

Roads

Master Specification

RD-GM-D2 Road Safety Audits

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RD-GM-D2 Road Safety Audit

1 Statement of Policy

- 1.1 Road Safety Audit (RSA) and Safe System Assessment (SSA) are processes intended to assist in achieving a safer road network through the application of sound road safety practice. The Department must carry out Road Safety Audits and Safe System Assessments throughout the planning, design and construction stages of road and bridge projects in accordance with the Austroads Guide to Road Safety Part 6: Road Safety Audit Management and Part 6A: Road Safety Audit Implementation and Austroads AP-R509-16 – Safe System Assessment Framework. The Road Safety Audit and Safe System Assessment Policy applies to all projects involving works on Department roads. These include projects/works undertaken on the road network by land developers and other organisations, including public transport related works.
- 1.2 To also be read in conjunction with Department Safe System Guidelines.
- 1.3 While it is desirable for RSAs on proposed roads or road upgrades to be undertaken whenever possible or practicable, during the design and construction and pre-opening phases, resource and cost implications mean that in practice, their conduct (number and phasing), nearly always needs to be commensurate with the complexity and circumstance of the project.
- 1.4 This policy requires that the following commitments be adopted as part of a strategic framework for the implementation of road safety audit principles and practices in the planning and development of infrastructure within the Department.
- 1.5 In accordance with the Australian National and Department State Road Safety Strategies this policy adopts a Safe System approach to the delivery of a road safety audit service by placing emphasis on fatal and serious crash risk.
- 1.6 The road safety audit process is an assessment of road engineering projects and as such the Safe System sphere of influence is limited to two of the four cornerstones of the Safe System approach, namely, Safe Roads and Roadsides, and Safe Speeds.
- 1.7 This is to be achieved by focusing the 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 with the aim to reduce the risk of fatal and serious injury crashes.
- 1.8 A road safety audit is a formal examination of a future road or traffic project in which an independent qualified team reports on potential crash occurrence and severity which may result from the introduction of the project.
- 1.9 Road safety audits are a proactive process to prevent the occurrence of road crashes. The road safety audit process provides project managers with a powerful mechanism to identify potential crash risk in the delivery of infrastructure projects and aims to reduce the risk of trauma and crashes on the road network.
- 1.10 In the implementation of this policy the road safety audit approach to be taken is: that it is not acceptable that any human should die or be seriously injured on the Department road network, and specific road safety audit findings shall be highlighted in this regard.
- 1.11 Road safety audits and road safety inspections must be conducted in accordance with the Austroads Guide to Road Safety Part 6: Road Safety Audit and other and relevant Guidelines.
- 1.12 All road safety audits must be repeated if the project design materially changes, if there are many minor changes which together could impact on road user safety, or if the previous road safety audit for the relevant stage is more than 3 years old. Should a project not begin the next stage in its development within 3 years of the completion of the previous audit, the project must be re-audited. This is to ensure that due consideration is given to the project's interface with the existing road network.
- 1.13 Relevant staff shall be trained in order to fulfil the training and experience requirements to achieve and maintain road safety auditor accreditation. A list of accredited auditors can be found at: https://www.dpti.sa.gov.au/contractor_documents/documents/road_safety_auditors

- 1.14 The Road safety audit must consider the design holistically as detailed in including Austroads Guide to Road Design Part 2, design considerations including the three main elements that define how a road will perform in terms of safety:
- a) a) The vehicles, the pedestrians and the cyclists;
 - b) b) Road environmental factors; and
 - c) c) Human factors.

2 Road Safety Auditor Management System

- 2.1 The following links provide an online tool that assists practitioners to carry out road safety audits. It steps Users through the Austroads Road Safety Audit process (i.e. Feasibility stage, Preliminary design stage, Detail design stage, Pre-opening stage, Roadwork traffic scheme and existing roads), provides Australasian and jurisdiction specific references, and allows auditors to generate road safety reports.

Austroads Road Safety Audit Toolkit: <http://rsatoolkit.com.au/>

Austroads Road Safety Engineering Toolkit: <http://engtoolkit.com.au/>

3 Road Safety Audits

- 3.1 Copies of the Road Safety Audit shall be submitted to the Principal, Contractor and Independent Design Certifier within 1 week of the road safety audit being carried out.
- 3.2 The Contractor must include the Road Safety Audit Report, with the specified design submission. Provision of the Road Safety Audit will constitute a **Hold Point**.
- 3.3 The Detailed Design and Issued for Acceptance must include documented responses from the designer including:
- a) details of action taken to remedy deficiencies;
 - b) further actions proposed to address issues of concern; and
 - c) in the event that the Contractor considers that no further action is necessary to address issues of concern, a full explanation for not undertaking such action.
- 3.4 The Contractor must ensure the road safety audit is integrated into the safety in design and CPTED assessment.

