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D19#648540

Feb 2021

**Road Administrative Classification Assessment Guidelines**

Process and Procedure for Determining the Administrative Classification of Roads in Western Australia

Contents

[1 PURPOSE and structure of the guidelines 4](#_Toc63694939)

[2 ADMINISTRATIVE CLASSIFICATION OF ROADS 4](#_Toc63694940)

[2.1 Overview of Road Classification and Evaluation - Urban Criteria 5](#_Toc63694941)

[2.1.1 Tier 1 - Pre-Requisite for consideration of full assessment - Urban 5](#_Toc63694942)

[2.1.2 Tier 2 - Full Assessment Criteria - Urban 5](#_Toc63694943)

[2.2 Overview of Road Classification and Evaluation – Rural Criteria 6](#_Toc63694944)

[2.2.1 Built Up Area or Non Built Up Area or Hybrid Assessment - Rural 6](#_Toc63694945)

[3 CLASSIFICATION OF URBAN ROADS 7](#_Toc63694946)

[3.1 Background 7](#_Toc63694947)

[3.2 Definition 7](#_Toc63694948)

[3.3 Tier 1 - Pre-Requisite for consideration of full assessment 8](#_Toc63694950)

[3.3.1 Planning Statutory and Transport Requirements: 8](#_Toc63694951)

[3.3.2 Traffic Requirements 9](#_Toc63694952)

[3.4 Tier 2 - Full Assessment Criteria 9](#_Toc63694953)

[3.4.1 Strategic Role 9](#_Toc63694954)

[3.4.2 Network Role 10](#_Toc63694955)

[3.4.3 Design Function 13](#_Toc63694956)

[3.4.4 Traffic Volumes 13](#_Toc63694958)

[3.5 Available Data For Urban Assessments 15](#_Toc63694959)

[3.6 Scaling and Weighting Factors 15](#_Toc63694960)

[3.7 Scoring Thresholds for Urban Roads 15](#_Toc63694961)

[3.8 Other Considerations 16](#_Toc63694962)

[4 CLASSIFICATION OF RURAL ROADS 17](#_Toc63694963)

[4.1 Background 17](#_Toc63694964)

[4.2 Classification Principles for Rural Roads 18](#_Toc63694965)

[4.3 Classification Criteria for Rural Roads 19](#_Toc63694966)

[4.3.1 Strategic Requirements (Maximum of 8 points) 19](#_Toc63694967)

[4.3.2 Network Role 24](#_Toc63694968)

[4.3.3 Design Function 25](#_Toc63694969)

[4.3.4 Traffic Volumes 26](#_Toc63694970)

[4.4 AVAILABLE DATA FOR RURAL SCORING ASSESSMENTS 28](#_Toc63694971)

[4.5 CRITERION PRIORITY OR WEIGHTING 29](#_Toc63694972)

[4.6 SCORING THRESHOLDS FOR RURAL ROADS 29](#_Toc63694973)

[5 Definitions 30](#_Toc63694974)

Document Control

|  |  |
| --- | --- |
| **Owner** | Network Planning & Development Manager (NP&DM) |
| **Custodian** | Road Classification Manager (RCM) |
| **Document Number** | D19#648540 |
| **Issue Date** | February 2021 |
| **Review Frequency** | Bi-Annually |

Amendments

|  |  |  |  |
| --- | --- | --- | --- |
| Revision Number | Revision Date | Description of Key Changes | Section / Page No. |
| 0 | August 2019 | Supersedes:  *Guidelines for Determining and Assigning Responsibility for Roads in Western Australia Part 2 – Administrative Classification Assessment Criteria [Updated 2011]* | All |
| 1 | February 2021 | Template updated to new format; Web links updated; Reference to Main Roads internal Document “Lane Change Maps” removed from Urban assessments; Reference to AMMS in Urban assessments added. | Various |

# PURPOSE and structure of the guidelines

The “*Road Administrative Classification Assessment Guidelines”* (this document) assists Main Roads Western Australia (MRWA) to determine, in conjunction with Local Government, which roads are the responsibility of the State Government, and then to proclaim those roads as either a highway or main roadin accordance with the provisions of the *Main Roads Act 1930*. These roads are collectively known as State Roads. Roads assessed as no longer meeting the criteria are proclaimed to “cease to be a ‘highway” or “cease to be a main road” and are generally referred to as being “deproclaimed”.

The policy for determining and assigning road responsibility is outlined in the companion document, “*Road Responsibility Policy”* which summarises the current arrangements for road responsibility, together with background information on how the current arrangements were developed. In addition, it provides an overview of the process used to transfer responsibility for roads between Local and State Government.

This document, “*Road Administrative Classification Assessment Guidelines*” outlines MRWA’s administrative classification process that determines road responsibility by classifying public roads according to the function they perform, and assigning responsibility to either the State or Local Government. It contains procedures associated with this process, and are applicable when classifying new roads, or reclassifying existing roads.

# ADMINISTRATIVE CLASSIFICATION OF ROADS

The Administrative Classification process is used to determine which roads come under the care and control of the State Government. A request for a classification assessment may be initiated by a Main Roads’ Region, the Minister for Transport, a government agency (e.g. DPLH), Local Government, or some other party.

Requests to review the classification of a road should be forwarded to Main Roads’ Road Classification Manager (RCM) at the Main Roads’ metro office. If the request is initiated by local government, and the road in question is located across two or more local government areas, the request must be a joint submission from the local governments involved. Requests received by a Regional Manager (RM) are to be forwarded to RCM.

Requests for a review of the classification of existing roads can occur at any time: however, proponents must clearly demonstrate the reason or basis for the request in order to justify a detailed assessment. Requests should include information on how the function of the road has changed, and the factors responsible for this change. Any available information in relation to the assessment criteria listed in this document should also be provided in support of the request.

The administrative classification process leads into the proclamation process, outlined in the MRWA internal document “*Road Proclamation Process and Procedure”.*

Below are overviews of classification criteria used for Urban and Rural roads. Further information is available in **Section 3 (Urban roads)** and **Section 4 (Rural roads).**

## Overview of Road Classification and Evaluation - Urban Criteria

As part of the ***Future Roads Project - Urban***, Main Roads and the Western Australian Local Government Association (WALGA) developed an updated, two tier, road classification and evaluation system, finalised in March 2018. This system is for use for the administrative classification of all roads **within** the Metropolitan and Peel Region Schemes.

Requirements of the first tier should be met to progress to the second tier of assessment, with certain exceptions as outlined below. The function of each tier is as follows:

### Tier 1 - Pre-Requisite for consideration of full assessment - Urban

As a requirement of the *Main Roads Act 1930* (Section 13), any road to come under the care and jurisdiction of Main Roads as Highways must meet the following criteria:

* Consideration of the monies available or likely to be available for highways; AND
* Whether the road is or will be a direct connection between the capital of this state and any other state; OR
* Whether the road is or will be the principal route between the capital and the major producing regions of the state; OR
* Whether the road is or will be the principal route between two or more of the major producing regions or major centres of population of the state; OR
* Whether the road is or will be the principal route for high volume traffic movements within large urban areas.

The Tier 1 analysis determines whether a route under assessment meets a modern interpretation of these criteria by comparing the route under assessment to planning, statutory and transport documentation within the Perth and Peel Regions as well as current and predicted traffic counts (where applicable).

**Note:** Assessment requests received from the following areas do not necessarily need to meet the Tier 1 pre-requisite and can go straight to full Tier 2 Assessment:

1. Internally from Main Roads
2. A request from elsewhere within the Portfolio
3. A request from the HMT or Ministers Office

### Tier 2 - Full Assessment Criteria - Urban

Once a route has been deemed to meet the requirements of the Main Roads Act 1930 (WA) as part of Tier 1, it is assessed according to the Tier 2 criteria. The Tier 2 criteria determine whether the road meets certain key attributes including but not limited to:

* Strategic Role - features in relevant Planning, Statutory and Transport documentation, including the *Perth and Peel @3.5Million* suite of documents
* Network Role - RAV Network Access, bus routes, connectivity and property access
* Design Function - route capacity, road classification
* Traffic Volumes – AAWT/AADT (average weekday and all day traffic); heavy vehicle counts.

For the purpose of assessment, Urban roads comprise all roads within the Perth Metropolitan and Peel Region Schemes (MRS/PRS), both within and outside Built Up Areas.

The road types permitted in Built Up Areas are:

* Distributor A
* Distributor B
* Local Distributor
* Access Road

The road types permitted in non Built Up Areas are:

* Regional Distributor
* Local Distributor
* Access Road

Scoring for roads outside Built Up Areas but within the Perth Metropolitan and Peel Region Schemes are included in the assessment process. Regional Distributors within the Perth and Peel Region Schemes are assessed as commensurate with Distributor A roads.

