Appendix 15: Transportation

15-1 Parking, Loading Spaces and Manoeuvring Areas – Tables and Figures

Table 15-1a: Number of bus parking~~, emergency vehicle~~, queuing, accessible car park, drop-off, maximum car parking, loading, and cycle parking spaces required, and activities requiring gear lockers for visitors

Activity	Bus parking spaces	~~Emergency vehicle~~Gear lockers required for visitors (to be inserted after staff cycle spaces)	Queuing spaces	Accessible car park spaces		Drop-off car spaces	Maximum number of car park spaces in Business 1 to 7 Zones where 10 or more spaces are provided	Loading spaces	Visitor and student cycle parking spaces	Staff and resident cycle parking spaces
				Criteria	Number of accessible car park spaces					
a. Ancillary residential units and apartment buildings				-	-		1.25 per residential unit	-	1 per ~~4~~2 units	~~-~~2 for the first bedroom plus 1 per additional bedroom
b. Building improvement centre (excluding nurseries and garden centres)		Yes		A = Gross Floor Area (m^2)			1 per 40m^2 gross floor area	1 space	~~-~~ 1 per 1,000m^2 gross floor area	~~-~~ 1 per 5 FTE staff
				A ≤ 1,000	1					
				1,000 < A ≤ 2,500	2					
				For each additional 2,500 above 2,500	1 additional space					
c. Camping				A = Number of			1.25 per	-	-	~~-~~1 per 5

grounds				units, camp sites, and caravan sites			unit, camp site or caravan site			FTE staff
				A ≤ 20	1					
				20 < A ≤ 50	2					
				For each additional 50 above 50	1 additional space					
d. Childcare facilities for less than six children				-			2.5 + (1.25 x Number of full-time equivalent staff)		1	1
e. Childcare facilities for six or more children				Number of FTE staff members		1 per 5 children that the facility is designed to accommodate	1.25 x Number of full-time equivalent staff		~~-~~1 per 10 children	1 per ~~100 students~~ 5 FTE staff
				Up to 20	1					
				21 to 50	2					
				For each additional 50 above 50	1 additional space					
f. Community centre		Yes		A =Gross Floor Area (m^2)			1 per 24m^2 gross floor area	1 space	1 per 50m^2 gross floor area or 1 for every 5 persons the facility is designed to accom	1 per 5 FTE staff
				A ≤ 600	1					
				600 < A ≤ 1,500	2					
				For each additional 1,500 above 1,500	1 additional space					

									modate , whiche ver is the greater	
g. Single dwellings and duplex dwellings (except for duplex dwellings in Rotokauri North see nn. below)				-	-		2.5 per household or dwelling			For residential units without a garage: 2 for the first bedroom plus 1 per additional bedroom
h. Drive-through services			5 per dispensing facility	A =Gross Floor Area (excluding canopy area over pumps) (m^2)			1 per 24m^2 gross floor area (excluding canopy area over pumps)	1 space	1 per 100m^2 gross floor area	1 ~~space~~ per ~~10~~5 FTE staff
				A ≤ 600	1					
				600 < A ≤ 1,500	2					
				Each additional 1,500 above 1,500	1 additional space					

i. Emergency service facilities		~~Sufficient space for all the emergency vehicles that use the site~~		Number of on-duty staff			1.25 per on-duty staff person	-	-	~~-~~1 per 5 FTE staff
				Up to 20	1					
				21 to 50	2					
				Each additional 50 above 50	1 additional space					
j. Health care services				A = (3 x Number of consultants) + (Number of FTE staff)			3.75 per consultant and 1.25 per FTE staff	1 space	1 per 2 consultants	1 ~~space~~ per ~~10~~5 FTE staff
				A ≤ 20	1					
				20 < A ≤ 50	2					
				A > 50	((0.02 x A) + 0.5)					
k. Home-based business				~~A = (Number of household car parks provided + Number of vehicles used solely for the home-based business)~~ -	-		2.5 per household plus 1.25 per vehicle used solely for the home-based business	-	-	-
				~~A ≤ 20~~	~~1~~					
				~~20 < A ≤ 50~~	~~2~~					
l. Hospitals		Yes		A = 0.25 x (Number of FTE staff + Number of beds)			1 per 3.2 FTE staff plus 1 per 3.2 beds	1 space per 50 beds	1 per ~~15 beds~~1,000m^2 gross floor area	1 per ~~30 beds~~5 FTE staff
				A ≤ 20	1					

				20 < A ≤ 50	2					
				A > 50	((0.02 x A) + 0.5)					
m. Industrial activities (including warehouses, logistics, and freight-handling activities) (excluding trade and industry training facilities)				A =Gross Floor Area (m^2)			1 per 120m^2 gross floor area	1 space per development or per 3000m^2 gross floor area, whichever is the greater	~~-~~1 per 2,000m^2 gross floor area	1 ~~space~~ per 1,000m^2 GFA or 1 per ~~15~~5 FTE staff, whichever is the greater
				A ≤ 3,000	1					
				3,000 < A ≤ 7,500	2					
				For each additional 7,500 above 7,500	1 additional space					
n. Industrial activities (trade and industry training facilities only)				A = Number of FTE staff + (0.33 x Number of students the facility is designed to accommodate)			1.25 per FTE staff, plus 1.25 per 3 students the facility is designed to accommodate	1 space	1 per ~~3~~2 FTE students	1 per ~~space per 15~~5 FTE staff
				A ≤ 20	1					
				20 < A ≤ 50	2					
				A > 50	(0.02 x A) + 0.5					
o. Managed care facilities and rest homes		Yes		-	-		1.25 per 3 bedrooms plus 1.25 per each FTE staff	-	1 per ~~60~~30 beds/ units/ apartments	1 ~~space~~ per ~~15~~5 FTE staff

							member			
p. Marae	1 per 25m^2 gross floor area	Yes		A =Gross Floor Area (m^2)			1 per 20m^2 gross floor area	1 space	1 per 50 m^2 gross floor area or 1 for each 5 persons the facility is designed to accommodate, whichever is the greater	-
				A ≤ 500	1					
				500 < A ≤ 1,250	2					
				For each additional 1,250 above 1,250	1 additional space					
q. Nurseries and garden centres		Yes		A =Site Area (m^2)				-	~~-~~1 per 400m^2 site area and a minimum of 4 spaces ~~.~~	1 ~~space~~ per ~~15~~5 FTE staff
				A ≤ 4,000	1					
				4,000 < A ≤ 10,000	2					
				For each additional 10,000 above 10,000	1 additional space					
r. Offices		Yes		A =Gross Floor Area (m^2)			1 per 32m^2 gross floor area	1 space	1 per ~~800m2~~ 50m^2 gross floor area	1 per ~~250m8~~ 0m^2 gross floor area or 1 per 5 FTE staff,
				A ≤ 800	1					
				800 < A ≤ 2,000	2					
				For each additional	1 additional space					

				2,000 above 2,000						whichever is the greater
s. Outdoor recreational area including playing fields, courts and tracks (excluding playgrounds)				Maximum number of participants that the area is designed to accommodate			1.25 per 3 participants based on the maximum number of participants that the area is designed to accommodate	-	1 per 20 participants based on the maximum number of participants that the area is designed to accommodate	-
				Up to 60	1					
				61 to 150	2					
				For each additional 150 over 150	1 additional space					
sa. Outdoor recreational areas (playgrounds only)								-	1 per 200m² playground site area with a minimum of 4 spaces	-
t. Places of assembly (except libraries and museums)		Yes		The greater number of accessible car park spaces determined by Criteria X or Criteria Y			1 per 12 m^2 gross floor area or 1 for each 4 persons the facility is designed	1 space	1 per 50 m^2 gross floor area or 1 for each 5 persons the	1 per 5 FTE staff

							to accommodate, whichever is the greater		facility is designed to accommodate, whichever is the greater	
					A = Gross Floor Area (m^2)						
				X	A ≤ 300	1					
				X	300 < A ≤ 750	2					
				X	For each additional 750 above 750	1 additional space					
				Y	Number of people the facility is designed to accommodate						
				Y	1 to 100	1					
				Y	101 to 250	2					
				Y	For each additional 250 above 250	1 additional space					
u. Places of assembly (Libraries and		Yes			A =Gross Floor Area (m^2)			1 per 24m^2 gross floor area	1 space	5 spaces plus 1 per	1 ~~space~~ per ~~10~~5 FTE staff
					A ≤ 600	1					

museums only)				600 < A ≤ 1,500	2				200m² gross floor area or 1 for every 5 persons the facility is designed to accommodate, whichever is the greater	
				For each additional 1,500 above 1,500	1 additional space					
v. Places of worship		Yes		A =Gross Floor Area (m²)			1 per 24m² gross floor area	1 space	1 per 50 m² gross floor area or 1 for each 5 persons the facility is designed to accommodate, whichever is the greater	1 per 5 FTE staff
				A ≤ 600	1					
				600 < A ≤ 1,500	2					
				For each additional 1,500 above 1,500	1 additional space					
w. Buildings serving		Yes		A =Gross Floor Area (m²)			1 per 16m²	1 space	1 per 50m²	1 per 5 FTE

outdoor recreational areas and indoor recreation buildings				A ≤ 400	1		gross floor area		gross floor area or 1 for every 5 persons the facility is designed to accommodate , whichever is the greater	staff
				400 < A ≤ 1,000	2					
				For each additional 1,000 above 1,000	1 additional space					
x. Research and Innovation activities		Yes		A =Gross Floor Area (m^2)			1 per 32m^2 gross floor area	1 space	1 per ~~350m~~250m^2 gross floor area	1 ~~space~~ per ~~10~~5 FTE staff
				A ≤ 800	1					
				800 < A ≤ 2,000	2					
				For each additional 2,000 above 2,000	1 additional space					
y. Residential centres							1.25 per FTE staff plus 1.25 per 3 bedrooms	-	1 per 5 beds	1 ~~space~~ per ~~15~~5 FTE staff
z. Retail activities (gross floor		Yes		A =Gross Floor Area (m^2)			1 per 16m^2 gross floor area	1 space	1 per ~~500 m~~250m^2 GLFA	1 per 250 m^2 GLFA
				A ≤ 400	1					

area less than 5,000 m^2 in individual ownership/ tenancy or integrated retail development)				400 < A ≤ 1,000	2				A	or 1 per 5 FTE staff, whichever is the greater
				For each additional 1,000 above 1,000	1 additional space					
aa. Retail activities (gross floor area greater than or equal to 5,000 m^2 and less than		Yes		A =Gross Floor Area (m^2)			1 per 24m^2 gross floor area	1 space	1 per ~~500 m~~250 $0m^2$ GLFA	1 per 250 m^2 GLFA or 1 per 5 FTE staff, whichever is the greater
				5,000 ≤ A ≤ 6,000	4					
				A = 6,000	5					
				For each additional 1,500 above 6,000	1 additional space					

10,000 m^2 in individual ownership/ tenancy or integrated retail development)~~–~~										
bb. Retail activities (gross floor area 10,000 m^2 or greater in individual ownership/ tenancy or integrated retail		Yes		A = Gross Floor Area (m^2) 10,000 ≤ A < 12,000 For each additional 2,000 above 10,000	 6 1 additional space		1 per 32m^2 gross floor area	1 space	1 per ~~500 m~~250m^2 GLFA	1 per 250 m^2 GLFA or 1 per 5 FTE staff, whichever is the greater

development)										

cc. Retail activities - bulky goods only				A = Gross Floor Area (m^2)			1 per 40m^2 gross floor area	1 space	1 per 1,000m^2 GF	1 ~~space~~ per ~~10~~5 FTE staff
				A ≤ 1,000	1					
				1,000 < A ≤ 2,500	2					
				For each additional 2,500 above 2,500	1 additional space					
dd. Retail activities – outdoor only				A = Uncovered display area (m^2)			1 per 80m^2 of uncovered display area	-	~~-~~1 per 1,000m^2 of uncovered display area	1 ~~space~~ per ~~10~~5 FTE staff
				A ≤ 2,000	1					
				2,000 ≤ A < 5,000	2					
				For each additional 5,000 above 5,000	1 additional space					
ee. Retail activities – indoor display areas for vehicles, boats and agricultural and industrial machinery only		Yes		A = Gross Floor Area (m2)			1 per 120m^2 gross floor area	1 space	~~-~~1 per 250m^2 GLFA	1 ~~space~~ per ~~10~~5 FTE staff
				A ≤ to 3,000	1					
				3,000 < A ≤ 7, 500	2					
				For each additional 7,500 above 7,500	1 additional space					
ff. Retail activities – food		Yes		A = Gross Floor Area (m^2)			1 per 8m^2 gross floor area	1 space	1 per ~~125m~~50m^2	1 per 400m^2 gross

	and beverage, cafes, restaurants and licensed premises only				A ≤ 200	1				gross floor area	floor area or 1 per 5 FTE staff, whichever is the greater
					200 < A ≤ 500	2					
					For each additional 500 above 500	1 additional space					
gg.	Retail activities – super markets only		Yes		X + Y			1 per 16m² gross floor area devoted to retail sales activities and 1 per 32m² gross floor area for all other activities	1 space	1 per ~~500 m~~250m² GLFA	1 ~~space~~ per ~~10~~5 FTE staff
					A = Floor area devoted to retail sales activities						
				X	A ≤ 400	1					
					400 < A ≤ 1,000	2					
					For each additional 1,000 above 1,000	1 additional space					
					A = Floor						

				area devoted to other activities						
				A ≤ 2,000	1					
				2,000 < A ≤ 5,000	2					
				For each additional 5,000 above 5,000	1 additional space					
hh. Retirement villages				-	-		1.25 per unit plus 1.25 for each four units	-	1 per ~~60 beds~~ unit	1 ~~space~~ per ~~15~~5 FTE staff for staff, plus 2 per residential unit for residents

ii. Schools	1 per 200 students where school bus services are provided. For schools not served by school bus services, no bus spaces are required	Yes		Number of FTE staff 1 to 20 21 to 50 For each additional 50 above 50	 1 2 1 additional space	1 per 50 primary and intermediate students and 1 per 100 secondary students	1.25 per FTE staff	-	~~Primary schools~~ Year 6 and below: 1 per 4 students Year 7 and above: 1 per 3 students. Visitors: 1 per 20 students ~~Intermediate schools 1 per 5 students Secondary schools 1 per 4 students~~	1 per ~~100 student s~~5 FTE staff
jj. Showho				~~Number of car~~	1		2.5 per	-	-	-

me				~~parks provided~~Per showhome			showhome			
				~~0 - 20~~	~~1~~					
				~~21 - 50~~	~~2~~					
				~~For each additional 50 over 50~~	~~1 additional~~					
~~k~~k. Tertiary education and specialised training facilities				A = Number of FTE staff + (0.33 x number of students)			1.25 per FTE staff, plus 1.25 per 3 students the facility is designed to accommodate	1 space	1 per ~~10~~4 FTE students ~~the facility is designed to accommodate~~	1 per ~~10~~5 FTE staff
				A ≤ 20	1					
				20 < A ≤ 50	2					
				A > 50	(0.02 x A) + 0.5					
ll. Transport depots				A = Gross Floor Area of building or site used for storage, whichever is the greater (m^2)			1 per 80m^2 gross floor area of building or site area used for storage, whichever is the greater	1 space	-	1 ~~space~~ per ~~20~~10 FTE staff
				A ≤ 2,000	1					
				2,000 < A ≤ 5,000	2					
				For each additional 5,000 above 5,000	1 additional space					
mm. Visitor accommodation				A = Number of FTE staff + the greater of B or			1.25 per FTE staff member	1 space	1 per 20 beds	1 ~~space~~ per ~~15~~5 FTE

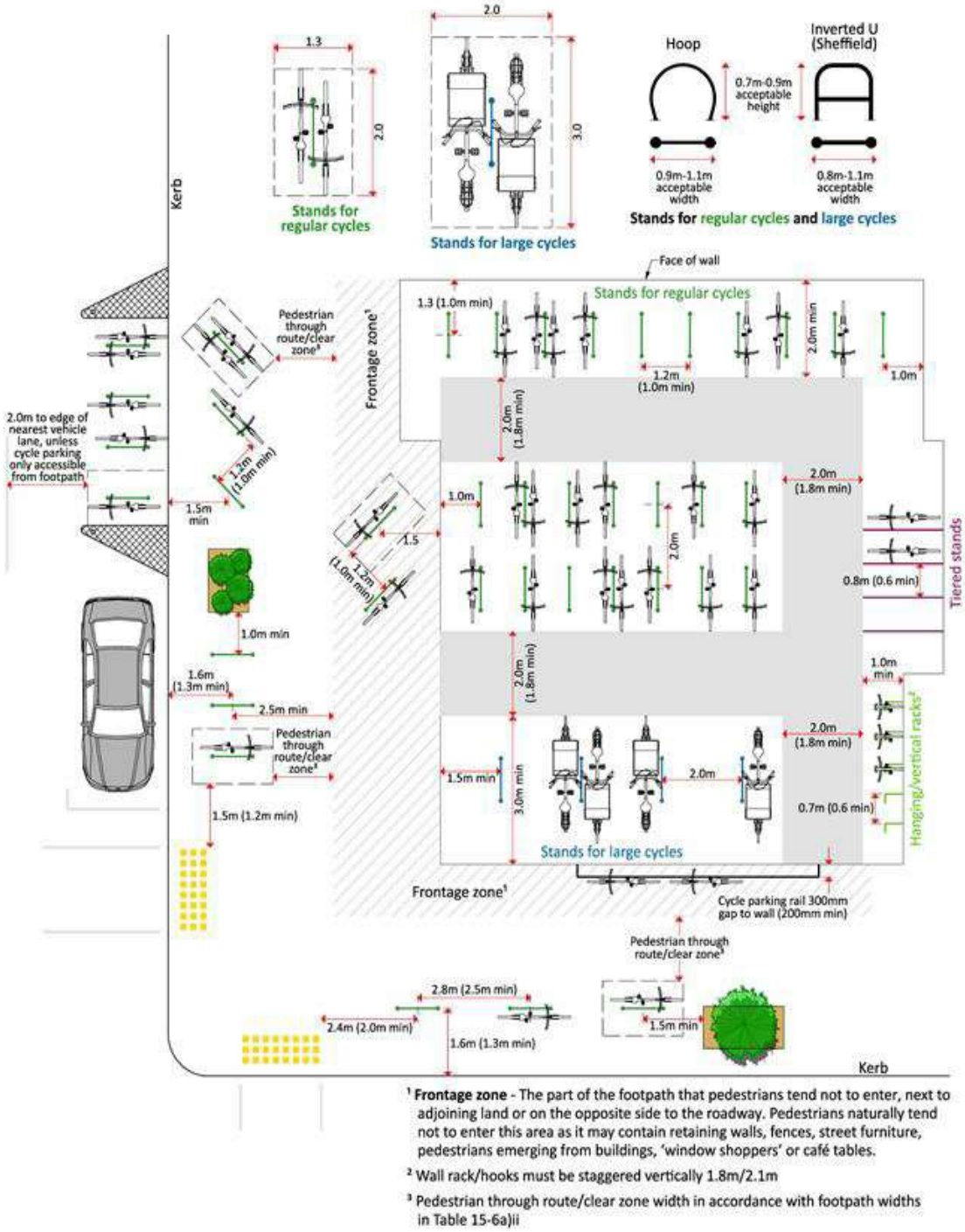
				C, where B = 0.33 x number of visitors the facility is designed to accommodate C = number of accommodation units			plus the greater of either 1.25 per 3 visitors that the facility is designed to accommodate or 1.25 per unit		except hotels where the rate is 1 per 30 bedrooms	staff
				A ≤ 20	1					
				20 < A ≤ 50	2					
				A > 50	(0.02 x A) + 0.5					
nn. Duplex dwelling in Rotokauiri North								-	-	1 per bedroom for residential units without a garage
oo. Key Public Transport Interchange								-	2 per bus route with a minimum of 10 spaces	-

nn. ~~Duplex dwelling in Rotokauri North~~									

Notes

1. *The installation of bicycle parking spaces in an adjoining transport corridor is at the discretion and approval of Council as the Road Controlling Authority and may be subject to specific design requirements.*
2. ~~*If fewer than four spaces and stands are required then these can be allocated to either visitor or staff parking (or both).*~~
3. ~~*If more than four spaces are required then a minimum of 25% should be allocated to visitor use and 25% for staff use only, the remainder can be allocated to either visitor or staff parking (or both).*~~
4. *Volume 1, Rule 25.14.4.2.a.ii. caps the minimum staff cycle parking spaces requirement at 1 per ~~10~~5 FTE staff.*
5. *The standards in this table do not apply within the Transport Corridor Zone or Natural Open Space Zone (refer to Table 15-1c).*
6. *The accessible car park space and loading space standards in this table do not apply within the Central City Zone (refer to Table 15-1b).*
7. ~~*Cycle space standards in this table apply within the Central City Zone*~~*.*
8. *The requirements of Table 15-1d must be met where they require a higher number of accessible car park spaces than Table 15-1a.*
9. *Refer to Rule 25.14.4.2 e when assessment of the number of parking spaces (of any type) results in a fractional space.*
10. *Refer to Rule 25.14.4.2 w regarding substituting up to 10% of cycle parking spaces required by Table 15-1a with dedicated parking spaces for micro-mobility devices on a 1-for-1 basis.*
11. *Development in the Central City Zone, Business 1 Zone, Business 5 Zone, Business 6 Zone, and Business 7 Zone is exempt from any requirement to provide accessible car park spaces for retail activities within existing buildings where there is no ability to provide customer or staff parking on the site. Refer to Rule 25.14.4.2 b i.*

