Movement and Place Network Classification

Detailed Design

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ONE NETWORK FRAMEWORK

REG THE ROAD EFFICIENCY GROUP | We are. LGNZ. Te Kāhui Kaunihera ō Aotearoa. | WAKA KOTAHI NZ TRANSPORT AGENCY

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Introduction

One Network Framework – an evolution of the One Network Road Classification

The One Network Framework is an evolution of the One Network Road Classification and has been designed to take a more human-centric approach to classifying our road and street network. It is part of a national response to ensure delivery of a safe transport system that protects and prioritises human life and is particularly needed in our urban areas where communities are striving to create great places to live, work and play. The framework also seeks to bring more distinction to both our urban and rural networks by introducing a stronger multi-modal focus that highlights the strategic importance of each mode in achieving the overall objective of moving people and goods efficiently and effectively.

The One Network Framework provides a **common language** to describe the different functions of roads and streets in relation to both the movement of people and goods and as destinations in their own right, the social spaces which streetscapes provide to our community.

A single classification framework helps us all to understand and determine a future view of how we want our roads and streets to perform and provides the mechanism to have **richer conversations** about competing demands, strategic objectives and potential investment.

The One Network Framework is not designed to provide transport solutions but rather to set the context for nationally consistent conversations. It helps to establish the *function* of a road or a street, and while it can inform design or investment conversations, does not seek to determine the *form* of a road or street. Other guidance is available for that purpose.

Why evolve?

The One Network Road Classification (ONRC) was initiated through recommendations from a 2012 government taskforce to “improve road maintenance investment through level of service differentiation”. The resulting national classification system – the ONRC – has been a giant leap forward in terms of benchmarking investment in asset management, and providing a nationally consistent framework. The benefits of the framework have been numerous, and it has become embedded in a number of national policies and systems. The national application of the ONRC has been world leading and has meant it can be used as the basis for a wide range of decision-making.

Following on from these initial benefits, the evolution of the ONRC into the One Network Framework broadens its success further and ensures it is fit for purpose in more complex urban environments, where there are a number of competing demands on limited road and street space, and a range of modes to be accommodated. This work also brings together and embeds the success of Network Operating Frameworks, which have been utilised in urban areas around the country, but are often based on a slightly different approach to road network classification.

Finally, the evolution of the ONRC brings more granularity to the way our rural networks are classified, through better differentiating freight routes from general traffic routes and reflecting the specific context of rural roads.

By evolving ONRC to account for these extended needs, the framework is strengthened into something that can be used *across* transport and land use disciplines, increasing its relevance.

The One Network Framework provides a common language that can assist in linking strategies and policies together and support better, more holistic, decision-making. This common language also offers a mechanism to translate local movement and place frameworks into a national framework for more aligned investment conversations.

What's in it for you?:

The benefits of the framework differ depending on what transport or land use discipline you work in, and whether you work predominantly in **rural** or **urban** context settings.

For **rural** areas, particularly in relation to asset management, very little may change. The ONRC classes will be mapped by default to represent the 'General Traffic' and 'Freight' classifications. So, for most rural areas, current ONRC categories are likely to strongly correlate (if not completely) with the general movement classes, particularly if there are no public transport networks. The separate 'Freight' mode class allows you to differentiate, at a more granular level, your freight routes. The biggest benefit is in being able to map the place function, allowing you to emphasise where your road networks go through town centres, or past important places such as district schools or marae. This contextual information will be useful for conversations with your community about things like speed management or town centre upgrades.

For **urban** areas, the framework allows you to see the work many of you are doing locally reflected at a national level. Creating liveable towns and cities goes well beyond transport, and this framework helps us nationally move towards a better understanding of our competing demands.

Currently, both central and local government are driving towards several strategic goals including reducing harm from land transport, reducing emissions, a greater emphasis on community wellbeing, and achieving higher quality urban development. All of these require frameworks and tools that naturally lead us to more interdisciplinary planning and 'systems thinking'. Evolving the ONRC to the One Network Framework is a key national response to this shift, and provides a more robust framework that is appropriate for both rural AND urban settings.

To achieve this purpose, the following challenges have been addressed:

a) The framework caters for active or public transport modes and 'off road' routes which make it useful as a land transport planning tool in urban and rural environments

b) The emphasis is shifted to the overall movement of people and goods, by any mode, rather than only considering the volume of vehicles a route can support.

c) The framework considers the role transport corridors play in providing social spaces for people to interact and enjoy and the interplay with travel across and along a transport corridor, the Place function.

d) It provides a framework that considers the future intended function of the corridor in the medium to long term so that planning can be put in place to achieve that intended state.

Principles:

To be successful the One Network Framework adheres to the following principles:

- It is relevant for both urban and rural settings, by developing a common language that all practitioners can use
- Considers movement of people and goods via all modes of transport, rather than just vehicles
- Differentiates strategic networks of different modes of transport
- Considers movement in the context of place
- Prioritises and protects human life and helps embed the Safe System approach
- Is simple to understand, use and interpret, providing additional layers of complexity only where needed
- Aligns with spatial planning processes, tools and frameworks
- Guides planning, operation and investment decisions in the short and long term

Glossary of Terms

Corridor	(1) The area of land utilised to provide a transport link between two points. Usually constrained within the land area of the road reserve. (2) The collection of routes utilised to provide a transport link between two key points by all available modes which may sometimes be expanded to include off-line modes such as railways and dedicated cycle paths that provide the link.
Mode Neutrality	Mode neutrality means considering all transport modes when planning, regulating and funding transport, and basing decisions on delivering positive social, economic, and environmental outcomes. When assessing the benefits and costs of different transport modes, each mode needs to be considered as part of a multi-modal system.
Movement	In the context of the One Network Framework, Movement equates to the strategic importance of a transport corridor in providing for the movement of people or freight along a corridor, considering all possible transport modes (mode neutrality).
Network	Collective term for all roads and streets under the control of a Road Controlling Authority. National Network: All roads and streets in New Zealand Highways Network: All state highways in New Zealand Also used to describe a collection of roads and streets that is mode specific (Cycle Network).
'Off Road'	A term to describe a transport corridor that is outside (off-line) of the road reserve, for example a dedicated cycle lane through a park that forms part of a strategic cycling network.
Place	In the context of the One Network Framework, Place equates to the strategic importance of the road or street as a destination in its own right, determined by the level and nature of on-street activity occurring within the streetscape, and the level of access required to adjacent land, which interacts with and impacts on the movement function along a corridor.
Road Controlling Authority (RCA)	A regional council, territorial authority, or public organisation that operates a part of the NZ Land Transport network.
Road Reserve	The land area set aside for the purpose of providing for land transport, usually incorporating the entire area between property boundaries.
Strategic Network	A network of roads and streets specifically designated to support movement of a particular mode of transport e.g. Strategic Freight Network. Note that a particular section of road or street can belong to more than one strategic network, then requiring a multi-modal approach to classification.
Street Category	The specific classification assigned to a road or street from the two Street Families based on its intended movement and place function.
Street Family	A Street Family is a group of street categories that are grouped according to the context they refer to. There are two street families, one for the urban realm and one for the rural realm.
Te Araroa	Te Araroa (The Long Pathway) is New Zealand's long distance tramping route, stretching circa 3,000 kilometres along the length of the country. It is made up of a mixture of tracks and walkways, and link sections alongside roads.

PLACE

Place

The classification of 'Place' in terms of definable metrics is not necessarily a particularly easy exercise. The intrinsic value of a place is often invoked more by feelings than facts. Despite this, numerous academic engineering studies have sought to quantify the value of place. Much of this enquiry was in response to the need to classify place and its relationship with movement, in so enabling a movement and place approach to transport corridor planning and management.

The classification of place should achieve the following outcomes:

- Reflect the planned and intended function of the specific location
- Relate to the on-street activity generated by adjacent land-use and its requirement for access
- Consider the interaction with the movement function of the corridor, including the requirement for lateral movement across the carriageway
- Be informed by adjacent land-use, and the density of activity occurring 'off-street'
- Recognise the significance of the catchment from which the location attracts visitors, or the location's importance to the surrounding community.

Intended nature of place

The ONF intends to primarily describe the future intended function of the transport network and the relationship with adjacent land-use close to the transport corridor. The intended nature of a place is a brief description of the location around and along the road or street that in simple language describes the overall nature of the place.

On-street activity

The level of on-street activity provides a direct pointer to the classification of place. As the level of observable and measurable activity off-carriageway within the corridor increases, so does the classification of place, in proportionate steps. In terms of metrics to describe each on-street activity category, this most closely aligns with pedestrian activity, in so describing a direct correlation between movement and place. On-street activity also creates the need for pedestrians to cross the carriageway laterally and proportionately, and this factor is considered through the interaction with movement metric.

Catchment significance and connection to community

At a high level, catchment significance relates to how far people are willing to travel to experience a place. This most commonly aligns with the facilities that utilise the land adjacent to roads and streets, a sports stadium for instance having regional significance as events will attract people from throughout the region. Guidance is provided within the metrics in terms of the typical facilities utilising the adjacent land that may fall into each class.

Adjacent Land-use

The purpose to which adjacent land is used is a creator of on-street activity and also generates a requirement for access to and from the corridor. While a range of economic and social indicators, such as GDP and population density, could be used as metrics to categorise place in terms of adjacent land-use, the application of this would be cumbersome and require a large amount of data analysis. Land-use zoning in the TLA's district/unitary plan provides the authorities planned future intentions for the adjacent land as determined by land-use planners and should be used as a significant contributor to place classification. The 23 standard planning zones and an additional 5 special

purpose zones described in the National Planning Standards have been allocated across the 5 classes as a guide to Place classification.

Interaction with movement function

As the levels of on-street activity and requirement for access increase, so does the need for movement laterally across the carriageway. This requirement can be thought of in terms of the frequency of crossing facilities along the corridor, with the requirement for lateral movement across the carriageway increasing in proportion to on-street activity and the need to support associated pedestrian movement. Guidance is provided in the metrics in the level and nature of facility for lateral movement that would usually be evident for each class. For M1P5 in the urban context lateral movement will always be grade separated.

Intensity of use

Intensity of use is a measure of how much the off-carriageway space is being used, by people dwelling in the space, eating al-fresco, browsing market stalls, window shopping, or just relaxing on a bench seat. The metric is indicative of how utilised each square metre of public space is over the course of a day (7am to 5pm). This indicator is included here to be used as a guide, as determination of the actual values of intensity of use would be impractical in most situations.

The table overleaf describes how each of the factors detailed above could be used as an indicator for classification of place.

The factors described in the table are derived from a number of local and overseas movement and place frameworks, including those used by Transport for London, City of Toronto, VicRoads (Victoria, Australia), Transport New South Wales, and Auckland Transport.

