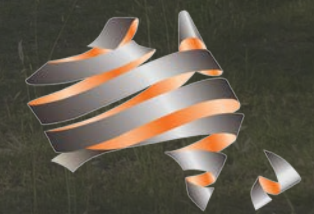




Guide to Traffic Management Part 5: Road Management

12 September 2017



Austroads

Today's moderator



Elaena Gardner

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About Austroads



The peak organisation of Australasian road transport and traffic agencies

- Roads and Maritime Services New South Wales
- Roads Corporation Victoria
- Department of Transport and Main Roads Queensland
- Main Roads Western Australia
- Department of Planning, Transport and Infrastructure South Australia
- Department of State Growth Tasmania
- Department of Transport Northern Territory
- Transport Canberra and City Services Directorate, Australian Capital Territory
- Commonwealth Department of Infrastructure and Regional Development
- Australian Local Government Association
- New Zealand Transport Agency

Housekeeping

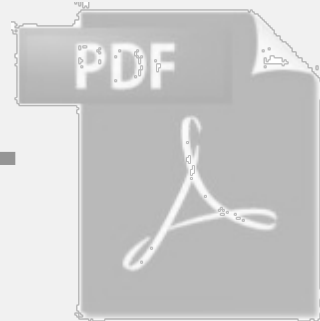


Presentation = 35 mins

Question time = 15 mins



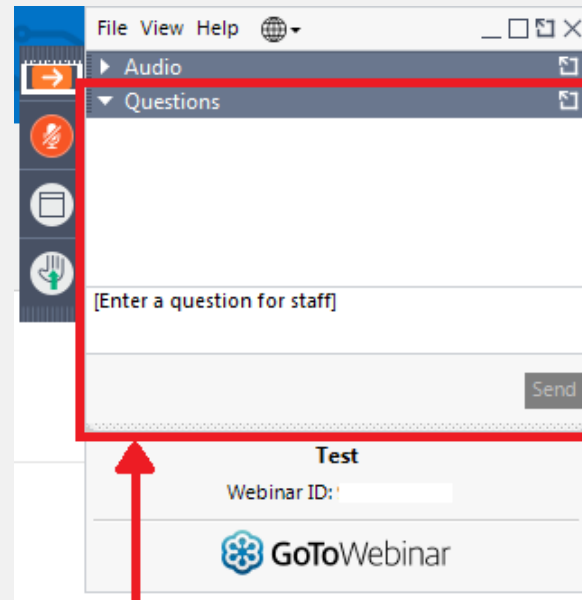
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Austroads Guide



Download from the Austroads website

<https://www.onlinepublications.austroads.com.au/items/AGTM05-17>

Today's presenter



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Agenda



1. Introduction and purpose of webinar
2. Philosophy of Austroads Guide to Traffic Management (AGTM) Part 5
3. Key changes to AGTM Part 5
4. Structure of AGTM Part 5
5. Conclusion
6. Questions

Introduction and purpose of webinar

- The Austroads *Guide to Traffic Management Part 5: Road Management* discusses traffic management issues and treatments related to road mid-blocks.
- The Guide was updated in 2017 as part of Austroads Project NTM 2081.
- This webinar provides an overview of the key changes to the Guide.



AGTM Part 5 Update: The Project Team



Austroads Project Manager

Kamal Weeratunga MRWA

ARRB Project Team

David Green (Project Leader)
Kenneth Lewis

Austroads Working Group

<i>Fergus Tate</i>	<i>NZTA</i>
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<i>Dave Landmark</i>	<i>MRWA</i>
<i>Dean Simmonds</i>	<i>RMS – NSW</i>
<i>Aftab Abro</i>	<i>NT</i>

Safety Representatives

<i>Simon Harrison</i>	<i>TMR – Qld</i>
<i>Melvin Eveleigh</i>	<i>TfNSW</i>

Philosophy of AGTM Part 5

- To provide traffic management guidance with respect to the mid-block.
- To refer to other Austroads Guides where content is best addressed:
 - Guide to Traffic Management
 - Guide to Road Safety
 - Guide to Road Design.
- Guidance is limited to good practice rather than mandatory practice which is addressed in Australian Standards.