Figure 15-1aa: Cycle parking dimensions



¹ **Frontage zone** - The part of the footpath that pedestrians tend not to enter, next to adjoining land or on the opposite side to the roadway. Pedestrians naturally tend not to enter this area as it may contain retaining walls, fences, street furniture, pedestrians emerging from buildings, 'window shoppers' or café tables.

² Wall rack/hooks must be staggered vertically 1.8m/2.1m

³ Pedestrian through route/clear zone width in accordance with footpath widths in Table 15-6a)ii

Table 15-1aa: Number of parking spaces in Rotokauri North

Activity	Car parking spaces
All activities	There are no minimum car parking space

	requirements

Table 15-1b: Number of loading spaces required – Central City Zone

Activity	Loading/service spaces
a. Residential	-
b. All other activities	1 space per site This standard does not apply where the site has existing development and insufficient space to allow a compliant loading/service space

Table 15-1c: Number of loading spaces in the Natural Open Space Zone and Transport Corridor Zone

Activity	Loading/service spaces
a. All activities	-

Table 15-1d: Number of accessible spaces required – disabled users – Non-Residential Use – All Zones

Total number of car park spaces being provided	Minimum number of accessible car park spaces for disabled users
1 – 20	1
21 – 50	2
For each additional 50 car parks above 50 car park spaces	1 additional

Note
1. The requirements of Table 15-1a must be met where they require a higher number of accessible car park spaces than Table 15-1d.

Table 15-1e: Number of spaces required for less mobile users – All Zones

Total number of car park spaces being provided	Minimum number of car park spaces for less mobile users
50 - 100	1
For each additional 50 car parks above 50 car park spaces	1 additional

Note
1. *For the purposes of spaces required by Volume 1 Rule 25.14.4.2.c.ii. and Table 15-1e, the allocation and management of use to less mobile users (e.g. elderly, parents with infants, and/or temporary disabilities) is at the discretion of the site owner or occupier.*
2. *The standards in this table do not apply to offices in the Central City Zone.*

Table 15-1f: Number of motorcycle parking spaces required – All Zones

Total number of car park spaces being provided	Minimum number of motorcycle spaces
20-100 spaces	3
For each additional 40 car parks above 100 car park spaces	1 additional

Table 15-1g: Number and type of ~~bicycle end-of-journey facilities~~shower cubicles required ~~– Central City Zone~~for staff cyclists and ~~Business Zones 1 to 7~~micro-mobility users

Number of ~~staff~~ cycle and micro-mobility spaces provided for staff	Minimum number of ~~showers~~standard shower **cubicles** required	Minimum number of ~~changing rooms~~of accessible shower **cubicles** required
~~10 – 50~~1 - 9	~~2~~0	~~2~~1
10 – 50	1 per 25 cycle spaces	No less than 10% of the total number of shower cubicles provided must be accessible.
51 – 150		
Each additional 100 cycle spaces	2 additional	

Note

1. *Each shower cubicle and accessible shower cubicle must have its own dry area for changing.*

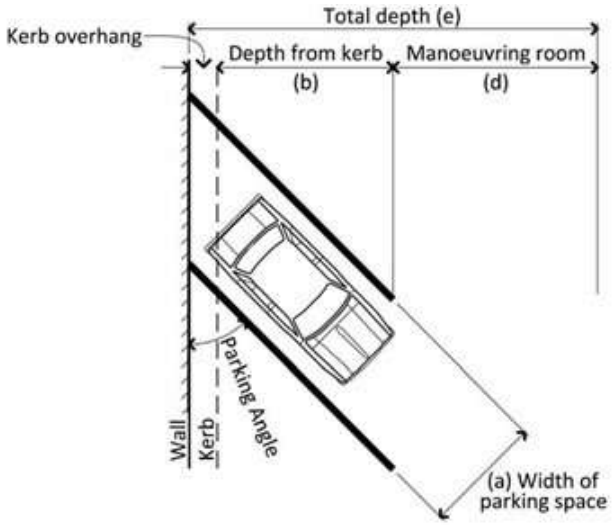
Table 15-1ga: Number of changing rooms required for staff cyclists and micro-mobility users

Number of cycle and micro-mobility parking spaces provided for staff	Minimum number and type of changing rooms required
1-9	0
10 - 50	1 ungendered
51 or more	2 ungendered
Each additional 50 cycle spaces	1 ungendered

Note

1. *The changing rooms specified in this table are additional to the dry area for changing required to be provided with each shower cubicle.*

Table 15-1h: Minimum dimensions for on-site parking~~, loading~~ spaces and manoeuvring areas



Type of parking		Stall width (a)	Stall depth		Manoeuvre width (d)	Total depth (e)	
Parking angle (x)	Type		From wall (b)	From kerb (c)		One row	Two rows
		ALL MEASUREMENTS ARE IN METRES					
90	Nose in	2.4 2.5 2.6 2.7	5.1	4.1	7.9 7.6 7.2 6.8	13.0 12.7 12.3 11.9	18.1 17.8 17.4 17.0
75	Nose in	2.4 2.5 2.6 2.7	5.4	4.4	6.4 5.8 5.2 4.6	11.3 11.2 10.6 10.0	17.2 16.6 16.0 15.4
60	Nose in	2.4 2.5 2.6 2.7	5.4	4.5	4.5 4.2 3.9 3.6	9.9 9.6 9.3 9.0	15.3 15.0 14.7 14.4
45	Nose in	2.4 2.5 2.6 2.7	5.0	4.2	3.6 3.5 3.4 3.3	8.6 8.5 8.4 8.3	13.6 13.5 13.4 13.3
30	Nose in	2.4 2.5 2.6 2.7	4.3	3.7	3.0	7.3	11.6

0	Parallel	2.5	Stall length 6.0	3.7	6.2	8.7

1. Parallel parking spaces (Parking Angle = 0) shall be 6m long, except where one end of the space is not obstructed, in which case the length of the space may be reduced to 5m.
2. Minimum aisle and accessway widths shall be 3m for one way flow, and 5.5m for two way flow. Recommended aisle and accessway widths are 3.5m for one way flow, and 6m for two way flow.
3. Maximum kerb height = 150mm.
4. Parking space dimensions will vary for accessible car park spaces.

Figure 15-1ha: Minimum dimensions for on-site loading spaces

Activity	Length of loading space (m)	Width of loading space (m)
Industrial activities	11	3.5
All other activities	8	3.5
All sites and development designed to accommodate articulated vehicles	21	3.5