Place

	Classification factors				Metrics				
		Nature of Place	**Level of On-Street Activity**	**Indicative Land-Use**	**Catchment Significance**	**Level of On-Street Activity**	**Interaction with movement**	**Indicative Adjacent Land-Use**	**Catchment Significance**	**Intensity of use**
						Pedestrian volume	**Requirement for lateral movement**	**Residential and Commercial density: Land-use zone classification**	**Place significance - Activity generating facilities**	**The intensity of use of the off-carriageway space by persons dwelling**
P1	**Provincial/ Regional**	*On-street facilities encourage use by active modes, and visitors to stop and experience the locality for longer periods.*	*Land-use generates high levels of on-street activity including lateral movement across the carriageway. Sites of regional significance that attract significant visitor numbers to the location.*	*Very high-density mixed use (high rise apartments and office towers), downtown retail and commercial centres.*	*Streetscape provides for a provincial or regional level of amenity.*	*Aligned to W1* *> 1000 /hour (peak)* *> 5,000 /day*	*At intersections, and frequent intermediate intervals midblock*	*City Centre zone* Special purpose zones: *Airport zone* *Hospital zone* *Port zone* *Stadium zone* *Tertiary education zone*	Regionally Significant Locations: *Central Business Districts* *Airports* *Central Metro Stations* *Ports* *Hospitals* *Sports Stadiums and Event Arenas* *University and Polytechnic Campuses* *Major tourist destinations*	*> 4 Person hours/m²/day (7am to 5pm)*
P2	**City/ District**	*On-street facilities encourage visitors to stop and experience the locality.*	*Surrounding land-use generates significant levels of on-street activity including lateral movement across the carriageway. Weekend markets and special events may also generate peak activity.*	*Diverse mixed use, low rise apartments, special zones or high density commercial/ retail.*	*Streetscape provides for a city or district level of amenity.*	*Aligned to W1,W2* *> 2,500 /day*	*At intersections, and infrequent intermediate intervals midblock*	*Metropolitan Centre zone* *High Density Residential Zone* *Commercial zone* *Large Format Retail zone*	City/District Significant Locations: *Main Shopping Centres* *Big Box Retail precincts* *Transport Interchanges* *Secondary Schools* *Main regional tourist attractions*	*> 2 Person hours/m²/day (7am to 5pm)*
P3	**Neighbourhood/ Township**	*Increasing levels of on-street activity and access to adjacent land.*	*Surrounding land-use generates increased on-street activity.* *Community facilities and points of interest in rural settings generating some on-street activity.*	*Medium density residential, mixed use residential/ commercial, or industrial areas.*	*Streetscape provides for a neighbourhood or township level of amenity.*	*Aligned to W2* *> 1000 /day*	*At intersections and connecting strategic routes (such as pedestrian alleyways and cycle paths)*	*Medium Density Residential zone* *Neighbourhood Centre zone* *Local Centre zone* *Mixed use zone* *Town Centre zone* *Light Industrial zone* *General Industrial zone* *Heavy Industrial zone* *Open space zone* *Sport and Active Recreation zone*	Neighbourhood Significant Locations: *Suburban Shopping Centres* *Suburban Metro Stations* *Primary Schools* *Playgrounds* *Sporting Club Grounds* *Local parks* *District Halls* *Places of local interest/colour*	*> 1 Person hours/m²/day (7am to 5pm)*
P4	**Local**	*Quieter streets likely to attract some on-street activity. Generally private low frequency access.*	*Primarily residential or peri-urban in nature, with on-street activity associated with residents going about their lives.*	*Mostly low density residential in urban and peri-urban areas. Lifestyle blocks in peri-urban areas.*	*Streetscape has local area significance.*	*Aligned to W3* *< 1000 /day*	*Casual with care within M4 and M5 movement classes, targeted but infrequent within M1, M2 and M3.*	*Large Lot Residential zone* *Low Density Residential zone* *General Residential Zone* *Rural Lifestyle zone (R)* *Settlement zone (R)* *Natural Open Space zone*	*Suburban Residences*	*< 1 Person hours/m²/day (7am to 5pm)*
P5	**Limited**	*Movement of people and goods the primary function. Limited on-street activity and requirement for access.*	*Little discernible on-street activity.*	*Mostly rural, except for Motorways and Expressways in urban areas.*	*Streetscape has local significance in the rural context, but does not provide any amenity for on street activity*	*No pedestrian movement, Walking may be prohibited along corridor, no Pedestrian facilities provided*	*Grade separated at M1 in the Urban context* *Casual with care in Rural context*	*General Rural zone (R)* *Rural Production Zone (R)*	*Rural Environment*	*Effectively Nil*

STREET FAMILIES

Street Families

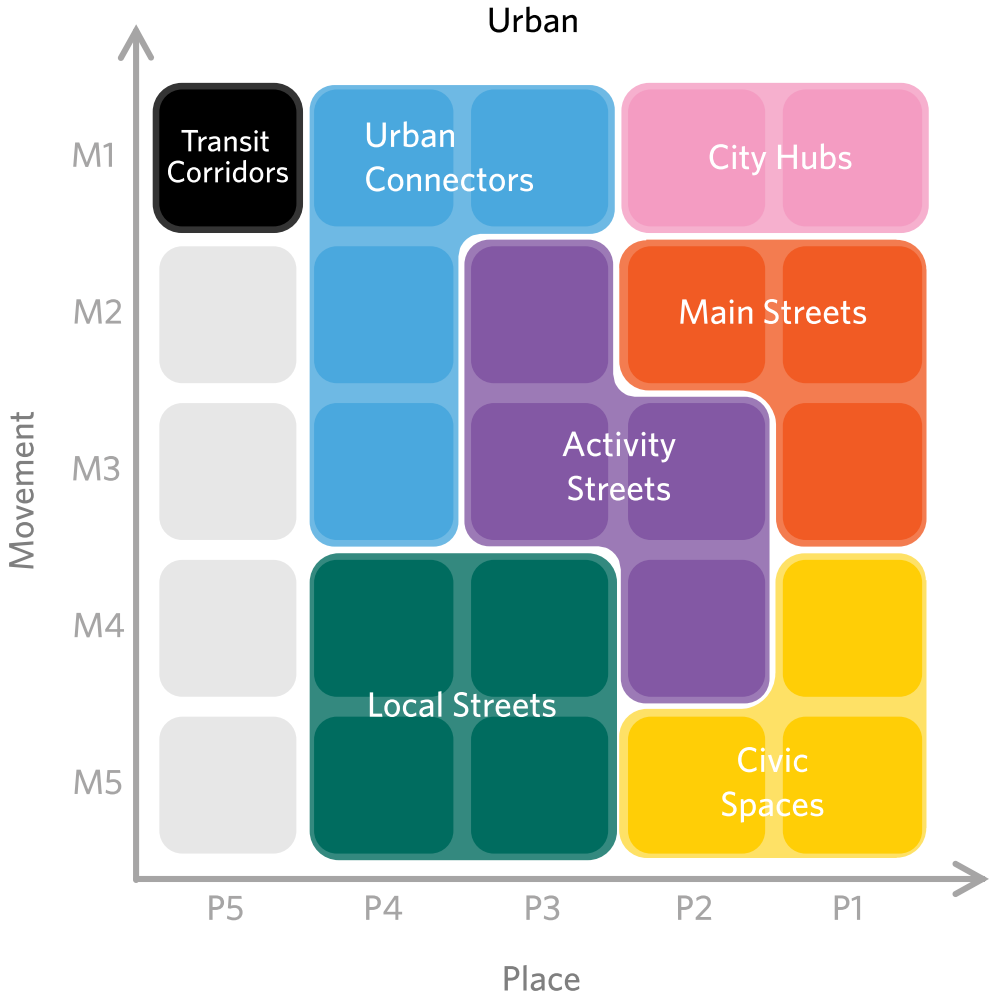
Street families bring together the movement and place elements to determine an overall movement and place classification for the road or street. In order to limit the number of possibilities within the framework, street categories comprise of regions within the movement and place matrix. As an evolution of ONRC the objective of the street families is still to ensure consistent infrastructure funding discussions and as a means for comparative analysis across the entire land transport network in New Zealand.

The street families are designed to be intuitive, so that as a first pass when thinking about the corridor under consideration a particular street category is envisioned in the mind's eye of those undertaking the classification. This can then be checked against what the metrics and factors are indicating an appropriate classification for the corridor should be.

Two sets of street families are provided, one for use in the urban realm and one for rural. This recognises that both the level of people and goods movement for a particular class, and the factors that designate place are different in each context.

Street Family Classification matrix

The current configuration of the street category zones overlaid on the movement and place matrix is shown to the right and overleaf. The colours used are those recommended for use on maps and within spatial systems to provide contrast between different classes likely to appear adjacent to each other.



Differentiation of Urban and Rural

The Street Families describe two sets of movement/place categories, a set for the urban realm, and a set for the rural realm. The definition of what constitutes urban or rural for ONF differs from that used for ONRC which was determined primarily by the speed limit of the particular street or road. For ONF it is intended that Urban and Rural be differentiated based on adjacent land-use, i.e. if the land the street or road traverses is a rural land-use zone then the road is rural.

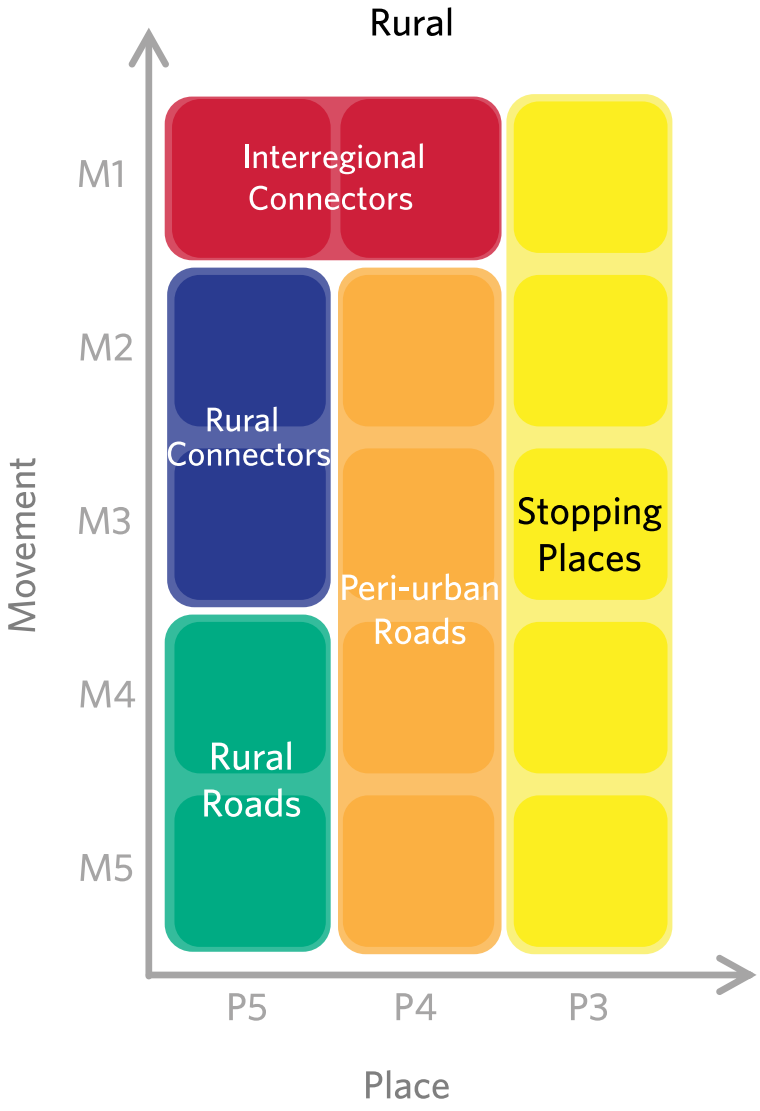
Name

Each street category name suggests the nature of a particular road or street when both the level of movement of people and goods and the nature of the place are factored into the classification. They form part of the common language to be used when referring to similar categories of streets and roads and are easier to remember than technical alphanumeric codes like M2P3.

Street categories can also undertake additional functions that are not immediately invoked by the street category name, and which would appear to be completely different from each other in both function and form, but have in common similar levels of movement and place significance. An example of this is industrial areas when compared to Local Streets and Urban Connectors, where the amount of activity defining the place component is similar, and the level of people and goods movement is comparable.

Description

The descriptions of each street category describe the general characteristics of the street category in terms of the levels of movement, the amount of on-street activity, and indicative adjacent land-use. They provide a summary of all the classification factors for the specific category.



Nature of Place

The significant factors that contribute to the place classification of the street category are described here, with some additional depiction of the specific character for the particular street category.

On-street activity

For the specific street category this describes what a casual observer would experience in terms of the level of activity along and across the street and some indication of the opportunity for lateral movement.

Adjacent land-use

Describes the nature of the adjacent land-use that is generating the requirement for access to the corridor, and therefore contributing to on-street activity and generating movement. The density of residential or commercial properties adjacent to the corridor is also stated.

Nature of Movement

A brief description for each of the five transport modes of that mode's typical use of the particular street category and an indication of the adjacent land-use creating the requirement for movement. These descriptions are indicative only and provided as a guide to classification.

Indicative mode share

A chart showing the indicative mix of modes typically using the street category, and the relative volumes of goods or people movement. Again, this is indicative only and provided as a guide to classification.

Urban Street Family

Local Streets provide quiet and safe residential access for all ages and abilities and foster community spirit and local pride. They are part of the fabric of our neighbourhoods, where we live our lives and they facilitate local community access.

Their local Place significance derives from the on-street activity being associated with those who live on these streets. Movement classification is low with most trips locally generated.

Local Streets are the most common and most diverse streets in urban areas. They are generally important components of walking and cycling networks and should support these transport choices for local trips.

Nature of Place

On-street activity

Low levels of on-street activity associated with residents going about their daily lives. Due to the low levels of vehicle movement, lateral movement can be undertaken at any point along the corridor to coincide with desire lines. In some particularly quiet streets the carriageway can often be used as a play area by local children.

Adjacent Land-use

Primarily suburban low density residential use. Can also apply to low density industrial use such as quiet cul-de-sacs in industrial areas.

Nature of Movement

Walking (Pedestrian Activity)

Low levels of pedestrian movement associated with residents going about their daily lives. First/last kilometre of walking trips connecting to higher activity streets.

Cycling

On-street cycling along residential streets where the volume and average speed of traffic means a relatively safe environment for cycling.