## Overview of Road Classification and Evaluation – Rural Criteria

As part of the ***Future Roads Project – Rural***, Main Roads, together with WALGA and relevant Regional Road Groups, developed a Rural administrative classification system, endorsed in March 2019. This is for use for all roads **outside** the Perth Metropolitan and Peel Region Schemes, both within and outside townsites.

For rural assessments, any road/route will only be considered for assessment to become a State Administered Road if it is listed by the relevant Regional Road Group as *a Significant Local Government Road*.

Additionally, the following criteria are also required to be met for Rural assessments:

* Strategic Requirements - features in relevant Planning and other documentation
* Network Role - RAV Network Access, connectivity and property access
* Design Function - route capacity, road classification
* Traffic Volumes – AAWT/AADT vpd, heavy vehicle counts

### Built Up Area or Non Built Up Area or Hybrid Assessment - Rural

To ensure an accurate representation of the route under assessment, consideration is given to the characteristics of the area and therefore the type of analysis required.

A “Built Up Area” (BUA) for the purpose of the Rural classification assessment is defined as any area within the latest depiction of the Australian Bureau of Statistics *Urban Centres and Localities* (Major Urban, Other Urban and Bounded Locality) located **outside** of the Metropolitan or Peel Region Schemes (MRS/PRS).

The road types permitted in built up areas are:

* District Distributor A (only major population centres )
* District Distributor B (only major population centres)
* Local Distributor
* Access Road

The road types permitted in non-built up areas are:

* Regional Distributor
* Local Distributor
* Access Road

In certain cases where a route changes from a BUA to a non BUA or vice versa, a hybrid assessment is conducted. This is to ensure all sections of the route are evaluated according to their most appropriate assessment criteria. Scoring for roads within BUAs, outside the MRS/PRS, is included in the assessment process, which includes separate scoring criteria for roads within and outside BUAs.

# CLASSIFICATION OF URBAN ROADS

## Background

The assessment criteria for Urban Roads were developed following a review by a Working Group with representation from Main Roads, WALGA and Local Government in 2018. These criteria reflect the *Main Roads Act 1930* in a modern light considering the current traffic environment and transport network requirements. As part of the review of the Administrative Road Classification process, a two tier system for administrative road classification assessment was introduced.

The first tier determines whether the route under consideration meets the requirements in Section 13 of the *Main Roads Act 1930* to become a state road. Roads which are proclaimed as state roads come under the care and control of Main Roads and are given the Road Hierarchy designation of “Primary Distributor”. Further information on the Road Hierarchy can be found on the Main Roads Website.

The second tier determines whether the road under consideration meets a minimum level of “significance” to be proclaimed as a state road. The evaluation criteria addresses the following including but not limited to:

* Strategic Role
* Network Role
* Design Function
* Traffic Volumes

## Definition

Urban roads comprise those roads within the Perth Metropolitan Region Scheme and Peel Region Scheme (MRS/PRS) boundaries. This is consistent with the Australian Bureau of Statistics definition.

The Road Hierarchy provides guidance as to a roads location, degree of connectivity and predominant purpose. In addition to Primary Distributors (state roads), under the Western Australian Road Hierarchy the following roads form routes within urban areas.

* District Distributor A
* District Distributor B
* Local Distributor
* Access Road

Regional Distributors are typically located in non Built Up Areas. For the purpose of Urban Assessments, Regional Distributors within the MRS/PRS boundaries are considered commensurate with Distributor A roads.

## Tier 1 - Pre-Requisite for consideration of full assessment

**Tier 1 Criteria must be met before progression to Tier 2 as follows:**

The Tier 1 analysis compares the route under assessment with relevant planning, statutory and transport documentation as well as current and predicted traffic AAWT counts. A selection of documents has been identified to best represent the three categories of assessment. To meet the document criteria for Tier 1, the route under assessment must meet the following requirements:

|  |  |
| --- | --- |
| **Category** | **Criteria** |
| Planning / Statutory | One document / item from either category |
| Transport | Two documents from this category |
| Traffic Characteristics | AAWT (Annual Average Weekday Traffic) PCU (Passenger Car Unit) adjusted requirements in excess of 20,000 vpd |

### Planning Statutory and Transport Requirements:

The criteria in this section reflect the current planning and statutory environment as applied to urban areas in the Perth Metropolitan region. The documents identified to best represent the Planning, Statutory and Transport categories of assessment are outlined below:

|  |  |
| --- | --- |
| **Category** | **Document** |
| Planning | State Planning Policy 5.4 (SPP5.4): Road and Rail Transport Noise and Freight Considerations in Land Use Planning – Primary Freight Roads and Rail Routes **Schedule 3** - Listed as a Primary Freight Road currently or in the future (udpdated September 2019)   * Refer to [Schedule 3](https://www.dplh.wa.gov.au/getmedia/d122172e-f1fc-4fd8-a58c-5965cafca21e/SPP_5-4_Schedule_3_Metro_Map) at the link to all SPP 5.4 documents: [SPP 5.4 Link](https://www.dplh.wa.gov.au/spp5-4) |
|  | Perth & Peel @ 3.5 Million Sub-Regional Structure Plans – Shown in Perth & Peel @ 3.5 Million Sub Regional Planning Frameworks (Central, North-East, North-West, or South Metro/Peel) as either proposed or current Primary Distributors.   * Link to North-west Planning Framework (Page 15): [North-West\_Sub\_Region\_March2018](https://www.dplh.wa.gov.au/getmedia/0c8b1bf4-5fc7-4bd0-946f-156cb78016d3/FUT-PP-North-West_Sub_Region_March2018) * Link to North-east Planning Framework (Page 17): [North-East\_Sub\_Region\_March2018](https://www.dplh.wa.gov.au/getmedia/e70c0597-2329-4f70-82b2-758ce0b8bdc8/FUT-PP-North-East_Sub_Region_March2018_v2) * Link to South / Peel Planning Framework (Page 17): [South\_Metro\_Peel\_Sub\_Region\_March2018](https://www.dplh.wa.gov.au/getmedia/becc75c4-cd43-4f28-9372-1044387ab62a/FUT-PP-South_Metro_Peel_Sub_Region_March2018_v2) * Link to Plan 8 Regional Roads (Page 57): [Central Sub-Region Part 2 March2018](https://www.dplh.wa.gov.au/getmedia/7ea08c05-32f1-43dc-8c9b-29184ef5292c/FUT_PP-Central_Sub_Region_March2018_v2_part2) * Link to Spatial plan: (Page 29): <https://www.dplh.wa.gov.au/getmedia/404a6895-f6ec-4829-87df-8de5b80075b8/FUT-PP-Perth_and_Peel_Sub_Region_March2018_v2> |
|  | Identified as a ***Location of Strategic Significance*** (Not a document) \*\*\* |
| Statutory | Metropolitan Region Scheme / Peel Region Scheme – Shown as Other Regional Road (ORR)   * Link to DPLH Combined MRS/PRS: [Region Scheme Maps](https://www.dplh.wa.gov.au/information-and-services/mapping/region-scheme-maps/) |
| Transport | The **Public Transport** Map on each of the above listed Sub Region Plan. (High Priority Transport Corridor Only)  Links: As above Sub-Regional Perth & Peel @ 3.5 Million Sub-Regional Structure Plans – Shown in Perth & Peel @ 3.5 Million Sub Regional Structure Plans (Central, North-East, North-West, or South Metro/Peel) – specific pages as below:   * Link to Plan 5 Public Transport (page 37): [North-West\_Sub\_Region\_March2018](https://www.dplh.wa.gov.au/getmedia/0c8b1bf4-5fc7-4bd0-946f-156cb78016d3/FUT-PP-North-West_Sub_Region_March2018) * Link to Plan 5 Public Transport (page 43): [North-East\_Sub\_Region\_March2018](https://www.dplh.wa.gov.au/getmedia/e70c0597-2329-4f70-82b2-758ce0b8bdc8/FUT-PP-North-East_Sub_Region_March2018_v2) * Link to Plan 5 Public Transport (Page 45): [South\_Metro\_Peel\_Sub\_Region\_March2018](https://www.dplh.wa.gov.au/getmedia/becc75c4-cd43-4f28-9372-1044387ab62a/FUT-PP-South_Metro_Peel_Sub_Region_March2018_v2) * Link to Plan 7 Public Transport (Page 55): [Central Sub-Region Part 2 March2018](https://www.dplh.wa.gov.au/getmedia/7ea08c05-32f1-43dc-8c9b-29184ef5292c/FUT_PP-Central_Sub_Region_March2018_v2_part2) |
|  | Perth and Peel@3.5million - Transport Network: [Perth\_Peel\_3.5million\_TransportNetwork.](https://www.transport.wa.gov.au/mediaFiles/projects/PROJ_P_Perth_Peel_3.5million_TransportNetwork.pdf) |
|  | RAV Network - Is the route on the RAV Network (Category 2 or higher)? – Map available on Main Roads website.   * Link to HVS RAV Network Map: [RAV Network](https://mrapps.mainroads.wa.gov.au/hvsnetworkmap) |
|  | Network Hierarchy - Is the route a Regional Distributor or a Distributor A or B? – Map available on Main Roads website.   * Link to Road Information Mapping : [Road Network Hierarchy](https://mrapps.mainroads.wa.gov.au/publicmaps/rim) |

Table 1 - Main roads Act Document Requirements 1

**Note:** If the route connects to a *Location of Strategic Significance* such an airport (high passenger or freight movements) OR public or commercial port (high freight or passenger movements) OR major intermodal freight facility OR other locations as identified by the Road Classification Manager as being of major or State significance, then this is deemed to meet the document criteria with a full score of 4 and the route will be deemed to require a full assessment irrespective of traffic counts.