Figure 15-1i: Examples of on-site parking configurations

Refer to Table 15-1h for relevant minimum dimensions

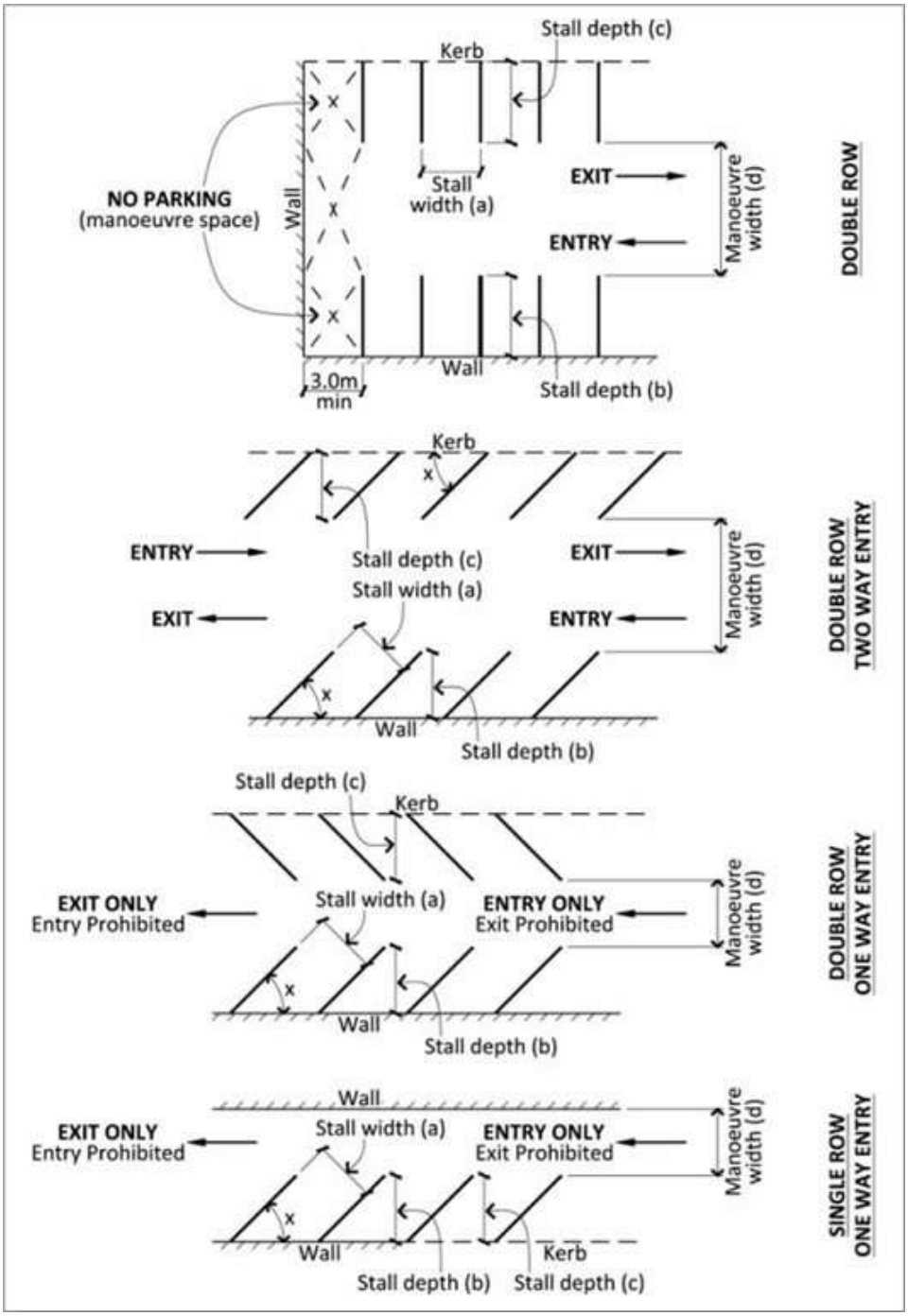


Figure 15-1j: 90 Percentile Car Tracking Curve Minimum Radius

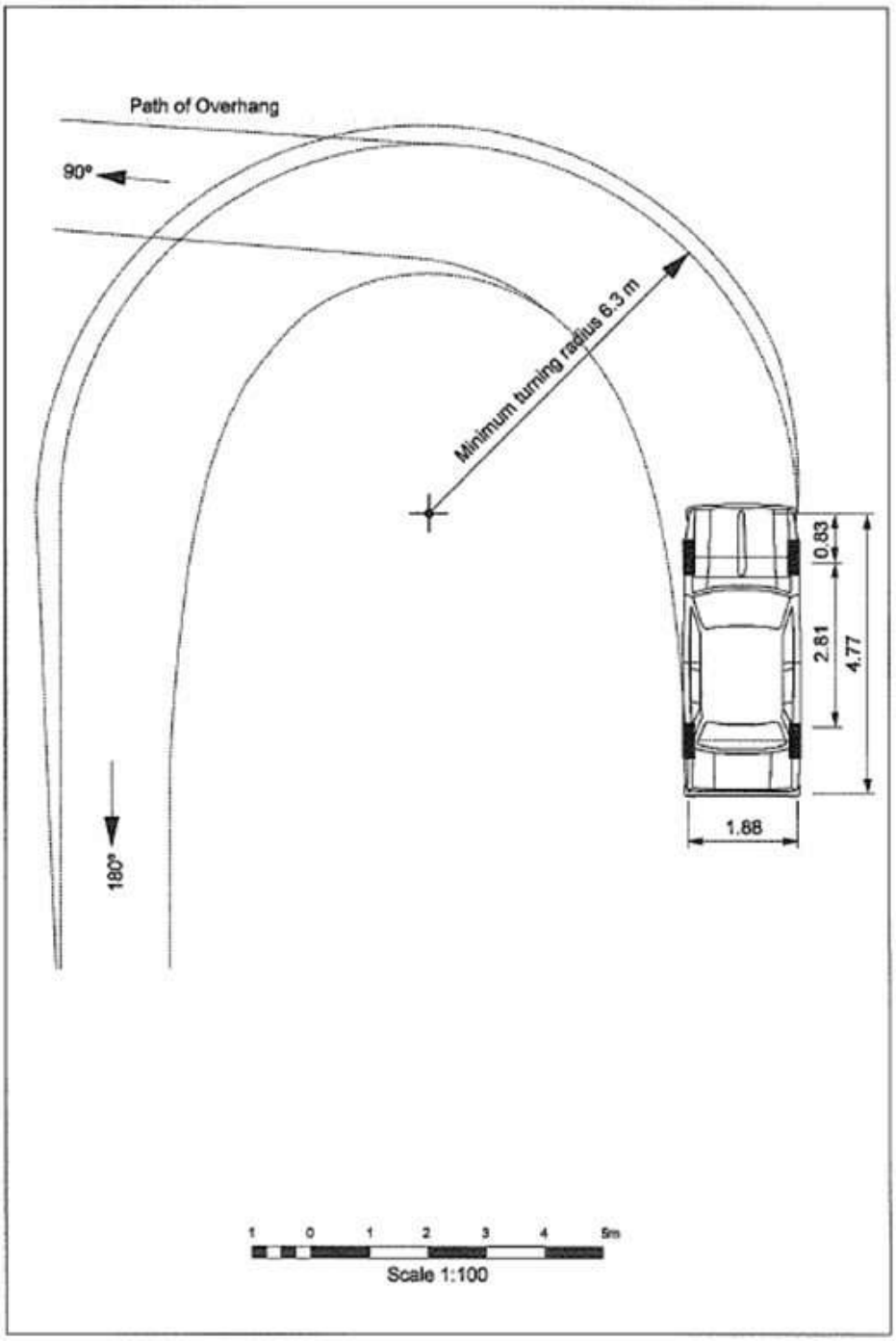


Figure 15-1k: 99 Percentile Car Tracking Curve Minimum Radius

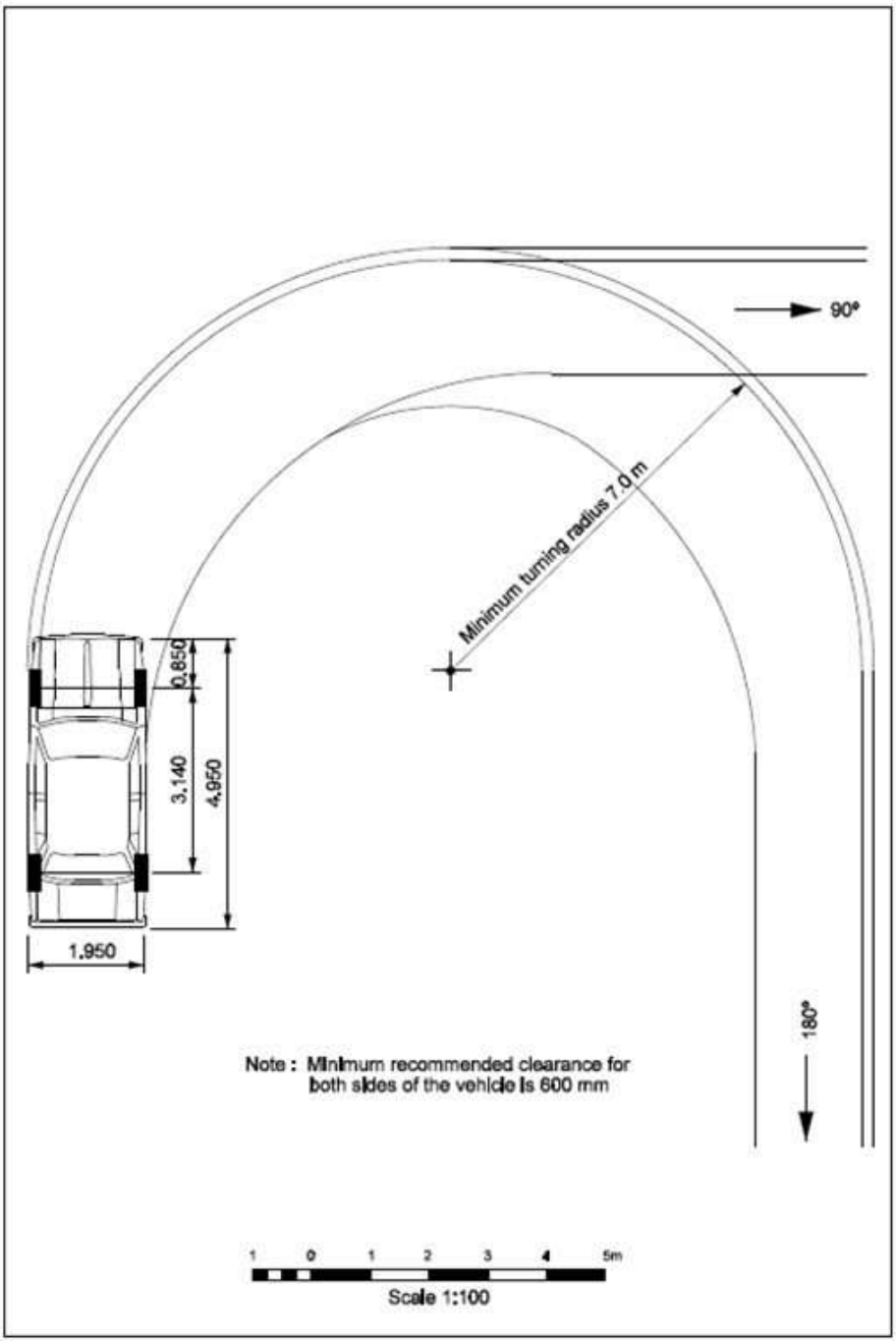


Figure 15-1l: 99 Percentile Medium Rigid Truck Tracking Curve Minimum Radius

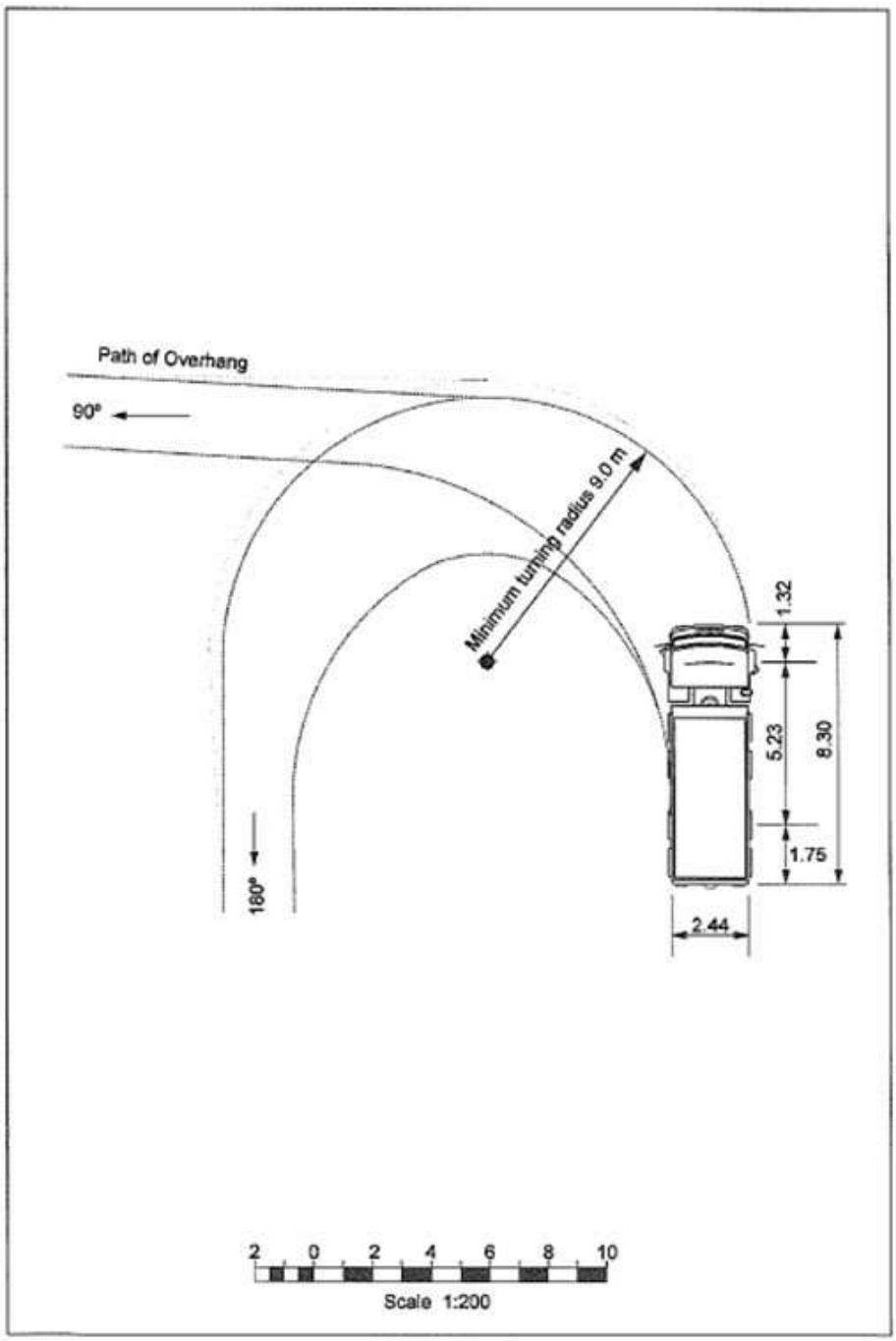
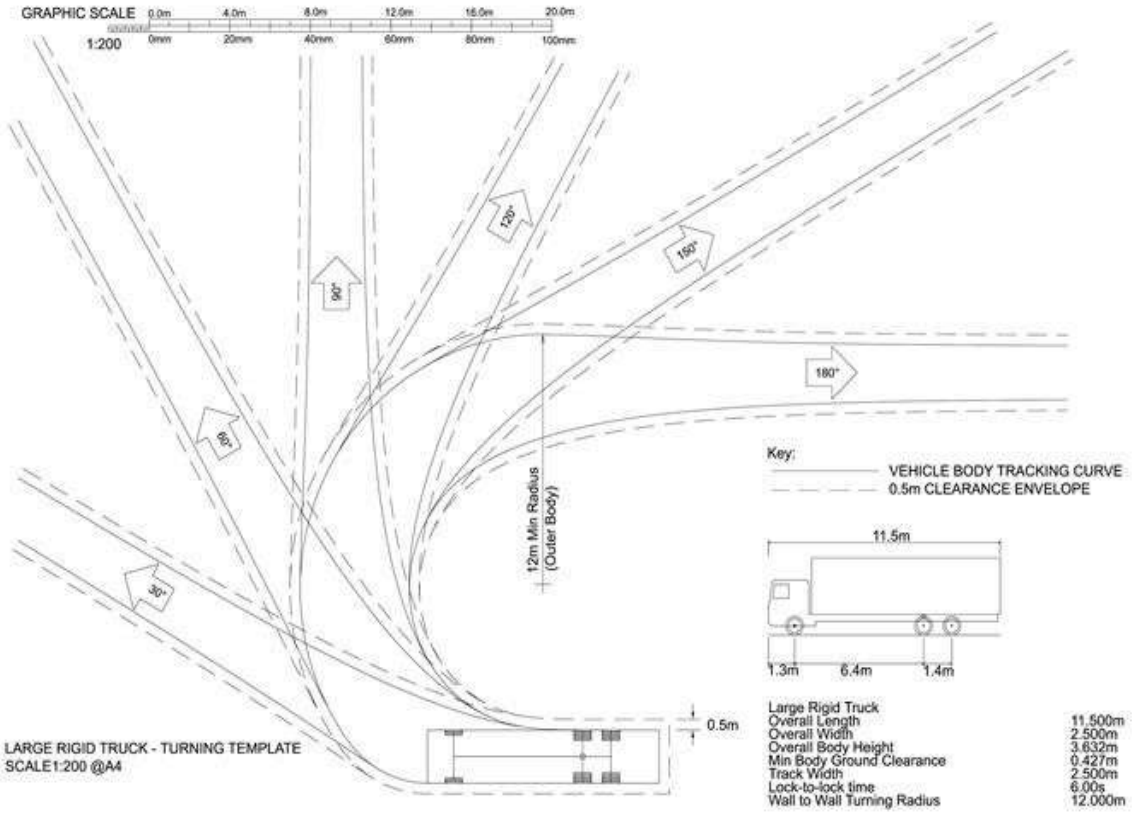


Figure 15-1m: 99 Percentile Large Rigid Truck Tracking Curve Minimum Radius



15-2 Integrated Transport Assessment Requirements – Tables

Table 15-2a: Simple ITA checklist

Requirements for Simple ITA[1]	
Item description	**Details to be included**
a. Background	A description of the proposed activity and the purpose and intended use of the ITA
b. Existing land data	A description of the location, site layout, existing uses, adjacent land uses, any consented or planned changes expected within 10 years likely to affect transport, and zoning
c. Existing transport data	A description of the trip generation and access arrangements for all modes, on-site parking and the surrounding transport network (including hierarchy, traffic volumes, safety and consented or planned changes expected within the next 10 years likely to affect network infrastructure, services and network management)
d. Proposal details	A description of the proposal (including site layout, operational hours, vehicle access, on-site parking and loading, internal vehicle circulation, pedestrian, cycle and ~~pedestrian circulation~~micro-mobility access, and end-of-journey facilities)
e. Design Statement	Developments triggering an ITA (i.e., those generating more than 500vpd or approximately 50 residential units or providing a new transport corridor) will be required to prepare a Design Statement that provides specific consideration and assessment of matters including: • How walking, cycling, micro-mobility use, and public transport will be prioritised including assessment of block layouts, contribution to neighbourhood permeability, design speed, point-to-point walking distances, frequency of vehicle crossings, and provision of on-street parking; • Rubbish, recycling, and food scraps collections; • How off-street parking is to be provided; and

	• How on- and off-street parking is to be designed to create a safe environment.
f. Predicted travel data	The trip generation of the proposal for all modes of travel.
g. Appraisal of transportation effects	An assessment of safety and efficiency and effects in the immediate vicinity. The assessment must prioritise identifying and mitigating effects on transport modes that are higher in the transport mode hierarchy. Where the proposed activity has the potential to impact on the state highway, a summary of consultation with Waka Kotahi ~~New Zealand~~NZ Transport Agency shall be included. Where the proposed activity has the potential to impact on a railway level crossing, a summary of consultation with the KiwiRail must be included.
h. Climate Change	An assessment of the effects of the proposal on embodied greenhouse gas emissions and operational greenhouse gas emissions using the ASI framework described in the Transport Emissions: Pathways to Net Zero by 2050 Green Paper (May 2021). The ASI framework addresses 3 elements: • Avoid – improve the overall efficiency of the transport system through interventions to reduce the need to travel and trip lengths. • Shift – improve the efficiency of trips by promoting mode shift to low carbon modes, such as walking, cycling, public transport, coastal shipping, and rail freight. • Improve – lower the emissions of transport vehicles and fuels.
i. Avoiding or mitigating actions	Details of any mitigating measures and revised effects
j. Compliance with policy and other frameworks	Consideration of compliance with District Plan standards
k. Discussion and conclusions	Summary and conclusion assessment of effects
l. Recommendations	Proposed conditions (if any)

Note

1. *For further guidance refer to Appendix A of Waka Kotahi ~~New Zealand~~NZ Transport Agency Research Report No.422, "Integrated Transport Assessment Guidelines", Abley et al, November 2010.*

Table 15-2b: Broad ITA checklist

Requirements for Broad ITA[1]	
Item description	**Details to be included [2]**
a. Background	A description of the proposed activity, the purpose and intended use of the ITA, and an outline of any previous discussions with the relevant road controlling authorities
b. Existing land data	A description of location, site layout, existing use and consents (if any), and adjacent and surrounding land use.
c. Existing transport data	A description of ~~the~~: i. The existing access, arrangements for deliveries and ~~service arrangements~~collection of rubbish, recycling, and food scraps, and any on-site car parking. ~~A description of the~~ ii. The surrounding transport network (including hierarchy, traffic volumes, crash analysis, congestion, and intersections). iii. The ~~A description~~accessibility of ~~passenger~~public transport ~~modes~~and walking, cycling, and ~~accessibility, walking and cycling~~micro-mobility networks.
d. Committed environmental changes	Consideration of other committed developments ~~and~~, land use changes, and transport network improvements (including ~~passenger~~to public transport ~~, walking~~ and provisions for walking, cycling, and micro-mobility).
e. Existing travel characteristics	Details on the existing trip generation, modal split, and assignment of trips to the network
f. Proposal details	A description of the proposal (including site layout, operational hours, vehicle access, any on ~~-site~~-site car parking and drop off spaces, ~~and~~ internal vehicle circulation, pedestrian, cycle, and ~~pedestrian circulation). A description of~~micro-mobility access, end-of-journey facilities, and any construction management matters). ~~A description of what end of journey facilities are proposed~~
g. Design Statement	Developments triggering an ITA (i.e., those generating more than 500vpd or approximately 50

	residential units or providing a new transport corridor) will be required to prepare a Design Statement that provides specific consideration and assessment of matters including: • How walking, cycling, micro-mobility use, and public transport will be prioritised including assessment of block layouts, contribution to neighbourhood permeability, design speed, point-to-point walking distances, frequency of vehicle crossings, and provision of on-street parking; • Rubbish, recycling, and food scraps collections; • How any off-street parking is to be provided; and • How any on- and off-street parking is to be designed to create a safe environment.
h. Predicted travel data	A description of the trip generation, modal split, trip assignment to the network, trip distribution and trip type proportions of the proposal. Consideration of future traffic volumes and trip generation. A 20-year assessment period for major arterial and strategic transport corridors should be used. Assessment periods shall be from date of application If relevant validated and comprehensive transportation forecasts are not available, the assessment should consider expected traffic conditions over a 10 year period and the sensitivity of assessment conclusions to changes in traffic conditions.
i. Appraisal of transportation effects	An assessment of safety, efficiency, environmental, accessibility, integration, and economic effects (including effects on greenhouse gas emissions, and sensitivity testing). The assessment must prioritise identifying and mitigating effects on transport modes that are higher in the transport mode hierarchy. A specific assessment of the safety and efficiency of the transport network against Assessment Criteria G3 to G6 in Appendix 1.3.3 Restricted Discretionary, Discretionary and Non-Complying Assessment Criteria – G Transportation. Where the proposed activity has the potential to impact on the state highway, a summary of consultation with Waka Kotahi ~~New Zealand~~NZ Transport Agency shall be included. Where the proposed activity has the potential to impact on a railway level crossing, a summary of consultation with KiwiRail must be included.
j. Climate Change	An assessment of the effects of the proposal on embodied greenhouse gas emissions and operational greenhouse gas emissions using the ASI framework described in the Transport Emissions: Pathways to Net Zero by 2050 Green Paper (May 2021). The ASI framework addresses 3 elements: • Avoid – improve the overall efficiency of the transport system through interventions to reduce the need to travel and trip lengths. • Shift – improve the efficiency of trips by promoting mode shift to low carbon modes, such as walking, cycling, public transport, coastal shipping, and rail freight. • Improve – lower the emissions of transport vehicles and fuels.
k. Avoiding or mitigating actions	Details of any mitigating measures and revised effects~~, including measures to encourage other~~. The assessment must prioritise transport modes that are higher in the transport mode hierarchy.~~.~~ **Travel planning ~~and~~, travel demand management measures, and sensitivity testing of mitigations.**
l. Compliance with policy and other frameworks	Review against District Plan objectives, policies and rules. Detailed assessment against ~~Access Hamilton~~Hamilton City Council transport strategy and ~~associated action plans. Other~~other relevant local, regional, and national strategies or plans (e.g., Regional Land Transport ~~Strategy~~Plan, Regional Public Transport Plan, and the emissions reduction strategy).
m. Safety and Efficiency	Any changes over the relevant assessment period to the: a. Predicted level of personal risk to individuals (safety) using the network. b. Levels of service (efficiency) of the network Consideration of whether the desirable levels of service set out in the notes below can or should be maintained. This should also recognise the pre-proposal levels of service and whether other benefits accrue that could have the potential to offset or otherwise support a lesser level of service. For example, longer traffic delays resulting in slower speeds may support pedestrian-friendly land use environment in the Central City.
n. Discussion and conclusions	An assessment of effects and conclusion of effects. **Confirmation of the suitability of the location of the proposal**
o. Recommendations	Proposed conditions (if any)

[1] For further guidance refer to Appendix A of Waka Kotahi ~~New Zealand~~NZ Transport Agency Research Report No.422 "Integrated Transport Assessment Guidelines", Abley et al, November 2010.

[2] Details listed in bold font are required for large developments with significant transport impacts and may not be applicable for smaller developments.

Note
Guidance on ~~'safety' and~~ 'efficiency'

Desirable levels of service:

i. An average delay per vehicle during Peak Periods on the approaches to intersections of no greater than:
- *55 seconds for the Strategic Network, Major and Minor Arterial transport corridors*
- *80 seconds for all other transport corridors*

ii. ~~On the Strategic Network, Major and Minor Arterial transport corridors during Peak Periods:~~
- *~~Average vehicle speeds between intersections restricted to no less than 90% of the posted speed limit~~*
- *~~Average vehicle speeds, including intersections, constrained to no less than 18 km/h~~*

iii. Unless demonstrated otherwise with site specific data, Peak Periods are taken to be 7am to 9am and 4pm to 6pm Monday to Friday.

It is not a requirement of the Plan that individual proposals mitigate the effects of other proposals in order to achieve the desirable levels of service. Where the pre-proposal desirable levels of service over the assessment period have already been exceeded, it is not expected that a proposal be required to restore the network to the desirable levels of service, rather it is expected that the proposal mitigates its effects to maintain the pre-proposal level of service for the relevant assessment period.

