent Family Fun Days Project Team.

Avon Descent Family Fun Days - Funding has been sought from Lotterywest for the 2020 Avon Descent Family Fun Days to assist Councils meet the costs of staging family fun day events including infrastructure, services and entertainment. The collaborative regional marketing campaign is coordinated by the EMRC. The EMRC receives grant funding from Lotterywest on behalf of the member Councils and the Shires of Toodyay and Northam and coordinates the regional marketing campaign, achieving a high level return on investment for participating councils. A fee for service arrangement is in place with the Shire of Toodyay and Shire of Northam and the EMRC co-ordinates the debrief, grant review and acquittal, pre-planning and planning meetings with relevant parties.

Perth's Autumn Festival - Participation in Perth's Autumn Festival (Hello Autumn) has moved to an online option at no cost to member Councils. Councils will be able to nominate core events held within the Region for promotion via the EMRC's perthseasternregion.com.au website. Additional fringe events held in the Region will also be promoted to expand the scope of the Autumn Festival.

Hello Spring Campaign –Hello Spring is a regional campaign promoting community, culture and active lifestyle events held in the Region during spring/summer. This promotion focuses on promoting the Region as a great place to live, work and play in the warmer months and builds on the current winter and autumn promotions to achieve all-year-round promotion of the Region. This campaign is at no cost to Councils.

How will participating member Councils benefit?

Participating member Councils will benefit through the alignment of regional priorities and local area priorities to deliver outcomes that support industry investment, advocate for regional priorities and promote the Region as a whole. The EMRC strategies complement local priorities of member Councils in order to maximise, leverage and make effective use of collective resources.

What impact/support will this project have on participating member Councils?

Continuing in-kind support is required from member Councils in the form of officer time to participate in the relevant advisory groups or committees. Financial support is also required from participating Councils.

SUMMARY OF REGIONAL DEVELOPMENT BUSINESS UNIT PROJECTS 2018/2019

Member Council financial support is sought for the following projects:

Regional Economic Development	Member Council contribution required (\$)
Regional Economic Development Strategy 2017 – 2021 actions Regional Advocacy Strategy 2016 – 2020 actions Economic Development Officers Group REMPLAN profiling tool Advancing Perth Eastern Region Tours Business Exemplar Project Business and Investment Attraction Project Digital Technology and Innovation Precinct Activation advocacy and/or research Regional Youth Advocacy Priorities Recreational Walking and Cycling Campaigns	\$66,644
Regional Events	Member Council contribution required
Avon Descent Family Fun Days, Perth's Autumn Festival and Hello Spring Campaigns; and Management of Perth's Eastern Region Website – perthseasternregion.com.au.	\$18,168
Total member Council financial support requested for above-mentioned projects for 2020/2021	\$84,812

REGIONAL ECONOMIC DEVELOPMENT – 2020/2021

PROPOSED 2020/2021 PROJECTS BUDGET– INDIVIDUAL COUNCIL BASIS

Adopted Budget 2019/2020	Project Summary	Proposed Budget 2020/2021
\$	Operating Income	\$
Member Council Contributions: Regional Economic Development (REDS)		
8,959	Town of Bassendean	9,102
15,983	City of Bayswater	16,239
13,821	City of Belmont	14,042
13,821	City of Kalamunda	14,042
13,011	Shire of Mundaring	13,219
0	City of Swan	
\$65,595	Total Member Council Contributions: REDS	\$66,644
Member Council Contributions: Regional Events		
2,169	Town of Bassendean	2,204
4,378	City of Bayswater	4,448
3,723	City of Belmont	3,782
0	City of Kalamunda	
0	Shire of Mundaring	
7,612	City of Swan	7,734
\$17,882	Total Member Council Contributions: Regional Events	\$18,168
\$83,477	Combined Contributions: REDS & Regional Events	\$84,812
Grants/Other Contributions		
179,500	Avon Descent Family Fun Days grant (Lotterywest)	180,000
0	Perth's Autumn Festival grant (Lotterywest)	
10,000	Non-member Councils	10,000
\$189,500	Total Grants/Other Contributions: Regional Events	190,000
\$272,977	Total Income	\$274,812
Operating Expenditure		
333,553	Cost of REDS Projects and Regional Events program	313,468
30,000	Regional Economic Profile Tools (REMPPLAN and id.profile)	30,000
9,000	Regional Youth Program	9,000
\$372,553	Total Expenditure	352,468
\$99,576	Net EMRC contribution	77,656

REGIONAL DEVELOPMENT

SUMMARY OF INDIVIDUAL MEMBER COUNCILS PROPOSED COMMITMENTS - 2020/2021

Individual Member Councils Contributions 2020/2021	Integrated Transport	Economic Development	Events	Total Commitment
	\$	\$	\$	\$
Town of Bassendean	6,359	9,102	2,204	17,665
City of Bayswater	12,800	16,239	4,448	33,487
City of Belmont	10,818	14,042	3,782	28,642
City of Kalamunda	11,561	14,042	0	25,603
Shire of Mundaring	10,076	13,219	0	23,295
City of Swan	22,712	0	7,734	30,446
TOTAL	74,326	66,644	18,168	159,138

ENVIRONMENTAL SERVICES BUSINESS UNIT

OVERVIEW

The Environmental Services Business Unit works to achieve the following objectives of the EMRC's 10 Year Strategic Plan 2017 to 2027:

- To contribute towards improved regional air, water and land quality and regional biodiversity conservation and to address climate change issues within the Region;
- To provide advice and advocacy on issues affecting the Region; and
- To manage partnerships and relationships with stakeholders.

The EMRC's Regional Environment Strategy 2016-2020 guides the Environmental Services team in its facilitation of a range of environmental services that enable the EMRC and its member Councils to meet their responsibilities and community expectations for sustainable and adaptive environmental initiatives, and to maintain and enhance the natural assets of the eastern region. Under the Regional Environment Strategy, the EMRC and its member Councils are collaboratively progressing regional environmental management using the global Sustainable Development Goals (SDGs) as a framework.

REGIONAL ENVIRONMENTAL STRATEGY ACTIONS 2020/2021

The EMRC will continue to deliver actions within the Regional Environmental Strategy (RES) 2016-2020 as approved by member councils and will include:

Strategic Objective 1: Our region has sufficient and sustainably managed water resources and good water quality in rivers, wetlands and groundwater (SDG 6 - Clean Water and Sanitation).

1.1 Continue to provide a regional water management program including data management and information sharing (Water Conservation Project)

1.9. Facilitate water quality monitoring and improvement activities under a cross-regional catchment management program (ERMCP Project).

Strategic Objective 2: Our region adopts sustainable, affordable and modern energy sources and promotes energy efficiency (SDG 7 – Affordable clean energy)

2.6 Coordinate local government areas, business and community education programs on energy efficiency and renewable energy (Home energy audit project)

Strategic Objective 3: Our region safe resilient, resource efficient and environmentally sustainable urban areas (SDG 11 – Sustainable cities & communities)

3.5 Provide member Councils and industry with ongoing information related to green growth to facilitate it becoming an approach to economic development (ACER project)

3.6 Advocate to State government on behalf of member Councils to mandate inclusion of environmental considerations in planning instruments (Understanding and managing flood risk project).

Strategic Objective 4: Our region fosters sustainable production and consumption patterns and promotes environmentally responsible lifestyles (SDG 12 – Sustainable cities & communities)

3.5 Provide member Councils and industry with ongoing information related to green growth to facilitate it becoming an approach to economic development (ACER project, Water Conservation project, Building Benchmarking & Efficiency project).

Strategic Objective 5: Our region addresses climate change and its impacts through mitigation and adaptation (SDG 13 – Climate action)

5.1. Provide education and information to member Councils and community members on how to reduce their greenhouse gas emissions and adapt to specific climate change impacts (ACER Project, Home Energy Kit Project, Future Proofing).

6.4. Coordinate cross-regional catchment management program to support priorities identified by member Councils (Eastern Region Catchment Management Program).

Strategic Objective 6: Our region protects restores and enhances terrestrial ecosystems, addresses land degradation and prevents biodiversity loss (SDG 15 - Life on Land).

6.1. Continue to build partnerships and provide technical support, research and information relating to pest, weed, and pathogen control (Eastern Region Catchment Management Program).

6.4. Coordinate cross-regional catchment management program to support priorities identified by member councils (Eastern Region Catchment Management Program).

6.6. Continue to facilitate community, particularly youth involvement in biodiversity conservation and stewardship (, Bush Skills for Youth project).

The Environmental Services programs proposed for 2020/2021 include:

- Eastern Region Catchment Management Program (natural resource management) including Community Capability grant (subject to grant funding);
- Farm dams as refuges for freshwater biodiversity in a drying climate: new tools to enhance biodiversity capacity (subject to grant funding);
- Rehabilitation of Wangalla Brook project (subject to grant funding);
- Cultural Walking Trail (subject to grant funding);
- Sustainability Programs (energy, water and climate change) including Achieving Carbon Emissions Reduction (ACER), Water Quality and Conservation and Future Proofing;
- Regional Benchmarking Building Efficiency Project;
- Stage 4 - Understanding and Managing Flood Risk Stage Four Project, and
- Proposed Stage 1 Regional Mapping Project (new initiative).

The team also works to deliver on the objectives of the Regional Advocacy Strategy 2016-2020, to provide a collective voice for the Region and to be a conduit for collaboration and advocacy on issues of regional significance.

How will participating member Councils benefit?

Member Councils assist in the alignment of regional priorities with local area priorities to deliver outcomes that support improved regional air, water and land quality and regional biodiversity conservation and address climate change issues. The support provided by Environmental Services programs will not duplicate existing activities but act as “enablers” that will add value to member Councils’ own initiatives. The EMRC’s strategies complement local priorities of member Councils in order to maximise, leverage and make effective use of collective resources.

The EMRC acknowledges that member Councils have built considerable environmental knowledge and skills over the last decade and understands that its role is changing and diversifying from mainly delivering programs and projects to offering more coordination and technical support; providing knowledge and innovation; and adding value to the skills that already exist within member Councils, the community and other key stakeholders.

What impact/support will this project have on participating member Councils?

Continuing in-kind support is required from member Councils in the form of officer time to participate in meetings, provide information, or to provide program oversight and input. Financial support is also required from participating Councils to implement specific programs and initiatives.

EASTERN REGION CATCHMENT MANAGEMENT PROGRAM (ERCMP)

The EMRC has supported member Councils and industry stakeholders to achieve sustainable land management goals for over 20 years. Through the establishment of the Eastern Region Catchment Management Program, Bush Skills 4 Youth, Community Capability, and the Farm Dams Project member Councils and their communities benefit from improved environmental outcomes.

The Regional Environmental Strategy 2016 - 2020 (RES) sets in place a structured framework for the delivery of regional environmental activities. The basis for 2019/2020 activities relies on continuation of the most successful projects and additional activities developed in consultation with member Councils.

The EMRC are committed to delivering the following projects aligned with the RES in the 2020/21 period:

- **The Eastern Region Catchment Management Program (ERCMP)** has been delivering natural resource management (NRM) services to Perth's Eastern Region for over 20 years through the ERCMP. This is a cross-regional catchment management program delivered by the EMRC to support priorities identified by member councils. It is currently resourced by 3 FTE's and 0.6 FTE (NRM Coordinator, 2 Environmental Projects Officers and a part time Bush Skills 4 Youth Officer) and is highly regarded as a very successful initiative in delivering NRM outcomes at local government and community levels. This program delivers:
 - Regular updates regarding activities to the community and stakeholders via the Greenpage newsletter,
 - Provides support to catchment groups and volunteers through project officer attendance to Catchment Group meetings across the region, Catchment Group or community events, access to technical advice and advocacy via grant funding applications.
 - Provides education opportunities for the community through the Bush Skills for the Hills program comprised of up to 10 workshops across schools and community within the region,
 - Supports member Councils across the region through access to technical advice and advocacy via grant funding applications on behalf of the member Councils and associated Friends of Groups.
 - Bush Skills 4 Youth Program delivers specifically designed workshops to schools, groups and organisations based on needs and interest, spread across the region. Support and collaboration with Youth Centres and activities across the region.
- **Community Capability Program** (subject to grant funding) is a program within the overall ERCMP which aims to increase community awareness of the environmental issues facing the Wooroloo Brook Catchment. Through this program the community participate in on ground rehabilitation activities to empower the community across this catchment to address ongoing environmental issues for improved environmental outcomes. Deliverables include participation in community events, organisation of workshops and rehabilitation activities and support for community Friends of Groups.
- **Farm dams as refuges for freshwater biodiversity in a drying climate: new tools to enhance biodiversity capacity** (subject to funding) Is a project to develop and trial three potential biodiversity management tools designed specifically for farm dams and monitor the biodiversity response; improve knowledge of the role that farm dams play in regional patterns of biodiversity through time; and produce and disseminate an on-line guide for landholders and an on-line guide for local government on managing dams for biodiversity in Western Australia.

NRM has been a key feature of the EMRC's partnerships with participating member Councils, regional stakeholders and researchers and the ERCMP team supports participating member Councils, their residents and their community groups in protecting and managing the biodiversity, waterways and catchments of the relevant member Councils.

PROPOSED NEW PROJECT - REGIONAL MAPPING

(subject to grant funding and member council participation)

This proposed new project aims to address potential gaps with regards to regional scale mapping and analysis of environmental attributes to support NRM approaches across the region. The project aims to identify and manage gaps in existing mapping and provide a regional scale mapping tool to assist the member Councils to strategically plan their NRM activities to address whole of catchment health, bushfire, die back, urban planning and climate change preparedness management approaches across the region. The project will provide guidelines to support ongoing analysis and development of a set of standards for regional mapping to provide indicators for strategic planning and track progress against actions as well as report on the environmental outcomes of our member Council activities.

Stage 1 of the project will be undertaken as a trial to ascertain the 'fit for purpose' approach to mapping environmental indicators such as vegetation condition, density, vegetation complexes, weed species and coverage, bushfire fuel loading, soil types and terrain. This trial will initially utilise existing infrared, aerial photography and digital elevation model samples from Landgate with recommendations of how to cost effectively expand the available knowledge through other mapping approaches. This approach considers the land area occupied by our member Councils and the application of environmental indicators in both rural and urban environments. The deliverable of Stage 1 is a document that outlines the 'fit for purpose' and cost-effective mapping approach for different environmental indicators, a set of standards for regional mapping, recommendations for alternative approaches and further research trials if required. This document will provide all our member Councils excellent guidance into the next stage of the project or to undertake additional mapping activities at their own cost. **To complete Stage 1 the overall cost is approximately \$15,000. This cost could be covered by a contribution from participating member Councils of around \$2,000 each plus a contribution from the EMRC to make up the shortfall.**

Stage 2 of the project would include undertaking whole of Council mapping for participating Councils with a view to planning a phased approach over a number of years, utilise existing mapping available and then prioritising target areas for alternative mapping approaches such as light detecting and ranging (LIDAR). This stage would also include analysis of the mapping data to provide indicators identified through Stage 1. **To complete Stage 2, further work to understand the costs would need to be undertaken, the overall cost would be more significant and may result in a contribution from participating member Councils of approximately \$10,000, a contribution from the EMRC and grant funding to cover the shortfall.**

Stage 3 of this project would include development of a regionally centralised mapping tool to enable all participating Councils to view data collated for the region. This stage of the project would run concurrently with Stage 2 to ensure there is a way to view the captured data. It is anticipated that a subscription cost for the centralised mapping tool, training and administration fee to enable EMRC to manage this may apply and this will be addressed in the planning and budgeting for the project once Stage 1 is completed. The EMRC in conjunction with member Councils will identify the appropriate tool and potential existing apps to enable our volunteers and staff to collate data for verification and addition to the regional mapping platform. This would likely translate to a 'citizen science' opportunity for volunteers.

What will the EMRC provide?

The EMRC will project manage the proposed project; facilitation of workshops, undertake contractor management, review all reports and provide advice around strategic opportunities. In addition, the EMRC would apply for any available grant funding to make it more cost effective for Councils, administrate and co-ordinate the collation and analysis of the mapping data and source and administrate the regional mapping tool.

What are the benefits for our member Councils?

This project will provide our member Councils with the ability to review environmental attributes at the regional scale, plan strategically based on risk for existing programs such as bushfire management, weed control, revegetation activities and feral animal control, which go across Council boundaries. The project will also provide environmental indicators and collate data to report on activities, strategic objectives and track bushfire readiness and climate change adaptation targets. Completing the mapping project regionally will also enable larger areas of mapping and analysis to be completed and generate economies of scale and a standardise set of mapping which will greatly benefit member Councils.

Where to from here?

An indication of member Council interest in taking part in this project will be required in the first instance. If there is sufficient interest (3 or more Councils) then the EMRC will prepare a project plan in consultation with those Councils and progress the project in a Staged approach, having regard for budget constraints and the availability of external grant funding. Should the interest be minimal the option to undertake stage one as a trial or pilot project may be possible, with the benefits and lessons learnt then shared with other local governments.

EASTERN REGION CATCHMENT MANAGEMENT PROGRAM (ERCMP)

PROPOSED 2020/2021 MEMBER COUNCIL CONTRIBUTIONS

2019/2020 Adopted Budget per council: Kalamunda; Mundaring; Swan	Eastern Region Catchment Management Program (ERCMP)	2020/2021 Proposed contribution per council: Kalamunda; Mundaring; Swan
\$		\$
44,514 (includes Bush Skills 4 Youth contribution)	EMRC officer located 1 day a week in member Council offices (Kalamunda, Mundaring and Swan)	45,226
	Landholder enquiries	
	Private landowner visits	
	Support and attendance at Catchment Group meetings and planting days	
	End of Year Volunteer Event (1 p.a.)	
	Bush Skills for the Hills (8-10 workshops p.a.)	
	ERCMP meetings (4 meetings p.a.)	
	Greenpage Newsletter (6 editions p.a.)	
	Assist with local and regional grant applications (e.g. SALP, Rivercare)	
	Bush skills 4 Youth Program (40 workshops across the region)	
Value add	Coordination of local NRM initiatives (e.g. Booklet reprints, Steam Wand, alternative weed management, information forums)	Value add
Value add	Coordination and implementation of Regional Grant Funded Projects (see below)	Value add
0		
44,514	Total contribution per participating member Council including Bush Skills 4 Youth	45,226

	Non-ERCMP member Councils supporting Bush Skills 4 Youth	
3,500*	Bush Skills 4 Youth	7,000
3,500*	Total contribution per non-ERCMP member Council supporting Bush Skills 4 Youth	

Figures exclude GST

*** NOTE: Bush Skills 4 Youth contribution will be \$7,000 as State NRM Program funding was not successful. The EMRC contributed the shortfall in 2019/2020.**

SUSTAINABILITY PROGRAMS – ENERGY, WATER AND CLIMATE CHANGE

Member Councils and the EMRC have worked together on environmental sustainability for over 16 years through initiatives and programs such as the former ICLEI's Cities for Climate Protection and Water Campaign, Future Proofing, ACER: Achieving Carbon Emissions Reduction, Community Energy Efficiency Program and the former Perth Solar Cities. As funding sources change and specific programs end, innovative approaches need to be developed and existing programs adapted and improved to deliver the most benefit to the Region and maximise benefit to member Councils.

The Regional Environmental Strategy 2016 - 2020 (RES) sets in place a structured framework for the delivery of regional sustainability activities. The basis for 2020/2021 activities relies on continuation of the most successful projects and additional activities developed in consultation with member Councils.

In response to member Councils' changing priorities and progress in achieving sustainability outcomes across emissions, energy, water and climate change, for 2020/2021 a 'modular approach' has been taken to the ongoing Sustainability Program to allow more flexibility for participation and ensure ongoing value for each Council.

Contributions for the ongoing Sustainability Programs have been based on the agreed "business as usual" funding model split into different modules, with the addition of proposed regional-scale fixed-length fee for service projects to add value to existing services and meet identified priorities.

The EMRC acknowledges that some member Councils may have the need of some services but not others. Where possible, the EMRC aims to tailor services to the individual needs of a member Council, either through an ongoing program or as a fee for service project. Specific tasks and deliverables will be negotiated and agreed within a program plan, and a new cost allocation can be determined.

The EMRC are committed to delivering the following projects aligned with the RES in the 2020/21 period:

- **Achieving Carbon Emissions Reduction Project (ACER)** supports member Councils to manage, monitor and reduce corporate carbon emissions, improve energy efficiency and adopt renewable energies through two modules, Energy and Emissions Action and Energy and Water Data.
 - Energy and Emissions Action provides technical support to progress strategies, plans and actions to meet emissions reduction targets as well as supporting participation in the Cities Power Partnership. Energy and Water Data provides management of the Azility platform, data analysis and reporting.
- **Water Quality and Conservation Project (WQCP)** enables member Councils to continually improve water efficiency and water quality, ensuring a water sensitive future as well as providing cost savings through two modules, Water Action and Waterwise Council.
 - Water Action provides technical support to progress strategies, plans and actions to meet water conservation goals as well as supporting integration of the Water Sensitive Cities Index framework into strategies and plans. Waterwise Council supports participation, reporting and recognition in Water Corporation's Waterwise Council Program.
- **Future Proofing** complements climate change mitigation actions and builds on the adaptation work ready undertaken by member Councils through two modules, Climate Action and Heat Havens.
 - Climate Action provides technical support to progress strategies, plans and actions to meet adaptation and risk management objectives as well as support urban canopy improvement.

- **Building Benchmarking Efficiency Project (BBE)** builds on the work completed under the ACER program, as member Councils have been proactive in undertaking energy and water efficiency retrofits and upgrades, supported by the EMRC's Sustainability Programs and external grants. For many Council facilities, the most easily identified actions have now been completed - lighting retrofit, air conditioning upgrade and solar PV installation. The next steps to achieve long term sustainability require a deeper understanding of facility performance.
 - The Regional Benchmarking Building Efficiency Project is being undertaken over two years and involves assessing a sufficient number of buildings/facilities of various types across the Region to be able to identify areas of success and highlight areas for potential improvement. It is important to establish a robust database to better understand Key Performance Indicators for each facility type; quantify benefits and financial savings potential; and identify the most cost-effective retrofits and upgrades. Year 2 of the project will be undertaken in 2020/2021.

SUSTAINABILITY PROGRAMS - PROPOSED 2020/2021 CONTRIBUTIONS

Sustainability Programs – energy, water and climate change	Bassendean Contribution 2020/2021	Belmont Contribution 2020/2021	Mundaring Contribution 2020/2021	Swan Contribution 2020/2021	Bayswater Contribution 2020/2021
ACER: ACHIEVING CARBON EMISSIONS REDUCTION					
ENERGY AND EMISSIONS ACTION	\$	\$	\$	\$	\$
Energy and emissions actions support including: - Monitoring of progress towards Emissions Reduction Target, action tracking - Technical support - Community awareness and promotion material	7,989	7,851	6,411	0	0
Cities Power Partnership (CPP) support including: - Assistance with CPP participation and reporting - Technical support for knowledge hub, tools and resources					
Home Energy Audit Kit maintenance and support					
ENERGY AND WATER DATA	\$	\$	\$	\$	\$
Management of Azility platform including: - Energy and water data verification and manual data upload (fleet, streetlighting, measures) - Anomaly detection and monitoring, ad hoc data analysis - Facilitation of quarterly Performance Reviews	8,179	8,179	8,179	0	
Annual data analysis and reporting including snapshots for water and emissions					
WATER QUALITY AND CONSERVATION					
WATER ACTION	\$	\$	\$	\$	\$
Water actions support including: - Monitoring of progress towards water targets, action tracking - Technical support for action development and implementation - Facilitation of Water Team Meetings - Community	6,798	7,371	7,216	9,125	

Sustainability Programs – energy, water and climate change	Bassendean Contribution 2020/2021	Belmont Contribution 2020/2021	Mundaring Contribution 2020/2021	Swan Contribution 2020/2021	Bayswater Contribution 2020/2021
awareness and promotion material					
Recommendations for integrating Water Sensitive Cities Index framework into strategies and plans					
WATERWISE COUNCIL	\$	\$	\$	\$	\$
Assistance with Waterwise Council program participation including: - Data analysis and technical support for reporting - Completed Waterwise Council reporting for re-endorsement - Assistance with Waterwise Council program initiatives, such as Water Sensitive Cities Benchmarking Workshop	7,010	7,010	7,010	8179	
CRC FOR WATER SENSITIVE CITIES	\$	\$	\$	\$	\$
Industry partnership with CRC for Water Sensitive Cities providing: - Representation on Regional Advisory Panel - Access to research outputs, tools and products - Subsidised workshops, seminars and conference	Value add	Value add	Value add	Value add	Value add
FUTURE PROOFING					
CLIMATE ACTION	\$	\$	\$	\$	\$
Climate change actions support including: - Monitoring of progress towards adaptation and risk management objectives, action tracking - Technical support - Community	5,924	8,974	0	0	

Sustainability Programs – energy, water and climate change	Bassendean Contribution 2020/2021	Belmont Contribution 2020/2021	Mundaring Contribution 2020/2021	Swan Contribution 2020/2021	Bayswater Contribution 2020/2021
awareness and promotion material					
Technical advice regarding climate change predictions, risks, global and national agreements, and local impacts					
Support for urban canopy improvement and other urban heat island mitigation priorities					
2020/2021 VISION PARTNERSHIP	\$	\$	\$	\$	\$
Partnership including support for urban forest events	Value add	Value add	Value add	Value add	Value add
Sub Total	35,900	39,385	28,816	17,304	0
Building Benchmarking Efficiency	\$	\$	\$	\$	\$
Support for the completion of the BBE audits.*	11,700	12,440	12,440	14,560	13,720
Total contribution per council	47,600	51,825	41,256	31,864	13,720

Figures exclude GST

* Figures **exclude** the Azility annual subscription renewal fee

NOTE: Should any non-participating member Council wish to rejoin a program, a cost allocation can be determined.

Azility Subscription Renewal Fees (paid directly to Planet Footprint)	Bassendean Contribution 2020/2021	Belmont Contribution 2020/2021	Mundaring Contribution 2020/2021	Swan Contribution 2020/2021
	\$	\$	\$	\$
Azility Core Scorekeeping Service plus Emissions Module Plus Measures Module	8,077	12,629	12,629	0

Please note that renewals occur in February of each year and the above is an **indicative cost only** – the 2020/2021 cost represents an estimated 1.6% increase in February 2021. Please note that if renewals are paid to Azility for a 3 year term, then the annual renewal cost will remain at the 2018 price

Figures exclude GST.

ENVIRONMENTAL SERVICES

SUMMARY OF INDIVIDUAL MEMBER COUNCIL PROPOSED COMMITMENTS - 2020/2021

Individual Member Council Contributions 2020/2021	ERCMP (incl. Bush Skills 4 Youth \$7000)	Sustainability Programs	Regional Benchmarking	Flood Risk	Total Commitment
	\$	\$	\$	\$	\$
Town of Bassendean	0	35,900	11,700	0	\$47,600
City of Bayswater	0	0	13,720	0	\$13,720
City of Belmont	7,000	39,385	12,440	0	\$58,825
City of Kalamunda	45,226	0	0	0	45,226
Shire of Mundaring	45,226	28,816	12,440	0	\$86,482
City of Swan	45,226	17,304	14,560	0	\$77,090
TOTAL	\$142,678	\$121,405	\$64,860	*\$0	\$328,943

* Note – Contribution by participating Councils have already been paid in 2018/19

SECTION 3: MEMBER COUNCIL INDIVIDUAL FINANCIAL CONTRIBUTIONS

Town of Bassendean

2019/2020	Regional Services Project Summary	2020/2021
\$	Regional Development	\$
6,259	Regional Integrated Transport Projects	6,359
8,959	Regional Economic Development	9,102
2,169	Regional Events Program	2,204
17,387	Regional Development Sub Total	17,665
\$	Environmental Services	
0	Eastern Region Catchment Management Program - Natural Resource Management (<i>including Bush Skills 4 Youth</i>)	0
35,335	Sustainability Programs - Energy, Water and Climate Change (<i>excluding Azility subscription renewal</i>)	35,900
16,100	Regional Benchmarking Building Efficiency Project (<i>maximum cost</i>)	11,700
0	Understanding and Managing Flood Risk Stage Four/Five (<i>subject to funding</i>)	0
51,435	Environmental Services Sub Total	47,600
68,822	Total Funding Being Sought	65,265

(Figures exclude GST)

City of Bayswater

2019/2020	Regional Services Project Summary	2020/2021
\$	Regional Development	\$
12,599	Regional Integrated Transport Projects	12,800
15,983	Regional Economic Development	16,239
4,378	Regional Events Program	4,448
32,960	Regional Development Sub Total	33,487
\$	Environmental Services	
0	Eastern Region Catchment Management Program - Natural Resource Management (<i>including Bush Skills 4 Youth</i>)	0
0	Sustainability Programs - Energy, Water and Climate Change (<i>excluding Azility subscription renewal</i>)	0
23,160	Regional Benchmarking Building Efficiency Project (<i>maximum cost</i>)	13,720
0	Understanding and Managing Flood Risk Stage Four/Five (<i>subject to funding</i>)	
23,160	Environmental Services Sub Total	13,720
56,120	Total Funding Being Sought	47,207

(Figures exclude GST)

City of Belmont

2019/2020	Regional Services Project Summary	2020/2021
\$	Regional Development	\$
10,648	Regional Integrated Transport Projects	10,818
13,821	Regional Economic Development	14,042
3,723	Regional Events Program	3,782
28,192	Regional Development Sub Total	28,642
\$	Environmental Services	
3,500	Eastern Region Catchment Management Program - Natural Resource Management (<i>including Bush Skills 4 Youth</i>)	7,000
38,765	Sustainability Programs - Energy, Water and Climate Change (<i>excluding Azility subscription renewal</i>)	39,385
18,320	Regional Benchmarking Building Efficiency Project (<i>maximum cost</i>)	12,440
0	Understanding and Managing Flood Risk Stage Four/Five (<i>subject to funding</i>)	0
60,585	Environmental Services Sub Total	58,825
88,777	Total Funding Being Sought	87,467

(Figures exclude GST)

City of Kalamunda

2019/2020	Regional Services Project Summary	2020/2021
\$	Regional Development	\$
11,379	Regional Integrated Transport Projects	11,561
13,821	Regional Economic Development	14,042
0	Regional Events Program	0
25,200	Regional Development Sub Total	25,603
\$	Environmental Services	
44,514	Eastern Region Catchment Management Program - Natural Resource Management (<i>including Bush Skills 4 Youth</i>)	45,226
0	Sustainability Programs - Energy, Water and Climate Change (<i>excluding Azility subscription renewal</i>)	0
0	Regional Benchmarking Building Efficiency Project (<i>maximum cost</i>)	0
0	Understanding and Managing Flood Risk Stage Four/Five (<i>subject to funding</i>)	
44,514	Environmental Services Sub Total	45,226
69,714	Total Funding Being Sought	70,829

(Figures exclude GST)

Shire of Mundaring

2019/2020	Regional Services Project Summary	2020/2021
\$	Regional Development	\$
9,917	Regional Integrated Transport Projects	10,076
13,011	Regional Economic Development	13,219
0	Regional Events Program	
22,928	Regional Development Sub Total	23,295
\$	Environmental Services	
44,514	Eastern Region Catchment Management Program - Natural Resource Management (<i>including Bush Skills 4 Youth</i>)	45,226
28,362	Sustainability Programs - Energy, Water and Climate Change (<i>excluding Azility subscription renewal</i>)**	28,816
18,320	Regional Benchmarking Building Efficiency Project (<i>maximum cost</i>)	12,440
0	Understanding and Managing Flood Risk Stage Four/Five (<i>subject to funding</i>)	
91,196	Environmental Services Sub Total	86,482
114,124	Total Funding Being Sought	109,777

(Figures exclude GST) ** Please Note: Energy and Water only

City of Swan

2019/2020	Regional Services Project Summary	2020/2021
\$	Regional Development	\$
22,354	Regional Integrated Transport Projects	22,712
0	Regional Economic Development	
7,612	Regional Events Program	7,734
29,966	Regional Development Sub Total	30,446
\$	Environmental Services	
44,514	Eastern Region Catchment Management Program - Natural Resource Management (<i>including Bush Skills 4 Youth</i>)	45,226
17,031	Sustainability Programs - Energy, Water and Climate Change (<i>excluding Azility subscription renewal</i>)**	17,304
27,680	Regional Benchmarking Building Efficiency Project (<i>maximum cost</i>)	14,560
0	Understanding and Managing Flood Risk Stage Four/Five (<i>subject to funding</i>)	
89,225	Environmental Services Sub Total	77,090
119,191	Total Funding Being Sought	107,536

(Figures exclude GST) - ** Please note: Water only



12.2 REGIONAL ROAD SAFETY PLAN

REFERENCE: D2019/16419

PURPOSE OF REPORT

The purpose of this report is to present the final draft of the *Regional Road Safety Plan* for Council endorsement.

KEY POINTS AND RECOMMENDATIONS

- The EMRC, in consultation with member Councils and the consultant, has developed the draft *Regional Road Safety Plan* for Perth's Eastern Region.
- The Regional Integrated Transport Strategy Implementation Advisory Group (RTIS IAG) has been consulted and had input into content of the Plan.
- The Plan includes the following key sections:
 - Background and Literature Review
 - Mapping and Analysis of crash hotspots in the region
 - Recommendations
 - The recommendations have regard for the State Government's Safe Systems approach.
- The Plan will be utilised by the EMRC to advocate and provide support to member Councils for developing a safe road network through safe systems for all users.
- The Plan can also be utilised by member Council's when advocating for road infrastructure funding.

RECOMMENDATION(S)

That Council endorse the draft EMRC Regional Road Safety Plan.

SOURCE OF REPORT

Director Regional Services

BACKGROUND

The development of the *Regional Road Safety Plan* (The Plan) was identified as an action aligned with Priority Area 1 'Safety' of the *Regional Integrated Transport Strategy 2017-2021*. The development of the *Regional Road Safety Plan* included consultation and input from RITS IAG members. The input was provided through RITS IAG meetings, a road safety workshop and via email exchanges. The Plan was also included as part of the *Regional Services Project Funding Summary 2019-2020*.

REPORT

The draft Plan commenced development during the 2018/2019 financial year, in consultation with GTA Consultants, and has now been concluded. Research of relevant strategic documents at Federal, State and Local Government levels was carried out and was followed by a mapping of the crash locations and the type of crashes for individual member Councils. The basis of the plan has been the four cornerstones of the safe systems approach and the 7Ps of road safety developed by the Department of Transport. Following analysis of the Main Roads WA's crash data from the years 2013 – 2017; maps were produced for the individual member Councils that highlighted the high risk areas. Maps produced in the final documents are based on the overall crash occurrence, different types of vehicles and the severity of the crash.



Item 12.2 continued

The draft Plan comprises of detailed review of the individual member Council's area including the literature review and mapping of the Main Roads WA's crash data. Detailed analysis of the Safe Systems approach and 7Ps Systems approach was incorporated in the recommendations for the transition into a safer road network. The key sections in the plan include background study, literature review, mapping and recommendations.

The draft Plan has been developed with input from the RITS IAG representatives, including officers from the EMRC's six member Councils and other agencies.

The draft Plan will support member Councils and key stakeholders in regards to improving road safety within the Region, with an overarching aim of supporting safe roads and reducing the number of people killed or seriously injured.

The EMRC will also utilize the draft Plan as a supporting document when advocating to the State and Federal government on required road efficiency improvements throughout the Region and as supporting documentation when seeking funding to implement actions identified in the draft Regional Road Safety Plan.

STRATEGIC/POLICY IMPLICATIONS

The development of the draft Plan aligns with the EMRC's 10 – Year Strategic Plan 2017 – 2027 and aligns with two Key Result Areas and addresses one of the objectives of the priority area identified in the Regional Integrated Transport Strategy 2017-2021.

The EMRC's 10 - Year Strategic Plan 2017 - 2027

Key Result Area 2 – Economic Development

- 2.1 To facilitate and advocate for increased investment in regional infrastructure

Key Result Area 3 – Good Governance

- 3.1 To provide advice and advocacy on issues affecting Perth's Eastern Region

The Regional Integrated Transport Strategy 2017 - 2021

Priority Area 1 - Safety

Goal That the region's transport network is safe and transport users are not exposed to harm or perceived safety risks when utilizing or interacting with the network.

Objective 1.1 Identify and advocate for the removal or treatment of road safety black spots including the removal or grade separation of high-risk level crossings and intersections.

Objective 1.2 Identify and support information, communication and education initiatives that encourage safe transport behaviours and inform of potential risk factors.

Objective 1.3 Advocate for roads and roadsides to be well maintained and continuously improved to reduce crash risk.

Objective 1.4 Identify areas of the transport network where enforcement and surveillance activities will improve the safe use of the transport network and advocate for their implementation.

Objective 1.5 Advocate for transport infrastructure that uses 'designing out crime' principles to improve safety and amenity of transport-related public spaces.



Item 12.2 continued

FINANCIAL IMPLICATIONS

The cost associated with the development of the *Regional Road Safety Plan* was included in the adopted 2019/2020 EMRC operating budget.

SUSTAINABILITY IMPLICATIONS

The draft *Regional Road Safety Plan* aims to contribute to the sustainability of the Region through advocating, supporting and implementing projects that help facilitate a greater level of road efficiency for the Regions' residents, workers and visitors.

MEMBER COUNCIL IMPLICATIONS

Member Council	Implication Details
Town of Bassendean City of Bayswater City of Belmont City of Kalamunda Shire of Mundaring City of Swan	The draft Plan will act as a supporting document for member Councils when working towards improving road safety within Perth's Eastern Region.

ATTACHMENT(S)

Draft Regional Road Safety Plan (Ref: D2019/16607)

VOTING REQUIREMENT

Simple Majority

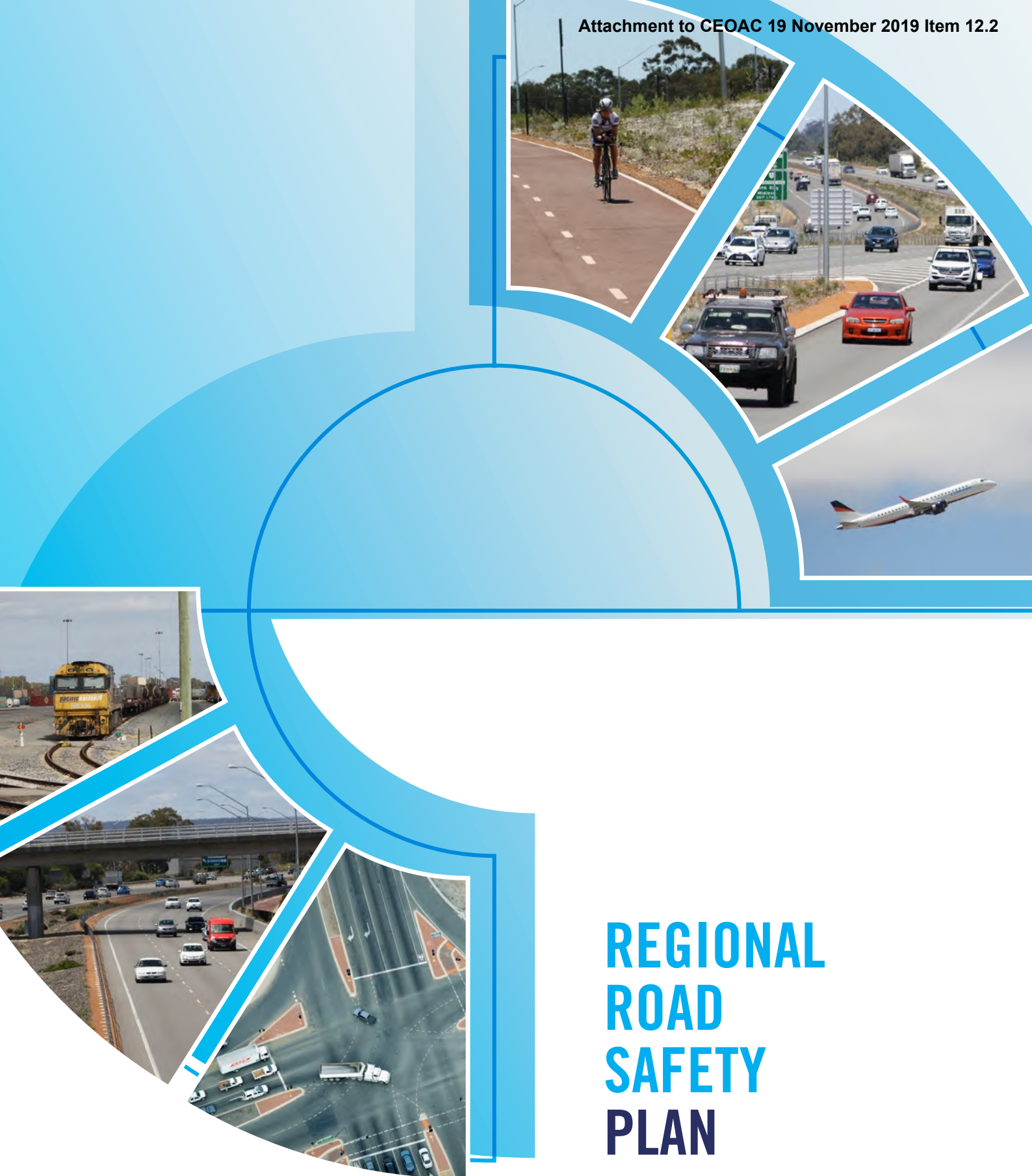
RECOMMENDATION(S)

That Council endorses the draft EMRC Regional Road Safety Plan

CEOAC RECOMMENDATION(S)

MOVED

SECONDED



REGIONAL ROAD SAFETY PLAN



Advancing Perth's Eastern Region 



Overview

Australia ranked 15 of 31 of the Organisation for Economic Co-operation and Development (OECD) Nations in terms of the number of annual deaths per 100,000 population in the latest statistics published in 2016. This highlights the need to review road safety on our roads. The Western Australian Government and Road Safety Commission's *Towards Zero Strategy* highlights the State's focus on reducing the number of killed and seriously injured crashes on Western Australian Roads.