Public Transport

Most local streets have no public transport function. Where they are part of the public transport network they are normally secondary public transport corridors, providing local access and coverage, but at reduced schedules.

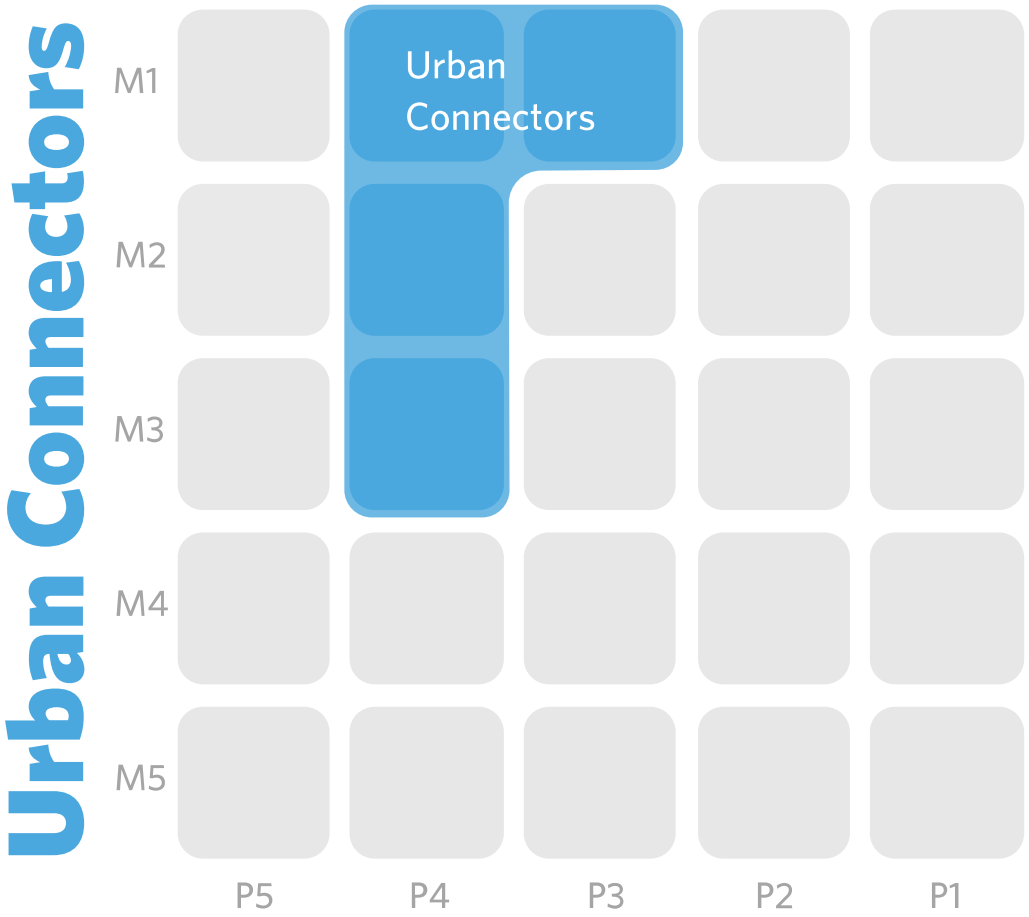
General Traffic

Low volumes of primarily private vehicles associated with residents going about their daily lives.

Freight

Freight use primarily by parcel delivery couriers in residential streets and occasionally furniture removal vans. Low volumes of HV use in quieter industrial area streets.

Indicative mode share



Urban Connectors provide safe, reliable and efficient movement of people and goods between regions and strategic centres and mitigate the impact on adjacent communities.

These streets have a lower Place classification associated with the reduced level of on-street activity resulting from the adjacent land use. The higher Movement classification indicates that the street may be an important route for freight, public transport, private vehicles or cyclists.

The purpose of Urban Connectors is to provide for efficient movement of people and goods from A to B. There are low levels of interaction between the adjacent land use and the street. Separation between modes is likely to be required as average speeds and traffic volumes tend to be higher. Servicing adjacent land has a lower priority, as the key role of these streets is to move along them rather than accessing adjacent properties. Industrial area streets are also most likely to fall within the Urban Connectors category.

Nature of Place

On-street activity

Low levels of on-street activity associated with people needing to pass through an area. Requirement for lateral movement usually confined to intersections with adjoining streets.

Adjacent Land-use

Low to medium density residential and commercial use. Some routes provide for main connectors through industrial areas. Servicing adjacent land has a lower priority, as the key role of these streets is to move along them.

Nature of Movement

Walking (Pedestrian Activity)

Low levels of pedestrian movement associated with people needing to pass through an area. Adjacent land-use and a lack of on-street amenities do not encourage pedestrians to dwell.

Cycling

On-street cycling along busy urban arterials where no special allowance for cycling has been made and the cyclist must share the road with care with vehicles. Urban Collectors supporting longer trips are more likely to be included in on-road primary cycling routes

Public Transport

Urban connectors will often have higher levels of PT, up to PT2 Spine level when providing the link within the route between the residential origin of journeys and the commercial or educational destination. PT services may operate express (limited or no stops) on these sections of the route.

General Traffic

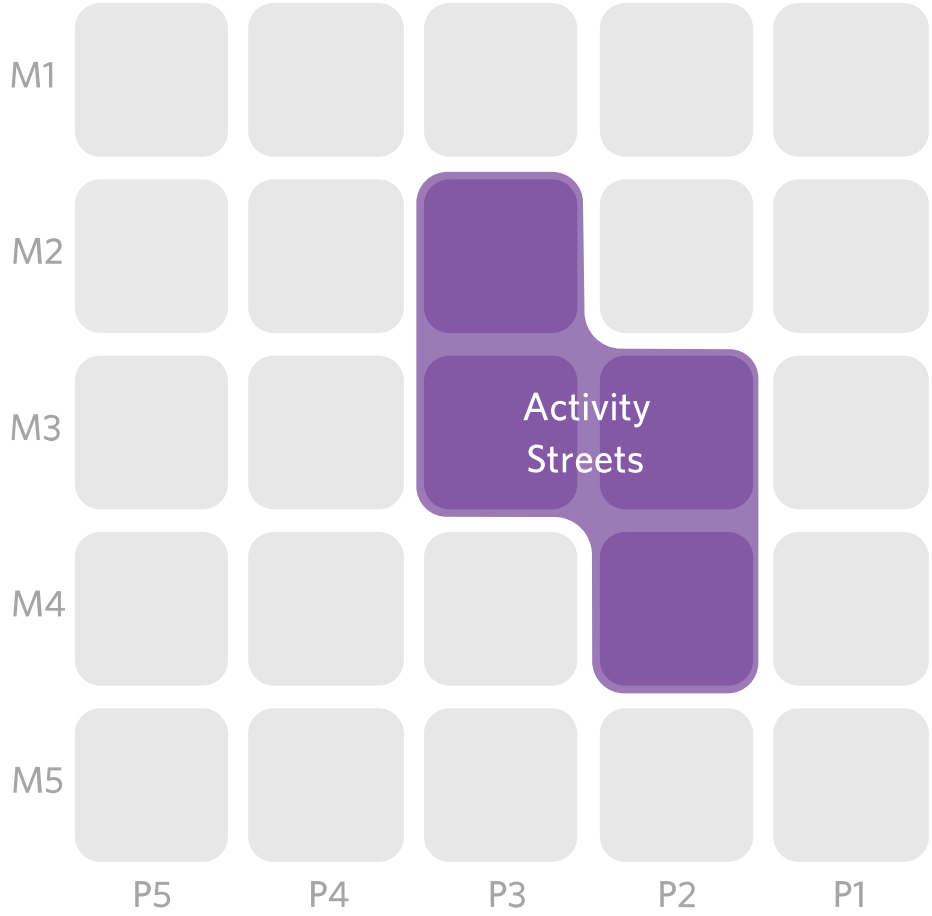
High levels of people movement via private vehicles as route provides for key connections between residential areas and work and education. These routes also provide cross city movement for vehicles travelling longer distances inter-regionally.

Freight

These routes provide the primary freight corridors within the urban realm where these is no Transit Corridor alternative. Urban Connectors provide for safe, reliable and efficient movement of goods between regions and strategic centres.

Indicative mode share

Activity Streets



Activity Streets provide access to shops and services by all modes. There is significant demand for movement as well as place with a need to manage competing demands within the available road space. Activity Streets aim to ensure a high quality public realm with a strong focus on supporting businesses, traders and neighbourhood life. Activity streets are where people spend a significant amount of time, working, shopping, eating, residing, and undertaking recreation. Examples range from neighbourhood shopping centres to waterfront esplanades.

Nature of Place

On-street activity

Increased levels of on-street activity associated with the requirement for access to adjacent stores, businesses and community facilities.

Adjacent Land-use

Moderate density of commercial, retail or industrial activities or medium to high density residential properties

Nature of Movement

Walking (Pedestrian Activity)

Increased levels of pedestrian movement associated with access to shops, businesses and community facilities. Some on-street amenities are provided to encourage pedestrians to dwell.

Cycling

On-street cycling along busy urban arterials where no special allowance for cycling has been made and the cyclist must share the road with care with vehicles. As activity streets are often desirable destinations within a short ride of residential areas, many will have some level of facility for cyclists.

Public Transport

Activity Streets on PT routes normally support PT movement at either PT3 Primary or PT4 Secondary level of movement with PT normally having to share the carriageway with a number of other modes.

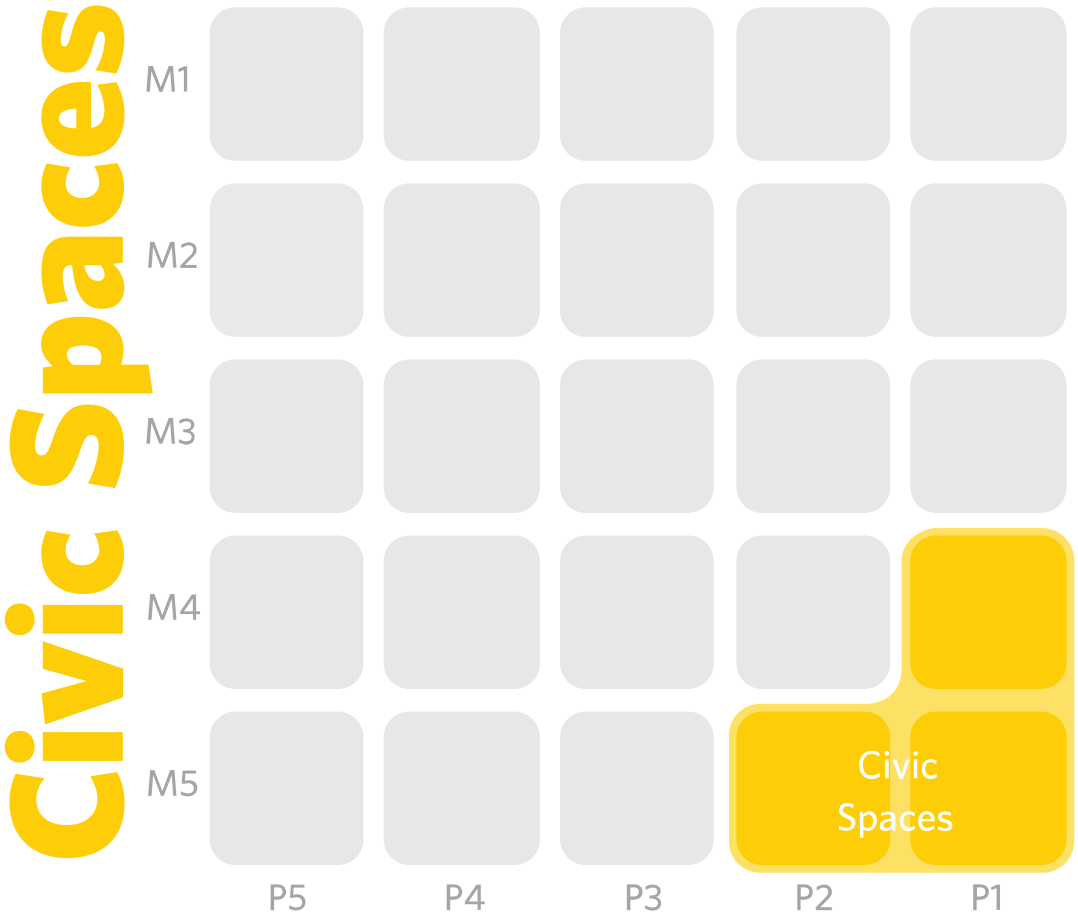
General Traffic

Moderate levels of people movement via private vehicles as route provides for both through connections between residential origin of journeys and the commercial or educational destination, and as a destination itself.

