

Technical Direction

Traffic management and road safety practice



Transport
Roads & Maritime
Services

TTD 2016/001 February 2016

Supersedes TTD 2014/003

Design and implementation of shared zones including provision for parking

Summary:	Audience:
This Technical Direction provides guidelines for the design and implementation of shared zones in a road or road related area (Category 1) and for shared zones in a road with footpath parking (Category 2).	<ul style="list-style-type: none">• Traffic management staff• Road safety staff• Councils

Definitions

Shared zones are defined under Rule 24 in the NSW Road Rules (2008). A shared zone is a road or network of roads or a road related area where space is shared safely by vehicles and pedestrians and where pedestrian priority and quality of life take precedence over ease of vehicle movement.

Shared zones employ a range of regulatory and non-regulatory treatments to indicate a change in environment and priority. Where parking is provided in a shared zone, it is only allowed in marked bays and must have the relevant signage provided.

Using this Technical Direction:

- A **Category 1** (Cat 1) shared zone is provided on a road related area, has clearly different coloured and textured surface treatments from the surrounding roads, and typically does not have kerbs.
- A **Category 2** (Cat 2) shared zone is provided on a road which includes footpath parking and has substandard footpath widths, retains kerbs and has traffic calming devices and treatments to regulate traffic speeds to 10km/h.

Practice/General

The NSW Government is committed to improving pedestrian safety and amenity. The implementation of applicable shared zones will assist in reducing the incidence of pedestrian death and serious injury. One of the key requirements of shared zones is that they are attractive and interesting public places that reflect local needs and activities.

Shared zones are specifically designed for pedestrian priority and may be appropriate for a road, a network of roads or road related areas where there are comparatively high pedestrian volumes, where the road is narrow and pedestrian access along existing substandard (less than 1.2 metres) footpaths is limited, and/or where on-road parking on one or both sides of the road restricts the free movement of vehicles along the road (especially emergency and service vehicles).

Owner:	General Manager Network NSW	Review date:	July 2018
Authorised by:	Ken Kanofski COO Journey Management	Date:	Page 1 12
RMS 16.045		Printed copies of this document are uncontrolled	

Approvals:

The safest place for pedestrians is on a specific pedestrian facility. A shared zone will only be considered where adequate footpaths cannot be retained within the road reserve and where there are very low numbers of slow moving vehicles. Footpaths can be retained in a shared zone where footway parking is in place.

A shared zone should not look like a normal road environment and requires a self enforcing road environment. Kerbs should generally not be provided in a shared zone to ensure a discernible change in the environment from the surrounding roads, and to facilitate the ease of movement and indicate the priority for pedestrians, especially disabled pedestrians. Existing 'brownfield' roads may be suitable for conversion to Category 1 or 2 shared zones without the removal of existing kerbs if approved by Roads and Maritime Services.

Traffic control devices (ie signs and markings) referred to in this Technical Direction shall meet RMS specifications. Traffic control devices, other than the *Shared zone* (R4-4), *End shared zone* (R4-5), and *Give Way to Pedestrians* (R2-10) signs, will still require council approval through the usual Local Traffic Committee process.

The NSW road rules (Rule 188) permit parking in designated shared zones. A driver can stop in a marked parking bay or designated parking area if the driver is permitted to do so by the road rules and where indicated by a parking bay or sign.

The maximum speed limit in shared zones is always 10 km/h. All speed zones and shared zone schemes must be authorised by RMS as per the delegations under the Roads Act.

Implementation of these guidelines must include community involvement and participation. Shared zones are designed and constructed by local councils in consultation with the local community.

This Technical Direction provides guidelines for all aspects of shared zones, including design and implementation, and for the provision of parking within designated shared zones, and supports the Transport for NSW SS/12/01 shared zone policy.

Guidelines

General

- All new shared zones (Cat 1) must be constructed without kerbs.
- In special circumstances existing roads can be converted to shared zones, without the removal of the existing kerbs. Potential reasons for not removing kerbs may include heritage or cost-prohibitive constraints. However where existing kerbs are being retained traffic calming devices and a visibly changed road environment may need to be used to address vehicle speed. The retention of kerbs requires RMS approval.
- All shared zones must display the required regulatory signage and should include pavement markers at each entry point to the area and at each exit point from the area. The entry signage is to be duplicated on both sides of the road, where possible.
- Drivers must give way to pedestrians at all times in shared zones (NSW Road Rule 83). A *Give Way to Pedestrians* (R2-10) sign must be installed below each *Shared zone* (R4-4) sign. A *Give Way to Pedestrians* pavement marking must be installed at each entry to a Category 2 shared zone.
- All shared zones in NSW must display a speed limit of 10 km/h. No other speed limit is allowed. All shared zones in NSW must be authorised by RMS as they are a speed zone.
- Where parking is to be provided in shared zones, *Park In Bays Only* (R5-65) signs must be provided under the shared zone (R4-4) signs at each entry into the shared zone.