Table 15-2c Downtown Precinct ITA Checklist

Requirements for ITA within Downtown Precinct [1]	
Item description	**Details to be included [2]**
a. Background	A description of the proposed activity, the purpose and intended use of the ITA, and an outline of any previous discussions with the relevant road controlling authorities
b. Existing land data	A description of location, site layout, existing use and consents (if any)
c. Existing transport data	A description of the existing access and service arrangements and on-site car parking. A description of the transport network adjacent to the pedestrian and vehicle access points (including traffic volumes and crash analysis).
d. Committed environmental changes	Consideration of other developments, land use and transport network improvements within the Downtown Precinct (including passenger transport, walking and cycling)
e. Existing travel characteristics	Details on the existing trip generation, modal split, and assignment of trips to the network
f. Proposal details	A description of the proposal (including site layout, operational hours, vehicle access, any on ~~site~~-site car parking and drop off spaces, ~~and~~ internal vehicle circulation, pedestrian, cycle, and ~~pedestrian circulation~~micro-mobility access, and end-of-journey facilities). ~~A description of what end of journey facilities are proposed~~
g. Predicted travel data	A description of the trip generation, modal split, trip assignment to the network, trip distribution and trip type proportions of the proposal. Consideration of future traffic volumes and trip generation using a 10-year assessment period.
h. Climate Change	An assessment of the effects of the proposal on embodied greenhouse gas emissions and operational greenhouse gas emissions using the ASI framework described in the Transport Emissions: Pathways to Net Zero by 2050 Green Paper (May 2021). The ASI framework addresses 3 elements: • Avoid – improve the overall efficiency of the transport system through interventions to reduce the need to travel and trip lengths. • Shift – improve the efficiency of trips by promoting mode shift to low carbon modes, such as walking, cycling, public transport, coastal shipping, and rail freight. • Improve – lower the emissions of transport vehicles and fuels.
i. Appraisal of transportation effects	An assessment of safety, efficiency, environmental, accessibility, and integration effects in the immediate vicinity. The assessment must prioritise transport modes that are higher in the transport mode hierarchy.
j. Avoiding or mitigating actions	Details of any mitigating measures and revised effects, including measures to encourage other modes. **Travel planning and travel demand management measures.**
k. Compliance with policy and other frameworks	Review against District Plan objectives, policies and rules. Simple assessment against ~~Access~~ Hamilton ~~and associated action plans~~City Council's Transport Strategy.

l. Discussion and conclusions	An assessment of effects and conclusion of effects. Confirmation of the suitability of the access points of the proposal
m. Recommendations	Proposed conditions (if any)

[1] For further guidance refer to Appendix A of Waka Kotahi ~~New Zealand~~NZ Transport Agency Research Report No.422 "Integrated Transport Assessment Guidelines", Abley et al, November 2010.
[2] Details listed in bold font are required for large developments with significant transport impacts and may not be applicable for smaller developments.

Table 15-2d: Integrated Transport Assessment vehicles per day conversion table

Activity	Threshold/unit equivalent to Vehicle Trip Generation				
	<100 vpd	100 - 249 vpd	250 - 499 vpd	500 – 1499 vpd	>1500 vpd
a. Ancillary residential units and apartment buildings	Up to 20 residential units	21-50 residential units	51-100 residential units	101-300 residential units	More than 300 residential units
b. Building improvement centre (excluding nurseries and garden centres)	Up to 100m^2 GFA	101-250m^2 GFA	251-500m^2 GFA	501-1,500m^2 GFA	More than 1500m^2 GFA
c. Camping grounds	Up to 5,000m^2 site area	5,001-12,500m^2 site area	12,501-25,000m^2 site area	25,001-75,000m^2 site area	More than 75,000m^2 site area
d. Childcare facilities	Up to 30 children	31-75 children	76-150 children	151-450 children	More than 450 children
e. Community centre	Up to 1,000m^2 GFA	1,001-2,500m^2 GFA	2,501-5,000m^2 GFA	5,001-15,000m^2 GFA	More than 15,000m^2 GFA
f. Single dwellings and duplex dwellings	Up to 10 residential units	11-25 residential units	26-50 residential units	51-150 residential units	More than 150 residential units
g. Drive through services	All proposals require a Broad ITA				
h. Emergency service facilities	All proposals require an ITA				
i. Health care services	Up to 100m^2 GFA	101-250m^2 GFA	251-500m^2 GFA	501-1,500m^2 GFA	More than 1,500m^2 GFA
j. Home-based business	ITA not required				
k. Hospitals	All proposals require a Broad ITA				
l. Industrial activities (including warehouses) (excluding trade and industry facilities)	Up to 1,500m^2 GFA	1,501-3,750m^2 GFA	3751-7,500m^2 GFA	7,501-22,500m^2 GFA	More than 22,500m^2 GFA
m. Industrial activities (trade and industry facilities only)	Up to 500m^2 GFA	501-1,250m^2 GFA	1,251-2,500m^2 GFA	2,501-7,500m^2 GFA	More than 7,500m^2 GFA
n. Managed care facilities and rest homes	Up to 15 beds	16-38 beds	39-75 beds	76-240 beds	More than 240 beds
o. Marae	Up to 1,000m^2 GFA	1,001-2,500m^2 GFA	2,501-5,000m^2 GFA	5,001-15,000m^2 GFA	More than 15,000m^2 GFA
p. Nurseries and garden centres	Up to 65m^2 GFA	66-175m^2 GFA	176-400m^2 GFA	401-1,500m^2 GFA	More than 1,500m^2 GFA
q. Offices	Up to 500m^2 GFA	501-1,250m^2 GFA	1,251-2,500m^2 GFA	2,501-7,500m^2 GFA	More than 7,500m^2 GFA
r. Outdoor recreational areas including playing fields, courts and tracks	Up to 2 courts/fields	3-5 courts/fields	6-10 courts/fields	11-30 courts/fields	More than 30 courts/fields
s. Places of assembly	Up to 1,000m^2 GFA	1,001-2,500m^2 GFA	2,501-5,000m^2 GFA	5,001-15,000m^2	More than 15,000m^2

(except Libraries and Museums)				GFA	GFA
t. Places of Assembly (Libraries and Museums only)	Up to 150m^2 GFA	151m^2-400m^2 GFA	401m^2-750m^2 GFA	751-2,200m^2 GFA	More than 2,200m^2 GFA
u. Places of worship	Up to 1,000m^2 GFA	1,001m^2-2,500m^2 GFA	2,501m^2-5,000m^2 GFA	5,001-15,000m^2 GFA	More than 15,000m^2 GFA
v. Building serving recreation reserves and indoor recreation buildings	Up to 100m^2 GFA	101-250m^2 GFA	251-500m^2 GFA	501-1,500m^2 GFA	More than 1,500m^2 GFA
w. Research and Innovation activities	Up to 500m^2 GFA	501-1,250m^2 GFA	1,251-2,500m^2 GFA	2,501-7,500m^2 GFA	More than 7,500m^2 GFA
x. Residential centres	Up to 10 residents	11-25 residents	26-50 residents	51-150 residents	More than 150 residents
y. Retail activities (in individual ownership / tenancy or integrated retail development)	Up to 100m^2 GFA	101-250m^2 GFA	251-500m^2 GFA	501-1,500m^2 GFA	More than 1,500m^2 GFA
z. Retail activities – Bulky goods only	Up to 100m^2 GFA	101-250m^2 GFA	251-500m^2 GFA	501-1,500m^2 GFA	More than 1,500m^2 GFA
aa. Retail activities – Outdoor only	Up to 1,000m^2 GFA	1,001-2,500m^2 GFA	2501-5,000m^2 GFA	5,001-15,000m^2 GFA	More than 15,000m^2 GFA
bb. Retail activities – Indoor display areas for vehicles, boats and agricultural and industrial machinery	Up to 1,500m^2 GFA	1,501-3,750m^2 GFA	3,751-7,500m^2 GFA	7,501-22,500m^2 GFA	More than 22,500m^2 GFA
cc. Retail activities – Food and beverage, cafes, restaurants and licensed premises only	Up to 100m^2 GFA	101-250m^2 GFA	251-500m^2 GFA	501-1,500m^2 GFA	More than 1,500m^2 GFA
dd. Retail activities – Supermarkets only	Up to 50m^2 GFA	51-125m^2 GFA	126-250m^2 GFA	251-750m^2 GFA	More than 750m^2 GFA
ee. Retirement villages	Up to 1,200m^2 GFA	1,201m^2-3,000m^2 GFA	3,001m^2-6,000m^2 GFA	6,001-18,500m^2 GFA	More than 18,500m^2 GFA
ff. Schools	All proposals require a Broad ITA				
gg. Showhome	ITA not required				
hh. Tertiary education facilities and specialised training facilities	Up to 500m^2 GFA	501-1,250m^2 GFA	1,251-500m^2 GFA	501-1,500m^2 GFA	More than 7,500m^2 GFA
ii. Transport depots	All proposals require a Broad ITA				
jj. Visitor accommodation	Up to 10 units	11-25 units	26-50 units	51-150 units	More than 150 units

Table 15-2e: Travel Plan Checklist

Requirements for a Travel Plan	
Item description	Details to be included
a. Introduction	A description of the proposed activity.
b. Purpose	The purpose, expected outcomes, and intended use of the Travel Plan. Describe the key objectives that the travel plan seeks to achieve. This must include a range of outcomes including mode

	shift, improved health and social wellbeing, and reduction in greenhouse gas emissions.
c. Site Assessment	A description of the location, site layout, access, any parking arrangements (including number and type of on-site spaces and how they are to be managed to support their efficient use and promote alternative modes of travel), loading space arrangements, and end-of-journey facilities. Consider accessibility for mobility-impaired and the merits of a car-share scheme for the development. A description of the public transport, walking, cycling, and micro-mobility networks used to access the activity. Consider safety of nearby intersections and crossing facilities.
d. Travel Patterns	Details of existing travel data that clearly sets out the current state of travel and establishes a baseline for future monitoring. A travel survey is required for expansion of existing activities or relocated activities, but estimates may be appropriate for new activities.
e. Management	Detail who will be responsible for implementing and monitoring the Travel Plan. Larger activities or sites with multiple activities will require a Travel Plan Coordinator or steering group.
f. Travel Behaviour Change Measures	Identify a package of measures to encourage greater use of active modes, micro-mobility, and public transport, and reduce car-based travel. The performance measures must focus on satisfying the needs of transport modes that are higher in the transport mode hierarchy.
g. Performance Measures and Targets	Details of performance measures and targets to be monitored, including methodology and frequency of data collection. Targets must have a minimum five-year timeframe with interim targets at year one and year three.
h. Implementation	Detail how the Travel Plan will be communicated, promoted, implemented, and monitored. The Travel Plan must include activities for marketing and awareness-raising of the Travel Plan and dissemination of travel information.
i. Monitoring and Review	Identify the programme and methods for monitoring implementation of the Travel Plan. Detail how monitoring of the Travel Plan will be reported to Council at year one, year three, year five, and, thereafter, five-yearly. Outline of review mechanisms to ensure continuing improvement and how information and best practice can be assessed to ensure the Travel Plan is regularly updated to maintain currency and relevance.

15-3 Minimum Sight Distances at Railway Level Crossings – Tables and Figures

Table 15-3a: Required approach sight distances at railway level crossings[1]

Vehicle approach speed (km/h)[2, 3]	Approach distance (A)[4]	Required approach visibility along tracks (B)[4,5]		
		Signs only	Alarms only[6]	Alarms and boom gates[6]
20	31m	318m		
30	50m	282m		
40	73m	274m		

50	100m	278m	Approach Sight Triangles not applicable in this situation
60	130m	287m	
70	164m	300m	
80	208m	314m	
90	251m	330m	
100	298m	357m	
110	350m	376m	

[1] This table is based on the sighting distance formula used in Waka Kotahi ~~New Zealand~~NZ Transport Agency Traffic Control Devices Manual ~~2008~~2012, Part 9 Level Crossings - Appendix B and in the Australian Level Crossing Assessment Model (ALCAM). Distances are conservative and are derived from:
- A train speed of 110 kph and a single set of rail tracks
- A fall of 8 % on the approach to the level crossing and a rise of 8 % at the level crossing
- 25 m design truck
- 90° angle between road and rail
- Other parameters as specified in Waka Kotahi ~~New Zealand~~NZ Transport Agency's Traffic Control Devices Manual ~~2008~~2012, Part 9 Level Crossings – Appendix B

[2] Speed restrictions are not used in New Zealand around level crossings
[3] The 85th percentile road vehicle speed shall be adopted. This speed is typically estimated at the point at which a driver would first see the level crossing signs/alarms and begin to look for trains. Where this is not known, the sign-posted road speed + 10% shall be used
[4] Refer to Figure 15-3b for how to define the Approach Sight Triangle using distance (A) and (B).
[5] The distances in this table apply to a single set of rail tracks only. For each additional set of tracks add 25m to the distance (B).
[6] Railway Level Crossings controlled by alarms or boom gates do not require approach sight triangles because they provide active warning signals of approaching trains.

Figure 15-3b: Measuring approach sight triangles at railway level crossings

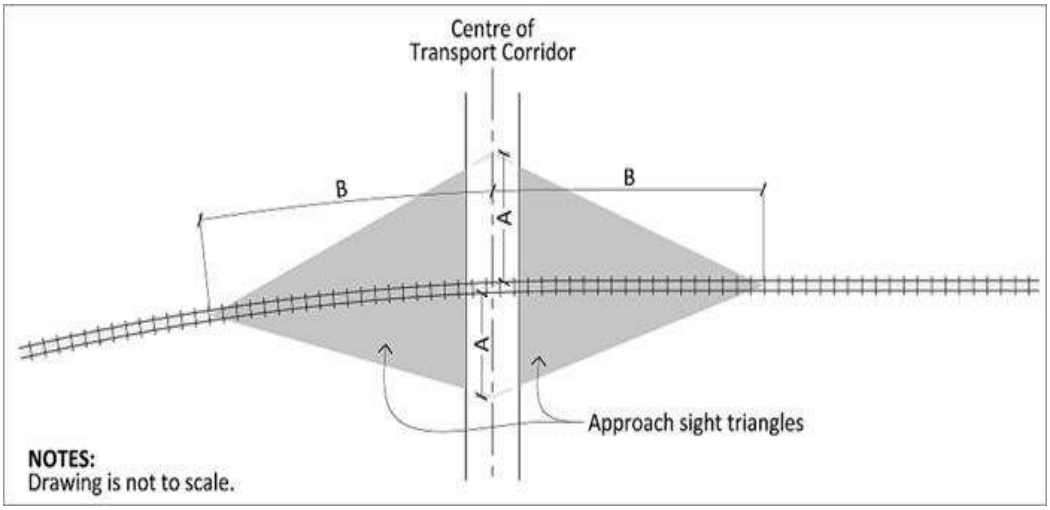


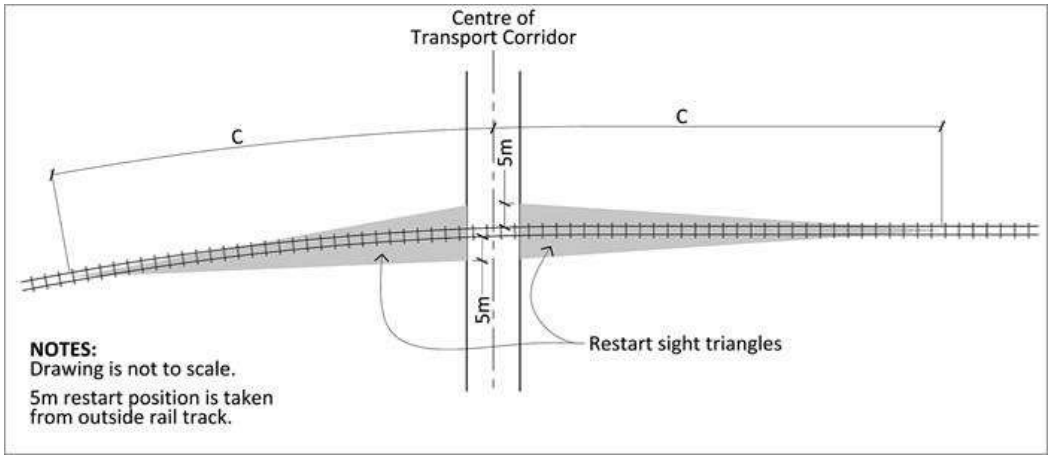
Table 15-3c: Required restart sight distances for railway level crossings[1]

Required approach visibility along tracks (C)[2,3]		
Signs only[4]	**Alarms only[4]**	**Alarms and boom gates[4]**
677m	677m	60m

[1] This table is based on the sighting distance formula used in Waka Kotahi ~~New Zealand~~NZ Transport ~~Agency Traffic~~Agency Traffic Control Devices Manual ~~2008~~2012, Part 9 Level Crossings - Appendix B and in the Australian Level Crossing Assessment Model (ALCAM). Distances are conservative and are derived from:
- A train speed of 110 kph and a single set of rail tracks
- A fall of 8 % on the approach to the level crossing and a rise of 8 % at the level crossing
- 25 m design truck
- 90° angle between road and rail
- Other parameters as specified in Waka Kotahi ~~New Zealand~~NZ Transport Agency's Traffic Control Devices Manual ~~2008~~2012, Part 9 Level Crossings – Appendix B

[2] Refer to Figure 15-3d for how to define the Restart Sight Triangle using distance (C).
[3] The distances in this table apply to a single set of rail tracks only. For each additional set of tracks add 50m to distance (C).
[4] Type of Railway Level Crossing control.

Figure 15-3d: Measuring restart sight triangles at railway level crossings



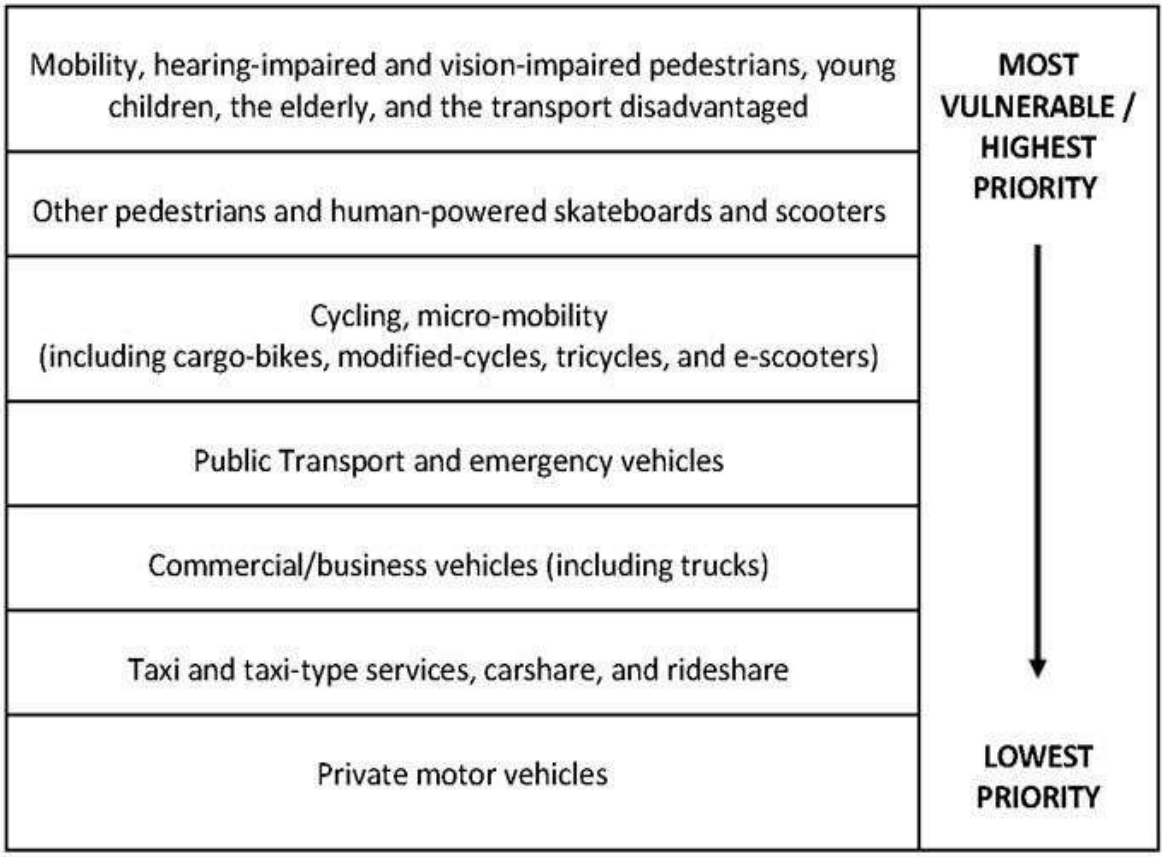
15-3A Transport Mode Hierarchy

a. The Transport Mode Hierarchy defines the prioritisation of levels of service, access, and amenity of the transport modes to support mode shift and sustainable transport choices.

b. The Transport Mode Hierarchy places those users most at risk in the event of a collision at the top of the hierarchy. The hierarchy does not remove the need for everyone to behave responsibly. The users most vulnerable in the event of a collision are pedestrians, cyclists, micro-mobility device users, horse riders and motorcyclists, with children, older adults and disabled people being more at risk.

c. The Transport Mode Hierarchy gives priority to the vulnerable road users, active transport, and public transport, with private motor vehicles given the lowest priority.