Freight

Moderate levels of through movement of goods, with some freight movement being associated with deliveries to adjacent properties. Higher proportion of goods movement use in industrial area streets connecting manufacturing to shipping and distribution.

Indicative mode share



Civic Spaces are roads and streets with high demand for pedestrian activity combined with a much lower requirement for vehicle movement. They are places communities value, and intended for visitors to enjoy.

These are spaces that people are encouraged to spend time in, and where people on foot can relax and move freely. There is usually street furniture and other amenities to encourage and support people lingering and spending time in these spaces.

These streets have a higher Place classification representing the increased level of on-street activity and higher density adjacent land use generating that activity. The lower Movement classification indicates that these streets are mainly intended for localised on-street activity with little or no through movement. The lateral movement of pedestrians is usually given priority in these spaces. Examples include pedestrianised streets, plazas and low speed shared streets.

Nature of Place

On-street activity

High levels of on-street activity. These spaces provide pedestrian priority over vehicle movement. Civic spaces allow for safe lateral movement at any point along the route.

Adjacent Land-use

Community based facilities that bring people together. Sports arenas, concert venues, theatres, parks, restaurants and bars particularly those providing al-fresco dining. Tertiary education campuses, tourist attractions.

Nature of Movement

Walking (Pedestrian Activity

High levels of pedestrian movement. These spaces are designed for pedestrians to stop and spend time socialising, or just enjoying the space. A range of amenities are provided to encourage people to dwell.

Cycling

Some cyclist activity, particularly in shared streets designed to support higher volumes of active mode travel. Some level of facility will usually be provided for cyclists.

Public Transport

Civic spaces are not normally utilised for PT movement, but may occur close to PT interchanges to facilitate the efficient movement of disembarking passengers continuing their journey as pedestrians.

General Traffic

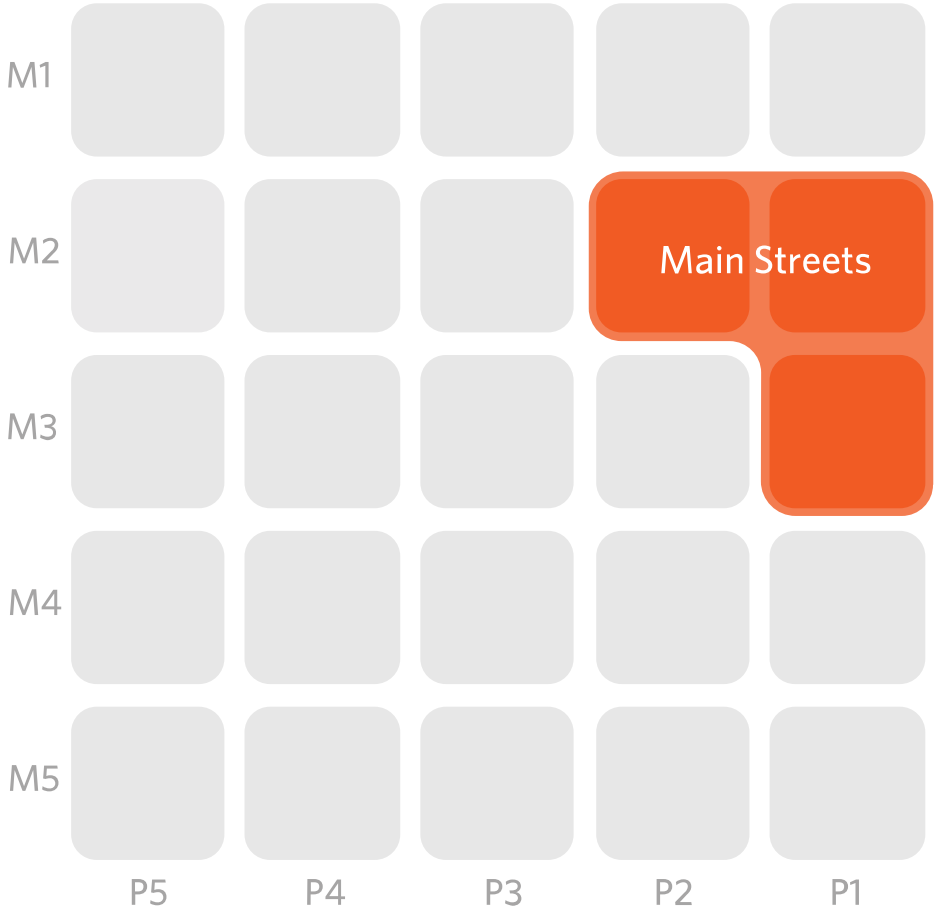
Low speed people movement by general traffic within shared spaces. This mode is sometimes excluded from pedestrianised precincts.

Freight

Goods movement primarily by parcel couriers and for goods delivery using light vehicles where vehicle access is provided within shared spaces.

Indicative mode share

Main Streets



Main Streets provide a pedestrian friendly environment. They aim to support businesses, on-street activity and public life while ensuring excellent connections with the wider transport network. While not having the level of through movement of City Hubs, they provide a similar function, needing to balance the interaction between people and goods movement and on-street activity. Examples include rural townships and provincial cities where the main through road also doubles as the main commercial centre.

Nature of Place

On-street activity

High levels of on-street activity associated with the requirement for access to adjacent stores, businesses and community facilities. The requirement for lateral movement is tempered by the need to support increased levels of traffic movement.

Adjacent Land-use

Diverse mixed use, low rise apartments, special zones or high density commercial and retail.

Nature of Movement

Walking (Pedestrian Activity)

High levels of pedestrian movement associated with access to adjacent stores, businesses and community facilities. Some on-street amenities are provided to encourage pedestrians to dwell, but the primary purpose of the pedestrian realm is providing connections to shops and businesses..

Cycling

Higher levels of cyclist movement associated with access to adjacent stores, businesses and community facilities. Some on-street facilities are normally provided to encourage cyclists. Many Main Streets will be included within strategic cycling networks.

Public Transport

Main Streets on PT routes typically support PT movement at either PT3 Primary or PT4 Secondary level of movement.

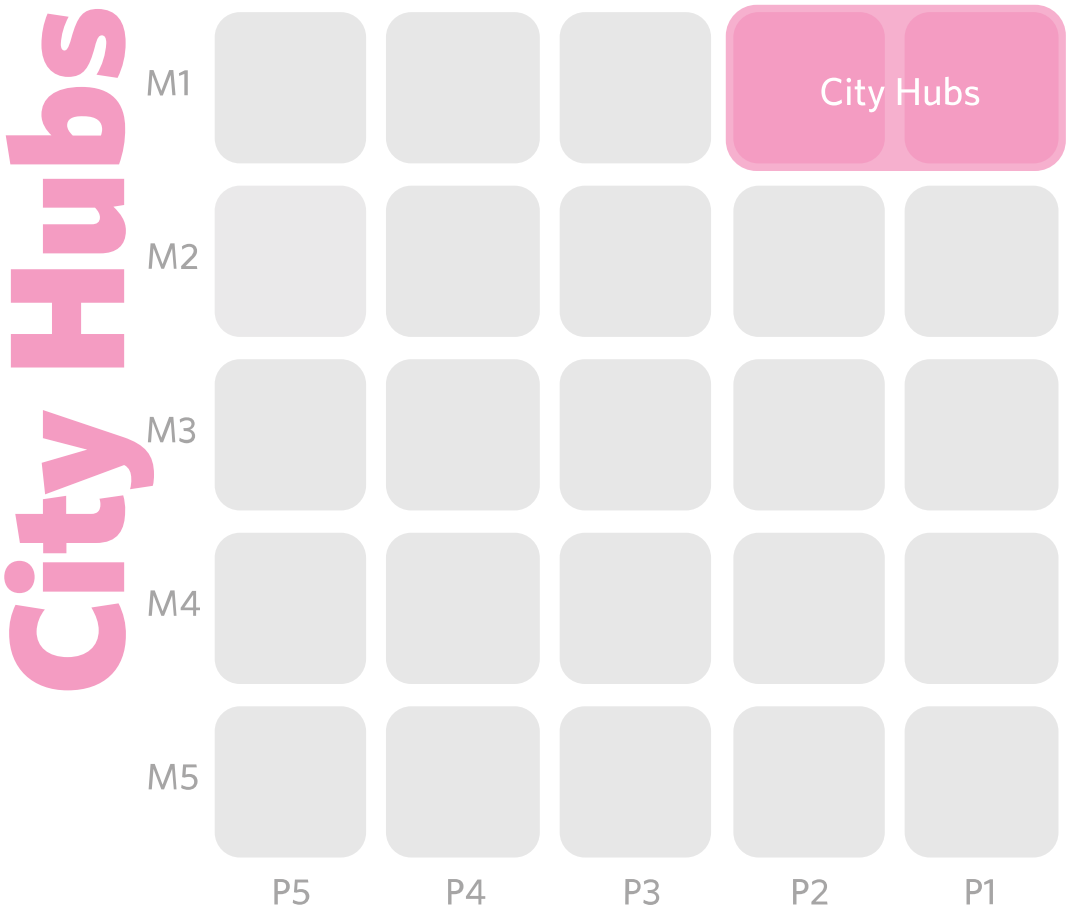
General Traffic

Moderate levels of people movement accessing destinations provided by adjacent land-use via private vehicles, usually combined with a moderate level of through movement. Movement is moderated by the increased on-street activity and interaction with pedestrians moving laterally across the carriageway.

Freight

Low levels of through movement of goods, with most freight movement being associated with deliveries to adjacent properties. In rural townships where the main through road also doubles as the main commercial centre, movement of freight is often diverted away from Main Streets.

Indicative mode share



City Hubs are dense and vibrant places that also have a high demand for people movement. They are also places providing focal points for businesses and culture. These streets should aim to reduce the impact of high traffic volumes while accommodating high pedestrian numbers, multi-modal journeys and access to public transport and essential emergency services.

These streets have both a higher Place and Movement classification. They are busy spaces with lots of activity from people visiting the location due to the adjacent land use activity, and a high amount of through movement of people travelling by all modes.

The large number of competing demands within City Hubs require careful consideration to ensure that this competition between the significant Movement and Place functions is managed. These streets have a high number of people moving through and across them and so require efficient modes of transport, with lateral movement access prioritised to mitigate the impacts of congestion, and ensure a safe environment.

Examples include major city centre streets such as Queen Street in Auckland and Lambton Quay in Wellington.

Nature of Place

On-street activity

Highest levels of on-street activity associated with the requirement for access to adjacent stores, businesses and community facilities, and generated by the high density residential and commercial adjacent land-use. To provide a safe environment for lateral movement, regular controlled crossing opportunities are usually required.

Adjacent Land-use

Very high density office and residential tower blocks, central city shopping centres. Central business precincts of major cities.

Nature of Movement

Walking (Pedestrian Activity)

Highest levels of pedestrian movement associated with access to adjacent stores, businesses and community facilities, and generated by the high density residential and commercial adjacent land-use. Provision of on-street amenities needs to be balanced with the requirement to allow for the movement of high numbers of pedestrians.

Cycling

High levels of cyclist movement associated with access to adjacent stores, businesses and community facilities, and generated by the high density residential and commercial adjacent land-use. City hubs are likely to be included in strategic cycling networks. Cycling is an efficient means of goods delivery (letters, small parcels, fast-food delivery) within City Hubs.

Public Transport

City hubs on PT routes typically support PT movement at a PT2 or PT3 level of movement where there is often a confluence of many PT services converging in metropolitan areas. In many cases PT is given priority within these corridors.

