VARIATION TO THE PROPOSED QUEENSTOWN LAKES DISTRICT PLAN (TE PŪTAHI LADIES MILE)
SUMMARY OF EVIDENCE OF TIMOTHY JOHN CHURCH – UBRAN DESIGN
ON BEHALF OF THE ANNA HUTCHINSON FAMILY TRUST

1. As directed by paragraph 12.2 of Hearing Minute 1, I set out below a summary of the key points of my evidence and my latest position on the matters remaining in dispute.
2. I have prepared a statement of evidence, dated 20th October 2023; prepared a Joint Statement of Urban Design Experts, dated 1st November 2023; and a Joint Statement of Urban Design and Transport Experts, dated 24th November 2023.

Summary of the key points of my evidence

3. My evidence outlines the important opportunity for the Extension Area to be considered holistically within the wider QLSP urban growth planning of Te Pūtahi / Eastern Corridor, Te Kirikiri Frankton Metropolitan Centre and Wakatipu Basin generally. Equally, I emphasised the potential difficulties in managing any long-term future urban expansion of the Te Pūtahi / Eastern Corridor to the west, if existing Wakatipu Basin Lifestyle Precinct activities are developed, as currently zoned.
4. I recommend an Extension Area Structure Plan layout, providing choice of a non-trafficked, active travel route to the historic bridge; resilient vehicle access, allowing for future proofing SH6 widening of Spence Road; a Local Park; and landscape remediation of terrace escarpments along the Kimiākau / Shotover River, as a naturalised UGB.
5. I also recommended the 'Optimised' TPLM Structure Plan Western Amendment, recognising the importance of the western transit stop and the opportunity to establish a best-practice TOD approach. This included a neighbourhood centre and HDR zone, as part of establishing a well-rounded centre hierarchy and a highly accessible neighbourhood, in line with NPS-UD. While the TPLM Structure Plan provides strong continuity of landscape character along SH6, the poor response to this western transit stop results in a weak continuity of urban form in my view. I consider the reliance on one eastern centre along this transit corridor is too much of a step change from the 'pearls along a necklace' pattern proposed in the Te Kirikiri Frankton Masterplan. I have provided further TOD theory / Urban Design guidance extracts in **Attachment A**.

My latest position on the matters remaining in dispute

6. I disagree with Mr Harland's rejection of the lower terrace within the Extension Area. I note the extent of MDR Precinct has been reduced in this area following the Planning JWS and I consider the remaining portion is important to provide continuity of those features in my paragraph 4 above and is also more topographically accessible, being aligned with the gently sloping Spence Road. Furthermore, this is the closest part of the Extension Area to the considerable resources provided in Te Kirikiri Frankton Metropolitan Centre.
7. I disagree with Mr Harland and Mr Dunn's assertion that the realignment of Lower Shotover Road in my Optimised option is overly circuitous. My original Optimised

version sought the transport expert advice of Mr Bartlett and it was considered most appropriate that the primacy of Lower Shotover Road be maintained for access from the north, adapted to an ONF Urban Connector (**Attachment B**) and connect directly into the Stalker Road / SH6 intersection. This was preferred over joining the Collector Road (Type A), as illustrated by Mr Harland's sub-options in his response to Submitter questions. Mr Harland has suggested other areas of concern articulated in his Rebuttal Evidence, paragraph 31(c) to (j) that I largely accept and address in my updated Optimised option.

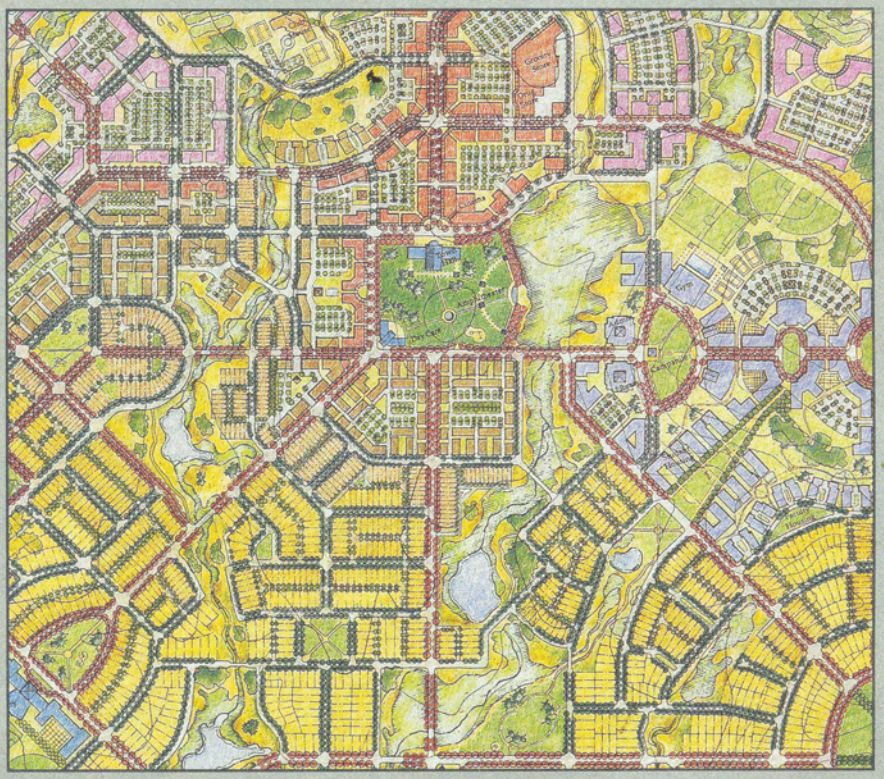
8. As such, should the Panel be minded to accept the Western Amendment to the TPLM Structure Plan, my recommended Optimised option, compared with my understanding of the Council's current position is illustrated in **Attachment C** with tracked changes to my EIC description as: Lower Shotover Road becomes an Urban Connector (M1P3) at the northern end of the Extension Area with an associated gateway treatment to manage the rural road transition. Establish a new northern T-Intersection into the Extension Area for a Local Street (M4P3) then realign Lower Shotover Road into the Structure Plan Area to create a new, more centralised, four-way intersection with the northern Collector Road / Activity Street (M2P3). This then provides an opportunity to establish a Main Street (M2P2) ~~extension~~ section through to the signalised intersection with SH6 (M1P3) and Stalker ~~Spence~~ Road, associated with a proposed northeast facing Neighbourhood Centre located at the corner of the Spence Road extension. The remnants of Lower Shotover Road help form part of the Amenity Access Area ~~a public transport slipway~~ off Frankton / Ladies Mile Road (SH6). This optimises the walkable catchment around the public transport stop providing opportunities for a TOD, comprising both a Neighbourhood Centre and High Density Residential zonings. A Neighbourhood Centre can then provide convenience retail and amenity for the remaining Medium Density development at western end of the Structure Plan and Extension Area.

9. Finally, in relation to the Urban Design implications for the SH6 Corridor speed limit of 60km/hr, I disagree with the 18 - 20m widths of the Amenity Access Strip proposed by the Council's Urban Design experts in the cross sections attached to the Urban Design and Transport Expert JWS particularly, the inclusion of a vehicle slip lane and the width of the 'feature tree' landscape strip, at either 6m or 8.4m. While I acknowledge that TPLM is likely to be a more relaxed urban environment than Te Kirikiri Frankton Metropolitan Centre is, I prefer the Alternative Cross Section by Submitter Experts, prepared by Mr Wier and Mr Bartlett. This accommodates similarly scaled trees to the south side, more efficiently utilises developable land; reduces actual and perceived severance; and better address public safety (CPTED) principles, primarily 'territorial reinforcement' (sense of ownership), and 'quality of the environment' (design quality and long term maintenance).

ATTACHMENT A:
TRANSIT ORIENTATED DEVELOPMENT THEORY / URBAN DESIGN GUIDANCE EXTRACTS

The Next American Metropolis

Ecology, Community, and the American Dream



PETER CALTHORPE

Princeton Architectural Press

Published by
Princeton Architectural Press
37 East 7th Street
New York, New York 10003

96 9s 5 4

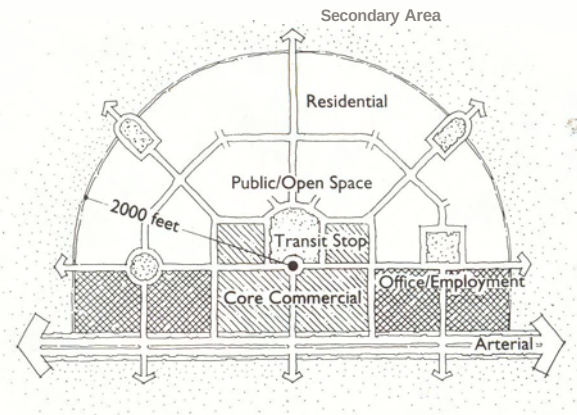
Printed and bound in Canada

Library of Congress Cataloging-in-Publication Data
Calthorpe, Peter.
The next American metropolis: ecology, community, and the American dream / Peter Calthor-pe.
p. cm.
ISBN 1-878271-68-7 :
1. City planning—United States. 2. Urban ecology—United States.
3. Metropolitan areas—United States. I. Title.
HT167.C3 1993
307.76'0973—dc20 93-10170
CIP

Definitions

Transit-Oriented Development (TOD)

A Transit-Oriented Development (TOD) is a mixed-use community within an average 2,000-foot walking distance of a transit stop and core commercial area. TODs mix residential, retail, office, open space, and public uses in a walkable environment, making it convenient for residents and employees to travel by transit, bicycle, foot, or car.



TODs offer an alternative to traditional development patterns by providing housing, services, and employment opportunities for a diverse population in a configuration that facilitates pedestrian and transit access.

They can be developed throughout a metropolitan region on undeveloped sites in urbanizing areas, sites with the potential for redevelopment or reuse, and in new urban growth areas. Their uses and configuration must relate to existing surrounding neighborhoods.

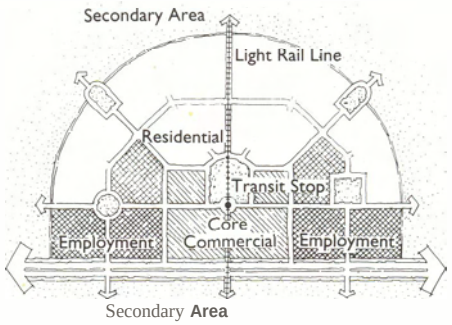
They must be located on or near existing or planned segments of a trunk transit line or feeder bus network. Adequate auto accessibility is also important. These design guidelines establish standards for site selection and development to ensure that TODs succeed in providing a mix of uses, a variety of housing types, and a physical environment that is conducive to pedestrian and transit travel. Developing a network of TODs throughout the region will also serve to strengthen the overall performance of the regional transit system.

The size of a TOD must be determined on a case-by-case basis. The average 2,000-foot radius is intended to represent a "comfortable walking distance" (±10 minutes) for a majority of people. In some locations, comfortable walking distance is affected by topography, climate, intervening arterials or freeways, and other physical features. Therefore, their size will be greater or lesser depending on surrounding features.

Urban TOD

Urban TODs are located directly on the trunk line transit network: at light rail, heavy rail, or express bus stops. They should be developed with high commercial intensities, job clusters, and moderate to high residential densities.

Each TOD may assume a different character and mix of uses depending on its location within the region, market demands, and the surrounding land uses. Urban TODs are suitable for job-generating and high-intensity uses such as offices, community-serving retail centers, and moderate- to high-density housing because they allow direct access to the transit system without requiring passengers to transfer. Similarly, the intensity of development along the trunk line network should reflect the significant investment necessary to construct the transit system and should generate the greatest number of transit-bound trips.



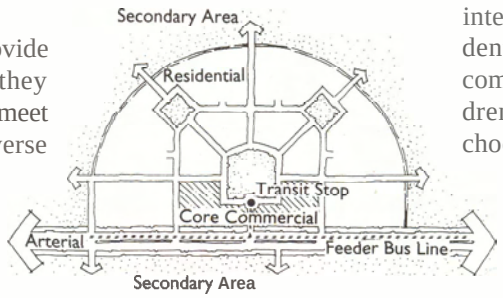
Special development guidelines are recommended for sites that are highly accessible by trunk line transit to permit higher-density residential development and to encourage a higher percentage of job-generating uses. When Urban TODs are located in existing developed neighborhoods, it may be appropriate to apply the densities and mix of uses recommended by a local planning effort. Urban TODs are typically sited approximately 1/2 to 1 mile apart to meet station spacing guidelines, although they could be sited closer together, as transit planning and market demand permit.

Neighborhood TOD

Neighborhood TODs are located on a local or feeder bus line within 10 minutes transit travel time (no more than 3 miles) from a trunk line transit stop. They should place an emphasis on moderate density residential, service, retail, entertainment, civic, and recreational uses.

Neighborhood TODs should have a residential and local-serving shopping focus at densities appropriate for its context and lesser transit service level. Where the feeder bus stops are frequent, TODs can be sited close together and form a "corridor" of moderate density, mixed-use nodes.

Neighborhood TODs can help provide affordable communities because they include a variety of housing types to meet the needs of our increasingly diverse population in a land use pattern that minimizes the need for multiple car ownership. If properly designed, Neighborhood TODs can meet local needs for public facilities and parks, respect the character and quality of existing neighborhoods, and limit inter-community traffic through residential areas. They are also walkable communities, providing access for children, the elderly, and those adults who choose to walk or bike.