- The parking bays must be marked within the shared zone. The length and width of any parking space must comply with AS2890.5 *Parking Facilities*.
- To ensure compliance with on-street parking for people with disabilities please refer to AS 2890.6-2009 *Parking Facilities*.
- As shared zones are a pedestrian priority environment there should not be any requirement for pedestrian crossings and pedestrian fencing.
- Continuous footpath treatments should be considered. Refer to TD 2013/05.
- All shared zone proposals on existing roads must have consultation with the local community by Council to provide an opportunity for feedback prior to implementation.

Design Principles

The design principles for shared zones need to be defined to ensure the proposed scheme incorporates the necessary features to provide an appropriately safe environment. In particular, the design needs to have an impact which clearly highlights to drivers that there is a change in the road environment and traffic conditions and that the priority is for pedestrians. The design features are required to be implemented in accordance with the Austroads Guide to Traffic Management Part 8: Local Area Traffic Management and the relevant RMS Austroads Guide Supplement. The following table presents the design principles for shared zones.

Features	Information
Street space/ kerb & gutter/ delineation	<p>The road environment in a shared zone must be changed to ensure that it does not look like a normal road</p> <ul style="list-style-type: none"> • Any delineation and kerbs shall be removed to enhance the sense of pedestrian priority (Cat 1). • Where it is not possible to remove the kerbs then the shared zone must be treated to a level where drivers can clearly identify that they are in a different driving environment. • Traffic calming or suitable pedestrian friendly treatments must be provided to reduce speeds within the zone where kerbs have been retained.
Entrance/exit points	<ul style="list-style-type: none"> • Prominent features such as signs, architectural or landscape features must be provided to indicate a change in the street environment and highlight the start/end of the shared zone (Cat 2). • A <i>Give Way to Pedestrians</i> pavement marking must be installed (Cat 2 only). • Continuous footpath treatments should be considered as entry/exit treatments to assist traffic calming. Refer to TD 2013/05.
Traffic signs	<ul style="list-style-type: none"> • Regulatory traffic signs as per the requirements of the NSW Road Rules 2008 are required. • All entry signs must be provided on both sides of the road, for one or two-way shared zones, to further enhance the changes in environment and priority.
Pavement surface	<ul style="list-style-type: none"> • The pavement surface shall be changed to highlight the difference in the street environment from the surrounding road network. It must be clearly distinguishable by colour, texture and/or materials. Any exceptions require RMS approval.
Traffic calming features/ treatments	<ul style="list-style-type: none"> • Traffic calming or suitable treatments must be provided to reduce speeds within the zone where kerbs have been retained to encourage consistently slow driving and ensure compliance with the 10 km/h speed limit. • Advisory speed plates are not required to supplement speed hump advisory signs.
Forward visibility	<ul style="list-style-type: none"> • To encourage drivers to drive with care and comply with the 10km/h speed limit, it is not desirable to have unlimited forward visibility in a shared zone. • In locations where it is considered necessary to maintain visibility, a minimum stopping sight distance of 12 metres shall be applied.

Features	Information
Vehicle mix and accessibility requirements	<ul style="list-style-type: none"> Alternative access for large vehicles such as buses needs to be planned. Access must be designed to safely accommodate emergency vehicles, delivery and garbage trucks. Emergency services and Police are to be consulted during the design process.
Car parking	<ul style="list-style-type: none"> Car parking provisions may need to be altered to suit the scheme. Car parking bays must be marked along the scheme and in accordance with the prescribed lengths and widths in AS 2890.5 and AS 2890.6-2009 <i>Parking Facilities</i>. Car parking spaces that straddle existing kerb and gutter are to be provided in Cat 2 shared zones.
Bicycles	<ul style="list-style-type: none"> Cyclists must be able to safely traverse the features provided in the scheme to encourage lower vehicle speeds. Traffic calming measures must incorporate features to make them cycle friendly. In one way shared zones, consideration should be given to contra-flow bicycle movements. This provision will increase access for non-motorised transport and must include <i>Bicycles Excepted</i> (R9-3) signs. Cyclists need to be aware that they must give way to pedestrians.
Mobility and vision impaired requirements	<ul style="list-style-type: none"> Designs must include provision to safely accommodate the needs of the mobility and vision impaired. Refer to AS 1428.4.1 <i>Design for Access and Mobility</i> for detailed design requirements.
Lighting and drainage grates	<ul style="list-style-type: none"> Appropriate lighting should be installed for safety and security purposes. Appropriate drainage grates should be installed to cater for pedestrian and cyclist use.

