



**mainroads**  
WESTERN AUSTRALIA

# Guidelines for Approving RAV Access

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## Document Control

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## Amendments

Revision Number	Revision Date	Description of Key Changes	Section / Page No.
	23/09/2016	<ul style="list-style-type: none"> <li>Updated contact email address</li> </ul>	Section 7
	August 2018	<ul style="list-style-type: none"> <li>Removed reference to Concessional Guidelines</li> <li>Removed reference to Strategic Road Freight Network</li> <li>Added Network Performance Considerations and Use of Signage</li> </ul>	Section 1 Section 3 Section 6.7 & 6.8
	September 2018	<ul style="list-style-type: none"> <li>Amended wording in Swept Path Concerns and Network Performance Considerations Sections</li> </ul>	Section 6.1 and 6.7

## Definitions

*The following are definitions for terms used in these Guidelines.*

Term	Definition
<b>HVS</b>	Main Roads Heavy Vehicle Services
<b>Main Roads website</b>	<a href="http://www.mainroads.wa.gov.au">www.mainroads.wa.gov.au</a>
<b>RAV</b>	Restricted Access Vehicle

# Related Documents

Trim Ref	Title
<b>D14#493277</b>	Standard Restricted Access Vehicle Route Assessment Guidelines
<b>D16#374056</b>	Tri Drive Route Assessment Guidelines
<b>D15#132720</b>	Framework for Adding Local Government Roads to Restricted Access Vehicle Networks

## 1 PURPOSE

The Commissioner of Main Roads (the Commissioner) has the authority under provisions in the Road Traffic (Vehicles) Act 2012 to approve RAV access on a public road. The Commissioner has delegated this authority to Main Roads Heavy Vehicle Services.

HVS administers the route assessment and approval process in order to provide efficient road access for RAVs, without having an adverse impact on road safety, the road infrastructure and public amenity. All route assessments must be conducted in accordance with the Route Assessment Guidelines relevant to the particular vehicle configuration and mass limit being requested. The following Route Assessment Guidelines are available on the Road Access page of the Main Roads website:

- Standard RAV Route Assessment Guidelines; and
- Tri-Drive Route Assessment Guidelines.

HVS decides whether a road will be approved for RAV access and may apply travel and road conditions to an approval when considered necessary for road safety, infrastructure protection or public amenity.

The purpose of this document is to provide guidance to Main Roads staff responsible for making decisions related to RAV access, particularly for roads that do not strictly meet the Route Assessment Guideline requirements. This document will also provide an understanding to stakeholders on the decision making process.

## 2 ROLES & RESPONSIBILITIES

### 2.1 Main Roads WA

The Commissioner is empowered under the Road Traffic (Vehicles) Act 2012 to approve RAV access on the public road network. The Commissioner has delegated these powers to the Heavy Vehicle Services (HVS).

HVS is responsible for reviewing all route assessments to decide if RAV access will be approved and what conditions, if any, will be applied. HVS will issue the approvals via either a RAV Notice or a RAV Permit.

The Main Roads Regional Offices conduct route assessments on behalf of HVS and provide recommendations to HVS on the level of access that should be approved and if conditions should be applied.

## 2.2 Local Governments

Local Governments are key partners in the shared responsibility of safe and efficient RAV access within Western Australia and manage approximately 88 percent of West Australian roads. It is fundamental that Main Roads and Local Governments continue to build strong partnerships to ensure the best possible outcomes. Main Roads WA will ensure engagement with Local Government about RAV access on their roads.

The *Framework for Adding Local Government Roads to Restricted Access Vehicle Networks*, outlining the process for applying for RAV access and the roles of various entities, can be found on the Main Roads website under the [Road Access](#) page of the Main Roads website.

## 3 NETWORK CONTINUITY CONSIDERATIONS

When considering access decisions, HVS and Local Governments should be mindful of network wide considerations relating to efficiency, connectivity, sustainability, asset protection, public safety and public amenity.

Where a more appropriate route is available, it is reasonable for Main Roads and Local Governments to propose alternative routes to the applicant.

## 4 APPROVAL PRINCIPLES

When considering an application for RAV access approval, HVS must consider the following:

- Where the assessment identifies the road meets all of the relevant Route Assessment Guidelines, the road can be added to the relevant RAV Network;
- Where the assessment identifies the road does not meet all of the relevant Route Assessment Guidelines, however reasonable conditions can be applied to mitigate any associated risks, the road can be added to the relevant RAV Network;
- Where the assessment identifies the road does not meet all of the relevant Route Assessment Guidelines and applying reasonable conditions is not likely to mitigate any associated risk or is not likely to be complied with, the road should not be added to a RAV Network. However, access approval may still be granted under individual permit, following additional assessment based on the individual access requirement.
- Where the assessment identifies the road does not meet all of the relevant Route Assessment Guidelines, regard should be given to the historic performance of similar vehicles on the route, subject to relevant upgrades being made to the route within a reasonable time.

## 5 RISK ASSESSMENT

### 5.1 Public Safety

Public safety includes the safety of persons or property. This includes, but is not limited to, the safety of drivers and passengers of vehicles, the safety of persons such as pedestrians and people near the road-related area, and the safety of property such as vehicles and loads on or near the road-related area.

