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Transport Infrastructure Ireland

## TII Publications



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# Road Safety Impact Assessment

**PE-PMG-02001**

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## About TII

Transport Infrastructure Ireland (TII) is responsible for managing and improving the country's national road and light rail networks.

## About TII Publications

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## Document Attributes

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## NRA DMRB and MCDRW References

For all documents that existed within the NRA DMRB or the NRA MCDRW prior to the launch of TII Publications, the NRA document reference used previously is listed above under 'historical reference'. The TII Publication Number also shown above now supersedes this historical reference. All historical references within this document are deemed to be replaced by the TII Publication Number. For the equivalent TII Publication Number for all other historical references contained within this document, please refer to the TII Publications website.

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## **Road Safety Impact Assessment**

**January 2016**

**Summary:**

This Standard covers the requirements for Road Safety Impact Assessments on Infrastructure Projects affecting National Roads. It describes the stage at which the assessment shall be carried out and the procedures to be followed. It is intended to be read in conjunction with the Standard NRA HA 18 Road Safety Impact Assessment Guidelines.

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**VOLUME 5      ASSESSMENT AND  
PREPARATION OF ROAD  
SCHEMES**

**SECTION 2      PREPARATION AND  
IMPLEMENTATION**

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**PART 2**

**NRA HD 18/16**

**ROAD SAFETY IMPACT ASSESSMENT**

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# 1. INTRODUCTION

## General

- 1.1 The objective of this Standard is to ensure that the implications on road safety of different planning alternatives are fully assessed as part of both feasibility study and route selection process. This assessment shall indicate the road safety considerations which contribute to the choice of the proposed solution.

## Revisions since HD 18/12

- 1.2 This Standard supersedes NRA HD 18/12 Road Safety Impact Assessment. This standard has been updated and minor revisions have been made throughout. The principal changes are as follows:
- The definition of Impact Assessment Team has been revised;
  - The definition of Overseeing Organisation has been revised;
  - The definition of Director and Road Safety Impact Assessment Report have been added;
  - The requirement for Road Safety Impact Assessment on commercial developments alongside or affecting national roads on the TEN-T network has been revised.

## Scope

- 1.3 This Standard sets out the procedures required to implement Road Safety Impact Assessments on Infrastructure Projects affecting national roads. It defines the relevant schemes and stages in the design at which assessment shall be undertaken.
- 1.4 The Standard should be read in conjunction with EU Directive 2008/96/EC, Irish Regulation S.I. No. 472/2011 and NRA HA 18 Road Safety Impact Assessment Guidelines.

## Definitions

- 1.5 Road Safety Impact Assessment:

The strategic comparative analysis of the impact of different planning alternatives for a new road or a substantial modification to the existing network on the safety performance of the road network.

- 1.6 Road Safety Audit:

The evaluation of a road scheme during design, construction and early operation to identify potential safety hazards which may affect any type of road user and to suggest measures to eliminate or mitigate those problems.

- 1.7 Employer:

The organisation managing the various phases of scheme preparation and supervision of construction or as defined in the Contract.

- 1.8 Design Team

The Design Team undertaking the various phases of scheme preparation and supervision of construction.

1.9 Design Project Manager

The leader of the Design Team undertaking the various phases of scheme preparation and supervision of construction.

1.10 Impact Assessment Team:

An assessment team consisting of a minimum of two persons appointed by the Design Project Manager and approved by the Director or equivalent in the Overseeing Organisation.

1.11 Overseeing Organisation:

Transport Infrastructure Ireland (TII) shall be the overseeing organisation for all infrastructure projects on or alongside the National road network that require a road safety impact assessment.

1.12 Director:

The Head of Safety (Roads and Tunnels) TII or equivalent in the Overseeing Organisation.

1.13 Road Safety Impact Assessment Report:

The report submitted by the Impact Assessment Team to the Director.

1.14 Infrastructure Project:

An Infrastructure Project is any construction project that takes place on or alongside the national road network or that affects the national road network.

1.15 TEN-T:

Trans-European Network - Transport

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## 2. ROAD SAFETY IMPACT ASSESSMENT

### Schemes to be Assessed

- 2.1 Road Safety Impact Assessment shall apply to all new major infrastructure projects on national roads, or a substantial modification to the existing national road network

### Scope of the Impact Assessment

- 2.2 The primary purpose of a Road Safety Impact Assessment is to demonstrate, on a strategic level, the implications on road safety of different planning alternatives of an infrastructure project.
- 2.3 The Road Safety Impact Assessment shall indicate the road safety considerations which contribute to the choice of the proposed solution. It shall further provide all relevant information necessary for the selection of the solution, including a comparative analysis of the road safety implications of each alternative considered and an evaluation of the road safety benefits and dis-benefits arising from each alternative.

### Safety Health and Welfare at Work Act

- 2.4 It is important to ensure that the Assessment Team complies with current legislation and best practice in relation to safety and health while undertaking Road Safety Impact Assessments.

### Stage of Impact Assessment

- 2.5 Road Safety Impact Assessment shall be carried out at the initial planning stage of a project and shall be regularly reviewed through the design phases until scheme approval.
- 2.6 The alternatives presented and considered at this stage can vary widely and should include the Do-Nothing and Do-Minimum proposals. For instance, a large scheme for a proposed town bypass presented at Feasibility Stage could include not only a wide range of potential alternative routes, but also the option of continuing with the existing situation, and a minimal option of minor improvements along the existing route.
- 2.7 Road Safety Impact Assessment does not replace or preclude Road Safety Audit, which is done by a team independent of the design process. The requirements for road safety audit are set out in NRA HD 19.
- 2.8 It is recommended that a Road Safety Impact Assessment should be considered during the preparation of County Development Plans, where an asset is being proposed on to a national road or associated junction. Refer to Spatial Planning on National Road Guidelines for Planning Authorities (DoELG, 2012)

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## 3. ROAD SAFETY IMPACT ASSESSMENT PROCESS

3.1 The Road Safety Impact Assessment is an integral part of the design process and is to be produced by the Design Team

### Impact Assessment Team

3.2 The Project Manager of the Design Team, in consultation with the overseeing organisation, shall appoint a competent Road Safety Impact Assessment Team from within the Design Team, and submit the names of the Impact Assessment Team members to the Director for approval.

