Enter The Project Location

Enter the Project Proposal

Road Safety Audit

Stage 2 - Preliminary Design

Audit Ref: PTS/RSB/RSA/2015/001

Prepared for:

**Enter Client Details**

By:

**Enter Road Safety Audit Team Organisation**

Report Issue Date: **1/01/2015**

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# INTRODUCTION

## Scope of Audit

A Road Safety Auditis a formal, systematic, assessment of the potential road safety risks associated with a new road project or road improvement project conducted by an independent qualified audit team. The assessment considers all road users and suggests measures to eliminate or mitigate any risks identified by the audit team.

This Road Safety Audit has been conducted following the general principles detailed in *Austroads Guide to Road Safety Part 6: Road Safety Audit* and in accordance with the requirements contained in the Main Roads Western Australia Policy and Guidelines for Road Safety Audit.

This report results from a [Audit Stage] Road Safety Audit carried out on the proposed [Project Proposal] at [Project Location].

The background and objective of the proposed project is [INCLUDE INFORMATION SUPPLIED BY THE CLIENT IN THE AUDIT BRIEF].

The Audit was undertaken by [Audit Team Leader] of [Audit Team Leader Organisation] with reference to the details provided in the Audit Brief.

The audit comprised an examination of the drawings and other information supplied by [Client Contact and Organisation] as listed in Appendix D.

All the findings described in Section 2 of this report are considered by the audit team to require action in order to improve the safety of the proposed project and to minimise the risk of crash occurrence and reduce potential crash severity.

The audit team has examined and reported only on the road safety implications of the project as presented and has not examined or verified the compliance of the design to any other criteria.

## The Audit Team

|  |  |  |  |
| --- | --- | --- | --- |
| **Auditor No.** | **Name** | **Role** | **Organisation** |
| 000000 | [ENTER NAME] | Audit Team Leader | [ENTER ORGANISATION] |
| 000000 | [ENTER NAME] | Audit Team Member | [ENTER ORGANISATION] |
| 000000 | [ENTER NAME] | Audit Team Trainee | [ENTER ORGANISATION] |

The audit team visited the site on [DATE] at [TIME]. At the time of the site visit the weather was [ENTER] and the existing road surface was [ENTER WET/DRY].

A night-time site visit was undertaken on [DATE] at [TIME].

## Specialist Advisors

Others present during the daytime / night-time visits were:

|  |  |  |
| --- | --- | --- |
| **Name** | **Role** | **Organisation** |
| [ENTER NAME] | [E.g. Police Advisor] | [ENTER ORGANISATION] |
| [ENTER NAME] | [E.g. Traffic Signal Advisor] | [ENTER ORGANISATION] |
| [ENTER NAME] | [E.g. Maintenance Advisor] | [ENTER ORGANISATION] |

## Safe System Findings

The aim of Safe System Findings is to focus the Road Safety Audit process on considering safe speeds and by providing forgiving roads and roadsides. This is to be delivered through the Road Safety Audit process by accepting that people will always make mistakes and by considering the known limits to crash forces the human body can tolerate. This is to be achieved by focusing the Road Safety Audit on particular crash types that are known to result in higher severity outcomes at relatively lower speed environments to reduce the risk of fatal and serious injury crashes.

The additional annotation “**IMPORTANT**” shall be used to provide emphasis to any road safety audit finding that has the potential to result in fatal or serious injury or findings that are likely to result in the following crash types above the related speed environment: head-on (>70 km/h), right angle (>50 km/h), run off road impact object (>40 km/h), and crashes involving vulnerable road users (>30 km/h), as these crash types are known to result in higher severity outcomes at relatively lower speed environments.

The exposure and likelihood of crash occurrence shall then be considered for all findings deemed “**IMPORTANT**” and evaluated based on an auditors professional judgement. Auditors should consider factors such as, traffic volumes and movements, speed environment, crash history and the road environment, and apply road safety engineering and crash investigation experience to determine the likelihood of crash occurrence. The likelihood of crash occurrence shall be considered either “**VERY** **HIGH**”, “**HIGH**”, “**MODERATE**” or “**LOW**” and this additional annotation shall be displayed following the “**IMPORTANT**” annotation on applicable findings.

