



Roads and Maritime Services Austroads Guide Supplement

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Roads and Maritime Services Supplement to Austroads Guide to Road Design Part 6: Roadside Design, Safety and Barriers (2009) Version 2.0

General

Austroads has released the Guide to Road Design, Part 6: Roadside Design, Safety and Barriers and all road agencies across Australasia have agreed to adopt the Austroads guides to provide a level of consistency and harmonisation across all jurisdictions. This agreement means that the new Austroads guides and the Australian Standards, which are referenced in them, will become the primary technical references for use within the Agency.

This supplement is issued to clarify, add to, or modify the Austroads Guide to Road Design, Part 6: Roadside Design, Safety and Barriers.

Roads and Maritime accepts the principles in the Austroads Guide to Road Design, Part 6: Roadside Design, Safety and Barriers with variations documented in this supplement under the following categories:

- Roads and Maritime Enhanced Practice: Roads and Maritime practice that enhances the Austroads Guides
- Roads and Maritime Complementary Material: Roads and Maritime reference material that complements the Austroads Guides. These documents include Roads and Maritime Manuals, Technical Directions and/or other reference material and are to be read in conjunction with the Austroads Guides
- Roads and Maritime Departures: Roads and Maritime practice that departs from the Austroads Guides.

Roads and Maritime Supplement to Austroads Guide to Road Design Part 6: Roadside Design, Safety and Barriers

Document Information

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Document History

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2.0	11/08/2016	First issue.	All	Road Policy, Specifications and Technology
1.0	17/1/2011	First issue.	All	Technology Standards (Road)

GENERAL

In the context of road design, a greenfield site is a location on which a new road is being built where there are no constraints that prevent the use of the Normal Design Domain (NDD) design values.

A brownfield site is a location where development or constraints influence the design to the extent that use of values outside the NDD may be necessary for one or more elements of the design.

The Austroads Guide to Road Design provides Normal Design Domain criteria suitable for new roads (greenfield sites). In most cases, the same criteria that is used for greenfield sites should also be used for modifications and upgrades to existing roads (brownfield sites).

The use of design parameters outside of the Normal Design Domain requires approval from an authorised person in accordance with the Roads and Maritime Services Delegations Manual.

Roads and Maritime: Complementary Material

The following documents provide additional detail of Roads and Maritime best practice. It is necessary to comply with complimentary material.

- NSW Bicycle Guidelines
- Roads and Maritime Supplements to Austroads Guides
- Roads and Maritime Australian Standards Traffic Supplements
- Roads and Maritime Traffic Signal Design Guide
- Roads and Maritime Delineation Manual
- Roads and Maritime Standard Drawings
- Roads and Maritime Technical Directions
- NSW Road Rules
- Roads and Maritime Safety Barrier Acceptance Documents.

The documents are published and can be found on the Roads and Maritime website.

Roads and Maritime: Enhanced Practice | Departures

4 DESIGN TO MITIGATE HAZARDS

4.2.2 Determine the Clear Zone

In NSW the clear zone principle is used.

4.5.4 Methods for Quantitative Analysis

In NSW all hazards identified in the clear zone should have treatment (e.g. removal, protection). Quantitative analysis is not to be used to establish the absolute need to erect a road safety barrier.

In NSW the ‘Hazard Risk Assessment’ (Section 4.6) is the favoured method of quantitative analysis. It is used to identify the most important sites for treatment as it recognises the budget limitations which apply and allows higher listed sites to be treated first.

4.6.4 Risk Step R3 – Calculate Crash Cost for Hazard

Crash type costs are to be obtained from the most recent Transport for NSW ‘Principles and Guidelines for Economic Appraisal of Transport Investment and Initiatives’ using the Willingness to Pay Approach.

Once a severity index has been established, the crash type costs for property damage, other injury, serious injury and fatality are to be multiplied by the tabulated percentages below and added together to give the total cost associated with that severity index.

Severity index (SI)	Property damage (%)	Other Injury (%)	Serious Injury (%)	Fatality (%)
0	0	0	0	0
0.5	100	0	0	0
1	90.4	7.3	2.3	0
2	71	22	7	0
3	43	34	22	1
4	30	30	37	3
5	15	22	55	8
6	7	16	59	18
7	2	10	58	30
8	0	4	46	50
9	0	0	25	75
10	0	0	0	100

6 ROAD SAFETY BARRIERS

6.3.19 Step B11 – Determine Barrier Points of Need

In NSW the ‘Angle of Departure’ method is used for establishing point of need.

Appendix C RTA METHOD

In NSW the ‘RTA Method’ is not used.