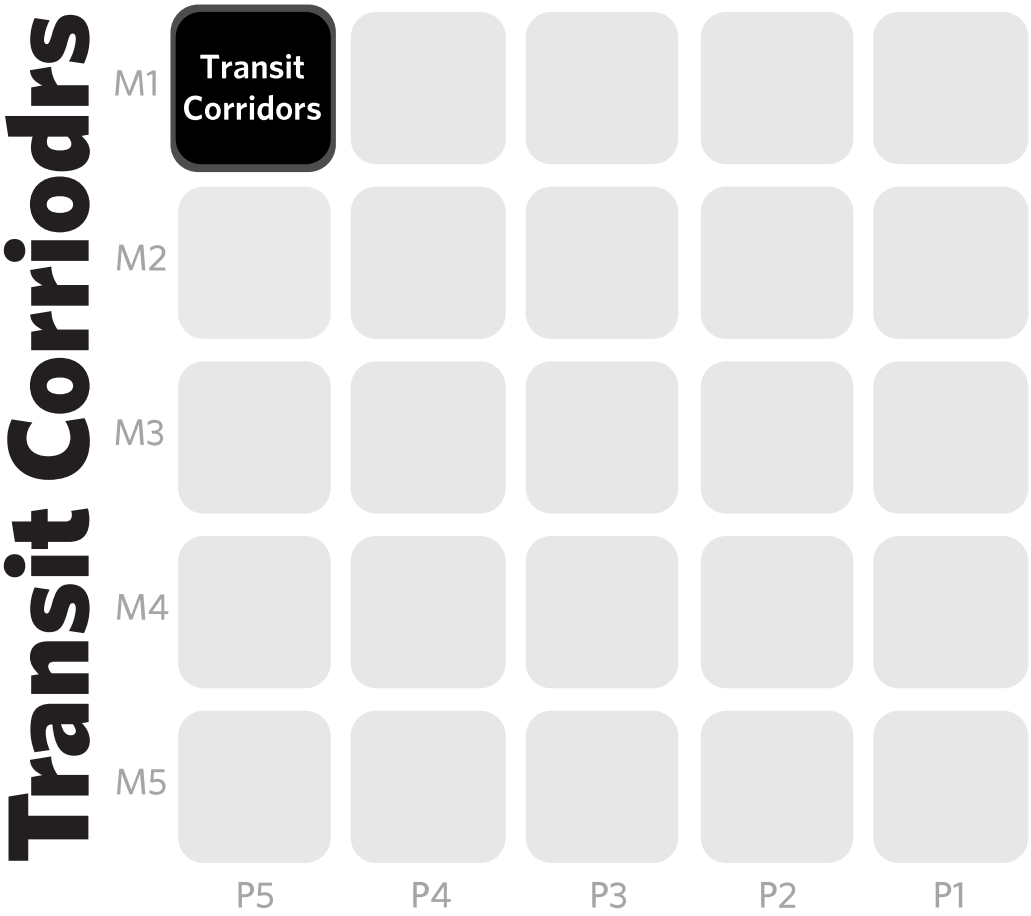
General Traffic

Higher levels of people movement by private vehicle generated by the requirement for access to adjacent stores, businesses and community facilities. Travel times are generally lower due to the increased interaction with the place based activity and requirement for lateral movement by pedestrians.

Freight

Low levels of through movement of goods, with most freight movement being associated with deliveries to adjacent properties. Typically, provision is made for freight off-line by service lanes to divert this mode away from City Hubs.

Indicative mode share



Transit Corridors provide for the fast and efficient long distance movement of people and goods within the urban realm. This includes motorways and urban expressways. They are mode specific and use by other modes than those intended is discouraged or even prohibited. By definition all dedicated, high movement and mode specific transport corridors such as heavy rail networks and busways are included in this classification.

Nature of Place

On-street activity

Active modes of transport are specifically excluded from using these corridors.

Adjacent Land-use

These corridors can traverse the entire range of urban land-use zones. As there is no provision for access, adjacent land-use is not a generator of on-street activity.

Nature of Movement

Walking (Pedestrian Activity)
Pedestrians are specifically excluded from using these corridors.

Cycling
Cyclists are specifically excluded from using these corridors.

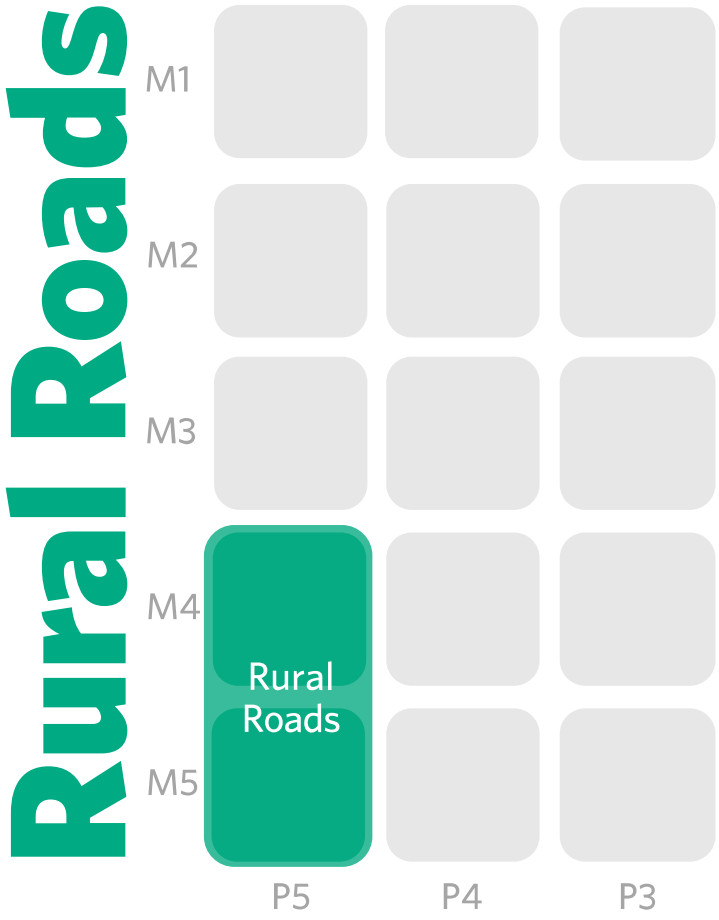
Public Transport
Utilised as mass transit corridors to enable the efficient movement of PT vehicles across cities. May share with other vehicles such as on motorways and expressways, or use dedicated PT only corridors such as busways and metro railways. Some lengths of motorway provide for PT only lanes to prioritise movement by this mode.

General Traffic
Fast and efficient long distance movement of people in cars and light commercial vehicles.

Freight
Fast and efficient long distance movement of goods by heavy vehicle on motorways and expressways or by rail.

Indicative mode share

Rural Street Family



Rural Roads primarily provide access to rural land, for those that live there, and in support of the land-use activity being undertaken. Rural Roads are the most common and most diverse roads in rural areas. They have no appreciable on-street activity occurring and in many parts of the country are unsealed. Some rural roads are important for freight, collecting dairy and forestry and other primary produce from their source, while others, where volumes of vehicular traffic are very low, can provide safe and pleasant recreational and tourism routes, including the New Zealand Cycle Trail and Te Araroa (New Zealand's walking trail). In some parts of New Zealand, rural roads are utilised more by people riding horses than by vehicles.

Nature of Place

On-street activity

These corridors usually demonstrate no discernible on-street activity, as no provision is made to support pedestrian movement. Some casual use of roadsides is made for localised movement. On occasion, the corridor may be used for activities such as mustering stock.

Adjacent Land-use

Usually zoned rural production or general rural. The vast range of agricultural, horticultural, vinicultural, forestry and other productive land uses. National parks and other non-productive natural areas.

Nature of Movement

Walking (Pedestrian Activity)

No provision is made to support pedestrian movement. Some casual use of roadsides is made for localised pedestrian movement.

Cycling

Low levels of utility cycling in rural areas within an accessible distance of urban areas.

Public Transport

Some use at PT5 level as school bus routes by targeted services

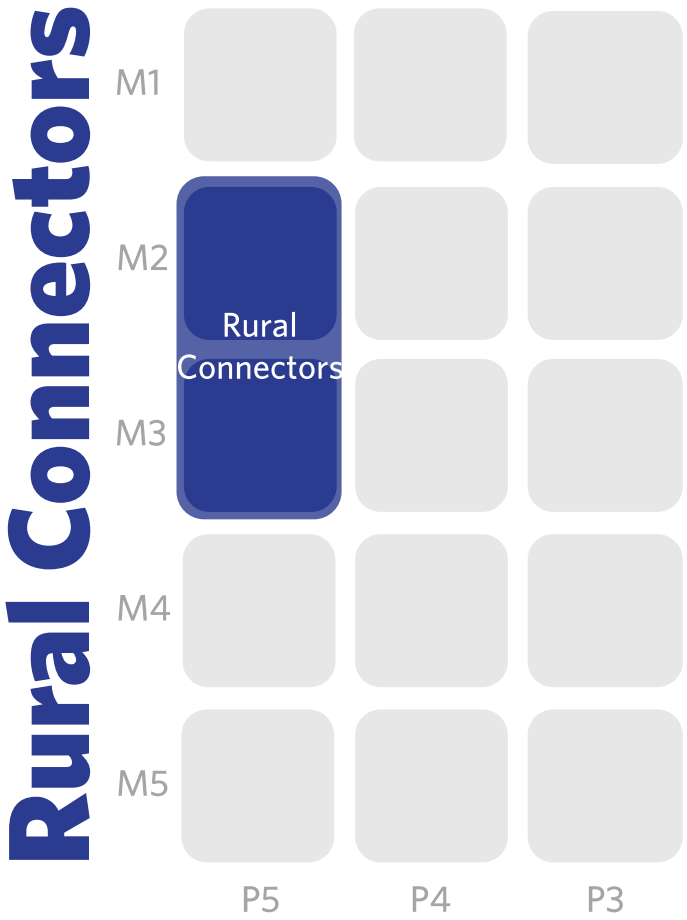
General Traffic

Low levels of people movement via private vehicles associated with residents access to work and education. Localised movement associated with adjacent rural land-use.

Freight

Low levels of goods movement associated with connecting primary producers to processing facilities and goods markets.

Indicative mode share



Rural connectors provide the link between rural roads and interregional connectors. They support an increased level of through traffic, while also providing access from the adjacent land they pass through. Examples include feeder roads into townships and roads to regionally significant tourist attractions.

Nature of Place

On-street activity

These corridors usually demonstrate no discernible on-street activity, as no provision is made to support pedestrian movement. Some casual use of roadsides is made for localised movement. On occasion, the corridor may be used for activities such as mustering stock.

Adjacent Land-use

Usually zoned rural production or general rural. The vast range of agricultural, horticultural, vinicultural, forestry and other productive land uses. National parks and other non-productive natural areas

Nature of Movement

Walking (Pedestrian Activity)

No provision is made to support pedestrian movement. Some casual use of roadsides is made for localised pedestrian movement.

Cycling

Low levels of utility cycling in rural areas within an accessible distance of urban areas. Some use of rural connector roads for tourist cycling.

Public Transport

Some use at PT5 level as school bus routes by targeted services. May be used as a PT4 Secondary PT route for longer distance services between towns but usually with no provision of stops.

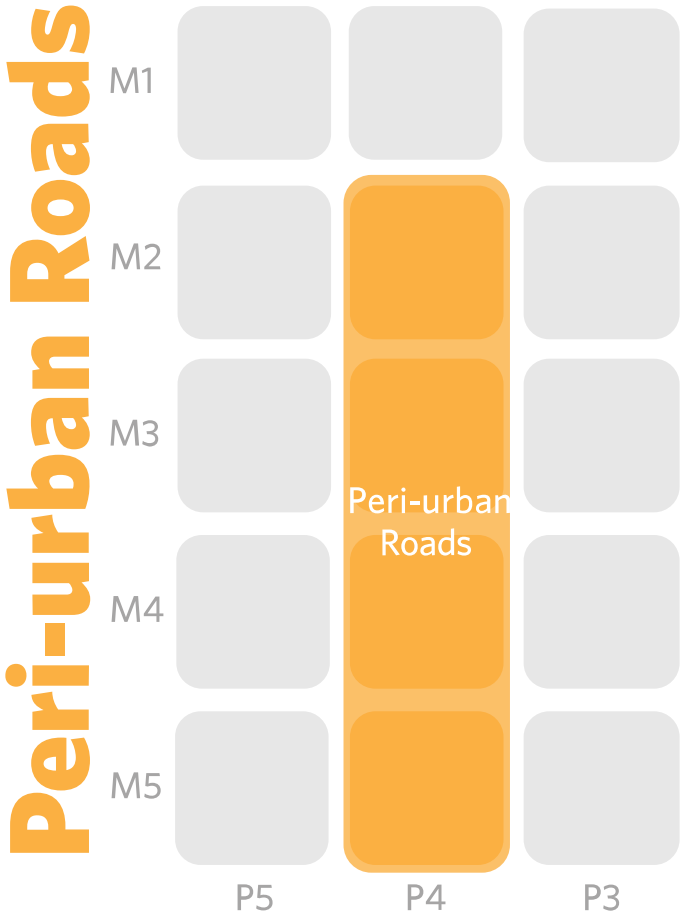
General Traffic

Higher levels of people movement in private vehicles associated with longer journeys between towns and connecting rural residents to work and education in townships.

Freight

High levels of goods movement associated with connecting primary producers to processing facilities and goods markets. Rural connectors also provide the secondary routes for longer distance goods movement within regions.