Core Commercial Areas

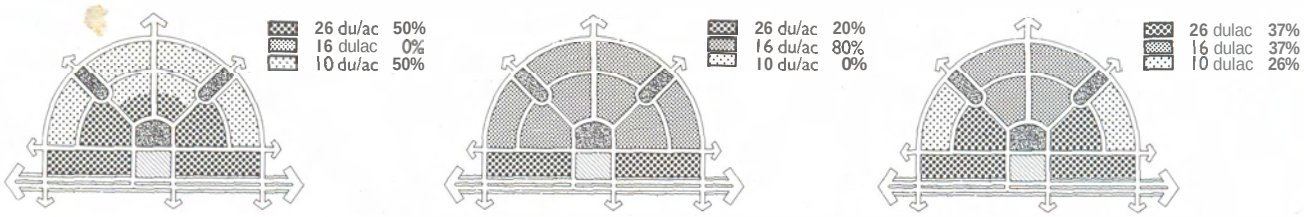
Each TOD must have a mixed-use core commercial area located adjacent to the transit stop. At a minimum, the core area should provide convenience retail and local-serving offices. Larger core areas may also combine major supermarkets, restaurants, service commercial, entertainment uses, comparison retail, second-floor residential, and employment-intensive office and light industrial uses.

A commercial core at the center of each TOD is essential because it permits most residents and employees to walk or ride bicycles for many basic goods and services. This is particularly advantageous for those without cars and individuals with mobility limitations. Those who still choose to drive to shop will have to go fewer miles and can avoid using arterial streets for local trips. Core commercial areas also provide a mixed-use destination that makes transit use attractive. People are more prone to use transit to get to work if the transit stop is combined with retail and service opportunities.

The size and location of core commercial areas should reflect anticipated market demand, proximity to transit and phasing considerations. Optional upper-floor office and residential uses in the core commercial area increase the mixed-use, round-the-clock nature of the core area. Employment-generating uses, such as office buildings and employee-intensive light industrial uses, may be located adjacent to or amongst the retail component of the core commercial area. The transit stop and core commercial area should be complemented with a "village green" or public plaza which can serve as a focal point for community activities. Secure and convenient bicycle parking facilities should be provided to encourage bicycle access.

Residential Areas

TOD residential areas include housing that is within a convenient walking distance from core commercial areas and transit stops. Residential density requirements should be met with a mix of housing types, including small lot single-family, townhomes, condominiums, and apartments.



URBAN TOD – AVERAGE RESIDENTIAL DENSITY OF 18 DU/AC

TOD residential areas provide a higher concentration of households in close proximity to transit service and core commercial areas than typical suburban land use patterns. Average minimum densities of at least 10 du/net acre are necessary to support local bus service; higher densities are necessary for adequate light rail and express bus

service. To this end, the TOD concept encourages walking and biking, reduces reliance on the automobile, supports transit service, and creates distinct, identifiable neighborhoods.

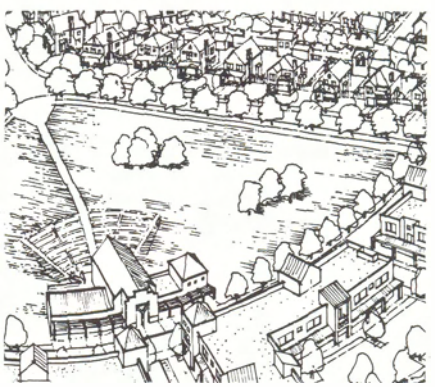
Residential areas should extend from the core commercial area and transit stop over an area that is an average 2,000 feet in radius, representing a 10-minute walking distance. They should contain a variety of housing types and ownership patterns, ranging from small-lot single-family homes with carriage units to apartment buildings.

The average minimum density requirement is intended to set a baseline density standard for all TODs, as well as encourage variety. A mix of housing types may be used within this area, some high density and some low density, provided the overall average minimum density is met. For example, a TOD residential area may include a mix of small lot single-family homes with ancillary units (12 dulacre), townhouses (15 dulacre) and apartments (25 du/acre) combined to meet an average density requirement of 18 dulacre. Net densities are roughly 20% higher than gross densities, once streets and other infrastructure improvements are accounted for. Higher average density standards may be adopted by site-specific plans to respond to locational differences within a community. Community Plans, Specific Plans and/or zoning studies will clarify how the minimum average density standards are applied to individual sites.

Public Uses

Public uses are required to serve residents and workers in TODs and neighboring areas. Parks, plazas, greens, public buildings, and public services may be used to fulfill this requirement. Small public parks and plazas must be provided to meet local population needs.

The structure of a TOD is built around accessible and convenient public facilities and spaces. A strong sense of community, participation, identity, and conviviality is important to support a sense of safety and comfort within a neighborhood. Public uses serve this role by providing meeting places, recreation opportunities and lunch time picnic spots essential to the vitality of TODs. A well-used park is centrally located in a neighborhood, has good visibility from the street, and often benefits by being next to a public library, civic services, transit, or retail.

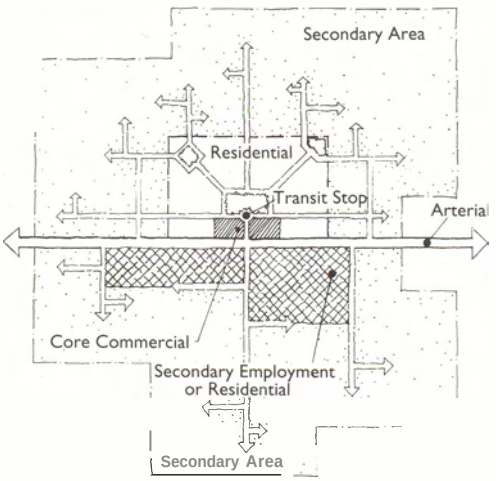


Each TOD must contain open space areas available to the public and facilities which serve the needs of the surrounding community. Varying sizes and types of TODs will require or justify inclusion of civic buildings and public facilities. Appropriate public facilities include day care, libraries, community buildings, police and fire stations, post offices, and governmental services. Public buildings should be placed in central locations, as highly visible focal points, or adjacent to public parks and plazas. Civic uses such as an urban plaza, community center, post office, and library are best located in the core area in conjunction with retail businesses and offices. Recreation-oriented uses, such as parks, recreation facilities, and community buildings, as well as large parks and schools, should be centrally located with easy access from TOD residences and the core area. Schools should be placed at the perimeter of TODs in their Secondary Area.

Secondary Areas

Each TOD may have a Secondary Area adjacent to it, including areas across an arterial, which are no further than one mile from the core commercial area. The Secondary Area street network must provide multiple direct street and bicycle connections to the transit stop and core commercial area, with a minimum of arterial crossings. Secondary Areas may have lower density single-family housing, public schools, large community parks, low intensity employment-generating uses, and park-and-ride lots.

The Secondary Area provides for uses which are not appropriate in TODs because they are lower density and more auto-oriented. These areas will, however, provide market support for TOD businesses because Secondary Area residents and workers may shop in the core commercial area and generate riders for the transit system. Employment-generating uses should be located directly across the arterial from the transit stop.



Commercial uses which are very similar in nature and market appeal to those located in the core commercial area should not be permitted in Secondary Areas. They may diminish the ability of the TOD to establish a viable retail center. Similarly, very low intensity industrial and warehousing uses which are highly auto- and truck-dependent are not appropriate for Secondary Areas; they do not have a sufficient number of employees to contribute to create a healthy pedestrian environment.

Single-family residential development is and will continue to be an important land use. These areas typically have too low a density to be adequately serviced by transit. By maximizing street connections to TODs and making it convenient for residents to bike or walk to the transit stop, transit utilization in single-family areas may increase. This is important both in New Growth Areas and in existing neighborhoods where streets may need to be retrofitted. Providing multiple, interior street connections between TODs and Secondary Areas will keep many auto trips off arterials. Locating public schools in Secondary Areas will provide a service for the TOD without using valuable transit-accessible land.

Other Uses

Uses that rely extensively upon autos, trucks or have very low employment intensities are not appropriate uses for TODs or Secondary Areas. Rural residential, industrial uses, and travel-commercial complexes should be located outside of TODs and Secondary Areas.

Many uses typically allowed in commercial areas rely predominantly upon auto travel to generate business patrons. These uses, such as auto dealers, freestanding car washes, mini-storage facilities, highway commercial uses, and motels, should not be permitted in TODs or Secondary Areas.

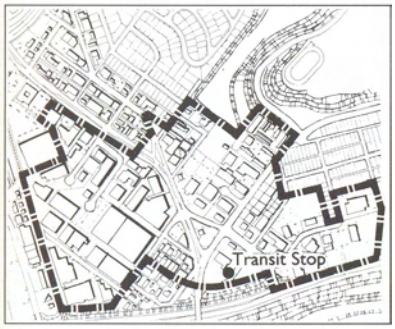
Similarly, low-employment-generating industrial uses should not be permitted in TODs or Secondary Areas.

They are not compatible with nearby residential uses and generate few employees to support core commercial areas. Industrial uses are more appropriate where existing industrial activities occur and where major freeway noise impacts are anticipated.

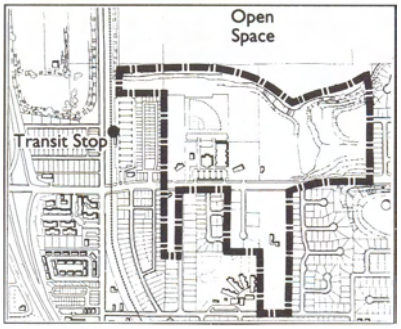
In order for more frequent transit service to be economically viable, uses near transit stops must have moderate residential densities and the commercial uses must create a high level of pedestrian activity. Land near the transit stop should reinforce transit use by supporting higher density, pedestrian-oriented uses and development patterns. Uses that are primarily auto-oriented are not appropriate for TODs and are better located near major highways.

Location Types

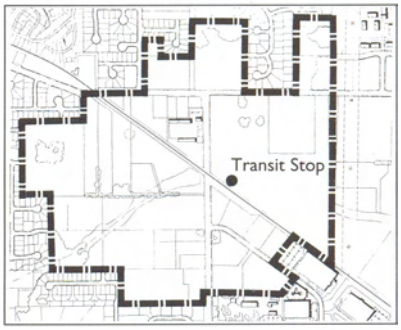
TODs may be located in Redevelopable Sites, Infill Sites, or in New Growth Areas: Redevelopable Sites are developed areas that could be revitalized with new, more intensive uses and transit service. Infill Sites are vacant parcels surrounded by existing urban development. New Growth Areas are larger, undeveloped properties typically on the city's periphery. Regional comprehensive plans, local community plans, and transit corridor plans should identify appropriate sites in each of these settings.



REDEVELOPABLE SITE



INFILL SITE



NEW GROWTH AREA

TODs are an opportunity to promote efficient development patterns, both in the existing urbanized fabric of the city and in New Growth Areas. Three types of settings have been identified which broadly characterize the physical pattern of development throughout most American cities. These three functional settings represent the range of conditions where TODs could be located and linked by transit.

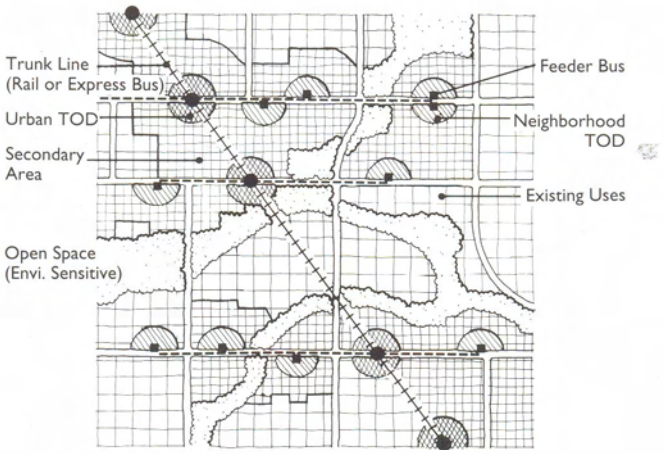
Implementation on Redevelopable and Infill Sites has the opportunity to transform development patterns that are presently highly auto-oriented into mixed-use, transit-oriented development. Careful site selection and integration of viable, existing uses within the site and its surroundings can help ensure its future success. Furthermore, traffic and infrastructure constraints must be addressed if TODs are to function well.

The TOD concept is also a strategy to promote efficient and environmentally sensitive development patterns in newly developing areas. Because these sites are relatively free of existing land uses, New Growth Areas offer a great opportunity for creating mixed-use destinations and interconnected street systems. Constraints generated from topography and sensitive habitats can be overcome by carefully selecting sites and by configuring streets to relate to the topography. A fundamental premise, however, must be to limit sprawl by clustering development within planned urban growth areas.

Guiding Principles

Relationship to Transit and Circulation

The site must be located on an existing or planned trunk transit line or on a feeder bus route within 10 minutes transit travel time from a stop on the trunk line. Where transit may not occur for a period of time, the land use and street patterns within a TOD must function effectively in the interim.



The trunk line network represents the region's express transit system. It typically consists of either light rail, heavy rail, or express bus service, with at least a 15-minute frequency of service and a dedicated right-of-way. Providing a dedicated right-of-way, whether fixed rail or HOV lanes, serves two important purposes: 1) it ensures expedited and free-flow transit travel; and 2) it represents a long-term transit commitment that allows developers to make similar investments.

The feeder bus network is a system of timed transfer local bus routes that link to the trunk line network. Transit stops on the feeder bus network should be within 10 minutes transit travel time (approximately 2 to 3 miles) from a trunk line network stop, with buses running at least a 15-minute frequency of service. 10 minutes transit travel time is the maximum people are typically willing to ride prior to a mode change. In some circumstances, a feeder bus can be provided by a private transit system that meets this level of service criteria.