Figure 15-3Aa: Transport Mode Hierarchy



15-4 Transport Corridor Hierarchy Plan and Definitions

a. The transport corridor hierarchy classifies current and planned future transport corridors within the ~~City~~city. The transport corridor hierarchy plan contained within Figures 15-4b to 15-4f identifies which classification applies to each transport corridor.

b. Various standards within this Plan relate to the classification of transport corridors (e.g.,. building setbacks from an arterial transport corridor).

Function

c. The hierarchy groups transport corridors into five main classifications based on the transportation functions they perform. These classifications are:

   i. Major arterial.

   ii. Minor arterial.

   iii. Collector.

   iv. Local.

   v. Central City.

d. A 'major arterial' transport corridor's principal function is the movement of significant levels of goods and people between parts of the ~~City~~city and beyond. Inter- and intra-city heavy freight

and through ~~traffic~~-traffic should generally be directed to these corridors. This classification includes all corridors managed as Motorway or Expressway by Waka Kotahi NZ Transport Agency. Property access is either non-existent or heavily controlled. Inter-city passenger transport services are expected to use these routes. Intra-city passenger transport services may traverse these routes. Cycling will be separated from pedestrians and vehicle traffic.

e. A 'minor arterial' transport corridor's principal function is the movement of high levels of goods and people between parts of the ~~City~~city. Heavy freight distributing goods to parts of the ~~City~~city may use these corridors. Through-traffic moving between parts of the ~~City~~city may use these corridors. Property access is managed. Intra-city passenger transport services are likely to use these routes. Cycling will be separated from pedestrians and vehicle traffic.

f. A 'collector' transport corridor performs both a movement and property access function. These transport corridors often move goods and people between local destinations or to higher order transport corridors for further travel. Property access is provided with few restrictions. Depending on the land use environment heavy freight and through ~~traffic~~-traffic may be limited on these corridors. Intra-city passenger transport services are likely to use these routes. Cycling will be separated from pedestrians and vehicle traffic.

g. A 'local' transport corridor's principal function is the provision of property access. The movement of goods and people is directed to higher-order transport corridors. Property access has few restrictions. The land-use environment dictates whether heavy freight movement is supported. Through-traffic is generally discouraged. Intra-city passenger transport services are unlikely to use these routes where an alternative higher-order transport corridor is available.

h. 'Central City' transport corridors provide for both property access and the distribution of goods and people throughout, into and out of, the Central City. Passenger transport services will use some of these corridors, particularly buses which provide services to and from the Hamilton Transport Centre. These corridors are expected to be used by significant numbers of commuters ~~(vehicle~~(vehicles, ~~pedestrian~~pedestrians, micro-mobility users, and cyclists) and by service vehicles accessing properties or service lanes. High levels of visitor (e.g., shoppers, students) pedestrian traffic ~~is~~are also expected as people access goods and services and move about the Central City. On-street parking, loading, taxi, and bus stop facilities are common features.

i. Two overlays are used to respond to factors that cross over the four classifications. These overlays are:

   i. Strategic network.

   ii. Pedestrian-focus areas.

j. A strategic network applies to most major arterial transport corridors and generally includes the significant road corridors indentified in the Regional Policy Statement and the Regional Land Transport Strategy. This overlay recognises the significant strategic role that these transport corridors perform for moving goods and people as part of the wider national and regional transport network. Protecting the efficient and effective operation of the strategic network so it can continue to provide its wider transport functions is a critical outcome.

k. A pedestrian-focus area applies to specific transport corridors within the Central City. This reflects and supports the land-use pattern identified for the Central City. It is expected that the form of these transport corridors will evolve to support a complementary integration of the transport corridor function with the adjacent land uses. The design elements of these transport corridors will be more conducive to a vibrant, pedestrian-focused environment, supporting active frontages, on-street dining or retailing activities and the creation of high-quality public spaces.

Note

1. *Shared zones (Land Transport (Road User) Rule 2004) or pedestrian malls (Section 336 of Local Government Act 1974) may be used as a means of managing the use of transport corridors in a way to give greater priority to pedestrian and cyclists. These mechanisms are very case specific and not likely to be applied generally to parts of the City. They are also unlikely to be appropriate outside of local transport corridors or Central City transport corridors within pedestrian-focus areas.*

Form

l. The form and design elements of transport corridors are determined through the balancing of a corridor's function within the network with the needs and sensitivities of adjacent land uses (see Land-Use Environments below).

Land-Use Environment

m. 'Land-use environments' are groupings of land-use zones that provide for activities that share similar sensitivities to, or demands of, the transport network. These groups are defined in Table 15-4a. The land-use environments tend to affect the form of transport corridors by changing the allocation of space of various design elements (e.g. number of lanes, pedestrians, landscaping and other amenity features) and whether priorities are given to the different transport users or modes (e.g. desirable speed environment, shared spaces).

n. The detail of the design elements and criteria for transport corridors is contained within Appendix 15~~-6~~-5. These design elements and the form created by the combination of transport corridor hierarchy classification and land-use environment, reflects a balancing process between the transport function demands and land use values (e.g. slower vehicle speeds and greater pedestrian amenity along local residential transport corridors).

Table 15-4a: Land-use environments by zone

Land-use environment	Zone[1]
i. Residential	General Residential Zone Medium ~~Special~~Density Residential Zone ; ~~Special Heritage Zone~~ ~~Special Natural Zone~~ ~~Temple View Zone~~ ~~Residential Intensification Zone~~ Peacocke ~~Character Zone~~Precinct ~~Rototuna North East Character Zone~~ Medium Density Residential Zone High Density Residential Zone Large Lot Residential Zone
b. Business	Business 1 to 7 Zones Knowledge Zone
c. Industrial	Industrial Zone Ruakura Logistics Zone Ruakura Industrial Park Zone Te Rapa North Industrial Zone
d. Future Urban	Future Urban Zone
e. Central City	Central City Zone
f. Site/Area specific[2]	Community Facilities Zone Major Facilities Zone Neighbourhood Open Space Zone Sport and Recreation Open Space Zone Destination Open Space Zone Natural Open Space Zone

[1] Refer to the "Purpose of the Zone" of the relevant zone chapters for a statement about the purpose of each zone and the land-use activities they encourage or discourage.
[2] The location and extent of zones within this land-use environment category mean that transport corridors do

not generally run through them. Transport corridors adjoining these land-use environments should reflect the land-use environment directly opposite these zones or be a continuation of the corridor either side. Site access controls may still vary.

Intersections

o. The form and design elements of transport corridors may alter as they approach intersections. This is particularly the case where different classifications of transport corridors intersect and especially so where arterials meet lower-order transport corridors.

p. To reinforce and protect the function of transport corridor classifications, the respective land-use environments, and the legibility of the network, intersections and their approaches may contain transport infrastructure or be managed in a way that would not normally be expected for that classification of transport corridor. For example, where a collector meets a major arterial, the collector may: ~~Gain~~gain additional lanes; have crossing infrastructure for pedestrians, cyclists and ~~cyclists;~~micro-mobility users. In addition, landscaping, public art, or signs may be used to reinforce a change in hierarchy~~;~~, or on-street parking may be restricted.

Routes Transitioning Between Land-Use Environments

q. Some transport corridors are lengthy and pass through a range of land-use environments in the City. Along a corridor the classification or land-use environment may change. A logical evolution of the form of the transport corridor should be expected. This may be achieved by a substantial and immediate change at an appropriate intersection along the route, or possibly by gradual, progressive changes over a transitional length of the corridor.

Routes with Different Land-Use Environments on Each Side

r. Parts of some transport corridors will have different zones on either side. In this situation the form of the transport corridor will need to be flexible to provide for the needs of both land-use environments.

Note

1. *The Strategic Network Overlay is derived from transport corridors identified by:*
   - *The Regional Policy Statement 2016 – as Significant Transport Corridors*
   - *The Regional Land Transport Strategy 2011-2041 – as nationally or regionally significant*
   - *Access Hamilton – as part of the strategic network*
2. *The use of specific transport corridors for passenger transport (e.g. inter or intra city bus services) is determined by the Waikato Regional Council in collaboration with Council and expressed in the Regional Land Transport ~~Strategy~~Plan and Regional Public Transport Plan.*
3. *Some arterial transport corridors may also be limited access roads where access restrictions have been created under s88 of the Government Roading Powers Act 1989 or s346 of the Local Government Act 1974. These restrictions apply over and above any District Plan controls.*
4. *Access to transport corridors may also be restricted by segregation strips. Segregation strips are essentially small strips of land along the frontage of properties (even just a few centimetres wide) created under the Public Works Act 1981 (or by councils under the Local Government Act 2002) during property negotiations and/or application negotiations. The strips are held in public ownership and are not classed as being road. Properties separated from a transport corridor by a segregation strip lose their direct vehicle access to the transport corridor adjoining the segregation strip but are generally provided with alternative vehicle access.*
5. ~~*Appendix 15-5 identifies land currently set aside for road but which Council intends to 'stop'*~~