Indicative mode share



Peri-urban Roads primarily provide access from residential property on the urban fringe, where the predominant adjacent land-use is residential, but usually at a lower density than that found in urban residential locations. On street activity is discernible and local in nature but also at lower levels than in urban areas. The level of people and goods movement on peri-urban roads can range from low volume through to regional.

Nature of Place

On-street activity

Low levels of on-street activity associated with residents going about their lives. Some activity associated with first/last kilometre of trips to and from adjacent urban areas.

Adjacent Land-use

Adjacent land-use is residential on larger lot properties and lifestyle blocks. Nearer urban areas and in small hamlets and settlements the size of properties may reduce to appear almost urban in nature.

Nature of Movement

Walking (Pedestrian Activity)

Low levels of pedestrian movement associated with residents going about their daily lives utilising the roadside berms.

Cycling

Low levels of cyclist movement associated with residents going about their daily lives and accessing nearby townships.

Public Transport

Some use at PT5 level as school bus routes by targeted services. May be used as a PT4 Secondary PT route for longer distance services between towns, and in some instances may also include provision of bus stops.

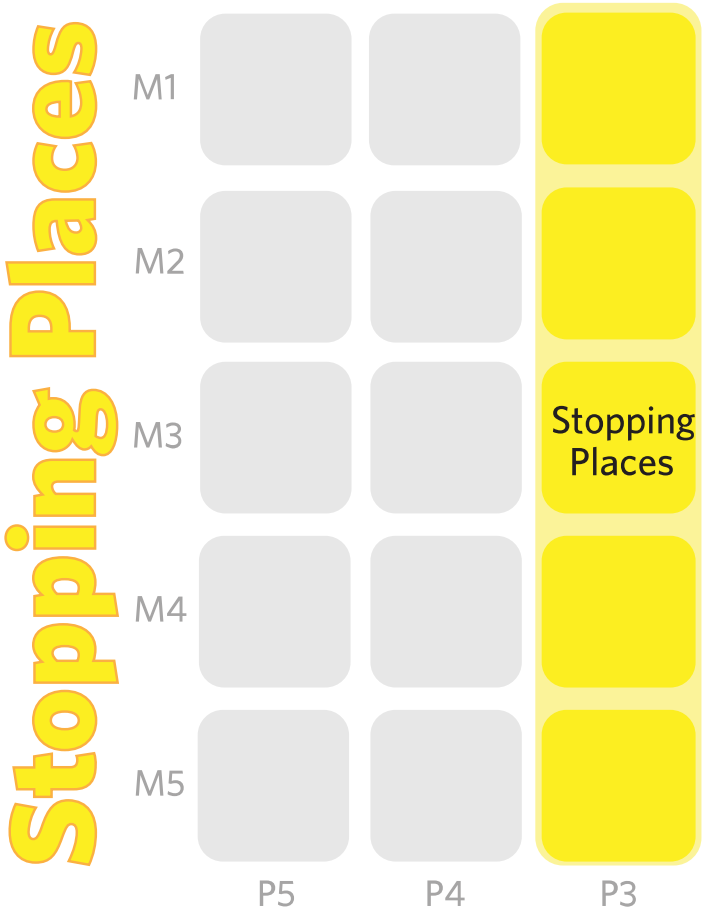
General Traffic

Moderate levels of people movement in private vehicles passing through and by residents accessing work and education in nearby townships.

Freight

Varying levels of goods movement depending on the associated movement class.

Indicative mode share



Stopping Places are where people gather in a rural setting. There is adjacent land-use generating on-street activity, and lateral movement across the carriageway can be expected. They have levels of on-street activity or adjacent land-use generating activity that is above the level normally generated by local residents. Examples include rural schools, community halls, marae, and sites of scenic interest. The movement classification around Stopping Places covers the entire range from M5 to M1 and so they can occur on quiet rural roads through to interregional connectors.

Nature of Place

On-street activity

Increased on-street activities, usually for a short section of corridor to access key designations immediately adjacent to and accessed from the corridor. Can occur on routes of any movement class. Some type of intervention is usually required on the higher movement corridors to ensure safe and efficient access.

Adjacent Land-use

Special use areas such as rural schools, community halls, marae and tourist attractions.

Nature of Movement

Walking (Pedestrian Activity)

Increased pedestrian movement including significant lateral pedestrian movement within the length of corridor designated as a Stopping Place.

Cycling

Some cyclist movement including lateral movement within the length of corridor designated as a Stopping Place, particularly by cycle tourists accessing tourist attractions.

Public Transport

Where the stopping place is a rural school will usually be utilised as a place for school bus services to stop and discharge/uplift passengers. Some tourist destinations close to urban areas may be on scheduled PT routes.

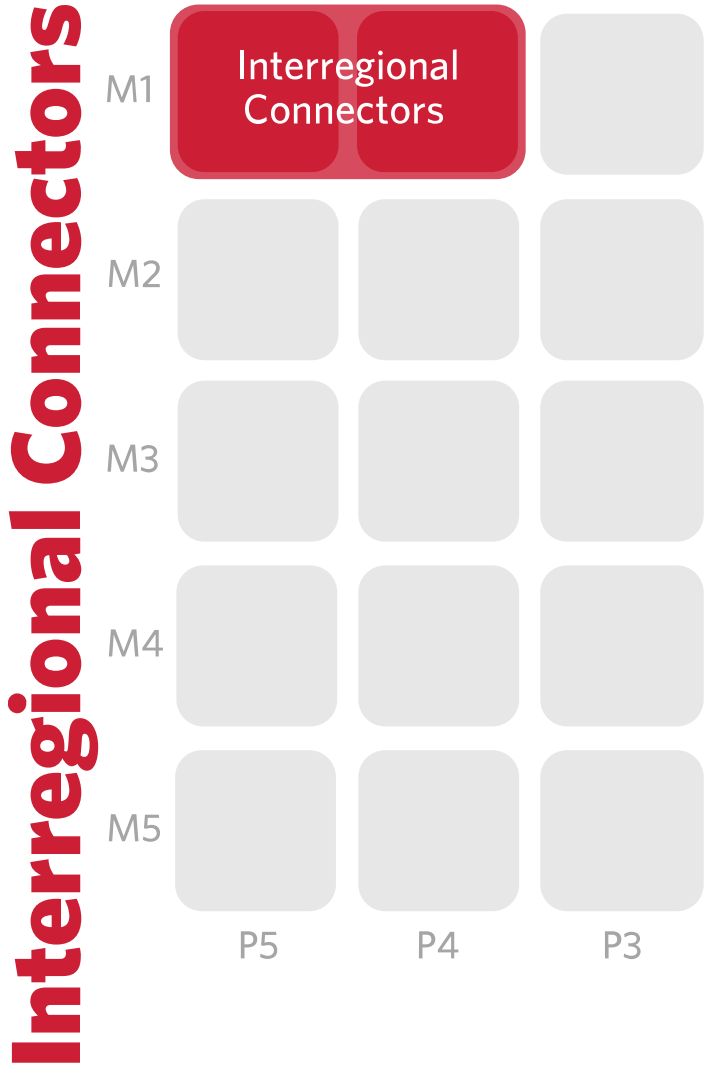
General Traffic

Varying levels of people movement by private vehicle depending on the route. The requirement for access to and from the adjacent land-use is intensified around the location, compared to the general nature of the associated corridor the Stopping Place occurs on.

Freight

Varying levels of goods movement depending on the corridor movement class.

Indicative mode share



Interregional Connectors provide safe, reliable and efficient movement of people and goods between regions and strategic centres in a rural context. The focus of Interregional Connectors is to provide for efficient movement of people and goods over significant distances, and therefore these roads will usually have reduced land use access along them, many being designated as Limited Access Roads (LARs).

Nature of Place

On-street activity

These corridors usually demonstrate no discernible on-street activity, as no provision is made to support pedestrian movement. Some casual use of roadsides is made for localised movement. Some CR level cycling activity is possible on routes that connect the NZ cycle trail, or by cycle tourists.

Adjacent Land-use

Usually zoned rural production or general rural. The vast range of agricultural, horticultural, vinicultural, forestry and other productive land uses. National parks and other non-productive natural areas.

Nature of Movement

Walking (Pedestrian Activity)

These corridors usually demonstrate no discernible on-street activity, as no provision is made to support pedestrian movement. Some casual use of roadsides is made for localised movement.

Cycling

Low levels of utility cycling in rural areas within an accessible distance of urban areas. Use of Interregional Connectors for tourist cycling, particularly to link parts of the NZ cycle trail.

Public Transport

May be used as a PT4 Secondary PT route for longer distance services between cites and satellite towns.

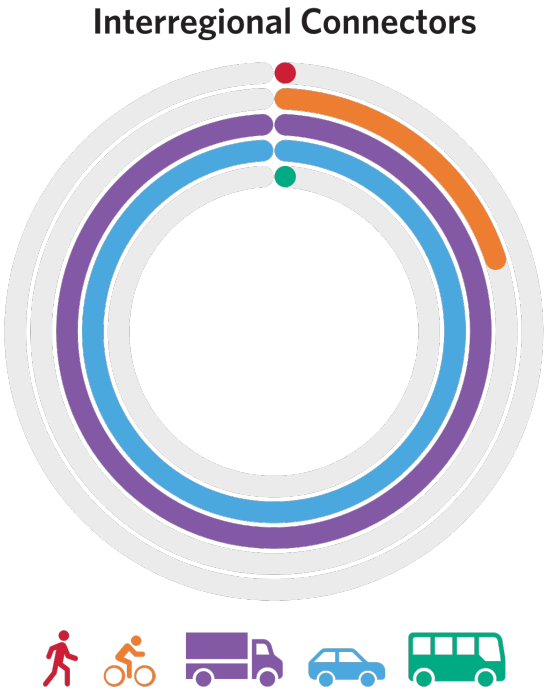
General Traffic

High levels of people movement by private vehicles undertaking interregional travel.

Freight

Interregional Connectors provide the primary routes for long distance goods movement inter-regionally and nationally.

Indicative mode share




MOVEMENT

Movement of People and Goods

The classification of overall movement should achieve the following outcomes:

- Recognise the contribution to movement of all modes of transport, including active modes
- Focus on the movement of people and goods along a corridor, not simply the number of vehicles using the carriageway
- Provide a method for classification that is principles based and both prescriptive and intuitive. That is, the approximate classification can be derived using quantitative measures, and refined using qualitative factors.
- Feel right when the movement and place classification for the corridor is compared against the street category that classification places it in, i.e. the intended function of the corridor is congruent with its movement class.

People movement

A fundamental shift from the One Network Road Classification framework is the consideration of movement as people and goods, rather than the number of cars and trucks using a corridor. This approach also better recognises the contribution of other modes to the classification of overall movement. Consider figure 1, if we need to move 100 people along a corridor. This can be achieved by 100 pedestrians, or 100 cyclists, or 84 cars and light vehicles, or 2.5 buses, or just one train carriage. In reality it will be some combination of all available modes. The point is that 100 pedestrians walking down a street is as valid a means of movement as 84 cars travelling down the same street.

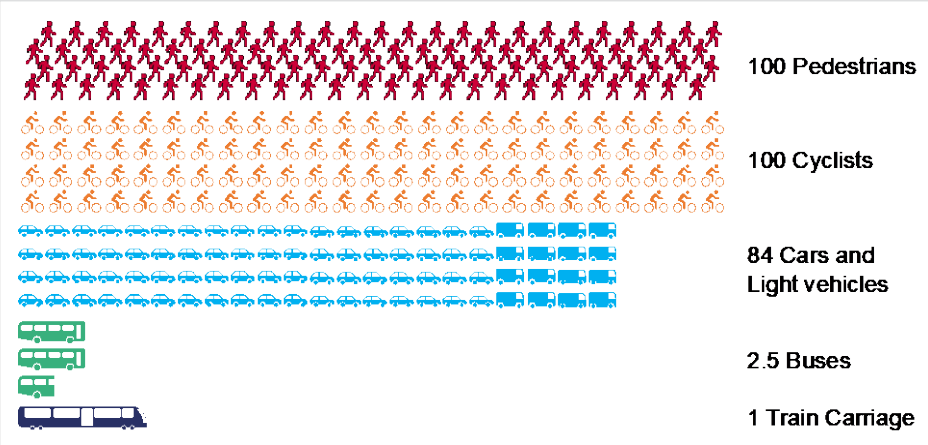


Figure 1: People movement

Linking locations of significance

Other factors for movement need to be considered, such as the intent of the corridor in linking locations of significance. This categorisation factor is known as strategic significance and indicates the importance of the corridor within the transport network. Factors that contribute to strategic significance include the importance of the start and end points of the journey, usually in terms of their contribution to the economy, access to essential services and the distance between these points, for example inter-regional journeys being categorised higher than local journeys. Strategic significance is also designated by network design. This is best demonstrated that in most instances there are likely to be more than one possible route to connect two locations of significance, but only one will usually be designated as the strategic corridor for that link.