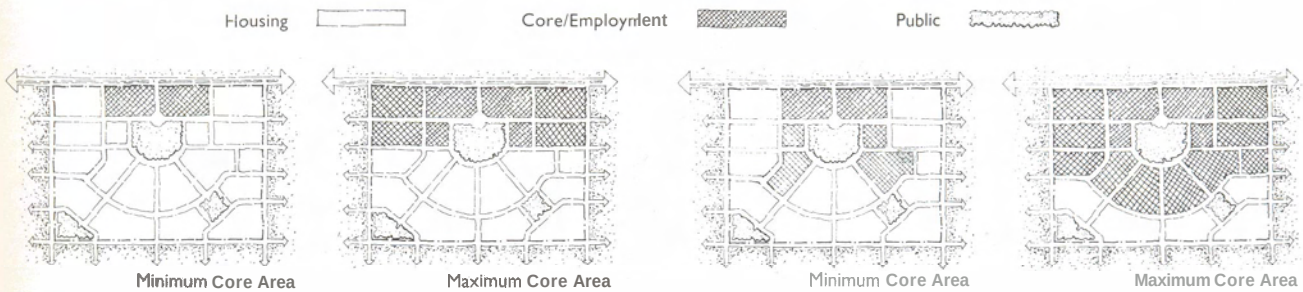
Even with an ambitious 40% non-auto mode split, **60%** of all trips will continue to be via autos. The land use patterns in TODs, as well as their internal street systems, must plan for on-going auto use. Adequate auto access from arterials and freeways, as well as frequent transit service, will also be an important locational consideration for the more intensive, employment-oriented TODs. Not all transit stops will be TODs; some stops will be developed as park-and-ride lots.

In many locations transit service is planned, but will not be implemented until well after development ocurrs. A region has the opportunity to guide transit planning by providing the densities necessary to support transit with advanced land use planning. In early years, express bus service can serve planned light rail lines and establish ridership clientele. Land use patterns should lead transit service planning, rather than expecting transit to come to an area that must be retrofitted to provide transit-supportable densities.

Mix of Uses

All TODs must be mixed-use and contain a minimum amount of public, core commercial and residential uses. Vertical mixed-use buildings are encouraged, but are considered a bonus to the basic horizontal mixed-use requirement. The following is a preferred mix of land uses, by percent of land area within a TOD:

USE	NEIGHBORHOOD TOD	URBAN TOD
Public	10% - 15%	5% - 15%
Core/Employment	10% - 40%	30% - 70%
Housing	50% - 80%	20% - 60%



NEIGHBORHOOD TODS

URBAN TODS

A certain minimum proportion of uses is required to stimulate pedestrian activity and to provide economic incentives for developing with mixed-use patterns. The proportion of uses is based on site area, not density or building intensity. It does not preclude additional, different uses on upper floors. At a minimum, retail, housing, and public-uses are required in all TODs. Employment uses within the core commercial area may be used to augment these minimum uses, as market conditions permit. The public use component should include and devoted to parks, plazas, open space, and public facilities. The different mix of uses for Neighborhood TODs and Urban TODs is intended to reflect the variations in intensity and type of development desired at these sites.

The mix of land uses and appropriate densities should be clarified in a community or site-specific planning process, in order to address site-related issues such as context, market demand, topography, infrastructure capacity, transit service frequency, and arterial/freeway accessibility. Special care should be taken to respect the context of the site and the character of surrounding existing neighborhoods.

Vertical mixed-use buildings do contribute to a healthy pedestrian environment, but are much more difficult to implement due to current real estate practices that encourage single-use buildings. For this reason, vertical mixed-use should not be solely relied upon to create pedestrian-oriented places.

If a neighborhood or employment area has local destinations within convenient walking distance, residents and employees are more likely to walk or bicycle. Furthermore, if local destinations are accessible to drivers without requiring use of the arterial street system, congestion can be reduced. The required proportion of uses is designed to encourage pedestrian activity, yet allow flexibility to create neighborhoods with different use emphases, such as primarily residential TODs (Neighborhood TODs) and TODs which emphasize job-generating uses (Urban TODs).

Residential Mix

A mix of housing densities, ownership patterns, price, and building types is desirable in a TOD. Average minimum densities should vary between 10 and 25 dwelling units/net residential acre, depending on the relationship to surrounding existing neighborhoods and location within the urban area.

Small-Lot Single-Family

Townhouses

Duplexes

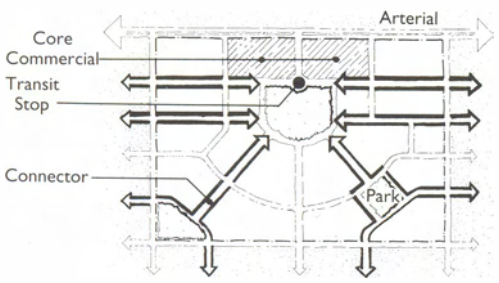
Apartments & Condominiums

While each TOD will take on a different character and will have a different proportion of single-family and multi-family densities, care should be taken to provide a variety of housing types, costs, and ownership opportunities. Residential areas can combine small lot single-family units, duplexes, townhouses, and apartment buildings.

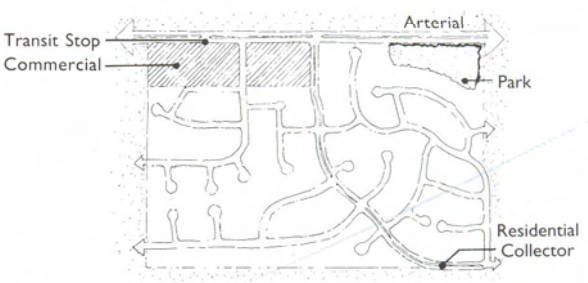
In order for TODs to be affordable to the diverse range of households, they must provide a mix of housing types. Single-family housing has, and will continue to have, strong market demand in most communities. Higher density townhouses and multi-family units are, however, gaining an increasing proportion of the market share. The range of permissible residential densities can accommodate all of these household needs. Providing a mix of housing types will also result in more "cosmopolitan" communities.

Street and Circulation System

The local street system should be recognizable, formalized, and inter-connected, converging to transit stops, core commercial areas, schools and parks. Multiple and parallel routes must be provided between the core commercial area, residential, and employment uses so that local trips are not forced onto arterial streets. Streets must be pedestrian friendly; sidewalks, street trees, building entries, and parallel parking must shelter and enhance the walking environment.



PREFERRED



DISCOURAGED

The street pattern should be simple, memorable, and direct, avoiding circuitous routes. Streets should converge at common destinations, such as transit stops, core commercial areas, and parks. They should allow autos, bikes, and pedestrians to travel on small local streets to any location in the TOD without crossing or following an arterial. Street connections should be designed to keep through trips on arterial streets and local trips within neighborhoods. At no time should an arterial street be the only route to and from the different land uses of the TOD.

Where there is steep topography or other sensitive natural resources, it may be necessary to curve streets and create some cul-de-sacs. On-street pedestrian and bicycle paths should be provided to allow residents to walk to all local destinations, rather than segregated off-street paths.

Clear, formalized, and inter-connected street systems make common destinations visible. They also provide the shortest and most direct path for pedestrians and bicyclists. With an inter-connected street system, any single street will be less likely to be overburdened by excessive traffic, thus reducing the need for cul-de-sacs. A street pattern which is circuitous and complex will discourage pedestrians; a street system with landmarks and a simple form will be memorable and familiar.

General Design Criteria

Buildings should address the street and sidewalk with entries, balconies, porches, architectural features, and activities which help create safe, pleasant walking environments. Building intensities, orientation, and massing should promote more active commercial centers, support transit, and reinforce public spaces. Variation and human-scale detail in architecture is encouraged. Parking should be placed to the rear of buildings.

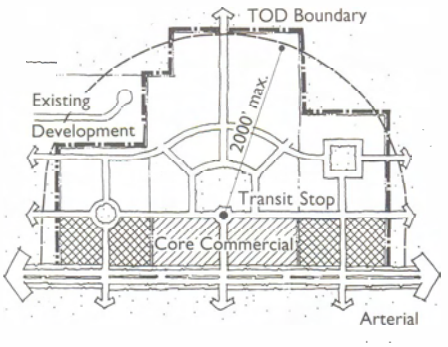
Orienting buildings to public streets will encourage walking by providing easy pedestrian connections, by bringing activities and visually interesting features closer to the street, and by providing safety through watchful eyes. Moderate-to-high intensities and densities also support frequent and convenient transit service. Retail centers with pedestrian-scale features and configurations will support the walking environment critical to that transit service.

With the possible exception of anchor retail stores, primary building entrances should be physically and visually oriented toward streets, parks and plazas, and not to the interior of blocks or to parking lots and garages. Parking lots should be placed to the rear of buildings. Secondary entrances, oriented toward parking lots, are permitted. Where existing viable uses are separated from the street by large parking lots, infill is encouraged at the street. In addition, new internal streets may be constructed closer to existing entries, thus creating a "Main Street" pedestrian setting.

Core commercial areas should be intensive enough to provide a "Main Street" shopping spine. Furthermore, multi-storied buildings and structured parking are strongly encouraged in Urban TODs to better utilize land adjacent to a transit line. As a region continues to grow, land economics may make future intensification desirable. Commercial area development plans should include long-term strategies for additional stories and buildings, along with structured parking. Residential infill should also be possible by permitting some ancillary dwellings in single-family residential areas.

Site Boundary Definition

The size of the TOD is variable depending on the ability to provide internal, local street connections. Parcels within an average 10-minute walking distance of the transit stop shall be included if direct access by local street or path can be established without use of an arterial. To allow for a basic mix of uses, the TOD area should be a minimum of 10 acres for Redevelopable and Infill Sites, and 40 acres for New Growth Areas.



While the majority of the site should be within a quarter to half mile walking distance, the total area will vary based on parcel sizes, topography and other intervening features. Oddly shaped parcels may extend the site boundary beyond 2,000 feet to include areas which are the equivalent of a 10 minute walking distance; sites limited by topography or adjacent to freeways or arterials may be smaller. Where a majority of a parcel is within 2,000 feet, the whole parcel should be included in the site area. The distance from the transit stop to the outer boundary of the Secondary Area should be no greater than one mile. The arterial network in a New Growth Area should be located to maximize the potential size of TODs and not bisect viable sites.

If a candidate site does not have a street system that can provide direct auto and walking connections to the core area and transit stop, the site must be strictly limited to the parcels that do or can provide connections. This site may be a single property, but must be a minimum of 10 acres in size. All required uses must be provided within this smaller site area.

Sufficient vacant or redevelopable land must be available in the site to allow full application of the development standards. In Redevelopable Areas, there should be a mix of underutilized properties that could be redeveloped to more intensive uses. On Infill Sites, the undeveloped parcel should be surrounded by uses that fit with the TOD concept. Adjacent existing uses, such as employment or multi-family housing, can essentially function as part of the TOD or its Secondary Area if their intensities and densities are consistent with the design guidelines.

Sites in New Growth Areas may consist of 40 to 160 acres of land that are wholly undeveloped or have some minor amount of existing uses. Sites may consist of parcels in multiple ownerships provided that the planning for the designated site is coordinated among the property owners.

Coordinated Planning and Specific Area Plans

Regardless of the number of property owners, development of a TOD must provide a coordinated plan for the entire site. This "Specific Area Plan" should be consistent with the Design Guidelines, coordinate development across property lines, and provide strategies for financing construction of public improvements.

TODs represent a departure from traditional single parcel/single use development and require coordinated planning and implementation of public improvements such as streets, pedestrian paths, bikeways, and plazas. While a few sites will be owned by a single entity, many sites will consist of numerous parcels under multiple

Ministry for the Environment
Manatū Mō Te Taiao

People + Places + Spaces

A design guide for urban New Zealand

The front cover shows views of Cathedral Square, Christchurch, an aerial view of Christchurch and Great South Road in Otahuhu, Auckland.

Published in March 2002 by
Ministry for the Environment
PO Box 10-362
Wellington
New Zealand

ISBN: 0-478-24049-X
ME number: 420

This document is available on the Ministry for the Environment's website: www.mfe.govt.nz

Chaptersix

Applying the Design Principles at Each Project Level

This chapter describes how the design principles we have been discussing can be applied at each project level. In the boxes below we take a project level and look at how each of the issues in the issues matrix affects it. Guidelines have been provided on how to handle the issue, but remember that the actions taken in any situation will depend on the specific circumstances. Remember, too, the process principles and the value of looking at the project level to either side of your project.

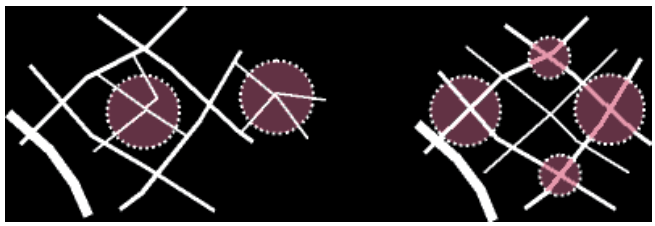
Further information on how the principles address the issues raised in Chapter 3 is given in Appendix 1, page 57.

SUB-REGIONAL: Sub-regional, city-wide, town-wide and village-wide

This sub-regional structure plan for Waitakere City promotes a clear pattern of consolidation around existing, and new, passenger transport and vehicle-based nodes.

Consolidation and dispersal

- Promote a range of centres, of varying size, according to their function in the region.
- Provide strategies to manage economic growth and to revitalise declining centres.
- Increase employment and residential capacity, where appropriate.
- Focus walkable nodes on arterials and public transport so they benefit from the movement economy.



Avoid locating nodes away from the main routes.

Nodes on main routes offer more efficiency and best capture the movement economy.

Integration and connectivity

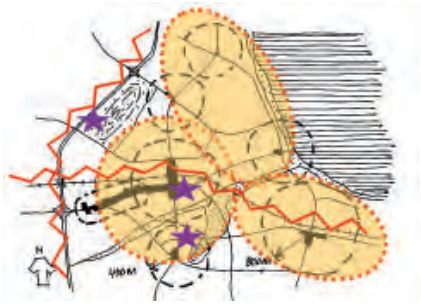
- Develop a logical structure of connected routes.
- Integrate public and private transport networks with each other, and with the land uses they serve.
- Provide effective connections and interchange opportunities between all forms of transport eg, bus, rail, taxis, ferry, cars, cycles and pedestrians.
- Ensure public transport networks efficiently serve their catchments and destinations.
- Provide long-distance cycle and pedestrian routes that offer good continuity.