3.3 Current TII training and experience requirements for Road Safety Impact Assessment Teams are subject to change and are available to download from <http://nrastandards.nra.ie>.

### Impact Assessment Elements

3.4 Annex I, of the EU RISM Directive 2008/96/EC contains the elements that should be considered by the road safety impact assessment team.

### Site Visits

3.5 A site visit shall be carried out by all members of the assessment team at the same time.

### Road User Role Play

3.6 Road safety issues affecting all road users must be considered. In general pedestrians and other vulnerable road users are affected more acutely than other road traffic by changes in road alignment and/or changes to available routes. The road safety impact assessment shall include an assessment of the impact of the scheme on all road users including vulnerable road users.

### Impact Assessment Report

3.7 The Road Safety Impact Assessment Team shall prepare a written report, which shall cover all road safety impact assessments done throughout the planning and design stages of the project. The report must clearly identify the scheme and the Road Safety Impact Assessment Team membership.

3.8 The following items should be included in the Road Safety Impact Assessment Report:

- Problem definition, defining the objectives of the scheme;
- Road Safety Objectives of the proposed scheme, highlighting any specific scheme objectives to remove a particular road safety problem on the existing road network;
- The date of the site visit and the weather at the time;
- A list of the Road Safety Impact Assessment Team members;
- Extents of the entire area of the road network where route choice and traffic patterns would be affected by the proposed scheme;
- Existing road safety problems on the current road network within the defined extents;
- Analysis of the collision history for at least five years;
- Road safety consequences of the Do-Nothing and Do-Minimum scenarios;

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- Description of each alternative proposal;
  - Assessment of impacts on road safety of the proposed alternatives;
  - Comparison of alternatives, including cost benefit type analysis from a safety perspective;
  - The TII strategy for provision of safe rest stops for drivers in the wider region surrounding the proposed scheme location should be consulted;
  - Ranking of route options.
- 3.9 The main element of the report is the comparative road safety impact assessment of the effects of each alternative proposal. The following points should be borne in mind when writing this section:
- Where proposed alternatives differ in scale and cover differing lengths or areas of the existing network, a common assessment area must be defined for all options being compared and all impacts within this area considered;
  - An assessment of the effects of each alternative must be made in terms of predicted collisions. Quantitative indicators can be used such as collision rates, collisions per junction type etc.
- 3.10 All effects on traffic flow and traffic patterns must be considered. Any projected change in modal split as a consequence of the proposals is important as this may not only affect the mix of vehicle category within the traffic flow, but may also impact on patterns of pedestrian and cycle travel and locations where conflicts with other vehicles occur.
- 3.11 The likely range of seasonal and climatic conditions should be considered.
- 3.12 A cost benefit type assessment of the road safety benefits and dis-benefits of each option shall be produced to compare to the Do-Minimum situation.
- 3.13 The options, including the Do-Minimum option, should be ranked in terms of road safety considerations, giving an order of preference and an indication of the magnitude of difference between options. If one option, or a group of options, show considerably more or less benefit than the others then this should be highlighted. Conversely, if there is little difference in road safety terms between two or more of the proposals then these should be given the same ranking.
- 3.14 Appendices shall include all data necessary to understand the Road Safety Impact Assessment as a separate document without the need to reference other reports on the scheme. This is likely to necessitate inclusion of drawings, photographs and a summary of collision records.

### **Subsequent Actions to the Report**

- 3.15 The Road Safety Impact Assessment shall also be submitted to the Director for review and comment.
- 3.16 The final recipient of the Road Safety Impact Assessment report shall be the Design Project Manager who shall use it to inform the option selection phase.

## 4. REFERENCES

### **NRA Design Manual for Roads and Bridges**

NRA HA 18 Road Safety Impact Assessment Guidelines

NRA HA 19 Road Safety Audit Guidelines

NRA HD 19 Road Safety Audit

NRA TD 19 Safety Barriers

### **NRA Documents**

National Roads Authority, 2012. Impact Assessment Team Qualifications for Road Safety Impact Assessment - (as per NRA HD 18).

National Roads Authority, 2010. 2010 Project Management Guidelines.

### **Other Documents**

European Parliament and the Council of the European Union, 2008. Directive 2008/96/EC of the European Parliament and of the Council of 19<sup>th</sup> November 2008 on Road Infrastructure Safety Management.

European Transport Safety Council, 1997. Road Safety Audit and Safety Impact Assessment

Department of the Environment, Community and Local Government, 2012. Spatial Planning on National Roads. Guidelines for Planning Authorities.

Statutory Instrument No. 472 of 2011. European Communities (Road Infrastructure Safety Management) Regulations 2011.

The Institution of Highways and Transportation, 2008. Road Safety Audit.

## 5. ENQUIRIES

- 5.1 All technical enquiries or comments on this document or any of the documents listed as forming part of the NRA DMRB should be sent by e-mail to [infoDMRB@tii.ie](mailto:infoDMRB@tii.ie), addressed to the following:

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