### Traffic Requirements

PCU (Passenger Car Unit) adjusted requirements in excess of 20,000 vpd anywhere along the route. Traffic characteristics can be taken from any or all of the following:

* Main Roads Traffic Map - <https://trafficmap.mainroads.wa.gov.au/>
* Other traffic counter data
* Observed counts
* Modelled counts

Please see Item 3.4.4 for more information on PCU adjustments.

## Tier 2 - Full Assessment Criteria

The full administrative road classification assessment provides a point-based score system to evaluate whether the route under consideration meets the functional requirements of a road which should be under the care and control of Main Roads.

### Strategic Role

Scoring for strategic role is measured proportionately based on the sum of route section under assessment as it features within relevant strategic documentation. The score for strategic role is the sum of the proportion of the route under assessment as shown on each of the following documents.

State Planning Policy 5.4: Road and Rail Transport Noise and Freight Considerations in Land Use Planning: Link here: [Schedule 3](https://www.dplh.wa.gov.au/getmedia/d122172e-f1fc-4fd8-a58c-5965cafca21e/SPP_5-4_Schedule_3_Metro_Map)

Perth & Peel @ 3.5 Million – Sub Regional Structure Plan – Regional Roads. Link here: [Sub\_Regional\_Plans](https://www.dplh.wa.gov.au/perth-and-peel-@-3-5-million-frameworks)

Metropolitan Region Scheme/Peel Region Scheme. Link here: [Region Scheme Maps](https://www.dplh.wa.gov.au/information-and-services/mapping/region-scheme-maps/)

Perth and Peel@3.5million – The Transport Network March 2018– **2050 Public Transport Network.** *Proposed high-priority or high frequency transit*. Figure 2, 5, 8 or 11 (page 9, 14, 20 or 26). Link here: [Perth\_Peel\_3.5million\_Transport Network\_2018](https://www.transport.wa.gov.au/mediaFiles/projects/PROJ_P_Perth_Peel_3.5million_TransportNetwork.pdf)

Perth and Peel@3.5million – The Transport Network March 2018– **2050 Freight Network**. Figure 4, 7, 10 or 13 (page 11, 16, 22 or 28). Link here: [Perth\_Peel\_3.5million\_Transport Network\_2018](https://www.transport.wa.gov.au/mediaFiles/projects/PROJ_P_Perth_Peel_3.5million_TransportNetwork.pdf)

The score is awarded based on the sum of the proportion of each document the route meets.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Category | Total length of route under assessment (km) | **Document (and link)** | Length of route that meets document criteria (km) | Proportion of route that meets criteria (*length meets criteria / total length)* |
| Planning |  | State Planning Policy 5.4: Road and Rail Transport Noise and Freight Considerations in Land Use Planning -[Schedule 3](https://www.dplh.wa.gov.au/getmedia/d122172e-f1fc-4fd8-a58c-5965cafca21e/SPP_5-4_Schedule_3_Metro_Map) |  |  |
|  | Perth & Peel @ 3.5 Million – Sub Regional Structure Plan (Mar 2018) – Regional Roads - [Sub\_Regional\_Plans](https://www.dplh.wa.gov.au/perth-and-peel-@-3-5-million-frameworks) |  |  |
|  | Location of Strategic Significance (not a document)## |  |  |
| Statutory | Metropolitan Region Scheme/Peel Region Scheme - [Current MRS Map](https://www.dplh.wa.gov.au/departmentofplanninglandsheritage/media/mapping/mrs/20190219_mrs_100000_map.pdf) |  |  |
| Transport | Perth and Peel@3.5million – The Transport Network March 2018– **2050 Public Transport Network.** *Proposed high-priority or high frequency transit*. Fig 2, 5, 8 or 11 (p 9, 14, 20 or 26). Link here: [Perth\_Peel\_3.5million\_Transport Network\_2018](https://www.transport.wa.gov.au/mediaFiles/projects/PROJ_P_Perth_Peel_3.5million_TransportNetwork.pdf) |  |  |
|  | Perth and Peel@3.5million – The Transport Network March 2018– **2050 Freight Network**. Fig 4, 7, 10 or 13 (p 11, 16, 22 or 28): Perth\_Peel\_3.5million\_Transport Network\_2018.  [Perth\_Peel\_3.5million\_Transport Network\_2018](https://www.transport.wa.gov.au/mediaFiles/projects/PROJ_P_Perth_Peel_3.5million_TransportNetwork.pdf) |  |  |
|  | **[Total Length]** |  | **[Sum Lengths Meeting Criteria]\*\*** |  |
| **Cumulative Sum of Proportions**  **Total Score (based on scoring table above)** | | | | **[Cumulative Sum proportions] \*\*\*** |
| Max 4.0 |

Table 2 - Strategic Criterion

**Note:** If the route connects to a *Location of Strategic Significance* such as an airport (high passenger or freight movements) OR public or commercial port (high freight of passenger movements) OR major intermodal freight facility OR other locations as identified by the Road Classification Manager as being of major or State significance, then this is deemed to meet the document criteria with a full score of 4.

### Network Role

**Network Role – RAV Network Routes:**

The RAV network access is measured proportionally according to the RAV Network Category to give an average score over the length of the route. RAV Network Access categories have been adjusted however reflect to reflect scoring outcomes consistent with an urban road network characteristic. Section totals are scored to a maximum of 3 points (RAV Network 5 and above).

If the RAV Network category is not constant over the entire length of the assessed route, a distance average shall be used. The link to Main Roads RAV Network is below: <https://mrwebapps.mainroads.wa.gov.au/hvsnetworkmap>

1. Designated road train and long vehicle routes (refer RAV Network) are scored as follows:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **RAV Network** | **Score** | **Total length of route (km)** | **Length of each RAV section (km)** | **Proportion of Route (RAV section / total length)**  **[sum of sections – Total = 1.00]** | **Score by Proportion of Route (Proportion\*Score)** |
| RAV5/6/7/8 | 3.00 |  |  |  |  |
| RAV 3/4 | 2.00 |  |  |  |
| RAV 2 | 1.00 |  |  |  |
| No RAV Network | 0.00 |  |  |  |
| AMMS Network | 0 to 0.3 |  |  |  |  |
| **Total** |  | [Total length] | [= Total length] | **1.00** | **[Total score:**  **0.00 – 3.30]** |

Table 3 - Heavy Vehicle Network

In addition, if the route under assessment is part of the Accredited Mass Management Scheme (AMMS), the following additional points are allocated: AMMS Level 1 - additional 0.1; Level 2 - additional 0.2; Level 3 - additional 0.3

**Network Role - Bus Routes /Rapid Transit**

The Public Transport Authority (PTA) determine major bus routes with the emphasis on bus mobility and serving important bus terminals.

A high traffic bus route is defined as any section of a route which provides for 100 or more bus trips per day. A medium traffic bus route is defined as any section of a route which provides for 50 to 100 bus trips per day. A low traffic bus route is defined as any section of a route which provides for 1 to 50 bus trips per day.

The cut-off point of 50 bus trips was selected as it reflects 5 bus trips per hour for 3 hours in AM peak and 3 hours in PM peak and 20 bus trips during the remaining 18 hours of the day.

Shapefile available at Transperth website location <http://www.transperth.wa.gov.au/About/Spatial-Data-Access> . Network maps are available at: <https://www.transperth.wa.gov.au/Journey-Planner/Network-Maps>

Bus route scores are assessed proportionally, (PT section length/PT section total) to give the average score based on the sum of route sections.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Category | Score | Total length (km) | Length of PT section (km) | Proportion of route (PT section/total) | Score by Proportion of Route  (Proportion\*score) |
| 100+ Buses per day | 3.00 |  |  |  |  |
| 50 – 100 Buses per day | 2.00 |  |  |  |
| 1 – 50 Buses per day | 1.00 |  |  |  |
| 0 – 1 Buses per day | 0.00 |  |  |  |
| Total |  | [Total length] | [=Total length] | **Sum = 1.00** | **[Total score] [0.00 – 3.00]** |

Table 4 - Public Transport

**Network Role - Connectivity**

Maintaining network connectivity is a key part of the expanding State road network. A current connection between existing State roads is given higher priority compared to connecting existing State roads with lower order roads.