At Sturges, Waitakere, a high degree of connectivity between new developments (red) has been achieved over an extensive area. Note the road lining the stream edge.

Diversity and adaptability

- Locate new land uses where they will achieve good synergies with existing uses.
- Ensure adjacent uses are compatible.
- Seek a balance between residential, employment and recreational activities.
- Provide an appropriate distribution of amenities, such as shops, schools and parks, where the communities they serve can easily access them.

Promote a wide range of uses as indicated here by the shaded areas, along the busiest routes and in the nodes, indicated by the circles, where they will benefit from high degrees of public access and exposure.



Undertake a legibility analysis, which determines ***edges*** (eg, beaches, rivers, railway lines, motorways), ***nodes*** (eg, neighbourhoods, town centres), ***landmarks*** (eg, historic buildings, natural features), ***paths*** (eg, key routes, streams edges) or ***districts*** (sub-areas as defined by sectors of the community). Consider how these can be emphasised and celebrated, and, where negative, mitigated.

Legibility and identity

- Celebrate regional landmarks and natural features.
- Where appropriate, use rivers, scarps and ridgelines to define the edges of communities.
- Emphasise the visual and functional character differences between different nodes and different communities.

These significant wetlands and adjoining land at Te Atatu, Waitakere, were retained for their ecological value, water quality function and recreational benefits. Immediately adjacent is a medium-density area that is integrated with a town centre. A balance between intensification and the natural environment is maintained.

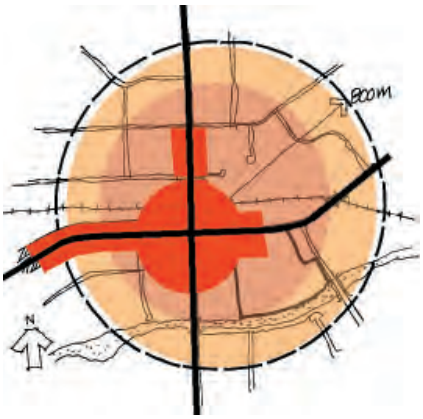
Ecological responsiveness

- Provide catchment management plans that define areas for urban concentration, and habitats and natural features for retirement for stormwater management.
- Protect ecologically sensitive areas.
- Provide green linkages between natural habitats where ecologically beneficial.
- Consider the distribution of open spaces, and the relevance of their size and function.
- Consider region-wide strategies for improved water quality which encompass rain water, wastewater and fresh water issues.
- Consider region-wide strategies for energy conservation and waste management.

DEVELOPMENT FRAMEWORKS:
Districts, precincts, town centres, village centres, neighbourhoods and corridors

Consolidation and dispersal

- Define nodes as walkable catchments.
- Promote higher-density residential activities that achieve high standards of privacy, safety, security, private open space and visual character.
- Provide compact and efficient public open spaces near the core, larger ones towards the periphery.



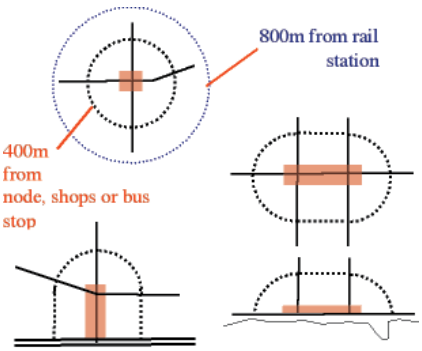
Locate higher density, and a greater range of uses, towards the core with multi-storey buildings and decked parking, where viable.

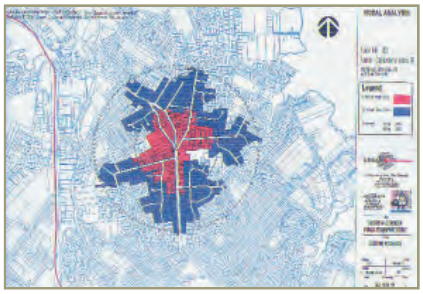
Walkable nodes (see opposite)

Pedestrian access should be a key consideration from the outset. We may use our cars most of the time, but ultimately we experience the world on foot. Generally people will take around five minutes to walk 400m and 10 minutes for 800m. A five minute walk to convenience shops, bus stops and other daily facilities is considered reasonable, as is 10 minutes to a railway station.

This organising device should only be used as a guide, but when overlaid with a connected movement system will help ensure that more integrated environments are created, which avoid isolated, single-use developments.

Walkable nodes



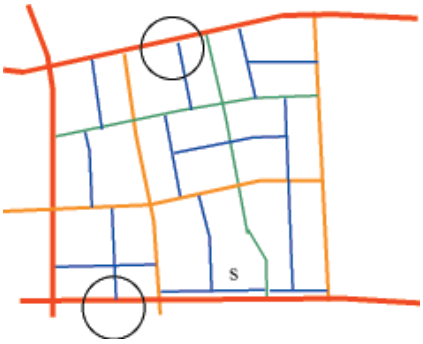


A 'pedshed' effectively measures the efficiency of pedestrian access to the centre of a node. Here the areas within 400m (red) of a bus stop or neighbourhood centre, and 800m (blue) of a town centre or rail station, are tested. The areas within actual safe walking distance (400m or 800m) of the node are shaded. These are compared with the theoretical area within the radius. Aim for 70 percent of the area or more. Efficiencies can be improved with new linkages, or by shifting the centre, as was done with the rail station at Glen Eden.

Integration and connectivity

- Promote a well-connected local movement system which is well integrated with land uses.
- Locate new street linkages where they will provide safe pedestrian access to the node and public transport.
- Provide street connections to the adjoining neighbourhoods.
- Ensure busier roads and arterials still have lively frontage conditions; provide service lanes where direct access is unachievable.
- Provide traffic planning and management that balances traffic efficiency with streetscape quality, pedestrian safety and comfort.
- Locate public transport stops where they are looked over by adjacent development.

Connected street networks



Connected street networks (see opposite)

A connected network of streets is very efficient in terms of fuel consumption and promoting good integration. They are still hierarchical, but the lowest-order street (circled) still connects with the higher-order streets. Slip roads (S) can ensure development does not back onto busy roads. The lowest-order streets can be designed to have similar slow-speed qualities to that of a cul de sac, with the added advantage of increased personal safety due to a higher presence of passing motorists.

ATTACHMENT B:
WAKA KOTAHI ONE NETWORK FRAMEWORK FACTSHEET AND

One Network Framework (ONF)

What is the One Network Framework?

Traditionally, roads and streets are considered as movement corridors only to get us from A to B.

Currently, many of our roads are limited in widths by existing infrastructure which means we need to consider how these roads can meet growing demand.

We need a new approach to classify our network that enables better design, planning and delivery of a modern transport system to meet the increasing needs of people, businesses, communities, and our climate.

The One Network framework (ONF) recognises that streets not only keep people and goods moving, but they're also places for people to live, work, and enjoy. The ONF is designed to contribute to improving road safety and building more vibrant and liveable communities.

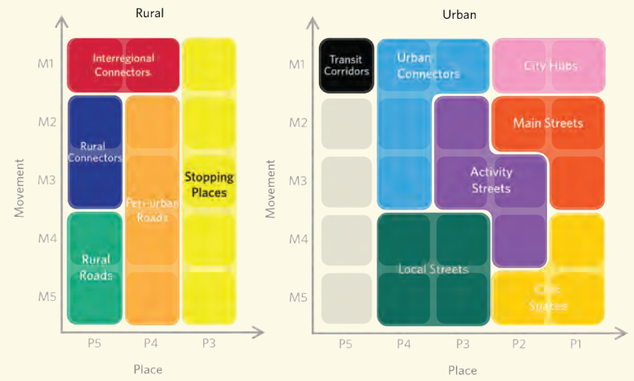
Movement and Place has many uses at the strategic network planning and development level, as well as at the detailed project level. It marries network-wide and local considerations. At its heart, the ONF organises transport links by their place and movement roles into road and street types.

The ONF is a tool to help establish priority uses, performance measures and potential interventions for each road and street type

A common language

The ONF provides a common language for all transport practitioners across the transport system from planners to asset/roading managers. This common language also supports meaningful engagement between stakeholders and the community.

The ONF helps to improve consistency in how transport projects and plans are communicated and discussed with the community. At a time when communities are expecting a greater say in transport and infrastructure decision-making, movement and place provides opportunities to have discussions about how we can address and prioritise our future transport challenges.



Framework components

The ONF has many uses at the strategic network planning and development level and at the detailed project level. The ONF organises transport corridors by their 'place' and 'movement' roles into road and street types.

Strategic level uses

- Set aspirations to enact Waka Kotahi vision for an integrated and sustainable transport system
- Classify the transport network and assign future vision for roads and streets
- Promote thinking about the performance of the network as a whole rather than as individual transport links
- Assess network problems, assist with investment decisions, and project identification and prioritisation.

Project or local level uses

- Translate the experience and requirements of different users during their journey within a street
- Provide design guidance for the development of project options and solutions
- Provide a framework for project impact evaluation that can be aligned with wider network performance assessment
- Guide asset maintenance regimes
- Assist community engagement.

What are the benefits

- The ONF aligns with strategic transport planning at all levels including long term plans, Regional Land Transport Plans (RLTPs) and the NLTP
- Improves investment planning and decision making
- Enables consistency in measuring current and future network performance and levels of service
- It enables investments to deliver on the strategic intent of Government, Waka Kotahi and our partners, including the Road to Zero strategy, Adapting for climate change, Promoting community wellbeing, Higher quality urban development.

Timeline

Completed to date:

- Development and implementation of the framework
- Current state use of ONF across Road Controlling Agencies (RCA)
- Moderation of RCA implementation of ONF complete

By SEP 2022 — ONF Modal Guidance Released

By OCT 2022 — Future Network Guidance Released

By MAR 2023 — RCAs Modal Classification complete

By DEC 2023 — ONF embedded for 2024 NLTP

WAKA KOTAHI NZ TRANSPORT AGENCY

One Network Framework

22-340

ONF classification matrix

The ONF is a system two-dimensional classification tool focused on Movement and Place.

The ONF recognises that shared, integrated planning approaches between transport and land-use planners will result in better outcomes. The ONF acknowledge the transport network has a 'place' function. This means roads and streets are destinations for people, as well as transport corridors.

The ONF also introduces classifications for different modes of transport, recognising that our roads and street have different functions for different modes. To determine the classification of a transport link, it is mapped against a movement and a place axis according to the significance of its future aspirational movement and place functions.

Roads and streets are mapped with consideration to the mix and balance of transport modes, the built environment, the aesthetic quality and character of the place and the types of modes appropriate to the place.

The process of defining these classifications takes into consideration:

- Place – define the land-use vision and user experience that transport needs to support.
- Movement – consider the mix of transport modes and define priority for moving people and goods safely.

Movement classification

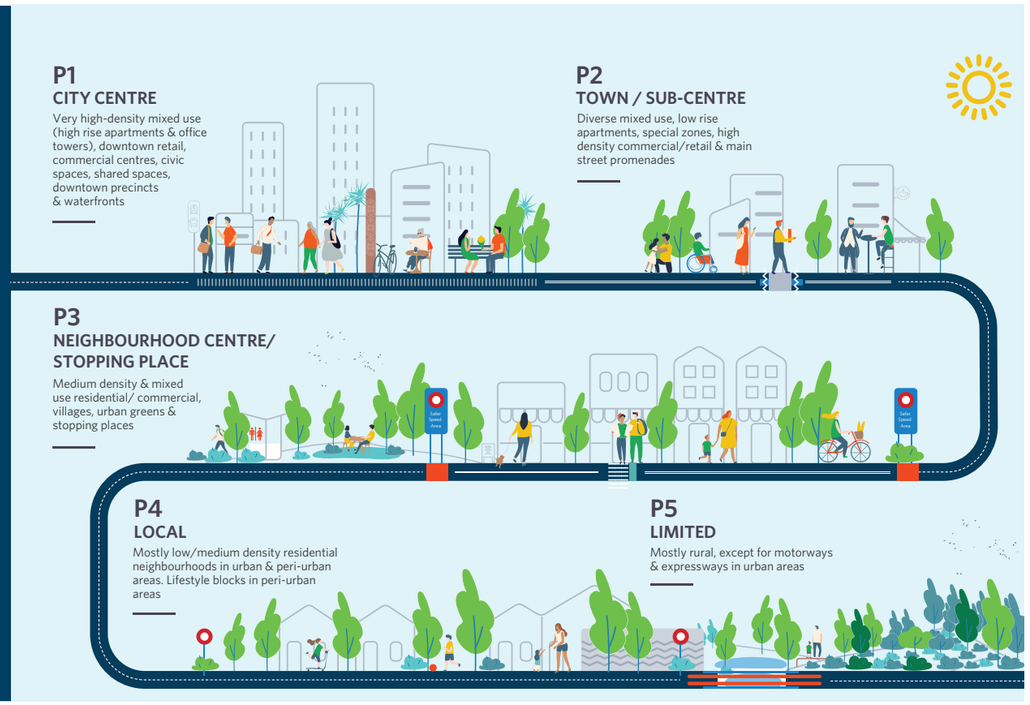
The classification of movement should achieve the following outcomes:

- 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 principle-based and both prescriptive and intuitive. That is, the approximate classification can be derived using quantitative measures.

Place classification

The classification of place should achieve the following outcomes:

- Reflect the function of the specific location
- Relate to the on-street activity generated by adjacent land-use and its requirements for access
- Consider the interaction with the movement function of the corridor, including the requirements for lateral movement across the carriageway
- Be informed by adjacent land-use and the density of activity occurring "off-street".