Perth's Eastern Region has a strategic location in terms of transport and freight movement within the state. It has a range of competing land uses that make it challenging to have uniform transport and safety solutions for the region.

An efficient, safe and integrated transport network is critical to ensuring that the Perth's Eastern Region is able to support the predicted population and transport growth in both the region and the wider Perth metropolitan area.

The purpose of this document is to identify the blackspots and crash hotspots in the region and to provide solutions for the unique issues identified with detailed analysis from the MRWA crash data with an objective that the Road Traffic System should be configured so that no person is exposed to forces that exceed the known human tolerances for force.

This document also looks at the crash data of individual member Councils and their safety issues along with any cross boundary issues and provides recommendations and actions on ways to tackle these issues.

The EMRC's approach to safety in the transport network is to ensure that users are not exposed to harm or perceived safety risks when utilising or interacting with the network.

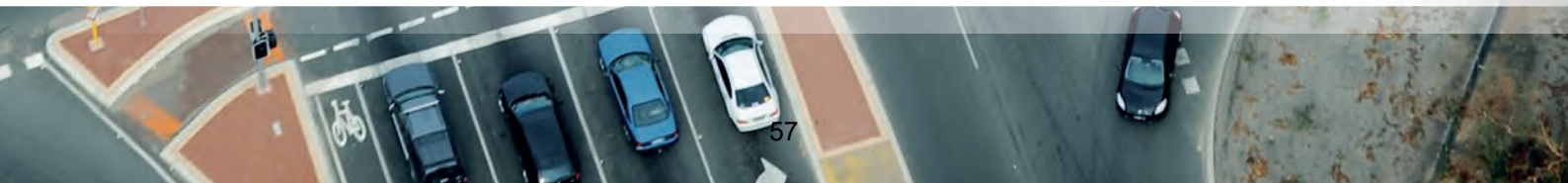
The EMRC has adopted a 'systems based approach' to developing a Road Safety Plan, which is in line with the strategic approaches of both the WA State Governments.

This plan will provide EMRC's member Councils with a strategic document that will have a combined vision of objectives. It provides the EMRC with actions for road safety projects including promoting education for safe road use. In addition to this it enables the EMRC to advocate for better infrastructure for the Perth Eastern Region.

The Eastern Metropolitan Regional Council (EMRC), is a progressive and innovative regional local government working on behalf of six member Councils located in Perth's Eastern Region: Town of Bassendean, City of Bayswater, City of Belmont, City of Kalamunda, Shire of Mundaring and City of Swan. A key focus of the EMRC is advocacy and this includes advocating for safer roads to help contribute towards achieving a zero road death toll. This Road Safety Plan is underpinned by the Safe System Philosophy.

This Road Safety Plan has a vision:

The EMRC advocates for and provides support to member Councils to promote and work toward achieving a road transport system where all road users are safe.



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1. Introduction

1.1. Eastern Metropolitan Regional Council

The EMRC works to facilitate integrated transport planning initiatives to provide an efficient, safe and integrated regional transport network and delivers a number of initiatives to support this goal. The provision of an efficient and safe transport network in Perth's Eastern Region is a critical issue for both local and state government, particularly with the predicted population growth for Perth in the future. In 2017/2018, the EMRC delivered a number of key initiatives in the areas of road safety, public transport and active transport.

Perth's Eastern Region (PER) represents approximately 35% of Perth's metropolitan area. It has an interesting mix of land uses ranging from residential, industrial and commercial. The PER has a unique topography, occupying the north-east sector of the Swan Coastal Plain, and up the Darling Escarpment. This contributes significantly to the road trauma risk of the region, especially along major corridors (particularly, for example, Greenmount Hill), and on the extensive network of roads supporting access to the Perth Hills. Owing to the escarpment terrain, historic nature of the town centres, constraints along arterial roads in established urban areas and the tight geometry of roads in the Perth hills it gives rise to unique road safety risks.

The Region has arguably one of Western Australia's most important pieces of infrastructure i.e the Perth Airport. The Airport is the premier international, domestic and regional gateway to Western Australia and has experienced significant growth in passenger movements increasing in the past decade. It has a distinctive position in transport being the primary hub for civil aviation, rail and road transportation with the intermodal freight terminals (airport and railway terminal infrastructure) and regional/interstate connections. The Region includes the Kewdale Intermodal Terminal, an important strategic component of the freight network in Western Australia due to its accessibility by road and rail and its proximity to industrial areas.

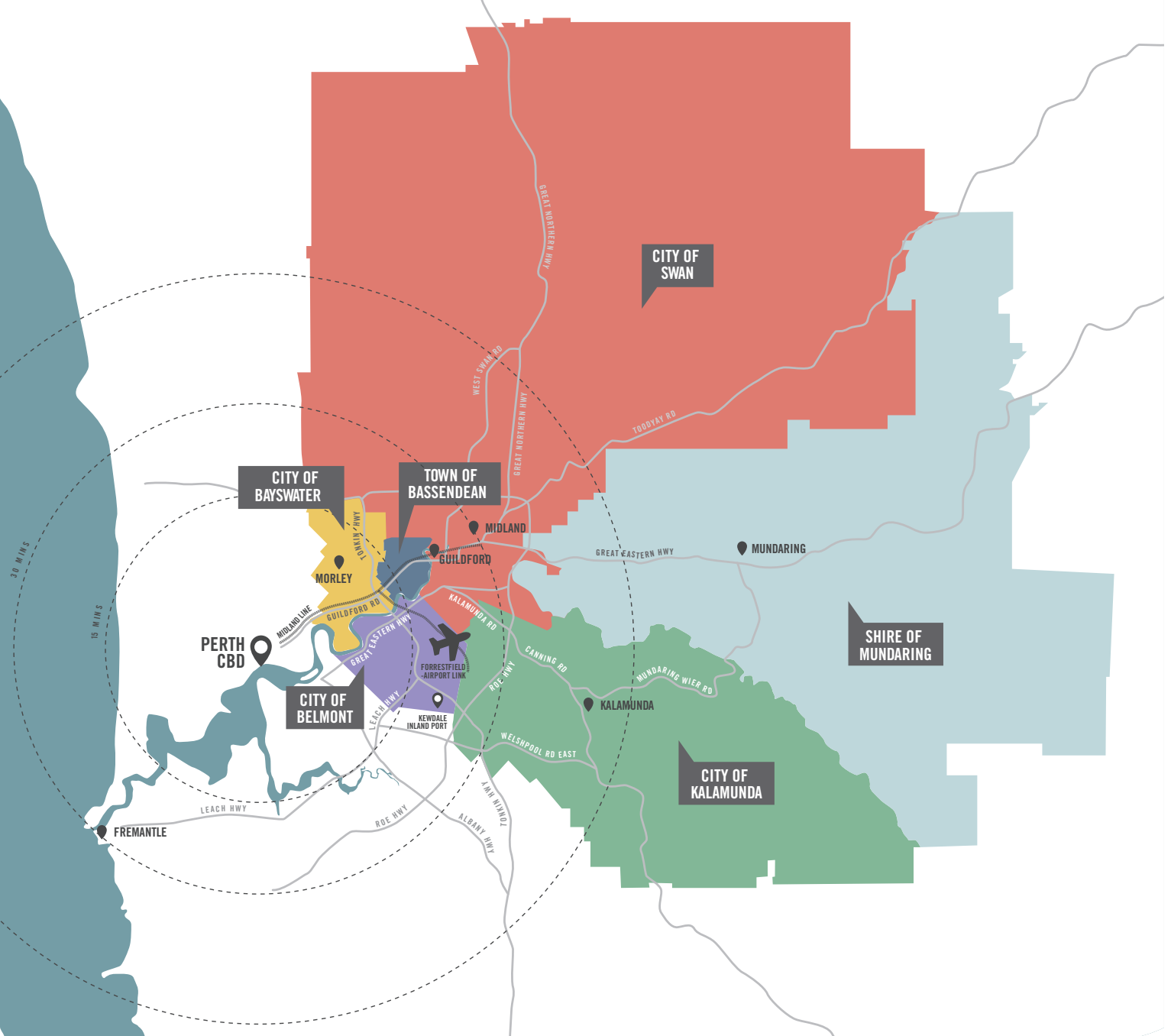
PER is Western Australia's primary hub for international and domestic airport terminals and a number of intermodal freight terminals. Being the primary freight hub, it will continue to form a major role in the interface between rail, aviation and road for decades to come. It also has major industrial presence especially construction and resource markets with areas such as Malaga, Kewdale, Belmont, Bayswater/Bassendean, Hazelmere, Midvale, Forrestfield, and Bullsbrook. These locations are high trip generators as they are key employment hubs and include key strategic roads.



The region is also the interface for the majority of heavy regional traffic to, from, and through the Perth Metropolitan Region, particularly through Great Northern Highway, the future Perth Darwin National Highway and Perth Adelaide National Highway, Great Eastern Highway, Reid Highway, Roe Highway and Tonkin Highway. These transport and industrial concentrations provide both opportunities and issues for the region.

Extensive upgrades to public transport in the PER are either being delivered or are in the planning stage, as the Forrestfield Airport Link nears completion, and METRONET Stage 1 planning for the Ellenbrook line, new Bayswater Station, and Bellevue extension progress. These projects also pose a significant opportunity to reduce road trauma through promoting mode share.

In addition to this, the Perth Hills, comprising of the Mundaring and Kalamunda Town Sites, are also a popular on-road cycling area, where roads are often shared between cyclists, heavy and light vehicles. Perth's Eastern Region is truly unique, with these characteristics having a considerable influence on travel behaviour and motivation.



In Western Australia, the majority of roads are either under the care, control and management of the State Government or local government. This Plan looks at all roads within Perth's Eastern Region, regardless of ownership. Whilst the majority of roads in the State are under the care, control and management of the respective local government, the State Government, through Main Roads Western Australia (MRWA), owns and manages roads of strategic significance including freeways and highways etc. Roads under MRWA control are subject to separate legislation and are often beyond any control or influence of the local government. This Plan looks at each local government area holistically, regardless of road ownership to help the EMRC advocate to the State and local governments for a safer road network in Perth's Eastern Region.

1.2. Road Safety in Perth's Eastern Region

A safe transport system is imperative to ensure that the community can travel around the region safely. It is also important to ensure that the economic impact of crashes is minimised, particularly in the freight industry, which is a significant driver in Perth's Eastern Region.

While congestion management and freight management initiatives are important and can be targeted at identified hotspots to alleviate congestion, longer term approaches to changing travel behaviours (both individual travel habits and wider freight industry operations) are required to create more capacity out of the existing constrained network.

This is directly relatable to this Regional Road Safety Plan, in that, evidence suggests that congested conditions lead to more frequent exposure to higher levels of poor driving behaviour, an increase in risky manoeuvres and increased impatience and road rage.

This Road Safety Plan will provide strategic guidance for the EMRC member Councils' overarching strategies to support and advocate for the reduction of the number of people killed and seriously injured on roads within the Region in line with the Western Australian State Government's *Towards Zero – Western Australia's Road Safety Strategy 2008-2020*.

1.3 Objectives

The objectives from the EMRC's *Regional Integrated Transport Strategy* that guide the Road Safety Plan include:

- Identify and advocate for the removal or treatment of road safety black spots including the removal or grade separation of high-risk level crossings and intersections (SAFE ROADS and ROADSIDES).
- Identify and support information, communication and education initiatives that encourage safe transport behaviours and inform of potential risk factors (SAFE ROAD USE).
- Advocate for roads and roadsides to be well maintained and continuously improved to reduce crash risk (SAFE ROADS and ROADSIDES).
- Identify areas of the transport network where enforcement and surveillance activities will improve the safe use of the transport network and advocate for their implementation (SAFE ROAD USE).
- Consideration for all road users, including vulnerable road users such as pedestrians and cyclists (SAFE ROAD USE).

The above key objectives assist in setting the base for the new Road Safety Plan by providing a focus on Safe Roads and Roadsides through identifying blackspot areas and high-risk areas. In addition, education and behaviour change communication and information will assist in improving Safe Road Use. In accordance with a Systems Approach, it will also be important to develop recommendations to identify and advocate for Safe Speeds and Safe Vehicles.

1.4 Vision

Together with the member Councils, the Vision for the EMRC Regional Road Safety Plan agreed vision is:



VISION

The EMRC advocates for and provides support to member Councils to promote and work toward achieving a road transport system where all road users are safe.

This vision guides this Road Safety Plan with the EMRC's *Regional Integrated Transport Strategy* objectives, and a set of member Council safety plans presented for each individual member Council to implement in association with EMRC and key stakeholders and will assist member Councils to transition to a full Safe System.





2. Current Scenario

There are a number of strategies, policies and programs that are currently adopted at various levels, both national and state government level. The EMRC have reviewed a number of strategies which are relevant to this plan.

2.1.1. National Road Safety Context

National Road Safety Strategy 2011-2020

Based on the 'safe system' approach to road safety, the National Road Safety Strategy 2011-2020 (NRSS) is a 10-year plan which sets out to reduce the annual number of crashes that result in death or serious injury. The 'safe system' approach recognises that users will make mistakes and result in crashes, however, also acknowledges that the road network should be forgiving and thus result in less death and serious injuries.

Since the initial release of the NRSS, the Australian Government initiated an inquiry into the NRSS in 2017 which was completed in 2018. The inquiry identified that implementation failure was a key issue, which was due to a lack of focus on harm elimination resulting in suboptimum results. The inquiry noted that progress was being made towards safer roads, vehicles and users, but did not make them completely safe. Two National Road Safety Action Plans, one for 2015-2017 and another for 2018 – 2020, were also prepared to support the implementation of the NRSS.

An implementation status report was also released in 2017, which identified that most Action Plan items were coded green, indicating that the action had been complete or was well advanced.



The National Road Safety Strategy 2011-2020 (NRSS) is a 10-year plan which sets out to reduce the annual number of crashes that result in death or serious injury.



Twelve key recommendations from the inquiry to measure the effectiveness of the strategy and to gauge its performance to date

1. Create strong national leadership by appointing a Cabinet minister with specific multi-agency responsibility to address the hidden epidemic of road trauma including its impact on the health system.
2. Establish a national road safety entity reporting to the Cabinet minister with responsibility for road safety.
3. Commit to a minimum \$3 billion a year road safety fund.
4. Set a vision zero target for 2050 with an interim target of vision zero for all major capital city CBD areas, and high-volume highways by 2030.
5. Establish and commit to key performance indicators in time for the next strategy that measure and report how harm can be eliminated in the system, and that are published annually.
6. Undertake a National Road Safety Governance Review by March 2019.
7. Implement rapid deployment and accelerated uptake of proven vehicle safety technologies and innovation.
8. Accelerate the adoption of speed management initiatives that support harm elimination.
9. Invest in road safety focused infrastructure, safe system and mobility partnerships with state, territory and local governments that accelerate the elimination of high-risk roads.
10. Make road safety a genuine part of business as usual within Commonwealth, state, territory and local government.
11. Resource key road safety enablers and road safety innovation initiatives.
12. Implement life-saving partnerships with countries in the Indo-Pacific and globally as appropriate to reduce road trauma.

Applicable to this EMRC Road Safety Plan

The NRSS inquiry recommendations assist in the development of this Road Safety Plan noting recommendations such as adopting a Safe System approach through advocating for the accelerated uptake of safe vehicles and adopting speed management initiatives, safety focused infrastructure and developing partnerships for recommendation implementation. In addition, making road safety a genuine part of business as usual is a key for member Councils – which requires member Councils to develop a fundamental understanding and detailed knowledge of Safe System.

ANCAP safety rating works within the Safe System principles rating the safety of vehicles highlighting the increased safety benefits of the higher rated 5 star vehicles. Advocating for the uptake of 5 star or 4 star vehicles will be key to ensure safe vehicle fleet within the EMRC region.

2.1.2. Western Australian Road Safety Context

Towards Zero Road Safety Strategy 2008 – 2020

The Towards Zero Road Safety Strategy 2008 – 2020 (Towards Zero), developed by the Western Australian State Government (Road Safety Council, comprised of the Department of Education and Training, Department of Health, Insurance Commission of WA, MRWA, Department of Planning and Infrastructure, Office of Road Safety, RAC, WALGA and WA Police), aims to reduce road trauma in Western Australia through setting initiatives. Towards Zero incorporates the Safe System approach to improve road safety through the four cornerstones being Safe Road Use, Safe Roads and Roadsides, Safe Speeds and Safe Vehicles. Towards Zero sets out to reduce road trauma by 11,000 people killed or seriously injured between 2008 and 2020, which is a 40% reduction of road users killed and seriously injured each year between 2005 and 2007 (base line). Key principles include:

1. The limits of human performance
2. The limits of human tolerance to violent forces
3. Shared responsibility
4. A forgiving road system
5. Increased use of public transport.

It is noted that the WA State Government is currently (2019) developing a new Road Safety Strategy to guide the State's Road Safety through to 2050. While the strategy will be assessing a 'business as usual' model in terms of how we currently address road safety, it will also assess the impact when the Government introduces significant step changes such as increased investment or infrastructure changes or reduction of speed limits e.g. reduction of speed limits by 10 km/hr does reduce the occurrence and severity crashes and is proved by statistical evidence.

2.1.3. WALGA Initiatives

RoadWise Program

The Western Australian Local Governments Association's (WALGA) RoadWise Program works with local governments to support the implementation of Towards Zero. It is supported by the Road Safety Council of WA and funded by the State Government. As part of the RoadWise Program, many initiatives and campaigns have been undertaken including the Blessing of the Roads, Child Car Restraints, Coffee Stop Program, Community Safe Speed Promise, Driver Reviver Program, Fleet Safety and the Road Ribbon for Road Safety.

The WALGA RoadWise program is also assisting local governments in embedding safe system in their committees and policies e.g. 'safe vehicle policy' so that it becomes part of the culture not a forced effort.

Safe System Guiding Principles for Local Governments

The purpose of the guiding principles is to encourage and enable adoption of the safe system approach by Local Governments. The guiding principles provide clarity when reviewing policies and practices and they ensure provisions are included to address the safe system approach and Towards Zero strategy.

Towards Zero defines six key safe system foundation initiatives crucial to support the successful implementation of the strategy objectives.

- 1 Research, data and setting targets – to be undertaken by individual Councils for their specific issues.
- 2 Capacity building – strengthening knowledge, skills and abilities within the organisation.
- 3 Leadership, commitment and community support – engaging the community.
- 4 Partnerships and alliances – active progression of mutual objectives between relevant organisations.
- 5 Coordination – alignment of interventions and management functions at all levels.
- 6 Monitoring and reporting – systematic and continual measurement of outcomes.

These key safe system foundation initiatives provided the basis for the development of the Safe System Guiding Principles for Local Government, illustrated in Figure 2.1.





Figure 2.1: Safe System Guiding Principles for Local Government

Central to the guiding principles is the overarching principle *Local Government commits to working towards a future of zero road fatalities and serious injuries, which encompasses the aspirational vision of Towards Zero and the safe system approach.*

Road Safety Around Schools

The *Road Safety Around Schools Guidelines* have been prepared by WALGA. The Guidelines focus on the safe travel of children to and from schools. There are two different editions, one for local governments and one for schools. The Guidelines provide information on the major road safety issues around schools and methods of improving or maintaining safety around schools. Resources provided to school as part of this initiative include signage templates such as footprints and stop signs.

School Drug Education and Road Aware (SDERA)

School Drug Education and Road Aware (SDERA) provides support to schools, early learning centres and community agencies across Western Australia, and is funded by the Department of Education (WA), Mental Health Commission and Road Safety Commission.

SDERA's mission is:

To educate young people to make safer choices for their health and wellbeing, and the prevention of road related injuries and harms from drug use.

With a vision of:

Drug and road safety education for every young person in WA.

SDERA targets early childhood, primary school and secondary school children, and raises awareness about alcohol and drugs, road safety and driver awareness.

Directions 2017-19 WA's Road Safety Education Action Plan

Directions 2017-19 was produced by SDERA in consultation with member agencies of the Western Australian Road Safety Education Commission (WARSEC). It aims to support safe road use through road safety education and sets out three priorities.

1. Build a positive road safety culture in schools and early childhood services
2. Promote safe behaviours among young road users
3. Strengthen leadership and collaboration of road safety education in WA.

These three priorities aid to create a safer road environment through creating a culture where there is shared road safety responsibility and increasing awareness of road safety issues such as seatbelts, alcohol, speed and fatigue.

Supporting programs include Constable Care, Smart Steps, Parenting Connections WA, Keys for Life, Right Track and Changing Health Act together (CHAT).

Applicable to this EMRC Road Safety Plan

The Regional Integrated Transport Strategy as part of the safety priority area identifies road safety as a shared responsibility across both local and state government agencies to work toward a safer road transport network.

WALGA and the RoadWise program is a key partnership for the EMRC and its member Councils to support the implementation of this Road Safety Plan. This is not only through running road safety initiatives and events but also, more critically, to assist local governments in embedding safe system in their committees and policies.

To this extent, the development of the *Safe System Guiding Principles for Local Governments* is a key document for all member Council employees to help build Safe System knowledge for both Council employees and their community (noted within the strategy objectives).

WALGA have also developed the *Road Safety Around Schools Guidelines* with a specific purpose to provide information to Councils on the major road safety issues around schools and methods of improving or maintaining safety around schools and something to be encouraged with every EMRC member Council.

The SDERA targets school children in consultation with local agencies to raise awareness about alcohol and drugs and safe road use. This is further supported through the Education Action Plan with the priorities aiming to create a safer road environment through creating a culture where there is shared road safety responsibility and increasing awareness of what safe road use means.

2.1.4. EMRC Road Safety Context

The EMRC have regard for the National and State Road Safety Strategies and aligns itself with these actions where relevant.

Regional Integrated Transport Strategy 2017 – 2021

The EMRC's Regional Integrated Transport Strategy 2017-2021 identifies a number of priority areas to achieve the Strategy's vision including:

1. Safety
2. Efficiency
3. Effective and Productive
4. Resilient and Innovative
5. Socially Responsible
6. Environmentally Responsible.

As part of the safety priority area, road safety is identified as a shared responsibility across various state and local government agencies. The EMRC supports, assists and advocates for the development of a fatality and serious injury free road network in Perth's Eastern Region, which is demonstrated through the production of the *EMRC's Regional Road Safety Plan, Direction Zero 2015-2018*, and subsequent revision as part of this Plan.

To work toward the implementation of the Regional Integrated Transport Strategy an Implementation Advisory Group has been formed that consists of all member Councils and key stakeholders, such as Perth Airport, WALGA, DoT, PTA, MRWA and RAC. This Road Safety Plan is the next phase of strategic work to support the Regional Integrated Transport Strategy.

Regional Road Safety Plan, Direction Zero 2015-2018 (Direction Zero)

The previous EMRC Regional Road Safety Plan, *Direction Zero 2015-2018* (Direction Zero) advocates to reduce the overall number of fatal and seriously injured people involved in road crashes and strives for a 40% reduction in the number of people killed or seriously injured by 2020 from a 2005-2007 baseline. The Plan sets the target, key performance indicators and an analysis of where and why crashes occur.

The following are the key focus areas that were identified to be:

- Safe Roads and Roadsides
- Safe Speeds
- Safe Road Use
- Safe Vehicles
- Road Safety Planning and Governance.

Road safety is a shared responsibility, which is evident through the various road safety strategies and plans prepared by various agencies at local, state and federal level, as well as in a regional context.



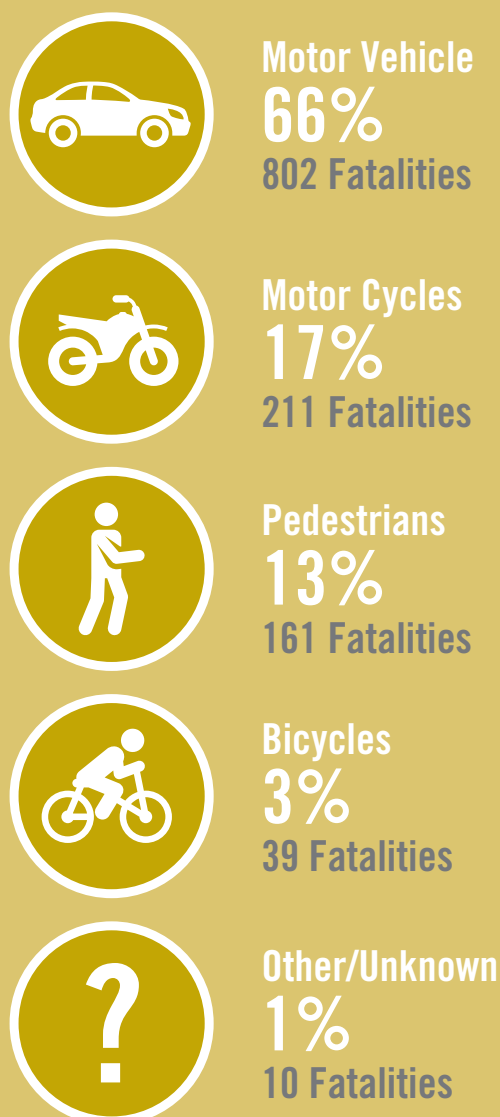
2.2. Road Safety Record

With Australia's population growing, there are more people on the road and therefore more people at the risk of a road related death or injury. The majority of road deaths occur in regional areas; however, the majority of serious injuries occur in metropolitan areas. Whilst it is important to avoid fatalities, it is also important to avoid serious injuries, as these can significantly impact lives. Nationally, there are currently no systems to measure national indicators of serious (non-fatal but disabling) crashes. In this Road Safety Plan, crashes requiring hospitalisation have been considered as a serious injury and are also looked at in further detail.

2.2.1. Australia

In 2017, there were a total of 1,223 road deaths in Australia. These included drivers or passengers of a motor vehicle, motor cyclists (or their passenger), pedestrians or cyclists, as shown in Figure 2.2. There has been no consistent trend in the total number of fatalities, as shown Figure 2.5.

Figure 2.2: Number of fatalities by Road User Type in 2017¹



Whilst the highest number of fatalities occurred in New South Wales, followed by Victoria and Queensland (see Figure 2.3), when looking at the rate of fatalities for every 100,000 of the population, the Northern Territory has more than double the national average, whilst Western Australia and Tasmania have the second highest rate, both above the national average (see Figure 2.4).

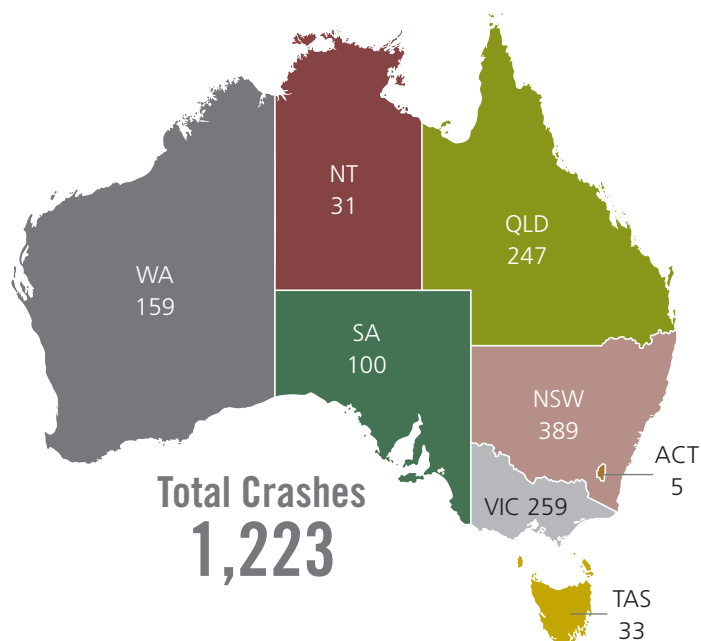


Figure 2.3: Total number of fatalities per state in 2017

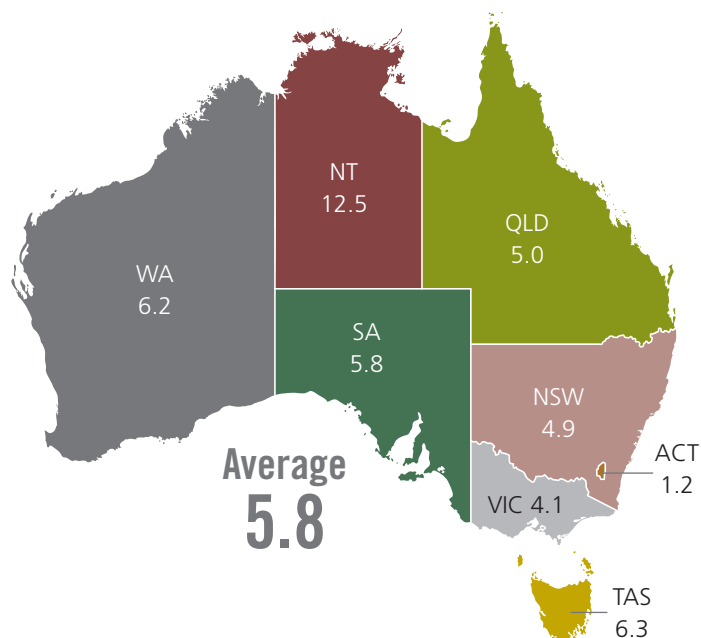


Figure 2.4: Fatality rate per 100,000 of the population 2017

¹ https://www.bitre.gov.au/statistics/safety/fatal_road_crash_database.aspx

² <https://www.rsc.wa.gov.au/Statistics/Latest-Statistics>

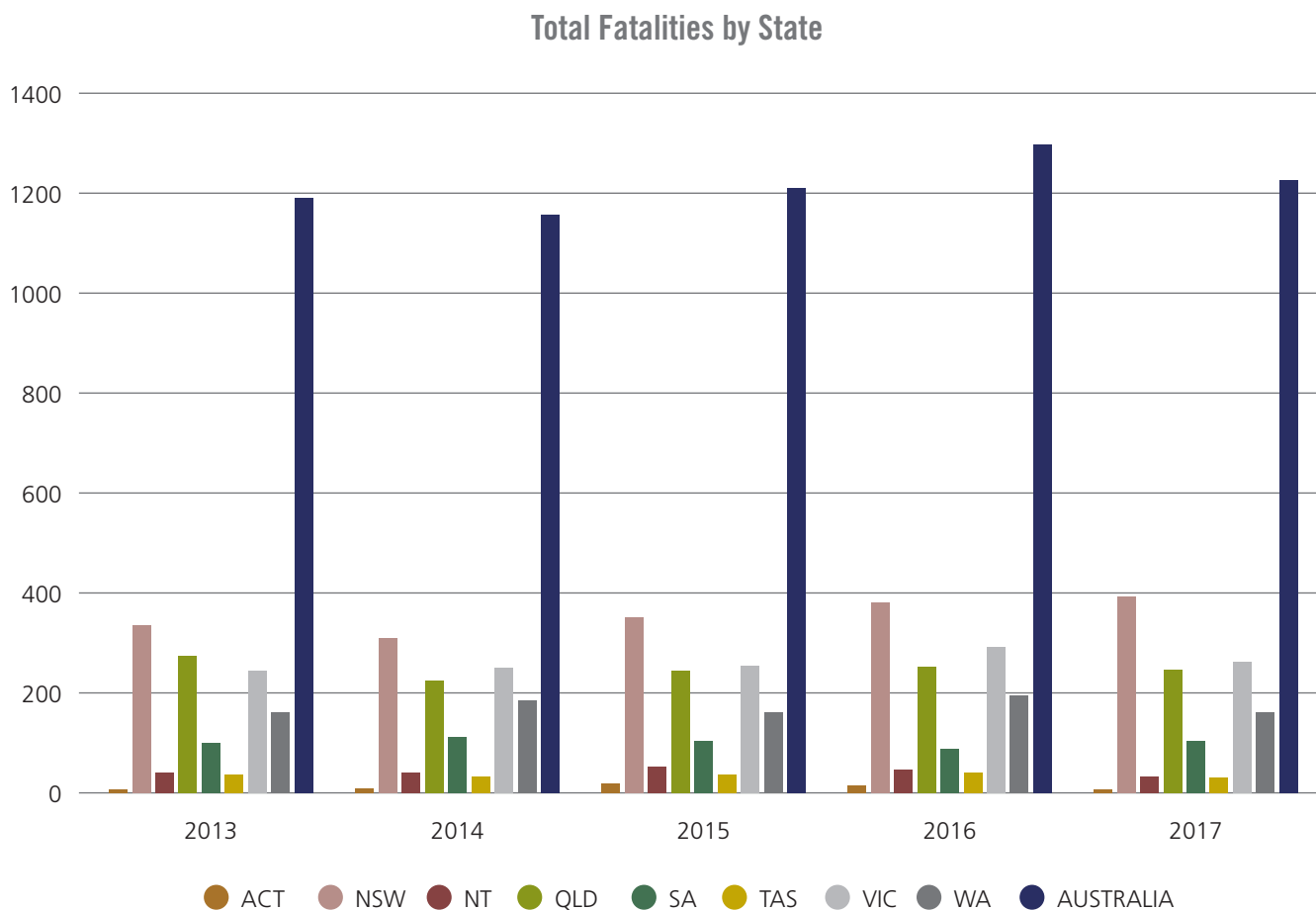
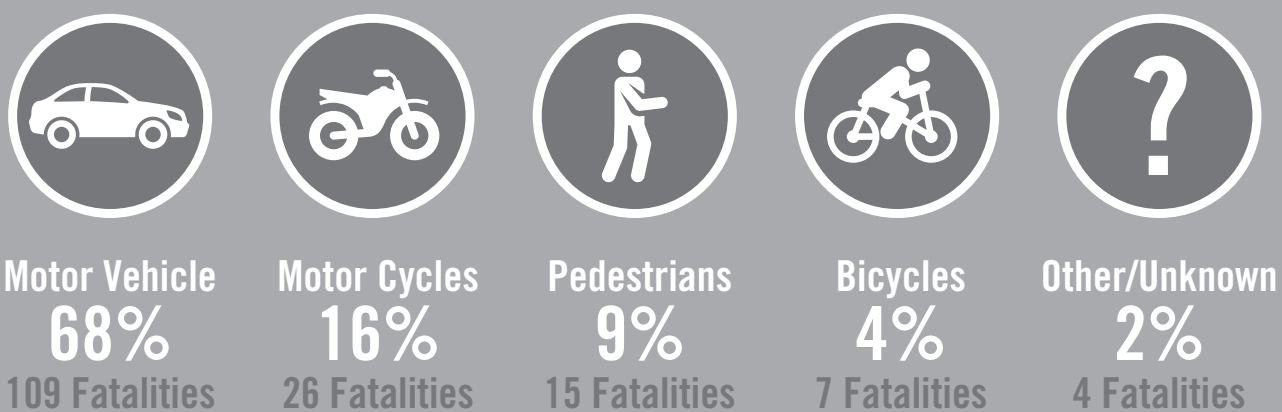


Figure 2.5: Total number of fatalities per state between 2013 and 2018

2.2.2. Western Australia

In 2017, there were a total of 161 fatalities in WA². Of the 161 fatalities, 70 occurred in Metropolitan Perth whilst 91 occurred in Regional WA.

Figure 2.6: Fatalities in Western Australia by Road User 2017



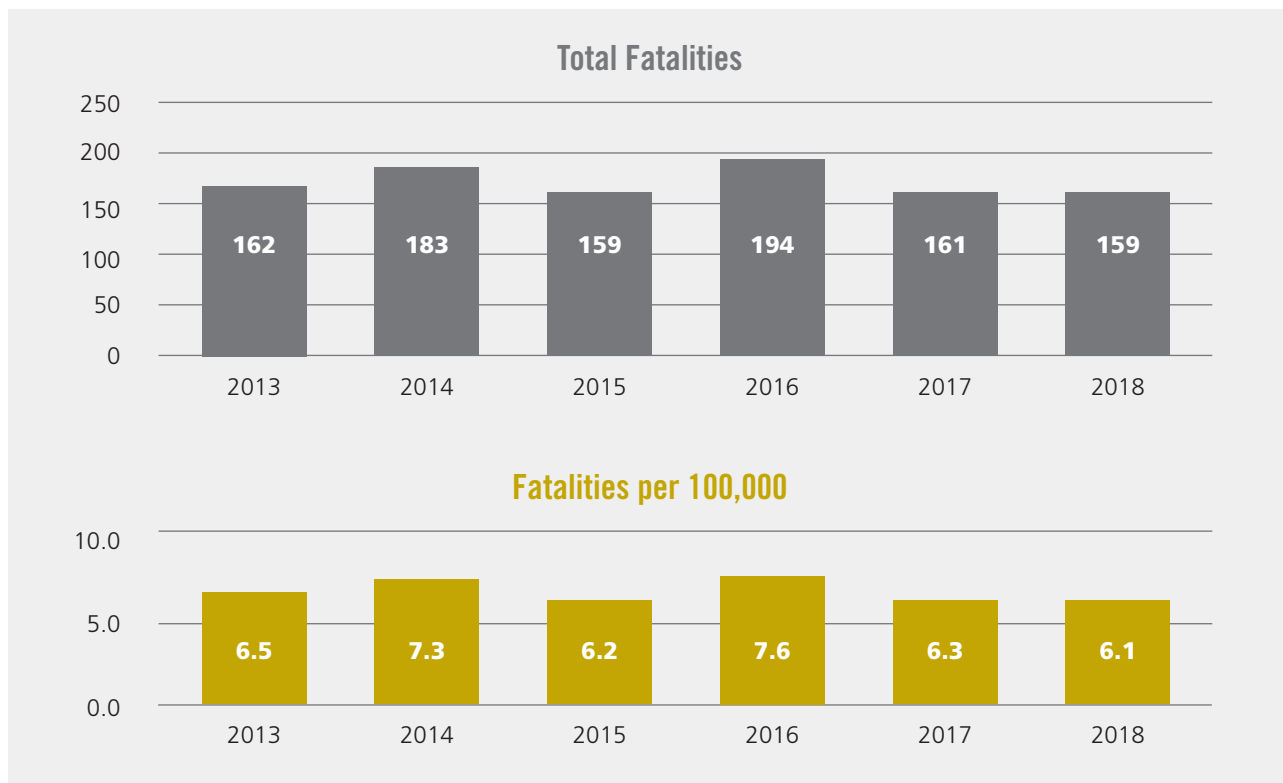


Figure 2.7: Total number of fatalities and fatalities per 100,000 population³ in Western Australia between 2013 and 2018

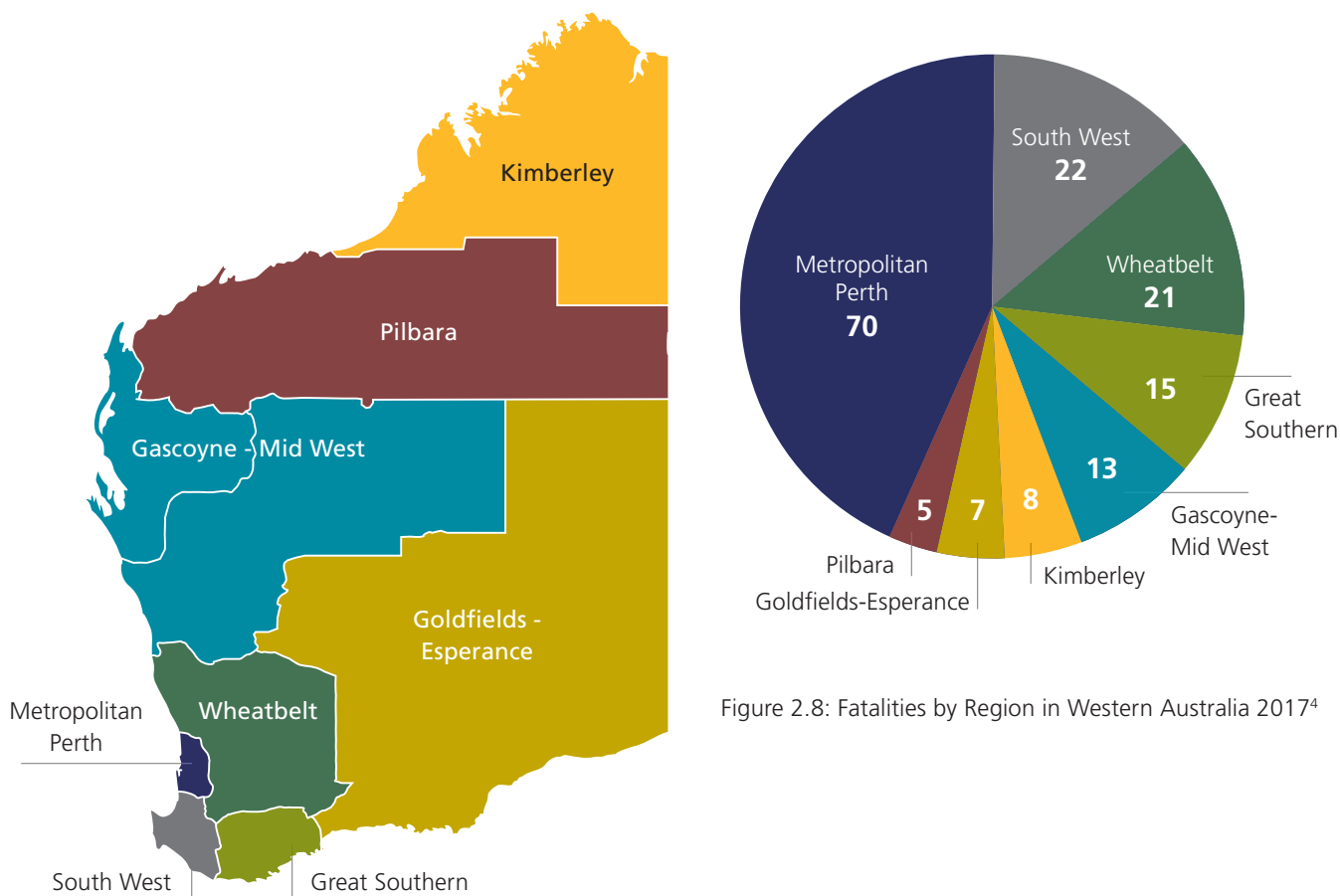


Figure 2.8: Fatalities by Region in Western Australia 2017⁴

Western Australia Crash Summary 2017

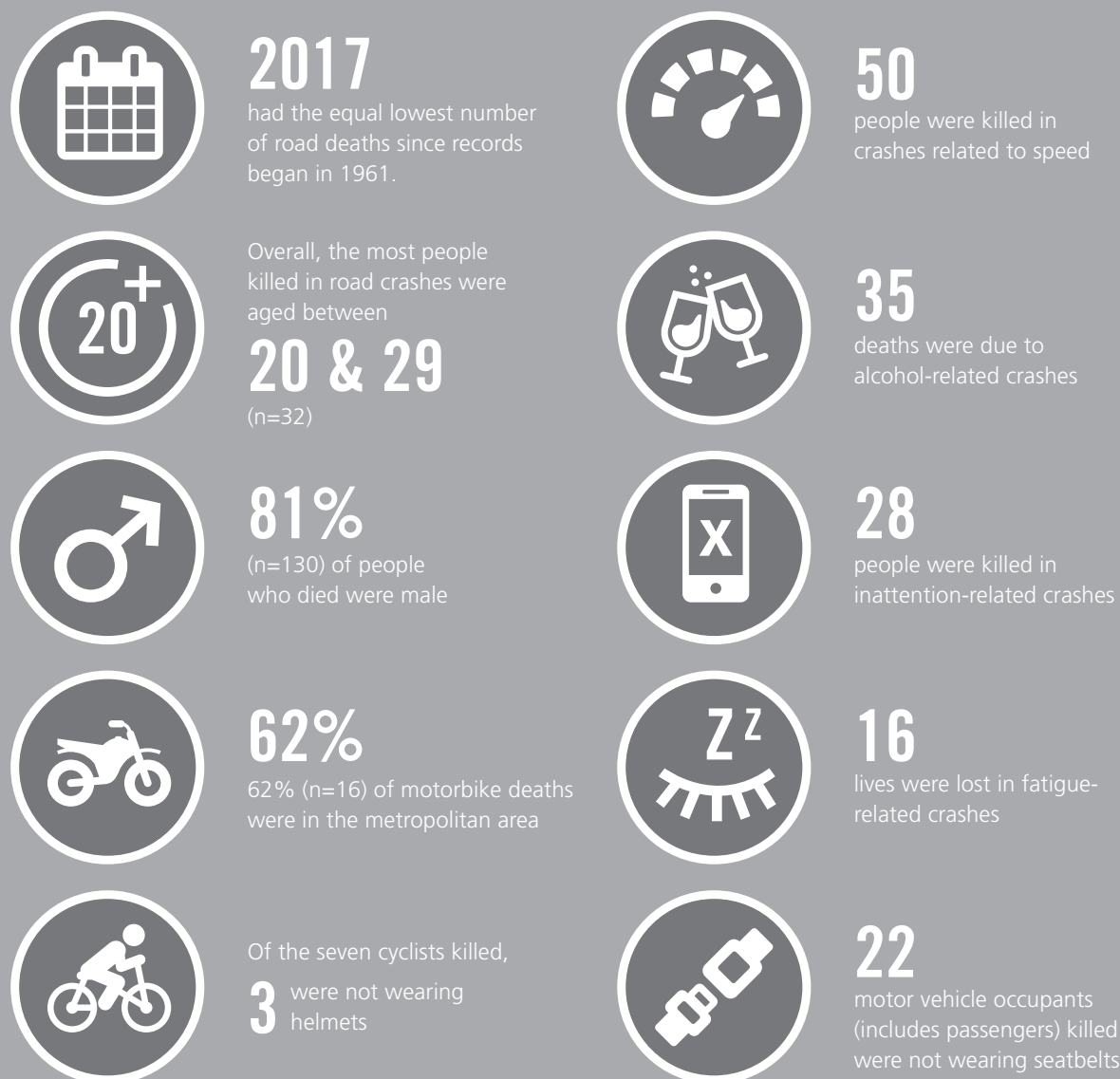


Figure 2.9: Western Australia Crash Summary 2017 (RSC 2018)⁵

The Road Safety Commission's (RSC) *2017 Preliminary Summary of Fatalities on Western Australian Roads* highlighted a few key features of the road fatalities in Western Australia in 2017. Of note is that behavioural choices such as drink driving, inattention whilst driving and not wearing a seatbelt were key causes of road based fatalities, as shown in Figure 2.9.