Who is GTM 5 for?

- Those wishing to seek Austroads endorsed guidance on how to manage and operate the mid-blocks of roads in the context of:
 - road space allocation,
 - lane management
 - speed:
- Specifically for
 - Practitioners in charge of the management and operations of mid-blocks.
 - Consultants wishing to advise those practitioners.
 - Researchers wishing to understand the endorsed practice in which to evolve further in the future.
 - Students and society wishing to understand and learn how mid-block are managed and operated.

Structure and key changes to AGTM Part 5



Section	Change
1. Introduction	Major update with new content
2. Access Management	Minor content changed
3. Road Space requirements for general traffic use	Restructure and additional content
4. Allocation of road space between road users	Restructure and additional content
5. Lane management	Minor content changes
6. Speed limits	Was Section 5 in previous version. Major update with new content
Appendices	Major change – additional appendices

Section 1: Introduction

- Provides an Introduction to the Guide Part
 - Puts the Guide Part in the context of the Guide to Traffic Management series.
- Modified to link AGTM Part 5 to:
 - Movement and Place, Network Operation Planning and AGTM Part 4: Network Management.
 - Mobility and Access.
 - Other strategies and the Safe System.

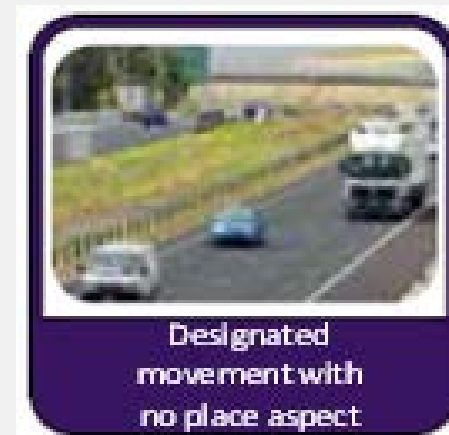


Section 1: Introduction



Figure 1.1: Movement and Place framework

Section 1: Introduction



Designated movement with no place aspects

- Move people and goods rapidly over long distances with motorways playing a strategically significant function within the road network.
- E.g. Motorway

Figure 1.1: Movement and Place framework

PLACE

Section 1: Introduction



Significant movement with some place aspects

- Provide safe, reliable and efficient movement between and within regional centres and urban areas.
- E.g. Major arterial

Figure 1.1: Movement and Place framework

PLACE

Section 1: Introduction



Significant movement with significant place aspects

- High demand for movement and high pedestrian activity with often limited road space result in vibrant streets within urban and regional areas.
- E.g. Main roads through CBD

Figure 1.1: Movement and Place framework

PLACE

Section 1: Introduction



- Some movement with some place aspects**
- The streets where people live their lives and that facilitate local access to their communities.
 - E.g. Local Road

Figure 1.1: Movement and Place framework

Section 1: Introduction



Some movement with significant place aspects

- High pedestrian activity and lower levels of vehicle movement create places people enjoy, attract visitors and are places communities value.
- E.g. Strip shopping centre