Putting this together with people movement means that a footpath linking a major transport interchange with a metropolitan centre carrying 30,000 pedestrians a day has a similar rating for movement to an urban motorway.

Considerations to determine **Movement** Significance		Nature of Movement	Strategic Hierarchy	Scale of People Movement
M1	**Major**	Strategic transport corridors providing critical connections and moving high volumes. Often with separated modes and competition for space (expressways, cycleways, bus lanes etc.)	Mass movement corridors across a city, region or nationally	Typically > 20,000 per day
M2	**Significant**	Priority corridors linking main centres or significant destinations and travel hubs within a city or region. Typically higher proportions of freight movement.	Busy corridors connecting important hubs within a city or region	10,000 – 25,000 per day
M3	**Moderate**	Corridors for moving people and goods around a city or region. Increasing volumes across multiple modes.	Collector corridors to major transport connector routes	3,000 – 12,000 per day
M4	**Minor**	Local movements by people connecting to the main transport corridors. Increased levels of modal mix.	Local movement linking to collector corridors	300 – 4,000 per day
M5	**Low**	Local movement by people making short trips or connecting to collector routes. Typically lower volumes.	Local access and movement	Typically < 500 per day

GENERAL TRAFFIC

General Traffic

General traffic will continue to use the 8 levels of classification prescribed by the One Network Road Classification framework.

This approach has the following advantages:

- For much of the network, the current ONRC classification can be directly transcribed over to One Network Framework
- The ONRC classification methodology for general traffic is well known throughout the sector
- Existing approaches to performance monitoring and reporting for carriageways can be retained

The significant difference to ONRC is that the One Network Framework is also intended to describe a view of the future intended function of the network in addition to the current operational state, i.e. the future intended function classification will reflect how the corridor is expected to operate in the medium to long term. This coupled with the fact that the categorisation need only consider the General Traffic mode means that some adjustment to the ONRC measures to align with strategic significance may be justified.

Rural / Urban difference

As for the ONRC, the categorisation for General Traffic will recognise the difference between streets within urban areas, and rural roads, i.e. the threshold to be rated in a particular class will be lower in the rural context than in the urban context.

It is intended that Urban and Rural be differentiated based on adjacent land-use, i.e. if the land the street or road traverses is a rural land-use zone then the road is rural.

Strategic significance

For general traffic, the strategic significance of each class is implicit, with the higher rated classes having greater strategic significance. When classifying general traffic, it will be important to look at the function the corridor is intended to provide, and not simply the volume of vehicles it is expected to convey. For example, urban motorways do not have to be capable of supporting 35,000 cars per day if their primary purpose is to connect to a strategically important location. Likewise, a rural road that is supporting relatively low volumes of traffic could be elevated in status if it is the sole means of connectivity to a remote region to ensure the corridor receives adequate funding to maintain the appropriate level of resilience.

Generally, the methodology for determining the movement classification of the general traffic mode will continue to utilise the ONRC method, which includes consideration of traffic volumes, importance of the link (strategic significance), and differentiating urban and rural contexts. The AADT metrics for each category will be adjusted to reflect people movement rather than vehicle movement, therefore allowing for a base comparison with other modes and the facility to use simple arithmetic to determine an overall movement classification based on all modes.

General Traffic

Class	ONRC Class	Strategic Significance	ONRC Metric / class differentiator	People movement per day
GT1	ONRC - High Volume.	The high volume movement of people nationally or to nationally significant locations. Nationally significant routes.	Urban > 35,000, Rural > 20,000 VPD	Urban > 40,000, Rural > 25,000
GT2	ONRC – National	The movement of people nationally or to nationally significant locations	Urban > 25,000 Rural > 15,000	Urban > 30,000 Rural > 18,000
GT3	ONRC – Regional	Connectors providing significant movement of people between cities and regions.	Urban > 15,000 Rural > 10,000	Urban > 18,000 Rural > 12,000
GT4	ONRC – Arterial	Connectors providing significant movement of people through or between neighbourhoods and towns.	Urban > 5,000 Rural > 3,000	Urban > 6,000 Rural > 3,500
GT5	ONRC – Primary Collector	Major collectors that link neighbourhoods to townships/districts.	Urban > 3,000 Rural > 1,000	Urban > 3,500 Rural > 1,200
GT6	ONRC – Secondary Collector	Minor collectors that link local areas to neighbourhoods.	Urban > 1,000 Rural > 1,000	Urban > 1,200 Rural > 1,200
GT7	ONRC – Access	Movement within a local area or to access areas outside the local area.	Urban < 1,000 Rural < 200	Urban < 1,200 Rural < 250
GT8	ONRC – Low Volume	Low volume movement within a local area	Urban < 200 Rural < 50	Urban < 250 Rural < 60

FREIGHT

Freight

For the reasons stated above under general traffic, the ONRC categories for Freight are being maintained. For freight, this means there are 7 categories, as ONRC made no distinction between Access and Low Volume for freight.

Strategic Significance

Generally, the methodology for determining the movement classification of the freight mode will continue to utilise the ONRC method, which includes consideration of vehicle counts and importance of the link (strategic significance). The AADT metrics for each category will remain as they are as they are a proxy for goods movement. This will continue to be the case until access to accurate and comprehensive information about the tonnage of goods being moved on the road network is available.

Goods Movement

Converting AADT to goods movement at present is a simple arithmetic exercise of multiplying the number of vehicles by an assumed average load size. To date, no work has been done around quantifying the correlation between tonnage of goods moved and movement of people, and therefore it is difficult to factor goods movement into overall movement. Strategic importance of the route for freight, both in terms of volumes of freight able to be moved and providing links between significant places is still a valid methodology for classifying Freight Movement. The framework also allows for the inclusion railway lines as part of the freight network. This allows for a corridor planning approach to freight movement, providing for mode shift from road to rail as part of strategic network transport planning.

Freight

Class	ONRC Class	Strategic Significance	ONRC Metric / class differentiator	Goods Movement
F1	ONRC - High Volume.	The high volume movement of goods nationally or to nationally significant freight hubs	> 1,200 VPD	> 30,000 Tn/day
F2	ONRC – National	The movement of goods nationally or to nationally significant freight hubs	> 800	> 20,000 Tn/day
F3	ONRC – Regional	Connectors providing significant movement of goods between cities and regions.	> 800	> 10,000 Tn/day
F4	ONRC – Arterial	Connectors providing significant movement of goods through or between neighbourhoods and towns	> 300	> 7,000 Tn/day
F5	ONRC – Primary Collector	Major collectors that link neighbourhoods to townships/districts.	> 150	> 3,500 Tn/day
F6	ONRC – Secondary Collector	Minor collectors that link local areas to neighbourhoods.	> 25	> 600 Tn/day
F7	ONRC – Access ONRC – Low Volume *	Freight movement within a local area or to access areas outside the local area.	< 25	< 600 Tn/day

* The ONRC functional classification made no distinction between Access and Low Volume for Freight movement, and therefore F7 covers both classes.

PUBLIC TRANSPORT

Public Transport

The classification for Public Transport movement has been developed in consultation with specialists in PT and multi-modal transport within Waka Kotahi. The ONF project seeks to align with other frameworks and approaches in general use across the transport sector, and in this case with how PT practitioners view their network.

Public Transport Service Level descriptor

The service level descriptor will be included in the ONF as it underpins the cornerstone concept of the ONF of creating a common language for use across all disciplines within the transport sector. The descriptor is a useful short-form label for each of the PT classes that quickly invokes the nature of the PT service or route.

Distinguishing between PT Services and Movement Corridors

In order to standardise the contribution of public transport to the movement function of a corridor, the distinction needs to be made between a Public Transport Service and Public Transport use of a corridor. A PT service has attributes such as headway (the regularity of a particular service), and service start and end points, that do not apply to the corridor. A corridor may support more than one PT service, so the cumulative result of all services using a corridor will be what defines the PT movement categorisation.

Strategic Significance

Strategic significance describes the extent to which the particular corridor contributes to the Public Transport Network. For PT this ranges from dedicated corridors that support rapid transit to corridors where low volumes of targeted PT services operate.

Indicative Vehicle volume (at peak)

Vehicle volume is the combined number of services per hour (at peak) that would be observed for all services passing a point on the section of street being classified. Where the street supports more than one PT service then the vehicle frequency will be higher than for the individual services. For example, if two services which both have a 15 minute headway at peak (4 services per hour) utilise the same street for part of their route, the effective vehicle volume would be 8 services per hour along that section of street. Vehicle volume then is an indication of the total demand on the street section by public transport. Vehicle volumes usually increase as PT routes get closer to central business districts and key transport interchanges.

Metro Rail and Ferries

By definition, all Metro Rail lines, and ferry sea lanes would be classified as PT1 as they are considered rapid transit corridors irrespective of headway, availability and or volume of people movement. For this reason, all Metro Rail and ferry services are described in Vehicle Volume as PT1.

People Movement

Public transport is a very efficient means of moving people, with a fully laden 44 seat bus equating to at least 35 private motorcars, even more efficient for higher occupancy PT vehicles like double-decker buses that are becoming increasingly common in NZ. ONF is concerned with people movement rather than traffic volumes. Using the movement of people or freight along a corridor over a period of time (standardised to daily counts) also allows for direct comparisons across transport modes in their contribution to transport outcomes.

School Buses

School buses can be included within the classification consideration of a particular corridor if the route the school bus takes is shared with other public transport services. If the route is only used for school buses, then the corridor would be classified as Targeted.

Public Transport

Class	Public Transport Service Level descriptor	Strategic Significance (Role in Public Transport Network)	Indicative vehicle volume (At peak) (Bi-directional)	Indicative People Movement (Bi-directional)	Description
PT1	Dedicated	Strategically significant corridors where **'rapid transit'** services are operated, providing a quick, frequent, reliable, and high-capacity service that operates on a permanent route (road, rail or sea lane) that is dedicated to public transport or largely separated from other traffic.	All metro rail corridors and dedicated corridors for non-rail public transport: all services. Buses, ferries and other non-rail public transport on largely separated corridors: > 12 services per hour.	>3000 per day	Dedicated or largely separated public transport corridors provide for the fast and efficient movement of people by rapid transit. By definition, they include dedicated busways and all metro rail lines and ferry sea lanes. They are only service public transport (excepting rail lines that can also provide a goods movement function under the freight mode.
PT2	Spine	Strategically significant corridors where many frequent services operate and **many different bus services merge together to create very high frequencies and overall passenger movement**. Any deficiencies on these corridors affect multiple services and large parts of an urban area.	>12 services per hour	1000 to 10000+ per day	Spine corridors are where many inbound services come together or outbound services operate, usually within city centres or at major transport interchanges, and much of the street space can be dedicated to public transport infrastructure, including significant space utlitised for bus stops. Examples are Symonds Street in Auckland central, and Manners Street in Wellington.
PT3	Primary	Strategic corridors where **frequent public transport services operate, providing regular (generally at least once every 15 minutes)** services across most of the day, seven days a week.	> 4 services per hour	500 to 2000 per day	Primary public transport corridors occur on the parts of the network where frequent service can be expected. This could be for part of route where the collection of services operating results in a better than 15-minute headway frequency of that part of the route. These corridors are more likely to be on major arterial roads.
PT4	Secondary	Corridors where **PT services operate at most times of day**, but less frequently. The main focus of PT services using these corridors is to provide basic access and coverage.	< 4 services per hour	100 to 1000 per day	Secondary public transport corridors occur in the parts of the network providing local access and coverage, but at reduced schedules. Routes typically traverse local streets and minor arterial roads
PT5	Targeted	Corridors where services only operate at certain times of the day (e.g. peak only) or for specific trip purposes (e.g. school buses only).	N/A	< 100 per day	These services provide a basic level of access to public transport, but on a much-reduced schedule, typically only once a day return, such as school bus services, and long-distance commuter services, or at peak times only.

Note: Not all classes of Public Transport will be applicable to all RCAs. It is expected that only large metropolitan councils will likely have corridors rated as PT1. Some smaller authorities also may not have corridors that would have the required frequency of operation or level of people movement to be classed as PT2 or even PT3. Councils are welcome to define ferry-based public transport services in line with whichever PT class they feel is more appropriate to reflect the strategic significance of the service.

CYCLING

Cycling

The project team has collaborated with active mode subject matter experts within Waka Kotahi and the transport sector to co-design and develop out the base guide shown in the table overleaf.