Traffic signs

Traffic signs to be used in a shared zone are described in the NSW Road Rules and are illustrated below.

Any traffic calming must display the appropriate warning signage (eg W5-10 *Speed hump*). However the supplementary advisory speed plate is not required on speed hump signage.

Entry signposting is to be duplicated on each side of the road, where possible

In shared zones, signs may be provided on both sides of the road, for one or two-way shared zones, to further enhance the changes in environment and priority.



R4-4 SHARED ZONE

- Must be displayed at the start of a shared zone.
- R4-4 may be repeated in combination with R2-10 at additional locations within a shared zone.



R4-5 END SHARED ZONE

Must be displayed at the end of the shared zone.

R2-10 GIVE WAY TO PEDESTRIANS

- Must be displayed at the start of a shared zone and below the R4-4 sign.
- R2-10 may be repeated in combination with R4-4



at additional locations within a shared zone.

R5-65 PARK IN BAYS ONLY

- Must be displayed at the start of a shared zone, below the R2-10 sign, when parking is provided.
- May be repeated in isolation at additional locations within a shared zone.

Traffic calming

Traffic calming features or treatments are required within Category 1 and 2 shared zones to reduce vehicle speeds, where a change in the road environment will not work alone. Where kerb and gutter are retained, traffic calming should be used to reduce vehicle speeds and are described in detail in the Austroads Guide to Traffic Management Part 8: Local Area Traffic Management.

There is no requirement to provide pedestrian fencing in shared zones.

Continuous footpath treatments should be considered as entry/exit treatments to assist traffic calming. Refer to TD 2013/05.

Landscaping and street furniture

Carefully located landscape features and street furniture can encourage lower speeds and enhance the experience for pedestrians. Examples of such features are bollards, architectural decorations, seating and lighting. These features can be repeated through the shared zone.

Provision for mobility and vision impaired people

The design for shared zones must safely accommodate the needs of those who are mobility restricted and vision impaired. Features such as tactile paving, hand rails and the careful placement of landscaping and street furniture must be considered during the design process. In shared zones, mobility and vision impaired access to the existing road must be provided and the ability to negotiate traffic calming must also be accommodated. AS 1428.4.1 *Design for Access and Mobility* contains detailed design requirements and must be referred to during the design process.

Shared Zones retaining kerb and gutter (Category 1 and 2)

The following table describes options for non-regulatory features used to help define shared zones to ensure pedestrian safety in shared zones that retain kerb and gutter.

Features	Description
Road narrowing/ kerb extension	<ul style="list-style-type: none"> • Encourages drivers and cyclists to reduce their speeds • Highlights to motorists and cyclists that they are in an area with changed traffic conditions such as lower speeds.

Features	Description
Raised threshold	<ul style="list-style-type: none"> Encourages lower speeds. Can also be used to indicate the entry/exit to the zone. There is no requirement to provide pedestrian fencing in shared zones. Continuous footpath treatments should be considered to assist traffic calming. Refer to TD 2013/05.
Change in carriageway surface and texture	<ul style="list-style-type: none"> Provides characteristics that distinguish the scheme from other roads. Shared zones require a different road surface along the entire length of the road. Alternate treatments may be considered with Roads and Maritime approval. This must be provided where the existing kerb and gutter is to be retained.
Architectural and landscaping	<ul style="list-style-type: none"> Assists in creating a visible change in the street environment. Helps to enhance the quality of the scheme. Creates a prominent feature that clearly highlights the start / end of the scheme. Can be repeated through the shared zone.
Pavement markings	<ul style="list-style-type: none"> A <i>Give Way to Pedestrians</i> pavement marking must be provided at each entry.