3 <https://profile.id.com.au/australia/population-estimate?WebID=140>

4 <https://www.rsc.wa.gov.au/RSC/media/Documents/Road%20Data/Statistics5/Annual%20crash%20statistics/annual-prelim-crash-statistics-2017.pdf>

5 Road Safety Commission's (RSC) 2017 Preliminary Summary of Fatalities on Western Australian Roads

2.2.3. Perth's Eastern Region

There were a total of 2,797 crashes in the EMRC region in 2017. Of these, there were 9 crashes⁶ which involved 14 different units⁵ such as motor vehicles, motor cycles, bicycles and pedestrians. There were a total of 11 lives lost in these 9 crashes⁷. 64% of the fatalities involved a vulnerable road user such as a cyclist, motorcyclist or pedestrian.

The RSC's 2017 Preliminary Summary of Fatalities on Western Australian Roads also shows a comparison of the State and National Government's goals and the recorded fatality rates, which is shown in Figure 2.11.

Figure 2.10: Fatal crashes in 2017 within the EMRC region by road users

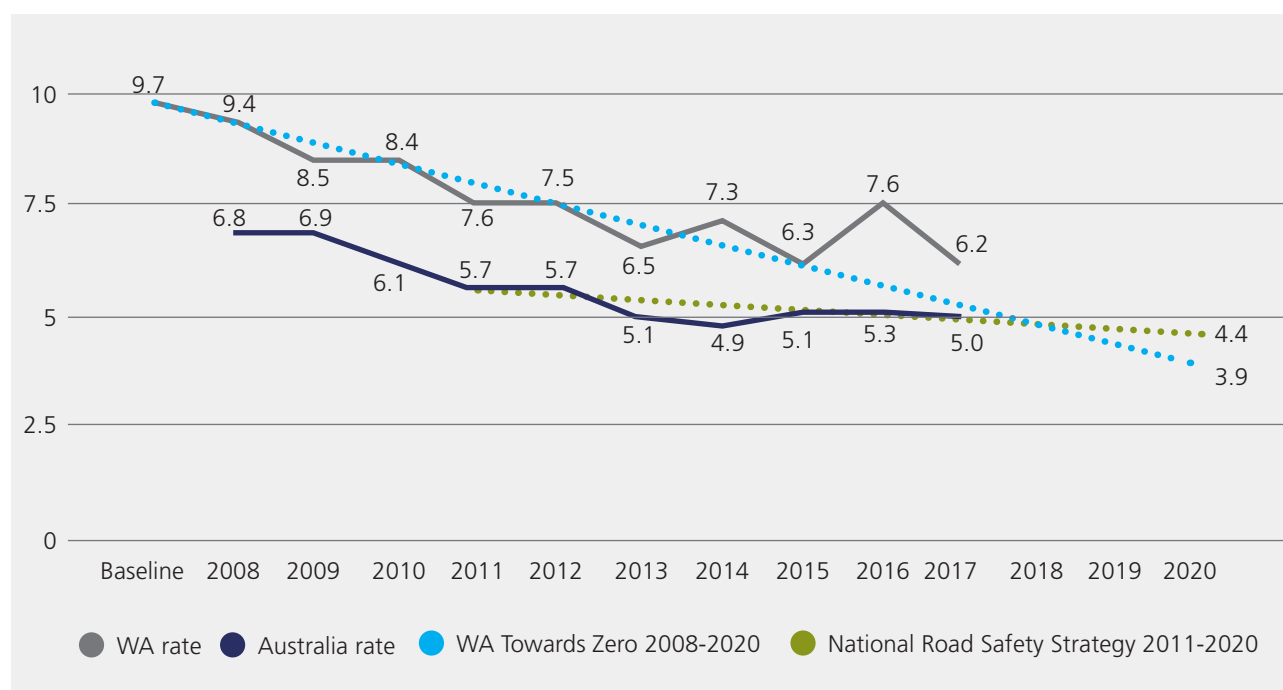
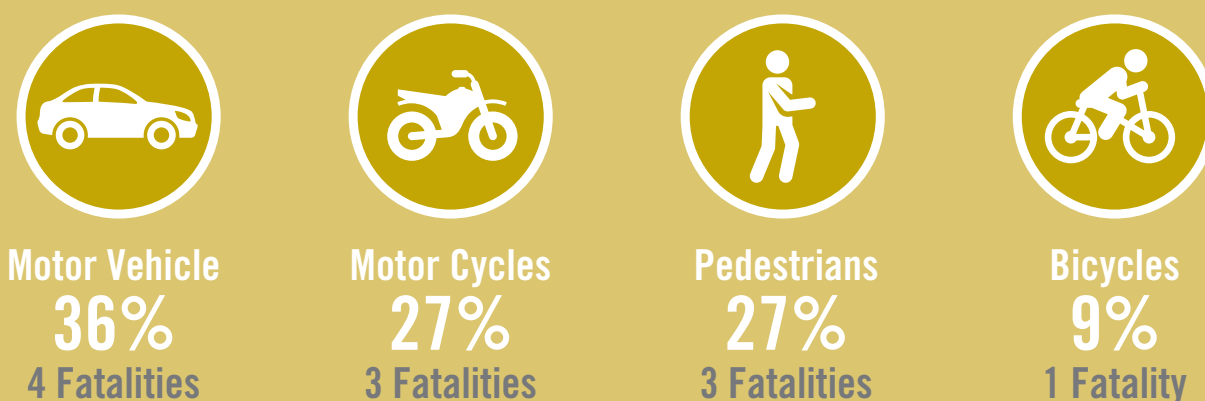


Figure 2.11: Fatality Rates per 100,000 Population (RSC 2018)

5 Road Safety Commission's (RSC) 2017 Preliminary Summary of Fatalities on Western Australian Roads
 6 MRWA Crash Analysis Reporting System Data
 7 BITRE Australian Road32: Deaths Database

Table 2.1 provides a summary of the fatality rate within each member Council area. The data shows that the City of Swan recorded the highest number of fatal crashes as well as crashes resulting in serious injury (hospitalisation) in 2017. The Town of Bassendean recorded the lowest number of fatal crashes and crashes resulting in serious injury. When this is assessed against the number of fatalities per 100,000 persons, the Town of Bassendean has the highest rate of fatalities per 100,000 of the usual resident population. The Western Australian average was 6.2 in 2017, where the Town of Bassendean was 6.4. The City of Swan, whilst having a high number of crashes, had the lowest number of combined KSI per 100,000 of the resident population. This is due to the large area and population of the City.

Table 2.2 lists the roads with the highest number of fatalities, whilst Table 2.3 lists the roads with the highest number of

crashes requiring hospitalisation. It should be noted that this data is for the entire length of the road, and not at particular intersections. Whilst the majority of those with a higher number of fatal crashes are on higher order roads, there are a number of local roads which also have a high number of serious crashes. Of significance is West Swan Road, Mundaring Weir Road, Gngara Road and Marshall Road, all of which have seen multiple fatal crashes.

The number of crashes which have required hospitalisation should also be taken into consideration, as a more serious crash could occur in the future. As part of a safe system approach, the EMRC will advocate to the State for further funding to assist the member Councils and acknowledgement of roads that require safety improvements, through avenues such as Black Spot Funding.

Table 2.1: Number of KSI Crashes within the EMRC Region by Member Council in 2017

	Fatal		Hospitalisation		Total	
	Number of crashes	Crashes per 100,000 people	Number of crashes	Crashes per 100,000 people	Number of crashes	Crashes per 100,000 people
EMRC Region	14	4.1	151	46.9	165	51.0
Town of Bassendean	1	6.4	9	57.6	10	64
City of Bayswater	3	4.4	26	38.0	29	42.4
City of Belmont	1	2.4	26	62.7	27	65.1
City of Kalamunda	3	5.1	26	43.9	29	49
Shire of Mundaring	1	2.6	18	46.2	19	48.8
City of Swan	5	3.6	46	32.9	51	36.5

Table 2.2: Top 10 Roads with the Highest Number of Fatalities and Hospitalisations between 2013 and 2017

Road	Road Ownership	Hospital	Fatal	Total
Great Eastern Hwy	MRWA	8	92	100
Roe Hwy	MRWA	4	36	40
West Swan Rd	City of Swan	4	19	23
Mundaring Weir Rd	City of Kalamunda / Shire of Mundaring	4	11	15
Great Northern Hwy	MRWA (north of Reid Hwy)	2	38	40
Gngara Rd	City of Swan	2	11	13
Marshall Rd	City of Swan	2	5	7
Toodyay Rd	MRWA (East of Roe Hwy)	2	12	14
Tonkin Hwy	MRWA	1	20	21
Welshpool Road East	City of Kalamunda MRWA (Roe Hwy to Tonkin Hwy)	1	9	10

Table 2.3: Top 10 Roads with the Highest Number of Crashes requiring Hospitalisation between 2013 and 2017

Road	Road Ownership	Hospital	Fatal	Total
Great Eastern Hwy	MRWA	92	8	100
Great Northern Hwy	MRWA (north of Reid Hwy)	38	2	40
Roe Hwy	MRWA	36	4	40
Reid Hwy	MRWA	20	-	20
Tonkin Hwy	MRWA	20	1	21
West Swan Rd	City of Swan	19	4	23
Morrison Rd	City of Swan	16	-	16
Kalamunda Rd	City of Swan / City of Kalamunda	13	-	13
Toodyay Rd	MRWA (East of Roe Hwy)	12	2	14
Mundaring Weir Rd	City of Kalamunda / Shire of Mundaring	11	4	15

2.3. Crash Summary

The EMRC area has a total estimated resident population (ERP) of 366,940⁸ across a total land area of 2,096km² with a population density of 1.75 persons per hectare. The overall population in the EMRC area has increased steadily since 2006. Each of the six local government areas vary in size, population and land use. These various features are important to note, as they reflect the need to look at each local government area individually to identify specific actions.

MRWA Crash Analysis Reporting System (CARS) provides detailed crash data and covers all intersections and midblock sections which have had one or more reported road crashes over a 5-year period from 1 January 2013 to 31 December 2017. In the five years between 1 January 2013 and 31 December 2017, a total of 25,070 crashes were recorded in the EMRC area⁹. This data has been categorised into the severity, which includes fatal, Hospitalisation required, medical attention required and property damage only (PDO) major, where the value of damage is more than \$3000, and PDO minor, which the value of damage is less than \$3000. Where the data was not recorded, it has been identified as 'unknown' and excluded from the analysis of that section.



Table 2.4: EMRC Member Council Crash Severity Summary

	Bassendean	Bayswater	Belmont	Kalamunda	Mundaring	Swan	EMRC Average
Fatal	0.2%	0.2%	0.1%	0.5%	0.7%	0.3%	0.3%
Hospital	4.9%	3.7%	3.1%	4.6%	7.3%	3.9%	4.6%
Medical	12.6%	14.6%	12.4%	13.6%	13.5%	15.0%	13.6%
PDO Major	53.8%	51.0%	53.0%	55.1%	54.0%	53.6%	53.4%
PDO Minor	28.4%	30.5%	31.4%	26.2%	24.5%	27.2%	28.0%

⁸ EMRC Profile ID 2018

⁹ MRWA Crash Analysis Reporting System Data

A higher percentage of fatal or seriously injured crashes are seen within the more rural member Councils such as Kalamunda and Mundaring, whilst the more urban member Councils see a higher percentage of minor crashes which result in less than \$3,000 worth of property damage.

A higher percentage of crashes involving motor cyclists (including mopeds and trail bikes) is also seen within the City of Kalamunda and the Shire of Mundaring. A higher percentage of crashes involving heavy vehicles (which includes trucks, tractors, semi-trailers, road trains and buses) are also seen within these local governments, which is likely due to the higher presence of these vehicles.

A higher percentage of crashes involving pedestrians (which include pedestrians on manual scooters and skateboards

as well as motorised wheelchairs) are seen in the member Councils with a higher population density such as the City of Bayswater and the Town of Bassendean. This is likely due to the increased population density as well as the inner-city nature of these member Councils.

The percentage of single vehicle crashes is also seen significantly higher in the more rural member Councils, with 23.1% of crashes within the Shire of Mundaring and 17.1% of crashes within the City of Kalamunda being a single vehicle crash, which is significantly higher than the member Council average of 12.1%. Single vehicle crashes are typically as a result of loss of control of the vehicle which may also be due to sharp turns or gravel on the road or swerving to avoid an object or animal.

Table 2.5: EMRC Member Council Crash Vehicle Type Summary

	Bassendean	Bayswater	Belmont	Kalamunda	Mundaring	Swan	EMRC Average
Bicycle	1.1%	0.9%	0.8%	0.8%	0.7%	0.9%	0.9%
Car	85.4%	89.5%	81.8%	80.3%	85.8%	82.8%	84.3%
Heavy Vehicle	4.0%	3.2%	4.4%	6.0%	6.1%	4.2%	4.6%
Motor Cycle	1.8%	1.5%	1.8%	2.8%	3.3%	1.9%	2.2%
Pedestrian	1.1%	0.9%	0.4%	0.5%	0.5%	0.6%	0.7%
Sub Total	93.4%	96.2%	89.2%	90.4%	96.4%	90.3%	92.6%
Unknown	6.6%	3.8%	10.8%	9.6%	3.6%	9.7%	7.4%



Table 2.6: EMRC Member Council Summary of Single Vehicle Crashes

	Bassendean	Bayswater	Belmont	Kalamunda	Mundaring	Swan	EMRC Average
Single Vehicle Crash (%)	5.6%	7.9%	7.1%	17.1%	23.1%	11.7%	12.1%

Table 2.7: EMRC Member Council Crash Vehicle Type Summary

	Bassendean	Bayswater	Belmont	Kalamunda	Mundaring	Swan	EMRC Average
Head On	0.9%	0.6%	0.4%	1.7%	1.7%	1.3%	1.1%
Hit Animal	0.1%	0.1%	0.1%	0.4%	2.0%	0.7%	0.6%
Hit Object	7.3%	5.8%	5.0%	13.2%	15.3%	8.3%	9.2%
Hit Pedestrian	2.0%	1.6%	0.8%	0.9%	0.8%	1.0%	1.2%
Non-Collision	0.5%	0.9%	0.8%	2.3%	3.2%	1.5%	1.5%
Rear End	34.1%	43.0%	51.0%	49.2%	39.6%	47.8%	44.1%
Right Angle	35.7%	24.3%	19.3%	16.9%	18.5%	19.5%	22.4%
Right Turn Through	4.8%	10.7%	6.2%	4.1%	4.1%	6.0%	6.0%
Sideswipe Same Direction	9.5%	11.7%	12.1%	9.7%	10.0%	9.9%	10.5%
Sub Total	94.8%	98.7%	95.6%	98.5%	95.1%	96.0%	96.4%
Unknown	5.5%	1.3%	4.4%	1.5%	4.9%	4.0%	3.6%



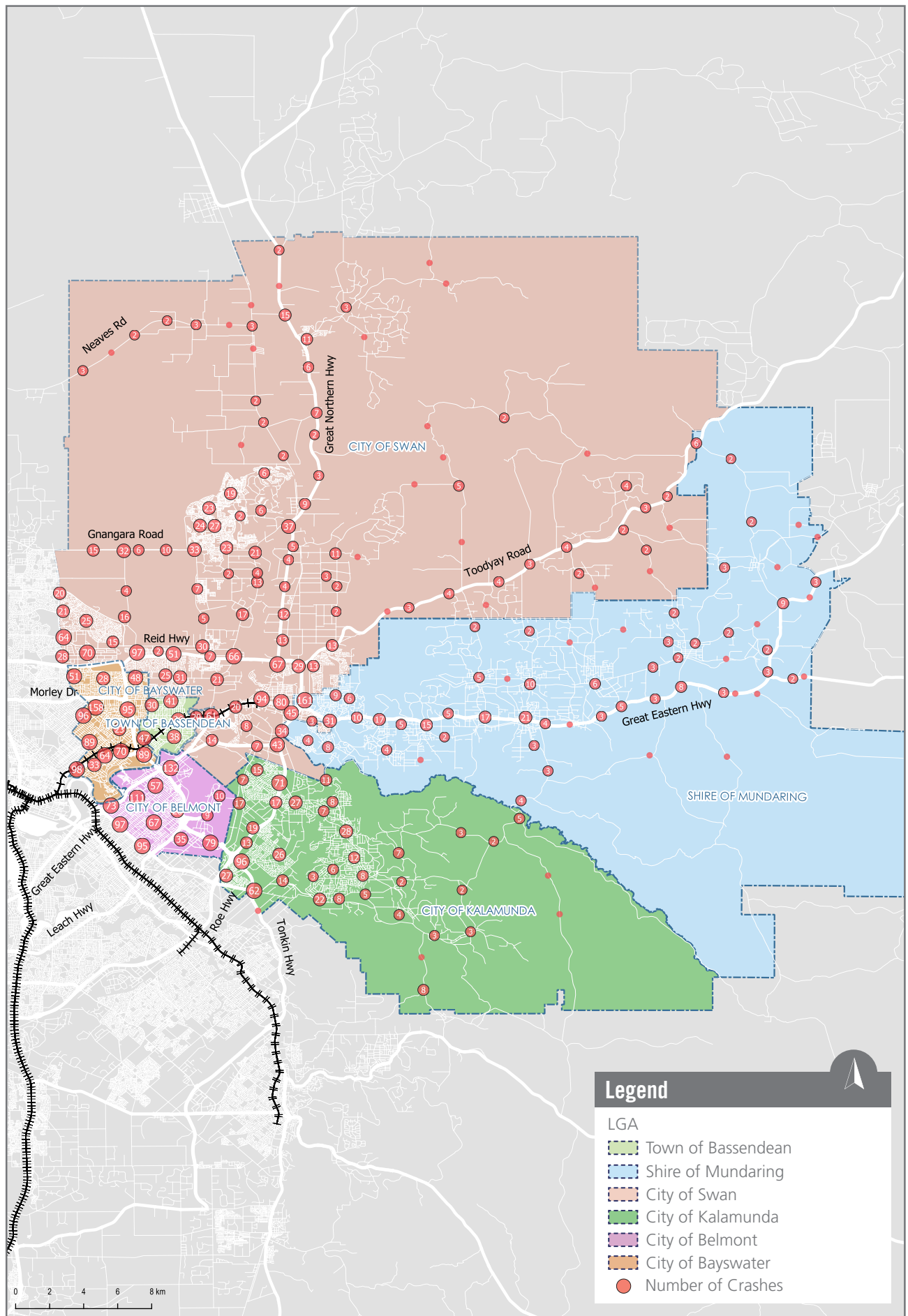
The human body is least tolerable where a vehicle hits a pedestrian or cyclist, where the risk of fatality for the target being hit increases dramatically when a vehicle travels over 30km/h

The human body is least tolerable where a vehicle hits a pedestrian or cyclist, where the risk of fatality for the target being hit increases dramatically when a vehicle travels over 30km/h. For side impact collisions such as a right angle or right turn through crash, there is a high risk of fatality for the target being hit over the speed 50km/h, whilst the risk of fatality for the target being hit increases significantly over 70km/h for frontal or hard object collisions such as hitting an object or rear end crashes.

Table 2.7 shows that in general, the most frequent type of crash in Perth's Eastern Region are rear end crashes. The member Councils with larger areas of rural zones such as the City of Kalamunda, Shire of Mundaring and City of Swan have a higher than average occurrence of head on and non-collision crashes. The Shire of Mundaring also has almost four times the EMRC area average of crashes where a vehicle hit an animal whilst both the City of Kalamunda and Shire of Mundaring have a higher percentage of crashes where a vehicle has hit an object, whilst a lower percentage of right turn through crashes.

The City of Bayswater and City of Belmont have higher percentages of right turn through crashes which typically occur at both signalised and unsignalised intersections where a vehicle is turning right.

Figure 2.12: Overall Number of Killed and Seriously Injured (KSI) Crashes within the EMRC



Data Source: Main Roads WA Crash Analysis Reporting System (CARS) - Period 2013 to 2017

2.4. Safety Workshop

An initial Road Safety Plan workshop (termed a Safety Workshop) was undertaken on 4 April 2019, to gather information and commence early consultation from member councils and key stakeholders. This included representatives from:

- Western Australian Local Government Association (WALGA),
- Eastern Metropolitan Regional Council (EMRC),
- RAC
- Perth Airport
- City of Swan
- City of Belmont
- Town of Bassendean
- Shire of Mundaring
- City of Kalamunda.

(Note: City of Bayswater were unavailable and as such, a separate meeting was held with them on 11 April 2019).

Representatives were asked to identify both existing and potential future key road safety and transport issues. They were also asked to consider future planning and development within their respective councils and any potential effect to road safety these may have, at either local or state government planning level.

In addition, at the end of the Safety Workshop, the advent of security against terrorist or isolated hostile vehicle mitigation attacks was discussed, noting recent events around the world (including Melbourne) and the need for Government to begin to consider this when planning and designing areas where large groups of pedestrians mass and what issues the respective member Councils may face as a result of this.

Each member Council and key stakeholder contributed to the workshop providing their insight and key issues pertinent to them.

The key themes that were discussed and drawn from the safety workshop included:

- Vulnerable road users such as gophers, an aging population, pedestrians, cyclists and school children.
- Congestion, resulting in risky behaviour as well as the associated congestion with specific intersections and level rail crossings
- Road safety including the types of crashes in respective local governments, such as single vehicle run-off road issues, traffic speed in general, hostile environments, pedestrian incidents in town centres.
- The impact of State Government projects, where key State Government projects were noted and how a lack of funding may have safety implications on the road network.

These themes, along with a review of the relevant current strategies have informed the recommendations of this Road Safety Plan.

2.5. Funding Opportunities

A number of funding opportunities for road safety and improvement projects are available to local governments in Western Australia (a few key funding sources are presented within this section). Each have their own specific qualification requirements. As recommendations from this Road Safety Plan are progressed, EMRC along with member Councils should explore these potential funding sources.

2.5.1. Black Spot Program

The Black Spot Program is a funding program to aid in road safety improvement where there is a proven crash history of high-risk location. There are two levels of funding, at the State Government level through MRWA, and Australian (Federal) Government level, through the Department of Infrastructure and Regional Development. Sites are evaluated at a benefit to cost ratio of at least 2 to 1 and focussed on cost-effective treatment of hazardous locations. The Black Spot Program also contributes towards reducing the national road toll, a target of the National Road Safety Action Plan 2018-2020, which was prepared by the Australian Government with input from State and Territory Governments.

Black Spot Program Funding Requirements

State Government

The State Government Black Spot Program is enforced through MRWA. For state roads, the State Government is the responsible party for the program, whilst for local roads, both the State Government and Local Government are responsible. A budget of \$10m per year has been allocated to state roads, which is to be fully funded by the State Government, and \$10m per year plus \$5m of local government contribution, where funding requirements are 2/3 by the State Government, and 1/3 by the Local Government. Project costs are to be between \$2,000 and \$3m. The benefit to cost ratio is to be 1 to 1.

Australian Government

The Australian Government Black Spot Funding Program is enforced by the Department of Infrastructure and Regional Development, with an allocated budget of \$6.585m per year. Projects are 100% funded by the Australian Government and costs are to be between \$2,000 and \$2m. The benefit to cost ratio is to be 2 to 1.





Figure 2.13: Example of Australian Government Black Spot Project – Railway Road / Elizabeth Street, City of Kalamunda

2.5.2. Metropolitan Regional Road Group (MRRG)

There are two funding programs driven by the MRRG and Main Roads Western Australia, which include the Road Rehabilitation Program and Road Improvement Program. The funding for road improvements includes new projects or upgrades. Examples of works considered for the MRRG funding include new road sections, road widening and upgrades.

2.5.3. Roads to Recovery

The Roads to Recovery Program is a Commonwealth Government funding program which supports the maintenance on the nation's local road infrastructure assets. It is in line with the National Road Safety Strategy 2011-2020 to help local governments enhance safety on their road network through grant funding. Examples of projects eligible for this type of works includes resheeting and resealing existing roads for a safer network. Pedestrian and cycling facilities associated with a road can also be funded under the Roads to Recovery program.

2.5.4. Western Australian Bicycle Network (WABN) Grants

The WABN grants program is a State Government program aimed to aid local governments with the funding of cycling related projects, including infrastructure, programs and bike plans. It is a key action of the *Western Australian Bicycle Network Plan 2014-2031*, which sets out the framework for the provision of a safe and sustainable cycling network across the state. There are two types of grants programs, with one for metropolitan local governments and one for regional local governments. There are also grants available for the planning, design and construction of Safe Active Streets.

3. A systems approach to tackle road safety

3.1. Safe System and Crash Force Tolerance

3.1.1. What is a Safe System?

Safe System is a road safety approach adopted by National and State Governments to generate improvements in road safety. The Safe System approach is underpinned by three guiding principles:

- people will make mistakes on our roads but should not be killed or seriously injured as a consequence;
- there are known limits to the forces the human body can tolerate without being seriously injured; and
- the road transport system should be designed and maintained so that people are not exposed to crash forces beyond the limits of their physical tolerance.

Safe System principles comprise of a holistic view of the road transport system and the interactions among roads and roadsides, travel speeds, vehicles and road users. This is an inclusive approach that caters for all groups using the road system, including drivers, motorcyclists, passengers, pedestrians, cyclists, and commercial and heavy vehicle drivers. Consistent with a long-term road safety vision, it recognises that people will make mistakes and may have road crashes, but the system should be forgiving, and those crashes should not result in death or serious injury. As such, there needs to be an increased focus on:

- Safe Road Users
- Safe Vehicles
- Safe Roads and Roadsides
- Safe Speeds.



Safe System principles comprise of a holistic view of the road transport system and the interactions among roads and roadsides, travel speeds, vehicles and road users.

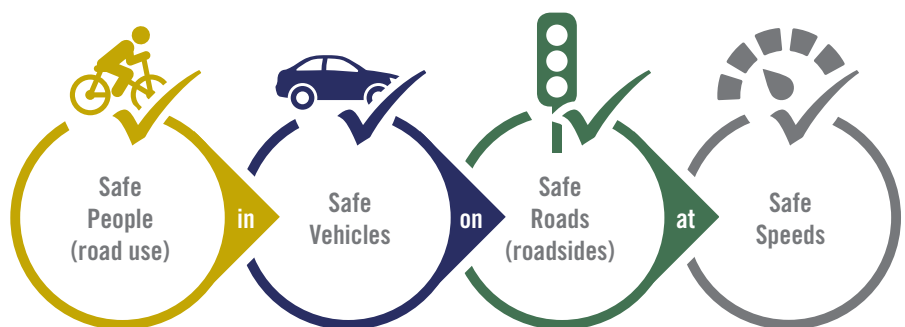


Figure 3.1: Application of the Safe Systems Principles

This new Safe System approach shifts away from the ideology that “it is up to every individual to survive a crash” and moves towards the ideology that “it is not acceptable for someone to die or be seriously injured as a result of a crash”.

It is accepted that all roads cannot be changed immediately to a fully safe system due to the extent and length of the road network across the EMRC area along with available funds. As such, it is important for member Councils as a region to continue to upgrade and maintain the regional road network to a fully safe system and prioritise safe design improvements, safe design speed changes and promoting the greater awareness of safe vehicles over time.

For existing roads, this can be done when upgrades and maintenance is planned to include design improvements, safe speed changes and transitioning the broader vehicle fleet to safe vehicles over time in accordance with Safe System.

3.1.2. Human Tolerance to Violent Forces

A key part of the Safe Systems is accepting that humans will make errors, however infrastructure and the road network should be forgiving. A part of this is understanding the human tolerance to violent process. When designing roads, if conflicts between road users are unavoidable, we need to consider the physical forces within the limits of human tolerance, which is summarised in Figure 3.2. Speed and crash force has an impact on the human body’s tolerance towards a violent force. The limits of human tolerance vary between the different types of collision, such as with a vulnerable road user (i.e. cyclists and pedestrians), roadside hazards, side-on collisions or frontal collisions.

Perth’s Eastern Region

In Perth’s eastern Region, the most common type of crash is a rear end crash. These crashes fit mostly in line with the frontal impact type of crash and are generally survivable. The second most common type of crash is a right-angle, or side collision type of crash. In this instance, roundabouts could be considered as a solution to minimise the impact of these types of crashes.

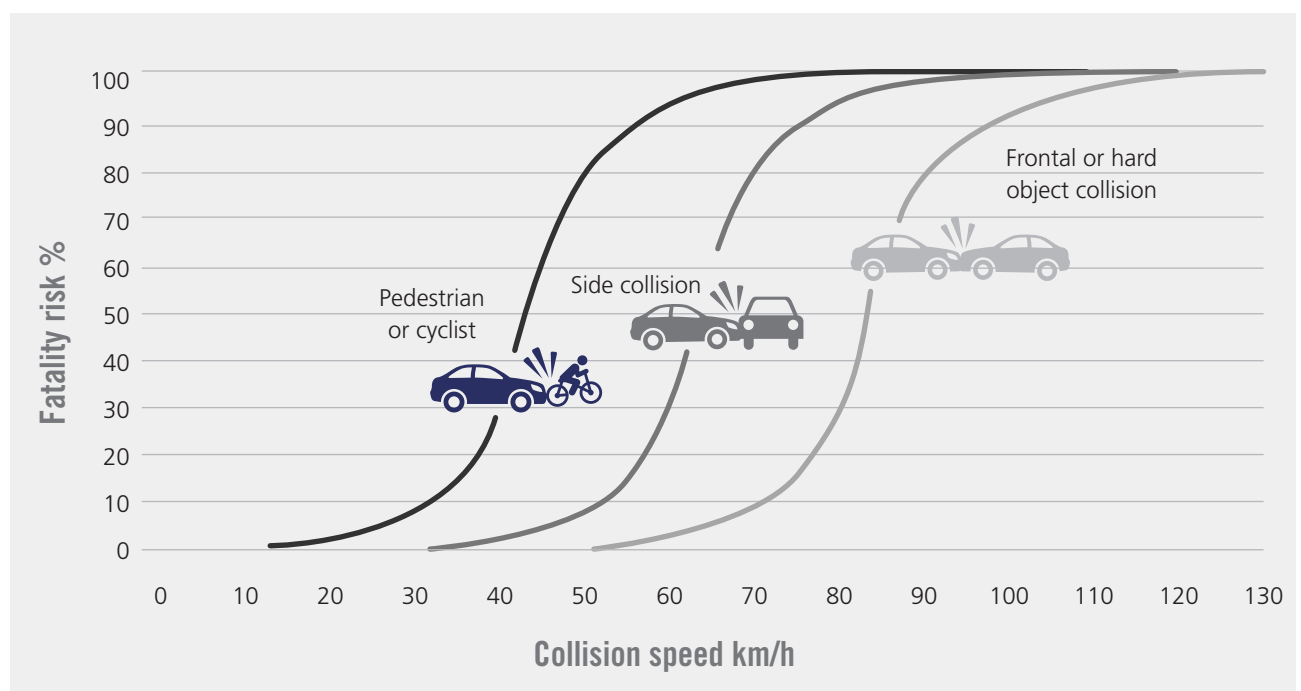


Figure 3.2: Fatality Risk Curve¹⁰

10 Wrambourg 2005 - https://acrs.org.au/files/arsrpe/full-paper_2019.pdf

4. Town of Bassendean Road Safety Review

4.1. Background

The Town of Bassendean has an ERP of 15,739¹¹ and a land area of 10km². The population density of the Town is 15.23 persons per hectare and is bound by the Swan River to the south and east, City of Swan to the north and east of the Swan River, City of Bayswater to the west and City of Belmont to the southern side of the Swan River. The Town is predominantly residential with supporting industrial at Ashfield Industrial Estate and commercial areas. The Town is serviced by three train stations along the Midland line. An analysis of the MRWA crash data has identified that there was a total of 810 crashes, involving 1,547 units including pedestrians, cyclists, motor cyclists, cars and heavy vehicles, between 2013 and 2017 as seen in Table 4.1.

4.2. Literature Review

Draft Bassendean Transport Plan 2018

The Town of Bassendean's Draft Bassendean Transport Plan does not specifically reference road safety. However, it does include an assessment of existing movement network (all modes) highlighting operational difficulties as well as cross boundary network issues that have an influence on Bassendean or other local governments in the area, such as a road located over two or more different local governments with different capacities and/or form or function. These issues may be traffic congestion issues and/or road safety issues. The assessment for the Plan is addressed through a network and policy SWOT analysis identifying influencing factors (both locally and at a state level) to shape the forward-facing transport and land use strategy. Through analysis, a number of proposals have been recommended within the Plan, including improved pedestrian crossing facilities, improved intersection upgrades to reduce conflicts, town centre speed limit reductions, more active transport links and safer vehicle fleet for the Town employees.

4.3. Crash Hotspots

810 crashes occurred within the Town of Bassendean area between 1 January 2013 and 31 December 2017, which involved 1,386 known units, which include bicycles, cars, heavy vehicles (including buses, trucks, semitrailers, tractors and road trains), motor cycles (including motorised scooters) and pedestrians (including motorised wheelchairs). 161 involved unit types were not recorded. The tables below give the detail of the crash statistics.



Population
15,739

Land Area
10km²

Density
15.32
persons per
hectare

¹¹ Population Estimate from ProfileID, derived from the Australian Bureau of Statistics Estimated Residential Population 2018

Table 4.1: Town of Bassendean Crash Severity

Severity	Number of Crashes	Percentage
Fatal	2	0.2%
Hospital	40	4.9%
Medical	102	12.6%
PDO Major	436	53.8%
PDO Minor	230	28.4%
Total	810	100%

Table 4.2: Town of Bassendean Type of Vehicles Involved in Crashes

Severity	Number of Crashes	Percentage
Type of Vehicle	Number of Crashes	Percentage
Bicycle	17	1.1%
Car	1,267	85.4%
Heavy Vehicles	59	4.0%
Motor Cycle	26	1.8%
Pedestrian	17	1.1%
Total (Known)	1,386	93.4%
Unknown	98	6.6%

Table 4.3: Town of Bassendean Midblock vs Intersection Crash

Location	Number of Crashes	Percentage
Intersection	507	62.6%
Midblock	303	37.4%
Total	810	100%

Table 4.4: Town of Bassendean Crash Type

Crash Type	Number of Crashes	Percentage
Head On	7	0.9%
Hit Animal	1	0.1%
Hit Object	59	7.3%
Hit Pedestrian	16	2.0%
Non-Collision	4	0.5%
Rear End	276	34.1%
Right Angle	289	35.7%
Right Turn Through	39	4.8%
Sideswipe Same Direction	77	9.5%
Total (Known)	768	94.8%
Unknown	42	5.5%

The crash data maps identify a few features within the Town of Bassendean area, which include:

- The highest frequency of crashes within the Town of Bassendean area occurred along the Railway Parade corridor, given the higher volume of traffic through this route. Other higher order corridors with a high frequency of crashes include Morley Drive East, Walter Road East, Lord Street and Collier Road between Morley Drive East and Railway Parade, which are all Distributor A roads. The majority of mid-block crashes have occurred along these roads and are generally within close proximity to an intersection. A corridor study can be considered for these roads to further analyse these routes. In addition to these, there have been a high number of crashes which have been recorded on a number of local roads and are discussed in the next section.
- The majority of crashes (51%) within the Town of Bassendean area have occurred where there was no sign or traffic control 35.7% of crashes were right angle crashes. Of the right-angle crashes, the majority occurred at a stop sign (39%), where there was no sign or control (33%) or at a give way sign (24%). The second most common type of crash was a rear end crash (34.1%) 44.1%. The majority of rear end crashes had occurred where there was no sign/control or at an intersection with traffic lights.
- The Town of Bassendean has a higher percentage of bicycle, car and pedestrian crashes compared to the EMRC area average, and a lower percentage of heavy vehicle and motor cycle crashes.

4.4. High Risk Areas

As mentioned in the section above a number of crashes have been recorded on local roads at intersections. Further investigation along the following roads to analyse the reasons behind crashes is recommended.

- Old Perth Road (Local Distributor)
- Anzac Terrace (Local Road)
- Broadway (Local Road)
- Palmerston Street (Local Road)
- Shackleton Street (Local Road)
- Iolanthe

Three motor cycle crashes were recorded at the intersection of **Altone Road and Morley Drive East**, resulting in one requiring medical attention and two resulting in property damage, and two at the intersection of **Anstey Road and North Road** with one requiring hospitalisation and one requiring medical attention. These intersections should be reviewed further to identify reasons for these crashes and mitigation measures to avoid any fatal crashes.

Heavy vehicle crashes have occurred along **Guildford Road and Railway Parade**, predominantly at the intersections of Jackson Street, Colstoun Road, Collier Road

A further investigation into the reasons behind and type of crashes at the following locations is recommended.

- Iolanthe Street / Collier Road (14)
- Shackleton Street / Kathleen Street (5)
- Reid Street / Kenney Street (7)
- Guildford Road / Collier Road (54).