WAKA KOTAHI NZ TRANSPORT AGENCY

One Network Framework

22-340

Urban Connectors

Urban Connectors

WAKA KOTAHI NZ TRANSPORT AGENCY | One Network Framework

Typical street width: varies (18 - 20m depicted)

Typical speed limit: 40 -60km/h

Typical land use context:
residential and neighbourhood shops

Connectors are long, contiguous streets that have higher levels of vehicle traffic. Their access function is typically less intense than the mains streets they lead into.

Network and operations guidance

- Where adjacent land uses support transitioning connector streets to more place-focused activity streets and people-friendly places they provide the opportunity for additional local serving business and public places, even for short stretches or local spots such as outside neighbourhood shops or parks.
- Reducing traffic, lowering traffic speed limits to 40-60km/h, and improving public transport may stimulate urban regeneration and higher quality, more engaging urban development on sites adjacent urban connectors.
- Connector streets are movement focused though they should not sever communities or be a barrier to public transport access. Where possible long-distance traffic should be reduced by re-routing vehicle traffic away from the connector and onto highways.
- General parking should be removed minimised and managed by timing or pricing. Kerbside activity can be managed in different ways across the day to provide for peak period bus lanes for example.
- Service and delivery parking are located close to destinations but in places that do not compromise walking paths or cycleways.
- Versions of this street type can be delivered in tactical or incremental ways saving time and money from a complete streetscape upgrade.

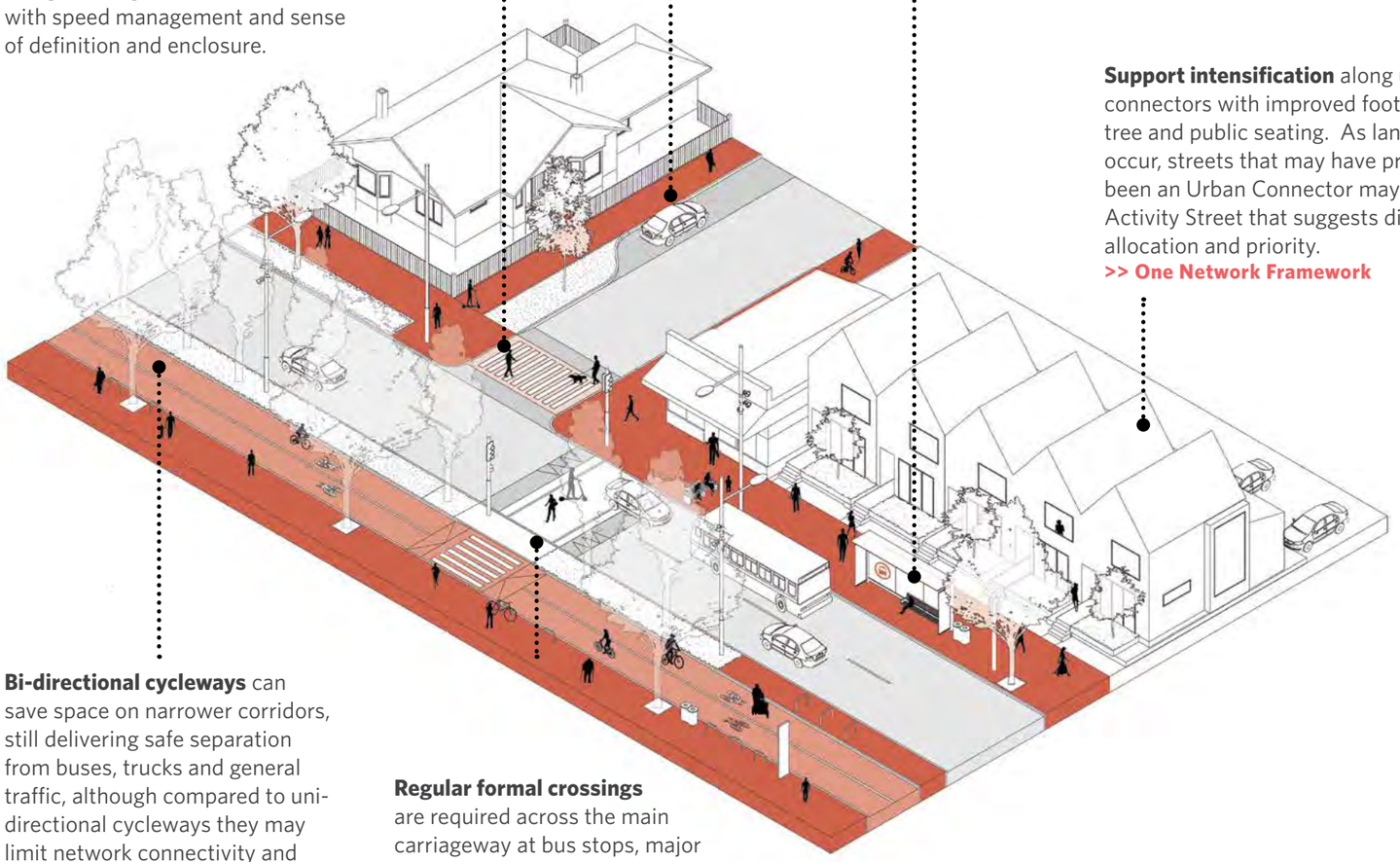
Raised zebra crossings of minor side streets allow for easy and safe walking journeys along the street including to access public transport and nearby centres.
>> Pedestrian Network Guidance

Safety devices must recognise the safe and appropriate speed environment
>> Speed Management Guide

Parking can be re-located to side streets with time or price restrictions in place. One-way side streets can provide additional parking in an angle layout.
>> National Parking Management Guidance

Street trees mediate temperature, provide shade, and reduce heat island effect and planted regularly along the length of corridors assist with speed management and sense of definition and enclosure.

Bus stops should be located in-line to save space, allow for more efficient operations and be close to a pedestrian crossing.
>> Public Transport Design Guidance



Support intensification along urban connectors with improved footpaths, street tree and public seating. As land-use changes occur, streets that may have previously been an Urban Connector may become an Activity Street that suggests different space allocation and priority.
>> One Network Framework

Bi-directional cycleways can save space on narrower corridors, still delivering safe separation from buses, trucks and general traffic, although compared to uni-directional cycleways they may limit network connectivity and seamless access to destinations.
>> Cycling Network Guidance

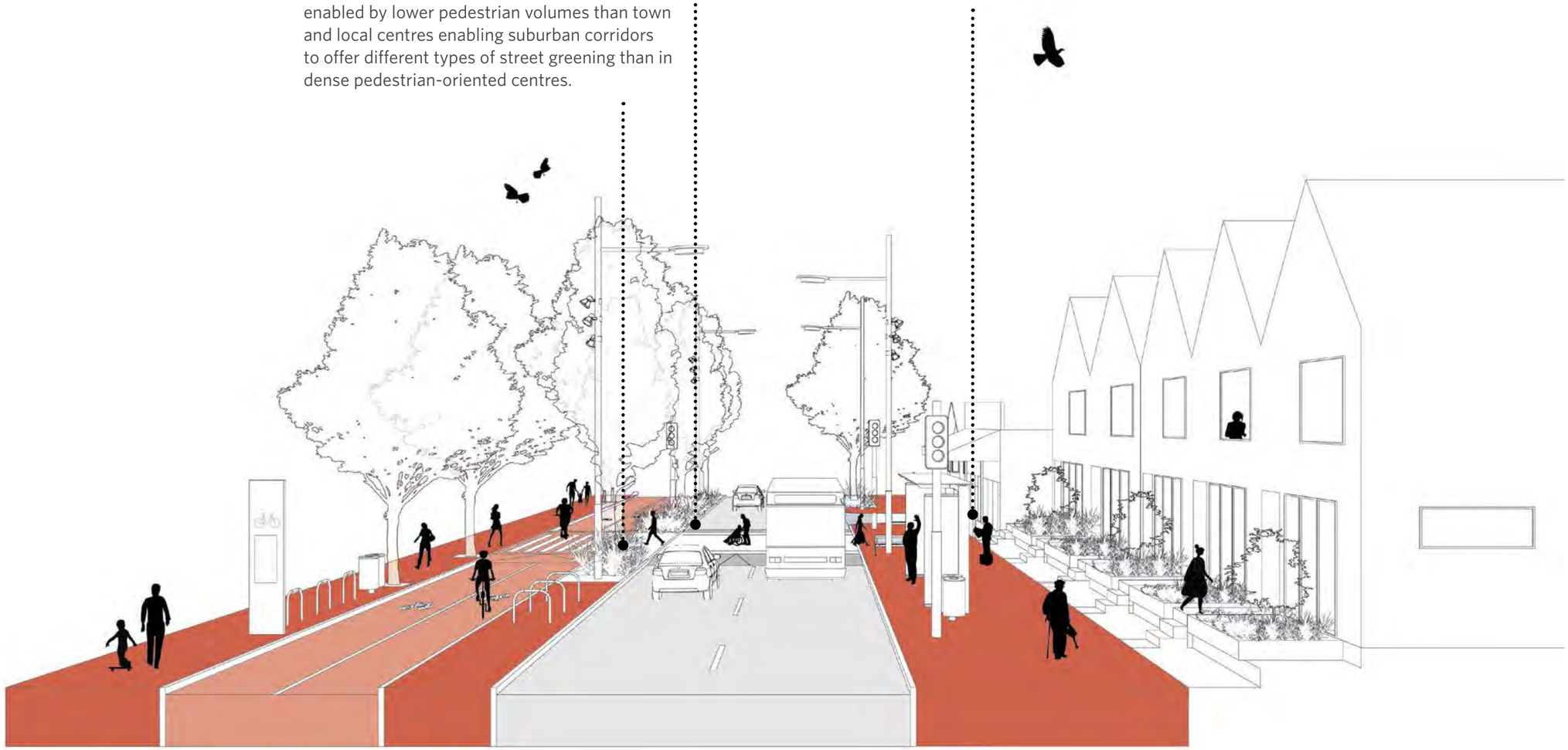
Regular formal crossings are required across the main carriageway at bus stops, major intersections and mid-block where activities such as schools, shops, parks and recreational destinations demand.
>> Pedestrian Network Guidance

Illustrations and associated guidance are indicative only.

No parking on narrow urban connectors to minimise carriageway width and prioritise traffic flow functions for urban connector routes while creating space for cyleways, bus stops, trees and planting in ways that don't impinge on pedestrian environment.
>> National Parking Management Guidance

Two traffic lane space allocation solutions on narrower urban connectors where street space is limited, help provide wider footpath space for bus stops, street trees, and where activity supports, bench seating and outdoor dining / street trading, in ways that best support local shops and businesses while not impeding pedestrian movement.
>> Pedestrian Network Guidance

Grass berms, rain gardens or low planting are enabled by lower pedestrian volumes than town and local centres enabling suburban corridors to offer different types of street greening than in dense pedestrian-oriented centres.



Illustrations and associated guidance are indicative only.

Urban Connectors

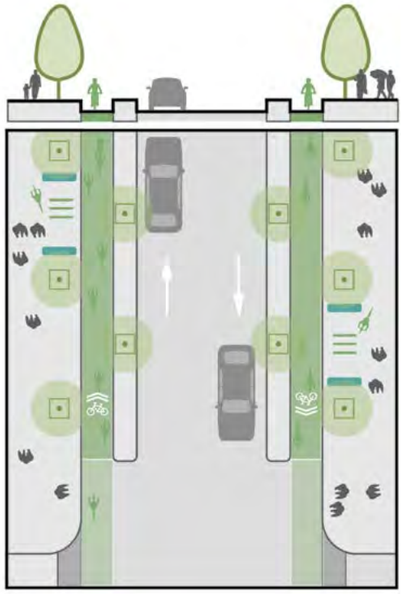
Diversifying the street category

Within any given One Network Framework street category, there is more than one integrated street solution. These pages provide indicative examples of the sorts of differentiated design responses to be explored through option development, as well as examples of similar street types from Aotearoa and around the world. This is intended to demonstrate that there's a diverse range of street types and integrated street design solutions possible within the broad umbrella of each ONF Street Category.

Urban Connectors

WAKA KOTAHI NZ TRANSPORT AGENCY One Network Framework

A range of potential integrated street solutions, to be explored through option development, for example



Cycling priority

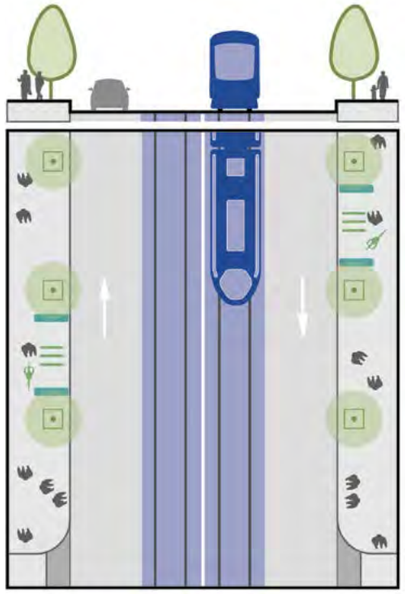
Priorities:

Safe and appropriate speed limit:

40 - 60

Key features:

- Separated cycleways and safe, separated crossings for people on bikes and two wheels
- Bus volumes do not require dedicated bus lanes
- Enables safe, separated cycling movement along strategic corridors
- Provides for high volumes of through movement by cyclists
- Supports local origins and destinations through on-street bicycle parking and end of trip facilities.