Scoring relates to the classification of connecting roads at either end of the route e.g. if the route connects at one end to a Primary Distributor and at the other end to Distributor B, the score would be 2.00 (Max 3 point score) and is based on The Main Roads Road Hierarchy:

* PD Primary Distributor
* DA District Distributor A
* DB District Distributor B
* RD Regional Distributor
* LD Local Distributor
* AR Access Road

|  |  |
| --- | --- |
| **Category** | **Score** |
| PD – PD | 3.00 |
| PD – DA/DB/RD, DA/DB/RD – DA/DB/RD | 2.00 |
| PD – LD/AR, DA/DB/RD/LD - LD | 1.00 |

Table 5 - Road Hierarchy Network Connectivity

**Network Role - Property Access**

Property access gives a strong indication as to the nature of the traffic flow on the route under assessment. More access points interrupt the flow of traffic as vehicles enter and exit. This leads to a reduction in traffic through-flow.

Property access is scored based on the total number of each category (residential, commercial and intersection) are counted and divided by the length of the route to give the average per

kilometre over the length of the route. [Note: for this process it is necessary to view the route using aerial photography or Google maps or similar].

The following rules are applied when scoring this criterion:

|  |  |
| --- | --- |
| **Category** | **Score** |
| No Access   * Number of intersections = 0 * Number of commercial access points = 0 AND * Number of residential access points = 0 | 3 |
| Limited Access (1)   * Sum of number of intersections and number of commercial access points <=8/km AND * Number of residential access points < 2/km | 2 |
| Limited Access (2)   * Sum of number of intersections and number of commercial access points < 10/km AND * Number of residential access points < 5/km | 1 |
| Unlimited Access   * All else | 0 |

Table 6 - Road Access

### Design Function

**Design Function - Route Capacity**

Roads of a higher classification tend to be higher capacity routes, with relatively higher operating speeds and traffic volumes. Lower order roads tend to have lower capacities with lower operating speeds and traffic volumes.

Route capacity is scored proportionally according to the number of trafficable lanes (section length/route length) to give an overall score for the entire length of the route. (Max 6 point score).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No of traffic lanes** | **Score** | **Total length of route (km)** | **Length of section (km)** | **Proportion of route (Section / Total length)** | **Score by Proportion of Route (length of section / total length) \* score** |
| 6 lanes | 3.00 |  |  |  |  |
| 5 lanes | 2.50 |  |  |  |
| 4 lanes | 2.00 |  |  |  |
| 3 lanes | 1.50 |  |  |  |
| 2 lanes | 1.00 |  |  |  |
| Less than 2 standard lanes | 0.00 |  |  |  |  |
| **Total** |  | **[Total]** | **[=Total]** | **1.00** | **[Total score] [0 – 3]** |

Table 7 - Road Capacity

**Design Function - Road Classification**

Road Hierarchy systems are used around the world to indicate the operating function of a road within a road network. Higher order local government roads are given priority over lower order local government roads and scored accordingly. Scoring is measured proportionately (section length/total length) to give an overall score for the entire length of the route (Max 3 point score).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Road Hierarchy** | **Score** | **Total Length (km)** | **Section length (km)** | **Proportion of total *(Section / total)*** | **Score by Proportion of Route** |
| Regional Distributor | 3.00 |  |  |  |  |
| Distributor A | 3.00 |  |  |  |  |
| Distributor B | 2.00 |  |  |  |
| Local Distributor | 1.00 |  |  |  |
| Access Road | 0.00 |  |  |  |
| **Total Score** |  | **[Total]** | **[=Total]** | **1.00** | **[0.00 – 3.00**] |

Table 8 - Design Function Road Hierarchy

### Traffic Volumes

**Traffic Volumes - AAWT (Average Annual Weekday Traffic)**

As an indicator of the more heavily trafficked routes, a PCU adjusted AAWT figure of 20,000vpd to 25,000vpd is used for urban routes. Roads of a higher classification tend to be used by commercial vehicle operators and are reflected by heavy vehicle numbers.

Scoring is measured proportionately (section length/total length) to give an overall score for the entire length of the route. As an indicator of the more heavily trafficked routes, an AAWT figure of 20,000vpd to 25,000vpd is used.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **AAWT (PCU Adjusted)** | **Score** | **Total Length (km)** | **Section length (km)** | **Proportion of total *(Section / total)*** | **Score by Proportion of Route** |
| 25,000+ vpd | 2.00 |  |  |  |  |
| 20,000 vpd - 25,000 vpd | 1.50 |  |  |  |
| 15,000 vpd – 20,000 vpd | 1.00 |  |  |  |
| 10,000 vpd – 15,000 vpd | 0.50 |  |  |  |
| 0 vpd – 10,000 vpd | 0.00 |  |  |  |
| Total |  | **[Total]** | **[=Total]** | **1.00** | **[0.00 – 2.00**] |

Table 9 - Traffic Volume

PCU (Passenger Car Unit equivalents)

The table below should be used to more accurately reflect vehicles on the roads within Western Australia for adjusting the AADT/AAWT count.

|  |  |  |
| --- | --- | --- |
| **Austroads**  **Class** | **Max Length in W.A.** | **Passenger Car Unit** |
| 2 to 5 | 14.5m | 2.0 |
| 6 to 9 | 20.0m | 3.0 |
| 10 | 27.5m | 4.0 |
| 11 | 36.5m | 6.0 |
| 12 | 53.5m | 8.0 |
| Motor cycle | - | 0.4 |
| Pedal cycle | - | 0.2 |

Note – this conversion table is for traffic counts of mixed class vehicle types to approximate the counts to equivalent Passenger Car Units and may not be applicable to road design applications.

**The procedure for PCU adjustment can also be requested from the MRWA Road Classification Section.**

**Heavy Vehicles Traffic**

Heavy vehicles (Austroads Class 3 and above) are scored proportionately based on vpd (section length/total length) as an overall score for the entire length of the route (Max 2 point score = >1000 vpd).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Number of Heavy Vehicles** | **Score** | **Total Length (km)** | **Section length (km)** | **Proportion of total (Section / total)** | **Score by Proportion of Route** |
| > 1 000 vpd | 2.00 |  |  |  |  |
| 500 vpd – 1,000 vpd | 1.50 |  |  |  |
| 50 vpd - 500 vpd | 1.00 |  |  |  |
| < 50 vpd | 0.00 |  |  |  |  |
| Total |  | **[Total]** | **[=Total]** | **1.00** | **[1.00 – 2.00**] |

Table 7 - Heavy Vehicles

\*\* Note: Refer to traffic map download section.

## Available Data For Urban Assessments

**Data Availability – Urban Roads**

|  |  |
| --- | --- |
| **Measurement Criteria and Data Availability** | |
| **Criterion** | **Data Item** |
| **1. Strategic Role** | Documentation used as part of Tier 1 |
| **2. Network Role** |  |
| 1. RAV Network | Main Roads RAV Network Map: [hvsnetworkmap](https://mrapps.mainroads.wa.gov.au/hvsnetworkmap) |
| 1. Bus Routes | PTA Bus Routes <http://www.transperth.wa.gov.au/About/Spatial-Data-Access> |
| 1. Connectivity | End links of road as shown in Main Roads [Road Network Hierarchy](https://mrapps.mainroads.wa.gov.au/publicmaps/rim) |
| 1. Property Access | Access points – Aerial imagery or Google Maps or similar |
| **3. Design Function** | |
| 1. Trafficable lanes | ROMAN/RAMM/IRIS or similar OR aerial imagery |
| 1. Road Classification | Main Roads Road Hierarchy: [Road Network Hierarchy](https://mrapps.mainroads.wa.gov.au/publicmaps/rim) |
| **4. Traffic Volumes** |  |
| 1. AAWT vehicles per week | Main Roads Traffic Map: [TrafficMap](https://mrapps.mainroads.wa.gov.au/TrafficMap/) |
| 1. Heavy Vehicles | Main Roads Traffic Map: [TrafficMap](https://mrapps.mainroads.wa.gov.au/TrafficMap/) |

**Source: RCR (2018) as updated**

## Scaling and Weighting Factors

**Scale Factors**

The maximum possible raw score for each criterion is not the same. To use raw scores in the analysis would introduce an unintended bias or artificial weighting to advantage those criteria with a higher possible raw score. To overcome this problem, raw scores are multiplied by a scale factor to give all scores the opportunity of an equivalent rating, as shown in the Table below.

