

Road Safety Audit Technical Directive and Guideline

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Acronyms	Full form
AGRS	Austrroads Guide to Road Safety
DIPL	Department of Infrastructure, Planning and Logistics
CAR	Corrective Action Report
IPWEA	Institute of Public Works Engineering Australasia
NTG	Northern Territory Government
RSA	Road Safety Audit
TRM	Territory Records Management (system)

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1. Technical Directive

The Northern Territory Government is committed to providing a safe, reliable, and sustainable road transport network.

To assist the Northern Territory Government's focus on 'Safety', a strategic approach has been developed for the delivery of Road Safety Audits (RSAs). This is a vital proactive and predictive road safety mechanism for assessing the road safety risk associated with changes to the road network and on identified existing areas incorporating Safe System principles within the process. This is to be achieved by focusing the audit process on considering safe speeds and by providing forgiving road environments. This is to be delivered through the RSA process that acknowledges that road users do make mistakes and mechanical failures do occur. By considering the known limits to crash forces that the human body can tolerate, all RSAs will aim to reduce the number of incidents in the first instance, and reduce the consequential risk of fatal and serious injuries where crashes occur.

To achieve this the Department of Infrastructure, Planning and Logistics (DIPL) will conduct Road Safety Audits on all projects that facilitate permanent changes to Territory Roads, or a change due to temporary road configurations associated with construction traffic management arrangements, or on identified existing sections on the road network in accordance with the requirements of this technical directive.

2. Preliminary

2.1. Definitions

Audit Brief means the instructions prepared using the DIPL standard template. It defines the scope of the audit and provides sufficient information to enable the audit team to conduct the audit.

Audit Team means a team that shall comprise of at least two people, independent of the design team, comprising of members appropriately experienced and trained in road safety engineering or crash investigation with knowledge of current practice in road design or traffic engineering principles who undertake road safety audits.

Audit Team Leader means the person with appropriate training and experience with overall responsibility for carrying out the audit and certifying the report. An Audit Team Leader practising must be an IPWEA or State/Territory Road Authority Accredited Senior Road Safety Auditor.

Audit Team Member means an appropriately experienced and trained person who is appointed to the Audit Team and who reports to the Audit Team Leader. An Audit Team Member must be an IPWEA or State/Territory Road Authority Accredited Road Safety Auditor.

Corrective Action Report (CAR) means a tabular summary report prepared by the Audit Team to be reviewed and responded to by the Design Team Leader. The DIPL project manager is to ensure that the identified findings and agreed recommendations detailed in the report are actioned, or are programmed to be actioned. Refer to the Department's Road Safety Audit, Corrective Action Report Template as a guide in what is expected to be provided.

Crash investigation means an examination of crashes to identify patterns and common trends that may have contributed to crash causation or crash severity. This can include the detailed investigation of a single crash.

Design Team Leader refers to the person delegated through a project consultancy or by the DIPL Civil Design Manager to undertake and lead the design process for the defined project.

Permanent change means any permanent change to the road network, excluding like for like maintenance replacement works and temporary works. Permanent change includes geometric changes, intersection upgrades and or surface upgrades, i.e. unsealed to seal.

Project Manager means DIPL Staff tasked and authorised to manage the relevant project requirements.

Public road means a road either under the control and management of DIPL or a Local Government, or any other road accessible by the public, and excludes private roads, as further defined in Division 1, Part 2 of the Australian Road Rules.

Road Safety Audit (RSA) means a formal, systematic, assessment of the potential road safety risks associated with a new road project, temporary road configurations associated with construction traffic management, or on identified existing sections on the road network conducted by an independent qualified audit team. The assessment considers all road users and suggests measures to eliminate or mitigate those risks.

Road safety engineering means the design and implementation of physical changes to the road network intended to reduce the number and severity of crashes involving road users. In some instances, this includes drawing on the results of crash investigations.

Road Safety Inspection means a formal examination of an existing road or road related area in which an independent, qualified team report on the crash potential and likely safety performance of the location.

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

Specialist Advisor means a person approved by the Project Manager to provide independent specialist advice to the audit team, such as, road maintenance advisors, traffic signal specialists, police advisors and individuals with specialist local knowledge.

Territory Roads means Northern Territory Government roads which are under the control and management of DIPL.

3. Scope

3.1. Purpose

The purpose of this document is to set out the DIPL's requirements for conducting Road Safety Audits on Territory Roads.