MRT corridor

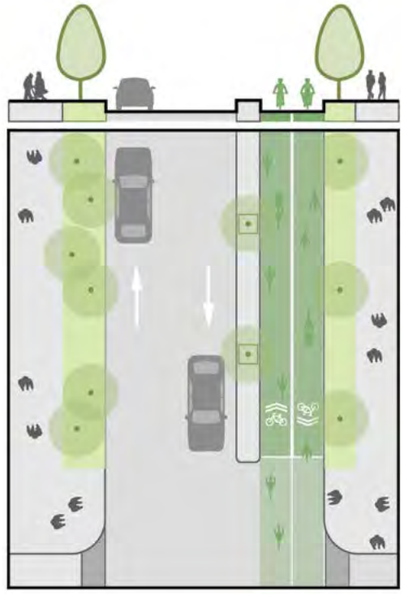
Priorities:

Safe and appropriate speed limit:

40 - 60

Key features:

- Prioritises the most space efficient modes to move high volumes of people across the urban area
- Removes on-street parking and slip lanes, simplifies intersections
- Supports local pedestrian movement and crossings where appropriate
- Integrates landscape treatments that provide a buffer to adjacent land uses and improve urban amenity.



Green cycling street

Priorities:

Safe and appropriate speed limit:

40 - 60

Key features:

- Prioritises active transport through separated off-street cycling facilities
- Provides green buffers between vehicles and people walking and cycling
- Enhances native ecology through continuous green connections
- Infill planting to create low-maintenance/high-amenity corridors.

Illustrations and associated guidance are indicative only.

Urban Connectors

Diversifying the street category

Within any given One Network Framework street category, there is more than one integrated street solution. These pages provide indicative examples of the sorts of differentiated design responses to be explored through option development, as well as examples of similar street types from Aotearoa and around the world. This is intended to demonstrate that there's a diverse range of street types and integrated street design solutions possible within the broad umbrella of each ONF Street Category.

A range of potential integrated street solutions, to be explored through option development, for example

Cycling priority

MASCOT AVENUE, MANGERE, AUCKLAND

Local examples:

- Mascot Avenue, Mangere, Auckland

DUNSMUIR STREET, VANCOUVER, CANADA

Global examples:

- Dunsmuir Street, Vancouver, Canada

MRT corridor

AUCKLAND LIGHT RAIL

Local examples:

- Future Auckalnd MRT
- Future Wellington MRT

DEVONSHIRE STREET, SYDNEY AUSTRALIA

Global examples:

- Devonshire Street, Surry Hills, Sydney Australia

Green cycling street

LINWOOD AVE, ŌTAUTAHI, CHRISTCHURCH

Local examples:

- Linwood Avenue, Ōtautahi Christchurch
- Cumberland Street, Ōtepoti Dunedin

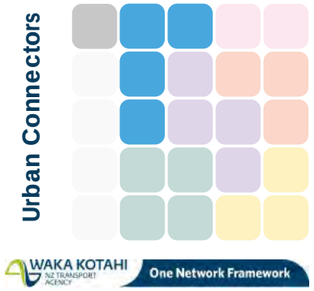
BOURKE STREET, SYDNEY AUSTRALIA

Global examples:

- Bourke Street, Surry Hills, Sydney Australia

Illustrations and associated guidance are indicative only.

Urban Connectors

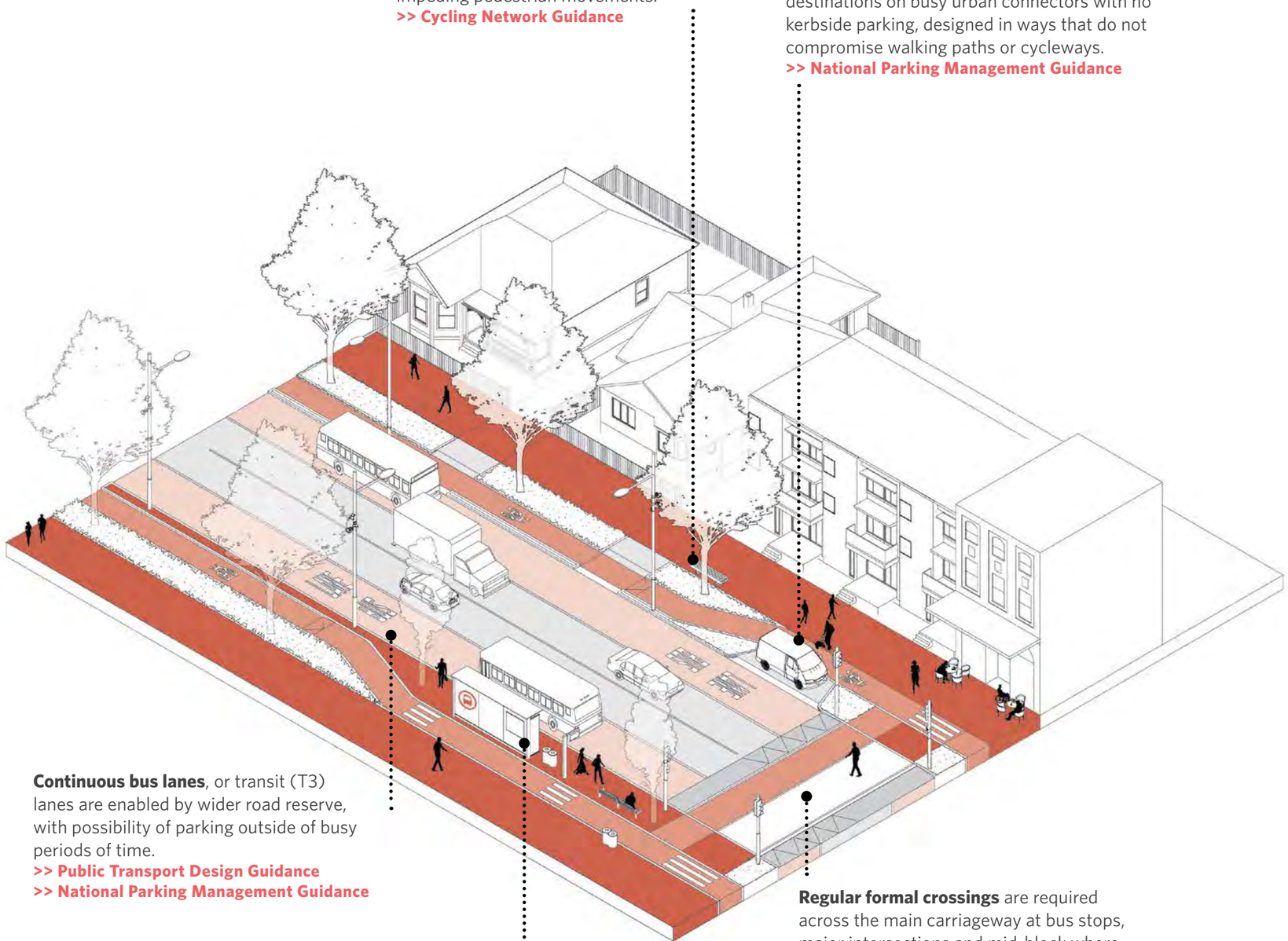


Typical street width: varies (27 - 30m depicted)
Typical speed limit: 40 -60km/h
Typical land use context:
residential and neighbourhood shops

Connectors are long, contiguous streets that have higher levels of vehicle traffic. Their access function is typically less intense than the mains streets they lead into.

Network and operations guidance

- Versions of this street type can be delivered in tactical or incremental ways saving time and money from a complete streetscape upgrade.
- Where adjacent land uses support transitioning connector streets to more place-focused activity streets and people-friendly places they provide the opportunity for additional local serving business and public places, even for short stretches or local spots such as outside neighbourhood shops or parks.
- Reducing traffic, lowering traffic speed limits to 40 - 60km/h, and improving public transport may stimulate urban regeneration and higher quality, more engaging urban development on sites adjacent urban connectors.
- Connector streets are movement focused though they should not sever communities or be a barrier to public transport access. Where possible long-distance traffic should be reduced by re-routing vehicle traffic away from the connector and onto highways.
- General parking should be removed minimised and managed by timing or pricing. Kerbside activity can be managed in different ways across the day to provide for peak period bus lanes for example.
- Parking can be re-located to side streets with time or price restrictions in place. One-way side streets can provide additional parking in an angle layout.



Cycle and micromobility parking should be located close to destinations without impeding pedestrian movements.
>> Cycling Network Guidance

Service and delivery parking and P5/short stay parking can be provided by mountable kerb solutions outside shops and other destinations on busy urban connectors with no kerbside parking, designed in ways that do not compromise walking paths or cycleways.
>> National Parking Management Guidance

Continuous bus lanes, or transit (T3) lanes are enabled by wider road reserve, with possibility of parking outside of busy periods of time.
>> Public Transport Design Guidance
>> National Parking Management Guidance

Bus stops can be located at the beginning of a bus lane segment or at the approach to a signal where priority can be provided with a bus advance signal. In lane bus stops can improve PT efficiency by avoiding delays merging back into traffic lane.
>> Public Transport Design Guidance

Regular formal crossings are required across the main carriageway at bus stops, major intersections and mid-block where activities such as schools, shops, parks and recreational destinations demand.
>> Pedestrian Network Guidance

Illustrations and associated guidance are indicative only.

Street trees are an essential part of climate change response on urban connectors, mediating temperature to reduce heat island effect and providing ecological corridor stepping stones across suburbs.

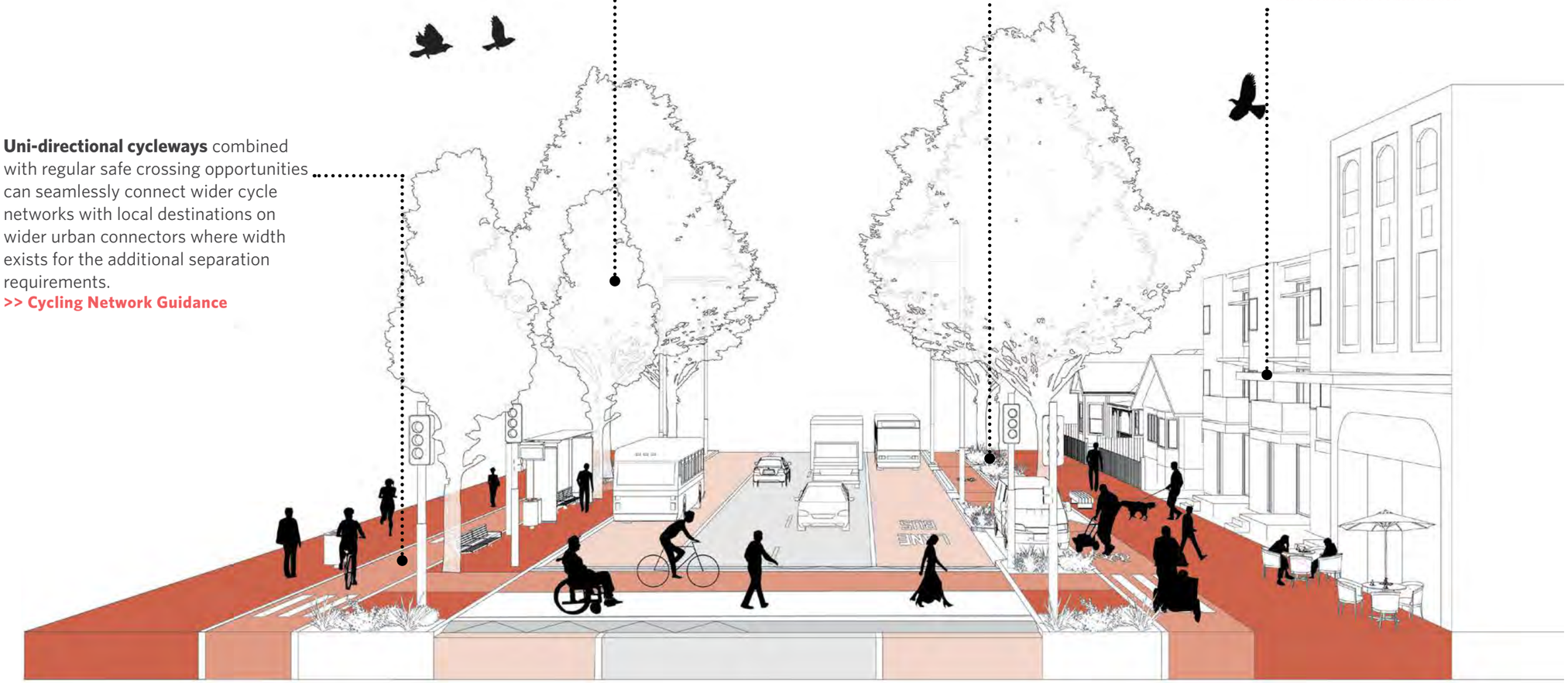
Uni-directional cycleways combined with regular safe crossing opportunities can seamlessly connect wider cycle networks with local destinations on wider urban connectors where width exists for the additional separation requirements.

>> Cycling Network Guidance

Street furniture is carefully located where space is available and on side streets. While space is limited, street trees should be provided wherever possible with relocated or renewed underground infrastructure enabling greater opportunities over time.

Support intensification along urban connectors with improved footpaths, street tree and public seating. As land-use changes occur, streets that may have previously been an Urban Connector may become an Activity Street that suggests different space allocation and priority.

>> One Network Framework



Illustrations and associated guidance are indicative only.