## Previous Safety Audits

A [ENTER AUDIT STAGE] was undertaken by [NAME OF ORGANISATION] in [MONTH AND YEAR] [AUDIT REF].

The items raised in the [ENTER AUDIT STAGE] safety audit have been addressed with the exception of the items listed below. These items are discussed again in this road safety audit.

|  |  |  |
| --- | --- | --- |
| **Earlier Audit Finding Ref.** | **Description** | **Audit Item Ref.** |
| [REF. E.g. 2.1] | [FINDING DESCRIPTION] | [REF. E.g. 2.1] |
| [REF. E.g. 2.1] | [FINDING DESCRIPTION] | [REF. E.g. 2.1] |

## Background Data

### Crash History

A study of the recent crash history has been conducted in the vicinity of the proposed project for the five-year period to the end of December [ENTER YEAR]. This showed that there were [999] reported crashes within the extracted data which is summarised below:

* [DETAILS OF CRASH TYPE GROUPINGS AND CRASH SEVERITY];
* [DETAILS OF CRASH TYPE GROUPINGS AND CRASH SEVERITY]; and
* [DETAILS OF CRASH TYPE GROUPINGS AND CRASH SEVERITY].

### Traffic and Speed Data

A summary of recent traffic data is provided below:

|  |  |  |  |
| --- | --- | --- | --- |
| **Location** | **Vehicles per day (% heavy vehicles)** | **Date** | **Source** |
| [ROAD NAME] (Site Number) | [NUMBER] ( %) | [DATE] | [Traffic Map] |

A summary of recent speed data is provided below:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Location** | **Average Speed (km/h)** | **85th Percentile Speed (km/h)** | **Date** | **Source** |
| [ROAD NAME] (Site Number) | [NUMBER] | [NUMBER] | [DATE] | [Traffic Map] |

### Appendices

Appendix A – Audit Findings Location Plan

Appendix B – Audit Photographs

Appendix C – Crash Reports

Appendix D – List of Documents Provided for the Audit

Appendix E – Corrective Action Report (CAR)

# ITEMS RAISED IN THIS [AUDIT STAGE] AUDIT

## Finding – Provide a title for the identified finding including its location e.g. Safe Intersection Sight Distance at the intersection of Ocean Reef Road and Marmion Avenue

Provide a summary of the finding including further clarification of the location if necessary. E.g. There is a tree that partially obscures sight lines to the north for vehicles exiting Ocean Reef Road.

***Justification of the finding:***

In the first paragraph describe the potential crash outcome related to the finding. E.g. There is a risk that vehicles could fail to give way whilst exiting the intersection which could result in right angle crashes.

Provide further justification of the finding by further explaining the problem and if applicable make reference to appropriate control data to support your finding. E.g. The tree located to the north of the intersection reduces Safe Intersection Sight Distance to 120 m. *Austroads Guide to Road Design Part 4A: Unsignalised and Signalised Intersection* indicates that Safe Intersection Sight Distance is the minimum distance which should be provided on the major road at any intersection. Using an operating speed of 110 km/h and reaction time of 2.0 seconds the required Safe Intersection Sight Distance is 285 m measured 7 m back along the side road from the conflict point.

***Recommendation***

Provide your recommendation ensuring that you do not use the terms ‘consider’ or ‘monitor’. E.g. Adequate Safe Intersection Sight Distance should be provided in accordance with Austroads guidelines.

**[IMPORTANT | HIGH]**

## Finding – Provide a title for the identified finding including its location e.g. Safe Intersection Sight Distance at the intersection of Ocean Reef Road and Marmion Avenue

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***Recommendation***

Provide your recommendation ensuring that you do not use the terms ‘consider’ or ‘monitor’. E.g. Adequate Safe Intersection Sight Distance should be provided in accordance with Austroads guidelines.

**[IMPORTANT | HIGH]**

## Finding – Provide a title for the identified finding including its location e.g. Safe Intersection Sight Distance at the intersection of Ocean Reef Road and Marmion Avenue

Provide a summary of the finding including further clarification of the location if necessary. E.g. There is a tree that partially obscures sight lines to the north for vehicles exiting Ocean Reef Road.