Figure 1.1: Movement and Place framework

PLACE

Section 1: Introduction

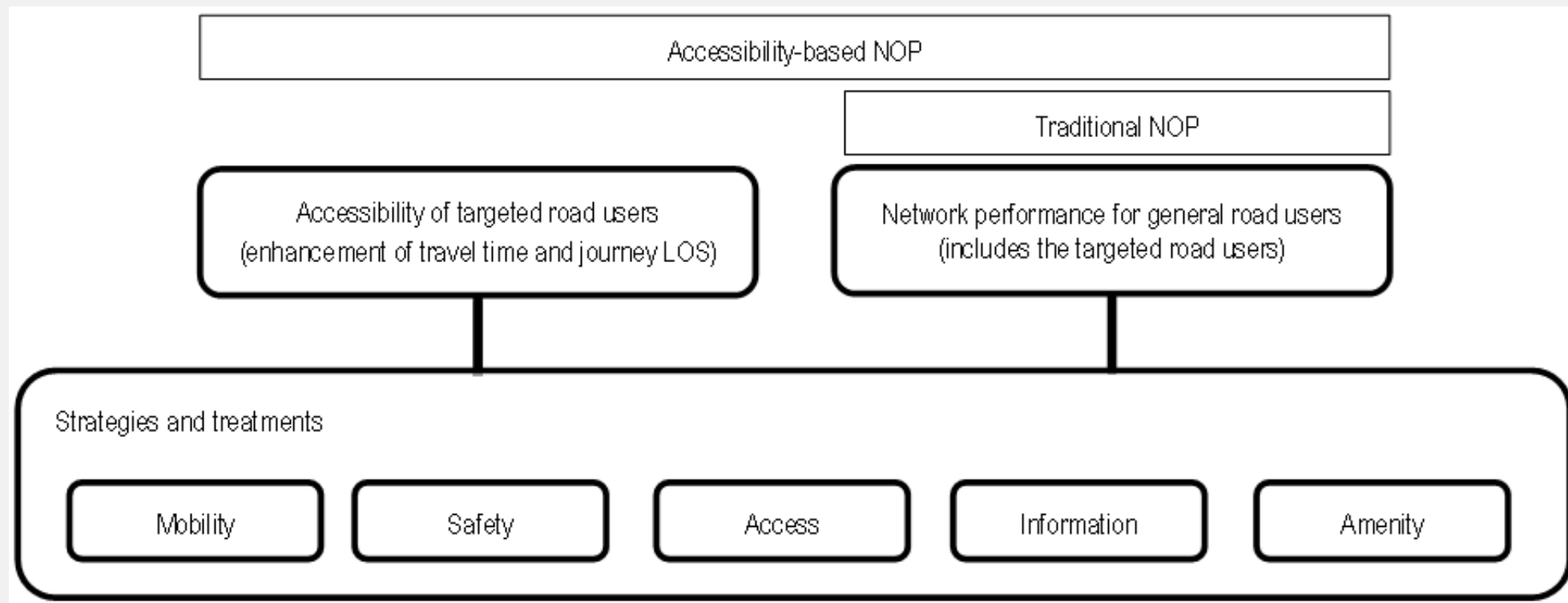


Figure 1.3: Network Operation Plan with consideration of accessibility needs of targeted road users

Section 2: Access Management



- Highlights the importance of access management in achieving safety and efficiency outcomes for the mid-block of the road.
- Various modifications made including the addition of guidance relating to treatments used for access management.

Section 3: Road Space Requirements for General Traffic Use



- Discusses the various road space requirements for general traffic use.
- Various content changes made including addition of new guidance.
- Presentation format modified from table format to section and text format.
- Guidance split over Section 3 and 4 to separate guidance between
 - road space allocation for general traffic
 - road space allocation for road users.

Section 4: Allocation of Road Space between Road Users

- Discusses the various road space requirements of different road users.
- Comprise of the content split from Section 3
- Various content changes made including addition of new guidance.
- Presentation format modified from a table format to a section and text format.