Corridor Studies recommended for the following locations that have had a high occurrence of crashes throughout the length of the roads to understand crash reasons and identify potential mitigation methods for these issues:

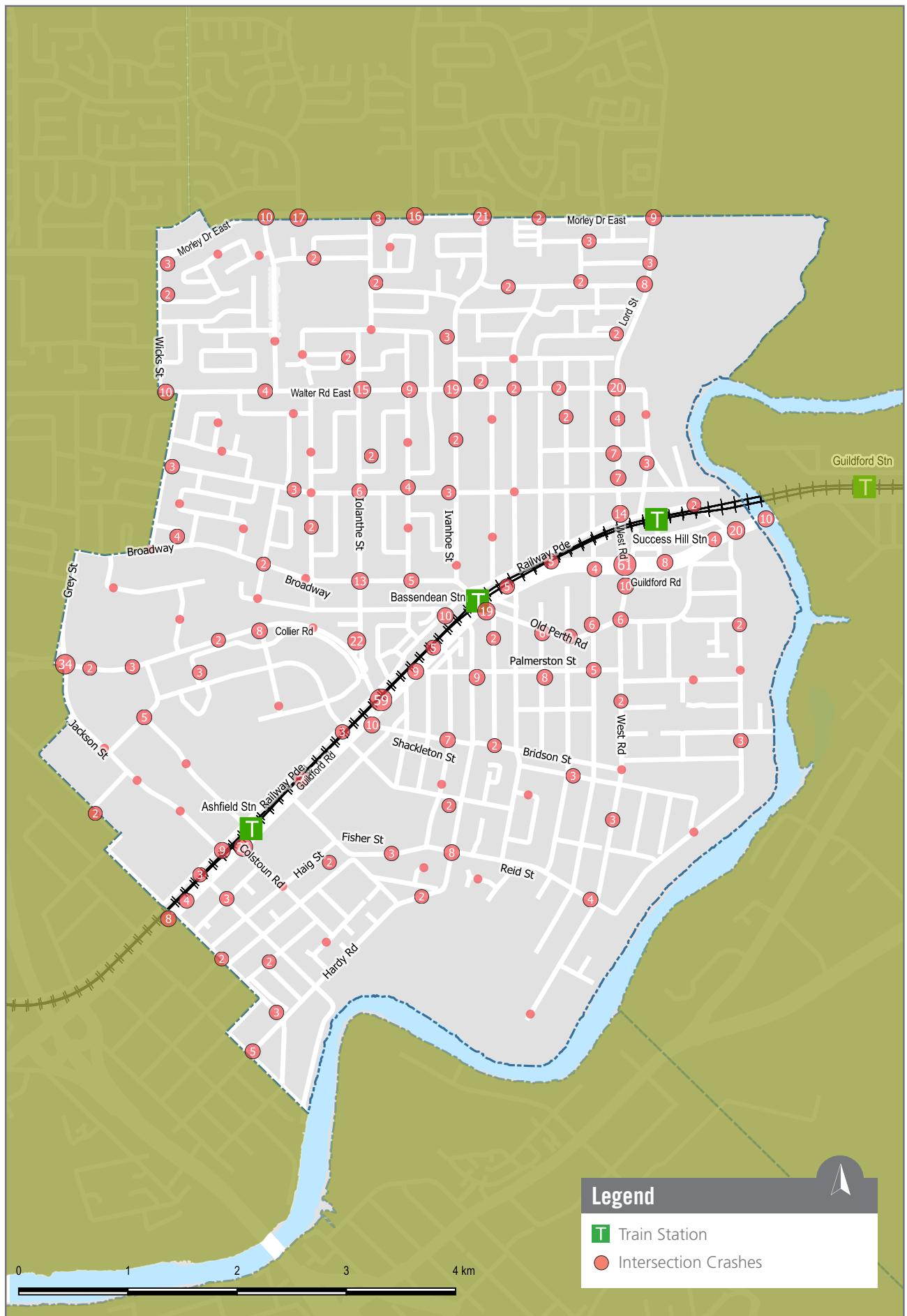
- Old Perth Road (28)
- Lord Street (64)
- Walter Road East (78).

Other considerations include:

- **Pedestrian crossings** – the Town has a higher than average percentage of crashes involving pedestrians.
- **Intersections** – the Town has a higher than average percentage of crashes that occur at intersections.

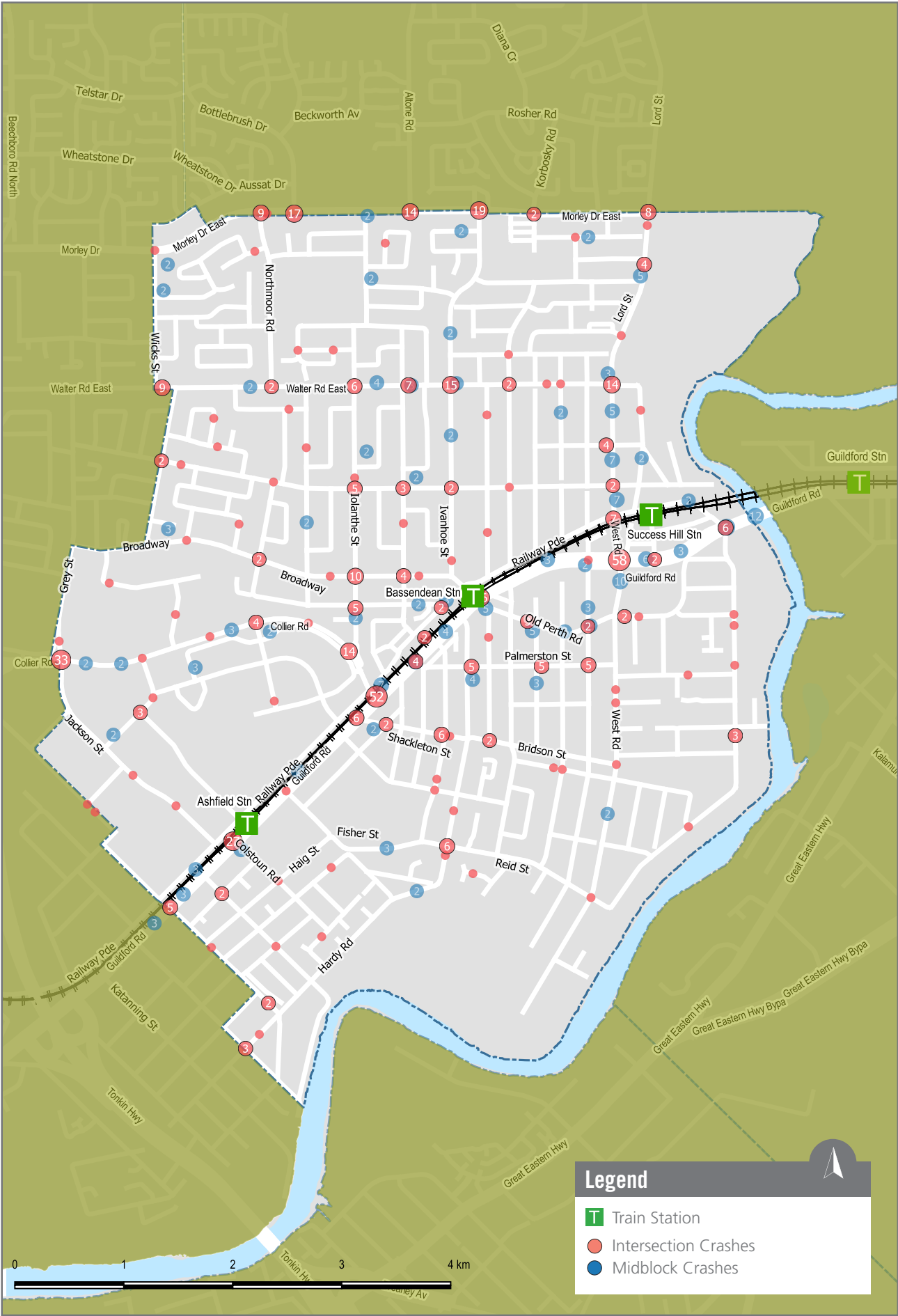


Figure 4.1: Overall Number of Crashes within the Local Government Area



Data Source: Main Roads WA Crash Analysis Reporting System (CARS) - Period 2013 to 2017

Figure 4.2: Overall Midblock vs Intersection Crashes within the Local Government Area



Data Source: Main Roads WA Crash Analysis Reporting System (CARS) - Period 2013 to 2017



5. City of Bayswater Road Safety Review

5.1. Background

The City of Bayswater has a population of 68,232¹² across a total land area of 35km². The City of Bayswater has the highest population density of the member Councils, with a density of 19.71 persons per hectare.

The City of Bayswater is bound by the City of Stirling to the west, City of Swan to the north and north-east, Town of Bassendean to the east, Swan River to the south, with the Town of Victoria Park, and City of Belmont on the other side of the Swan River. The City of Bayswater is serviced by four train stations on the Midland Railway Line and is serviced by Reid Highway to the north. Tonkin Highway and Morley Drive run through the City. The City has experienced an overall population growth since 2006 from 59,632 to 68,232 in 2018. However, it is noted that the population has steadily decreased annually since 2015.

Similar to the Town of Bassendean the City of Bayswater is predominantly residential with some supporting industrial and commercial areas. Given the higher population density, and proximity to the Perth CBD, there is a high proportion of higher density residential areas.

The City of Bayswater will also be affected by a number of public transport infrastructure projects as part of METRONET including the Forrestfield-Airport Link and associated upgrades to Bayswater Station and Morley-Ellenbrook Line.

The MRWA crash data for the period between 2013 to 2017 recorded a total of 5,094 crashes within the City. Of these, 11 (0.2%) were fatal, 190 (3.7%) required hospitalisation and 744 (14.6%) required medical attention. The majority of these crashes (81.5%) resulted in property damage. These 5,094 crashes involved 9,787 units, which include bicycles, cars, heavy vehicles (including buses, trucks, semitrailers, tractors and road trains), motor cycles (including motorised scooters) and pedestrians (including motorised wheelchairs).

5.2. Literature Review

City of Bayswater – Strategic Community Plan 2013 – 2023

The purpose of the Strategic Community Plan is to link the community's aspirations with the City's vision and long-term strategy. However, there is minimal information specifically referencing road safety initiatives. However, the Plan does note, with its Built Environments section, develop and maintain streetscapes with a connected community with sustainable and well-maintained transport. It also notes to advocate for safe and accessible public transport.

City of Bayswater Traffic Management Schedule 2017

The City has completed a Citywide Traffic Management Study on a precinct basis last year covering the whole municipality. The Study was divided up into eight different precincts undertaken over a number of years due to the vast area and extensive network.



Population
68,232

Land Area
35km²

Density
19.71
persons per
hectare

¹² Population Estimate from ProfileID, derived from the Australian Bureau of Statistics Estimated Residential Population 2018

Table 5.1: City of Bayswater Crash Severity

Severity	Number of Crashes	Percentage	EMRC Average
Fatal	11	0.2%	0.3%
Hospital	190	3.7%	4.6%
Medical	744	14.6%	13.6%
PDO Major	2,596	51.0%	53.4%
PDO Minor	1,553	30.5%	28.0%
Total	5,094	100%	100%

The reports have identified various number of potential traffic issues within each of the precincts with recommendations prioritised to short, medium and long term.

A high-level review of the recommendations notes that the majority of recommendations will address one or more of inappropriate traffic volumes, speed or crash issues. However, they are nearly all infrastructure focused projects (signing and lining changes, minor intersection works etc) which aligns with Safe Roads and Roadsides. A few of the recommendations will address speed through traditional LATM measures, but few (if any) will address safe vehicles or safe road use. This is understandable given Safe Roads and Safe Speed is more controllable by local government, but it does represent a possible advocacy position for EMRC to look at safe road use and safer vehicles.

It is noted there are only a few recommendations aimed at improving vulnerable road user infrastructure and safety.

5.3. Crash Hotspots

5,094 crashes were recorded within the City of Bayswater between 1 January 2013 and 31 December 2017, which involved 8,729 known units, which include bicycles, cars, heavy vehicles (including buses, trucks, semitrailers, tractors and road trains), motor cycles (including motorised scooters) and pedestrians (including motorised wheelchairs, skateboards and manual scooters). It is noted that the vehicle type data for the 750 vehicles were not recorded. Of the known units, 85.7% involved cars, whilst 3.3% involved vulnerable road users including bicycles, motor cycles and pedestrians. The majority of crashes within the City of Bayswater occurred at intersections (62.5%) which is similar to the EMRC area average of 59.7%.

The crash data maps identify a few features within the City of Bayswater. These are summarised below:

- The City of Bayswater had a higher percentage of car and pedestrian related crashes, and a lower percentage of heavy vehicle and motor cycle related crashes compared to the EMRC area average. The percentage of bicycle related crashes was the same as the EMRC area average. The lower percentage of heavy vehicles may, similar to the Town of Bassendean, be due to the City's higher density and inner-city nature.



- All of the higher order roads (Primary Distributor Roads and Distributor A) within the City of Bayswater have experienced a high frequency of crashes. This can be expected, given the higher volumes of traffic which would increase the opportunity for a crash to occur.
- From a high-level review, key local roads which have experienced a high frequency of crashes (more than 7 crashes over the 5-year reporting period) include:
 - Birkett Street
 - Drummond Street
 - Salisbury Street
 - Sussex Street
 - Tenth Avenue
 - Falkirk Avenue
 - Roberts Street
 - Clement Street
 - Murray Street
 - Ellesmere Road.
- Key local intersections which have experienced a high number of crashes (more than 5 crashes over the 5 years reporting period) include:
 - Sixth Avenue / Coode Street
 - King Street / Raymond Avenue
 - Salisbury Street / Bowden Street
 - Hardey Road / Moojebing Street.

- A number of locations have been identified where a cluster of crashes involving motor cyclists have occurred. All of the locations where multiple crashes have occurred have been intersections. These intersections, and number of occurrences are listed below.

- Whatley Crescent / Hotham Street Bridge (7)
- Guildford Road / Peninsula Road (5)
- Guildford Road / Whatley Crescent (5)
- Guildford Road / Tonkin Highway (4)
- Guildford Road / Garratt Road (3)
- Guildford Road / First Avenue (2)
- Guildford Road / Caledonian Avenue (2)
- Collier Road / Beechboro Road South (3)
- Collier Road / Crimea Street (3)
- Collier Road / Walter Road West (2)
- Morley Drive / McGilvray Avenue (2).

The majority of mid-block crashes have typically occurred at random locations due to reversing out of driveways or vehicles not giving way when turning. It is also noted that give-way crashes were recorded on Russell Street between Rudloc Road and the school crossing just south of Catherine Street. One of these crashes involved a pedestrian at the school crossing. There have also been a number of crashes involving pedestrian and/or cyclist.

- There are nine locations within the City which have had multiple crashes involving pedestrians and/or cyclists. These include:
 - Morley Drive / McGilvray Avenue (3 cyclists)
 - Russell Street between Walter Road West and Broun Avenue (10 pedestrians, 2 cyclists)
 - Caledonian Avenue between Railway Parade and Whatley Crescent, noting this is a level crossing (1 pedestrian, 4 cyclists)
 - Guildford Road / Eight Avenue (4 pedestrians)
 - Guildford Road between Falkirk Avenue and Caledonian Avenue (4 pedestrians, 2 cyclists)
 - Karrinyup Road / Crimea Street (2 pedestrians)
 - McGilvray Avenue (near Lincoln Village Shopping Centre) (2 pedestrians)
 - Beechboro Road North near Walter Road East (3 cyclists, 1 pedestrian)
 - Beechboro Road South / Railway Parade (3 cyclists)
 - Broun Avenue / McGregor Street (2 cyclists).

The occurrence of these crashes identifies that these areas are popular with cyclists and pedestrians, however the existing facilities may not be sufficient.

Table 5.2: City of Bayswater Type of Vehicles Involved in Crashes

Type of Vehicle	Number of Crashes	Percentage	EMRC Average
Bicycle	86	0.9%	0.9%
Car	8127	85.7%	84.3%
Heavy Vehicles	292	3.1%	4.6%
Motor Cycle	140	1.5%	2.2%
Pedestrian	84	0.9%	0.7%
Total (Known)	8729	92.1%	92.6%
Unknown	750	7.9%	7.4%

Table 5.3: City of Bayswater Midblock vs Intersection Crash

Location	Number of Crashes	Percentage	EMRC Average
Intersection	3,183	62.5%	59.7%
Midblock	1,911	37.5%	40.3%
Total	5,094	100%	100%

Table 5.4: City of Bayswater Crash Type

Location	Number of Crashes	Percentage	EMRC Average
Head On	27	0.6%	1.1%
Hit Animal	4	0.1%	0.6%
Hit Object	287	5.8%	9.2%
Hit Pedestrian	80	1.6%	1.2%
Non-Collision	42	0.9%	1.5%
Rear End	2111	43.0%	44.1%
Right Angle	1190	24.3%	22.4%
Right Turn Thru	527	10.7%	6.0%
Sideswipe Same Direction	572	11.7%	10.5%
Total (Known)	4840	98.7%	96.4%
Unknown	66	1.3%	3.6%

5.4. High Risk Areas

Key areas for consideration for the EMRC to advocate for a further review of within the City of Bayswater local government area include:

- Motor cycle crashes have occurred multiple times at the following locations:
 - Whatley Crescent / Hotham Street Bridge (7)
 - Guildford Road / Peninsula Road (5)
 - Guildford Road / Whatley Crescent (5)
- Consider a corridor study of:
 - The Primary Distributor and Distributor A roads of **Walter Road West, Russell Street, Broun Avenue and Beechboro Road South.**
- Further analysis of the following local intersections:
 - Sixth Avenue / Coode Street
 - King Street / Raymond Avenue
 - Salisbury Street / Bowden Street
 - Hardey Road / Moojebing Street.

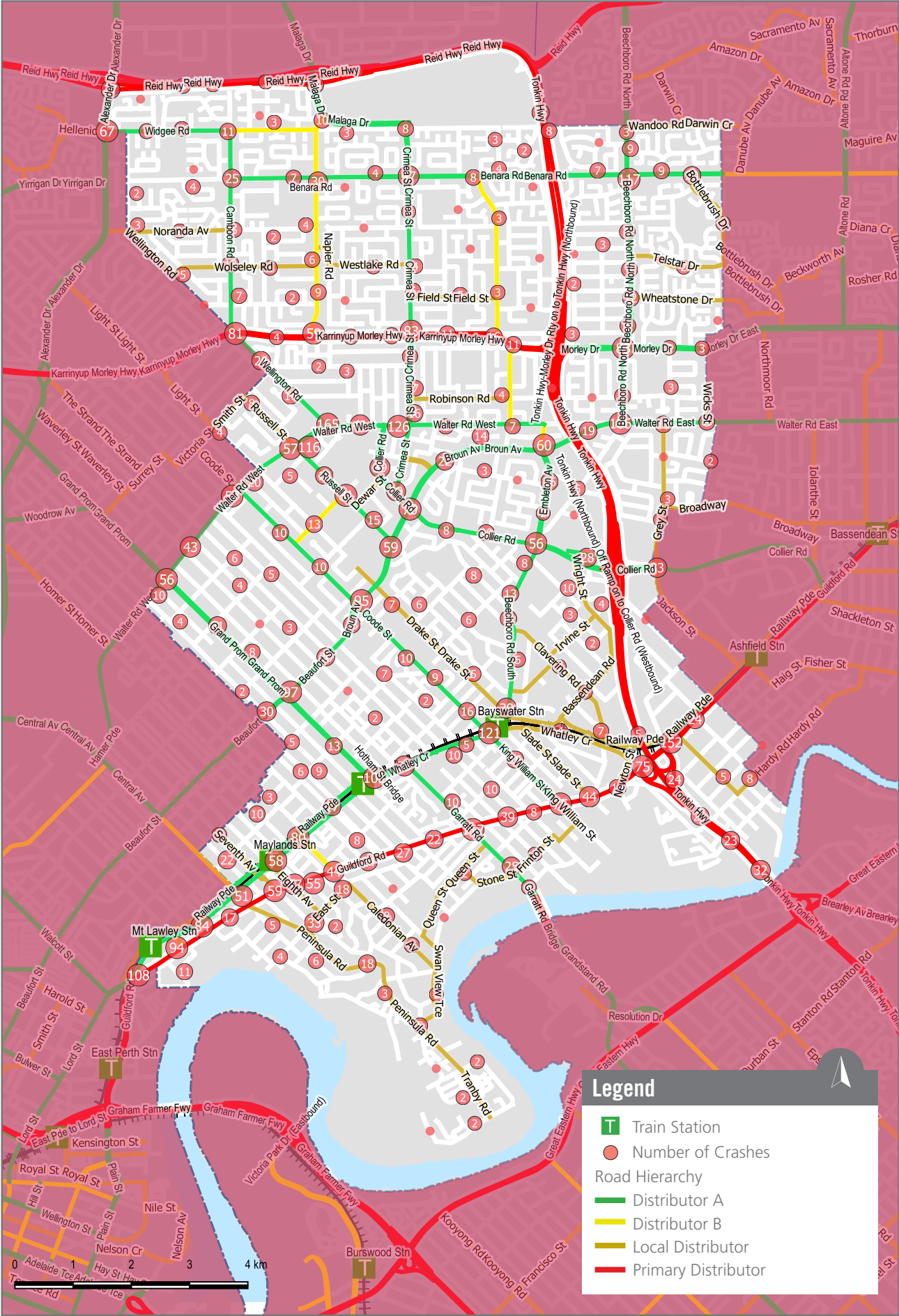
Other considerations include:

- Vulnerable Road Users – there is an at or above average crash percentage within the City of Bayswater area involving cyclists or pedestrians, respectively. Key consideration, including a review of the existing infrastructure and crossing locations should be given to the following locations:
 - Morley Drive / McGilvray Avenue (3 cyclist crashes, all requiring medical attention)
 - McGilvray Avenue (2 pedestrian crashes requiring hospitalisation, due to visual obstruction caused by parked cars)
 - Walter Road West between Light Street and Crimea Street (7 pedestrian crashes and 3 cyclist crashes)
 - Russell Street (10 pedestrian and 2 cyclist crashes) – Near Morley Galleria – a review to increase the pedestrian and cyclist environment is recommended)
 - Beaufort Street between Salisbury Street and Broun Avenue (9 cyclist crashes and 1 pedestrian crash)
 - Walter Road East near Beechboro Road North (3 cyclist crashes)
 - Beechboro Road South / Railway Parade (3 cyclist crashes)
 - King William between Broun Avenue and Georgina Street (6 pedestrian and 4 cyclists).
 - Gummery Street near the bend before Coode Street (2 cyclist crashes, 1 requiring medical attention and 1 requiring hospitalisation).
- Intersections
 - Within the City of Bayswater area, there is a higher than average percentage of crashes that occur at intersections.
 - Within the City of Bayswater area, a significantly higher percentage of right turn through crashes are noted, and further review should be undertaken to identify if signals or signage should be amended.



Figure 5.1: Overall Number of Crashes within the Local Government Area

5.5. Mapping



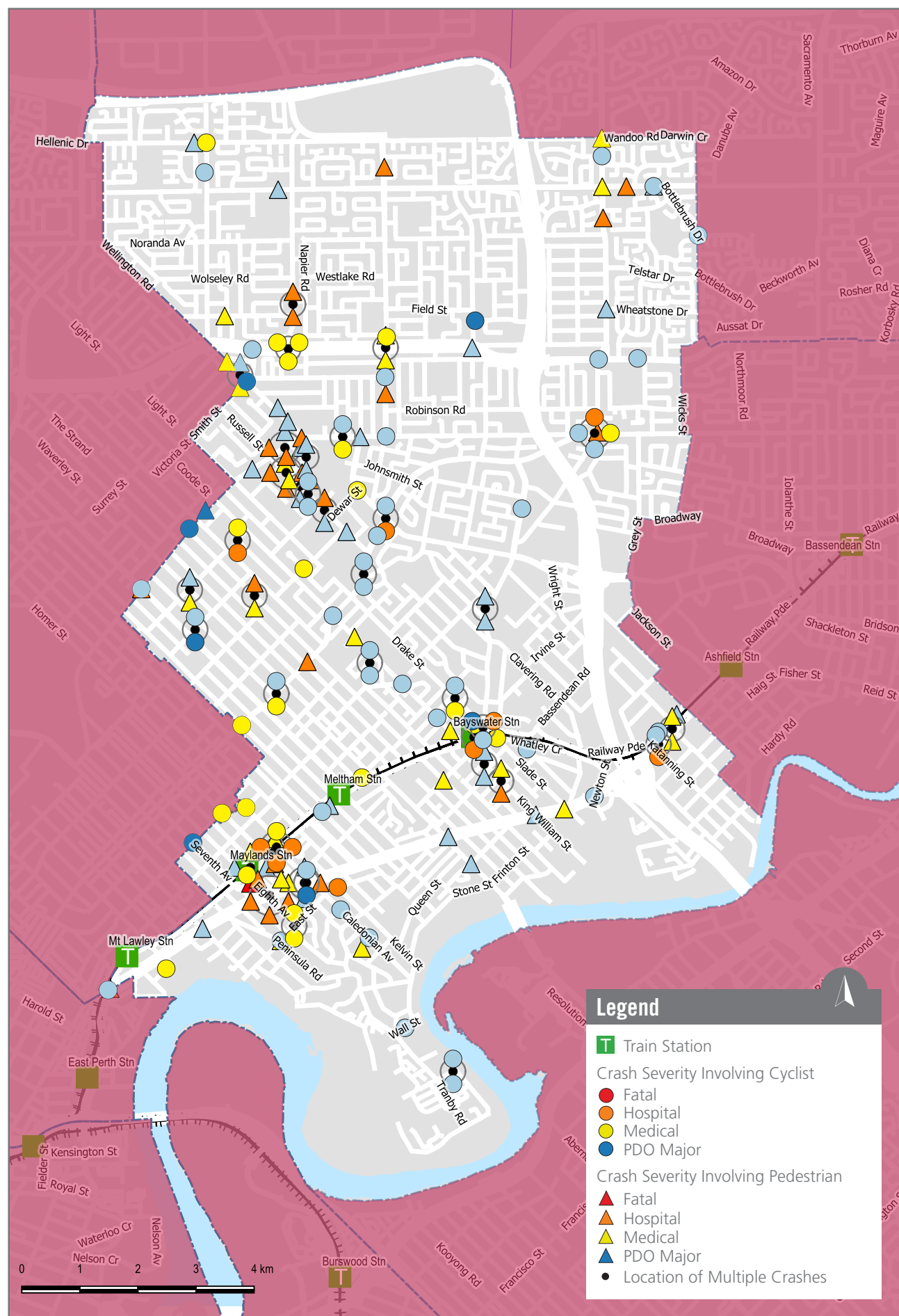
Data Source: Main Roads WA Crash Analysis Reporting System (CARS) - Period 2013 to 2017

Legend

- T Train Station
- Bayswater Intersection Crashes
- Bayswater Midblock Crashes

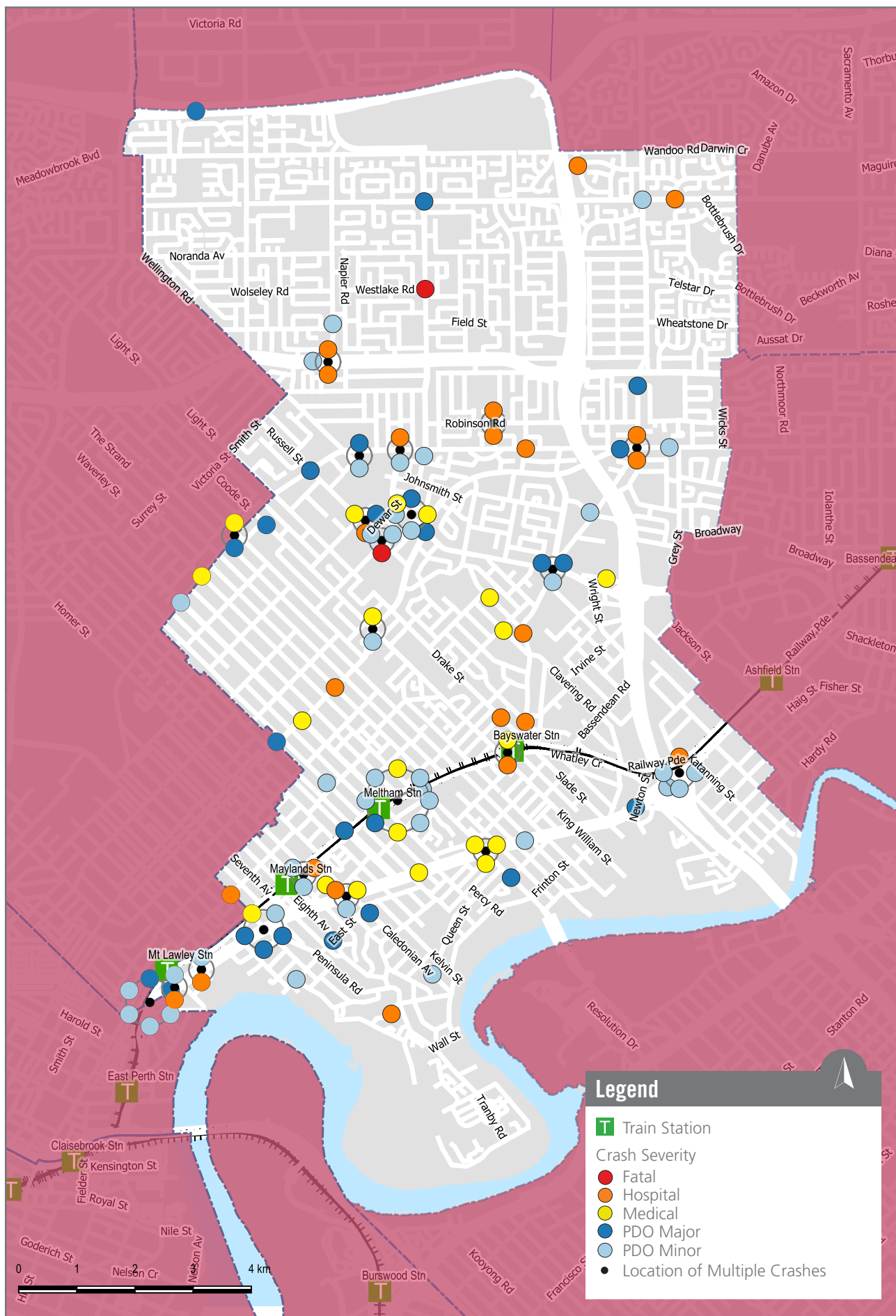
EMRC REGIONAL ROAD SAFETY PLAN | 37

Figure 5.3: Cyclist and Pedestrian Crashes within the Local Government Area



Data Source: Main Roads WA Crash Analysis Reporting System (CARS) - Period 2013 to 2017

Figure 5.4: Motor cycle Crashes within the Local Government Area



Data Source: Main Roads WA Crash Analysis Reporting System (CARS) - Period 2013 to 2017

6. City of Belmont

Road Safety Review

6.1. Background

The City of Belmont has a land area of approximately 40km² with an estimated resident population (ERP) of 41,510¹³ and population density of 10.46 persons per hectare. The City's population has grown steadily from 31,560 since 2006.

The City of Belmont is bound by the Swan River to the north, with the City of Bayswater and Town of Bassendean on the other side of the River, Town of Victoria Park to the south-west, City of Canning to the south-east, City of Kalamunda to the east, and City of Swan to the north-east. The City of Belmont is not serviced by a passenger train line at present; however, Redcliffe Station will be constructed as part of the State Government's METRONET. This will connect to the Midland Line and terminate at the future Forrestfield Station via Perth Airport. Major roads in the City include Tonkin Highway, Leach Highway, Great Eastern Highway and Orrong Road, all of which form a boundary around the City's residential edges.

The City has a number of distinct neighbourhoods including the Ascot Racecourse and adjacent Stables Zone, industrial areas including the Kewdale Freight Terminal, Belmont Mixed Use Zone, and residential areas. The Belmont Town Centre was also recoded in December 2011, which has seen an increase in apartments (Multiple Dwellings) and Grouped Dwellings in the area.

The MRWA crash data for the period between 2013 to 2017 recorded a total of 5,091 crashes involving 10,087 units (including cars, buses, trucks, pedestrians and cyclists). Of the total number of crashes, 6 (0.1%) were fatal, 157 (3.1%) required hospitalisation and 630 (12.4%) required medical attention. Two of the fatal crashes involved pedestrians (inclusive of the use of a manual recreational scooter), which highlights the importance of protecting vulnerable road users.

6.2. Literature Review

City of Belmont – Belmont on the Move 2015

The Integrated Transport Strategy for Belmont (Belmont on the Move) is a holistic study assessing all modes as well as community needs. While there is no specific section or analysis around road safety within the Strategy, recommendations do include such things as reduce speed zones (40km/h zones), improved pedestrian and cycle infrastructure, improvements to bus infrastructure as well as addressing road infrastructure and on-street parking. Implementation is proposed over a number of years, as funding is available.



Population
41,510

Land Area
40km²

Density
10.46
persons per
hectare

¹³ Population Estimate from ProfileID, derived from the Australian Bureau of Statistics Estimated Residential Population 2018

Table 6.1: City of Belmont Crash Severity

Severity	Number of Crashes	Percentage	EMRC Average
Fatal	6	0.1%	0.3%
Hospital	157	3.1%	4.6%
Medical	630	12.4%	13.6%
PDO Major	2698	53.0%	53.4%
PDO Minor	1600	31.4%	28.0%
Total	5,091	100%	100%

City of Belmont – Draft Sustainable Transport Plan 2019

The Sustainable Transport Plan is intended to create real change towards a more sustainable transport network for the people within the City of Belmont. The Plan, updates and combines the City's most recent TravelSmart Plan and Local Bike Plan into one document, together with a walking plan and a high level overview of public transport; a four-in-one plan whose outcomes have been informed by community consultation, documentation review and further analysis of the transport network. The plan aligns with the sustainable transport objectives set out in Belmont on the Move, for the City to be pedestrian and cyclist-friendly, traffic-calmed and accessible, and supporting sustainable transport with good public transport. In addition to active and public transport infrastructure recommendations, the plan identifies a number of reduced speed measures and a number of behaviours change recommendations, addressing safer roads, safer speeds and safer road use.

6.3. Crash Hotspots

5,092 crashes were recorded within the City of Belmont area between 1 January 2013 and 31 December 2017, which involved 8,754 known units, which include bicycles, cars, heavy vehicles (including buses, trucks, semitrailers, tractors and road trains), motor cycles (including motorised scooters) and pedestrians (including motorised wheelchairs, skateboards and manual scooters). It is noted that the vehicle type data for 1,064 vehicles were not recorded. 81.8% of crashes involved cars, whilst 3% included vulnerable road users including bicycles, motor cycles and pedestrians. 4.4% of crashes involved heavy vehicles, which is slightly less than the EMRC area average of 4.6%. The majority of crashes within the City of Belmont occurred at intersections (64.8%), which is more than the EMRC area average. The City of Belmont has a rich mixture of urban (including low to high density residential areas) and industrial land uses, which is reflected in the mix of crashes.



The crash data maps identify a few features within the City of Belmont area. These are summarised below:

- A large proportion of crashes occurred on higher order roads, such as Great Eastern Highway (Primary Distributor), Tonkin Highway (Primary Distributor), Leach Highway (Primary Distributor), Orrong Road (Primary Distributor), Abernethy Road (Distributor A), Garratt Road (Distributor A), Belgravia Street (Distributor A to Frederick Street, Local Road to Gabriel Street and Local Distributor to Kew Street).

However, a number of crashes have also occurred on all of the Distributor B and Local Distributor roads. Distributor B roads include Hardey Road, and Alexander Road, whilst Local Distributors include Francisco Street, Wright Street, Oats Street, Acton Avenue, Epsom Avenue, Belvidere Street, Frederick Street, Belgravia Street, Kew Street and Stanton Road.

Of these, Tonkin Highway, Leach Highway, Great Eastern Highway, Graham Farmer Freeway are Primary Regional Roads whilst Belgravia Street (between Fairbrother and Great Eastern Highway), Fairbrother Street (between Abernethy Road and Belgravia Street), Abernethy Road (between Fairbrother Street and Tonkin Highway), Kewdale Road and Orrong Road, are Other Regional Roads, as defined under the Metropolitan Region Scheme. Therefore, these roads are under the control of MRWA or the Department of Planning, Lands and Heritage, respectively, with some functions potentially delegated to the local government. The analysis does not focus on these roads, but rather focusses on other lower order local roads.

There are also a high frequency of crashes along local roads. This may be due to the City's grid form and built out nature. It is noted there is a higher number of crashes along routes which allow through movement throughout the City. The majority of crashes on local roads are midblock crashes.

- Local road intersections which have recorded a high number of crashes include:
 - Francisco Street / Gladstone Road (16)
 - Kooyong Road / Newey Street (8)
 - Kooyong Road / Campbell Street (6)
 - Fulham Street / Armadale Road (7)
 - Fulham Street / Acton Avenue (5)
 - Fulham Street / Belmont Avenue (18)
 - Fulham Street / Fisher Street (10)
 - Durban Street / Leake Street (7)
 - Epsom Avenue / Victoria Street (6)
 - Acton Avenue / Francisco Street (7)
 - Belmont Avenue / Francisco Street (20)
 - Hardey Road / Alexander Drive (15)
 - Hardey Road / Sydenham Street (10)
 - Hardey Road / Gabriel Street (11)
 - Gabriel Street / Fisher Street (11).
- A large number of crashes have also occurred within the Perth Airport area, where the roads are subject to federal legislation outside the control of the Western Australian State Government and Local Government. Key roads include Horrie Miller Drive and Grogan Road. It should be noted that large infrastructure works have been undertaken within this vicinity and these crash statistics are not reflective of the current road network.
- Whilst the percentage of heavy vehicle crashes is below the EMRC area average, the City of Belmont has the third highest percentage of heavy vehicle crashes in Perth's eastern region. The majority of heavy vehicle crashes have occurred along Great Eastern Highway, Abernethy Road (with a higher concentration in the Kewdale Industrial Area), Kewdale Road, Leach Highway, Tonkin Highway and Orrong Road, all of which are higher order roads (Primary Distributor or Distributor A). Local roads which have a multiple occurrence of heavy vehicle crashes include:
 - Hardey Road / Alexander Road (2)
 - Abernethy Road at or near Francisco Street, within the Belmont Mixed Use Zone (3)
 - Belmont Avenue / Campbell Street (2).
- A number of cyclist and pedestrian crashes also occurred in the area, with key areas identified as follows:
 - Belmont Avenue, particularly between Wright Street and Gabriel Street (5 cyclists and 4 pedestrians, noting this is near Belmont Forum, which is an attractor)
 - Belmont Avenue / Campbell Street (2 cyclists)
 - Armadale Road / Alexander Road (3 cyclists with two requiring medical attention or hospitalisation)
 - Grandstand Road between Raconteur Drive and Waterway Crescent (3 cyclists with two requiring medical attention or hospitalisation)
 - Great Eastern Highway at Abernethy Road and Belgravia Street intersections have also experienced a high number of crashes involving cyclists and pedestrians.
- The majority of motor cycle crashes have occurred along Orrong Road, with the intersections with Francisco Street, Roberts Road (Town of Victoria Park), Alexander Road, Archer Street (Town of Victoria Park), Wright Street, Oats Street, Briggs Street and Leach Highway, all having multiple crash occurrences. Key hotspots along Great Eastern Highway include the intersections of Epsom Avenue, Tonkin Highway, Coolgardie Street and Fauntleroy Avenue. Six crashes also occurred at the intersection of Horrie Miller Drive and Tonkin Highway, between the City of Belmont and Perth Airport,
- Local roads with multiple motor cycle crashes include:
 - Alexander Road / Kooyong Road (2)
 - Wright Street / Armadale Road (2)
 - Wright Street / Belmont Avenue (2)
 - Gabriel Street / Hardey Road (2)
 - Keane Street / Trink Street (2).
- There is a higher proportion of rear end, right turn through and sideswipe same direction crashes within the City of Belmont area than the EMRC area average. This can be an indication of congestion, where vehicles do not react in time and therefore result in rear end crashes or vehicles attempt to overtake which would see sideswipe same direction type crashes. The higher proportion of right turn through traffic may be an indicator of the existing signals in place, such as traffic signals which allow filtered right turn movements or stop or give-way signs. The City of Belmont also have a high number of roundabouts which may result in more rear-end crashes. However, reduces the number of right angle crashes and severity of crashes as drivers are required to slow upon approach.

It should be noted that heavy vehicles include buses and therefore a proportion of the heavy vehicle crashes in residential areas involve a bus.

Table 6.2: City of Belmont Type of Vehicles Involved in Crashes

Severity	Number of Crashes	Percentage	EMRC Average
Bicycle	79	0.8%	0.9%
Car	8030	81.8%	84.3%
Heavy Vehicles	430	4.4%	4.6%
Motor Cycle	173	1.8%	2.2%
Pedestrian	42	0.4%	0.7%
Total (Known)	8754	89.2%	92.6%
Unknown	1064	10.8%	7.4%

Table 6.3: City of Belmont Midblock vs Intersection Crash

Location	Number of Crashes	Percentage	EMRC Average
Intersection	3,301	64.8%	59.7%
Midblock	1790	35.2%	40.3%
Total	5,091	100%	100%

Table 6.4: City of Belmont Crash Type

Location	Number of Crashes	Percentage	EMRC Average
Head On	18	0.4%	1.1%
Hit Animal	4	0.1%	0.6%
Hit Object	254	5.0%	9.2%
Hit Pedestrian	40	0.8%	1.2%
Non-Collision	40	0.8%	1.5%
Rear End	2595	51.0%	44.1%
Right Angle	983	19.3%	22.4%
Right Turn Through	317	6.2%	6.0%
Sideswipe Same Direction	617	12.1%	10.5%
Total (Known)	4868	95.6%	96.4%
Unknown	223	4.4%	3.6%

6.4. High Risk Areas

The City of Belmont has a grid block layout throughout much of the City. This has resulted in an accessible network. However, through routes have also been identified to have a higher frequency of crashes. The majority of crashes on local roads occur at intersections.

The following local roads of particular concern are:

- Keane Street
- Sydenham Street
- Campbell Street
- Surrey Road
- Daly Street
- Keymer Street
- Miles Road
- Fulham Street (with 20 midblock crashes between Robinson Street and Abernethy Road).
- Local road intersections which have recorded a high number of crashes include:
 - Francisco Street / Gladstone Road (16)
 - Francisco street / Action Avenue (7)
 - Kooyong Road / Newey Street (8)
 - Kooyong Road / Campbell Street (6)
 - Fulham Street / Armadale Road (7)
 - Fulham Street / Acton Avenue (5)
 - Fulham Street / Belmont Avenue (18)
 - Fulham Street / Fisher Street (10)
 - Durban Street / Leake Street (7)
 - Epsom Avenue / Victoria Street (6)
 - Hardey Road / Alexander Drive (15)
 - Hardey Road / Sydenham Street (10)
 - Hardey Road / Gabriel Street (11).

These intersections are generally along the same routes, and therefore corridor studies of these roads (**Francisco Street, Kooyong Road, Fulham Street and Hardey Road**) could be considered.