***Justification of the finding:***

In the first paragraph describe the potential crash outcome related to the finding. E.g. There is a risk that vehicles could fail to give way whilst exiting the intersection which could result in right angle crashes.

Provide further justification of the finding by further explaining the problem and if applicable make reference to appropriate control data to support your finding. E.g. The tree located to the north of the intersection reduces Safe Intersection Sight Distance to 120 m. *Austroads Guide to Road Design Part 4A: Unsignalised and Signalised Intersection* indicates that Safe Intersection Sight Distance is the minimum distance which should be provided on the major road at any intersection. Using an operating speed of 110 km/h and reaction time of 2.0 seconds the required Safe Intersection Sight Distance is 285 m measured 7 m back along the side road from the conflict point.

***Recommendation***

Provide your recommendation ensuring that you do not use the terms ‘consider’ or ‘monitor’. E.g. Adequate Safe Intersection Sight Distance should be provided in accordance with Austroads guidelines.

**[IMPORTANT | HIGH]**

# Audit Team Statement

I hereby certify that the audit team have examined the documents listed in Appendix D and have inspected the site in undertaking this Road Safety Audit. I also confirm that this audit has been carried out independently of the design team following the general principles detailed in *Austroads Guide to Road Safety Part 6: Road Safety Audit* and in accordance with Main Roads Policy and Guidelines for Road Safety Audit.

The audit has been carried out for the sole purpose of identifying any features of the design which could be altered or removed to improve the safety of the proposal. The identified issues have been noted in this report. The accompanying findings and recommendations are put forward for consideration by the Client for implementation.

**Audit Team Leader**

|  |  |  |
| --- | --- | --- |
| [ENTER NAME] |  | Signature |
| [JOB TITLE] |  |
| [ORGANISATION] |  |  |
| [TEL. NO.] |  | Date |
| [EMAIL ADDRESS] |  |  |
|  |  |  |

**Disclaimer**

*This report contains findings and recommendations based on examination of the site and/or relevant documentation. The report is based on the conditions viewed on the day of inspection and is relevant at the time of production of the report. Information and data contained within this report is prepared with due care by the Road Safety Audit Team. While the Road Safety Audit Team seeks to ensure accuracy of the data, it cannot guarantee its accuracy.*

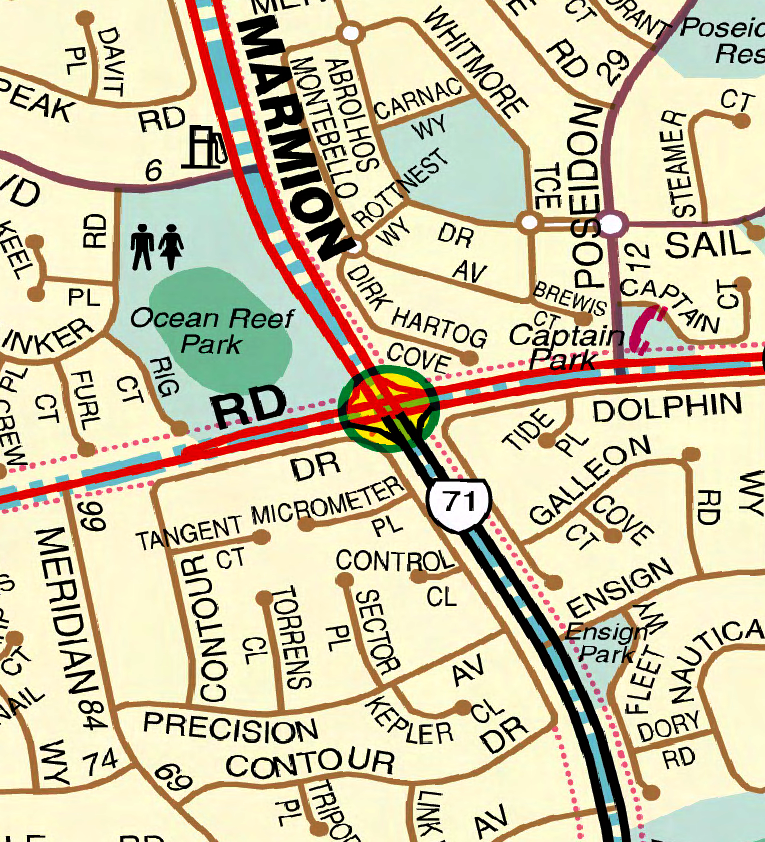
*Readers should not solely rely on the contents of this report or draw inferences to other sites. Users must seek appropriate expert advice in relation to their own particular circumstances.*