- Traffic calming features or suitable treatments must be provided to reduce speeds (in zones where kerbs have been retained). There is no requirement to provide pedestrian fencing in shared zones. Continuous footpath treatments should be considered to assist traffic calming. Refer to TD 2013/05.
- In a shared zone with two-way traffic movement where the available travel width is less than 6.0 metres, storage gaps should be provided to allow moving vehicles to pass each other. A convenient position for storage gaps is adjacent to driveways where the loss of parking spaces is minimised. Storage gaps may not be necessary where the street is short and a driver entering at one end of the street is able to see a vehicle entering at the opposite end of that street.
- Give Way to Pedestrians* pavement markings must be provided at entry points.
- Enhancements to shared zones may also be considered and include pavement markings such as the pedestrian symbol and the numerals 10 at regular intervals along the existing road length, with traffic calming devices or a changed road environment to maintain a self enforcing 10km/h speed limit.

Parking

- Parking bays that straddle existing kerbs are to be provided only in Category 2 shared zones, subject to approval. Where this is the case:
 - Retaining barrier kerb (Type SA) is acceptable adjacent to parking spaces that have direct access via a driveway from one end. This would limit parking to a maximum of two parallel parking spaces in series between driveways. This will discourage people from driving illegally along the footway to access or leave parking spaces.
 - Providing roll-top kerb (Type RT) is the ideal treatment where parking spaces are not directly accessible from a driveway, or where there are long lengths between driveways. This treatment will facilitate the provision of three or more parallel parking spaces in series. Alternating short lengths of different kerb types along a kerb line should be avoided. This practice may be acceptable if the kerb types were separated by driveways.

- Provisions for pedestrian access must be provided for essential services, including property access and letterboxes.
- Utility poles could restrict positioning and access to and from parking bays. The location of parking bays in relation to utility poles needs to be defined to suit the relevant Authority.
- If parking bays are located on each side of the road the width between them must not be less than 3.0 metres to allow vehicles to travel safely along the road or road related area.
- The location of the parking spaces or areas must not compromise sight distances at a shared zone entry point. There are existing mandatory (statutory) restrictions at intersections, road crossings, and traffic signals contained in the NSW Road Rules 2008 and RMS Technical Directions (signposted restrictions). These are applied to ensure that minimum sight distances are provided for road safety purposes.
- The parking spaces, including vehicle access to and from the spaces, are not to affect access to utilities. Utility covers may not be trafficable, so it is important to ensure that car parking does not damage them. Parking spaces and areas should be carefully located so this problem is eliminated or the devices protected.
- It is illegal to drive on the footpath, therefore parking spaces are to be located so they can be accessed without driving on the footpath.
- Trees and shrubs planted in the shared zone could affect positioning and access to and from parking bays, depending on the location and size of the tree or shrub. For safety, it is important to consider whether driver sight distance may be obstructed.
- Parking bays should not restrict access to property entrances.
- Parking bays must be provided in accordance with AS2890.5 and AS 2890.6-2009 *Parking Facilities*. The minimum width must be 2.1 metres and the minimum length must be 6.0 metres for parallel parking spaces.

90 and 45 degrees parking are not considered appropriate in a shared zone. The minimum carriage way widths required for 90 and 45 degrees parking does not adhere to the requirements for a self-enforcing road environment. In addition it is undesirable to have vehicles reversing within a shared zone.