Urban Connectors

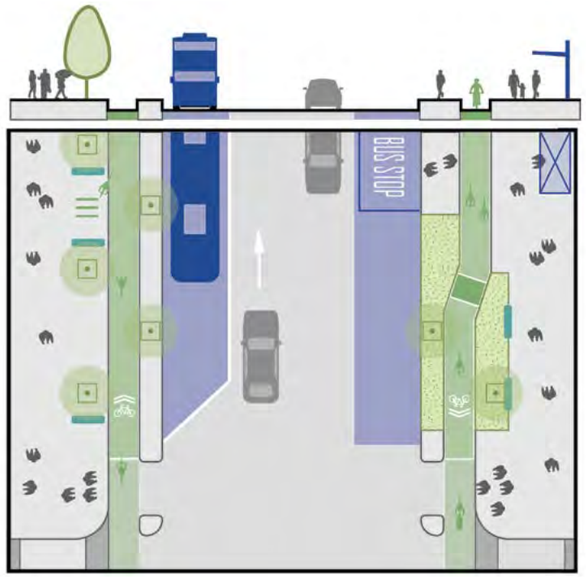
Diversifying the street category

Within any given One Network Framework street category, there is more than one integrated street solution. These pages provide indicative examples of the sorts of differentiated design responses to be explored through option development, as well as examples of similar street types from Aotearoa and around the world. This is intended to demonstrate that there's a diverse range of street types and integrated street design solutions possible within the broad umbrella of each ONF Street Category.

Urban Connectors

WAKA KOTAHI NZ TRANSPORT AGENCY | One Network Framework

A range of potential integrated street solutions, to be explored through option development, for example



Bus and bike connector

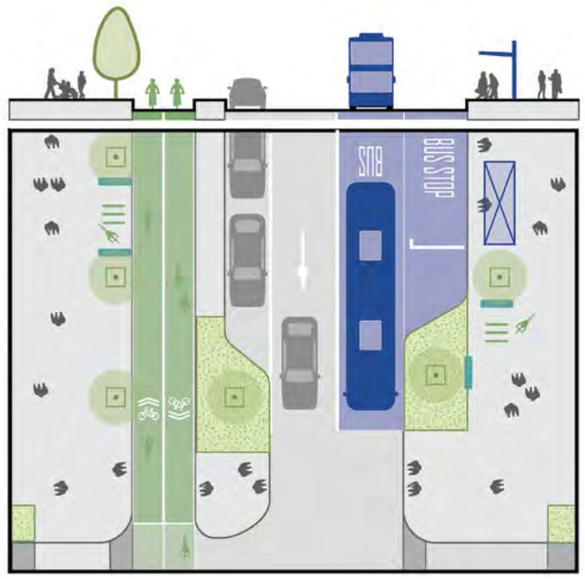
Priorities:

Safe and appropriate speed limit:

40 - 60

Key features:

- Prioritises the movement of space efficient modes, through dedicated bus lanes and protected cycle facilities
- Encourage vibrant on-street activity and amenity for workers, residents and visitors through flexible street furniture, landscape buffers and WSUD
- Removal of on-street parking and slip lanes, simplify intersections.



Enhanced one-way

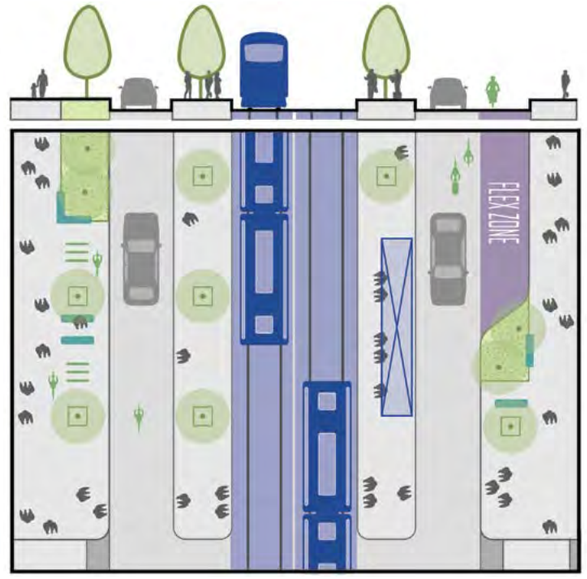
Priorities:

Safe and appropriate speed limit:

40 - 60

Key features:

- Extend the kerb to shorten crossing distance and provide extra space for on-street amenities such as seating, utilities infrastructure and planting
- Enables safe, separated cycling movement along strategic corridors and supports local access through on-street bicycle parking and end of trip facilities.



MRT corridor

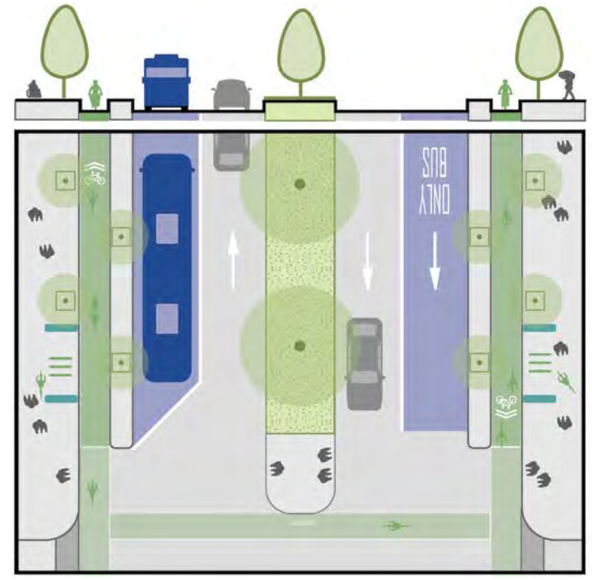
Priorities:

Safe and appropriate speed limit:

40 - 60

Key features:

- Prioritises the most space efficient modes to move high volumes of people across the urban area, provides for pedestrian priority and access around MRT stops
- Add signalised, mid-block crossings at MRT stops allowing people who walk and cycle to safely cross
- Removes on-street parking and right-turns at some intersections to enable MRT priority
- Integrates landscape treatments that provide a buffer to adjacent land uses and improve urban amenity.



Green connector

Priorities:

Safe and appropriate speed limit:

40 - 60

Key features:

- Prioritises movement of sustainable and active transport through dedicated bus lanes and separate off-street cycling facilities
- Provides green buffers between vehicles and people walking and cycling
- Enhances native ecology through continuous green connections
- Infill planting to create low-maintenance/high-amenity movement corridors.

Illustrations and associated guidance are indicative only.

Urban Connectors

Diversifying the street category

Within any given One Network Framework street category, there is more than one integrated street solution. These pages provide indicative examples of the sorts of differentiated design responses to be explored through option development, as well as examples of similar street types from Aotearoa and around the world. This is intended to demonstrate that there's a diverse range of street types and integrated street design solutions possible within the broad umbrella of each ONF Street Category.

A range of potential integrated street solutions, to be explored through option development, for example

Bus and bike connector

KARANGAHAPE ROAD

Local examples:

- Karangahape Road, Tāmaki Makaurau Auckland
- Great North Road Grey Lynn, Tāmaki Makaurau Auckland
- The Parade, Island Bay, Pōneke Wellington

Enhanced one-way

CUMBERLAND STREET

Local examples:

- Tuam Street, Ōtautahi Christchurch
- Cumberland Street, Ōtepoti Dunedin

MRT corridor

AUCKLAND LIGHT RAIL

Local examples:

- Future Auckland Light Rail
- Future Wellington MRT

Green connector

CAMERON ROAD MULTI-MODAL UPGRADE, TAURANGA

Local examples:

- Franklin Road, Tāmaki Makaurau Auckland
- Fenton Street, Rotorua
- Fitzherbert Avenue, Te Papaioea Palmerston North
- Riccarton Avenue, Ōtautahi Christchurch

MILLBANK, LONDON, UK

Global examples:

- Millbank, London, UK

UNION STREET, VANCOUVER, CANADA

Global examples:

- Union Street, Vancouver, Canada

HAMMARBY ALLE, STOCKHOLM

Global examples:

- Hammarby Alle, Stockholm, Sweden

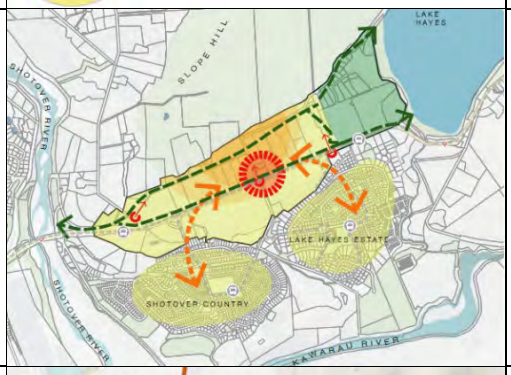
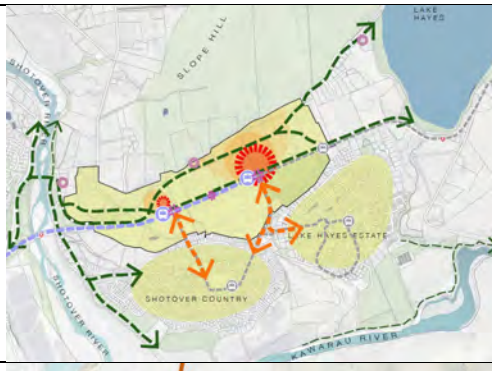
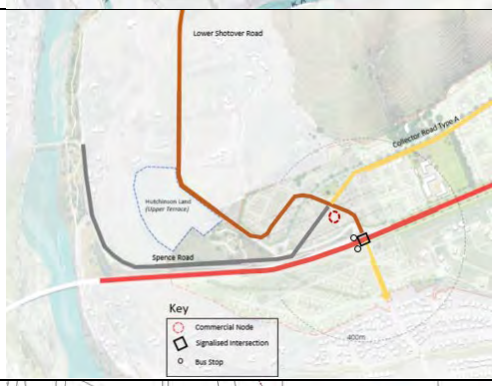
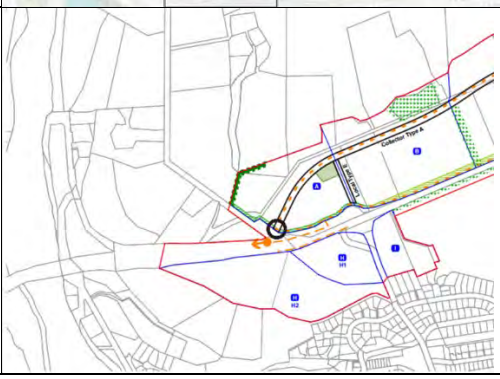
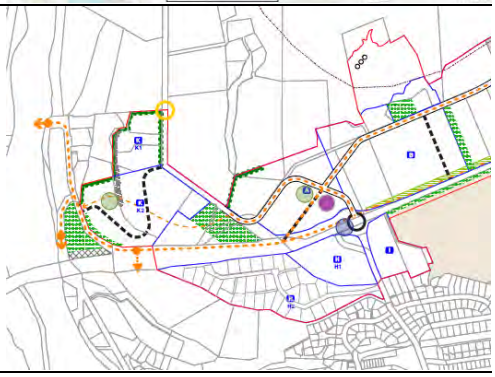
SAN PASSEIG DE SAINT JOAN BOULEVARD, BARCELONA, SPAIN

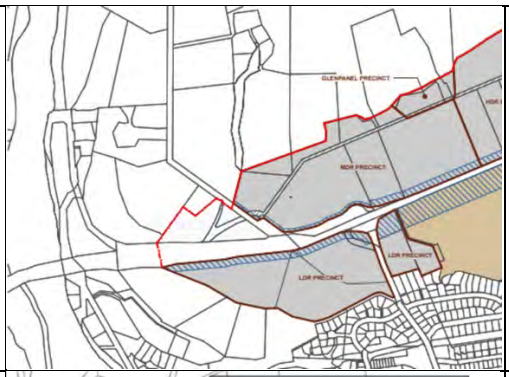
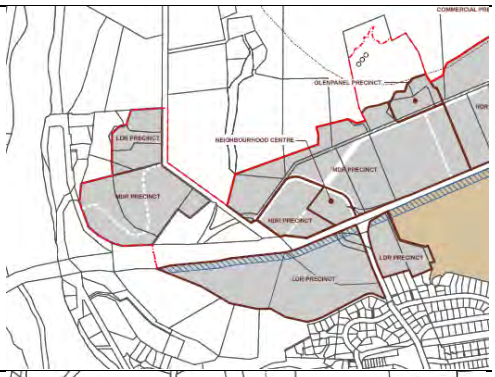
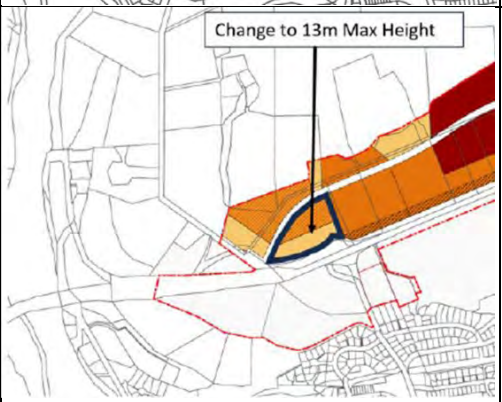
Global examples:

- San Passeig de Saint Joan Boulevard, Barcelona, Spain

Illustrations and associated guidance are indicative only.