**Weighting Factors**

An important part of any multi-criteria technique is the relative importance of each criterion. In assessing the classification of a road, some of the criteria will be more important than others. For this reason, the weightings shown in the table below have been adopted. This consists of the raw score multiplied by the scale and weighting factors.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Criterion (Urban)** | **Maximum raw score** | **Scale Factor** | **Weighting factor** | **New maximum** |
| Strategic Role | 4 | 3.00 | 1.90 | 22.8 |
| Network Role | 12 | 1.00 | 1.50 | 18 |
| Design Function | 6 | 2.00 | 1.25 | 15 |
| Traffic Volumes | 4 | 3.00 | 1.00 | 12 |
| **Totals** | 31 |  |  | **67.8** |

## Scoring Thresholds for Urban Roads

|  |  |  |  |
| --- | --- | --- | --- |
| **Hierarchy** | | **Score Threshold** | **Marginal Range** |
| **Primary Distributor** | | >45.6 |  |
| **Else** |  | <=45.6 | 40.6 - 45.6 |

## Other Considerations

Main Roads has a vested interest in the development and evolution of the State Road Network, influenced by various factors. As a by-product, Main Roads Planning and Technical Services may have projects in development which need to be taken into account.

**Roads with Similar Function and Service Area**

The intention behind the State road network as outlined in Section 13 of the Main Roads Act 1930 is to connect people to people, regions to regions and freight sources to intermodal or transport hubs. Roads which service the same area or provide a similar function to an existing State road, will be subject to examination in greater detail and on that basis, the recommendation may be made to not transfer jurisdiction.

* **Proximity of an existing Local Government Road performing a similar function**

If another Local Government road performs a similar network function in the vicinity, then a determination should be made regarding which road should be considered for assessment to become a State Administered road.

* **Proximity of an existing State Road already performing the network function**

If an existing State road performs the same network function, the road under consideration should remain a Local Government road. Unless it can be determined that different functions are performed that still meet the requirements for a road to become State Administered, then a proposed State road should not run in parallel less than 2 kms from an existing State road.

**Appropriate Land Tenure**

Land tenure needs to be checked to determine that proclamation can be legally made. Usually the land should be a declared road reserve over crown land, and should not include privately owned land.

**Availability of State Funding**

In considering whether to make any recommendation to the Governor that a road should be declared to be a highway or main road, the Commissioner shall take into account the moneys available or likely to be available for highways or main roads.

In addition consideration will be need to be given to the necessary upgrading, maintenance and planning required to be made available to support transfer to Main Roads jurisdiction.

For local roads for transfer to Main Roads, the road must be in a condition acceptable to the Regional Manager (i.e. without a backlog of maintenance works, or works the LG could reasonably be expected to undertake in its obligation to effective asset management.) Refer to the document: *Guidelines for Use in Negotiations Between Local Government and Main Roads on the Condition of Roads proposed for Transfer of Administrative Responsibility* for further information.

**Strategic and Regional Development Factors**

The significance of roads servicing major centres, port facilities and intermodal transport centres are covered in the assessment methodology. However, other factors which may also need to be considered include the development of:

• regional tourist attractions;

• strategic resource areas (e.g. agriculture, minerals, petroleum); and

• areas of strategic defence/national security importance.

Locations of Strategic Significance include airports (high passenger or freight movements) OR public or commercial port (high freight of passenger movements) OR major intermodal freight facility OR other locations as identified by the road classification assessment as being of major or State significance. These may influence the function and role of roads in the network over and above current traffic patterns and should therefore be considered in the final assessment.

Locations of Strategic Significance may influence whether the road/route is considered a State

Road.

# CLASSIFICATION OF RURAL ROADS

## Background

The criteria for classification of rural roads were developed by Main Roads, together with WALGA and relevant Regional Road Groups, and finalised in March 2019, for use for all roads **outside** the Perth Metropolitan and Peel Region Schemes, including within townsites.

A “Rural Road” for the purpose of classification assessment for road administration is defined as:

“Any road depicted outside the Metropolitan Region Scheme / Peel Region Scheme boundaries”.

Where a rural route passes through or into a Built-Up Area outside of the Metropolitan or Peel Region Schemes, the policy is to retain its prevailing rural classification. However, should the whole route or the majority of the route (greater than 50%) be within a “Built Up Area” as described below then it will be assessed against the Rural “Built Up Area” Criteria.

A “Built Up Area” (Rural) is any area within the latest depiction of the Australian Bureau of Statistics Urban Centres and Localities (Major Urban, Other Urban and Bounded Locality) outside of the MRS/PRS, but only if within a Major or Key Town. The population requirements for determining a Major or Key Town are as follows.

* A Major Town is a defined area with a population of 10,000 or greater
* A Key Town is a defined area with a population of 2,500 or greater

The table below can be used as a guide for determining route status in connecting to a Major or Key Town.

\*\* Figures are based on the ABS population census stats for 2016

|  |  |  |
| --- | --- | --- |
| **Name** | **Population Census 2016** | **Status Major or Key** |
| Albany | 29,369 | Major |
| Broome | 13,984 | Major |
| Bunbury | 71,094 | Major |
| Busselton | 25,325 | Major |
| Carnarvon | 4,429 | Key |
| Denmark | 2,557 | Key |
| Derby | 3,324 | Key |
| Donnybrook | 2,516 | Key |
| Dunsborough | 6,034 | Key |
| Esperance | 10,420 | Major |
| Geraldton | 31,978 | Major |
| Harvey | 2,750 | Key |
| Kalgoorlie-Boulder | 29,869 | Major |
| Karratha | 15,825 | Major |
| Katanning | 3,701 | Key |
| Kununurra | 4,343 | Key |
| Manjimup | 4,218 | Key |
| Margaret River | 6,394 | Key |
| Merredin | 2,634 | Key |
| Narrogin | 4,275 | Key |
| Newman | 4,567 | Key |
| Northam | 6,545 | Key |
| Pinjarra | 3,898 | Key |
| Point Denison - Dongara | 2,788 | Key |
| Port Hedland | 13,828 | Major |
| Tom Price | 2,952 | Key |
| York | 2,544 | Key |

\*\* Info taken from citypopulation.de - Population statistics for Urban Centres and Localities W.A.

The following sections detail the classification principles applicable to rural roads, together with explanatory notes on the rural road hierarchy and the assessment process.

## Classification Principles for Rural Roads

For rural assessments, any road/route will only be considered for assessment to become a State Administered Road if it is listed by the relevant Regional Road Group as *a Significant Local Government Road*.

Additionally, the following criteria are also required to be met for Rural assessments:

* Strategic Requirements - features in relevant Planning and other documentation
* Network Role - RAV Network Access, connectivity and property access
* Design Function - route capacity, road classification
* Traffic Volumes – AAWT/AADT vpd, heavy vehicle counts

The criteria take into account the requirements of the *Main Roads Act 1930* as well as considering the functional requirements of the State Road Network.

The assessment criteria have been aligned to the Western Australian Road Hierarchy. Roads that are administered by the State are Primary Distributors (PD) and are further categorised, when necessary, within the assessment as:

* National Land Transport Network (NLTN) – federally identified and funded routes
* Highways – as identified under Section 13(2) of the *Main Roads Act 1930.*
* Main Roads – as identified under Section 13(3) of the *Main Roads Act 1930*

Primary Distributor (NLTN) roads are explicitly designated as follows:

* The principal routes linking capital cities.
* The principal routes between key towns with a State-wide or national significance.

The size and degree of interaction between population centres indicates the importance of roads linking or servicing these centres.

Other categories of roads within the Road Hierarchy are administered by local government in rural areas are:

* Regional Distributor
* Local Distributor
* Access Road

The main function of these roads is to:

* provide for efficient movement of people and goods within and beyond regional areas; or
* service commercial or industrial areas in rural areas; or
* provide for local traffic movements and access to abutting property.

## Classification Criteria for Rural Roads

### Strategic Requirements (Maximum of 8 points)

The strategic criteria in this section reflect the current planning and statutory environment as applied to rural areas outside of rural townsites*.*

The route under assessment is scored based on its capacity to connect to *locations of strategic significance* and appearance within the relevant strategic documentation. A definition of a ‘*location of strategic significance’* can be found at p20 of this document.