Section 4: Allocation of Road Space between Road Users

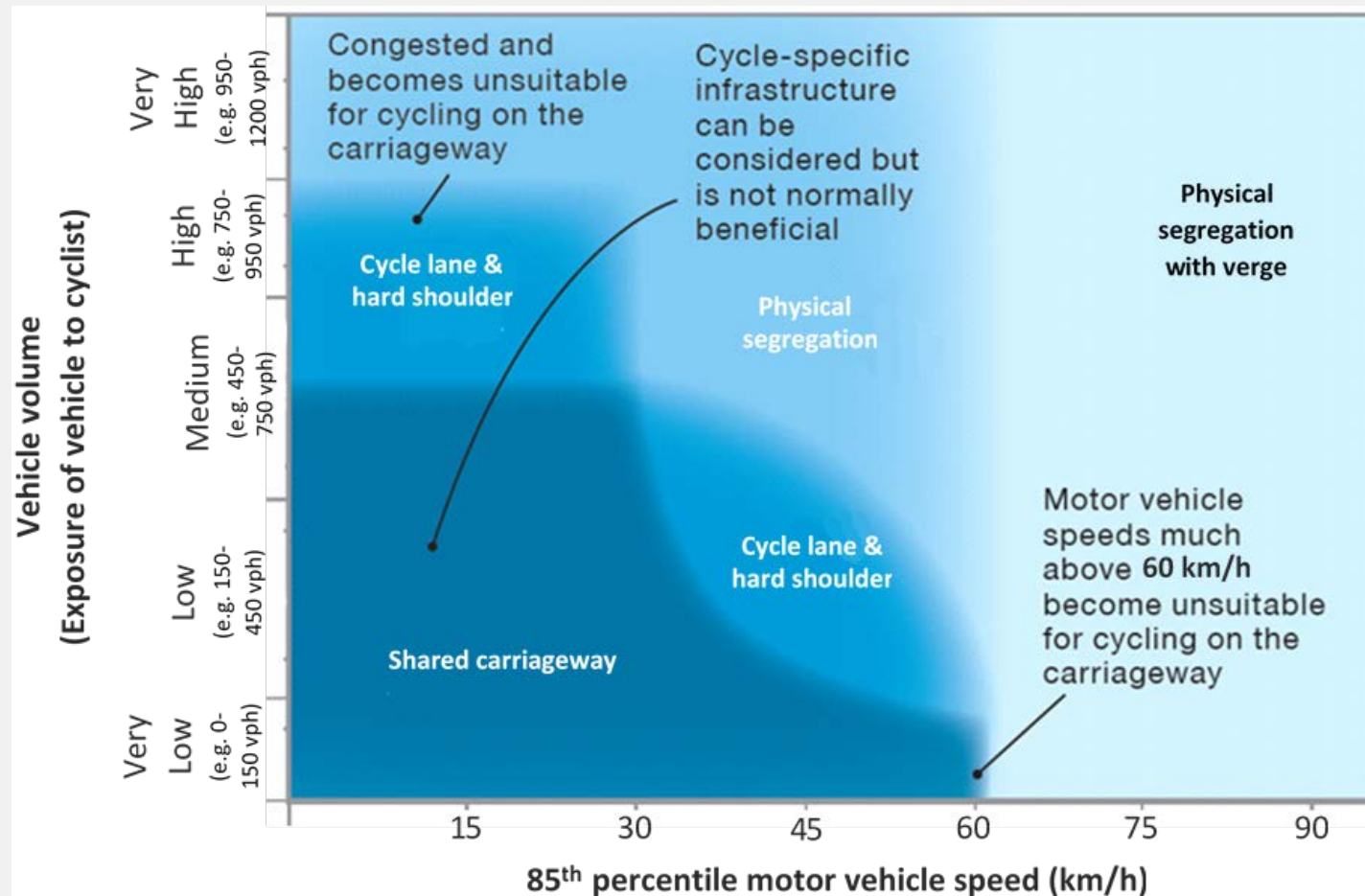


Figure 4.1: Guidance on the separation of cyclists and motor vehicles for the preferred bicycle route

Section 5: Lane Management



- Discusses the general lane management principles for different practices.
- No significant changes to this section.

Section 6: Speed Limits

- Provides guidance on Speed Limits, including:
 - the importance of Speed in a Safe System
 - setting of speed limits
- The main change was the inclusion of revised guidance on the establishment of speed limits.
- This aligns the setting of speed limits in order to better support the Safe System approach by:
 - reducing the consequences in the presence of a high risk (i.e. harm reduction approach)
 - recognising the mobility role of different road functions
 - reducing speed limits on high-risk roads where engineering treatments are not feasible
 - minimising the frequency of speed zone changes.