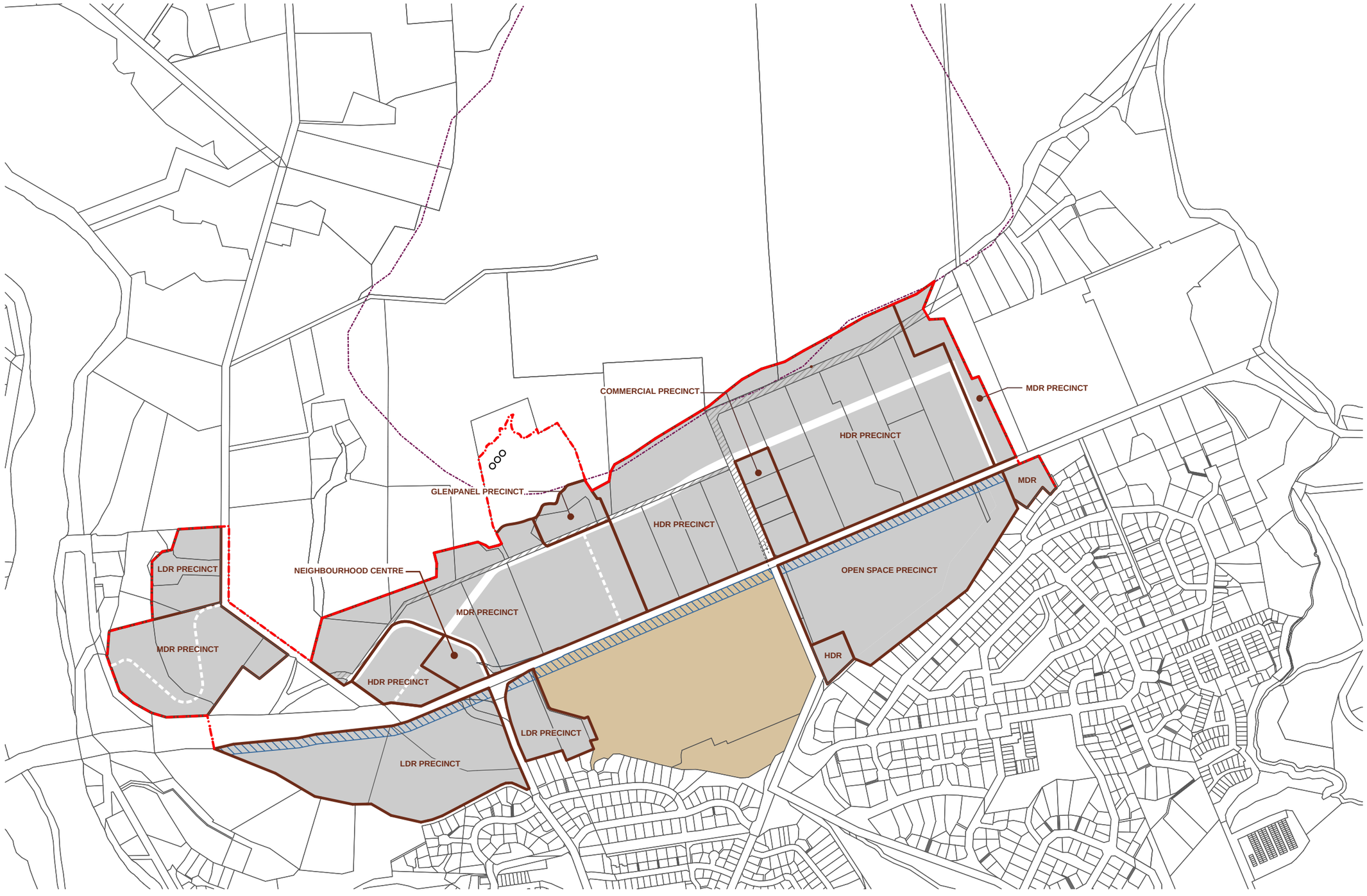
ATTACHMENT C:
GRAPHIC COMPARISON TABLE BETWEEN COUNCIL'S TPLM VARIATION AND UPDATED 'OPTIMISED' OPTION APPROACHES

Scale Relationship	Council's TPLM Variation Approach	Updated 'Optimised' Option Approach
Strategic Context (SH6 RTS Route) *(Note: Assumed Council approach based on Masterplan Concept)*		
Masterplan Concept *(Source: Te Pūtahi Ladies Mile Final Masterplan Report, QLDC, 2022)*		
TPLM Structure Plan Western Amendment Concept *(Note: Based on Mr Harland's response to Submitter Questions – Concept 3)*		
TPLM Western Amendment and Extension Area Structure Plan		

TPLM Western Amendment and Extension Area Land Use Zoning		
TPLM Western Amendment and Extension Area Building Height *(Note: Includes Mr Harland's response to Submitter Questions)*		
TPLM Extension Area Structure Plan		
TPLM Extension Area Illustrative Masterplan *(Source: Te Pūtahi Ladies Mile Final Masterplan Report, QLDC, 2022)*		

Te Pūtahi Ladies Mile Zoning Plan *(AHFT and GPLP Relief Sought)*

1:10,000 @ A3
1:5,000 @ A1
100m 200m



Key

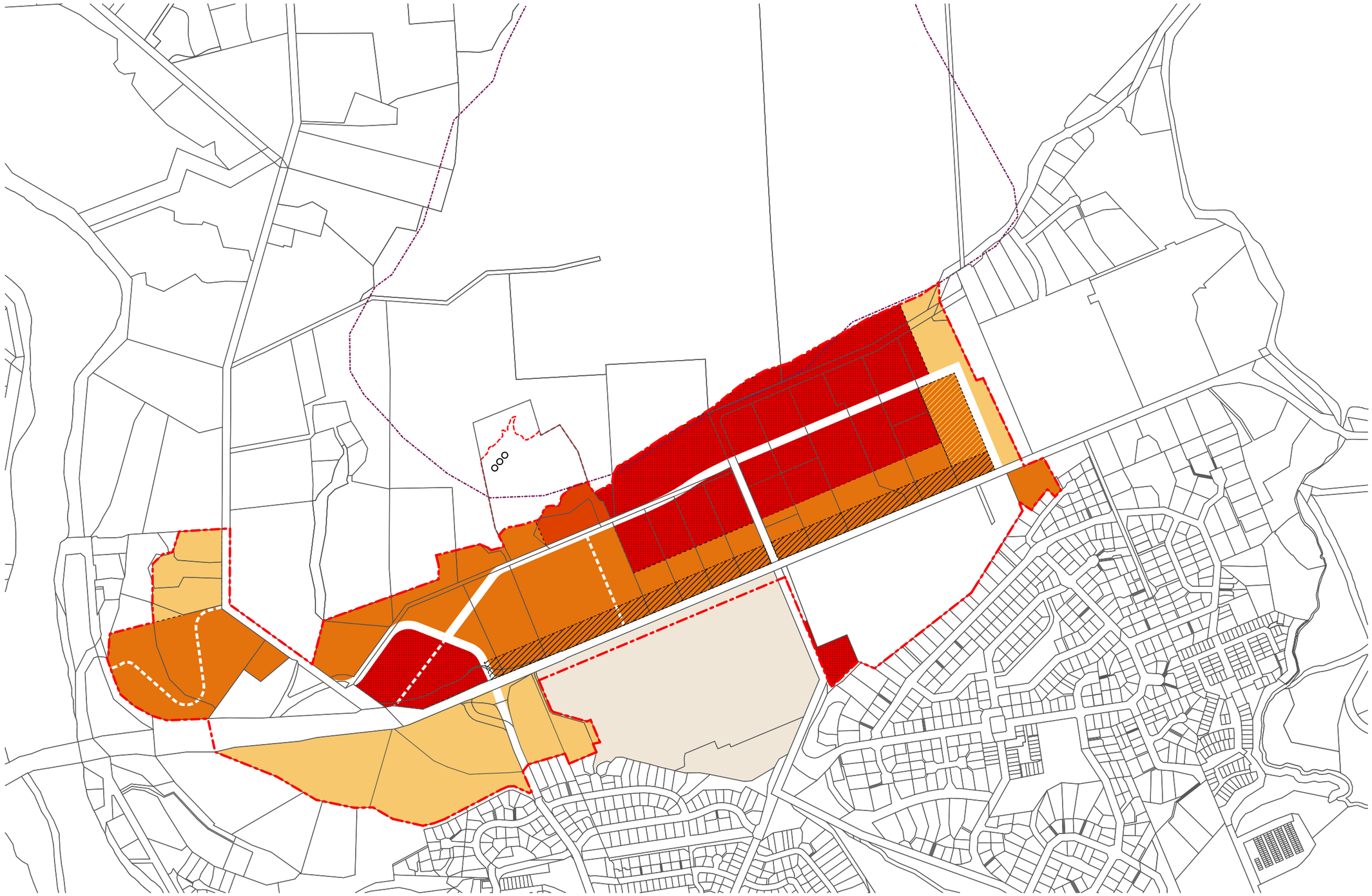
- Urban Growth Boundary Extension
- Building Restriction Area
- Te Pūtahi Ladies Mile Zone
- Precinct
  - **HDR** High Density Residential
  - **MDR** Medium Density Residential
  - **LDR** Low Density Residential
  - **Glenpanel Precinct**
  - **Commercial Precinct**
  - **Neighbourhood Centre Precinct**
  - **Open Space Precinct**
- Lower Density Suburban Residential Zone
- Unformed Legal Road

Te Pūtahi: Ladies Mile

Relief Sought Date: 11/12/2023

Te Pūtahi Ladies Mile Structure Plan - Building Heights *(AHFT and GPLP Relief Sought)*

1:10,000 @ A3
1:5,000 @ A1
100m 200m



Key

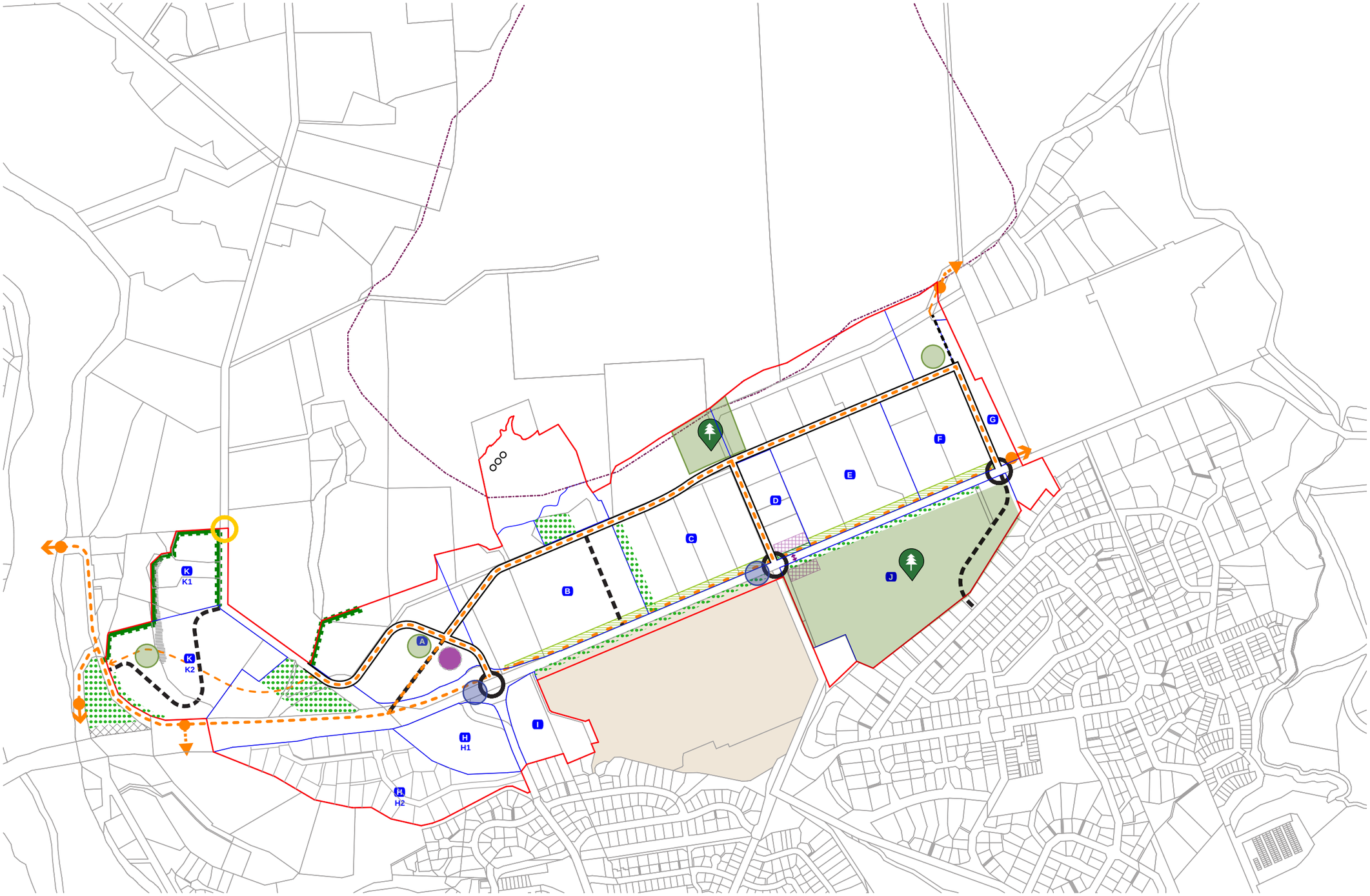
- Structure Plan Extent
- 8m maximum
- 13m maximum
  - min. 2 storey overlay
  - max. 3 storey overlay
- 17m maximum (8m max. within curtilage)
- 24.5m maximum (max. 6 storey)
- Slope Hill Roche Moutonnée Geological Feature

Te Pūtahi: Ladies Mile

Relief Sought Date: 11/12/2023

Te Pūtahi Ladies Mile Structure Plan - General *(AHFT and GPLP Relief Sought)*

1:10,000 @ A3
1:5,000 @ A1
100m 200m



Key

- Structure Plan Extent
- Proposed Intersection
- Structure Plan Roads (Type)
- Road Link
- Key Crossing
- Crossing Curtilage Area Overlay
- Major Active Travel Route
- Active Travel Access Provision
- Active Travel connection to existing routes
- Potential future Active Travel link
- Amenity Access Area ~10m
- Slope Hill Roche Moutonnée Geological Feature
- Open Space
- Community Park (≥1.5Ha)
- Landscape Buffer
- Sub-Area
- Existing Trees to be retained
- Terrace / Escarpment Edge
- Transport Node
- Te Pūtahi Ladies Mile Gateway Treatment
- Western Node Neighbourhood Centre
- UtilitySetback

Te Pūtahi: Ladies Mile

Relief Sought Date: 11/12/2023