The criteria in this section reflect the current planning and statutory environment as applied to rural areas outside of rural townsites.

|  |  |  |
| --- | --- | --- |
| CRITERIA **(To a Maximum Score of 8)** | SCORE | NOTES |
| Current listing as a significant local government road (1 point) |  |  |
| Specific freight network listing (i.e. Aglime Route (1 point) |  |  |
| Listed as a strategic route (State Strategic Document) (1 point) |  |  |
| Connects to a town (Major 2points, Key1 point) |  |  |
| Connects to a port/airport/intermodal grain facility (Major 2 points, Key 1 point) |  |  |
| Connects to a mining/grain/pastoral centre or region (1 point) |  |  |
| Connects to a significant tourist destination (1 point) |  |  |
| Connects to a strategic national production or defence location  (1 point) |  |  |
| Other location of strategic significance (per RCM) (1 point) |  |  |
| Only access to indigenous community (1 point) |  |  |

Table 8 Strategic Criteria Non-BUA

**The criteria below are to be used for those roads being mainly (>50%) within the BUA of a Major or Key Town.**

|  |  |  |
| --- | --- | --- |
| CRITERIA  **( To a Maximum Score of 8)** | SCORE | NOTES |
| Current listing as a significant local government road (1 point) |  |  |
| Is it a main connecter to a town activity centre (1 point) |  |  |
| Connects to a significant industrial centre (1 point) |  |  |
| Connects to a port (Major 2 Key 1 Minor 0.5) |  |  |
| Connects to an airport (Major 2 Key 1 Minor 0.5) |  |  |
| Specific freight network listing (i.e. Aglime Route (1 point) |  |  |
| Connects to a strategic national or defence location (1 point) |  |  |
| Other location of strategic significance (per RCM) (1 point) |  |  |
| Only access to indigenous community (1 point) |  |  |

Table 9 Strategic Criteria BUA

**Definitions Below Can Be Used As A Guide In Determining Strategic Requirements**

* **PORT**

See table below (pg 28) for Port listing allowing for freight by road to calculate the designation.

* **AIRPORT**

See list of airports below (pg 29) by passenger numbers use this classification unless additional information gives significant freight volumes.

* **MINING/GRAIN/PASTORAL/INTERMODAL CENTRES**

If it is the main attractor for road freight on the road in question then a subjective decision will need to be made regarding scoring. Major (2 points) or Key (1 point).

* **LOCATION OF STRATEGIC SIGNIFICANCE**

All locations identified by the Road Classification Manager as being of major State or national significance. Not covered by any other criteria.

* **TOURIST DESTINATION**

Refer to Regional Road Group listing and LG/State/Federal tourism websites to determine tourist information. Subjective call on Minor, Key or Major tourist area.

* **NATIONAL PRODUCTION OR DEFENCE LOCATION**

This would cover a location that is probably low profile but of National Significance for national defence or production where it would be in the national interest to have the road accessing the facility to be State administered.

* **STRATEGIC ROUTE**

Listed as a strategic, main or secondary road within a State strategic document (i.e. Regional Freight Network, Regional Frameworks). Currently to use [Regional Planning and Infrastructure Frameworks](https://www.dplh.wa.gov.au/information-and-services/district-and-regional-planning/country-planning/regional-planning-and-infrastructure-frameworks) issued by the Department of Planning, Lands and Heritage.

**PORT DESIGNATION BY ROAD FREIGHT**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Responsible Port Authority** | **Area** | **Designation per RCM** | **Road Traffic Total Tonnage P/A Import 16/17** | **Road Traffic Total Tonnage P/A Export 16/17** | **Total Tonnage P/A by Road 16/17** | **Triple Road Train 60t Quad RT 100t NW**  **Double Road 40t Train Other** | **Designation based on Road traffic Figures** |
| Kimberley Ports | Wyndham | Minor |  |  | 78,260 | 1,304 Triple RTs  = 3-4 per day | Minor |
| Kimberley Ports | Derby | Minor | N/A not actively working port at present | N/A not actively working port at present | N/A not actively working port at present. This will change in the near future. **Awaiting response re projected figures** |  |  |
| Kimberley Ports | Koolan Island | Minor | N/A | N/A | N/A |  |  |
| Kimberley Ports | Cockatoo Island | Minor | N/A | N/A | N/A |  |  |
| Kimberley Ports | Broome | Key | 40,113 | 76,181 | 116,294 | 1,938 Triple RTs  = 5-6 per day | Minor |
| Pilbara Ports | Port Hedland | Key | 1,688,451 | 3,652,172 | 5,340,623 | 89,010 Triple RTs  = 240 – 250 per day | Major |
| Pilbara Ports | Utah Point | Major | N/A | 21,179,654 | 21,179,654 | 211,797 Quad RTs  = 580 per day | Major |
| Pilbara Ports | Dampier | Key | 35,354 | 186,725 | 222,079 | 3,701 Triple RTs  = 10-11 per day | Minor |
| Pilbara Ports | Ashburton | Minor | N/A all piped via gas | N/A all piped via gas | N/A all piped via gas |  |  |
| Midwest Ports | Cape Cuvier | Minor | N/A all comes in from mine sites via private roads | N/A all comes in from mine sites via private roads | N/A all comes in from mine sites via private roads |  |  |
| Midwest Ports | Useless Loop | Minor | N/A all comes in from mine sites via private roads | N/A all comes in from mine sites via private roads | N/A all comes in from mine sites via private roads |  |  |
| Midwest Ports | Geraldton | Key | 322,110 | 1,399,006 | 1,677,768 | 27,963 Triple RTs = 77 per day | Key |
| Fremantle Ports | Fremantle | Major | 3,243,008 | 3,404.85 | 6,647,858 | Not Applicable | City Port |
| Southern Ports | Bunbury | Key | 540,468 | 3,884,392 | 4,424,860 | 110,621 Double RTs  = 303 per day | Major |
| Southern Ports | Albany | Key | 171,824 | 2,602,886 | 2,774,710 | 46,245 Double RTS  = 127 per day | Key |
| Southern Ports | Esperance | Key | 804,995 | 3,460,798 | 4,265,793 | 71,097 Double RTs  = 195 per day | Key/Major |

**AIRPORT DESIGNATION BY AIRPORT TRAFFIC**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  | **Dept of Infrastructure, Transport and Regional Economics** | | | | | |  |  |  |  |
| **REPORT PERIOD: 2016-17 WA** | |  |  |  |  |  |  |  |  |  |  |  |  |
| **Regular Public Transport (RPT) operations only** | | | |  |  |  |  |  |  |  |  |  |  |
| **AIRPORT TRAFFIC STATISTICS - UPLIFT/DISCHARGE data for INTERNATIONAL. TRAFFIC ON BOARD BY STAGES and UPLIFT/DISCHARGE data for DOMESTIC (including REGIONAL)** | | | | | | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  | **DOMESTIC (including Regional) AIRLINES** | | | **INTERNATIONAL AIRLINES** | | | **TOTAL PASSENGERS** | | | **FRP** |  |
|  |  |  | **Revenue Passengers** | | | **Revenue Passengers** | | | **Revenue Passengers** | | | **Designation** |  |
| **AIRPORT** | **Year** | **Rank** | **INBOUND** | **OUTBOUND** | **TOTAL** | **INBOUND** | **OUTBOUND** | **TOTAL** | **INBOUND** | **OUTBOUND** | **TOTAL** | **STATUS** |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ALBANY | 2016-17 | 59 | 27,891 | 28,292 | 56,183 | 0 | 0 | 0 | 27,891 | 28,292 | 56,183 | Key |  |
| BROOME | 2016-17 | 23 | 179,934 | 184,192 | 364,126 | 0 | 0 | 0 | 179,934 | 184,192 | 364,126 | Major |  |
| CARNARVON | 2016-17 | - | 9,314 | 11,477 | 20,791 | 0 | 0 | 0 | 9,314 | 11,477 | 20,791 | Key |  |
| ESPERANCE | 2016-17 | - | 24,186 | 25,472 | 49,658 | 0 | 0 | 0 | 24,186 | 25,472 | 49,658 | Key |  |
| GERALDTON | 2016-17 | 45 | 56,968 | 58,733 | 115,701 | 0 | 0 | 0 | 56,968 | 58,733 | 115,701 | Key |  |
| KALGOORLIE | 2016-17 | 29 | 121,713 | 122,759 | 244,472 | 0 | 0 | 0 | 121,713 | 122,759 | 244,472 | Major |  |
| KARRATHA | 2016-17 | 20 | 233,492 | 230,474 | 463,966 | 0 | 0 | 0 | 233,492 | 230,474 | 463,966 | Major |  |
| KUNUNURRA | 2016-17 | 50 | 35,272 | 35,918 | 71,190 | 0 | 0 | 0 | 35,272 | 35,918 | 71,190 | Key |  |
| LEARMONTH | 2016-17 | 47 | 39,499 | 41,076 | 80,575 | 0 | 0 | 0 | 39,499 | 41,076 | 80,575 | Key |  |
| MOUNT MAGNET | 2016-17 | - | 5,407 | 3,668 | 9,075 | 0 | 0 | 0 | 5,407 | 3,668 | 9,075 | Key |  |
| NEWMAN | 2016-17 | 27 | 142,244 | 151,739 | 293,983 | 0 | 0 | 0 | 142,244 | 151,739 | 293,983 | Major |  |
| PARABURDOO | 2016-17 | 40 | 82,661 | 83,878 | 166,539 | 0 | 0 | 0 | 82,661 | 83,878 | 166,539 | Key |  |
| PERTH | 2016-17 | 4 | 3,993,410 | 4,036,114 | 8,029,524 | 2,236,519 | 2,187,314 | 4,423,833 | 6,229,929 | 6,223,428 | 12,453,357 | Capital - Not Applicable |  |
| PORT HEDLAND | 2016-17 | 24 | 175,844 | 177,584 | 353,428 | 3,777 | 3,779 | 7,556 | 179,621 | 181,363 | 360,984 | Major |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

**NOTE - All other Western Australian Airports not considered for scoring in Future Roads - Rural**

### Network Role

Roads of a higher classification should cater for state-wide and regional traffic movements over relatively long distances. Lower road classifications should cater for local traffic movements over shorter distances and the provision of access to abutting property.