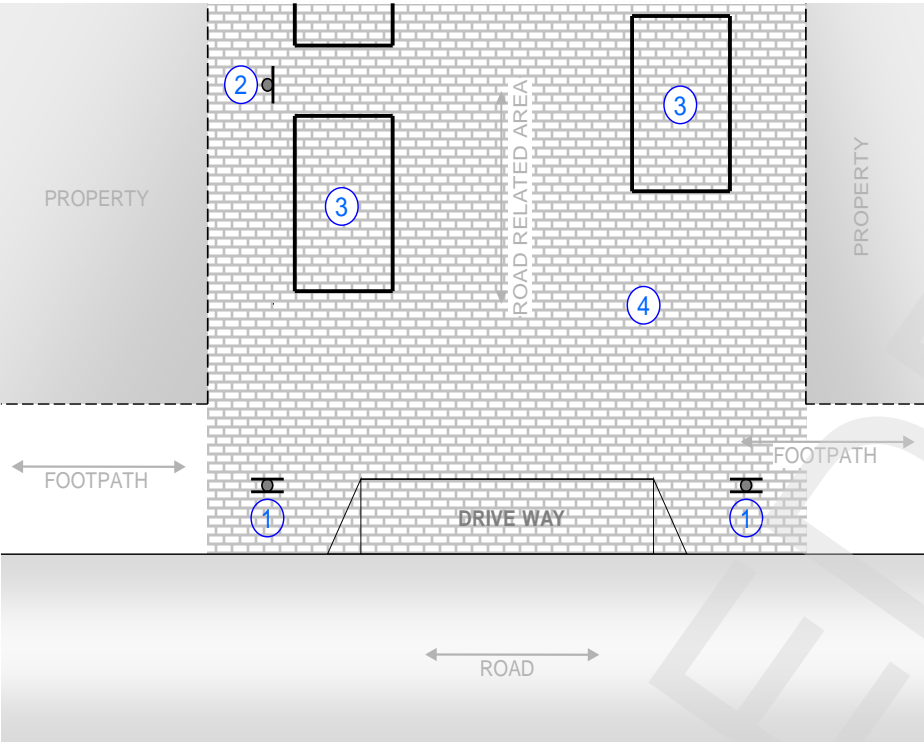
Road safety audits

Road safety audits provide a means of identifying and managing road safety risks in a shared zone scheme.

The features provided in shared zones must be safe for all road users. In particular the road safety audit is required to identify issues pertaining to vehicle speeds, movements and pedestrian safety and disability use.

Road safety audits are to be conducted at a number of points during a project, including at the design stage. The project manager must address all the identified deficiencies, prior to construction. A road safety audit is also to be conducted after implementation.

Road safety audits must be completed in accordance with the Austroads Guide to Road Safety Part 6: Road Safety Audits and the relevant RMS Austroads Guide Supplements.



- NOTES:
1. Regulatory traffic signage per the requirements of Road Rules 2008 must be provided at each entry and exit to the shared zone. Signs must be installed on both sides of the road at each entry. These include: R4-4, R2-10, R5-65 and R4-5.
 2. Traffic signs may be repeated at additional locations in the Shared Zone (R4-4, R2-10 and R5-65).
 3. Parking bays may be provided. Parking is only allowed in marked bays and should not restrict property / driveway access. All parking spaces must be provided in accordance with AS 2890.5.
 4. Pavement surface (colour, texture and materials) are used to highlight the difference in the environment from the surrounding street network.
 5. This diagram is not to scale.

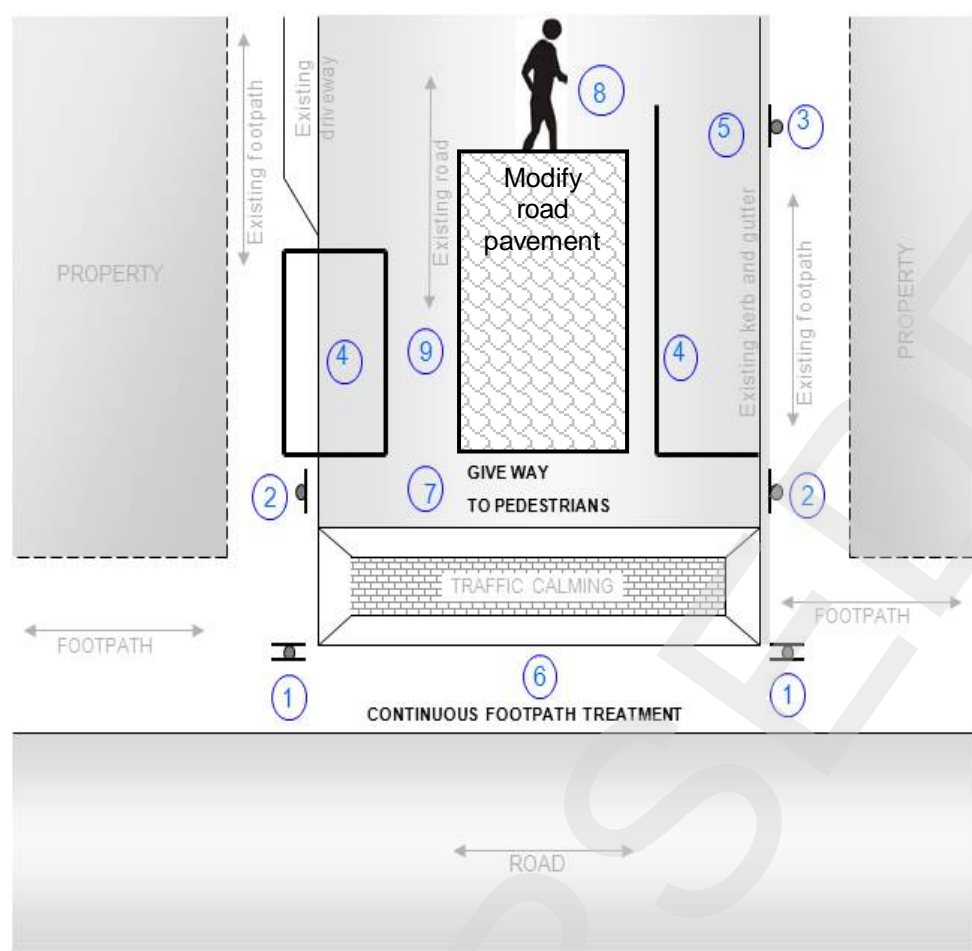
Category 1 shared zone Indicative layout and treatments