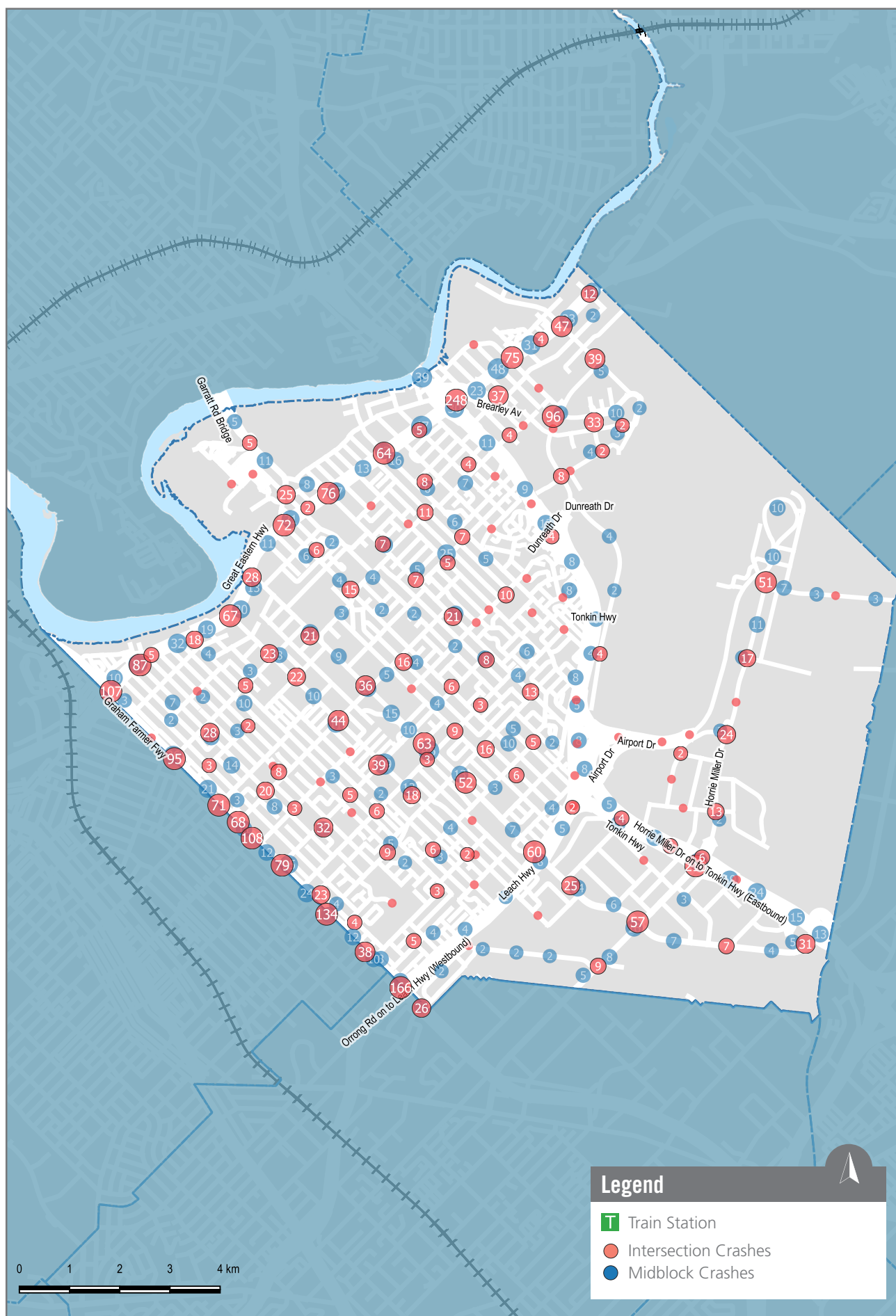
- Types of crashes - There is a higher instance of rear end crashes, right angle crashes and sideswipe same direction crashes within the City of Belmont area, which could be analysed in further detail.

Figure 6.1: Overall Number of Crashes within the Local Government Area



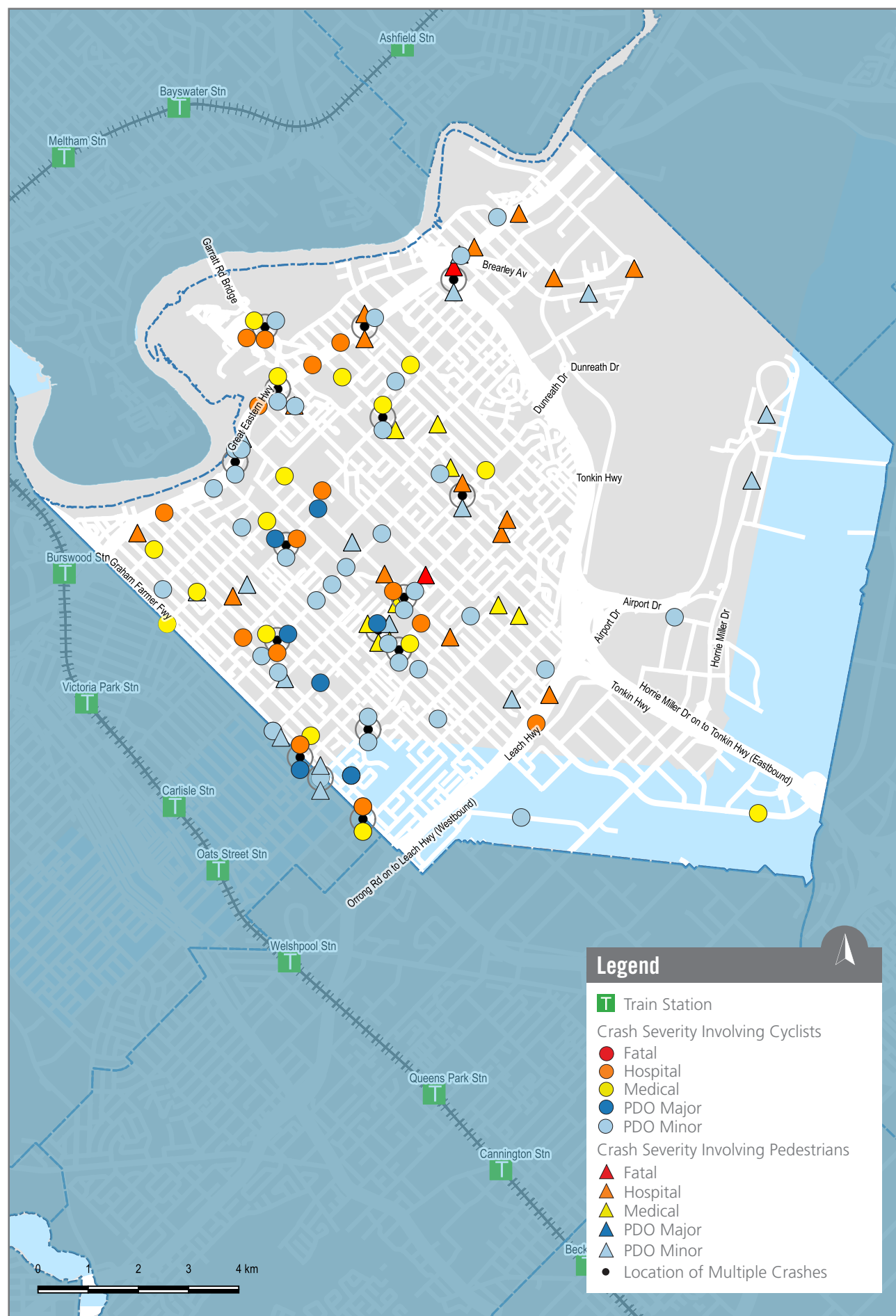
Data Source: Main Roads WA Crash Analysis Reporting System (CARS) - Period 2013 to 2017

Figure 6.2: Overall Midblock vs Intersection Crashes within the Local Government Area



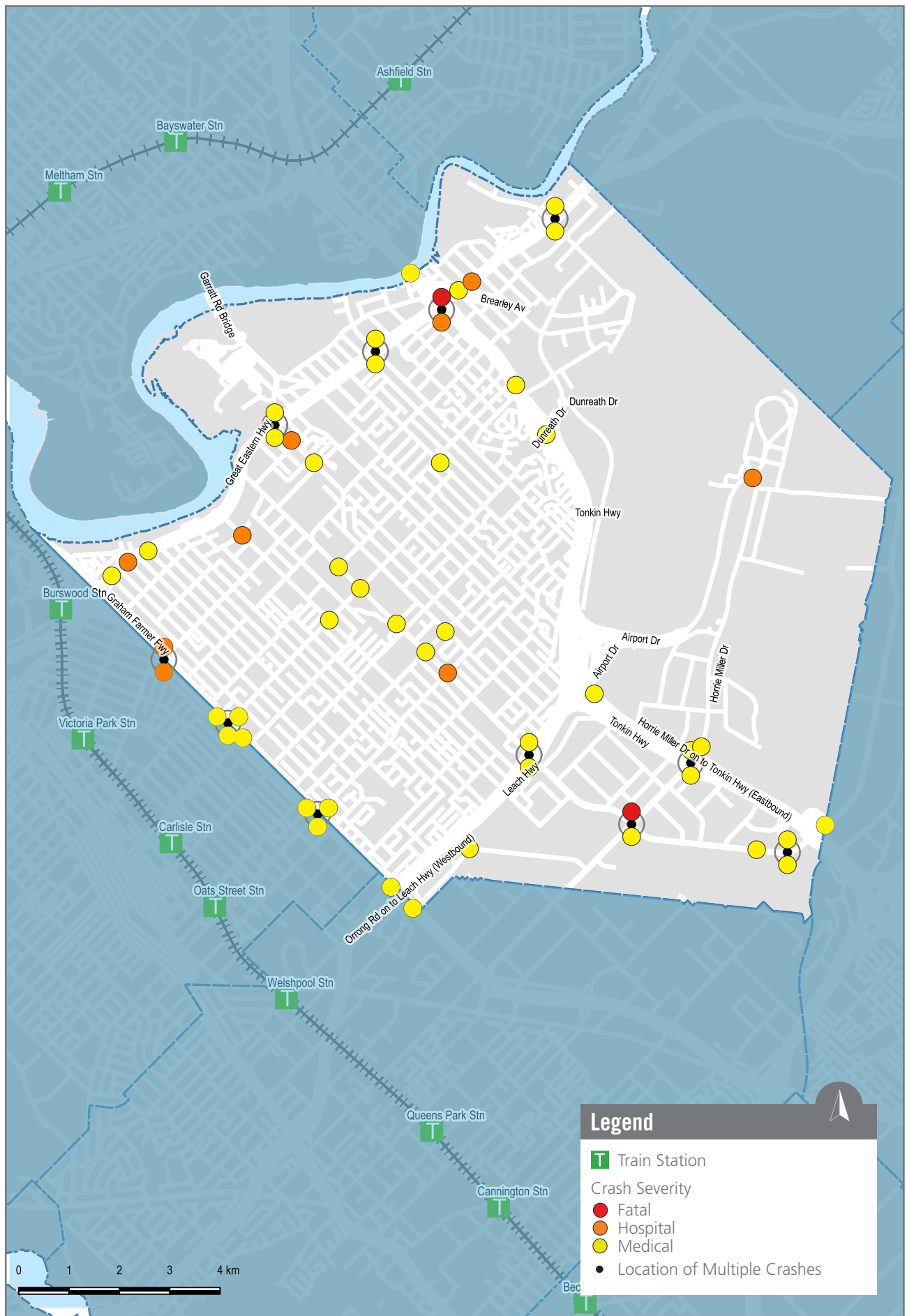
Data Source: Main Roads WA Crash Analysis Reporting System (CARS) - Period 2013 to 2017

Figure 6.3: Cyclist and Pedestrian Crashes within the Local Government Area



Data Source: Main Roads WA Crash Analysis Reporting System (CARS) - Period 2013 to 2017

Figure 6.4: Killed and Seriously Injured Bus and Heavy Vehicle Crashes within the Local Government Area



Data Source: Main Roads WA Crash Analysis Reporting System (CARS) - Period 2013 to 2017

7. City of Kalamunda Road Safety Review

7.1. Background

The City of Kalamunda has a land area of approximately 324km² with an ERP of 58,946¹⁴ and a population density of 1.82 persons per hectare. Although the City has experienced an overall growth from 51,423 to 58,946 between 2006 and 2018, the population has fluctuated over the years, with a reduction in 2016 which remained quite consistent in 2017 and a further reduction in 2018.

The key transport network in the City of Kalamunda include Tonkin Highway and Roe Highway. There is currently no passenger rail servicing the City. However, Forrestfield Station, as part of the State Government's METRONET will terminate within the City's boundaries, and feed into the Midland Line. Other key road infrastructure within the City of Kalamunda include the Forrestfield Transit Orientated Development and Abernethy Road extension to Lloyd Street, the grade separation of Great Eastern Highway Bypass / Roe Highway and removal of the full movement intersection to and from Hale Road and Tonkin Highway as part of the flyover proposal. The Roe Highway / Kalamunda Road Interchange Project is also due to commence soon. It should be noted that the majority of these key routes including Tonkin Highway, Roe Highway, Great Eastern Highway and Welshpool Road East are managed by Main Roads Western Australia, and therefore out of the control of the local government.

The City is largely residential and rural with a number of key industrial areas with Restricted Access Vehicle (RAV) routes with a large portion of the City being National Parks. The urban areas of the City are rapidly growing, including High Wycombe, Maida Vale and Wattle Grove. Key industrial areas include the Hazelmere Industrial area and the Forrestfield Intermodal Terminal, which are both attractors of heavy vehicles. Key local industries include orchards, intensive horticulture activities, grazing, animal agistment, minor sawmills, poultry, Government Works Depot and the C.B.H state grain terminal¹⁵.

The MRWA crash data for the period between 2013 to 2017 recorded a total of 3,150 crashes, inclusive of 480 single vehicle crashes, within the City of Kalamunda. Of these crashes, 18.7% required medical attention, hospitalisation or were fatal. Of the 16 fatal crashes, four involved pedestrians and nine involved motor cycles. Eight of the fatal crashes were also single vehicle crashes, where the driver lost control of the vehicle. One of these was a cyclist and four of these motorcyclists.



Population
58,946

Land Area
342km²

Density
1.82
persons per
hectare

¹⁴ Population Estimate from ProfileID, derived from the Australian Bureau of Statistics Estimated Residential Population 2018

¹⁵ City of Kalamunda History 2018 <http://www.kalamunda.wa.gov.au/About-Us/Our-City/History>

Table 7.1: City of Kalamunda Crash Severity

Severity	Number of Crashes	Percentage	EMRC Average
Fatal	16	0.5%	0.3%
Hospital	144	4.6%	4.6%
Medical	427	13.6%	13.6%
PDO Major	1737	55.1%	53.4%
PDO Minor	826	26.2%	28.0%
Total	3,150	100%	100%

7.2 Literature Review

City of Kalamunda – Bicycle Plan 2017

The City has recently prepared a Bicycle Plan with a focus on behaviour change (encouragement and education) which includes school-based programmes, network planning for better and safer cycle infrastructure and infrastructure recommendations for a ten-year time frame. The plan addressed safer cycle infrastructure, with a small portion also improving safer pedestrian infrastructure (such as shared paths, improved intersection crossing etc) as well as three recommendations for Safe Active Streets (safer speeds).

7.3. Crash Hotspots

3,150 crashes were recorded within the City of Kalamunda between 1 January 2013 and 31 December 2017, which involved 5,207 known units, including bicycles, cars, heavy vehicles (including buses, trucks, semitrailers, tractors and road trains), motor cycles (including motorised scooters) and pedestrians (including motorised wheelchairs, skateboards and manual scooters). It is noted that the vehicle type data for 555 units was not recorded. Of the known units, 80.3% involved cars, whilst 4.1% included vulnerable road users such as bicycles, motor cycles and pedestrians. There is a higher percentage (6%) of heavy vehicles involved in crashes within the City of Kalamunda when compared with the EMRC area average of 4.6%. This is likely due to the industrial areas and RAV routes, including Welshpool Road East.



The majority of crashes within the City have occurred along the higher order roads including the Primary Distributor roads of Roe Highway, Tonkin Highway and Orrong Road, and Distributor A roads of Kalamunda Road, Canning Road, Lesmurdie Road, Welshpool Road East, Hale Road, Berkshire Road and Abernethy Road. The majority of these roads being owned and managed by MRWA. However, a number of crashes have also occurred on lower order local roads:

- Berkshire Road / Dundas Road (8)
- Sheffield Road / Hale Road (13)
- Hale Road between Sheffield Road and Arthur Road, including the Sheffield Road / Hale Road intersection (26)
- Canning Road / Grove Road (8)
- Canning Road / Pomeroy Road (5)
- Maida Vale Road (35 crashes plus 34 crashes at the Roe Highway on/off ramps)
- Newburn Road (29 crashes plus 47 at the intersection of Kalamunda Road)
- Railway Road / Mead Street (5)
- Railway Road / Elizabeth Street (8)
- Gooseberry Hill Road / Williams Street (9)
- Ridge Hill Road (25)
- Mundaring Weir Road (22).

Of the above, Canning Road (between Pomeroy Road to Welshpool Road East), Maida Vale Road / Roe Highway, Railway Road / Elizabeth Street and Mundaring Weir Road have received Black Spot Program funding recently. Additionally, Berkshire Road / Dundas Road is being upgraded for RAV 7 access.

- It is noted that the majority of midblock crashes have occurred on higher order roads, including Primary Distributors, Distributor A and Distributor B roads.
- The majority of crashes on local roads occurred at intersections. The majority of crashes in rural, less built up areas also occurred at intersections.
- Whilst the percentage of cyclist and pedestrian crashes is lower than the EMRC area average, there have still been a number of notable casualty crashes in dense areas such as the Kalamunda Town Centre, Hawaiian's Forrestfield Shopping Centre and two schools (Hillside Christian College and Heritage College).
- A number of motor cycle related crashes have occurred on Tonkin Highway and Roe Highway. However, there have also been a number along Kalamunda Road, Canning Road, Mundaring Weir Road and Lesmurdie Road.
- There is a higher percentage of rear end, head on and non-collision crashes as well as those hitting objects. The higher proportion of head on and non-collision crashes as well as hitting objects may be a reflection of the topography and rural nature of the roads, which saw the majority of these crashes a result of losing control or swerving to avoid an animal or vehicle.
- 6.2% of crashes within the City of Kalamunda area also occurred when a driver attempted to overtake another vehicle. This triggers the potential for more driver awareness for safe overtaking.

Table 7.2: City of Kalamunda Type of Vehicles Involved in Crashes

Type of Vehicle	Number of Crashes	Percentage
Bicycle	48	0.8%
Car	4626	80.3%
Heavy Vehicles	345	6.0%
Motor Cycle	160	2.8%
Pedestrian	28	0.5%
Total (Known)	5207	90.4%
Unknown	555	9.6%

Table 7.3: City of Kalamunda Midblock vs Intersection Crash

Location	Number of Crashes	Percentage
Intersection	1,746	55.4%
Midblock	1,404	44.6%
Total	3,150	100%

Table 7.4: City of Kalamunda Crash Type

Location	Number of Crashes	Percentage
Crash Type	Number of Crashes	Percentage
Head On	53	1.7%
Hit Animal	12	0.4%
Hit Object	405	13.2%
Hit Pedestrian	28	0.9%
Non-Collision	71	2.3%
Rear End	1506	49.2%
Right Angle	519	16.9%
Right Turn Through	125	4.1%
Sideswipe Same Direction	298	9.7%
Total (Known)	3017	98.5%
Unknown	47	1.5%



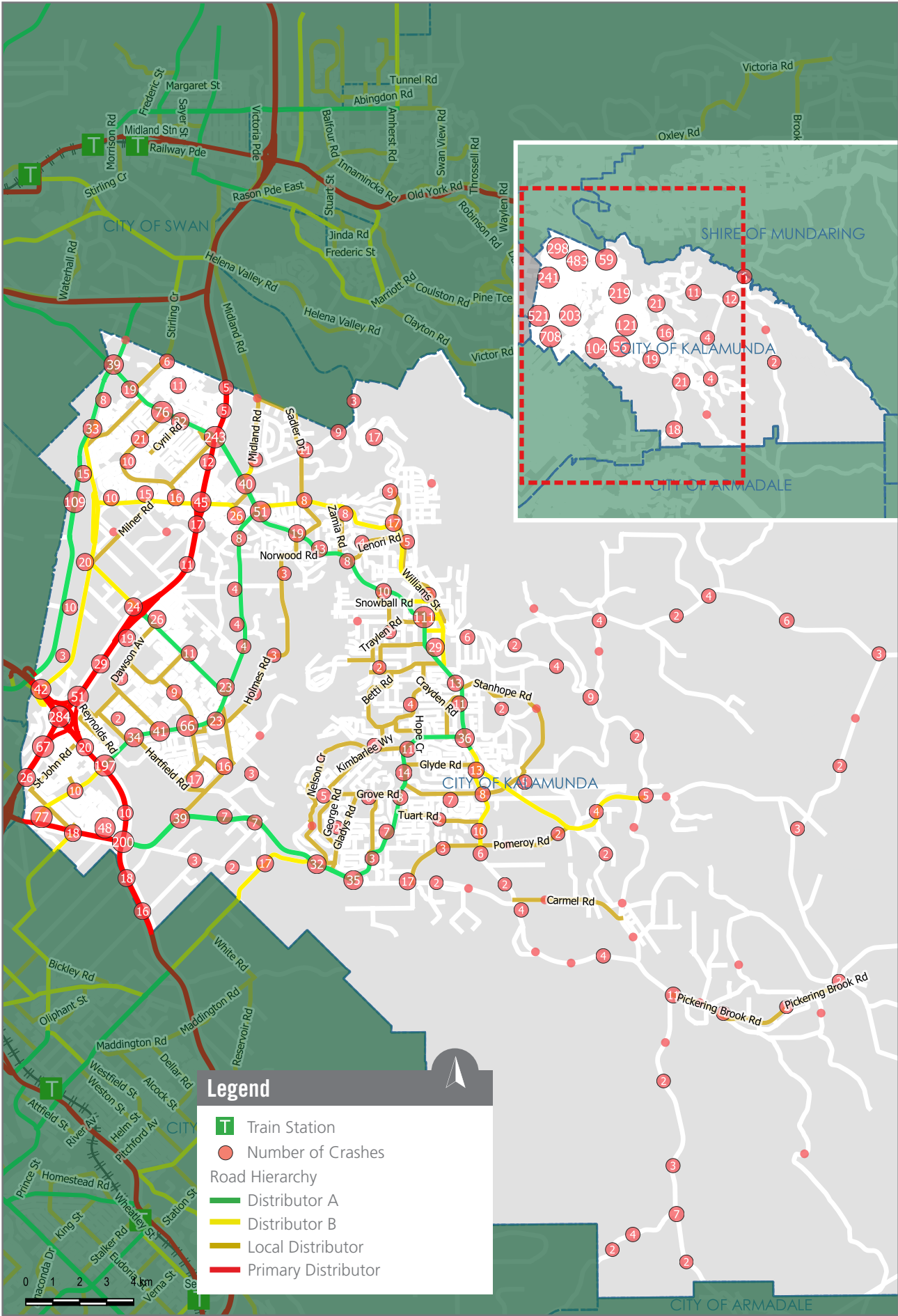
7.4. High Risk Areas

The City of Kalamunda area is a unique environment and therefore faces a number of various challenges.

- One particular intersection of concern is the **Lesmurdie Road and Welshpool Road East** intersection which has recorded 24 crashes with 10 involving cyclists and the majority requiring medical attention or hospitalisation. The City have undertaken mitigation works to this intersection but the impact of crash reduction is still to be assessed.
- Activity areas such as shopping centres and town centres have a higher occurrence of pedestrian and cyclist related crashes.
 - Four notable pedestrian related crashes were recorded in the **Kalamunda Town Centre** on Barber Street and Heath Road, which saw two pedestrians and two cyclists involved. Two were fatal and two required hospitalisations. These all occurred as the pedestrian attempted to cross the road.
 - Two cyclist and three pedestrian related crashes occurred along Hale Road, between Dawson Avenue and Strelitzia Avenue, abutting **Hawaiian's Forrestfield**, all of which resulted in medical attention or hospitalisation.
- Driver education campaigns could be further established for safe overtaking. 6.2% of total crashes occurred in the City of Kalamunda area as vehicles attempted to overtake another vehicle. There is also a higher percentage of rear end, head on and non-collision crashes as well as those hitting objects. The higher proportion of head on and non-collision crashes as well as hitting objects may be a reflection of the topography and nature of the roads, which saw the majority of these crashes a result of losing control of the vehicle, loose gravel on the road or swerving to avoid an animal or vehicle.

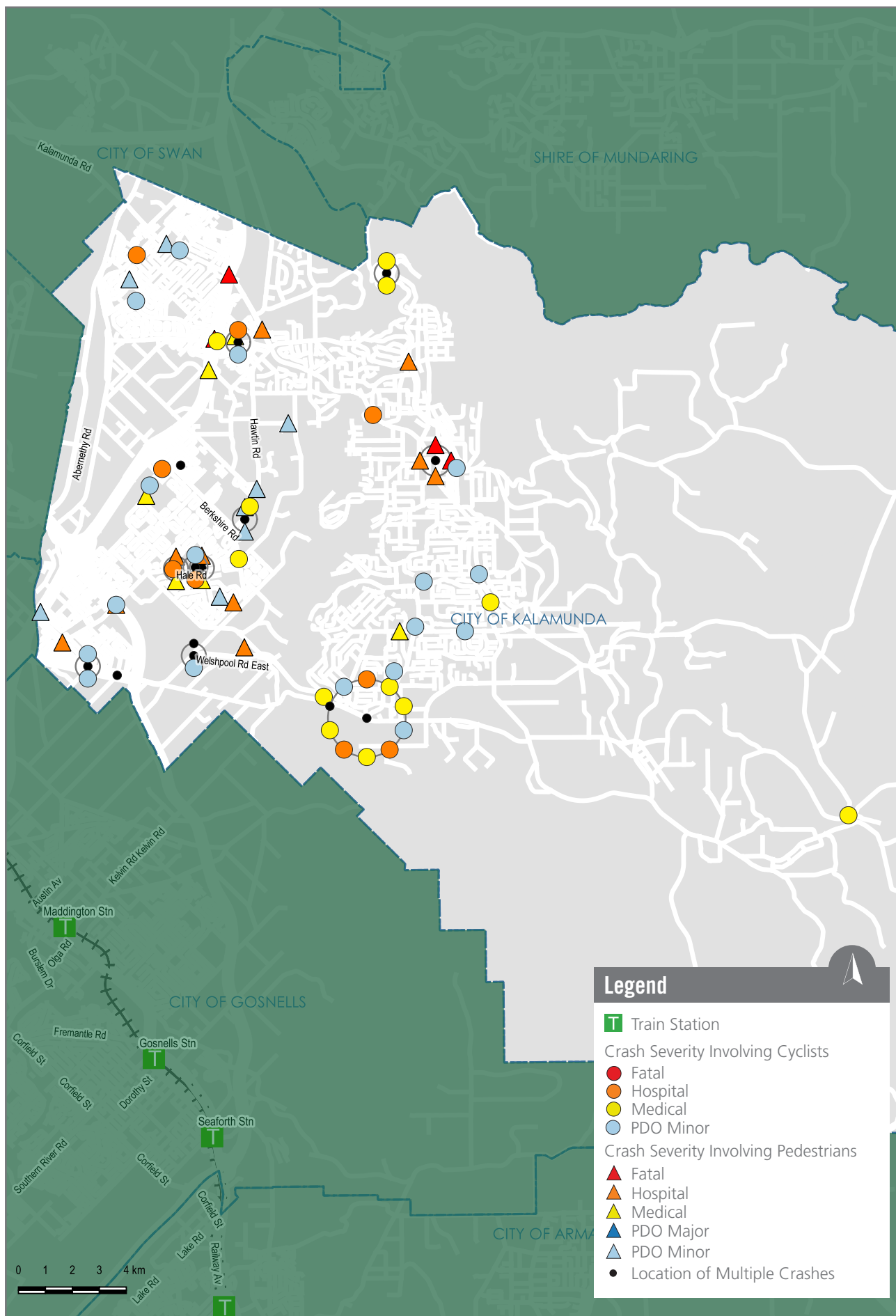


Figure 7.1: Overall Number of Crashes within the Local Government Area



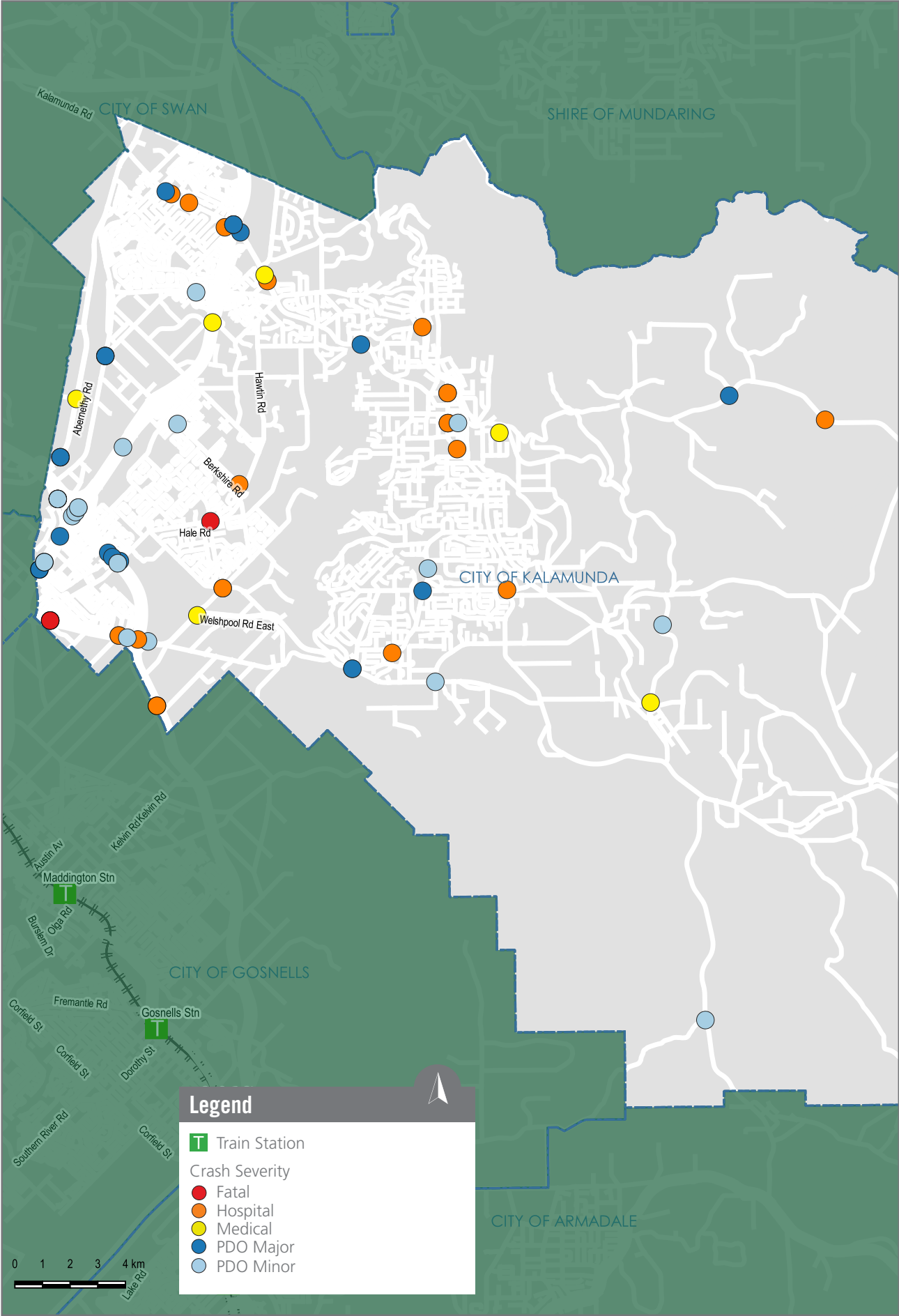
Data Source: Main Roads WA Crash Analysis Reporting System (CARS) - Period 2013 to 2017

Figure 7.2: Cyclist and Pedestrian Crashes within the Local Government Area



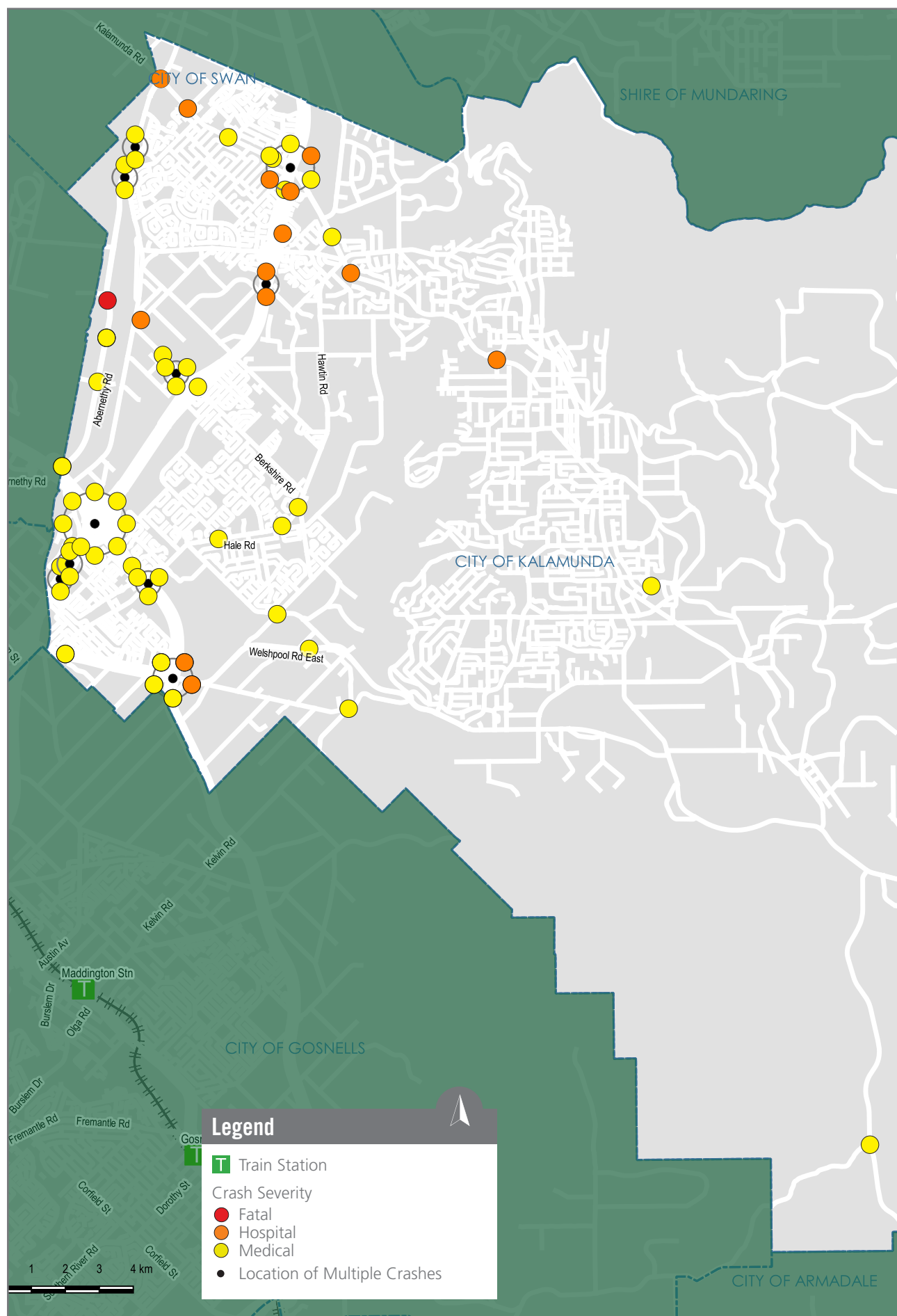
Data Source: Main Roads WA Crash Analysis Reporting System (CARS) - Period 2013 to 2017

Figure 7.3: Motor Cycle Crashes within the Local Government Area



Data Source: Main Roads WA Crash Analysis Reporting System (CARS) - Period 2013 to 2017

Figure 7.4: Killed and Seriously Injured Bus and Heavy Vehicle Crashes within the Local Government Area



Data Source: Main Roads WA Crash Analysis Reporting System (CARS) - Period 2013 to 2017

8. Shire of Mundaring Road Safety Review

8.1. Background

The Shire of Mundaring is the easternmost member Council with a land area of approximately 644km². The Shire has an ERP of 39,139¹⁶ and a population density of 0.61 persons per hectare. Overall, the population has increased from 36,326 in 2006 to 39,139 in 2018. The Shire of Mundaring is bound by the City of Swan to the North, City of Kalamunda to the South, and Shire of Northam and York to the east. The Shire is not serviced by any passenger railway network. Key roads in the Shire include the Great Eastern Highway which is a key regional east-west link.

The MRWA CARS data for Mundaring for the period between 2013 to 2017 recorded a total of 1,813 crashes within the Shire of Mundaring. As seen in the table below there were a total of 13 fatal crashes 2 of which involved a vulnerable road user, being a motorcyclist colliding with a car when overtaking and a motorcyclist rear ending a truck. All other fatal crashes were a result of loss of control of the vehicle, with eight being single vehicle crashes.

8.2. Literature Review

Shire of Mundaring – District Transport Study 2009

The District Transport Study has a focus on the Mundaring townsites comprising parts of the suburbs of Stoneville, Parkerville and Mundaring. The study discusses the importance of EastLink noting how it will improve accessibility and ultimately safety to the townsites, when regional traffic diverts to EastLink.

The study also included a crash assessment of a number of the roads and observes that Stoneville Road has the highest number of recorded crashes of the roads assessed, noting that a large proportion of the crashes occurred near the Mundaring Town Centre particularly intersection crashes. It also notes that Seaborne Street / Great Eastern Highway intersection has a relatively high record of crashes, perhaps indicating the intersection design is below standard.

8.3. Crash Hotspots

1,813 crashes were recorded within the Shire of Mundaring area which involved 2,927 known units, which include bicycles, cars, heavy vehicles (including buses, trucks, semitrailers, tractors and road trains), motor cycles (including mopeds and trail bikes) and pedestrians. It is noted that the vehicle type data for 110 units was not recorded. Of the known units, 85.8% involved cars, whilst 4.5% included vulnerable road users including bicycles, motor cycles and pedestrians. There is a higher percentage of heavy vehicles of 6.1% within the Shire of Mundaring along with a significantly higher percentage of crashes involving motor cycles in the Shire of Mundaring. This is likely due to the location and predominantly rural nature of the Shire.



Population
39,139

Land Area
644km²

Density
0.61
persons per
hectare

¹⁶ Population Estimate from ProfileID, derived from the Australian Bureau of Statistics Estimated Residential Population 2018

Table 8.1: Shire of Mundaring Crash Severity

Severity	Number of Crashes	Percentage
Fatal	13	0.7%
Hospital	132	7.3%
Medical	244	13.5%
PDO Major	979	54.0%
PDO Minor	445	24.5%
Total	1,813	100%

Table 8.2: Shire of Mundaring Type of Vehicles Involved in Crashes

Type of Vehicle	Number of Crashes	Percentage
Bicycle	20	0.7%
Car	2,607	85.8%
Heavy Vehicles	186	6.1%
Motor Cycle	100	3.3%
Pedestrian	14	0.5%
Total (Known)	2,927	96.4%
Unknown	110	3.6%

Table 8.3: Shire of Mundaring Midblock vs Intersection Crash

Location	Number of Crashes	Percentage
Intersection	867	47.8%
Midblock	946	52.2%
Total	1,813	100%

Table 8.4: Shire of Mundaring Crash Type

Crash Type	Number of Crashes	Percentage
Head On	30	1.7%
Hit Animal	36	2.0%
Hit Object	278	15.3%
Hit Pedestrian	14	0.8%
Non-Collision	58	3.2%
Rear End	718	39.6%
Right Angle	335	18.5%
Right Turn Through	74	4.1%
Sideswipe Same Direction	181	10.0%
Total (Known)	1,724	95.1%
Unknown	89	4.9%



The crash data maps identify a few features within the Shire of Mundaring area. These are summarised below:

- Whilst the Shire is largely of a rural nature, the majority of crashes have occurred in busier areas including town sites and areas with a more developed footprint. This includes Swan View, Greenmount, Helena Valley, Darlington, Parkerville, Mundaring and Stoneville, with a few also in Chidlow and Wooroloo.
- There are higher percentages of crashes involving motor cycles and heavy vehicles.
- There is a higher percentage of rear end, head on and non-collision crashes as well as those hitting objects. The majority of these crashes were as a result of losing control, loose gravel on the road or swerving to avoid an animal or vehicle. All of the crashes which were non-collision crashes and those that hit an object were single vehicle crashes.
- Where speed was identified as a factor in the crash, the majority of crashes resulted in medical attention required, hospitalisation or were fatal. This further supports the need for better driver awareness.
- The majority of crashes have occurred along Primary or Regional Distributor Roads including Great Eastern Highway, Mundaring Weir Road, Stoneville Road, Sawyers Road, Riley Road, Elliot Road and Seaborne Street.
- As expected, the more urban areas have a higher incidence of crashes. Key local roads to note include:
 - Richardson Road
 - Railway Parade
 - Glen Road
 - Marlboro Road
 - Morrison Road
 - Balfour Road
 - Needham Road
 - Coppin Road.
- A high number of midblock crashes are noted on Great Eastern Highway.
- The majority of cyclist and pedestrian crashes have occurred along Morrison Road. A number of motor cycle crashes have also occurred along Morrison Road, as well as Great Eastern Highway.
- A number of motor cycle crashes have also occurred on Stoneville Road, near Richardson Road.
- The majority of heavy vehicle crashes have occurred along Great Eastern Highway and Roe Highway.