**RAV Network Access**

The movement of goods by heavy vehicles is vital to the economy. Main Roads issues permits for vehicles exceeding 19m in length or 42.5 tonnes gross mass. The permit bases system is called the Restricted Access Vehicle (RAV) Network. B Doubles and articulated vehicles with one trailer are known as “long vehicles”. Vehicles longer than 30m are known as “road trains”.

RAV network access is measured proportionally according to the RAV Network category (section length/route length) to give an average score over the length of the route. Section totals are added to a maximum 3 point score. Additional points can be accrued for vehicles having AMMS (Accredited Mass Management Scheme) to a maximum 0.3 score as per the table below.

If the RAV Network category is not constant over the entire length of the assessed route, a distance average shall be used. The link to Main Roads RAV Network is below: <https://mrwebapps.mainroads.wa.gov.au/hvsnetworkmap>

1. Designated road train and long vehicle routes (refer RAV Network) are scored as follows:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| RAV Network | Score | Total length of route (km) | Length of each RAV section (km) | Proportion of Route (RAV section / total length)  [sum of sections: Total = 1.00] | Score by Proportion of Route (Proportion\*Score) |
| RAV 9/10 | 3.00 |  |  |  |  |
| RAV 5/6/7/8 | 2.00 |  |  |  |
| RAV 2/3/4 | 1.00 |  |  |  |
| No RAV Network | 0.00 |  |  |  |
| AMMS Network | 0 to 0.30 |  |  |  |  |
| **Total** |  | **[Total length]** | **[Total length]** | **1.00** | **[Total score:**  **0.00 – 3.30]** |

Table 10 RAV Network Criteria

**\*\*NOTE: Add the following additional points for vehicles having AMMS:**

**Level 1 - additional 0.1; Level 2 - additional 0.2; Level 3 - additional 0.3**

**Network Role - Network Connectivity**

Maintaining network connectivity is a key part of the expanding State road network. To this end, connecting existing State roads is given higher priority compared to connecting existing State roads with lower order roads.

|  |  |
| --- | --- |
| **Category** | **Score** |
| PD – PD | 3.00 |
| PD – RD | 2.00 |
| PD – LD/RD-RD/RD-LD | 1.00 |
| OTHERWISE | 0.00 |

Table 11 Network Connectivity

**Network Role - Property and Intersecting Road Access**

Property access gives a strong indication as to the nature of traffic flow on the route under assessment. More access points interrupt the flow of traffic as vehicles enter and exit. This leads to a reduction in traffic through-flow.

The total number of access points (which include property access and intersecting roads) are counted and divided by total route length to give the average score per kilometre over the length of the route (Max 2 point score).

The following rules are applied when scoring this criterion for NON-BUA:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Type of access | Total length (km) | Number of access  points | Access points / kilometre (*number / total length of route in km)* | Score |
| Limited(2) <1 per 10km |  |  |  |  |
| Limited(1) >=1 and < 10 per 10km |  |  |  |  |
| Unlimited >=10 per 10km |  |  |  |  |
|  | **[Total length]** |  |  | **[Total Score]** |

Table 12 Network Access Non-BUA

**The criteria below are to be used for those roads being mainly (>50%) within the BUA of a Major or Key Town.**

The following rules are applied when scoring this criterion for BUA

|  |  |
| --- | --- |
| **Category** | **Score** |
| Limited Access (2)   * Sum of number of intersections and number of commercial access points <=4/km AND * Number of residential driveways < 1/km | 2 |
| Limited Access (1)   * Sum of number of intersections and number of commercial access points < 6/km AND * Number of residential access points < 3/km | 1 |
| Unlimited Access   * All else | 0 |

Table 13 Network Access BUA

### Design Function

**Route Capacity**

Roads of a higher classification tend to have higher capacities. Capacity has been related to the number of trafficable lanes. The total number of traffic lanes is measured proportionally (section length/route length) to give an average score over the length of route (Max 3 point score).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No of traffic lanes** | **Score** | **Total length of route (km)** | **Length of section (km)** | **Proportion of route (Section / Total length)** | **Score by Proportion of Route (length of section / total length) \* score** |
| 4 Lane Divided | 5.00 |  |  |  |  |
| 4 Lane Undivided | 4.00 |  |  |  |
| 2 Lane 7m wide or greater | 3.00 |  |  |  |
| 2 Lane >5m<7m wide | 2.00 |  |  |  |
| 2 Lane up to 5m wide | 1.00 |  |  |  |
| Unsealed | 0.00 |  |  |  |  |
| **Total** |  | **[Total]** | **[=Total]** | **1.00** | **[Total score] [0 – 3]** |

Table 14 Design Route Capacity

**NOTE – For 3 lanes (i.e. passing lanes) add 0.5 points to the appropriate 2 Lane score. Only for a significant lengths of 3 lanes.**

**Road Classification**

The Main Roads Western Australian (MRWA) Road Hierarchy system, as endorsed by WALGA, is used to indicate the operating function of a road within a road network. Lower order roads act as feeder and collector roads, typically collecting neighbourhood and suburban traffic. Higher order roads tend to act as through roads, collecting and feeding traffic from lower order roads and facilitating high speed high volume traffic movements.

Higher order Local Government roads are given priority over lower order Local Government roads and scored accordingly. Scoring is measured proportionately (section length/route length) to give an average score over the length of the route (Max 3 point score).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Road Hierarchy** | **Score** | **Total Length (km)** | **Section length (km)** | **Proportion of total *(Section / total)*** | | **Score by Proportion of Route** |
| Regional Distributor | 3.00 |  |  |  |  | |
| Local Distributor | 2.00 |  |  |  | |
| Access Road Special Use (Indigenous or  Industrial) | 1.00 |  |  |  | |
| Access Road or other | 0.00 |  |  |  |  | |
| **Total Score** |  | **[Total]** | **[=Total]** | **1.00** | **[0.00 – 3.00**] | |

Table 15 Design Function (Road Hierarchy)

### Traffic Volumes

**Traffic Volumes – AAWT / AADT**

Regional Traffic Volumes are assessed as a proportional score (section length/route length) to give scores relevant to vehicle use in rural areas. (Max 5 point score for vehicles >2,000 vpd).

Regional Traffic Volumes are assessed using the table below to give scores relevant to vehicle use in rural areas. Note that either Average Annual Daily or Average Annual Weekday traffic may be used, depending on the characteristics of the route under assessment.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **AAWT or AADT (PCU Adjusted) – see Table 22 below** | **Score** | **Total Length (km)** | **Section length (km)** | **Proportion of total *(Section / total)*** | **Score by Proportion of Route** |
| >2,000 vpd | 5.00 |  |  |  |  |
| >1,500 – 2,000 | 4.00 |  |  |  |
| >1,000 – 1,500 | 3.00 |  |  |  |
| >500 – 1,000 | 2.00 |  |  |  |
| >100 – 500 | 1.00 |  |  |  |
| <100 | 0.00 |  |  |  |  |
| Total |  | **[Total]** | **[=Total]** | **1.00** | **[0.00 – 2.00**] |

Table 16 Traffic Volume Non-BUA

The following rules are applied when scoring this criterion for Rural Built Up Areas.

For those roads mainly (>50%) within the BUA of a Major or Key Town Traffic Volumes are assessed as a proportional score (section length/route length) to give scores relevant to vehicle use in a rural BUA (Max 5 point score for vehicles >10,000 vpd).