Section 6: Speed Limits

AGTM Part 5 provides new guidance on:

- Localised speed limit reductions at higher-risk Intersections
- Supporting active travel, shared spaces and activity centres through speed limits
- Minimum speed zone length
- Use of electronic speed limit signs in school zones and high pedestrian activity areas



Section 6: Speed Limits



- Urban roads – risk-based selection of speed limits
- Worked example of using the guidance to select speeds based on risk for an urban road
- Example in next few slides

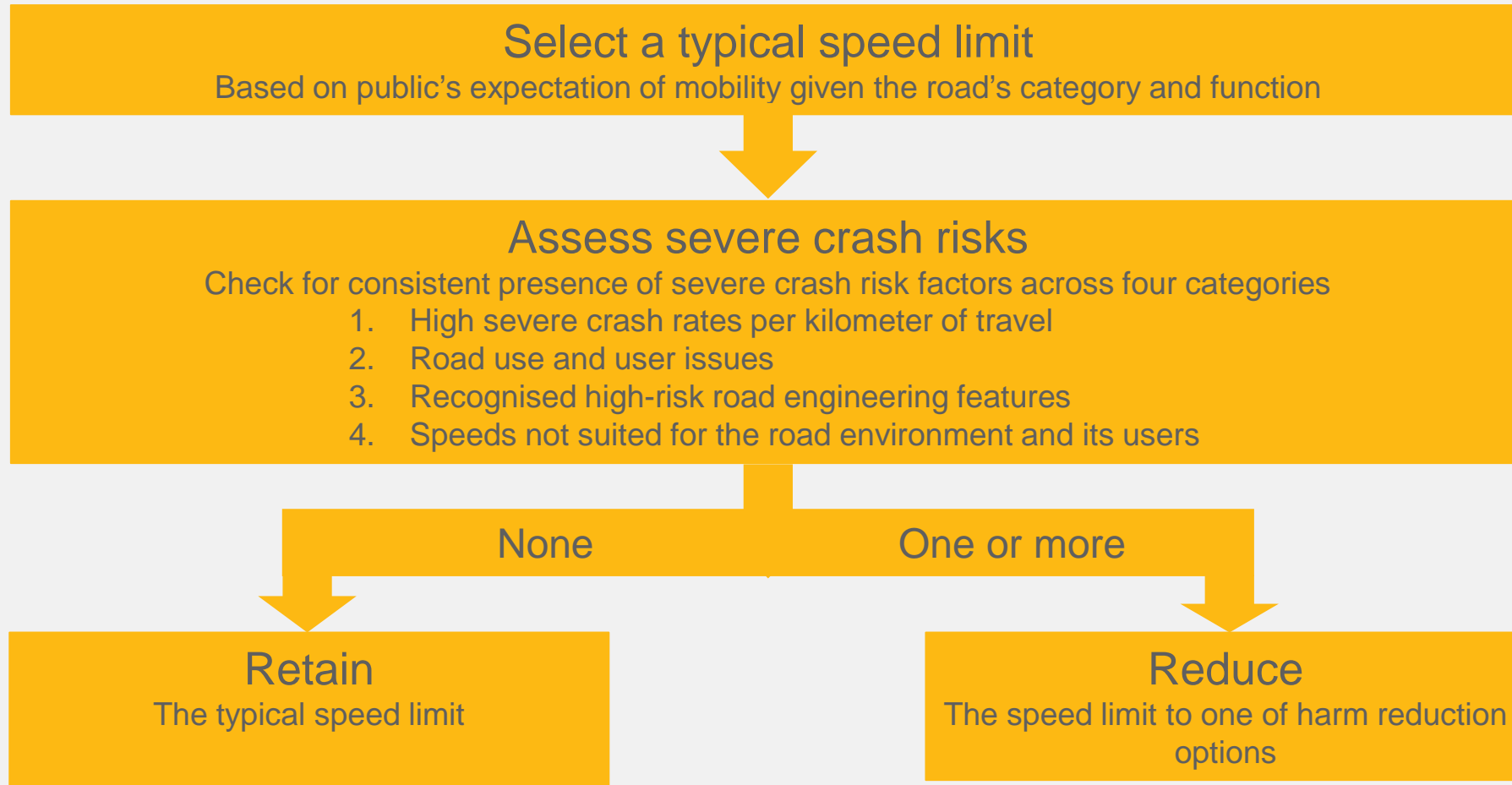
Urban roads – risk-based selection of speed limits



Table 6.4: Urban roads – risk-based selection of speed limits for different road categories and functions (section only)