8.4. High Risk Areas

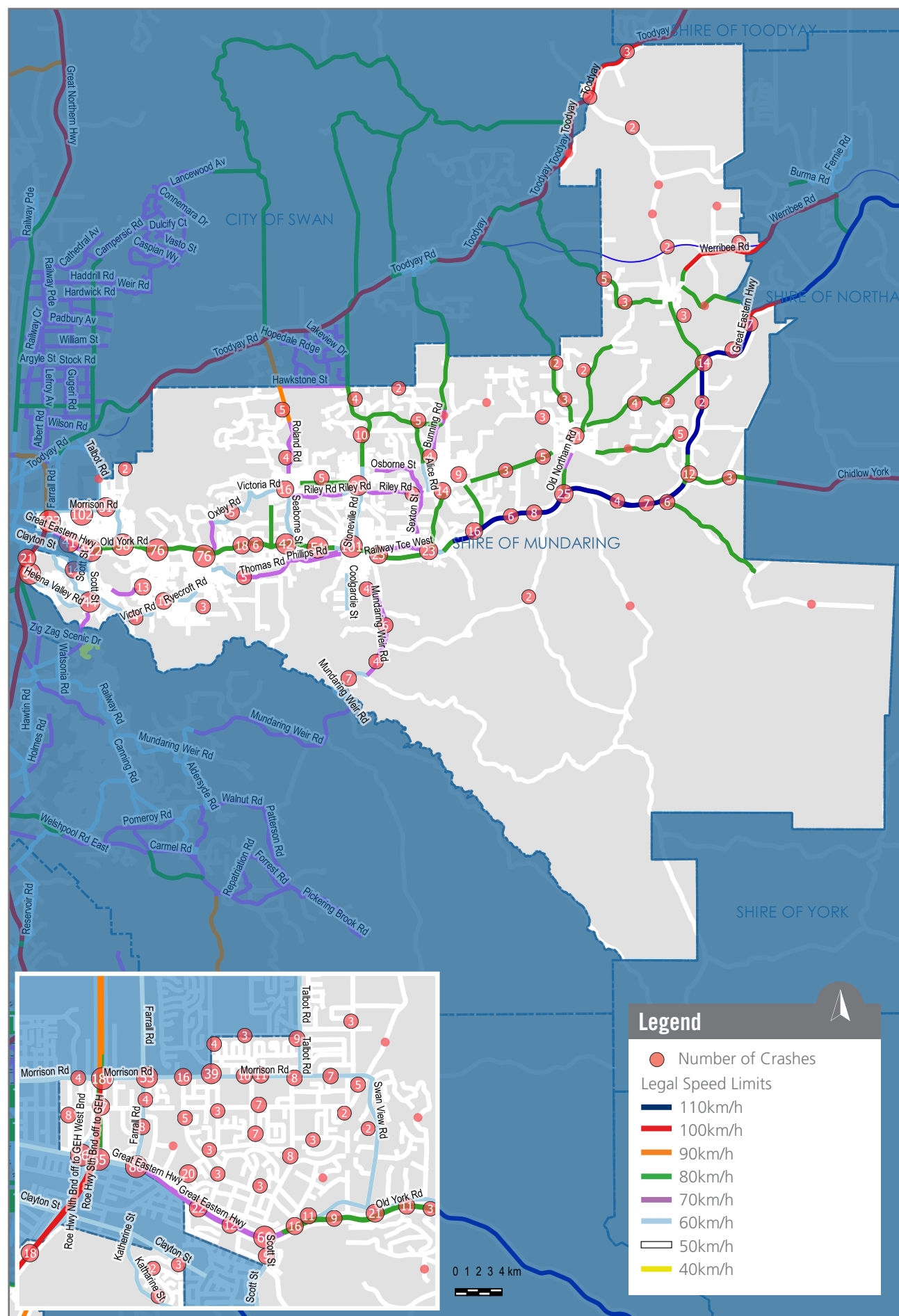
Similar to the City of Kalamunda area, the Shire of Mundaring area has a diverse range of land uses, though it is predominantly rural residential. As such the following key consideration for the EMRC to advocate for have been identified:

- Education
 - There is a higher percentage of crashes involving motor cycles and heavy vehicles, which could warrant education programs to ensure there is an understanding of the road environment (gravel on road) and overtaking opportunities.
 - Where speed was identified as a factor in the crash, the majority of crashes resulted in medical attention required, hospitalisation or were fatal. This further supports the need for better driver awareness.
- Given the majority of cyclist and pedestrian crashes have occurred along **Morrison Road**, further review to analyse these reasons to could be undertaken to improve the cyclist and pedestrian environment.
- Reasons for the high number of midblock crashes along **Great Eastern Highway** could be further investigated to identify treatment options, noting that **Eastlink** will also reduce traffic (including heavy vehicle traffic) along Great Eastern Highway.
- Detailed analysis of the **Stoneville Road, near Richardson Road** to understand the reason for multiple motor cycle related crashes.



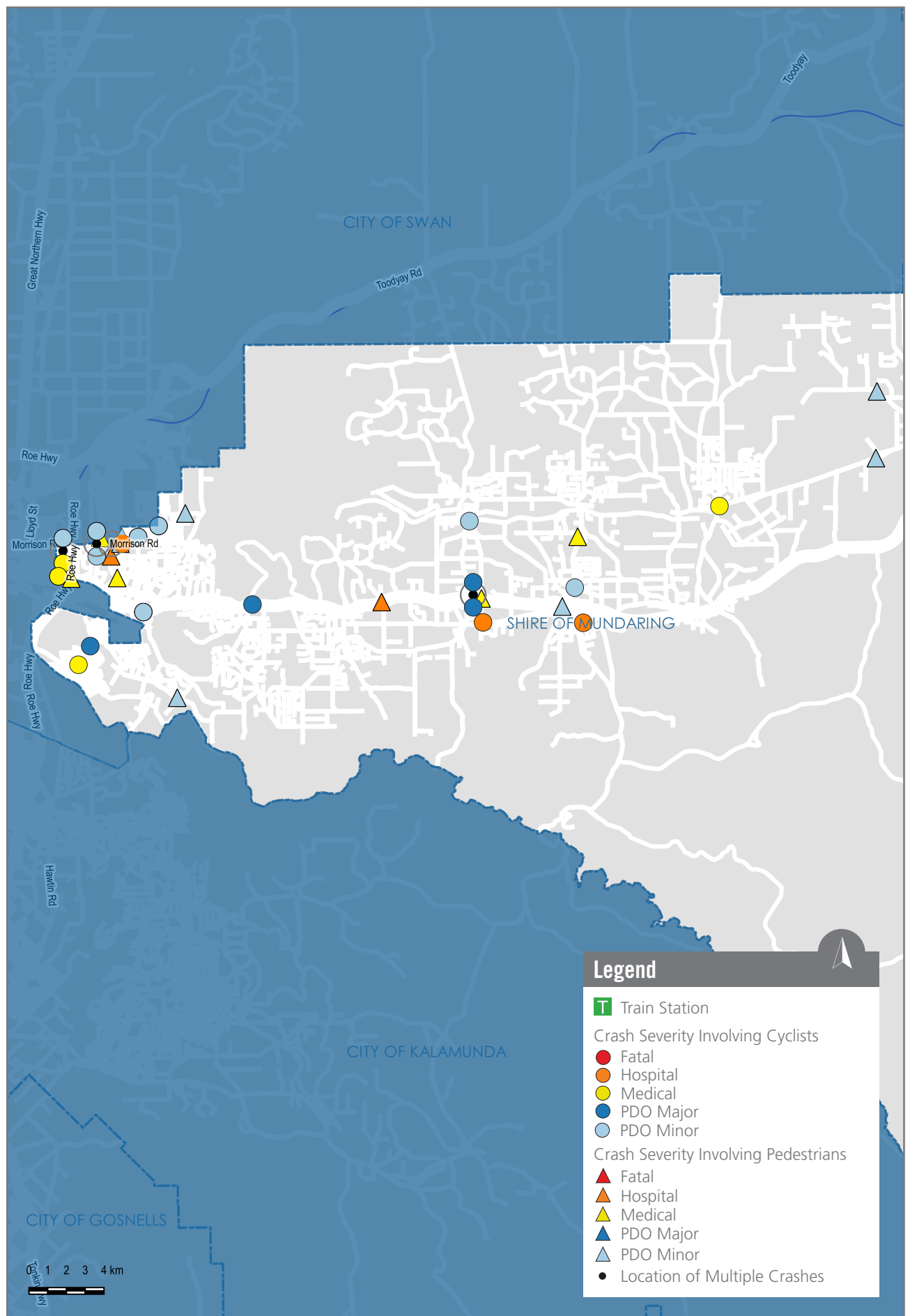
Figure 8.1: Overall Number of Crashes within the Local Government Area

8.5. Mapping



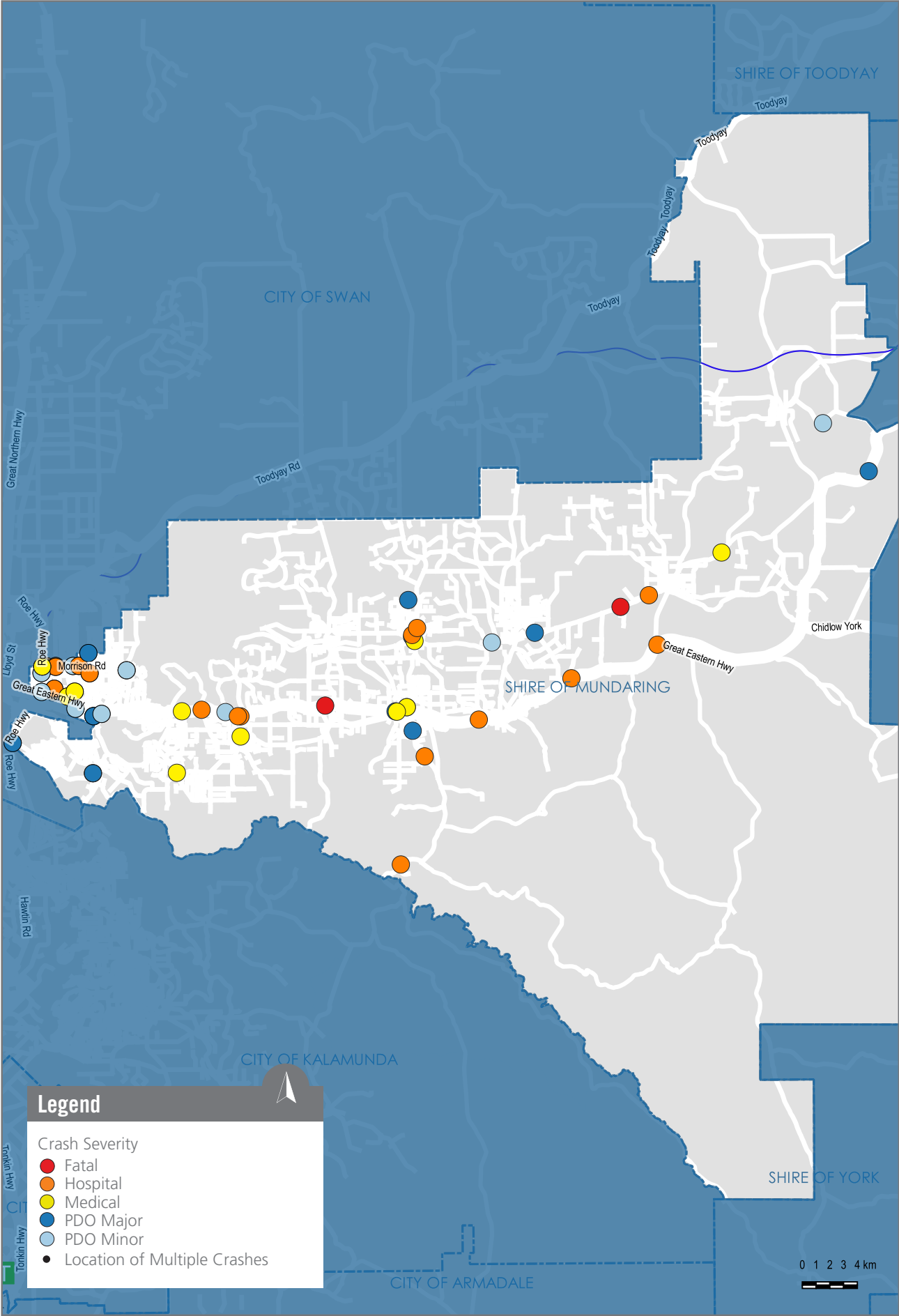
Data Source: Main Roads WA Crash Analysis Reporting System (CARS) - Period 2013 to 2017

Figure 8.2: Cyclist and Pedestrian Crashes within the Local Government Area



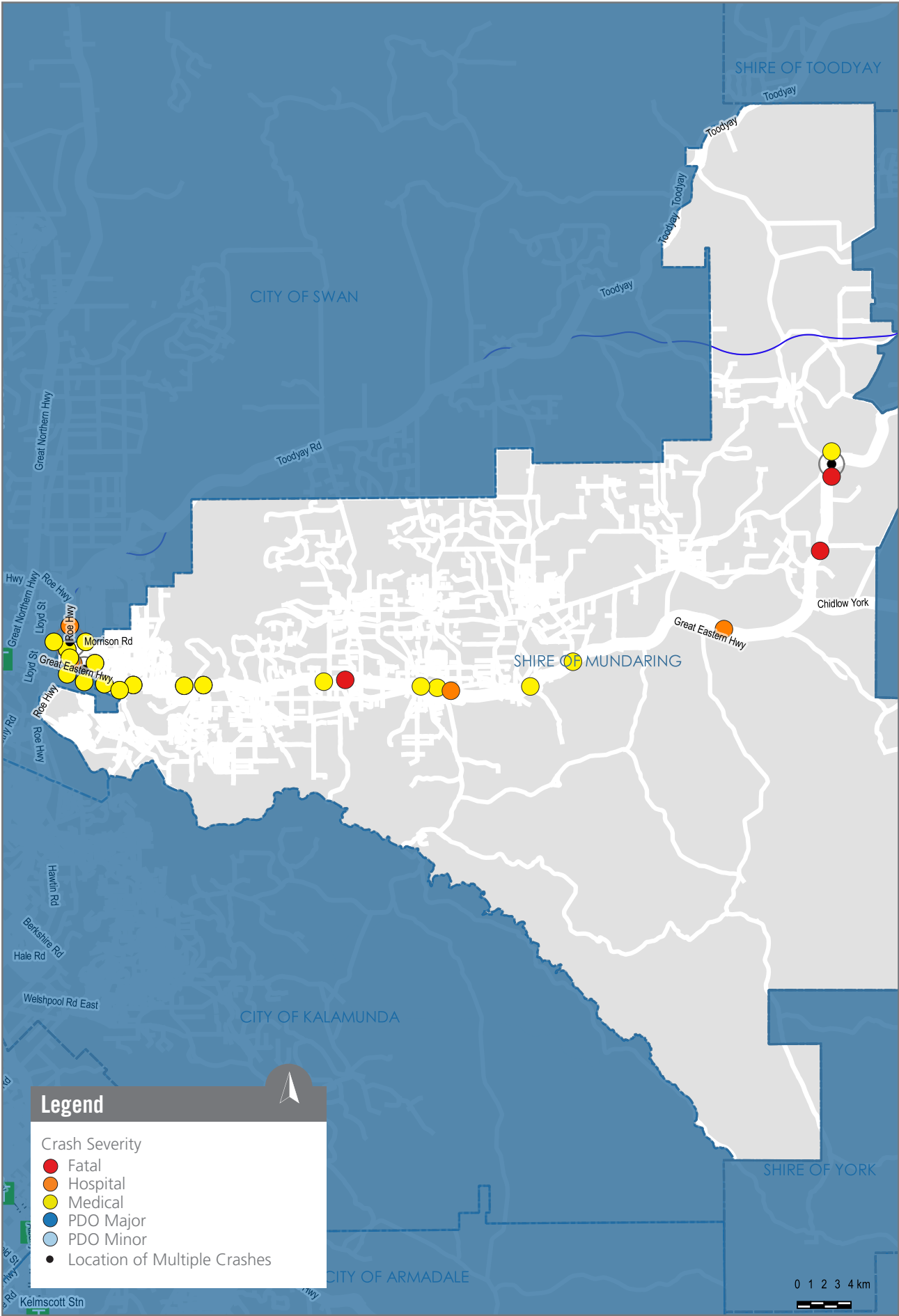
Data Source: Main Roads WA Crash Analysis Reporting System (CARS) - Period 2013 to 2017

Figure 8.3: Motor Cycle Crashes within the Local Government Area



Data Source: Main Roads WA Crash Analysis Reporting System (CARS) - Period 2013 to 2017

Figure 8.4: Killed and Seriously Injured Bus and Heavy Vehicle Crashes within the Local Government Area



Data Source: Main Roads WA Crash Analysis Reporting System (CARS) - Period 2013 to 2017

9. City of Swan Road Safety Review

9.1. Background

The City of Swan is the northernmost member Council of the EMRC and is approximately between 10 to 50km from the Perth CBD. The City of Swan has a land area of 1,044km², ERP of 143,374¹⁷ and population density of 1.37 persons per hectare. The City's population has grown rapidly, with the population increasing from 95,206 in 2006 to 143,374 in 2018. The City of Swan is bound by the City of Wanneroo to the west, City of Stirling to the south-west, City of Bayswater, Town of Bassendean and City of Kalamunda to the south, Shire of Mundaring to the east, and Shire of Chittering and Shire of Toodyay to the north.

The southern part of the City of Swan is serviced by four stations on the Midland Train Line, which terminates at Midland Station. A freight railway route also runs north-south within the City. There are also a number of key roads within the City, including Neaves Road, Great Northern Highway, Reid Highway, Roe Highway, Great Eastern Highway and the new Perth-Darwin Highway (Northlink).

The City of Swan area is predominantly regional, with key industries being forestry, agriculture, grazing and viticulture. However, the residential population has grown significantly over the last 30 years and is expected to continue to grow. Key urban growth areas include Midland, Ellenbrook, Henley Brook, The Vines, Brabham, Datum and Caversham. A large proportion of the area is also National Park, State Forest and nature reserves.

The MRWA crash data for the period between 2013 to 2017 recorded a total of 9,112 crashes within the City of Swan local government area. Of these, 19.2% required medical attention, hospitalisation or were fatal. A high proportion of the killed or seriously injured crashes involving a motor cycle crashes within the City of Swan area were single vehicle crashes where the driver lost control or attempted to overtake a heavy vehicle.

9.2. Literature Review

City of Swan – Integrated Transport Strategy 2014

The Integrated Transport Strategy is noted as an opportunity to create a high-quality integrated planning and transport environment that supports economic, environmental and social activities. Opportunities are noted within core areas of the City, particularly around Activity Centres, but also within Town Centres, local communities and near transport nodes the pedestrian environment forms the basis for transport and land-use synergies and must be considered in the context of the road environment and adjacent land uses.



Population

143,374

Land Area

1,044km²

Density

1.37
persons per
hectare

¹⁷ Population Estimate from ProfileID, derived from the Australian Bureau of Statistics Estimated Residential Population 2018

Table 9.1: City of Swan Crash Severity

Severity	Number of Crashes	Percentage
Fatal	30	0.3%
Hospital	351	3.9%
Medical	1367	15.0%
PDO Major	4887	53.6%
PDO Minor	2477	27.2%
Total	9,112	100%

The Strategy does not have a particular detailed road safety analysis; however, it does try to embed in the recommendations a number of actions which will help improve safety. Examples include a study on rail grade separation, cycle infrastructure implementation, encouragement for the uptake of public transport and pedestrian focussed recommendations and recognising that there is a need for further assessment for specific issues, such as undertaking a study of pedestrian crossing needs along and across strategic corridors (such as Great Eastern Highway).

8.3. Crash Hotspots

9,112 crashes were recorded within the City of Swan between 1 January 2013 and 31 December 2017, which involved 15,492 known units, which include bicycles, cars, heavy vehicles (including buses, trucks, semitrailers, tractors and road trains), motor cycles (including motorised scooters) and pedestrians (including motorised wheelchairs, skateboards, manual scooters and a ridden animal). It is noted that the vehicle type data for 1,662 units were not recorded. 82.8% of crashes involved cars, whilst 3.4% included vulnerable road users including bicycles, motor cycles and pedestrians, which is lower than the EMRC area average of 3.8%. There is a lower percentage of heavy vehicles of 4.2% within the City of Swan when compared with the EMRC area average of 4.6%.

The crash data maps identify a few features within the City of Swan. These are summarised below:

- There is a higher number of crashes involving cars than the EMRC area average, which may be due to a combination of the rapidly increasing urban footprint in the area as well as the rural nature of the area as it transitions towards urbanisation.
- Similar to all the other member Councils, the majority of crashes have occurred along higher order Primary or Distributor roads, including Great Northern Highway, Toodyay Road, Reid Highway, Roe Highway, Guildford Road and Great Eastern Highway as well as Gngangara Road, West Swan Road, Beechboro Road North, Marshall Road, Benara Road and Morrison Road.
- A large number of Local Distributor Roads have also experienced crashes, with notable locations being:



Intersections

- The Broadway / Elmridge Parkway
- The Broadway / Arbot Road (11)
- Mornington Parkway / Coolamon Boulevard (17)
- The Broadway / The Promenade (35)
- Main Street / Commercial Road (15)
- Pincaster Parade / Forestview Boulevard (12)
- The Promenade / Pincaster Parade (9)
- The Promenade / Main Street (34), noting this is directly adjacent to Ellenbrook Central a major trip attractor).
- Pincaster Parade / Woodlake Boulevard (7)
- Henley Brook Avenue / Fortescue Place (11)
- Bushmead Road / Stirling Crescent (15)
- Bushmead Road / Military Road (25)
- Bushmead Road / Helena Valley Road (10)
- Stirling Crescent / Lakes Road (7)
- Railway Parade / Railway Parade (6)
- William Street / Campersic Road (6)
- Haddrill Road / Campersic Road (10)
- Elmridge Parkway / Banrock Drive (12)
- Banrock Drive / Bordeaux Lane (9)

Midblock or Stretch of Road

- Warbook Road (8 plus 16 at the intersection of Great Northern Highway)
- The Promenade between Main Street and Pincaster Parade (20)
- Bushmead Road at/on approach to Robertson Street (6)
- Jinda Road between Wangalla Road and Clayton Street (5)
- Elgee Road between Fairbairn Gardens and Cowan Gardens (8)
- Hooley Road between Cope Street and Ferguson Street (15)
- Talbot Road between Farrall Road and Jane Brook Drive (9)
- O'Brien Road at / on approach to Lancewood Avenue (8), and further north along Clenton Road (11) – the majority of these crashes were single vehicle crashes which were due to lose gravel, swerving to avoid an animal or loss of control of the vehicle, and involved motor cycles. This road winds numerous times, and crashes were recorded near these bends.
- Along Lord Street and New Lord Street between the intersections of Gnangara Road and Reid Highway, there have been 175 crashes, excluding those at the Gnangara Road (85) and Reid Highway (57) intersections. It is noted this data will be affected by the new Lord Street project, as well as revised speed limits and therefore crash rates will change upon completion.

- There have been eight crashes along Henley Brook Avenue between Corich Pass and Gnangara Road, with 21 crashes at the Henley Brook Avenue / Gnangara Road intersection, which is near Aveley Central, a shopping centre and local attractor.
- Mayo Road just south of Toodyay Road (5) – all of which were single vehicle crashes where the driver swerved to avoid an animal, or lost control of the vehicle. Loose gravel was also noted as a reason for a crash.
- There is a high concentration of cyclist crashes along Great Eastern Highway, as well as in the Ellenbrook / Aveley area. Other specific areas of concern for cyclists and pedestrians are:
 - West Swan Road / Meadow Street (6 cyclist)
 - Benara Road / Bennett Street (3 cyclist)
 - Benara Road / Lord Street (2 cyclist)
 - Lord Street / Torley Way (2 cyclist)

Cassowary Drive east of Pelican Parade (3 pedestrian, all requiring medical attention or hospitalisation) noting this location is adjacent two bus stops

- Illawara Crescent near Kingfisher Park (4 pedestrian crashes), which is within a school zone.
- The majority of motor cycle related crashes are also generally quite clustered, with key areas being the more urban areas. Multiple crashes occurred at:
 - Gnangara Road / Lord Street (4)
 - Gnangara Road / Beechboro Road North (3)
 - Beach Road / Alexander Drive (3)
 - Beach Road / Bonner Drive (2)
 - Beach Road / Oxleigh Drive (3)
 - Alexander Drive / Truganina Road (2)
 - Morley Drive East / Alton Road (3)
 - Great Northern Highway between West Swan Road and Beryl Avenue (7)
 - Great Northern Highway near Chittering Road (3)
 - Great Eastern Highway between and Helena Street and Bushby Street (19 including 1 fatal and 12 requiring medical attention or hospitalisation)
 - Toodyay Road between Lilydale Road and Old Coach Road (3)
 - Great Northern Highway between Brig Way and Brearley Street (3)
 - Great Eastern Highway Bypass (9).

- The majority of midblock crashes have occurred on higher speed, higher order roads.
- The majority of crashes involving heavy vehicles such as trucks and buses have also occurred on higher speed, higher order roads. In addition to these areas, the Ellenbrook / Aveley area, Malaga industrial area and Midland Town Centre area also have a high instance of heavy vehicle related crashes. Specific locations where multiple crashes have occurred include:
 - Great Eastern Highway between Woodbridge Station and Reid Highway (35)
 - Great Northern Highway / Roe Highway (18)
 - Malaga Drive between Beach Road and Reid Highway (10)
 - Marshall Road / Beachboro Road North (17)
 - The Broadway/ Main Street / The Promenade (5)
 - Alexander Drive between Hepburn Avenue and Reid Highway (19)
 - Roe Highway between Great Eastern Highway Bypass and Helena Valley Road (39)
 - Gnangara Road (12) between Pincaster Parade (9) and Hennessey Road (3) excluding the intersections.
- The City of Swan area has a slightly higher than average percentage of rear end and head on crashes.



Table 9.2: City of Swan Type of Known Vehicles Involved in Crashes

Type of Vehicle	Number of Crashes	Percentage
Bicycle	153	0.9%
Car	14,200	82.8%
Heavy Vehicles	723	4.2%
Motor Cycle	320	1.9%
Pedestrian	96	0.6%
Total (Known)	15,492	90.3%
Unknown	1,662	9.7%

Table 9.3: City of Swan Crash Type

Crash Type	Number of Crashes	Percentage
Head On	117	1.3%
Hit Animal	68	0.7%
Hit Object	754	8.3%
Hit Pedestrian	92	1.0%
Non-Collision	140	1.5%
Rear End	4356	47.8%
Right Angle	1778	19.5%
Right Turn Through	545	6.0%
Sideswipe Same Direction	901	9.9%
Total (Known)	8751	96.0%
Unknown	361	4.0%

Table 9.4: City of Swan Midblock vs Intersection Crash

Location	Number of Crashes	Percentage
Intersection	5,247	57.6%
Midblock	3,865	42.4%
Total	9,112	100%

9.4. High Risk Areas

The City of Swan is a rapidly urbanising local government area with a combination of rural and residential areas. Within the City of Swan, a number of locations which were identified to have a higher number of crashes were also granted Black Spot Program funding including:

- Morrison Road / Farrall Road
- Great Eastern Highway / Ferguson Street
- Coolamon Boulevard / Mornington Parkway
- O'Brien Road
- Clenton Road
- Marshall Road / Trade Road / Business Way.

The following recommendations are made for the City of Swan:

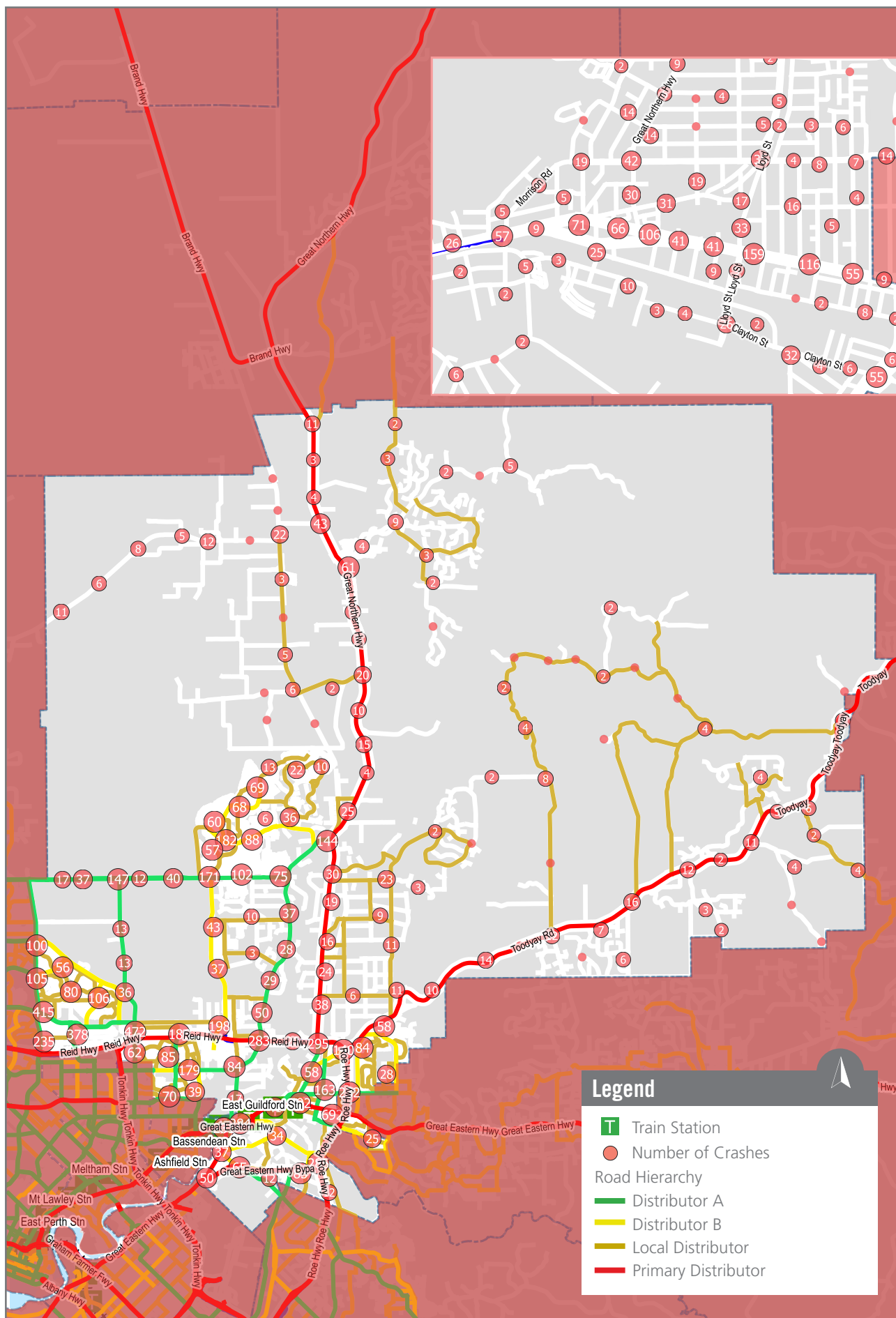
- Vulnerable road users
 - Illawara Crescent near Kingfisher Park (4 pedestrian crashes) – review of crossing facilities
 - Cassowary Drive east of Pelican Parade (3 pedestrian, all requiring medical attention or hospitalisation) noting this location is adjacent two bus stops – review of crossing facilities
 - West Swan Road / Meadow Street (6 cyclists) – further analysis of reasons for crashes.
- Further review of the following locations which have had a number of motor cycle related crashes:
 - Great Eastern Highway between and Helena Street and Bushby Street (19 including 1 fatal and 12 requiring medical attention or hospitalisation)

- Great Northern Highway between West Swan Road and Beryl Avenue (7)
- Great Eastern Highway Bypass (9)
- Great Northern Highway near Chittering Road (3)
- Alexander Drive / Truganina Road (2)
- Reid Highway / Beechboro Road North (3)
- Toodyay Road between Lilydale Road and Old Coach Road (3).
- Beach Road / Alexander Drive (3)
- Beach Road / Bonner Drive (2)
- Beach Road / Oxleigh Drive (3)
- Further review of heavy vehicle crashes at the following locations:
 - Great Eastern Highway between Woodbridge Station and Reid Highway (35)
 - Great Northern Highway / Roe Highway (18)
 - Malaga Drive between Beach Road and Reid Highway (10)
 - Marshall Road / Beachboro Road North (17)
 - The Broadway near Main Street (5)
 - Alexander Drive between Hepburn Avenue and Reid Highway (19)
 - Roe Highway between Great Eastern Highway Bypass and Helena Valley Road (39)
 - Gnangara Road (24) between Pincaster Parade and Hennessey Road excluding the intersections.
- Driver education – majority of crashes involving heavy vehicles have also occurred on higher speed, higher order roads. Awareness of heavy vehicle stopping distances or overtaking lanes could be considered.



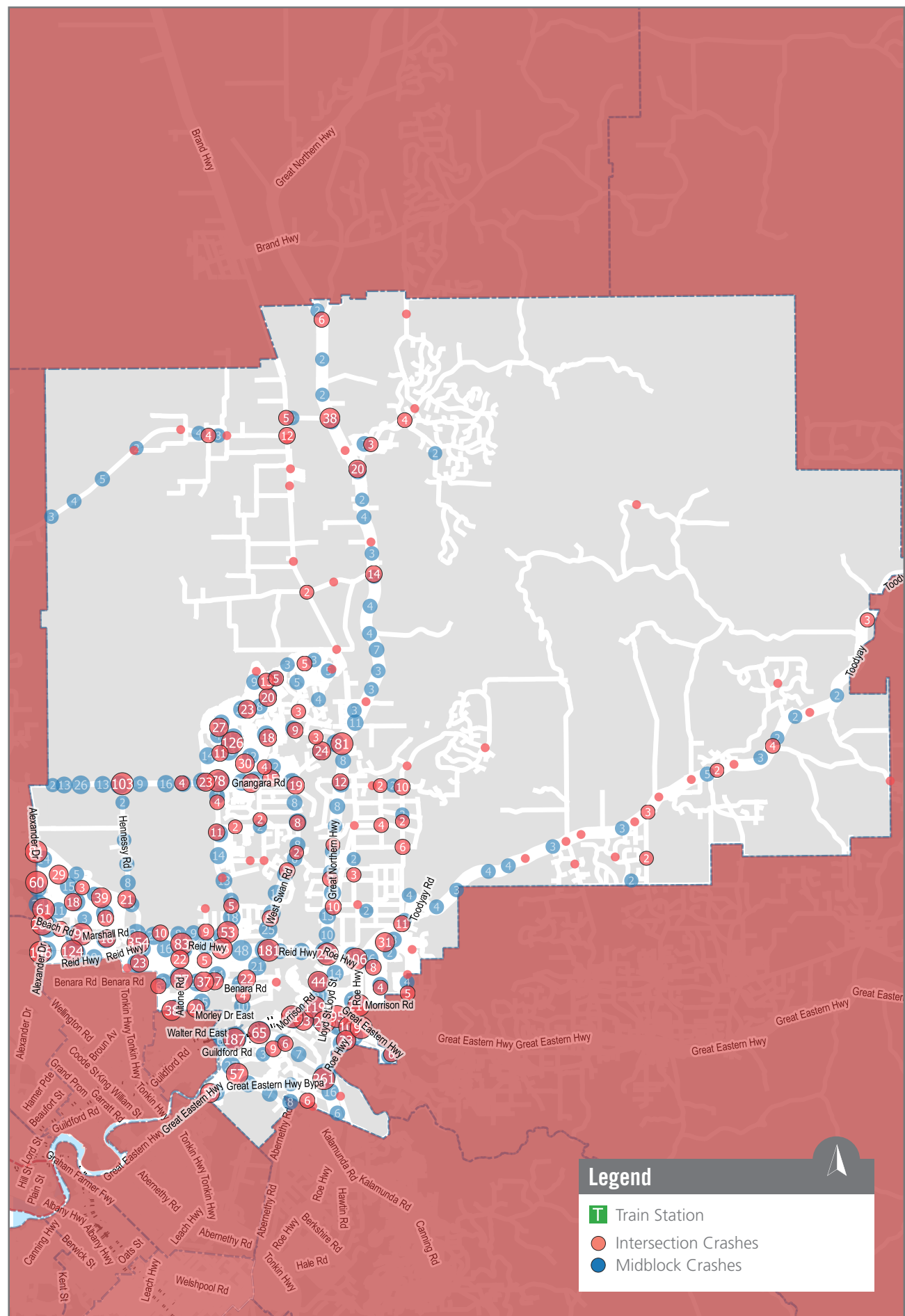
Figure 9.1: Overall Number of Crashes within the Local Government Area

9.5. Mapping



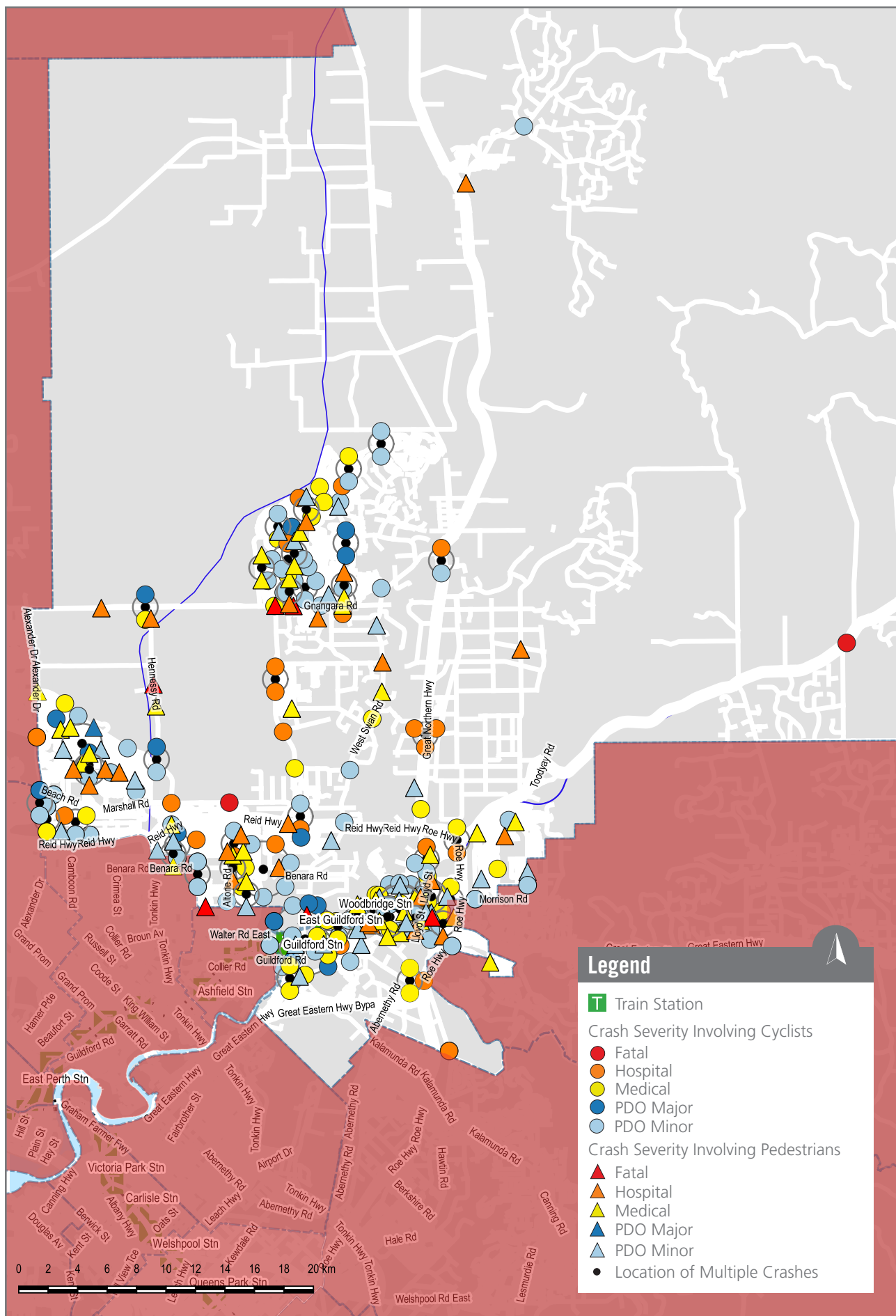
Data Source: Main Roads WA Crash Analysis Reporting System (CARS) - Period 2013 to 2017

Figure 9.2: Overall Midblock vs Intersection Crashes within the Local Government Area