Public safety is about ensuring that the use of a RAV does not cause harm to other people using the roads or to property on or near the road. All road users have a legitimate expectation that they can use the road without being put at unreasonable risk of harm by another road user.

Main Roads adopts the Safe Systems approach, where applicable, when considering aspects of public safety and with the aim of safe travel on the public road network. This approach suggests (amongst other things) that road users will make mistakes, and vehicles and road infrastructure need to be 'forgiving' of them.

## 5.2 Level of Risk

A risk is significant if it has a high likelihood of occurrence or will have a serious or major consequence. A risk that is unlikely to occur or will have a minor impact is not a significant risk.

With the use of heavy vehicles it is acknowledged that an incident may cause death or serious injury to a person or major damage to property (including the road infrastructure).

The size and weight of heavy vehicles often makes the consequences of an incident more serious than a similar incident involving other vehicles. The impact of an incident does not depend on who is responsible for, or causes, the incident.

When HVS is deciding whether there is a significant risk they need to consider both the likelihood that the potential risk will occur and the consequence if the risk is realised.

A risk cannot be significant simply because it may happen. There must be a reasonable likelihood that the risk will eventuate from the RAV using the particular road.

As a point for comparison, if the level of risk posed by general access vehicles is considered acceptable (that is, not significant), RAV access posing the same, or a lower, level of risk is not to be taken as significant.

## 6 MANAGING RISKS WITH CONDITIONS

### 6.1 Swept Path Concerns

Where the assessment identifies the road does not meet the swept path standards for the requested level of access, the road may still be approved under the following conditions:

- 1) A condition may be applied restricting specific turning movements or requiring travel in a certain lane when manoeuvring an intersection, to ensure the vehicle does not come into contact with roadside furniture or cross the centreline of the road, where sight distances are inadequate.
- 2) For a left or right turn, A RAV can move from one marked lane to another marked lane across a continuous line, provided there is sufficient sight distance in all directions of the intersection. However, traffic volumes should also be considered, as network operations may be impacted if RAVs are required to wait at a busy intersection for an extended period until there is sufficient clearance to complete the turn.
- 3) A live on-road assessment may be conducted under traffic management provided at the cost of the applicant. If the live trial demonstrates the template vehicle configuration specified in the relevant Route Assessment Guidelines can safely manoeuvre the intersection, the road may be added to the relevant RAV Network.
- 4) If the live on-road assessment only demonstrates a particular vehicle configuration used by the applicant (with a smaller dimension than the template vehicle configuration) can safely manoeuvre the intersection, the road may be approved under an individual permit.
- 5) Alternatively, the applicant may engage a consultant to conduct swept path assessments for their particular vehicle configuration. If the swept path assessments demonstrate the vehicle configuration can safely manoeuvre the intersection, the road may be approved under an individual permit.

## 6.2 Gradient Concerns

Where the assessment identifies the road does not meet the gradient standards for the requested level of access, the road may still be approved under the following conditions:

- 1) If the assessor makes a judgement based on their experience and recommends the road still be approved, noting there is an adequate approach and departure to the gradient, therefore there is negligible risk of the vehicle losing momentum and stalling or losing traction on the ascent, or negligible risk of the vehicle experiencing brake fade on the descent, the road may be added to the relevant RAV Network.
- 2) A live on-road assessment may be conducted under traffic management provided at the cost of the applicant. If the live trial demonstrates the template vehicle configuration specified in the relevant Route Assessment Guidelines can safely negotiate the gradient, the road may be added to the road network.
- 3) If the live on-road assessment only demonstrates a particular vehicle configuration used by the applicant (with a lesser gross mass than the template vehicle configuration) can safely negotiate the gradient, the road may be approved under an individual permit. In this instance, the applicant may need to provide evidence that appropriate systems are in place to ensure all drivers are made aware of the gradient and have adequate experience or are provided with adequate training to safely negotiate the steep gradient.

## 6.3 Road Width Concerns

Where the assessment identifies the road does not meet the road width standards for the requested level of access, the road may still be approved under the following conditions:

- 1) A condition may be applied to lower the speed limit of the RAV. The speed limit will need to be lowered enough so the road width meets the standard at the lower speed. However, it is important not to lower the speed to such a limit that creates a safety issue in itself, i.e. results in an unfavourable speed differential.
- 2) Where the road is a low volume road and the RAV is only required to travel a short distance, or traffic on the road is generally limited to local residents, the level of risk should be considered and if deemed to be negligible, access to the road may be approved under an individual permit. The applicant may be required to erect warning signage on the road or provide evidence that contact has been made with all local residents advising of the presence of RAVs on the road.

## 6.4 Stacking Distance Concerns

Where the assessment identifies the road does not meet the stacking distance standards for the requested level of access, the road may still be approved under the following conditions:

- 1) If the applicant reaches a formal agreement with the rail service provider, the road may be approved under an individual permit.
- 2) If the applicant is only using a vehicle with a length within the available stacking distance, the road may be approved under an individual permit.