Figure 15-4b: Transport corridor hierarchy plan

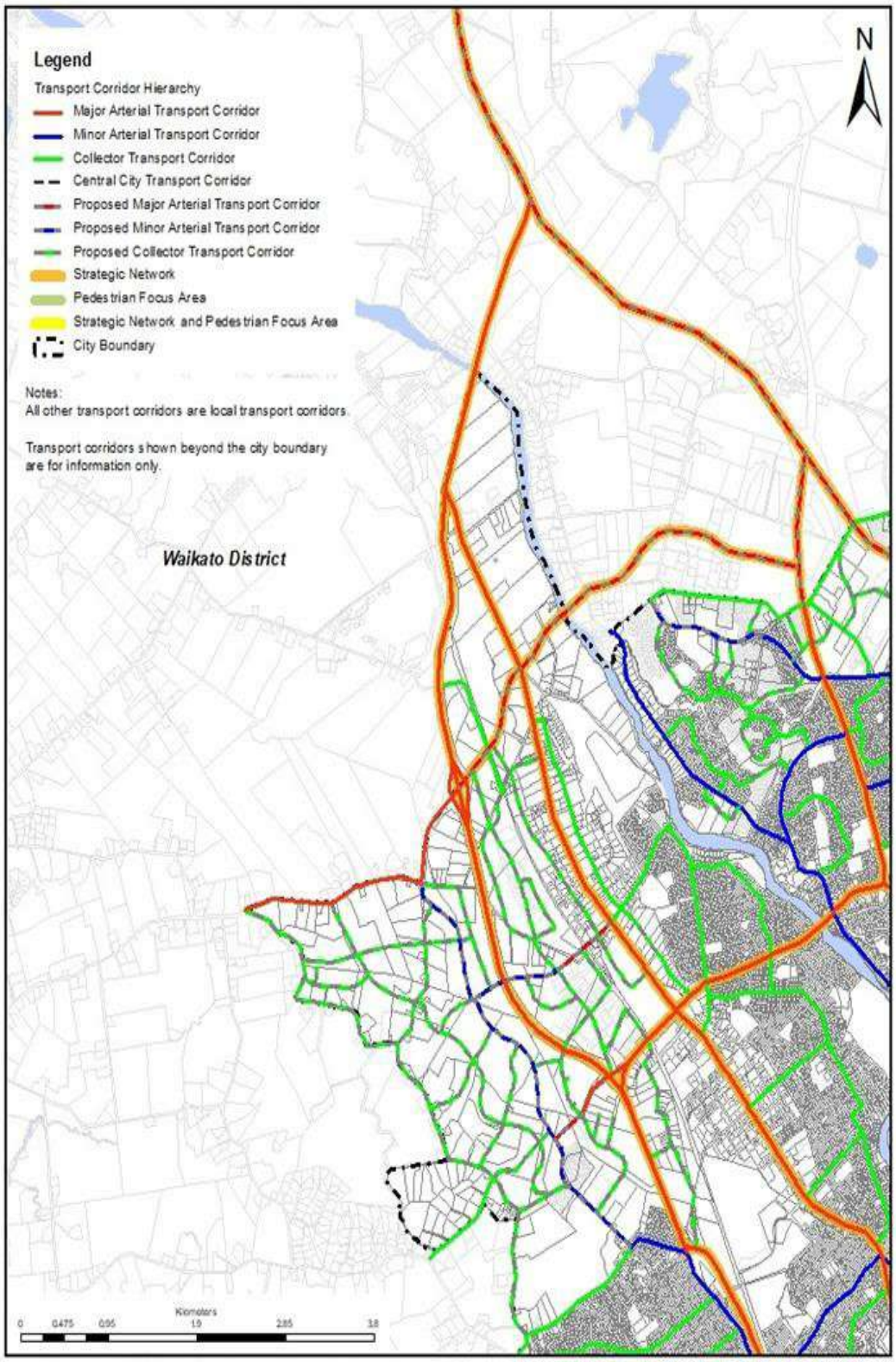


Figure 15-4c: Transport corridor hierarchy plan

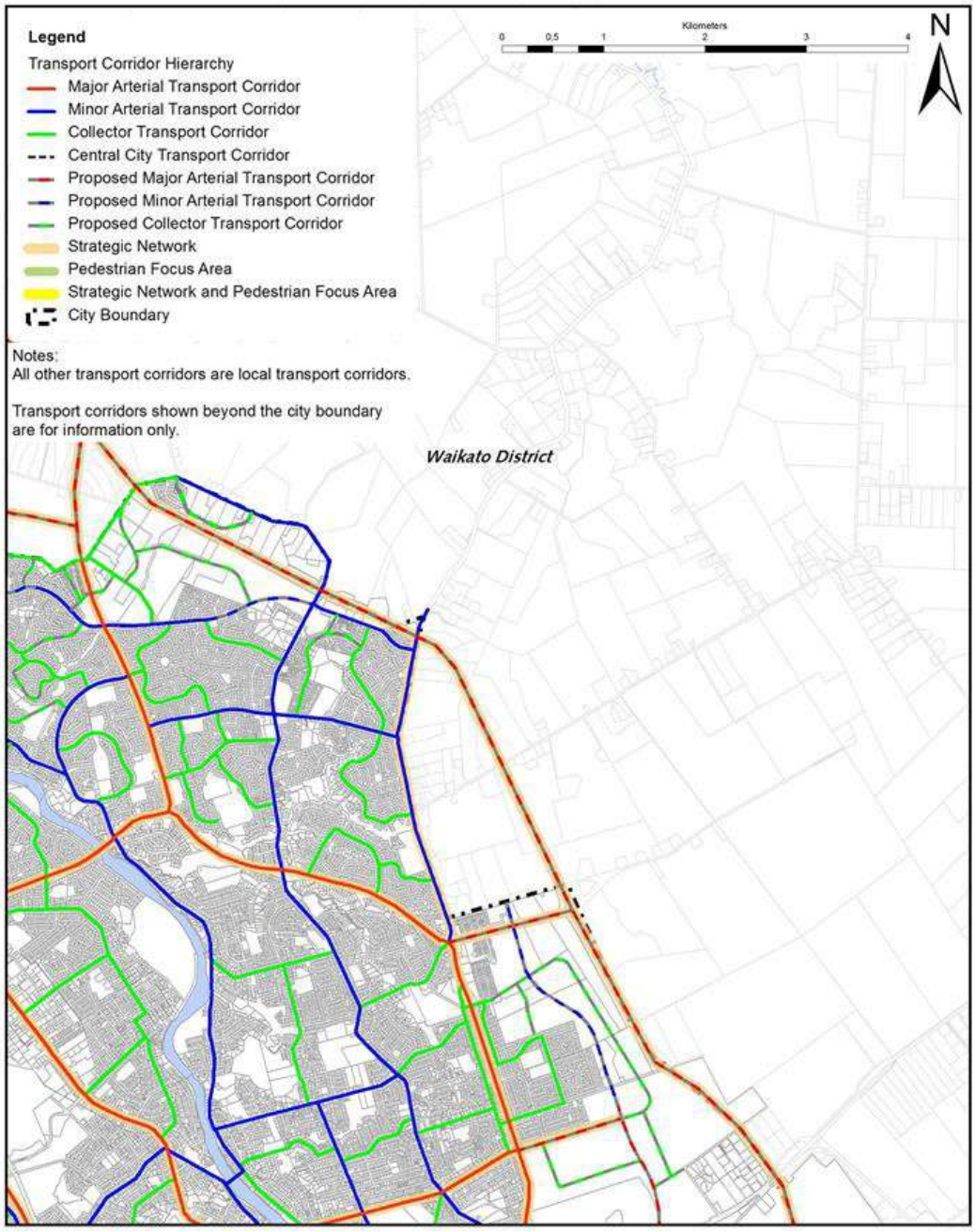


Figure 15-4d: Transport corridor hierarchy plan

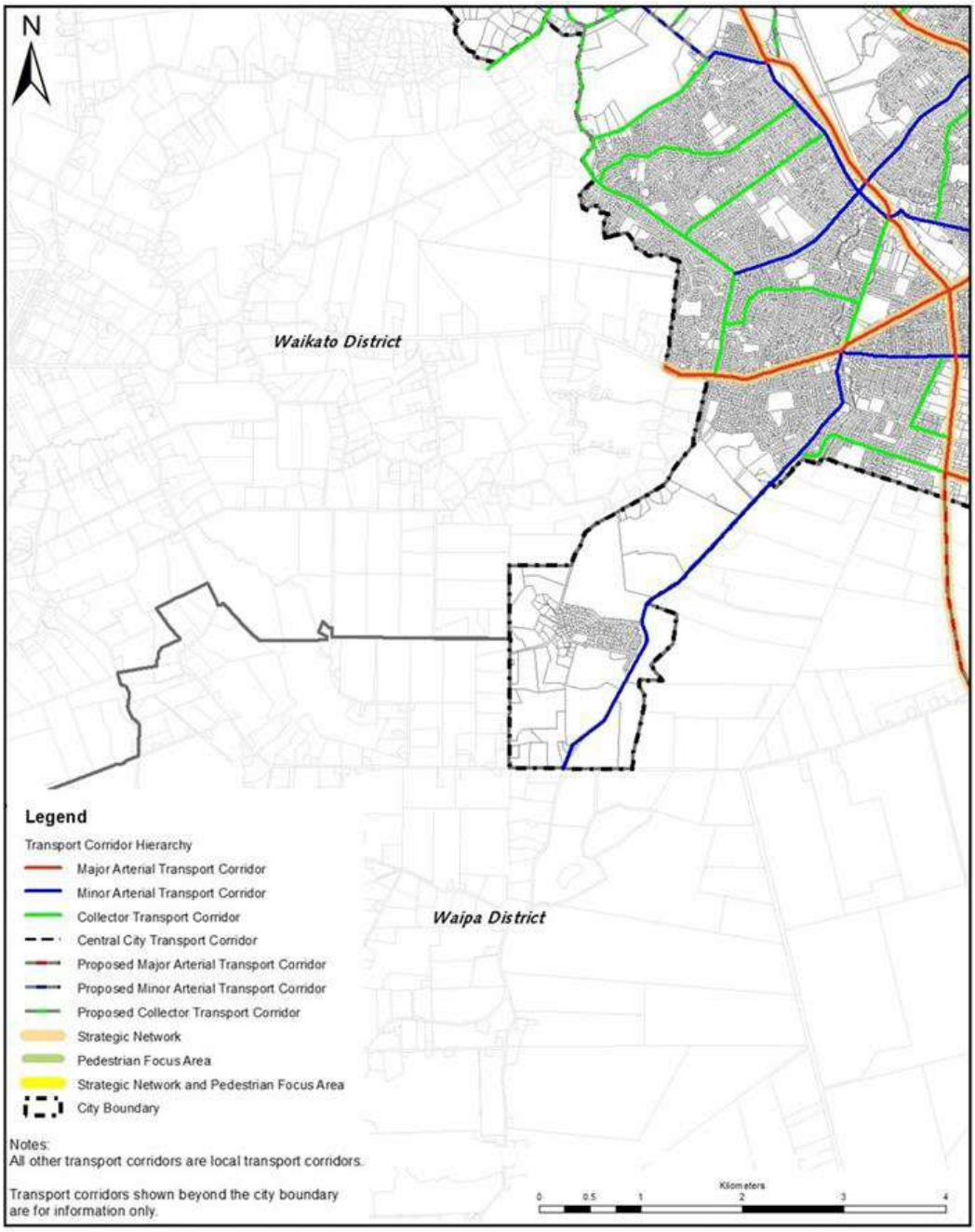


Figure 15-4e: Transport corridor hierarchy plan

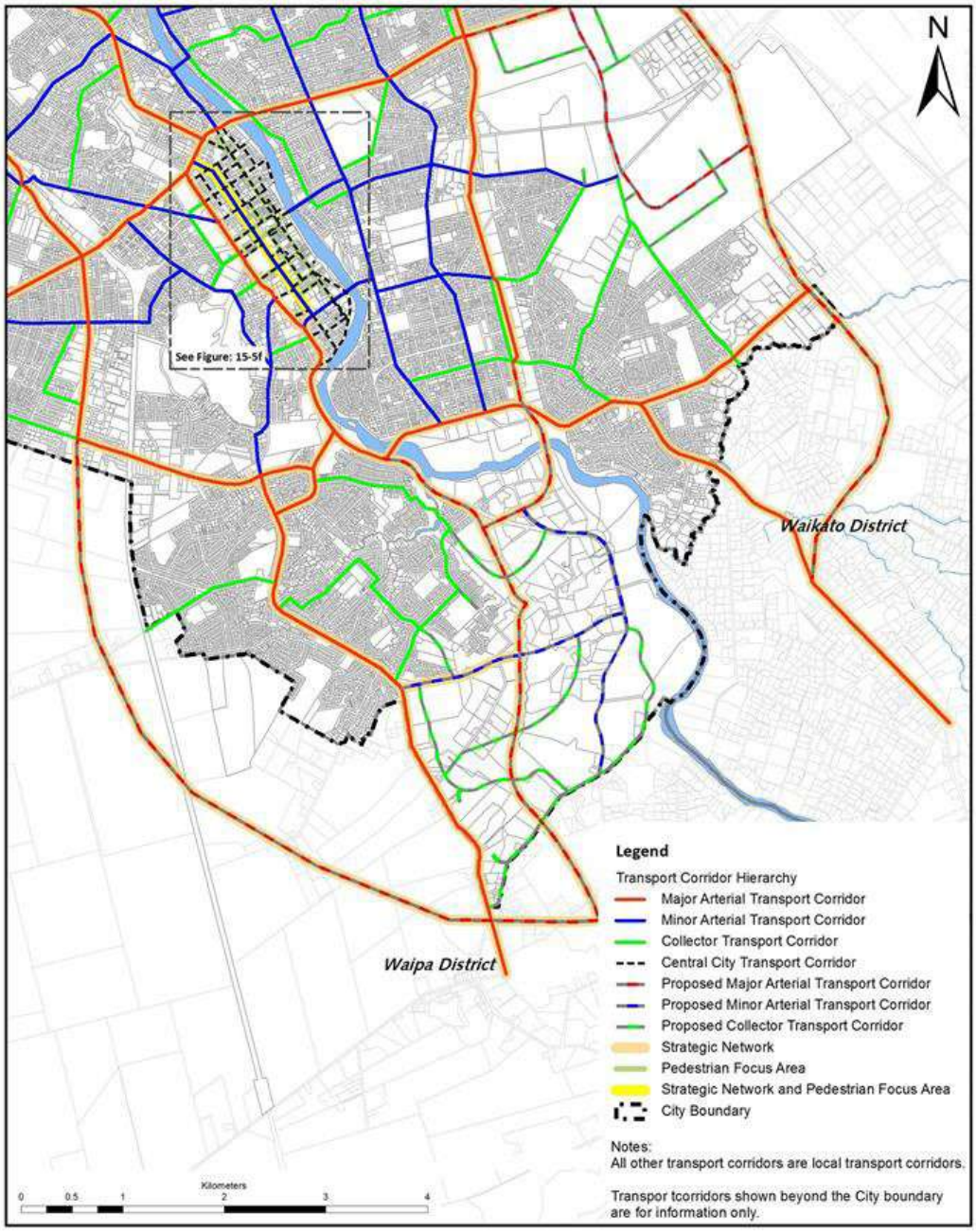
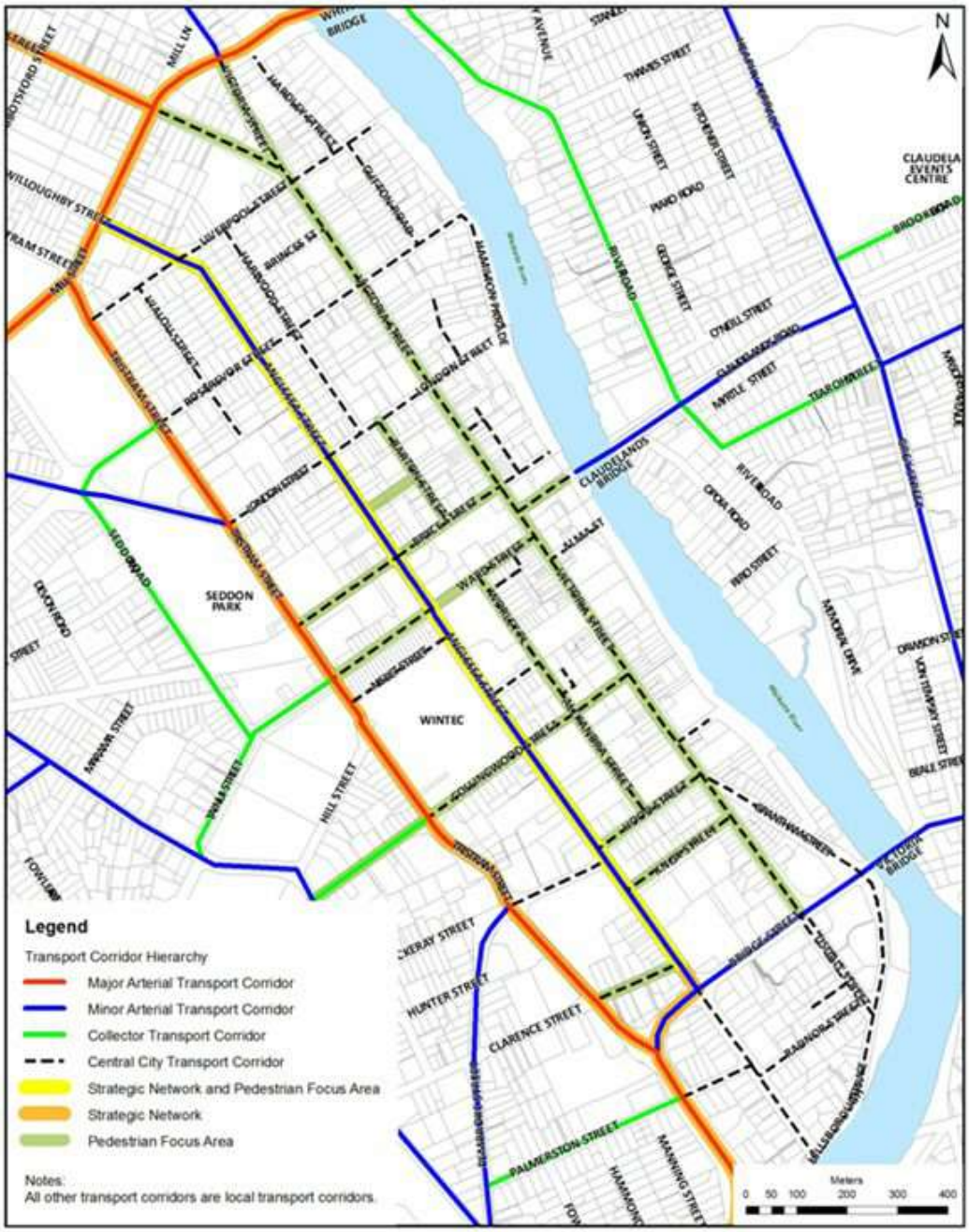


Figure 15-4f: Transport corridor hierarchy plan



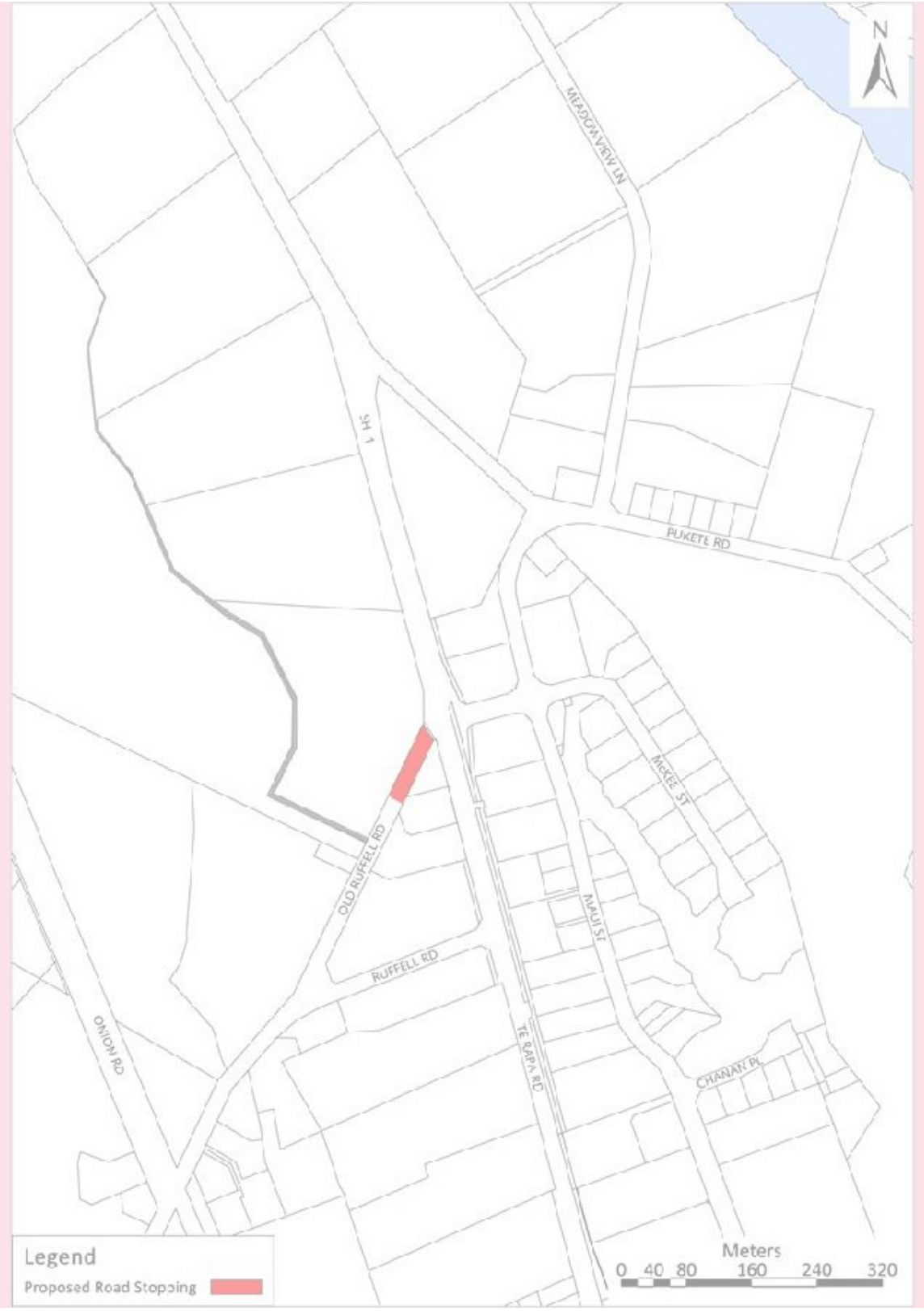
15-5 ~~Proposed Road Stopping~~

~~This appendix identifies land currently set aside for road but which Council intends to 'stop'. 'Stopping' means that it will cease to be road as defined by the Local Government Act. Road stopping is a process that can be undertaken under the Local Government Act 1974 or the Public Works Act 1981, and is separate to Resource Management Act processes, although sometimes they are run concurrently.~~

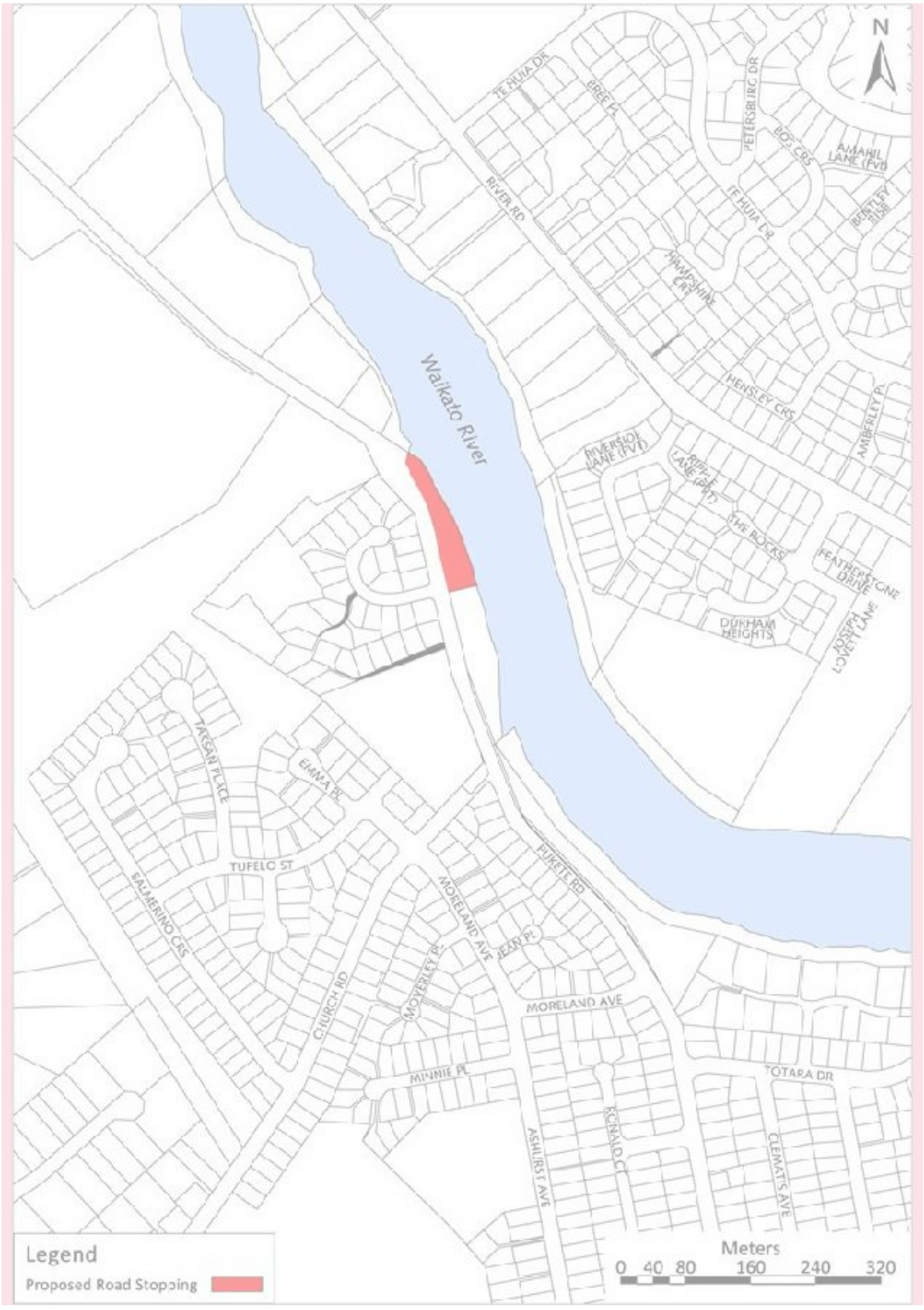
~~This appendix is for information purposes only and is not an exhaustive compilation of current or potential future road stopping. It is expected that road stopping processes, particularly the stopping of small parts of road, will arise and be processed without amendments being made to this appendix.~~

~~The areas shown are indicative and not surveyed. The final extent of any stopping will be determined as part of the formal stopping process.~~