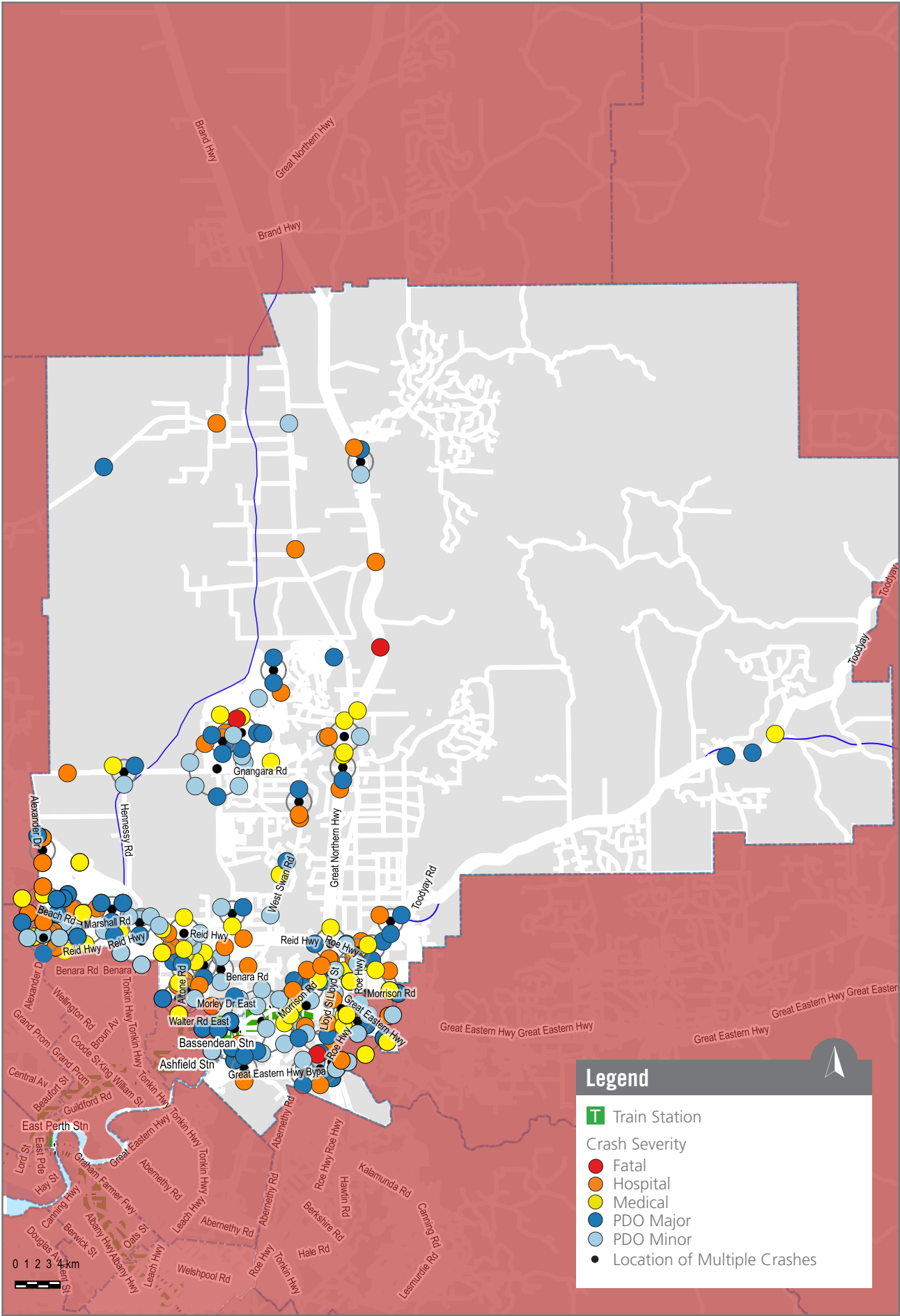
Data Source: Main Roads WA Crash Analysis Reporting System (CARS) - Period 2013 to 2017

Figure 9.3: Cyclist and Pedestrian Crashes within the Local Government Area



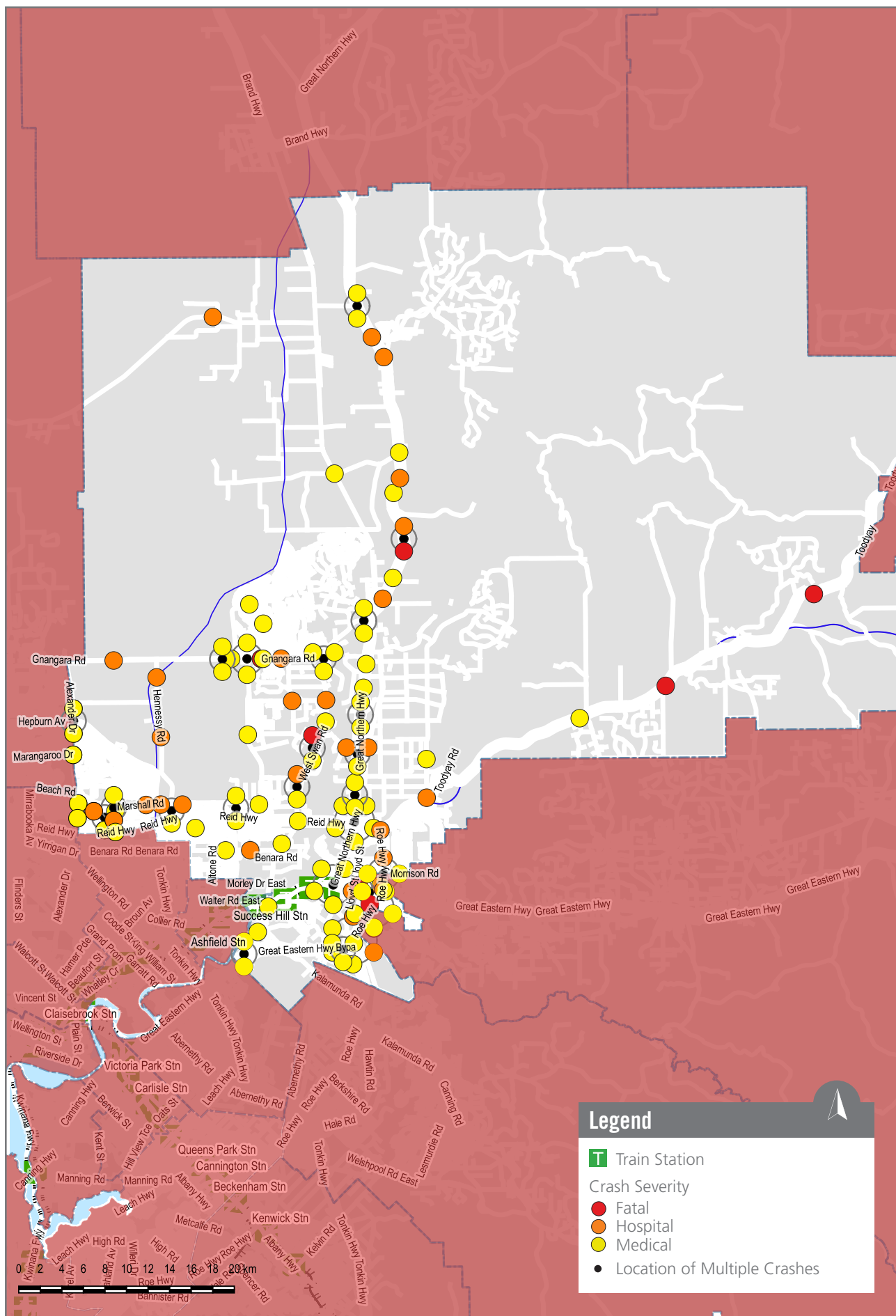
Data Source: Main Roads WA Crash Analysis Reporting System (CARS) - Period 2013 to 2017

Figure 9.4: Motor Cycle Crashes within the Local Government Area



Data Source: Main Roads WA Crash Analysis Reporting System (CARS) - Period 2013 to 2017

Figure 9.5: Killed and Seriously Injured Bus and Heavy Vehicle Crashes within the Local Government Area



Data Source: Main Roads WA Crash Analysis Reporting System (CARS) - Period 2013 to 2017



Vehicle technology will progress through the advent of an increase in safety features within vehicles as they become standard design as well as a move toward connected and autonomous vehicles.

10. Future Considerations

It is important for member Councils to be kept up to date with current and future vehicle technology and its effect on improving road safety and the safety of the road users within the EMRC region. Vehicle technology will progress through the advent of an increase in safety features within vehicles as they become standard design as well as a move toward connected and autonomous vehicles.

10.1. Australian Design Rules

The Australian Design Rules (ADRs) are national standards for vehicle safety, anti-theft and emissions. The ADRs are generally performance based and cover issues such as occupant protection, structures, lighting, noise, engine exhaust emissions, braking and a range of miscellaneous items.

The development of the ADRs continues as part of a normal program of review and revision. The program includes monitoring international developments and involves regular consultation with the Department's key stakeholders. This identifies implementation issues or changes in factors affecting existing ADRs, as well as any need to introduce new ADRs. The ADRs are also subject to a full review where possible every ten years to ensure they remain relevant, cost effective, and do not become a barrier to importation of safer vehicles and vehicle components.

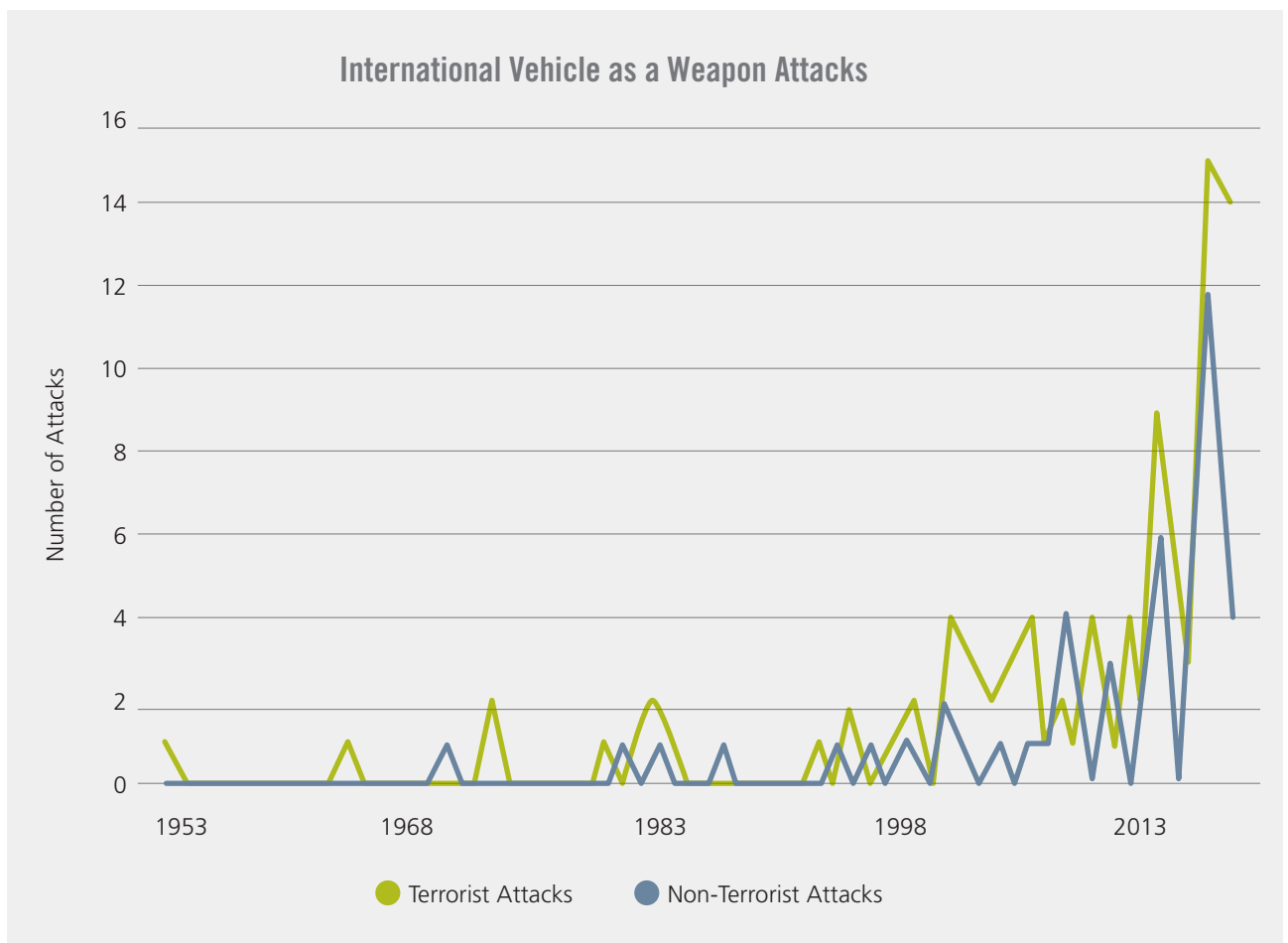
It is noted that, within the ADRs in addition to the standard requirement for safety in vehicles (such as airbags, seatbelts, headlights etc, only two 'newer' technological based safety features are now standard. These being:

- Electronic Stability Control (ESC), and
- Brake Assist Systems (BAS).

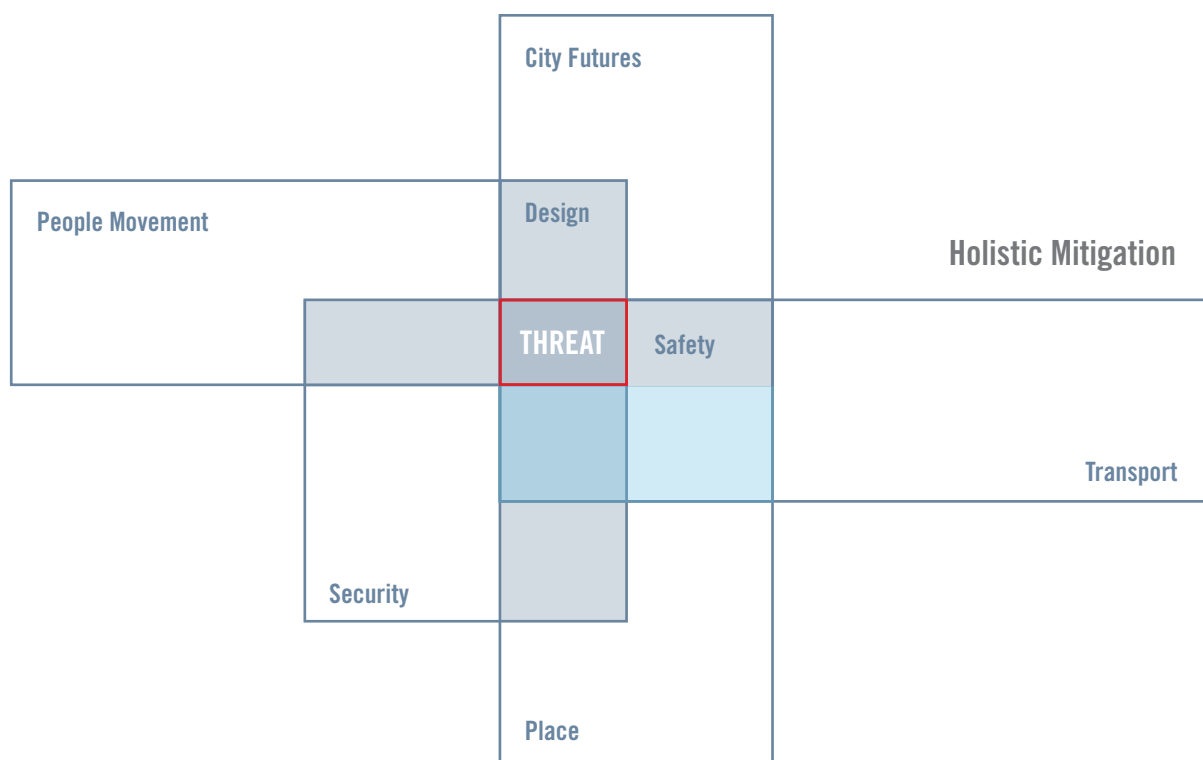
Within its role as an advocacy body, the EMRC could work with other advocacy organisations such as WALGA and RAC to assess deficiencies within the Australian Design Rules for vehicles with a view to lobbying Federal and State Government in including new safety features on vehicles as standard. An example of this could be advocacy to seek that Australian Design Rules incorporate mandatory ESC for motorbikes, and Autonomous Emergency Braking (AEB) for light vehicles, which has been mandatory within the design rules of some European Countries for many years.

10.2. Hostile Vehicle Mitigation

Vehicle as a Weapon (VaW) attacks have been rapidly rising in recent years with a shift in focus to understand, at the local level potential threat areas. As with the unfortunate events recently in Melbourne and elsewhere around the world, planning has not been undertaken for these random, rare attacks with cities having to be reactive. Ensuring a proactive planning approach for this will assist member Councils to work toward the safety of their local community and those that visit.



Due to the nature of VaW attacks being opportunistic single vehicle planning is often difficult. Transport planning and design can play a key role toward mitigation of VaW attacks through the design of movement and place infrastructure providing a buffer and sometimes a barrier between a VaW and a Place.



10.3. Autonomous Vehicles

Autonomous Vehicles (AVs) are one example of a number of emerging technologies which will impact on demography and the ways we think about infrastructure funding. Together with evolving social norms and changing personal preferences these developments are combining to change the way people live, cities operate, and agencies deliver their services. The exact detail of how these trends will play out is unclear, but two things can be asserted with some certainty: their impacts will be substantial, and they will be broad ranging. Changes in transport technology will not just affect the way we travel, but will affect the way we spend our time, how we spend our money, the way we live and, where we live. They will have knock on impacts on how urban areas operate, and the way transport infrastructure is provided and managed.

AVs and other emerging transport technologies will create significant challenges for road and transport agencies. To meet those challenges and make appropriate investments for the long-term – agencies need to understand the nature of the changes prompted by these technologies. To generate insights into how our cities may evolve in the presence of new transport technologies member Councils may need to address the following questions:

- What transport modes will be available?
- How will people choose their mode?
- What triggers and thresholds will drive mode shift?
- What investment is called for in AVs and who will make it?
- How might funding of infrastructure and cost recovery change in the presence of AVs?





11. Road Safety Recommendations

11.1. Applying a True 'System' Approach to Road Safety

The following assessment and analysis has been provided by Brett Hughes of P7 Safety.

Since the 1930s, road safety has undergone several evolutions, about every 15 years, the most recent of which is known in Australia as Safe System. While these phases have slightly different language and emphasis, they remain firmly based on three E's (Education, Enforcement and Engineering) simply applied to drivers, vehicles and roads. The resulting actions most commonly included in road safety strategies are therefore largely the same three: road engineering and driver education and enforcement.

Safety management in industrial contexts followed a similar path, based on the human-machine-local environment model. Typical analysis and response followed simple models such as Reason's 'domino' model of causality where one event triggered others that caused a crash, the 'Swiss Cheese' model to identify a cause of a crash and the hierarchy of interventions model to manage and prevent future events.

Aviation safety followed a different path and improved safety based on another management approach apparently because aviation was so complex that many things could go wrong and sometimes several at the same time. Causes were often beyond the pilot and airplane alone and there was little infrastructure involvement. Aviation also developed very intensive crash investigation, that was based on a no-blame or 'just culture' principle which protected information from being used for prosecutions. When Capt. Sullenberger control-crashed the 'Miracle on the Hudson' it wasn't only because he was a great pilot, but also because of a multitude of complementary elements that had been developed according to complex system safety management over many decades.

Road safety has also suffered 'siloed' actions of separate participants acting in isolation. A true systems approach takes account of all of the parts and participants and thoroughly applies integrated policy tools to achieve the most efficient and effective improvements.

Systems Approaches have strong theoretical, research and practical foundations. With a diverse history in biology and electronics, it has been successfully applied in several relevant fields, such as safety, reliability engineering and information technology, but not in government policy, planning and service delivery. So, if it was applied to these activities (such as this Road Safety Plan) it may be addressed as:

Participants use processes based on principles to apply policy tools to affect contributing parts, in order to achieve a purpose (economic, social and environmental improvement). These all occur in complex interdependent partnerships or influences of change within the system¹⁸.



Since the 1930s, road safety has undergone several evolutions, about every 15 years, the most recent of which is known in Australia as Safe System.

¹⁸ Brett Hughes, P7 Systems Approach

11.1.1. Application of the P7 System Approach

The P7 system approach can be applied to ensure a broader understanding required for the individual recommendations being provided within this Plan. The 7 Ps are:

P7 system approach

- **PURPOSE** – a clear statement of the Plan objectives (The Vision).
- **PARTS** – influence and respond to other parts of the system. Transport (road, cycling, pedestrians, public transport, freight, air), users (professional drivers, commuters, domestics, operators etc), information (signs, wayfinding, zoning, traffic management etc) and policies.
- **PARTICIPANTS** – all the individuals and groups who use and affect the system and who can make a difference, including the EMRC's Regional Integrated Transport Strategy (RITS) Implementation Advisory Group (IAG) members.
- **POLICY TOOLS** – the actions that participants apply to the parts that do and do not work toward the purpose. These are used to validate the Vision within a Safe System approach. What can key stakeholders and member Councils do to ensure the Vision is achieved.
- **PARTNERSHIPS** – understanding and documenting the relationships and interactions between the participants (users of the system), the parts (how they use the system) and the policy tools and how the approving authorities can ensure this relationship is enhanced and understood.
- **PRINCIPLES** – setting the direction of the Plan, ensuring ownership of identified recommendations and advocating for a safer system.
- **PROCESSES** – a toolkit (the Plan) detailing the research and analysis undertaken, techniques for management and advocacy, program of deliverables and recommendations.

The P7 system approach has been adapted and applied in the recommendations section of this plan.



11.2. EMRC Regional Road Safety Plan Recommendations

Table 9.2: City of Swan Type of Known Vehicles Involved in Crashes

No	Purpose (Issue)	Participants (Parties Involved)	Principles	Processes and Policies (Actions)
SAFE USER				
1	Higher than average number of pedestrian related crashes within the Town of Bassendean Kalamunda Town Centre pedestrian related crashes and poor walkable environment.	EMRC, Town of Bassendean and MRWA EMRC, City of Kalamunda and MRWA	Ensure pedestrian infrastructure is provided to protect pedestrians from traffic and/or ensure speeds are lowered to the survivable limits of vulnerable road users	EMRC to work with the Town to develop local policies and practices that support safe pedestrian environments. Develop guidelines for design interventions for road construction and built Environment towards pedestrian needs and comply with the Safe Systems Guidelines. EMRC to work with the City of Kalamunda to ensure pedestrian safety assessments are in accordance with Safe System principles of are undertaken as part of the Kalamunda Town Centre upgrade.
2	<ol style="list-style-type: none"> 1. High percentage of vulnerable road user crashes which include motor cycle crashes that may not be addressed within the City of Bayswater Traffic Management Plans 2. A number of intersections with higher percentage of vulnerable road user crashes which include motor cycle crashes. Intersections are along routes identified within Belmont's Sustainable Transport Plan 3. Motor cycle riders are at greater risk of being killed or seriously injured as a result of a crash at intersections due to their vulnerability. <ul style="list-style-type: none"> • Altone Road and Morley Drive East • Anstey Road and North Road 4. A number of roads and intersections within the City of Swan with higher percentage of motor cycle crashes highlighted within this Action Plan. 	EMRC, Town of Bayswater and MRWA EMRC, City of Belmont and MRWA EMRC, City of Swan and MRWA	Ensuring a Safe System approach is undertaken recognising pedestrian, cyclists and motor cycle vulnerability and survivable limits. Safe System assessment along an entire corridor to improve the safety for all road users	EMRC to work with the City of Bayswater to undertake a safety assessment and assist in advocating for funding to implement recommendations EMRC to facilitate a meeting with the City of Bayswater and Department of Transport to plan and design for Safe Active Streets. EMRC to work with the City of Belmont to undertake a safety assessment and assist in advocating for funding to implement recommendations. EMRC to facilitate a meeting with the City of Belmont and Department of Transport to plan and design for Safe Active Streets. EMRC to work with the City of Swan to undertake a road safety assessment on key roads with a motorcycle crash issue and assist in advocating for funding to implement recommendations.

No	Purpose (Issue)	Participants (Parties Involved)	Principles	Processes and Policies (Actions)
3	Understanding of Safe System within the member Councils (noting each Council will have differing knowledge in this area).	EMRC, member Councils, WALGA, MRWA and Road Safety Commission	All member Council employees involved with planning, designing and maintaining the road network utilise Safe System to progressively increase the safety of the road network for all road users	<p>EMRC to work with WALGA to promote the use of WALGA Safe System Guiding Principles for Local Government to member Councils.</p> <p>EMRC to advocate for member Councils employees to utilise the MRWA Road Safety Audit and Road Safety Engineering modules for employee training.</p> <p>EMRC to advocate for member Councils leadership team to apply to attend the Road Safety Commission Executive Road Safety Leadership Program.</p>
4	National and State crash rates of killed and seriously injured shows over-representation of younger drivers (less than 29yrs).	EMRC, member Councils, WALGA and SDERA	No school child begins their journey to becoming a driver without having first received Safe Road Use training. All school children should have safe route to travel to school.	EMRC to work with member Councils to ensure all High School children within each member Council receive safe road use education. All schools within each member Council progressively have a Safe Routes to School assessment.
5	Lack of Road Safety understanding within the wider EMRC community.	EMRC, WALGA and Community	EMRC and WALGA to work with the member Councils to educate the wider community on Safe System and everyone's part to play	<p>A suggestion within the Safety Workshop was for EMRC and WALGA to have a presence at community events.</p> <p>EMRC and WALGA can also work with each member Council and other agencies (such as Department of Transport) to improve messaging around safe system projects, such as Safe Active Street development, road rules for giving way to pedestrians etc.</p>

No	Purpose (Issue)	Participants (Parties Involved)	Principles	Processes and Policies (Actions)
6	Transport projects undertaken within member Council areas need to transition towards ensuring Safe System principles are the primary objective.	EMRC, member Councils, WALGA, MRWA	A representative from each member Council to form a Safe System design review panel chaired by EMRC to assist Council with Safe System transition	EMRC to organize a Safe System design review panel, with one or two representatives from each member Council, plus a representative from WALGA and MRWA to review road designs (above a certain value) from each member Council.
7	Responding to localised transport issues experienced adjacent to local government boundaries can result in traffic and road safety issues being transferred from one Council area to another.	EMRC	Each member Council when addressing traffic and road safety issues that may affect cross boundary travel do not implement solutions that transfer the problem to adjacent Councils	To provide high level advocacy to be targeted towards both State and Federal governments.

SAFE VEHICLES

8	The general public vehicle fleet currently on the road in WA is over ten years old (on average). Research shows older vehicles drastically increase the severity outcome of a crash.	EMRC, member Councils and WALGA	No employee within the member Councils will have to undertake work duties in an unsafe vehicle	EMRC to work with member Councils and WALGA to use the RoadWise Safe Vehicle Policy or adapt and develop their own
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SAFE ROADS AND ROADSIDE

9	Town of Bassendean has a higher number of crashes along Guildford Road and Railway Parade especially at west End Collier Road and intersection.	EMRC, Town of Bassendean and MRWA	Safe System principles should be followed to ensure corridor studies assess human tolerances to crash forces	A corridor study can be considered for these roads to further analyse these routes in accordance with the state principles.
10	High number of crashes along identified corridors <ul style="list-style-type: none"> Walter Road West, Russell Street, Beechboro Road South – City of Bayswater Francisco Street, Kooyong Road, Fulham Street and Hardey Road – City of Belmont Morrison Road and Stoneville Road. 	EMRC, City of Bayswater and MRWA EMRC, City of Belmont and MRWA EMRC, Shire of Mundaring and MRWA	Ensuring a Safe System approach is undertaken recognising pedestrian, cyclists and motor cycle vulnerability and survivable limits and the human tolerance to crash forces	To develop a Safe System process for corridor reviews and assist in advocating for funding to implement recommendations. EMRC to work with the Shire of Mundaring to undertake a Safe System transition project accordance with Safe System principles and assist in advocating for funding to implement recommendations.

No	Purpose (Issue)	Participants (Parties Involved)	Principles	Processes and Policies (Actions)
11	Lack of funding for East-Link, resulting in Mundaring Town Centre pedestrian related crashes and poor walkable environment.	EMRC, Shire of Mundaring and Department of Transport.	Improving the pedestrian environment for all users, ensuring Safe System ultimate aim by reducing road speeds to vulnerable road user survivable limits	EMRC to work with the Shire of Mundaring to undertake a Mundaring Town Centre walkability assessment in accordance with DoT Planning and Designing for Pedestrians guidelines with an aim to achieve a Safe System environment for pedestrians (and ultimately cyclists).
12	A number of roads and intersections within the City of Swan with higher percentage of heavy vehicle related crashes highlighted within this action plan	EMRC, MRWA Heavy Vehicles and member Councils	Ensuring a Safe System approach is taken recognising heavy vehicle mass and speed correlation to stopping distances as well as the disparity between large heavy vehicles and vulnerable road users	EMRC to work with member Councils to undertake a detailed study to understand the causality of the crashes involving heavy vehicles at the identified locations within this plan and assist in advocating for funding to implement recommendations.
13	Formal Road Safety Audit procedures have not been adopted by all member Councils to ensure a constant approach to safe system road safety auditing	EMRC, WALGA and member Councils	Audit policy ensures a commitment is adopted by Council for the implementation of road safety audit principles and practices in the planning and development of infrastructure within each member Council	EMRC to work with WALGA and each member Council to adopt the WALGA Road Safety Auditing policy or produce a similar policy for their Council. To set up network performance indicators relating to road safety.
SAFE SPEEDS				
14	High instances of crashes occurring when overtaking as well as single vehicle run-off road crashes. Such as Lesmurdie Road / Welshpool Road East intersection	EMRC, City of Kalamunda and MRWA	Transitioning rural roads to a fully Safe System through progressive safe system upgrades	EMRC to work with the City of Kalamunda to undertake a Safe System transition project in accordance with Safe System principles and assist in advocating for funding to implement recommendations
15	Shire of Mundaring experiences high instances of crashes occurring when overtaking as well as single vehicle run-off road crashes such as Morrison Road and Stoneville Road	EMRC, Shire of Mundaring and MRWA	Transitioning rural roads to a fully Safe System through progressive safe system upgrades	EMRC to work with the Shire of Mundaring to undertake a Safe System transition project in accordance with Safe System principles and assist in advocating for funding to implement recommendations
16	Speed reform – appropriate speeds for roads – lowering speeds for local neighbourhood roads and school zones	Main Roads WA Speed Zoning Policy and member Council community plans	Safe System principles states areas with expected vulnerable road user activity should have lower speeds	EMRC to work with member Councils to establish a 40km/h area speed zone trial and/or establish a 30km/h School Zone trial

Appendix A: Safety Workshop Summary

Key themes discussed in the Safety Workshop include vulnerable road users, congestion, safety issues and the impact of State Government Projects. The key points for each of these themes are summarised below.

Vulnerable Road Users

- There should be more consideration of gophers as the aging population grows, including appropriate networks, path widths, routes etc.
- User conflicts due to technology advancing, which includes electric scooter use of footpaths or in cycle lanes as well as E-Bikes on shared paths.
- Inadequate infrastructure to adequately separate modes of different size and speed – such as cyclists and heavy vehicles or traffic and pedestrians in town/ activity centres.
- Lack of safe pedestrian and cycle crossings on strategic and distributor roads.
- School Zones – current 40km/h speed limits and the small amount of time the reduced speed limit is actually in operation.
- Safe Active Street concept was noted as a good concept that works well however there is a lack of understanding of the concept, which may be a cultural issue where cycling is not heavily incorporated or considered a mode of transport.
- There was general consensus that town centres should be more ‘walkable’. EMRC could assess what this means for the region.
- Managing the use of footpaths by cycles when crossing driveways. Who gives way to who? – an understanding of the Road Traffic Code 2000.

Congestion

- Impact of congestion on impatient risky behaviour driving.
- Forecast congestion effecting regional freight movements and the impact on road safety.
- Lack of suitable and safe strategic road linking to the Eastern regions (EastLink).
- Impact of rail level crossings, and the associated congestion.



Key themes discussed in the Safety Workshop include vulnerable road users, congestion, safety issues and the impact of State Government Projects.

Safety Issues

- Single vehicle run-off road issues in more rural areas (Swan, Mundaring and Kalamunda).
- Traffic speed issues in general. It was also noted that there are inappropriate speeds on some roads or in some areas, which could trigger a speed reform.
- Strategic Roads cutting through neighbourhoods causing disconnect between communities proving difficult for crossing – such as Guildford Road through Bassendean, Tonkin Highway through Redcliffe and Great Eastern Highway through the City of Belmont.
- Hostile environments and safety, and the role of member Councils in addressing issues such as the 'Vehicle as a Weapon' issue.
- A number of pedestrian incidents in town centres were mentioned. Especially around the aging population and incidents with elderly pedestrians.
- General speed reform discussion, noting RAC are currently researching 'Safe Speeds' as a key issue. We should ensure the right speeds are posted for the right roads. Lower speeds for areas of high vulnerable road user activity. Great Eastern Highway (through Belmont) was noted as an example as inappropriate low speed for a key arterial vehicle and freight route (noting reason why the speed is 60km/h is likely due to the on-road cycling, which is a poor design outcome).
- Rail level crossings are problematic, create congestion and are also a safety issue.
- Sometimes neighbouring council projects move more traffic into council areas that cannot be safely catered for. More liaison and inter-council working needs to occur to ensure transport and road safety plans are aligned across the EMRC boundary.
- It was noted that a road safety plan should have a focus on KSI's rather than all crashes. While all crashes will be considered, high level assessment within this Plan has largely been around all types of crashes and Safe System crash types.
- Near-misses are often reported anecdotally, with no formal procedure. Council sometimes receive emails, but not consistently. The query was posed that perhaps EMRC could assess the potential for a government run central reporting system for near misses etc.
- Education and awareness programs region wide should be ongoing and not just one-off programs. EMRC could play a role in this to help manage behaviours directly. For example, road safety stalls and community events run by EMRC could be a consideration, as well as partnering with WALGA to further promote the RoadWise program. Also, additional information and messaging around the concept of Safe Active Streets, including the intent, role and that cars should give way to pedestrians etc.
- Speed in general and speed limits were also noted as key concerns. Speed reform is required so that the right speed for the right roads are allocated based on a system approach and not through the traditional engineering approach.

Impact of State Government Projects

- The Tonkin Highway / Hale Road access closure will result in an increased number of vehicles and freight traffic rerouting along local roads, potentially mixing with pedestrians.
- Lack of committed funding (Federal and State) for East Link means Mundaring townsites continue to affect safety for vulnerable road users.
- Bayswater Station upgrade by METRONET results in Whatley Crescent being restricted a single lane access, which could potentially have a wider impact on safety of the area.
- The new Ellenbrook Railway Line could have a road safety impact on the Town of Bayswater, which would require further investigation and review.
- MRS amendment for Guildford Road was not approved. There is potential for head on collisions at higher speeds and right angle crashes at intersections at higher speed due to widening works not occurring.
- It was noted that more railway level crossings to be funded so they can be removed at locations such as Railway Parade & Caledonian Ave and Guildford Rd & Railway Parade (Cresco Crossing). An alternative to removal could also include upgrades or grade separation, which is a more affordable option.
- Tonkin Gap Project (TGP) – MRWA will take up an alliance partner in June 2019 to fast track this project due to a lack of Government funding.



Appendix B: Science of crash force tolerance – vehicle mass and velocity

The mass of a vehicle has an impact on severity outcome in crashes and can be explained using Newton's Second Law of Motion:

($f = ma$) or (force = mass x acceleration)

When a constant force acts on a massive body, it causes it to accelerate i.e. to change its velocity at a constant rate. The force acting on an object is equal to the mass of that object multiplied by its acceleration.

The kinetic energy of an object is the energy that it possesses due to its motion. An object that has motion - whether it is vertical or horizontal motion - has kinetic energy. This is the energy that can be transferred into another vehicle or object upon impact in a crash and is expressed as:

($E_k = \frac{1}{2} mv^2$) or (kinetic energy = $\frac{1}{2}$ mass x velocity²)

Speed increases reaction distance and braking distance & crash forces ($d=vt$).

*Physics – the faster you go the harder you hit!
(E_k – speed is quadratic).*



Speed has a greater impact on the kinetic energy transfer than mass in the event a vehicle collides with another vehicle or object.

The reaction time of a typical driver, which is the period between a driver detecting a visual stimulus and their physical reaction to it, is 2 seconds.

The faster a vehicle travels, the greater the distance a vehicle will travel in the 2 seconds that it takes for the driver to react.

Distance travelled is calculated by multiplying speed (or velocity) and time, expressed as:

($d = vt$) or (distance = velocity x time).

Therefore, the faster a vehicle travels, the less time the driver has to reduce the vehicles speed.

If you refer to the formula for kinetic energy ($E_k = \frac{1}{2}mv^2$) you can see that velocity (or speed) is quadratic (or squared).

When comparing the impact of mass and speed on the outcome of a crash, the relationship between kinetic energy and mass is linear, which means that if you double vehicle mass it has twice as much kinetic energy.

The relationship between kinetic energy and velocity is exponential, which means that as you increase your speed, kinetic energy increases dramatically. This highlights that speed has a greater impact on the kinetic energy transfer than mass in the event a vehicle collides with another vehicle or object. It can therefore be argued that due to crash force tolerance, there is a case for reducing road speed in Western Australia. It is important to understand that a blanket approach to reducing speeds may not be appropriate, but rather a more detailed review of the network to understand where this may be required.

Human Tolerance to Violent Forces

A key part of the Safe Systems is accepting that humans will make errors, however infrastructure and the road network should be forgiving. A part of this is understanding the human tolerance to violent process. When designing roads, if conflicts between road users are unavoidable, we need to consider the physical forces within the limits of human tolerance, which is summarised in Figure 3.2. Speed and crash force has an impact on the human body's tolerance towards a violent force. The limits of human tolerance vary between the different types of collision, such as with a vulnerable road user (i.e. cyclists and pedestrians), roadside hazards, side-on collisions or frontal collisions.

Vulnerable Road Users (Pedestrian/Cyclist)

Generally, the human body, without any protection, cannot sustain impacts of above **30 km/h**. To address this, where practical, cyclists and pedestrians should be separated from other road users.

Roadside Hazards

The chances of surviving a fixed-point impact with a roadside hazard such as a tree or a pole decreases rapidly at speeds greater than **40 km/h**.

Side Collision

There is limited protection to the vehicle occupant when there is a side collision and the survivability of a crash significantly reduces above **50 km/h**. Roundabouts may be a good engineering solution to this crash type, as the angle of impact is less severe, and the deflection will reduce travel speed.

Frontal Impact

As the result of improvements of the safety features of vehicles, frontal impacts up to **70 km/h** are generally survivable. Where practical, roads speed zoned above 70 km/h should have separated carriageways, sealed shoulders, audible edge lines and road safety barriers.

Perth's Eastern Region

In Perth's eastern Region, the most common type of crash is a rear end crash. These crashes fit mostly in line with the frontal impact type of crash and are generally survivable. The second most common type of crash is a right-angle, or side collision type of crash. In this instance, roundabouts could be considered as a solution to minimise the impact of these types of crashes.

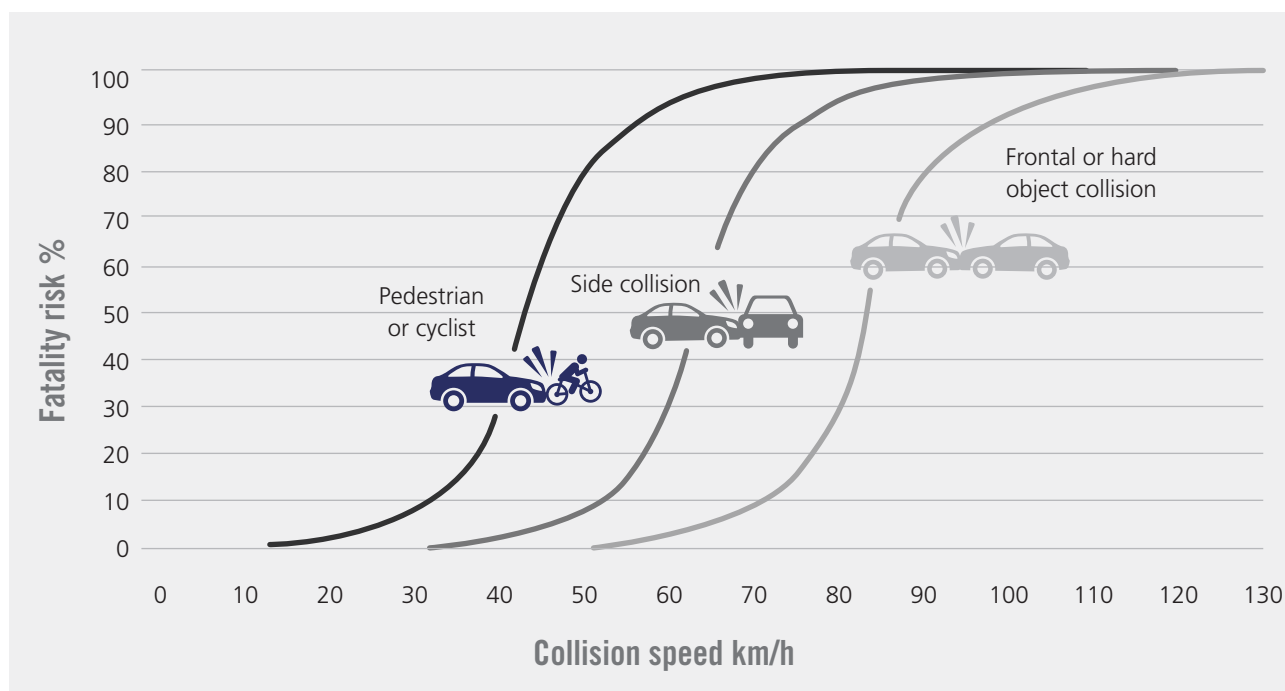


Figure 11.1: Fatality Risk Curve¹⁹

19 Wrambourg 2005 - https://acrs.org.au/files/arsrpe/full-paper_2019.pdf



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12.3 STRATEGIC REVIEW REQUEST FOR TENDER ENDORSEMENT

REFERENCE: D2019/16872

PURPOSE OF REPORT

The purpose of this report is to seek Council endorsement of Request for Tender (RFT) strategic review of the EMRC's services.

KEY POINTS AND RECOMMENDATION(S)

- Council at its 22 August 2019 meeting endorsed a strategic review of the EMRC.
- Since the adoption of the 10 year Strategic Plan - 2017 to 2027 in 2016, there has been significant progress on various projects and changes in the landscape of the waste industry.
- With the upcoming structural changes due to the Resource Recovery Facility (RRF) Project as well as new opportunities such as FOGO as a result of the Western Australian Waste Avoidance and Resource Recovery Strategy 2030 and Action Plan, it is imperative that the EMRC take this opportunity to seek and review its position.
- The Terms of Reference for the strategic review have been developed in consultation with the CEOAC which is made up of member Council CEOs, member Council staff and Councillors and are included as an attached RFT document to this report.
- It is proposed that the EMRC hire an external consultant through an RFT process to jointly explore strategic options, timing and scenario modelling for both Waste and Regional Services. The purpose of this review is to work on the way forward for the EMRC, including evaluating all strategic options to ensure it continues to deliver on its objectives for the benefit of its member Councils.

Recommendation(s)

That Council endorses the RFT2019-005 – EMRC Strategic Review, forming the attachment to this report.