Strategic Significance

For cycling primarily within the urban realm, there are currently 3 classes (C1 to C3) comprised of two classes for the primary and secondary strategic cycle networks and the third class being the 'everything else' category. The three classes are intended for utility cycling, i.e. cycling done for the purpose of getting to an activity at the journeys end and therefore for the purpose of transport.

Class CR – Cycling Regional is a class for corridors supporting cycling within the rural realm. It is intended that roads in the rural realm will only be classified for cycling where there is a discernible (greater than casual and occasional) use of a particular corridor by cyclists. This could be for routes providing connections between settlements, as part of the NZ Cycle Trail, or routes known as popular with road cyclists.

It is allowable for rural cycle routes to be classified as primary or secondary where they form part of the strategic cycling network and provide at least in part a utility cycling function. In this case the section of corridor fulfilling that function should be classified as C1 or C2 instead of CR.

Off-road cycling corridors

All cycling classes are intended as applicable to both cycling that occurs on the carriageway of roads and streets, as well as off-line corridors such as dedicated cycle paths, shared paths and pathways through parks. The determinant of class for off-road routes is where the route fits within the strategic cycling network for the RCA (C1, C2 or C3), supported by the volume of movement the route is intended to support.

Cycling

Class	Strategic Significance	Description
C1	Primary strategic cycling network, intended to support high volumes of cyclist movement	The primary strategic cycle network provides the backbone of the overall cycle network catering for higher volumes of cycle movement, longer and more efficient journeys (connecting across townships or between suburbs), and connecting to key locations of employment and education.
C2	Secondary strategic cycling network, providing key connections to schools, community facilities, employment or to public transport.	The secondary strategic cycle network provides the collector function within the network, joining local streets and roads to the primary strategic cycle routes. They also support key local cycle movement providing connections to schools, local shopping centres, suburban workplaces and public transport. This class can also be applied to off-road cycling routes such as cycle paths through parks where the route fulfils the function of a secondary cycling corridor.
C3	Every other street or path that forms part of the completed cycling network but is not part of the primary or secondary network. Localised cycling movement along and across residential streets, first/last kilometre to provide link to primary and secondary cycling networks.	This class covers all other routes that could form part of a completed cycling network but are not identified as primary or secondary strategic networks. This class includes residential streets where the volume and average speed of traffic can create a safe environment for cycling. This class may also include any off-road routes, such as paths through parks where cycling is permissible but not part of the strategic cycling network. The type of journey undertaken on these routes is primarily utility cycling for the purpose of getting to an activity at the journeys end.
CR	Cycling Regional: These are rural cycling routes that can be used for either utility cycling providing connections between settlements linking to key destinations, or for recreation or tourism purposes such as road cycling and cycle tourism . NZ Cycle trails. Excludes specialist cycling facilities such as mountain bike parks.	These routes occur mostly in the rural context and provide for longer cycle journeys that can be utility cycling to school or work, or cycling activity that is undertaken for the purpose of recreation or tourism, i.e. to experience the journey rather than to reach the destination. These routes include all the off-road sections of the NZ cycle trail, as well as the touring stages of that network, the pieces of the road network that provide link between the off-road portions. This class can also be used for routes known to be popular as training circuits with road cyclists. Excluded from this class and from inclusion in the cycle network overall are specialist cycling facilities such as the trails within mountain bike parks.

WALKING

Walking

The One Network Framework project team has collaborated with active mode subject matter experts within Waka Kotahi and the transport sector to co-design and develop the base guide shown in this section.

While walking is a mode of transport in its own right, pedestrians are also closely correlated with the place function of a street so classifying walking networks needs to be done alongside classifying 'place'. The existence or volumes of pedestrians in an area is often an indication of the importance, or quality, of the place function.

Pedestrian activity within street categories

As mentioned, walking networks have a direct relationship to Place function and therefore can be closely associated with some of the Street Categories e.g. Main Streets or Civic Spaces.

Further information is contained within the Street Families section of this document on the contribution of pedestrian movement to the nature of place, and how that would be observed using the various street families.

Intended Function

For walking primarily within the urban realm, there are currently 3 classes (W1 to W3) comprised of the primary and secondary strategic walking networks and the third class being the 'everything else' category intended to cover all other urban streets where walking is possible. The three classes are intended for walking networks that connect origins and destinations rather than areas where people dwell, however there is often a close correlation between these 'movement' and 'place' functions for walking networks.

Walking Special (WS) is a class for walking that is undertaken mainly for recreational and tourism purposes and predominantly in the rural context. This recognises the significance of walking corridors such as Te Araroa and Department of Conservation tracks and allows for these routes to be daylighted in overall walking network planning, to ensure they interface safely with movement corridors, and are not severed. Those parts of Te Araroa that traverse urban areas and share their route with the defined urban walking network should be classified either W1, W2 or W3 as should sections of rural road that have footpaths provided for local trips rather than longer distance tourism based trips.

All other rural roads will usually have no movement classification for walking, except where specific provision is made for local movement.

Indicative key walking catchments

Ninety percent of walking trips are less than 2km so walking networks are best classified by focussing on catchments around key attractors, rather than classifying longer corridors as done for other modes of transport.

Given the short distance of walking trips, and the accessibility they provide people of all ages and abilities, walking networks are dense and need to cater for direct desire lines. Because of this, classifying walking catchments (or 'ped sheds' as they are sometimes known) is best done using routes that are available for walking, rather than 'as the crow flies' catchments, to allow for obstructions and severance to be factored in.

City and suburb centres, shopping precincts, business districts, schools and universities are all key pedestrian attractors and therefore are strategically important parts of walking networks. Walking catchments are also critical to support public transport networks. Strategic walking networks therefore also correlate closely with public transport stops and interchanges.

Walking networks can include both on-street and off-street environments, where pathways through parks or alleyways etc provide key walking connections.

Connections to Public Transport

Accessibility to public transport is a key influencer in its use as a mode of travel. Studies and user research have sought to define the catchment reach of various types of public transport stop in terms of the distance people are willing to walk to either a local bus stop or a metro rail station. Regularity and reliability of services is also a major factor in choosing public transport. So public transport stops with more frequent services will have relatively higher patronage and associated pedestrian activity round them.

Walking

Class	Intended Function	Intended Function Description	Associated Street Categories (Indicative)	Indicative key walking catchments	Connections to Public Transport (indicative)
W1	Key routes within primary walking catchments connecting pedestrians with key destinations and places of significance.	The most intensely used pedestrian network providing connections to and between key destinations and places that play host to significant pedestrian activity. This includes access to and within the city centres and suburban / local centres. To workplaces, city hubs, civic spaces, community, health, significant educational and recreational facilities, and near transport hubs. W1 can include traffic free environments and routes away from motorised traffic where "place" is significant (e.g. city hubs, waterfront esplanades etc). Users generally able to move at their own rate, safely and comfortably whatever their ability, given priority at intersections, directional signs provided to assist users find key destinations, unimpeded by alt uses of space for sandwich boards, wheelie bins etc..	Civic Spaces, Main Streets, City Hubs	Key walking routes within 800m of P1/P2 amenities or land use zones including: Central Business Districts Town Centre Central City/Metropolitan Zone Hospitals Main Shopping Centres University and Polytechnic Campuses May include primary or secondary schools with large school rolls and dense local student catchments.	Within 500m of a stop or interchange on a PT1 or PT2 route Within 1km of a stop on a Metro Rail route, central ferry terminals or transport interchanges
W2	Key routes within secondary walking catchments, providing key connections to local destinations and providing access to W1 networks.	Provides connection to and between W1 routes, connects to locations of local pedestrian activity such as primary schools and to residential and suburban catchments. The local connections walking network. W2 can include off-line routes away from motorised traffic.	Activity Streets, Stopping Places, Urban Connectors	Key walking routes within 800m beyond W1 walking catchments Key walking routes within 800m of P2/P3 amenities/land use zones. May include catchments around smaller primary or secondary schools with local student catchments.	Within 250m of a stop on a PT3 or PT4 route
W3	Every other street or path that forms a completed walking network but is not considered 'primary' or 'secondary'.	Localised pedestrian movement along and across residential streets. W3 routes connect to and support access to W1 and W2 networks. This class also can include any off-road routes, such as paths through parks where walking is undertaken for the purpose of getting to a local activity at the journeys end. Progress/route selection may be affected by topography, and or temporary uses of space (wheelie bins)	Local Streets, Peri-urban Roads	Around and through P4 places	
WS	Walking Special: Rural routes used predominantly for recreation or tourism and so provide a reduced transport function. Includes rural parts of Te Araroa, DoC tracks.	These routes occur mostly in the rural context and are used for walking activity that is predominantly undertaken for the purpose of recreation or tourism (e.g. routes include Te Araroa, Department of Conservation walking tracks etc). Where local pedestrian facilities form part of designated sections of Te Araroa etc., these sections of the network should be classified as either W1, W2, or W3.	Rural Roads, Rural Connectors, Interregional Connectors	Around Rural P5 places	N/A

Approach to classification

Classification of streets and roads is undertaken to:

- Provide the means for describing the various components of the transport network based on their intended purpose and function
- Ensure the provision of consistent service levels on similar function roads
- Recognise that the various classes of streets and roads provide differing levels of utility within the transport network
- Differentiate service performance targets by class
- Guide planning, operation and investment decisions
- Aid in understanding the function and characteristics of different corridors, and the service outcomes which can be expected from users of that corridor
- Allow for comparative analysis and benchmarking of the performance of transport networks across RCAs and the country.

In order to achieve all of these desired outcomes it is important that the classification framework is applied consistently across the country within all RCAs.

Usually, a blunt instrument like rigorously defined metrics for each class would be used and enforced so that consistency was almost assured. This approach also does not work as well when considering the future intended function of the network, i.e. what the network may look like in 10 years' time, as any numbers assigned to factors such as people movement will be predictive only.

There is a desire to have a framework that is easy to use, intuitive, and avoids being overly prescriptive. With street category classification within street families in particular, it is recommended the approach be to determine the function of the road or street first, and then if appropriate adjust the classification based on metrics.

This means placing more weight on the classification factors such as strategic significance, and how a street or road will provide for the economic and social outcomes being sought through providing transport connections to important destinations or providing liveable community spaces, and less on the quantitative metrics.

Intended Function

The One Network Framework uses the concept of intended function as a key determinant in movement and place classification. This recognises that networks are planned, designed and built with a longer term focus, for example significant connector roads are often planned and built ahead of the expected volume of people movement they are designed to support. In this case the street should be classified as an Urban connector, even if the current level of movement indicates it is operating as a local street. Another example is 'rat-run' routes where streets intended to function as local streets are used as commuter routes. While operating as a connector, the local street's intended function is still a local street, and this is how it should be considered. The incongruity of the use of the local street supporting higher people movement can then be used as a trigger to put in place strategies to move the traffic over to the route that is intended as the connector. Classifying by intended function also ensures that roads and streets receive the appropriate level of investment in operations and maintenance.

Collaborative multi-discipline approach

It is envisaged that classification of the future strategic intended function (long term view) of transport networks will involve a collaborative, multidiscipline approach. Representation at workshops to classify networks should be from a range of disciplines that cover both the planning and design aspects of transport networks and urban/rural land-use.

Versions of classification

The One Network Framework will describe both the current and future intended functions of the transport network and the relationship with adjacent land-use close to the transport corridor. This will inform current operations as well as enabling multi-disciplinary discussions to be undertaken to plan transport networks aligned with growth strategies, land-use planning, and urban design.

A single classification framework helps us all to understand and determine a future view of how we want our roads and streets to perform and provides the mechanism to have **richer conversations** about competing demands, strategic objectives and potential investment.

Current function

The current function is intended to reflect the network as it operates today, for both movement and place. This incorporates the intended nature of place, on-street activity and adjacent land use, as well as the movement of people and goods.

Current Function

The current function view of the network will be used in operations and maintenance, and reporting on the delivery of service outcomes and network performance.

Future intended function

The significant difference to ONRC is that the One Network Framework also describes a view of the future intended function of the network in addition to the current operational state, i.e. the future intended function classification will reflect how the corridor is expected to operate in the medium to long term. This builds on the current function and is derived from existing growth strategies, District/Unitary plans, and long term transport plans to predict how the network will operate in ten to thirty years' time.

The development of the future intended function view of the network will encourage a collaborative approach to transport and land-use planning, and urban design that considers how planned changes in land-use will affect the transport network.

The future intended function view will be used in activity management plans, long term transport plans, and the development of business cases.

Future Intended Function

ONE NETWORK FRAMEWORK

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