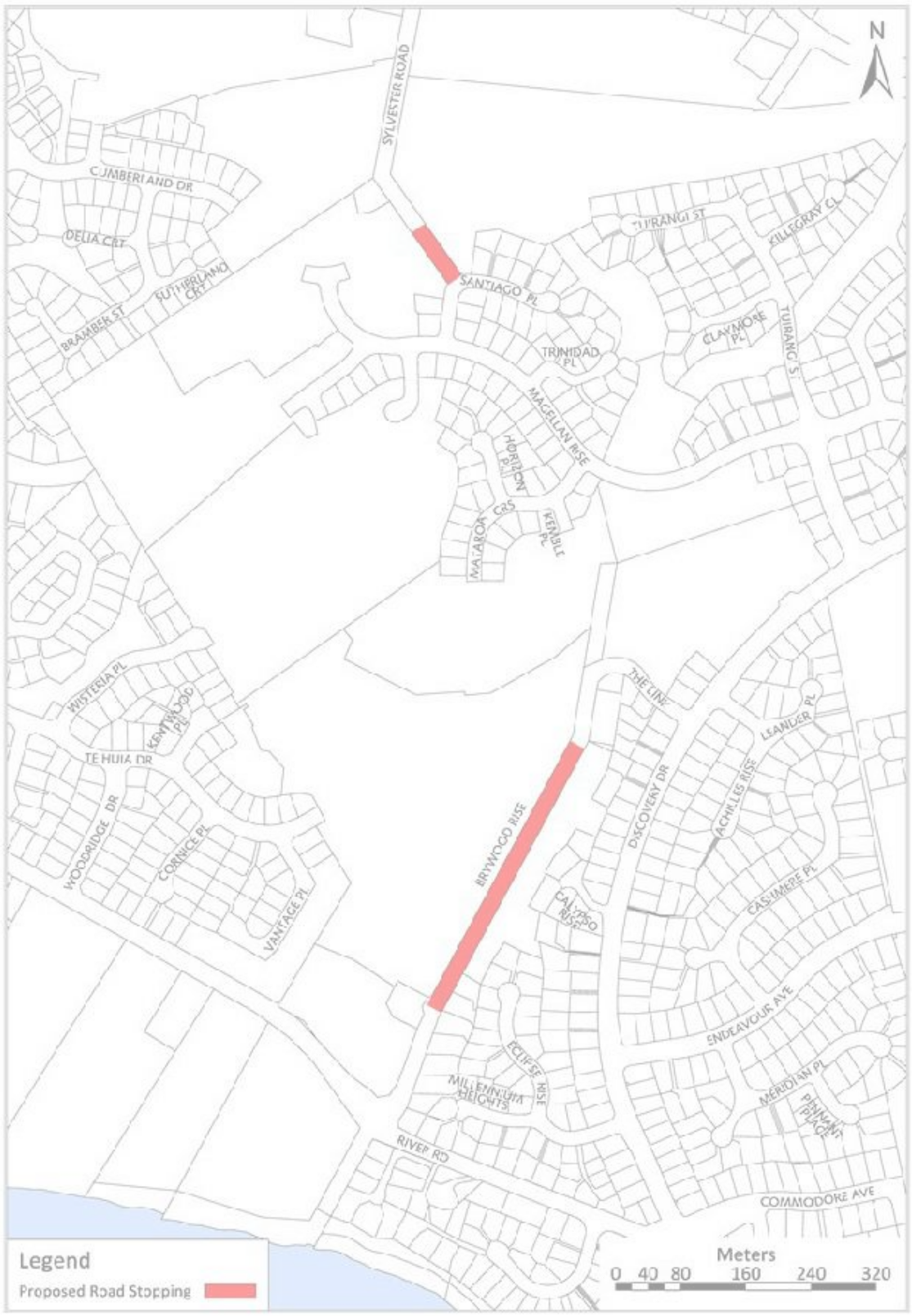
~~Figure 15-5a~~


N
MEADOWVIEW LN
SH 1
PUKETE RD
OLD RUFFELL RD
RUFFELL RD
ONION RD
TE RAPA RD
MAUI ST
MCKEE ST
CHANAY PL
Legend
Proposed Road Stopping
Meters
0 40 80 160 240 320

~~Figure 15-5b~~


N
Waikato River
PE HUIA DR
BREE PL
RIVER RD
PETERSBURG DR
BOYS CRS
AMAHIL LANE (FVT)
PE HUIA LA
BERTLEY RISE
HAMPSHIRE CRS
HENSLEY CRS
AMBERLEY PL
RIVERSIDE LANE (FVT)
RIPPLE LANE (PVT)
THE ROCKS
FEATHERSTONE DRIVE
DURHAM HEIGHTS
JOSEPH LOVETT LANE
TAKSAN PLACE
EMMA PL
TUFELO ST
PUKETE RD
BALMERINO CRS
CHURCH RD
MOYERLEY PL
MORELAND AVE
JEAN PL
MORELAND AVE
MINNIE PL
OTARA DR
ASHURST AVE
RONALD CT
CLEMATIS AVE
Legend
Proposed Road Stopping
Meters
0 40 80 160 240 320

~~Figure 15-5c~~


N
SYLVESTER ROAD
CUMBERLAND DR
DELIA CRT
SUTHERLAND CRT
BRAMBER ST
SANTIAGO PL
TRINIDAD PL
TUIRANGI ST
KILLEGRAY CL
CLAYMORE PL
TUIRANGI ST
MAGELLAN RISE
HORIZON PL
MATAROA CRS
KERMIE PL
WISTERIA PL
KENTWOOD PL
TE HUIA DR
WOODRIDGE DR
CORNICE PL
VANTAGE PL
BRYWOOD RISE
THE LINE
DISCOVERY DR
ACHILLES RISE
LEANDER PL
CASSIMERE PL
CALYPSO RISE
ENDEAVOUR AVE
ECLIPSE RISE
MILLENNIUM HEIGHTS
MERIDIAN PL
PENNANT PLACE
RIVER RD
COMMODORE AVE
Legend
Proposed Road Stopping
Meters
0 40 80 160 240 320

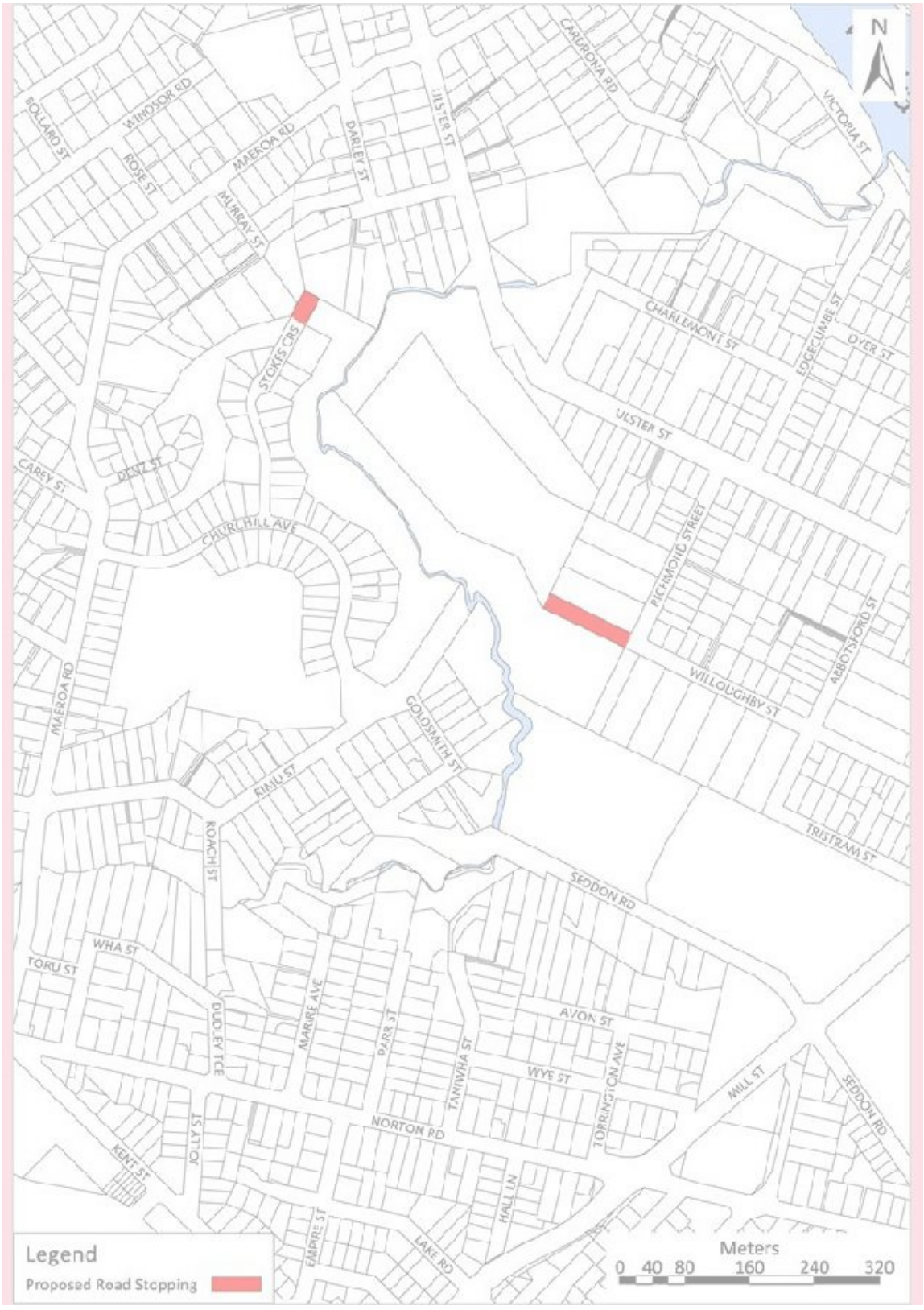
~~Figure 15-5d~~


N
RUFFELL ROAD
SIMSEY PL
THE BOULEVARD
DE LEEUW PL
ERROL CLOSE
NORMAN HAYWARD PL
TE KOWHAI ROAD EAST
Legend
Proposed Road Stopping
Meters
0 50 100 200 240 320

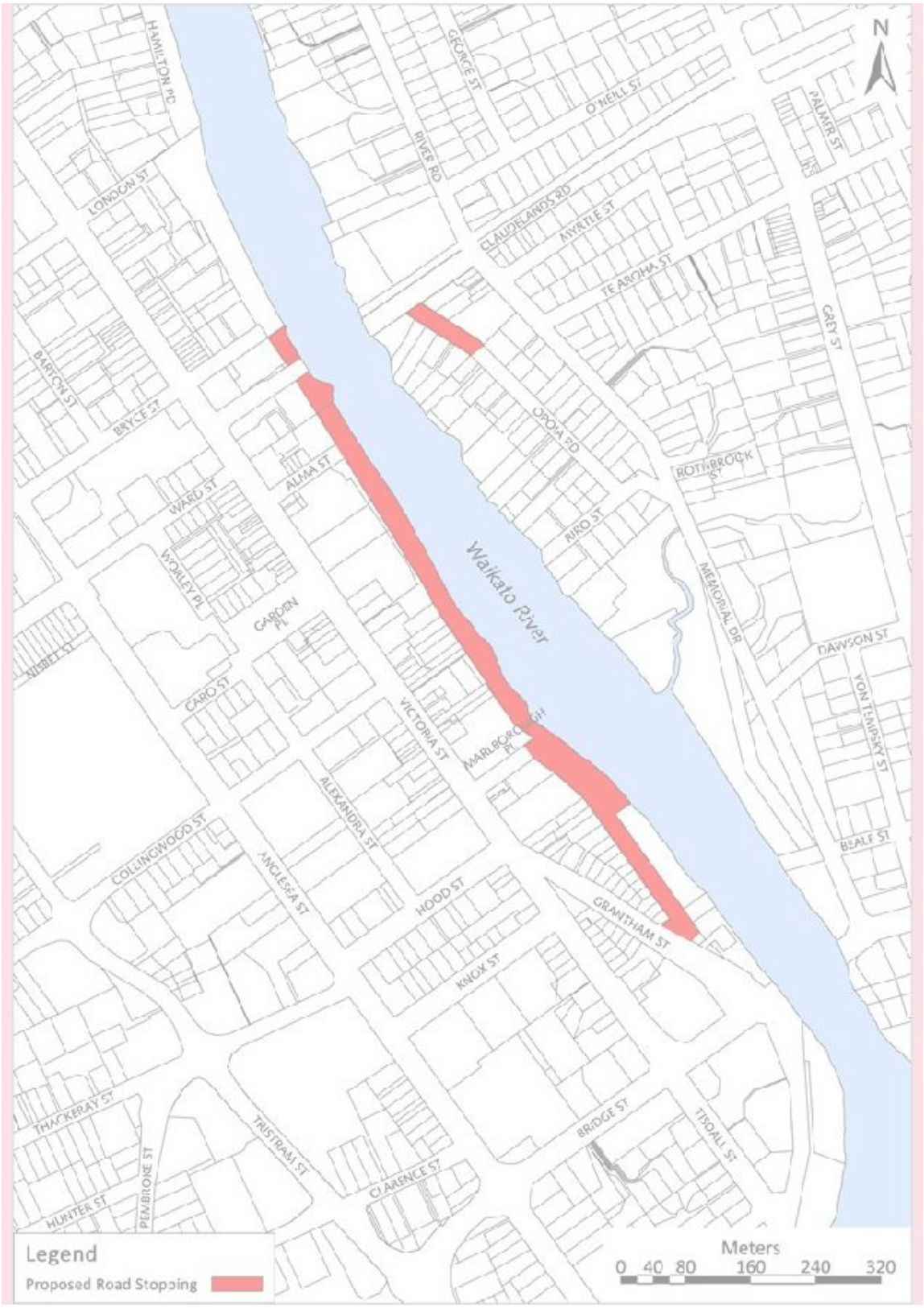
~~Figure 15-5e~~


N
Lake Rotokaeo
DOMINION RD
KARAKA ST
AVALON DR
RAHIENE ST
WALI ST
PURIRI ST
GRANDVIEW RD
NORMAN ST
RICH ST
VERRALL ST
ATLANTIC ST
TUI AVE
KIWI AVE
WALSH ST
HUIA AVE
FOREST LAKE RD
RIMU ST
LIVINGSTONE AVE
SHARON PL
MAGNOLIA CRS
NORTHVIEW LN
WAIMARIE ST
ELLICOTT RD
LINCOLN ST
Legend
Proposed Road Stopping
Meters
0 40 80 160 240 320

~~Figure 15-5f~~


N
BOLLARD ST
WINDSOR RD
ROSE ST
MAEROA RD
MURRAY ST
DARLEY ST
ULSTER ST
CARLTONA RD
VICTORIA ST
STOKES CRS
CHARLMONT ST
EDGECUMBE ST
OYER ST
ULSTER ST
CAREY ST
DEVZ ST
CHURCHILL AVE
RICHMOND STREET
ABBOTSFORD ST
WILLOUGHBY ST
MAEROA RD
GOLDSMITH ST
BIRD ST
TRISTRAM ST
ROACH ST
SEDDON RD
WHA ST
TORU ST
DUDLEY TCE
MARINE AVE
PARR ST
TANIWHA ST
AVON ST
WYE ST
TORRINGTON AVE
MILL ST
SEDDON RD
NORTON RD
KENT ST
ST ALTON
HALL LN
EMPIRE ST
LAKE RD
Legend
Proposed Road Stopping
Meters
0 40 80 160 240 320

~~Figure 15-5g~~


N
Waikato River
HAMILTON PO
LONDON ST
BARTON ST
BRYCE ST
GEORGE ST
RIVER RD
O'NEILL ST
CLAUDELANDS RD
AYRTLE ST
TE AROHA ST
PALMER ST
GREY ST
OPOA RD
ROTHBROCK ST
AIRO ST
MEMORIAL DR
DAWSON ST
VON TEMPSKY ST
BEALE ST
ALMA ST
WARD ST
WORLEY PL
GARDEN PL
KIBBEN ST
CARO ST
VICTORIA ST
MARLBOROUGH PL
ALEXANDRA ST
COLLINGWOOD ST
ANGLESEA ST
HOOD ST
GRANTHAM ST
KNOX ST
THACKERAY ST
PEMBROKE ST
HUNTER ST
TRISTRAM ST
CLARENCE ST
BRIDGE ST
TISDALL ST
Legend
Proposed Road Stopping
Meters
0 40 80 160 240 320

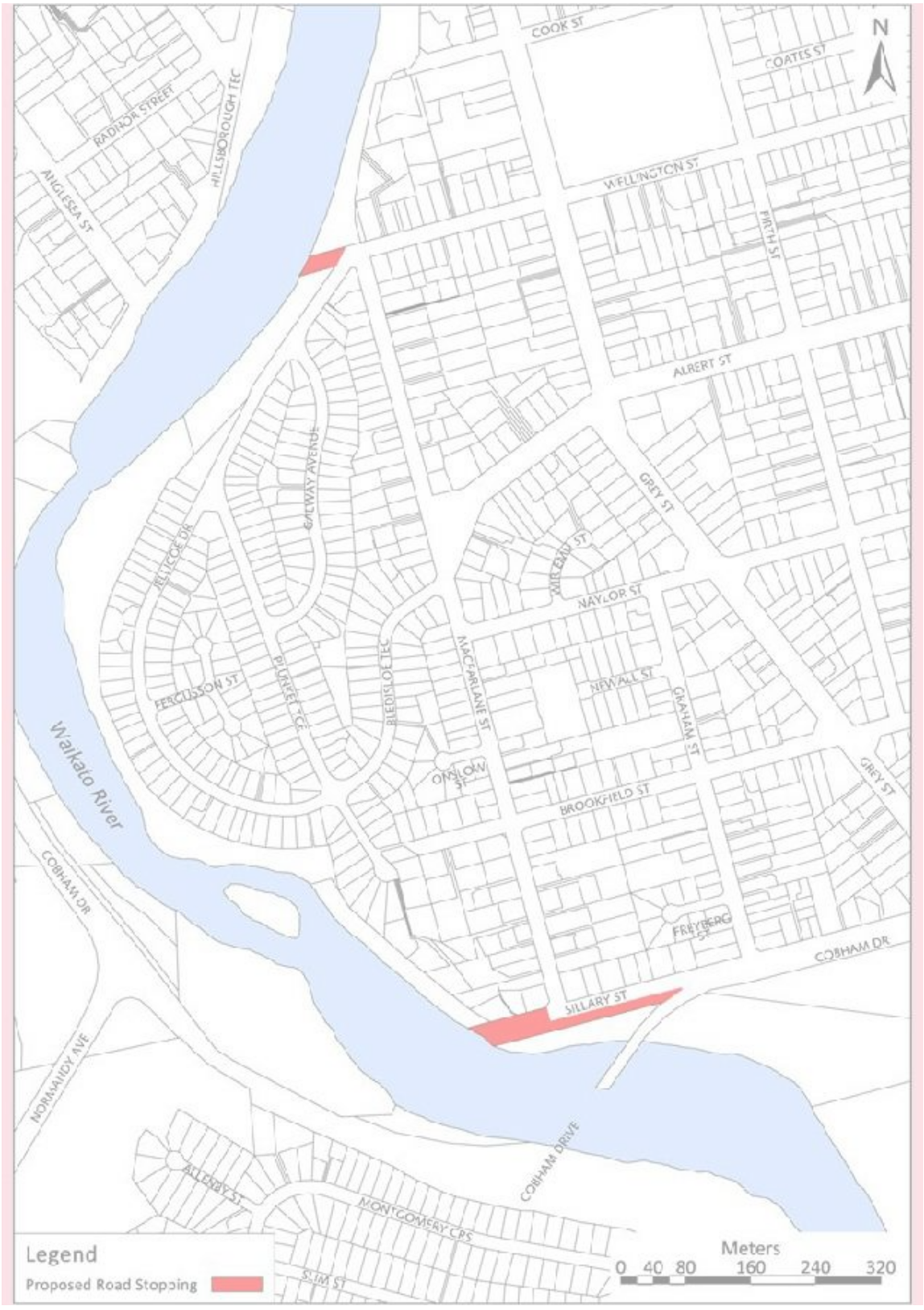
~~Figure 15-5h~~


N
BROOKLYN RD
CLAUDELANDS RD
PALMER ST
NEW ST
MASONS AVE
WHYTE ST
BELL ST
ST OLPHERTS AVE
TE AROHA ST
ARGYLL ST
WARR ST
BOND ST
BAINS AVE
JAMES ST
FRANCES ST
ARMAGH ST
PEACHGROVE RD
RUAKURA RD
SCOTT AVENUE
KINGSFORD MEWS
DAWSON ST
WILSON ST
GREY ST
VON TEMPSKY ST
MEMORIAL DR
BEALE ST
KELVIN PL
BRIDGE ST
CLYDE ST
GALLOWAY ST
NIXON ST
FARTH ST
COCK ST
Waikato River
Legend
Proposed Road Stopping
Meters
0 40 80 160 240 320

~~Figure 15-5i~~


N
Lake Rotoroa
(Hamilton Lake)
BELFAST PL
ELLIS ST
LAKE DOMAIN DR
RIMMINGTON DR
HASTINGS PL
GILBASS AVE
LAKE CRS
DUKE STREET
KOWHAI ST
CAMELLIA PL
ALISON ST
GRASSLANDS PL
QUAIL PL
QUENTIN DR
HIBISCUS AVE
KAHIKATEA DR
CLOW PL
GALLAGHER DR
Legend
Proposed Road Stopping
Meters
0 40 80 160 240 320

~~Figure 15-5j~~


N
COOK ST
COATES ST
WELLINGTON ST
ALBERT ST
GREY ST
NAYLOR ST
NEWALL ST
BROOKFIELD ST
SILLARY ST
COBHAM DR
COBHAM DRIVE
Walkato River
RADNOR STREET
HILLSBOROUGH TCE
ANGLESEA ST
GALWAY AVENUE
FERGUSSON ST
BLEDISLOE TCE
MACFARLANE ST
GRAHAM ST
FREYBERG ST
NORMANDY AVE
ALLENBY ST
MONTGOMERY CRS
SLIM ST
Legend
Proposed Road Stopping
Meters
0 40 80 160 240 320

~~**Figure 15-5k**~~

15-6-5 Criteria for the Form of Transport Corridors and Internal Vehicle Access

For designations, new transport corridors, private ways and internal vehicle access the design elements in this table will be used as guidance.