## 6.5 Sight Distance Concerns

Where the assessment identifies the road does not meet the sight distance standards for the requested level of access, the road may still be approved under the following conditions:

- 1) If the sight distance concern relates to an approach sight distance, a condition may be applied to lower the speed of the RAV. The speed limit will need to be lowered enough so the site distance meets the standard at the lower speed. The maximum speed restriction

should not be more than 20 km/h less than the posted speed on the route, or 30 km/h less in 110 km/h zones.

- 2) If the sight distance concern relates to an entering sight distance, the road may be approved under an individual permit for temporary access, under traffic management that reduces the speed of other traffic, on the through road, approaching the intersection.
- 3) Routes having intersections with lower than recommended entering sight distances can still be accepted if there is an adequate acceleration lane or if the road is low volume where RAVs are speed restricted and with sufficient signage.
- 4) If the visibility of an intersection can be improved to an acceptable level by vegetation control, temporary speed control signs, or lower speed zones, this may be recommended as a pre-requirement for RAV access. RAV access should not be permitted without prior confirmation that improved sight distance meets the minimum standard.

## 6.6 Road Infrastructure Concerns

Where the assessment identifies the road does not meet a standard relating to the road infrastructure, such as bridge ratings or pavement standards, the road may still be approved under the following conditions:

- 1) The road may be approved under an individual permit with a restricted mass limit.
- 2) The road may be approved if the applicant enters in an agreement to pay road maintenance funding contributions.

## 6.7 Network Performance Considerations

Where it is identified by the relevant road manager that network performance is significantly impacted by the introduction of RAVs, consideration must be given to possible network improvements prior to RAV access being approved.

The assessor should consider if the current intersection layout/s along the proposed route are suitable for the level of RAV access requested and what potential impacts there are on network performance with the introduction of RAVs.

Consultation with the relevant road manager should be undertaken to ensure:

- Existing treatments such as acceleration lanes and turn pockets at intersections remain adequate for the proposed level of RAV access; and
- Consideration is given to potential significant impacts on network performance that may result in the need, or justify intersection upgrades to include treatments such as turn pockets and/or acceleration lanes.

Traffic volumes, posted speed limits and sight distances must be considered as part of determining if significant infrastructure upgrades such as acceleration lanes, turn pockets or additional overtaking lanes are required or justified.

Alternatively, if network improvements are not viable, consideration can be given to applying access conditions such as:

- Granting access under curfew; or
- Granting access at particular times of the year when the traffic volumes are lower.

## 6.8 Use of Signage

The use of appropriate warning signs can improve safety by alerting other road users of the presence of RAVs operating along the road. The use of signage may be considered where:

- 1) A road is relatively narrow and/or has limited continuation sight distance (including bends);
- 2) Significant grades are identified along the road, particularly on approach to intersections; or
- 3) At intersections where RAVs will be turning onto through roads and minimum entering sight distances requirements cannot be achieved.

Whilst signage generally has the most value when warning of the presence of a reasonably significant risk that other road users may be less aware of or not expecting, it should not be used as a sole treatment to mitigate sight distance issues. Other considerations must be taken into account such as traffic volumes, expected road users and reducing the speed of RAVs on through roads to meet the relevant Route Assessment Guideline approach sight distance requirements.

The nature of RAV operations should also be considered when determining whether permanent or temporary signage would be appropriate. If the bulk of RAV use will be contained to brief seasonal periods then the use of temporary warning signs, in conformity with AS 1742.3 may be more appropriate

As a general rule, Main Roads standard signs should only be used where there is no suitable sign contained in Australian Standard AS 1742 for the particular circumstances to be signed, or where Main Roads practice differs from that contained in AS 1742.

The standard signs are listed in Appendix 1 and the electronic copies of Main Roads signage drawings and guidance upon Main Roads practice can be obtained from Signs Index page on the Main Roads website.

## 7 FURTHER INFORMATION

Further information relating to the RAV access application and approval process can be obtained by contacting Main Roads HVS on 138 486 or [hvsrouteassessments@mainroads.wa.gov.au](mailto:hvsrouteassessments@mainroads.wa.gov.au) .

Alternatively, please visit the Road Access page on the Main Road website.

## 8 APPENDICES

Appendix	Title
1	List of Standard Warning Signs

### Appendix 1: List of Standard Warning Signs

Sign Name	Sign No.	Drawing No.	Remarks
Trucks (Crossing or Entering)	W5-22A-D 	-	AS1742.2
Road Trains Entering 250 m	MR-WM-3 	9120-231	Main Roads Standards
Road Trains Crossing 250m	MR-WM-4 	9120-232	Main Roads Standards
Truck Route	MR-WM-45 	9848-0420	Main Roads Standards
Trucks Use Low Gear	G9-23A-C 	-	AS1742.2
End Truck Low Gear	MR-RM-22 	200531-0004	Main Roads Standards

<p>Residential Area Reduce Vehicle Noise</p>	<p>MR-GM-25</p> 	<p>200531-0040</p>	<p>Main Roads Standards</p>
<p>Trucks - Temporary (Crossing or Entering)</p>	<p>T2-25</p> 	<p>-</p>	<p>AS 1742.3</p>