Road Safety Auditors

- 3.5 Road safety auditors must be:
- a) qualified and experienced in undertaking Road Safety Audits:
 - A registered Road Safety Auditor hold recognised road safety audit training course, of at least two days duration plus have relevant experience with a focus on road safety engineering, road design, traffic management or road user behaviour experience
 - A Senior Road Safety Auditor must have at least five years' experience in a relevant road design, road construction or traffic engineering field plus at least five formal road safety audits undertaken under guidance of a Senior Road Safety Auditor, including at least three at design stages
 - b) All road safety audit teams must comprise a minimum of two members
 - c) All audit teams must be led by a suitably qualified and experienced Accredited Senior Road Safety Auditor and shall be listed on the Department Road Safety Audit Portal so that the maximum emphasis is placed on road safety engineering and Safe System principles.
 - d) Specialist advisors, such as, Police advisors or technical experts can assist the audit team by providing independent specialist advice on particular aspects of a project. There is no requirement for a specialist advisor to be an Accredited Road Safety Auditor. Specialist advisors shall be listed as an 'Advisor' in the audit report and shall not be listed as a team member.

- e) Team Leaders/Members shall excuse themselves from participation in the audit if:
 - They have had any involvement in planning, design, construction or maintenance activities for road infrastructure for the project.
 - They perceive any possibility of duress or coercion by their employer or employer's staff in relation to the audit.
 - Persons not accredited as a Road Safety Auditor or who do not have relevant specialist skills may still participate as an observer if invited to do so by the Team Leader.
- f) Free of any other commitment or obligation to the Contractor or the Contractor's design subcontractors.

4 Timing of Road Safety Audits

- 4.1 The Contractor must ensure that Road Safety Audits are conducted at the following stages:
 - a) a preliminary audit at Preliminary Design Stage (30%);
 - b) a final audit at Final Design (70%);
 - c) during construction, for each proposed major traffic operational change; and
 - d) Within 1 week after full opening to traffic.

5 When to Undertake an Audit

- 5.1 Black Spot Project Road Safety Audits shall be conducted on all Proactive Black Spot funded projects as per State Black Spot Program Development and Management Guidelines.
https://dpti.sa.gov.au/_data/assets/pdf_file/0005/325166/Black_Spot_Program_Guidelines.pdf
- 5.2 Road projects with a project value \geq \$10 M
All road infrastructure projects and design and construct projects that involve a permanent change to the State road network with an estimated project value \geq \$10 M shall have a road safety audit for each of the following 3 stages:
 - a) Stage 2 - Preliminary design (30%)
 - b) Stage 3 - Detailed design (70%)
 - c) Stage 4 - Pre-opening (when the project is substantially complete and prior to opening to the public)
- 5.3 Road projects with a project value \geq \$1 M and $<$ \$10 M
All road infrastructure projects that involve a permanent change to the State road network with an estimated project value \geq \$1 M and $<$ \$10 M shall have a road safety audit undertaken at the following 3 stages as a minimum:
 - a) Stage 2 - Preliminary design (30%)
 - b) Stage 3 - Detailed design (70%)
 - c) Stage 4 - Pre-opening (when the project is substantially complete and prior to opening to the public)
- 5.4 Road projects with a project value \geq \$100,000 and $<$ \$1 M
All road infrastructure projects that involve a permanent change to the State road network with an estimated project value \geq \$100,000 and $<$ \$1 M shall have a road safety audit undertaken at detailed design (70%).
- 5.5 Land Developments
Road safety audits shall be conducted during detailed design stage on land use developments that intersect the Department road network in accordance with the requirements of this policy. The road project value warrants above shall be used to determine audit requirements, with the exception of projects with an estimated project value less than \$150 000 that meet any of the following warrants:

- a) subdivisions of more than 50 lots
- b) car parks providing access for more than 50 vehicles
- c) developments that are likely to generate traffic movements in excess of 100 movements per day
- d) projects that are likely to generate increased pedestrian or cycle movements, or where significant numbers of pedestrians or cyclists are nearby or
- e) project locations where potential road safety risks are identified by the Department
- f) Land use developments that involve a permanent change to the public road network with an estimated projects value less than \$150 000 that meet any of the above warrants shall have a road safety audit undertaken at the following stage as a minimum:

5.6 Existing Roads

Road safety audits shall be undertaken for existing intersections or road sections where there is a traffic management or road safety concern, at the discretion of the Principal Road Design Engineer.

6 Hold Points

6.1 The following is a summary of Hold Points referenced in this Part:

Table RD-GM-D2 6-1 Hold Points

Document Ref.	Hold Point	Response Time
3.2	Provision of Road Safety Audit Report	10 Working Days