The primary objective of this technical directive is to guide DIPL staff and Road Safety Audit Practitioners to ensure a consistent approach in undertaking audits and duly closing out the audit findings and agreed actions in accordance with the *Austroads Guide to Road Safety (AGRS) PART 6: Managing Road Safety Audits* and *Guide to Road Safety (AGRS) PART 6A: Implementing Road Safety Audits*.

3.2. Background

In accordance with the Australian National and the Northern Territory Road Safety Strategies, this technical directive and guideline adopts a Safe System approach in the undertaking of road safety audits by placing emphasis on fatal and serious crash risk.

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.

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 may 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.

A Road Safety Audit is a formal examination of a road project, or an evaluation of an existing road in which an independent qualified team reports on potential crash occurrence and severity which may result from the introduction of the project elements.

Road Safety Audits are a proactive process to prevent the occurrence of road crashes. The Road

Safety Audit process provides a powerful mechanism to identify potential crash risk in the delivery of road projects or existing situations, and aims to reduce the risk of trauma and crashes on the road network.

In the implementation of this technical directive and guideline, the road safety audit approach taken shall adopt the principle that it is not acceptable that any human should die or be seriously injured on the Territory Road Network, and that specific road safety audit findings shall be actioned accordingly.

4. Application

4.1. Application Routes

This Guideline applies to all Territory Roads.

4.2. Principles

Road Safety Audits shall be conducted in accordance with the requirements of this technical directive with reference to *AGRS Part 6: Managing Road Safety Audits* and *AGRS PART 6A: Implementing Road Safety Audits*, which explains the general principles of Road Safety Auditing.

A DIPL road safety audit brief shall be prepared and provided to the accredited audit team leader. The audit brief should include details of the project purpose, any departures from standards, crash data, traffic data and information about any previous Road Safety Audits conducted on the project.

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.

4.3. Audit Types

Road Safety Audits may be undertaken for each of the stages below:

- Feasibility Design
- Preliminary Design
- Detailed design
- Work Zone Traffic Management of Construction Works
- Pre-Opening (when the project is substantially complete and prior to opening to the public)
- Post Completion of Projects
- Land Use Developments
- Existing Roads

4.4. The Road Safety Audit Corrective Action Report

The road safety audit corrective action report template is a guide to assist in providing the relevant content as identified in the *AGRS Parts 6 and 6A*. The template is available for use at <https://dipl.nt.gov.au/industry/technical-standards-guidelines-and-specifications/road-safety-audits>, and is structured to further assist in reporting the audit findings by:

- clearly identifying the section of road,
- the relevant issues,
- provides recommendations,
- ranks the issues based on risk in accordance with the *AGRS Part 6A: Implementing Road Safety Audits*, and
- where practical, the report shall include photos and/or plans.

4.5. Checklists

Checklists can be used as a prompt for the auditor and all checklists should be used in conjunction with *AGRS Part 6A: Implementing Road Safety Audits*.

Completed check lists **shall not** be appended to the final road safety audit report.

4.6. Initiating the Audit Process

Advice on when the audit process should be initiated and the information required by the audit team is provided in Table 1 below.

Audit Stage	Description	When to initiate RSA process	Information required
Feasibility Design (Stage 1)	An audit of the feasibility project design	Prior to land acquisition	Road safety audit brief. Drawings including horizontal and vertical alignment and basic form of intersections proposed in hard copy and electronic format.
Preliminary Design (Stage 2)	An audit of the preliminary project design	On completion of preliminary design prior to commencement of detailed design	Road safety audit brief. Drawings including horizontal and vertical alignment, typical cross section and form of intersections proposed in hard copy and electronic format. Copy of previous stage audits undertaken and completed Corrective Action Report.

Detailed Design (Stage 3)	An audit of the detailed project design	Prior to tendering the contract for the project	<p>Road safety audit brief.</p> <p>Drawings including horizontal and vertical alignment, cross sections, road markings, signage, kerbing, safety barriers, drainage, lighting, traffic signal details and landscaping in hard copy and electronic format.</p> <p>Copy of previous stage audits undertaken and completed Corrective Action Report.</p>
Pre-Opening (Stage 4)	An audit of the constructed project	Once substantially complete prior to opening to road users	<p>Road safety audit brief.</p> <p>As-built drawings in hard copy and electronic format, if available.</p> <p>Copy of previous stage audits undertaken and completed Corrective Action Report.</p>
Work Zone Traffic Management	Audit of the construction work site	To be undertaken where construction activity extends to active traffic areas	<p>Project drawings and Specification, and</p> <p>Work Zone Traffic Management Documents</p>

Table 1 Road Safety Audit Stages and Requirements

5. The Audit Team

All road safety audit teams must comprise a minimum of two members. The audit team shall be made up of an IPWEA or State/Territory Road Authority Accredited Senior Road Safety Auditor and a minimum of one IPWEA or State/Territory Road Authority Accredited Road Safety Auditor team member.