Figure 1. Photo and diagram of a Category 1 shared zone showing regulatory signage, typical layout and treatments. [Note: The No Entry sign is site specific]
The photo may have been modified to demonstrate essential elements.



Figure 2. Photo and diagram of a Category 1 shared zone retaining kerb and gutter showing treatments, parking provision, and typical layout.
The photo may have been modified to demonstrate essential elements.



Category 2 shared zone typical layout and treatments

- NOTES:
1. Regulatory traffic signage per the requirements of Road Rules 2008 must be provided at each entry and exit to the shared zone. Signs must be installed on both sides of the road at each entry. These include: R4-4, R2-10, R5-65 and R4-5.
 2. No Stopping sign. Must be placed in accordance with the regulations and to ensure parking does not compromise sight distance.
 3. Traffic signs may be repeated at additional locations in the Shared Zone (R4-4, R2-10 and R5-65).
 4. Parking bays may be provided over existing kerbs or on road. Parking is only allowed in marked bays and should not restrict property / driveway access. All parking spaces must be provided in accordance with AS 2890.5.
 5. The retention of kerb and gutter requires RMS approval.
 6. Traffic calming treatments must be provided at regular intervals to maintain vehicle travel speed at no more than 10 km/h. There should not be any general requirement to provide pedestrian fencing in shared zones. Continuous Footpath Treatments should be considered as entry treatments and traffic calming (TD 2013/05).
 7. A Give Way to Pedestrians pavement marking is to be provided at the entry to the shared zone. (Refer to the Delineation Manual Section 9.)
 8. Optional PS-4 pedestrian logos may be repeated at intervals.
 9. Pavement surface (colour, texture and materials) are used along the vehicle path to highlight the difference in the environment from the surrounding street network.
 10. This diagram is not to scale.



Figure 2. Photo and diagram of a Category 2 shared zone showing treatments, traffic calming, parking provision, and typical layout. ‘Give Way’ to Pedestrian’ pavement marking is optional.

The photo may have been modified to demonstrate essential elements.

Stakeholder consultation

To gain support for the implementation of a shared zone, to ensure compliance with the road rules, and to mitigate any potential conflicts and problems prior to the operation of the scheme, the concept and detailed design of a shared zone must be developed with the participation of the local community. Inclusive in this process is the need to liaise with disability groups.

Consultation with stakeholders such as the Police, emergency services, public transport companies, delivery/garbage truck operators and local businesses is needed prior to the implementation of the scheme.

It is the responsibility of the local council to deliver an appropriate public awareness campaign and should include a variety of communication channels (eg door knocking, media coverage, placement of posters and signs, distribution of brochures, and public exhibitions). This campaign should advise residents on issues such as where to place garbage bins, and the need to remove them from the shared zone promptly once emptied.

Approval by RMS

The authorisation of a shared zone is not delegated to councils. Shared zones are speed zones and approval to install them must be obtained from RMS in accordance with this policy.

Implementation

The final stage involves implementing the approved scheme on site. Monitoring the implementation by the design team is recommended to ensure consistency with the design objectives and principles.

Post implementation monitoring

A road safety audit is to be conducted after implementation. Local council should also periodically monitor the scheme to assess the effectiveness of the operation of a shared zone.

Action

This Technical Direction must be followed when councils are designing and implementing shared zones.

Updates

To ensure that this Technical Direction and any related guidelines remain current and relevant, minor updates may be made from time to time. Any updates may be obtained from the RMS website using the Traffic & Transport Policies & Guidelines Register which can be found at:

www.rms.nsw.gov.au/doingbusinesswithus/guidelines/documentregister/index.html

Printed copies of this Technical Direction are uncontrolled; therefore the Register should always be checked prior to using this Technical Direction or any related guidelines.