Road category/function and proposed speed limit (km/h)		Consider the corresponding speed for the respective category of road when any of the following severe crash risks are present ⁽¹⁾			
		Severe crash rate/ 100 million VKT	Road use and users	Road features	Speeds ⁽⁷⁾
Urban arterials – divided (fully and partially built-up areas)	80	–	–	–	–
	70 ⁽¹⁰⁾	–	–	<ul style="list-style-type: none"> • 2–4 standard access points per 100 m (includes intersections)⁽⁶⁾ • Consistent and frequent presence of unprotected roadside hazards within 1.5 m of the traffic (e.g. trees/poles spaced closer than every 10 m, or continuous⁽¹¹⁾) • No protection for left or right-turning vehicles • Generally curving or winding road alignment (e.g. > 4 higher-risk curves per km ⁽⁵⁾⁽¹²⁾) 	<ul style="list-style-type: none"> • Mean speed is well below the existing speed limit⁽⁶⁾ due to congestion⁽³⁾ and competing road uses⁽³⁾⁽⁴⁾ leading to high speed variation
	60	<ul style="list-style-type: none"> • Severe crash rate is high⁽²⁾ 	<ul style="list-style-type: none"> • Pedestrians or cyclists are present in high numbers⁽²⁾, especially in commercial areas and business districts • On-road parking is permitted and occurs frequently along the route 	<ul style="list-style-type: none"> • > 4 standard access points per 100 m (includes intersections)⁽⁶⁾. More than two of the road feature risk factors for 70 km/h 	<ul style="list-style-type: none"> • Mean speed is well below the existing speed limit⁽⁶⁾ due to congestion⁽³⁾ and competing road uses⁽³⁾⁽⁴⁾ leading to high speed variation
	40	–	<ul style="list-style-type: none"> • School frontage⁽³⁾⁽¹⁴⁾ • Pedestrians or cyclists are present in high numbers⁽²⁾ and on both sides of the divided road with major generators and attractors (commercial areas and business districts) of pedestrian activity on both sides of the road resulting in a high number of pedestrians crossing the road 	–	–
	100	–	–	–	–

Urban roads – risk-based selection of speed limits



Urban roads – risk-based selection of speed limits



Considerations	Risk factors present
Functional speed limit	80 km/h divided arterial
Severe crash rate	1.3 cr/km/5 years (low)
Road use and user factors	Pedestrians, cyclists, parking, intersections and access ← Risk
Road feature risk factors	Frequent intersections, roadside hazards, narrow lanes ← Risk
Speed factors	$V_{50}=78$ km/h, $V_{85}=83$ km/h



Urban roads – risk-based selection of speed limits



- Urban Arterial – divided
- Has two risk factors (only needs one)
- Recommended speed = 60 km/h

Road category/function and proposed speed limit (km/h)		Consider the corresponding speed for the respective category of road when any of the following severe crash risks are present ⁽¹⁾			
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	40	–	<ul style="list-style-type: none"> • School frontage⁽³⁾⁽¹⁴⁾ • Pedestrians or cyclists are present in high numbers⁽²⁾ and on both sides of the divided road with major generators and attractors (commercial areas and business districts) of pedestrian activity on both sides of the road resulting in a high number of pedestrians crossing the road 	<ul style="list-style-type: none"> • Frequent intersections, roadside hazards, narrow lanes 	–
	100	–	–	–	–

60 km/h

Pedestrians, cyclists, parking, intersections & access

Frequent intersections, roadside hazards, narrow lanes

Conclusion

- *Austroads Guide to Traffic Management Part 5* available at <https://www.onlinepublications.austroads.com.au/items/AGTM05-17>
- The latest version incorporates findings of recent Austroads research particularly around:
 1. Movement and Place
 2. Network Operation Planning
 3. Setting of speed limits to suit the role and function of the road in the context of the Safe System.

Questions?

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Upcoming Austroads webinars

<http://www.austroads.com.au/event>

September

- On-road public transport

October and November

- Road Transport Management Framework and Principles
- Connected and Automated Vehicles
- Guide to Traffic Management Part 6 and Guide to Road Design Part 4
- Guide to Traffic Management Part 13
- Guide to Traffic Management Part 3

Thank you for participating