5.1. Specialist Advisors

Specialist advisors, such as, Police advisors or technical experts can assist the audit team by providing independent specialist advice to the audit team 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.

5.2. Conflict of interest

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; or
- 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 do not have relevant specialist skills may still participate as an observer if invited to do so by the Team Leader.

6. When to Audit

Road Safety Audits shall be undertaken on all Capital Works and significant Minor New Works Programmed road projects that involve a permanent change to the Territory Road network.

6.1. Feasibility Design (Stage 1)

A Stage 1 Road Safety Audit is to be conducted on complex planning projects that are likely to create interfaces with existing road networks or complex arrangements to future networks.

6.2. Preliminary Design (Stage 2)

A Stage 2 Road Safety Audit is to be conducted on complex Capital Works Programmed road projects that incorporate multiple road interfaces and in circumstances of high proportions of heavy vehicle traffic.

6.3. Detailed Design (Stage 3)

A Stage 3 Road Safety Audit is to be conducted on all road infrastructure projects that involve a permanent change to Territory Roads.

6.4. Pre-Opening of Constructed Road Projects (Stage 4)

Stage 4, Pre Opening Road Safety Audits are to be undertaken on road infrastructure projects that involve a permanent change to Territory Roads where the change is in high speed environments, has reasonable interface with pedestrian activity or is in area of high traffic volumes.

6.5. Road Safety Inspection – Existing roads

Road Safety Inspections are a proactive road safety risk assessment that can be conducted on the existing public road network. Road Safety Inspections are a formal examination of an existing road or road related area in which an independent, qualified team report on the crash potential and likely safety performance of the road or location.

Road Safety Inspections shall be carried out in accordance with the requirements provided in the AGRS *Part 6A: Implementing Road Safety Audits*.

6.6. Land use developments

Road safety audits shall be conducted on land use developments that intersect Territory Roads, or on roads created by a land use development that are to be handed over to the NTG, in accordance with the requirements outlined in this technical directive and guideline.

Stage 4, Pre Opening Road Safety Audits are to be additionally undertaken on Land use development road connections to high order Territory Roads such as National Highways, Arterial Roads or high speed environment roads.

7. 7 Responsibilities

7.1. Endorsement

All Audit Reports shall be endorsed by the Road Safety Audit Team Leader, prior to submission to the DIPL.

7.2. Distribution and Audit Registration

7.2.1. Project Manager

Team Leaders directly employed by DIPL shall arrange for the Road Safety Audit Corrective Action Report to be recorded on the relevant project TRM file, electronically forwarded with a workflow action assigned to the Project Manager, Regional Manager or the delegated representative, and registered on the Road Safety Audit Tracking System.

7.2.2. Consultant or Other Agency Project Team Leader

Consultants or Other Design Team Leaders shall arrange for the audit report (including the Corrective Action Report) to be electronically forwarded to the Project Manager.

The Project Manager shall arrange for the full audit report (including the Corrective Action Report) to be recorded on the relevant TRM file.

7.3. Close Out

The Project Manager, in consultation with the Design Manager or external Project Team Leader shall complete the Corrective Action Report and incorporate any changes into the project documentation.

Remediation of project impacting actions shall be undertaken in time frames extending from immediate rectification completion to rectification within one calendar month, commensurate with the severity of the identified issue as defined by the priority risk rating listed in the Corrective Action Report. The completed and signed report is to be recorded on the relevant TRM file, a copy forwarded to the audit team leader, and updated in the Road Safety Audit Tracking System.

The Project Manager, Regional Manager or the delegated representative shall be responsible for the proposed actions and comments resulting from the Corrective Action Report.

7.4. Court Appearances

The Audit Team Leader is responsible for the findings and recommendations of the Audit Report but not the subsequent actions by the Department, Project Manager, Regional Manager or the delegated representatives.

There may be instances where the Project Manager is requested to appear in court via:

- Subpoena;
- Summons; or
- Contact to be a witness by:
 - Police Officer (prosecuting or Coroner's Court);
 - Counsel Assisting (Coroner's Court);
 - Departmental Legal team; or
 - Lawyer acting for party to or interest in an action.

In all instances such requests shall be referred to the Department's Executive and Legal representatives to determine the most appropriate representatives.