SOURCE OF REPORT

Chief Executive Officer

BACKGROUND

On 18 August 2016, Council adopted the 10 Year Strategic Plan – 2017 to 2027 which took effect from 1 July 2017 (Ref: D2016/10193). The 10 Year Strategic Plan is an element of an Integrated Planning Framework which has been developed to ensure that strategic priorities drive operational activities. The framework is based on the guidelines developed by the Department of Local Government and Communities (DLC) and is used to implement regional projects that will benefit the community that lives, works, plays and does business within Perth's Eastern Region.

Since the adoption of the 10 Year Strategic Plan in 2016, there has been significant progress on various projects and changes in the waste industry.

At the Special Meeting of Council on 7 September 2017 Council confirmed the preferred tenderer for the Request for Tender as the HZI Consortium at its East Rockingham facility (Ref: D2017/12794).



Item 12.3 continued

The State Government released the Western Australian Waste Avoidance and Resource Recovery Strategy 2030 and Action Plan in February 2019. At its 21 March 2019 meeting, Council resolved (D2019/04210):

“THAT COUNCIL NOTES THE RELEASE OF THE WESTERN AUSTRALIAN WASTE AVOIDANCE AND RESOURCE RECOVERY STRATEGY 2030 AND ACTION PLAN AND COMMITS TO ALIGNING THE EMRC WASTE PRACTICES WHERE POSSIBLE.”

At the same meeting, Council resolved:

1. *THE EMRC BEGIN THE PROCESS OF DEVELOPING A LONG-TERM FOOD ORGANIC & GARDEN ORGANIC (FOGO) STRATEGY INCLUDING, IF REQUIRED, SEEKING EXPRESSIONS OF INTEREST FOR THE APPROPRIATE TECHNOLOGY TO IMPLEMENT LONG-TERM FOGO PROCESSING SOLUTIONS TO CATER FOR ALL MEMBER COUNCIL WASTE STREAMS.*
2. *IN THE INTERIM, THE EMRC PROCEEDS WITH THE PROCUREMENT PROCESS AND LICENCE APPROVAL FOR THE ADDITION OF A TRIAL MOBILE AERATOR FLOOR (MAF) COMPOSTING SYSTEM FOR THE PROCESSING OF UP TO 10,000 TPA OF FOGO WASTE AT THE RED HILL WASTE MANAGEMENT FACILITY.*

As part of the State Government's commitment to implement a Container Deposit Scheme (CDS), the Department of Water and Environmental Regulation (DWER) sought feedback on the CDS with submissions to be analysed and recommendations made to the Minister for Environment. The introduction of the Container Deposit Scheme (CDS) in early 2020 will bring a range of benefits to Western Australia. There is the opportunity for Local Governments and MRF operators to agree how the benefits of the Scheme will be shared prior to its implementation, by considering likely costs and revenue.

At the 22 August meeting, Council resolved:

1. *COUNCIL ENDORSES A STRATEGIC REVIEW OF THE EMRC.*
2. *THE TERMS OF REFERENCE FOR THE STRATEGIC REVIEW IS TO INCLUDE, BUT NOT NECESSARILY BE LIMITED TO, SERVICE PROVISION, FACILITIES, INFRASTRUCTURE, PROJECTS, ACTIVITIES, FUNDING AND CONTRACTS.*
3. *THE TERMS OF REFERENCE AND THE REVIEW BE DEVELOPED IN CONSULTATION WITH THE CEOAC, MEMBER COUNCIL STAFF AND COUNCILLORS.*
4. *COUNCIL BY ABSOLUTE MAJORITY, IN ACCORDANCE WITH SECTION 6.8(1)(B) OF THE LOCAL GOVERNMENT ACT 1995, AUTHORISES EXPENDITURE UP TO THE AMOUNT SPECIFIED IN THE REPORT FOR A STRATEGIC REVIEW.*
5. *THE REPORT REMAINS CONFIDENTIAL AND TO BE CERTIFIED BY THE CHAIRMAN AND CEO.*

REPORT

Following Council's endorsement to proceed with a strategic review of the EMRC at its ordinary Council meeting on 22 August 2019, the terms of reference forming the specifications for the RFT have been developed in consultation with the CEOAC made up of member Council CEOs, member Council staff and Councillors. The Terms of Reference are incorporated into the RFT document.

The purpose of this review is to make an informed assessment regarding the way forward for the EMRC, including evaluating all strategic options and consider scenarios to ensure it continues to deliver on the objectives for the benefit of our member Councils.

It is proposed that the public notice of the RFT be given in December 2019 following Council endorsement for a minimum period of 16 days to invite submissions from consultants to independently and jointly explore strategic options in consultation with the EMRC.



Item 12.3 continued

The RFT document forming an attachment is tabled for Council endorsement.

STRATEGIC/POLICY IMPLICATIONS

Key Result Area 3 – Good Governance

- 3.1 To provide advice and advocacy on issues affecting Perth's Eastern Region
- 3.2 To manage partnerships and relationships with stakeholders


FINANCIAL IMPLICATIONS

Unbudgeted provisional sum has been previously approved by Council to be funded from the municipal fund.

SUSTAINABILITY IMPLICATIONS

Nil

MEMBER COUNCIL IMPLICATIONS

Member Council	Implication Details
Town of Bassendean	 The outcome of the review may impact on the future services of the EMRC provides to its member Councils.
City of Bayswater	
City of Belmont	
City of Kalamunda	
Shire of Mundaring	
City of Swan	

ATTACHMENT(S)

- 1. EMRC Strategic Review - RFT2019-005 (Ref: D2019/16948)
- 2. Project Price Schedule (Ref: D2019/16948)

VOTING REQUIREMENT

Simple Majority

RECOMMENDATION(S)

That Council endorses the RFT2019-005 – EMRC Strategic Review, forming the attachment to this report.

CEOAC RECOMMENDATION(S)

MOVED CR

SECONDED CR



REQUEST FOR TENDER

Request for Tender Project Title (RFT)	EMRC Strategic Review
Contract Description	Provision of a strategic review to assist EMRC to define, develop and implement a vision delivering sustainable, ecologically responsible and quality services to the community.
Request Number	RFT2019-005
Closing Date	31 January 2020
Non-Mandatory Briefing / Site Inspection	Not Applicable
Tender Submission	<p>Online via: www.tenderlink.com/emrc</p> <p><i>Tenders will not be accepted by email, facsimile, hand delivery, Australia Post or courier.</i></p>

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1 PRINCIPAL'S REQUEST

1.1 CONTRACT REQUIREMENTS IN BRIEF

The Eastern Metropolitan Regional Council (EMRC) intends to procure consultancy services to conduct a Strategic Review of the EMRC to consider, given the changing operating environment, how the EMRC can continue to deliver on its mission over the medium and long term in delivering waste avoidance, resource recovery, landfill and other services to its member councils and their communities.

The objective of this assignment is to complete a strategic and organisational review of the EMRC and the development of a framework for improved effectiveness and efficiency in delivering the EMRC core services to the community.

Total duration of the project is approximately 6-8 months excluding actual delivery of the stakeholder engagement plan.

The EMRC now invites Consultants with the relevant experience and expertise to submit a response to this Request for Tender indicating qualifications and experience required to provide this consultancy service.

A full statement of the goods/services required under the proposed contract appears in the Scope of Supply - Part 3.

1.2 TENDER DOCUMENTS

This Request for Tender is comprised of the following parts:

- (a) Part 1 - Principal's Request (read and keep this part);
- (b) Part 2 - Conditions of Tender (read and keep this part);
- (c) Part 3 - Specification and Scope of Supply (read and keep this part);
- (d) Part 4 - Tenderer's Offer (complete and return this part); and
- (e) Part 5 - General Conditions of Contract and Contract Departures (if required complete and return this section)

1.3 DEFINITIONS

Attachments:	The documents you attach as part of your Tender.
Deadline:	The deadline for lodgement of your Tender is the Closing Date stipulated at the front page of this RFT document.
General Conditions of Contract:	Means the General Conditions of Contract nominated in section 2.9 Part 2 of this RFT.
Offer:	Your offer to be selected to supply the Requirements.
Principal:	EMRC.
Request:	This RFT document.

Requirements:	The goods/services requested by the Principal as detailed in Part 3 of this RFT.
RFT	Request for Tender.
Selection Criteria:	The criteria outlined in section 1.9 used by the Principal in evaluating your Tender.
Specification:	The statement of Requirements the Principal request you to provide if selected.
Tender:	Your completed Offer form, response to the Selection Criteria and Attachments as detailed in Part 4 of this RFT.
Tenderer:	Someone who has or intends to submit an Offer to the Principal.

1.4 HOW TO PREPARE YOUR TENDER

- Carefully read all parts of this document.
- Attendance at the Mandatory or Non Mandatory site inspection (if applicable).
- Ensure you understand the Requirements (see Part 3).
- Complete the Offer (Part 4) in all respects and attach all your Attachments.

It is mandatory to provide responses to all the requirements stated in the Qualitative Criteria in section 4.3.2 to ensure your Offer is evaluated accordingly.

- Make sure you have signed the Offer form and responded to all of the Selection Criteria.
- Lodge your Tender before the Deadline.

1.5 INFORMATION AND COMMUNICATION

Tenderers should not rely on any information provided by any source other than those listed below:

- Within this Request for Tender and associated attachments;
- Clarifications through the online portal at www.tenderlink.com/emrc.

Tenderers are to request clarifications through the online portal. If a clarification is considered to be commercially sensitive TenderLink provides the opportunity for Tenderers to mark a question(s) as sensitive/private which will ensure delivery of the question only to the Principal. The Principal will assess the nature of the question and determine its sensitivity and if deemed sensitive in nature will provide a confidential response otherwise will provide the Tenderer the opportunity to withdraw their question or accept a response released to all Tenderers.

1.6 PRE QUALIFICATION REQUIREMENTS

(This section is not applicable for this tender.)

1.7 TENDER BRIEFING / SITE INSPECTION

(This section is not applicable for this tender.)

1.8 EVALUATION PROCESS

This is a Request for Tender (RFT).

Your Tender will be evaluated using information provided in your Tender.

The following evaluation methodology will be used in respect of this Request:

- (a) Tenders are checked for completeness and compliance. Tenders that do not contain all information requested (e.g. completed Offer form and Attachments) may be excluded from evaluation.
- (b) The Selection Criteria are considered in assessing the Tenders received to determine an overall assessment of the tender that will provide the most advantageous outcome to the Principal.
- (c) One or more Tenderers may be short listed and may also be required to clarify the Tender, make a presentation, demonstrate the product/solution offered and/or open premises for inspection. Referees may be contacted prior to the selection of a preferred Tenderer or Tenderers.
- (d) Negotiations may be undertaken with the preferred Tenderer/s regarding any aspect of the Request, the Tender, and/or the Contract.

The Tender may then be awarded to the Tenderer that in the Principal's view represents the most advantageous outcome to the Principal.

The successful Tenderer will be issued with a Letter of Award, which will form the contract, on completion of the evaluation process.

1.9 SELECTION CRITERIA

The Principal has adopted a most advantageous to the Principal approach to this Tender.

The Contract may be awarded to a Tenderer who demonstrates the ability to provide quality products or services at a competitive price and provide the most advantageous outcome to the Principal.

The tendered prices will be assessed together with an evaluation of the following qualitative and compliance criteria to assist in determining the Tender that will provide the most advantageous outcome to the Principal.

This means that, although price is considered, the Tender containing the lowest price will not necessarily be accepted, nor will the Tender ranked the highest on the qualitative criteria, nor will the Tender ranked with the highest overall score from the evaluation.

In assessing Tenders all information requested in this Request, and any additional information available to the Principal or provided by a Tenderer, in response to this Request, will be taken into account. However, it remains solely up to the Principal to determine suitability and fit of the proponent.

When assessing the most advantageous outcome the Principal will take into account the evaluation of the specific qualitative criteria and may in addition to the evaluation of the specific qualitative criteria consider other operational factors, including the possible effect on competition of awarding the Contract to a particular Tenderer, the lifetime operating costs of goods or services to be supplied, the Principal's contract management costs, and the Principal's requirements to maintain commercial confidentiality of its processes and procedures.

1.9.1 COMPLIANCE CRITERIA

These criteria will not be point scored. Each Tender will be assessed on a Yes/No basis as to whether the criterion is satisfactorily met. An assessment of "No" against any criterion may eliminate the Tender from consideration.

Description of Compliance Criteria	Yes/No
(a) Compliance and completeness in completing Part 4, in particular the Offer Form in section 4.1 and Qualitative Criteria in section 4.3.2 -, contained in this RFT.	Yes/No
(b) Compliance with the Conditions of Tendering for this Request.	Yes/No
(c) Compliance with the RFT closing date.	Yes/No
(d) Compliance with and completion of the Price Schedule	Yes/No

1.9.2 QUALITATIVE CRITERIA

In assessing the Tenders as to how advantageous or otherwise that they may be to the Principal, the Principal will assess each Tenderer against the qualitative criteria.

It is essential that Tenderers address each qualitative criterion. The Tenders will be used to select the chosen Tenderer, and failure to provide the specified information may result in elimination from the Tender evaluation process.

The qualitative criteria for this Request are as follows:

Description of Qualitative Criteria	Weighting
(a) Previous experience in providing similar services within the waste avoidance and resource recovery and waste management industry	20%
(b) Proposed Methodology and Implementation Plan	25%
(c) Scenario modelling and forecasting	25%
(d) Relevant Experience and Qualification of Personnel	10%

1.9.3 PRICE CONSIDERATIONS

Criteria	Weighting
Tendered prices	20%

1.10 LOCAL GOVERNMENT POLICIES THAT MAY AFFECT SELECTION

(This section is not applicable for this tender.)

1.11 PRICE BASIS

All prices for goods/services offered under this Request shall be fixed for the term of the Contract.

Any charge not stated in the Tender, as being additional will not be allowed as a charge for any transaction under any resultant Contract.

2 CONDITIONS OF TENDERING

2.1 DELIVERY METHOD ELECTRONIC

Submissions are lodged in the Electronic Tender Boxes at www.tenderlink.com/emrc by the time and date nominated on the front cover of this Request.

Tender submissions will not be accepted by email, facsimile, hand delivery, Australia Post or courier.

2.2 LODGEMENT OF TENDERS

The Tender must be lodged by the Deadline. The Deadline for this Request is the closing date and time shown on the front cover of this Request.

The Tender must be submitted on line via www.tenderlink.com/emrc

2.3 REJECTION OF TENDERS

A Tender shall be rejected without consideration of its merits in the event that it is not submitted before the Deadline and at the place specified in the Request and may be rejected if it fails to comply with any other requirements of the Request.

2.4 LATE TENDERS

Tenders received after the Deadline will not be accepted for evaluation.

2.5 ACCEPTANCE OF TENDERS

Unless otherwise stated in this Request, Tenders may be for all or part of the Requirements and may be accepted by the Principal either wholly or in part. The Principal is not bound to accept the lowest Tender and may reject any or all Tenders submitted.

2.6 DISCLOSURE OF CONTRACT INFORMATION

Documents and other information relevant to the contract may be disclosed when required by law under the *Freedom of Information Act 1992* or under a Court order.

All Tenderers will be given particulars of the successful Tenderer (s) or advising that no Tender was accepted.

2.7 ALTERNATIVE TENDERS

All Alternative Tenders must be accompanied by a conforming Tender.

Tenders submitted as Alternative Tenders or made subject to conditions other than the General and Special Conditions of Contract and must in all cases arising be clearly marked "ALTERNATIVE TENDER".

The Principal may in its absolute discretion reject any Alternative Tender as invalid.

Any Contractor's "General Conditions of Contract" or Terms and Conditions of Sales included in the Tenderer's letter or quotation or Tender submission will not be binding on the Principal in the event of a Contract being awarded.

2.8 TENDER VALIDITY PERIOD

All Tenders shall remain valid and open for acceptance for a minimum period of three (3) months from the Deadline or forty-five (45) days from the Council's resolution for determining the tender whichever is the later unless extended on mutual agreement between the Principal and the Tenderer in writing.

2.9 GENERAL CONDITIONS OF CONTRACT

Tenders shall be deemed to have been made on the basis of and to incorporate general conditions of contract substantially in the form of the General Services Consultant Contract enclosed with this Request.

2.10 PRECEDENCE OF DOCUMENTS

In the event of any conflict or inconsistency between the terms and conditions in this Request and those in the General Conditions of Contract, the terms and conditions appearing in this Request shall have precedence.

2.11 TENDERERS TO INFORM THEMSELVES

Tenderers shall be deemed to have:

- (a) examined the Request and any other information available in writing to Tenderers for the purpose of Tendering;
- (b) examined all further information relevant to the risks, contingencies, and other circumstances having an effect on their Tender which is obtainable by the making of reasonable enquires;
- (c) satisfied themselves as to the correctness and sufficiency of their Tenders including Tendered prices which shall be deemed to cover the cost of complying with all the Conditions of Tendering and of all matters and things necessary for the due and proper performance and completion of the work described therein;
- (d) acknowledged the Principal will not be liable for payment to Tenderer for any costs, losses or expenses incurred by the Tenderer in preparing this Offer.; and
- (e) acknowledged that the Principal may enter into negotiations with a chosen Tenderer. Negotiations shall be carried out in good faith.

2.12 ALTERATIONS

The Tenderer shall not alter or add to the Request documents unless required by these Conditions of Tendering.

The Principal shall issue an addendum to all Tenderers where matters of significance make it necessary to amend the issued Request documents before the Deadline.

2.13 RISK ASSESSMENT

The Principal reserves the right to engage (at its own cost) an independent financial assessor as a nominated agent to conduct financial assessments under conditions of strict confidentiality. For this assessment to be completed, a representative from the nominated agent may contact you concerning the financial information that you are required to provide.

The financial assessment is specifically for use by the Principal for the purpose of assessing this tender and will be treated as strictly confidential. We require your agreement to assist in the assessment process.

The Tenderer agrees that it will co-operate with an independent financial assessor during the financial assessments process.

2.14 ENVIRONMENTAL PROTECTION

(This section is not applicable for this tender).

2.15 OWNERSHIP OF TENDERS

All documents, materials, articles and information submitted by the Tenderer as part of or in support of a Tender shall become upon submission the absolute property of the Principal and will not be returned to the Tenderer at the conclusion of the Tender process PROVIDED that the Tenderer shall be entitled to retain copyright and other intellectual property rights therein, unless otherwise provided by the Contract.

2.16 CANVASSING OF EMPLOYEES AND COUNCILLORS

If a Tenderer, whether personally or by an agent, canvasses any of the Principal's employees, commissioners or councillors (as the case may be) with a view to influencing the acceptance of any Tender made by it or any other Tender, then regardless of such canvassing having any influence on the acceptance of such Tender, the Principal may at its discretion omit the Tender from consideration.

2.17 IDENTITY OF THE TENDERER

The identity of the Tenderer and the Contractor is fundamental to the Principal. The Tenderer shall be the person, persons, corporation or corporations named as the Tenderer in Part 4 and whose execution appears on the Offer Form in Part 4 of this Request. Upon acceptance of the Tender, the Tenderer shall become the Contractor.

2.18 TENDER OPENING

All Tenderers and members of the public may attend or be represented at the opening of Tenders.

All Tenders will be opened in the Principal's offices, following the advertised Deadline. No discussions will be entered into between Tenderers' and the Principal's officers.

3 SCOPE OF SUPPLY

3.1 Introduction

- 3.1.1 The Eastern Metropolitan Regional Council (EMRC), located at 226 Great Eastern Highway, Belmont 6104, is a progressive and innovative regional local government working on behalf of six member Councils located in Perth's eastern suburbs - Town of Bassendean, City of Bayswater, City of Belmont, City of Kalamunda, Shire of Mundaring and City of Swan.
- 3.1.2 The EMRC provides services in waste management, environmental management and regional development, EMRC is a model of successful collaboration that has initiated projects delivering real benefits to the region.
- 3.1.3 The EMRC operates out of 3 Sites namely; The Ascot Place Administration Centre, the Red Hill Waste Management Facility and the Hazelmere Resource Recovery Park and two remote transfer stations.
- 3.1.4 The intent of this document is to define the Scope of Supply to be performed by the Consultant.
- 3.1.5 The Chief Executive Officer or delegate is the EMRC's Principal Representative responsible for ensuring the Consultant delivery of the agreed expected outcomes.

3.2 Principal's Requirements

The Principal requires the service of a Consultant to provide labour, processes, expertise, experience, market knowledge and quality leadership to conduct a strategic review of EMRC business to define, develop and implement a vision delivering sustainable, ecological responsible and quality services to the community ("**Service**").

3.3 Definition

Term and Acronym	Definition
C&D	Construction and Demolition
C&I	Commercial and Industrial
Principal	Eastern Metropolitan Regional Council
MFA	Material Flow Analysis
MSW	Municipal Solid Waste
Site	<p>Comprises of the following locations:</p> <ul style="list-style-type: none"> • Ascot Place Administration Centre, 226 Great Eastern Highway, Belmont 6104. • Red Hill Waste Management Facility, 1094 Toodyay Road, Red Hill 6056 • Hazelmere Resource Recovery Park, 77 Lakes Road, Hazelmere 6055 • Coppin Road Transfer Station, Coppin Road, Mundaring 6073 • Mathieson Road Transfer Station, Mathieson Road, Chidlow 6556 • Other EMRC operated sites as they may arise.

3.4 Scope of Work

The Consultant shall provide suitably competent, qualified and experienced personnel to undertake the following activities:

3.4.1 Regional Market Assessment

Conduct a desktop research exercise to understand the following:

- a. The Principal's current Establishment Agreement and previous strategic plans and actions achieved to synthesise all the relevant information, in particular progress of WA alignment to the Waste Avoidance and Resource Recovery Strategy 2030 Action Plan and industry/community response to the strategy.
- b. Develop a scoping document of the current and future policy landscape with an explanation of current and future regulations to support projects.
- c. An estimated future growth forecast (20 year) by volume and composition of different feedstocks.
- d. MFA for MSW, but where possible, C&I and C&D waste to understand source, process and destination material flows.
- e. Identify and provide details of known opportunities of material offtake and timing within the region.
- f. Number, location, size, ownership, estimated volumes, age of plant / start year of facilities within the region.
- g. Document and describe key market drivers and broad economic principles.
- h. Succinct summary of offtake markets e.g. typical prices and terms, various offtake contracting structures with examples of operating projects.
- i. Articulate the principle risks to the sector and discuss future scenarios. For example, including but not limited to, key risk summary of feedstock reliability, terms and conditions of feedstock supply (incl. typical years), typical order of cost, community acceptance etc.
- j. Assessment of competitors of the waste in respective segments, asset register, market share, volume, tenure if known and ownership structure.

3.4.2 Circular economy horizon scan and Opportunities Analysis

- a. Based on outcomes of the regional market assessment, identify and categorise the feasibility of opportunities to become more circular. Things to consider for example are different business models, approaches to procurement and applications of different circular economy principles. This is expected to take the form of:
 - i. Initial stakeholder workshop(s);
 - ii. A high-level identification of different opportunities in waste, water, energy and transport;
 - iii. An outline of only the concepts the Principal can directly control or influence; and
 - iv. A high-level assessment on the viability and impact for each of these concepts.
- b. Engage with internal stakeholders across the Principal, member Councils, other Local Government and State Government departments to communicate the opportunities of a circular economy.
- c. Identification of the sectors or departments to focus upon.
- d. Provide an initial estimate of the economic benefits and opportunities in relation to a circular economy within the region.

3.4.3 Scenario Modelling and Options Analysis

- a. Develop a resource flow and cost model to understand the current baseline position and the interface between current live projects.
- b. Identify and model an agreed number of alternative scenarios for the remaining available material.
- c. Longlisting of options. This will be a broad review describing the option, technology or solution and associated advantages and risks, setting out examples of where it has been successful within other jurisdictions within a

similar regulatory environment. The output of the longlisting exercise should be a high-level briefing note presented in the form of a multi criteria analysis.

- d. A shortlisting exercise from choices selected from the longlisting. This phase will require a more detailed review including identification of demonstrated examples of projects using similar feedstocks and at similar scales and should also include provision of high-level financial assessment of the options.
- e. For each option there will need to be consideration of feedstock availability and composition, reference projects/facilities or case studies, performance, a financial summary, indication of typical programmes and development of risk and opportunity matrix.

3.4.4 Vision Setting, Strategy and Implementation Plan

Working with the Principal, the Consultant will be required to:

- a. Facilitate workshop(s) with key stakeholders to define a clear vision and future focus areas.
- b. Prepare a clear and concise regional resource and education strategy document which sets out where we are now, where we want to go and how we are going to get there.
- c. Prepare a detailed implementation plan that clearly sets out as a minimum key actions and initiatives, roles and responsibilities, programmes, gateways and milestones and the approach to monitoring success and performance.
- d. Optimisation plan for existing sites.

3.4.5 Stakeholder Engagement

Working with the Principal, the Consultant will be required to:

- a. Undertake a stakeholder mapping exercise and characterise stakeholders.
- b. Develop a stakeholder engagement plan and propose a cross-organisational approach to stakeholder consultation in conjunction with the Principal leadership team.
- c. Deliver the proposed stakeholder engagement plan (probably separate commission).

3.4.6 Governance Model

Working with the Principal, the Consultant will be required to:

- a. Review the current governance model of the Principal.
- b. Develop an overview of relevant alternative governance models.

3.4.7 Service Provision.

Working with the Principal, the Consultant will be required to:

- a. Review the current service provision model and funding model of the Principal.
- b. Develop an overview of existing services and options to expand or withdraw a service.

3.5 Key Deliverables

The Consultant must provide the following key deliverables within a timeframe to be agreed prior to commencement of the Service:

- a. Project inception report;
- b. Resource flow visualisations;
- c. Circular economy horizon scan report;
- d. Waste (Resource) and education strategy;
- e. Implementation plan;
- f. Workshop report;
- g. Stakeholder engagement plan;
- h. Governance options; and

- i. Service provision report.

3.6 Accountability and Management

The Consultant will be expected to:

- a. Maintain regular contact with the Principal, responding to communications in a timely manner.
- b. Be flexible and responsive to the needs of the Principal as they arise.
- c. Be proactive in seeking clarification, information or guidance as required.

3.7 Programme

The total duration of this project is approximately 6-8 months excluding actual delivery of the stakeholder engagement plan.

3.8 Intellectual Property Ownership

All Intellectual Property Rights (other than the Consultant's Background Intellectual Property Rights) in the designs, documents, materials, equipment or methods of working provided by the Consultant under the Contract will vest with the Principal. The Consultant must do everything necessary to perfect such vesting at the Consultant's cost or as otherwise agreed by the Parties.

4 TENDERER'S OFFER

4.1 OFFER FORM

The Chief Executive Officer
EMRC
1st Floor
226 Great Eastern Highway
Belmont WA 6104

I/We (block letters) _____

ADDRESS: _____

ABN / GST Status: _____

Telephone Number: _____ Fax: _____

Email (if any): _____

In response to RFT 2019- 005 EMRC Strategic Review:

I/We agree that I am/We are bound by, and will comply with this Request and its associated schedules, attachments, all in accordance with the Conditions of Tendering contained in this Request signed and completed.

The tendered price is valid up to three (3) months from the date of the tender closing or forty-five (45) days from the Council's resolution for determining the tender whichever is the later unless extended on mutual agreement between the Principal and the Tenderer in writing.

I/We agree that there shall be no cost payable by the Principal towards the preparation or submission of this Tender irrespective of its outcome.

The tendered consideration is as provided under the schedule of rates of prices in the prescribed format and submitted with this Tender.

Dated this: _____ day of _____ 20 _____

Signature of authorised Tenderer: _____

Name of authorised signatory (BLOCK LETTERS): _____

Position: _____

Address: _____

Witness Signature: _____

Name of witness (BLOCK LETTERS): _____

Position: _____

Address: _____

4.2 GENERAL AND CORPORATE INFORMATION

4.2.1 ORGANISATION PROFILE AND REFEREES

Attach your organisation profile and label it "Attachment 1".	Attachment 1 <input type="checkbox"/> Tick✓if attached
If companies are involved, attach their current ASIC company extracts search including latest annual return and label it "Attachment 2".	Attachment 2 <input type="checkbox"/> Tick✓if attached
Attach details of your referees, and label it "Attachment 3". You should give examples of work provided for your referees where possible.	Attachment 3 <input type="checkbox"/> Tick✓if attached

4.2.2 AGENTS

Are you acting as an agent for another party?	Yes <input type="checkbox"/> No <input type="checkbox"/>
If Yes, attach details (including name and address) of your principal and label it "Attachment 4".	Attachment 4 <input type="checkbox"/> Tick✓if attached

4.2.3 TRUSTS

Are you acting as a trustee of a trust?	Yes <input type="checkbox"/> No <input type="checkbox"/>
If Yes, in an attachment labelled "Attachment 5": (a) give the name of the trust and include a copy of the trust deed (and any related documents); and (b) if there is no trust deed, provide the names and addresses of beneficiaries.	Attachment 5 <input type="checkbox"/> Tick✓if attached

4.2.4 SUB-CONTRACTORS

Do you intend to subcontract any of the Requirements?	Yes <input type="checkbox"/> No <input type="checkbox"/>
If Yes, attach details of the subcontractor(s) including the name, address, location of premise and the number of people employed and label it "Attachment 6".	Attachment 6 <input type="checkbox"/> Tick✓if attached

4.2.5 CONFLICTS OF INTEREST AND BUSINESS ETHICS

Will any actual or potential conflict of interest in the performance of your obligations under the Contract exist if you are awarded the Contract, or is any such conflict of interest likely to arise during the Contract?	Yes / No
Has your company or any of its affiliates, or any current director, officer, or key employee has ever been debarred/suspended from doing business in any capacity, or convicted of charges of fraud, misrepresentation, corruption, bribery, money laundering or other related activities. If Yes please provide detail.	Yes / No
Does your organisation have a code of conduct or similar compliance and ethics related policy in place?	Yes / No
If Yes to the above questions, please supply in an attachment details of the above responses and label it "Attachment 7".	Attachment 7 <input type="checkbox"/> Tick✓if attached

4.2.6 FINANCIAL POSITION

Are you presently able to pay all your debts in full as and when they fall due?	Yes <input type="checkbox"/> No <input type="checkbox"/>
Are you currently engaged in litigation as a result of which you may be liable for \$50,000 or more?	Yes <input type="checkbox"/> No <input type="checkbox"/>
If you are awarded the Contract, will you be able to fulfil the Requirements from your own resources or from resources readily available to you and remain able to pay all of your debts in full as and when they fall due?	Yes <input type="checkbox"/> No <input type="checkbox"/>
Attach a financial profile for you and each of the other proposed contracting entities together with a list of financial referees and label it "Attachment 8".	Attachment 8 <input type="checkbox"/> Tick✓if attached

4.2.7 CONTRACT CONDITIONS

Do you agree to the proposed General Conditions of the General Services Consultant Contract attached in Part 5 Appendix A. If No, please complete Contract Departures in Part 5 Appendix B, of any proposed changes/amendments.	Yes / No
Attach the Contract Departures Form of any proposed changes/amendments and label it "Attachment 9".	Attachment 9 <input type="checkbox"/> Tick✓if attached

4.2.8 QUALITY ASSURANCE

The quality assurance for this Tender is: ISO9001. Does your organisation have this or any quality assurance or quality	Yes <input type="checkbox"/>
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assurance systems?	No <input type="checkbox"/>
Please provide your Quality Assurance Plan (QAP and supply details of your QAP and where relevant of your subcontractors, in an attachment labelled "Attachment 10".	Attachment 10 <input type="checkbox"/> Tick✓if attached

4.2.9 ENVIRONMENTAL PROTECTION

Not applicable for this RFT	Yes <input type="checkbox"/> No <input type="checkbox"/>
Not applicable for this RFT	Attachment 11 <input type="checkbox"/> Tick✓if attached

4.2.10 INSURANCE COVERAGE

The insurance requirements for this Request are stipulated in the General Conditions of Contract for Minor Service Contract. The Tenderer is required to supply evidence of their insurance coverage in a format as outlined below in "Attachment 12". A copy of the Certificate of Currency must be provided to the Principal within 12 days of acceptance.	Attachment 12 <input type="checkbox"/> Tick✓if attached
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Type	Insurer – Broker	Policy Number	Value (\$)	Expiry Date
Public Liability Insurance				
Professional Indemnity Insurance				
Workers Compensation Insurance				

4.3 RESPONSE TO SELECTION CRITERIA

4.3.1 COMPLIANCE CRITERIA

Have you complied with the Offer Form in section 4.1 and section 4.3.2 Qualitative Criteria contained in the Request?	Yes <input type="checkbox"/> No <input type="checkbox"/>
Have you complied with the Conditions of Tendering contained in this Request?	Yes <input type="checkbox"/> No <input type="checkbox"/>
Are you complying with the RFT closing date?	Yes <input type="checkbox"/> No <input type="checkbox"/>

Have you complied with and completed the price schedule? Please note Tenderer is required to complete the price schedule as per the format provided in this RFT. Please <u>do not</u> provide this in pdf format.	Yes <input type="checkbox"/> No <input type="checkbox"/>
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4.3.2 QUALITATIVE CRITERIA

Before answering the qualitative criteria, Tenderers shall note the following:

- (a) **It is mandatory to provide responses to all the requirements stated in this section to ensure your Offer is evaluated accordingly. Please label each of your responses corresponding to the criteria requirements.**
- (b) All information relevant to your answers should be contained within your Tender to each criterion;
- (c) Tenderers shall assume that the Evaluation Panel has **no** previous knowledge of your organisation, its activities or experience;
- (d) Tenderers shall provide full details for any claims, statements or examples used to address the qualitative criteria; and
- (e) Tenderers shall address each issue outlined within a qualitative criterion.

<p>A. Previous experience in providing similar services within the waste industry</p> <p>The Tenderer must provide details as applicable on their experience in conducting a strategic review for organisations of a similar size and industry and shall as a minimum address the following information and label it "Attachment 13":</p> <ol style="list-style-type: none"> (a) Provide an example of a strategic review programme provided to an organisation within the waste and resource recovery industry and it must include the following details: <ul style="list-style-type: none"> - scope of supply - resourcing - project plan - timeline of the activities - completion period in weeks for the project - deliverables - stakeholder engagement - the final outcome from the project. <p>Due to confidentiality reasons the Tenderer is not required to disclose the name of the company.</p> (b) Provide details of challenges that arose for the project above, lessons learnt and how these were managed including if there was anything that the Tenderer could have done differently and why. (c) Provide details of data sources to support the strategy development and how the data was utilised. (d) Provide an example of the Tenderer's experience in identifying and facilitating the implementation of circular economy principles. <p>Supply details in an attachment and label it "Attachment 13":</p>	<p>Attachment 13 <input type="checkbox"/></p> <p>Tick✓if attached</p>
<p>B. Proposed Methodology and Implementation Plan</p>	<p>Attachment 14 <input type="checkbox"/></p>

<p>The Tenderer must detail the process utilised to achieve the Requirements of the Scope of Supply. This shall as a minimum include the following information:</p> <ul style="list-style-type: none"> (a) The methodology employed and the reference documentation and research material/information supporting the process. (b) A detailed implementation plan and process to deliver this project which must include the capability and capacity, man hours and identify the personnel required for each phase of the project. (c) A project timeline for each phases of the project. (d) The proposed team for this project <p>Supply details in an attachment and label it "Attachment 14":</p>	<p>Tick✓if attached</p>
<p>C. Scenario modelling and forecasting</p> <p>Tenderer must provide details of the scenario modelling and forecasting process and methodology the Tenderer anticipates utilising for this project. Details provided must include the following:</p> <ul style="list-style-type: none"> (a) Source or reference points (b) Data source (c) Applicable tools and resources (d) Rules applicable (e) Provide the list of major dependency to ensure a higher level of success <p>Supply details in an attachment and label it "Attachment 15":</p>	<p>Attachment 15 <input type="checkbox"/></p> <p>Tick✓if attached</p>
<p>D. Relevant Experience and Qualification of Personnel</p> <p>Tenderers must provide as a minimum, information of proposed personnel to be allocated to this project, such as:</p> <ul style="list-style-type: none"> (a) Demonstrating a proven track record of inclusive strategic review and planning; (b) Tenderer must demonstrate that they have access to personnel trained locally who possess relevant local knowledge and experience to support the project and supply the key deliverables. (c) Their ability to synthesise a large range of information methodically but also have a flexible approach in a strategic review consultation environment; (d) Their role in the performance of the Contract; (e) Curriculum vitae; (f) Membership to any professional or business association; (g) Qualifications, with particular emphasis on experience of personnel in projects of a similar requirement; and (h) Any additional information. <p>Supply details in an attachment and label it "Attachment 16":</p>	<p>Attachment 16 <input type="checkbox"/></p> <p>Tick✓if attached</p>

4.4 PRICE INFORMATION

Tenderers **must** complete the following Price Schedule below and provide the Price Schedule in an attachment labelled "Attachment 17". Before completing the Price Schedule, Tenderers should read the entire Request.

4.4.1 PRICE SCHEDULE

Tenderer shall provide pricing schedule detailed below:

Provide price schedule as per the RFT2019-005 Project Price Schedule.xls in an attachment labelled "Attachment 17."	Attachment 17 <input type="checkbox"/> Tick✓if attached
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Important Note

The Principle reserves the right to accept all or part of the Service (activities as defined in the Scope of Supply in Section 3 of this RFT) offered in the Project Price Schedule.

4.4.2 SCHEDULE OF RATES FOR ADDITIONAL WORK

The Tenderer shall list below the hourly rates payable for provision of additional Service and provide the Disbursement Percentage in an attachment labelled "Attachment 17".

Provide Schedule of Rates for Additional Work as per the RFT2019-005 Project Price Schedule.xls in an attachment labelled "Attachment 17".	Attachment 17 <input type="checkbox"/> Tick✓if attached
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4.4.3 DISBURSEMENTS FOR ADDITIONAL WORK

Provide proposed profit and administration percentage mark-up (please note this is mark-up and not margin) for Third Party supplied Goods and Services for any additional work. Please provide percentage mark-up as per the table provided below and provide the Disbursement Percentage in an attachment labelled "Attachment 17".

Provide Disbursement for Additional Work as per the RFT2019-005 Project Price Schedule.xls in an attachment labelled "Attachment 17".	Attachment 17 <input type="checkbox"/> Tick✓if attached
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5 GENERAL CONDITIONS OF CONTRACT AND SPECIAL CONDITIONS OF CONTRACT

APPENDIX A - GENERAL CONDITIONS OF CONTRACT

Please refer to General Services Consultant Contract enclosed with this Tender

APPENDIX B – CONTRACT DEPARTURES

Please refer to Contract Departures enclosed with this Tender

Lump Sum Price Schedule				
RFT Document Reference	Description of Services/Tasks	Total Hours Required	Hourly Rate ex GST	Total Cost ex GST
3.4.1	Regional Market Assessment			
3.4.2	Circular economy horizon scan and Opportunities Analysis			
3.4.3	Scenario Modelling and Options Analysis			
3.4.4	Vision Setting, Strategy and Implementation Plan			
3.4.5	Stakeholder Engagement			
3.4.6	Governance Model			
3.4.7	Service Provision			
	Report preparation and finalisation			
	Total Cost of Project			

Note:

Prices for each of the services/tasks must include the following:

- a) meetings held at Principal Site or Consultant office
- b) all administration costs which includes photocopying, documentation preparation/collation etc
- c) all other costs in delivering the project which includes travel costs, time, fuel etc
- d) the Principal reserves the right to accept all or part of the services/tasks listed above.

Personnel Rate Schedule	
Position	Hourly Rate ex GST
eg Consultant	\$150.00

Disbursements	
Disbursement Description	% Markup on actual cost
Third party supplied Goods	
Third Party supplied services	
Third Party supplied equipment	

Note:

Please note this is mark-up and not margin to cover profit and administration cost



12.4 ITEMS CONTAINED IN THE INFORMATION BULLETIN

REFERENCE: D2019/16417

The following items are included in the Information Bulletin, which accompanies the Agenda.

1. REGIONAL SERVICES

- 1.1 REGIONAL SERVICES ACTIVITY REPORT - JULY TO SEPTEMBER 2019
(Ref: D2019/16734)
- 1.2 CORPORATE BUSINESS PLAN 2019/2020 - 2023/2024 PROGRESS REPORT JULY TO
SEPTEMBER 2019 (Ref: D2019/16420)

RECOMMENDATION

That the Chief Executive Officers Advisory Committee notes the items contained in the Information Bulletin accompanying the 19 November 2019 Chief Executive Officers Advisory Committee Agenda.

CEOAC RESOLUTION

MOVED

SECONDED

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13 REPORTS OF DELEGATES

14 NEW BUSINESS OF AN URGENT NATURE APPROVED BY THE CHAIRMAN OR PRESIDING MEMBER OR BY DECISION OF MEETING

15 GENERAL BUSINESS

15.1 EVENTS IN THE REGION

15.2 OTHER GENERAL BUSINESS

16 CONFIDENTIAL MATTERS FOR WHICH THE MEETING MAY BE CLOSED TO THE PUBLIC

Nil

17 FUTURE MEETINGS OF THE CHIEF EXECUTIVE OFFICERS ADVISORY COMMITTEE

The next meeting of the Chief Executive Officers Advisory Committee will be held on **4 February 2020** at the EMRC Administration Office, 1st Floor, 226 Great Eastern Highway, Belmont WA 6104 commencing at 12:30pm with lunch at 12noon.

Future Meetings 2020

Tuesday	4 February		at	EMRC Administration Office
Tuesday	3 March *	(informal)	at	TBA
Tuesday	7 April		at	EMRC Administration Office
Tuesday	5 May	(informal)	at	TBA
Tuesday	2 June *		at	EMRC Administration Office
Tuesday	7 July	(informal)	at	TBA
Tuesday	4 August		at	EMRC Administration Office
Tuesday	1 September	(informal)	at	TBA
Tuesday	6 October	(if required)	at	EMRC Administration Office
Tuesday	10 November		at	EMRC Administration Office

*** Please note the Monday prior to the March (informal) and June meetings are a Public Holiday.**

18 DECLARATION OF CLOSURE OF MEETING