The following rules are applied when scoring this criterion for BUA

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **AAWT (PCU Adjusted)** | **Score** | **Total Length (km)** | **Section length (km)** | **Proportion of total *(Section / total)*** | **Score by Proportion of Route** |
| >10,000 vpd | 5.00 |  |  |  |  |
| >7,500 – 10,000 | 4.00 |  |  |  |
| >5,000 – 7,500 | 3.00 |  |  |  |
| >2,500 – 5,000 | 2.00 |  |  |  |
| >1,000 – 2,500 | 1.00 |  |  |  |
| <1,000 | 0.00 |  |  |  |  |
| Total |  | **[Total]** | **[=Total]** | **1.00** | **[0.00 – 2.00**] |

Table 17 Traffic Volume BUA

\*\*Note: Traffic Scores must be reflective of their nature and one traffic count may not be a true indicator of traffic volumes for the full route. Where this appears likely, further traffic counts should be sought.

The table below should be used to more accurately reflect vehicles on the roads within Western Australia for adjusting the AADT/AAWT count.

|  |  |  |
| --- | --- | --- |
| **Austroads**  **Class** | **Max Length in W.A.** | **Passenger Car Unit** |
| 2 to 5 | 14.5m | 2.0 |
| 6 to 9 | 20.0m | 3.0 |
| 10 | 27.5m | 4.0 |
| 11 | 36.5m | 6.0 |
| 12 | 53.5m | 8.0 |
| Motor cycle | - | 0.4 |
| Pedal cycle | - | 0.2 |

Note – this conversion table is used to approximate traffic counts of mixed class vehicle types to equivalent Passenger Car Units and may not be applicable to road design applications.

Table 18 PCU Conversion

**Traffic Volumes – Heavy Vehicle Numbers**

The more important routes used by commercial vehicle operators are reflected by heavy vehicle numbers. A “heavy vehicle” is defined as a vehicle over 4.5 tonnes gross mass. The traffic counting system adopted by MRWA uses an Austroads classification system with Class 3 vehicles (2 axle truck or bus equal to or over 4.5 tonnes gross vehicle mass) and above having been adopted as a “heavy vehicle” for the purpose of this criterion score.

Heavy Vehicle numbers are assessed as a proportional score (section length/total length) to measure relevant heavy vehicle use in rural areas (Maximum 3 point score >300 vpd).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Number of Heavy Vehicles** | **Score** | **Total Length (km)** | **Section length (km)** | **Proportion of total *(Section / total)*** | **Score by Proportion of Route** |
| > 300 vpd | 3.00 |  |  |  |  |
| > 150 vpd - <=300 vpd | 2.00 |  |  |  |
| > 50 vpd - <=150 vpd | 1.00 |  |  |  |
| < 50 vpd | 0.00 |  |  |  |  |
| Total |  | **[Total]** | **[=Total]** | **1.00** | **[0.00 – 2.00**] |

Table 19 Traffic Heavy Vehicles Non-BUA

For those roads being mainly (>50%) within the BUA of a Major or Key Town, heavy vehicle numbers are assessed as a proportional score (section length/route length) based on use in built up areas (Maximum 3 point score >600 vpd).

The following rules are applied when scoring this criterion for BUA

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Number of Heavy Vehicles** | **Score** | **Total Length (km)** | **Section length (km)** | **Proportion of total *(Section / total)*** | **Score by Proportion of Route** |
| > 600 vpd | 3.00 |  |  |  |  |
| > 300 vpd - <=600 vpd | 2.00 |  |  |  |
| > 100 vpd - <=300 vpd | 1.00 |  |  |  |
| < 100 vpd | 0.00 |  |  |  |  |
| Total |  | **[Total]** | **[=Total]** | **1.00** | **[0.00 – 2.00**] |

Table 20 Traffic Heavy Vehicles BUA

## AVAILABLE DATA FOR RURAL SCORING ASSESSMENTS

The quality and availability of data was an important consideration in setting up the classification assessment model for the above criteria. The table below sets out the availability of suitable data in terms of the measurement criteria, while subsequent sections expand on their application.

|  |  |
| --- | --- |
| **Measurement Criteria and Data Availability –** | |
| **Criterion** | **Data items available** |
| 1. **Strategic Role** | (see section 4.3.1) |
| 1. Shows as a significant road/route within current state planning or transport strategy | * Listing within current State planning documents |
| 1. Connects to strategically significant location | * End links of road to location of strategic significance |
| 2. **Network Role** | (see section 4.3.2) |
| 1. Restricted Access Vehicle (RAV) | * Main Roads RAV Network map: <https://mrwebapps.mainroads.wa.gov.au/hvsnetworkmap> |
| 1. Connectivity | * End links of road as shown in Main Roads [Road Network Hierarchy](https://mrapps.mainroads.wa.gov.au/publicmaps/rim) |
| 1. Property Access | * Roadside land use inventory – Aerial imagery or Google Maps |
| 3. **Design Function** | (see section 4.3.3) |
| 1. Route Capacity | * Average Width Sealed or Unsealed –   ROMAN/RAMM data or similar |
| 1. Road Hierarchy | * in Main Roads [Road Network Hierarchy](https://mrapps.mainroads.wa.gov.au/publicmaps/rim) |
| 4. **Traffic Volumes** | (see section 4.3.4) |
| 1. Traffic Counts (VPD) | * Annual average daily traffic (AAWT/AADT)   Main Roads Traffic Map: [TrafficMap](https://mrapps.mainroads.wa.gov.au/TrafficMap/) |
| 1. Commercial Heavy Vehicle Routes | * Number of heavy vehicles/day   Main Roads Traffic Map: [TrafficMap](https://mrapps.mainroads.wa.gov.au/TrafficMap/) |

## CRITERION PRIORITY OR WEIGHTING

An important part of any multi-criteria technique is the relative importance of each criterion. In assessing the classification of a road, some of the criteria will be more important than others. For this reason, the weightings shown in the table below have been adopted. This consists of the raw score multiplied by the weighting factor.

**Weighting Factors – Rural Roads**

|  |  |  |  |
| --- | --- | --- | --- |
| **Criterion (Rural/ Rural BUA)** | **Maximum raw score** | **Weighting factor** | **New maximum** |
| Strategic Role | 8 | 2.50 | 20 |
| Network Role | 8 | 2.00 | 16.6 |
| Design Function | 8 | 1.50 | 12 |
| Traffic Volumes | 8 | 1.00 | 8 |
| **Totals** | 32 |  | **56.6** |

## SCORING THRESHOLDS FOR RURAL ROADS

|  |  |  |  |
| --- | --- | --- | --- |
| **Class** |  | **Score Threshold** | **Marginal Range** |
| PD - HIGHWAY | | >=42.00 | 40.00 - 42.00 |
| PD - MAIN ROAD | | >=28.00 | 26.00 - 28.00 |
| LOCAL ROAD | | <28.00 |  |

# Definitions

**Administrative Classification**

The process by which roads are arranged into different classes based on the function the road performs, for the purpose of assigning responsibility for the road to State or local government.

**Built Up Area**

A ‘Built Up Area’ (BUA) for the purpose of the Rural classification assessment is defined as any area within the latest depiction of the Australian Bureau of Statistics *Urban Centres and Localities* (Major Urban, Other Urban and Bounded Locality)

**Deproclamation**

The common use term for roads being proclaimed under Section 13 of the *Main Roads Act 1930* to ‘cease to be a highway’ or ‘cease to be a main road’.

**Highway**

The term ‘highway’ is generally used in this document in the context of its meaning in the *Main Roads Act 1930*. State Administered roads in the Perth Mt

**Main Road**

The term ‘main road’ is generally used in this document in the context of its meaning in the *Main Roads Act 1930*.

**Metropolitan Region Scheme**

The Metropolitan Region Scheme (MRS) defines the future use of land and provides the legal basis for planning in the Perth metropolitan region, dividing it into broad zones and reservations. The MRS area stretches from Singleton in the south to Two Rocks in the north and east to The Lakes. It requires local government town planning schemes to provide detailed plans for their part of the region, consistent with the MRS.

**State Road**

A generic term used to collectively refer to proclaimed ‘highways’ and ‘main roads, or roads administered by a State government agency.

**Peel Region Scheme**

The Peel Region Scheme (PRS) guides land use and provides the legal basis for planning in the Peel Region. The area includes the local government boundaries of the City of Mandurah and the shires of Murray and Waroona. The PRS defines the future use of land, dividing it into broad zones and reservations. It requires local government town planning schemes to provide detailed plans for their respective parts of the region. These schemes must be consistent with the PRS.

**Proclamation**

The process of formally declaring a road to be, or cease to be, either as a ‘highway’ or ‘main road’ in accordance with the provisions of the *Main Roads Act 1930*. It involves the preparation of the required proclamation papers by MRWA for presentation to the Hon. Minister for Planning and Infrastructure for endorsement. These papers are then formally approved by Executive Council (the supreme decision making body of the Executive arm of government, consisting of the Governor and the Ministers of the Crown) and a proclamation notice published in the Government Gazette.