*The Road Safety Audit Team does not warrant, guarantee or represent that this report is free from errors or omissions or that the information is exhaustive. Information contained within may become inaccurate without notice and may be wholly or partly incomplete or incorrect. Before relying on the information in this report, users should carefully evaluate the accuracy, completeness and relevance of the data for their purposes.*

*Subject to any responsibilities implied in law which cannot be excluded, the Road Safety Audit Team is not liable to any party for any losses, expenses, damages, liabilities or claims whatsoever, whether direct, indirect or consequential, arising out of  or referrable to the use of this report, howsoever caused whether in contract, tort, statute or otherwise.*

**APPENDIX A**

**AUDIT FINDINGS LOCATION PLAN**



**Audit Findings Location Plan**

**Finding 2.2**

**Finding 2.1**

**Finding 2.1**

**Finding 2.2**

**APPENDIX B**

**AUDIT PHOTOGRAPHS**

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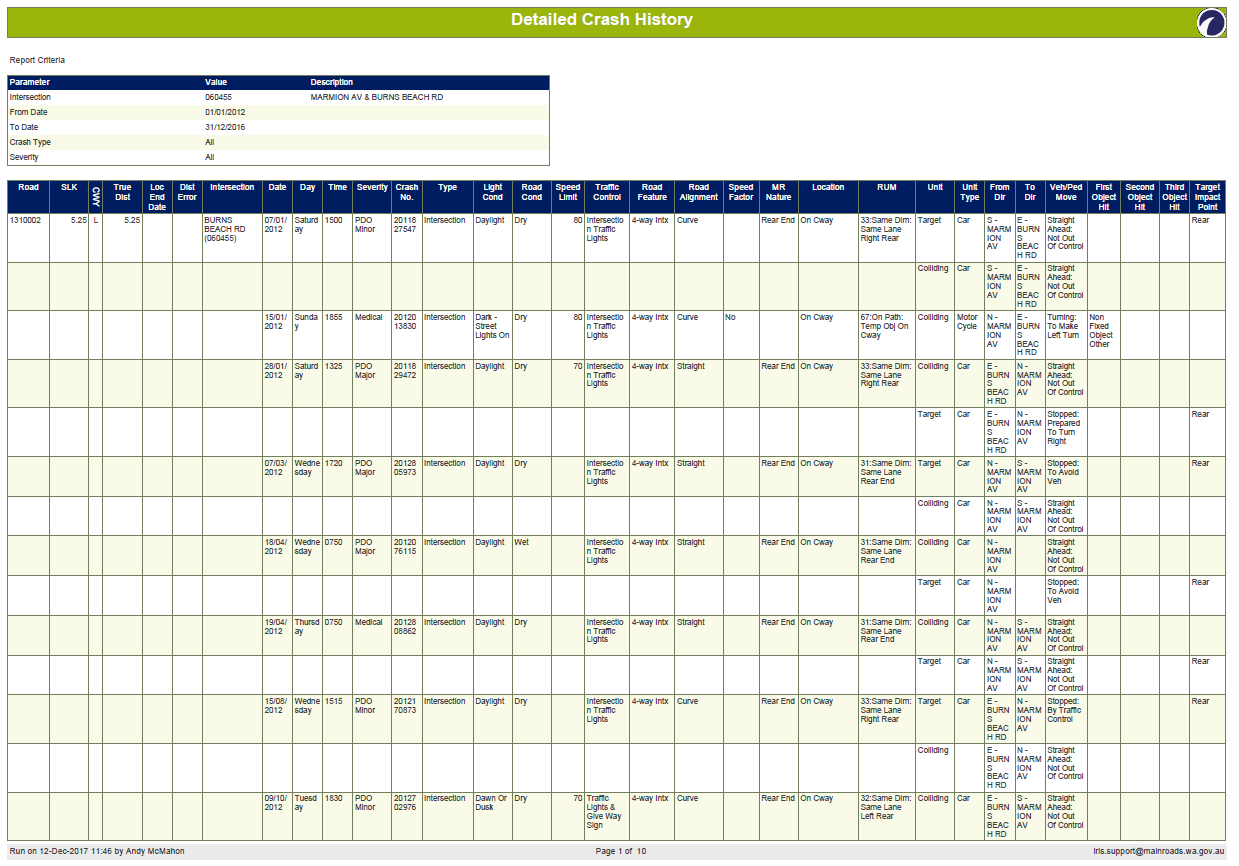
**Finding 2.1 – Tree obscuring sight lines to the south at the intersection**

****

**Finding 2.2 – Available Safe Intersection Sight Distance to the north**

**APPENDIX C**

**CRASH REPORTS**



**APPENDIX D**

**LIST OF DOCUMENTS PROVIDED FOR THE AUDIT**

|  |  |  |  |
| --- | --- | --- | --- |
| **Document Ref.** | **Document Title** | **Scale** | **Date** |
| TRS/01/10/100 H | Junction Alignment – Signs and Road Markings | 1:500 | 01/01/2015 |
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**APPENDIX E**

**CORRECTIVE ACTION REPORT**

**Corrective Action Report – [Project Location] – [Project Proposal]**

**[Audit Stage]**

|  |  |  |  |
| --- | --- | --- | --- |
| **Findings and Recommendations** | **Project Manager** | | |
| **Agree / Disagree** | **Reason for Disagreeing** | **Proposed Action and Comments** |
|  |  |  |  |
| **2.1 – Finding - Provide a title for the identified finding including its location e.g. Safe Intersection Sight Distance at the intersection of Ocean Reef Road and Marmion Avenue**  Provide a summary of the finding including further clarification of the location if necessary. E.g. There is a tree that partially obscures sight lines to the north for vehicles exiting Ocean Reef Road. | Choose an item. |  |  |
| **Recommendation**  Provide your recommendation ensuring that you do not use the terms ‘consider’ or ‘monitor’. E.g. Adequate Safe Intersection Sight Distance should be provided in accordance with Austroads guidelines.  **[IMPORTANT | HIGH]** | Choose an item. |  |  |
| **2.2 – Finding - Provide a title for the identified finding including its location e.g. Safe Intersection Sight Distance at the intersection of Ocean Reef Road and Marmion Avenue**  Provide a summary of the finding including further clarification of the location if necessary. E.g. There is a tree that partially obscures sight lines to the north for vehicles exiting Ocean Reef Road. | Choose an item. |  |  |
| **Recommendation**  Provide your recommendation ensuring that you do not use the terms ‘consider’ or ‘monitor’. E.g. Adequate Safe Intersection Sight Distance should be provided in accordance with Austroads guidelines.  **[IMPORTANT | HIGH]** | Choose an item. |  |  |
| **2.3 – Finding - Provide a title for the identified finding including its location e.g. Safe Intersection Sight Distance at the intersection of Ocean Reef Road and Marmion Avenue**  Provide a summary of the finding including further clarification of the location if necessary. E.g. There is a tree that partially obscures sight lines to the north for vehicles exiting Ocean Reef Road. | Choose an item. |  |  |
| **Recommendation**  Provide your recommendation ensuring that you do not use the terms ‘consider’ or ‘monitor’. E.g. Adequate Safe Intersection Sight Distance should be provided in accordance with Austroads guidelines.  **[IMPORTANT | HIGH]** | Choose an item. |  |  |

**Corrective Action Report – [Project Location] – [Project Proposal]**

**[Audit Stage]**

NOTE:

* This Corrective Action Report is to be read in conjunction with the full Road Safety Audit Report and its findings and recommendations.
* The asset owners (MRWA and/or LGA) **must** be informed of these findings, recommendations and proposed actions.
* Items not under the responsibility of this project representative must be forwarded to the persons / agencies who are responsible.

**These findings and recommendations have been considered, and the actions listed will be taken accordingly.**

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |
| **Responsible Project Representative** | **Company / Agency / Division** | **Position** | **Date** |
|  |  |  |  |
|  |  |  |  |
| **Asset Owner Representative** | **Company / Agency / Division** | **Position** | **Date** |