For changes to existing transport corridors the design elements in this table are used to create a baseline within which new works are considered to be a permitted activity (refer to Chapter 18: Transport Corridor Zone).

The criteria on the following pages are based on the ~~guidance contained in~~One Network Framework (ONF) and the ~~Hamilton City Infrastructure Technical Specifications~~Aotearoa Urban Street Planning and Design Guide which can be referred to if necessary for clarification and interpretation.

Table 15~~-6a~~-5a)i: Criteria for the form of Internal Vehicle Access

							Berm requirements[5]				
Transport corridor type[1]	**Land use environment [2]**	**Design speed environment (max desirable)**	**Legal width (min desirable)[4, 5, ~~14~~13]**	**Carriageway width[3]**	**Movement lane width[~~15~~14]**	**Berm requirements[5]**	**On street parking requirements (min desirable)**	**~~Passenger~~Public transport requirements (min desirable)[11]**	**Footpath requirements (min desirable)[12]**	**~~Cyclepath~~Cycle requirements (~~min desirable~~ (absolute minimum)**	**Service corridor (min desirable)[6]**
Residential Land Use Environment											
Private Way	Residential (serving 1-6 units)	10km/h	~~3.6m~~4m	~~3m~~3.5m	2-way flow, not marked	One side	None	None	Shared zone	Shared zone – no dedicated facility	One side
Private Way	Residential (serving 7-20 units – via common property under ~~unit~~Unit Titles Act) ~~or, 7 – 9 units (where access is part of a fee simple subdivision)~~	10 ~~to 20km~~km/h	6m	5.5m	2-way flow, not marked	1.5m both sides	None	None	Shared zone	Shared zone – no dedicated facility	1.5m both sides
Real	Residenti	10 km/h	7m	5.5m	2-way	N/A	None	None	Shared	Shared	One side

Lane	al				flow, not marked				zone	zone – no dedicated facility	

Table 15--56aa)ii: Criteria for the form of Transport Corridors

							Berm requirements[5]				
Transport corridor type[1]	**Land use environment [2]**	**Design speed environment (max desirable)**	**Legal width (min desirable)[4, 5, 13]**	**Carriageway width[3]**	**Movement lane width[14]**	**Berm requirements[5]**	**On street parking and landscaping/ stormwater management**		**Public transport requirements (min desirable)[11]**	**Footpath requirements (min desirable)[12]**	**Cycle requirements (absolute minimum)**	**Service corridor (min desirable)[6]**
							On street parking requirements (min desirable)	**~~Berm requirements[5]~~ Stormwater Management and landscaping**				
Residential Land Use Environment												

Local (low volume)	Residential (serving ~~10~~ -20 units via fee simple tenure)	~~40km~~30km/h	~~16m~~16.8m	6m	2~~-way~~-way flow, not marked	~~5m~~5.4m both sides	Recessed parallel parking bays ~~(2m~~(2.1m) on both sides	Where parking is not provided - specific design (2.1m wide) on both sides[8]	None		Cycling on road shared in movement lane	1.5m both sides

Local	Residential	~~40km~~30km/h	20m	6m	2~~-way~~-way flow, not marked	7m both sides	Recessed parallel parking bays ~~(2m(~~2.1m) on both sides	Where parking is not provided - specific design (2.1m wide) on both sides[8]			Cycling on road shared in movement lane	1.5m both sides
Collector / Non-PT Route	Residential	40 ~~to 50km~~km/h	~~23m~~24.2m	~~9m~~6.4m	2 @ ~~3m~~3.2m, marked	~~7m~~8.9m both sides	Recessed parallel parking bays ~~(2m(~~2.1m) on both			2m wide footpath, both sides	2m off road, separated from carriageway, both sides with 0.8m separator (including shy distances)[15] Or 3.5m bi-directional off-road separated	2m both sides

							sides				from carriageway on one side [16].	
Collector / PT Route	Residential	40km/h	24.6m	6.8m	2 @ 3.4m	8.8m both sides	Recessed parallel parking bays (2.1m) on both sides	Where parking is not provided - specific design (2.1m wide) on both sides[8]	All bus stops to be in lane. 2.8m berm with bus shelter	2m wide footpath, both sides	2m off road, separated from carriageway, both sides with 0.8m separator (including shy distances) [15] Or 3.5m bi-directional off-road separated from carriageway on one side [16].	2m both sides
Minor Arterial	Residential (Managed or limited direct access)[10]	60km/h	Specific design[8]	Specific design[8]	2 @ 3.5m, marked, plus 3m flush median	Specific design[8]	Recessed parallel parking bays ~~(2m(~~2.1	Where parking is not provided - specific des	All bus stops to be kerbside. Potential for bus priority at intersections	~~2.5m~~2m footpath on both sides	Separated cycle lanes on both sides or bi-directional off-road separated from carriageway one side (subject to specific	2.5m both sides

							m) on both sides	ign (2.1m wide) on both sides[8]			design [8, 15, 16])	
Major Arterial	Residential (Limited or no direct access)[10]	80km/h	Specific design[8]	Specific design[8]	4 @ 3.5m, marked, plus 3m solid median	Specific design[8]	None	Specific design[8]	All bus stops to be recessed. Potential for bus priority at intersections	Separated footpath and cycle facilities subject to specific design [8, 15, 16]		Specific design[8]
Industrial Land Use Environment												
Local	Industrial	40km/h	20m	9m	2 @ 4.5m, not marked	5~~.5m~~.6m both sides	Recessed parallel parking bays (~~2m~~(2.1m) on both sid	Where parking is not provided - specific design (2.1m wide)	None	1.5m wide footpath, both sides	Cycling on road shared in movement lane	1.5m both sides

							es	on both sides[8]				
Collector	Industrial	40km/h	~~23m~~28.6m		2 @ 4.5m, marked, plus 2m flush median	~~6m~~5.6m both sides	Recessed parallel parking bays ~~(2m(~~2.1m) on both sides		All bus stops to be kerbside	1.5m wide footpath, both sides	2m off-road, separated from carriageway, both sides, with 0.8m separator (including shy distances)[15] Or 3.5m bi-directional, off-road, separated from carriageway, on one side.[16]	2m both sides
Minor Arterial	Industrial	60km/h	Specific design[8]	12m Specific design[8]	2 @ 4.5m, marked, plus 3m flush median	Specific design[8].	Recessed parallel parking bays ~~(2m(~~	Where parking is not provided - specific	All bus stops to be kerbside	~~2.5m~~2m footpath on both sides	Separated cycle lanes on both sides Or bi-directional, off-road, separated from carriageway, on one side	2.5m both sides

							2.1 m) on both sides	design (2.1m wide) on both sides[8]			(subject to specific design [8, 15, 16])	
Major Arterial	Industrial	80km/h	Specific design[8]	Specific design[8]	4 @ 3.5m, marked, plus 3m solid median	Specific design[8]	None		All bus stops to be recessed	Separated footpath and cycle facilities (subject to specific design [8, 15, 16])		Both sides (subject to specific design[8])
Business Centres Land Use Environment												
Service Lane	Business Centres	10km/h	9m	5m	2 way flow, not marked	Specific design[8]	None	None	None	Shared zone	Shared zone – no dedicated facility	1.5m both sides
Local	Business Centres	~~40km~~30km/h[7]	Specific design[8]	12m (subject to specific design[8])	2 @ 3m	Specific design[8]	Parking one side only. May be recessed, parallel or	Where parking is not provided - specific design (2.1m wide)	All bus stops to be kerbside	2 @ 3.5m (subject to specific design[8])	Cycling on road shared in movement lane (subject to specific design[8])	1.5m both sides (subject to specific design[8])

							angled	on both sides[8]				
Collector	Business Centres	40km/h[7]	Specific design[8]	Specific design[8]	2 @ 3.5m plus median	Specific design[8]	Specific design[8]. Parking and loading spaces recessed. Parking may be parallel or angled on both sides		All bus stops to be kerbside	2 @ 3.5m (subject to specific design[8])	Separated cycle lanes on both sides or bi-directional separated from carriageway on one side (subject to specific design[8, 15, 16])	2m both sides (subject to specific design[8])

Minor Arterial	Business Centres	60km/h[7]	Specific design[8]	Specific design[8]	Specific design[8]	Specific design[8]	Specific design[8]. Typically recessed parallel parking bays (2m) on both sides		All bus stops to be kerbside	2 @ 3.5m (subject to specific design[8])	Separated cycle lanes both sides or bi-directional separated from carriageway on one side (subject to specific design[8, 15,16])	2.5m both sides (subject to specific design[8])
Major Arterial	Business Centres	60km/h[7]	Specific design[8]	Specific design[8]	Specific design[8]	Specific design[8]	Specific design[8]. Typically no on street par		All bus stops to be kerbside. Potential for bus priority at intersections	Separated footpath and cycle facilities on both sides (subject to specific design [8, 15, 16])		Both sides (subject to specific design[8])

							king provided					
Future Urban Land Use Environment												
Local	Future Urban[9]	40km/h	Specific design[8] (no less than 20m)	8m	2 @ 3m plus 2 @ 1m shoulder	Specific design[8]	None	Specific design[8]	None	1.5m wide footpath, both sides	Cycling on road shared in movement lane	Both sides
Collector	Future Urban[9]	60 or 80km/h	Specific design[8] (no less than 23m)	9m	2 @ 3m plus 2 @ 1m shoulder	Specific design[8]	None	Specific design[8]	All bus stops to be recessed	2.5m, shared off road footpath and cyclepath, both sides		Both sides
Minor Arterial	Future Urban[9]	60km/h	Specific design[8]	Specific design[8]	Specific design[8]	Specific design[8]	Specific design[8]	Specific design[8]	Specific design[8]	Specific design[8]	Specific design[8]	Specific design[8]
Major Arterial	Future Urban[9]	80km/h	Specific design[8]	Specific design[8]	Specific design[8]	Specific design[8]	Specific design[8]	Specific design[8]	Specific design[8]	Specific design[8]	Specific design[8]	Specific design[8]
Central City Land Use Environment												
Central City	Central City	30km/h	Specific design[8]	Specific design[8]	Specific design[8]	Specific design[8]	Parking and loadin	Specific design[8]	All bus stops to be kerbside	2 @ 4m (subject to specific design[8])	Cycling on road shared in movement lane	Both sides

							g spaces to be separate and recessed					
Pedestrian Focus Area	Central City	30km/h	Specific design[8]	Specific design[8]	Specific design[8]	Specific design[8]	Parking and loading spaces to be separate and recessed	Specific design[8]	Specific design.[8] All bus stops to be kerbside	2 @ 4m (subject to specific design[8])	Cycling on road shared in movement lane	Both sides
Strategic Network and Pedestrian Focus Area (Anglesea St)	Central City	40km/h	Specific design[8]	Specific design[8]	Specific design[8]	Specific design[8]	Parking and loading spa	Specific design[8]	Specific design[8] Potential for bus lanes and priority at intersect	Specific design[8]	Specific design[8]	Both sides

							ces to be separate and recessed		ions			
Strategic Network (Tristram St [Mill St to Bridge St] and Mill St)	Central City	60km/h	Specific design[8]	Specific design[8]	Specific design[8]	Specific design[8]	None	Specific design[8]	Potential for bus priority at intersections	Specific design[8]	Specific design[8]	Both sides
Strategic Network Overlay												
Strategic Network	All	60 or 80km/h	Specific design[8]	Specific design[8]	Specific design[8]	Specific design[8]	Specific design[8]	Specific design[8]	Specific design[8] Potential for bus priority at intersections	Specific design[8]	Specific design[8]	Specific design[8]

[1] New Major and Minor Arterial transport corridors are likely to be designated with the final design undertaken on a case by case basis. For work involving significant changes to existing transport corridors, local constraints, land use environment and network function requirements may require design compromises whereby the minimum desirable design criteria may not be able to be met. Refer to Figures 15-4b to 15-4f to identify the relevant transport corridor type.
[2] Refer to Table 15-4a for which zones form land use environments.
[3] Measured from the face of the kerb to the face of the opposite kerb (excluding any

recessed parking but includes any separated cycle facility).
[4] Full transport corridor width.
[5] Measured from the property boundary to the face of the kerb. Berm width will vary in order to accommodate features as required, including: lighting, noise attenuation, landscaping, street trees, swale drains, footpaths, ~~cyclepaths~~shared paths, cycle lanes, cycle paths, recessed parking. Landscaping or street trees will require a minimum width of 2m and be incorporated into the legal road width (typically replacing indented parking or medians). A berm width wider than that indicated in Table 15-5 a ii may be required to accommodate indigenous trees.
[6] Location of services will be dependent upon the location of the footpath. The ~~Hamilton City~~Regional Infrastructure Technical Specifications contains relevant guidance on locating services.
[7] If high pedestrian activity is expected then a 30km/h (or lower) design speed environment will be required. An Integrated Transport Assessment and safety audits will be necessary to ensure that the safety of vulnerable transport corridor users is achieved.
[8] Specific design requires case by case consideration of the design elements in the local context. This must be undertaken with input from Council's City Infrastructure engineers.
[9] The design of transport corridors in the Future Urban land use environments should be flexible enough to enable retrofitting to a lower design speed environment should zoning of the adjacent land use change.
[10] The level of direct access (none, limited, managed) may vary along a corridor depending on network function requirements, topography and the availability of alternative access.
[11] For guidance on bus stop types refer to the ~~Hamilton City~~Regional Infrastructure Technical Specifications. The design of kerbside bus stops will result in the positioning of a stopped bus partially or fully within the cycle or movement lane. This may require kerb extensions to achieve. Bus stops and other elements of public transport infrastructure are only necessary if part of a bus route.
[12] For guidance on pedestrian crossing facilities refer to the ~~Hamilton City~~Regional

Infrastructure Technical Specifications.

13 ~~Refer to 'Design Speed Environment' below for further guidance.~~

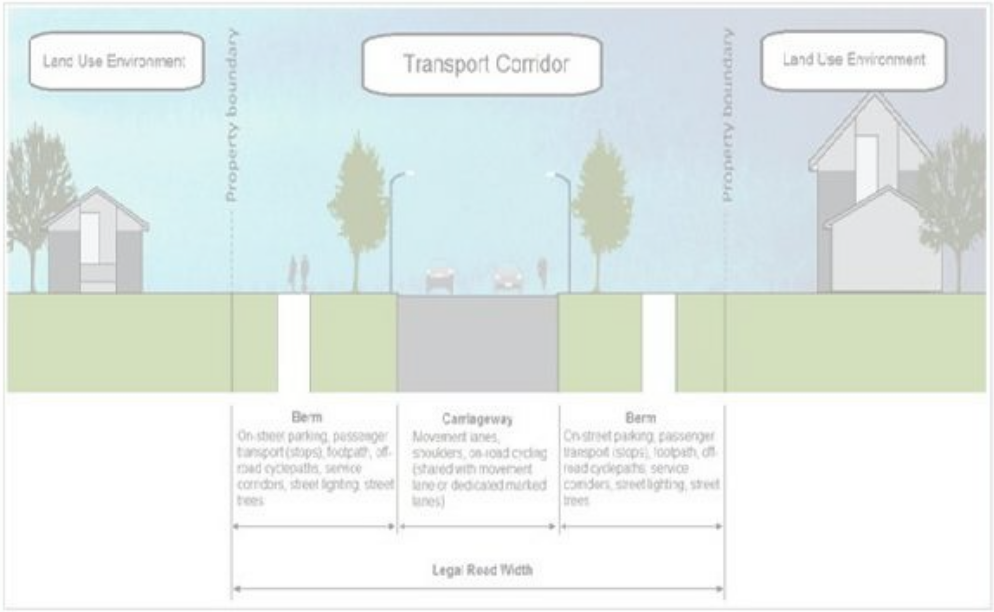
14 ~~Stormwater~~ Stormwater management solutions may require additional legal road width and alter the arrangement of elements in this table (e.g.~~,~~ swales or space for treatment devices).

~~15~~14 ~~Excluding~~ Excluding shoulders.

15 Separated cycle facilities are required to provide a separator and allow for shy distances between the cyclist and the separator, and between the cyclist and the movement lane and/or parked cars.

16 A proposal to use a bi-directional cycleway must be supported by an assessment that shows the design minimises and manages the risks associated with two-way movement, otherwise a single-direction cycleway on each side of the road must be provided.

Figure 15-6b



Design Speed Environment

Traffic management will need to be included in transport corridor designs to ensure that the design speed environment shown in Table 15-6a is achieved.

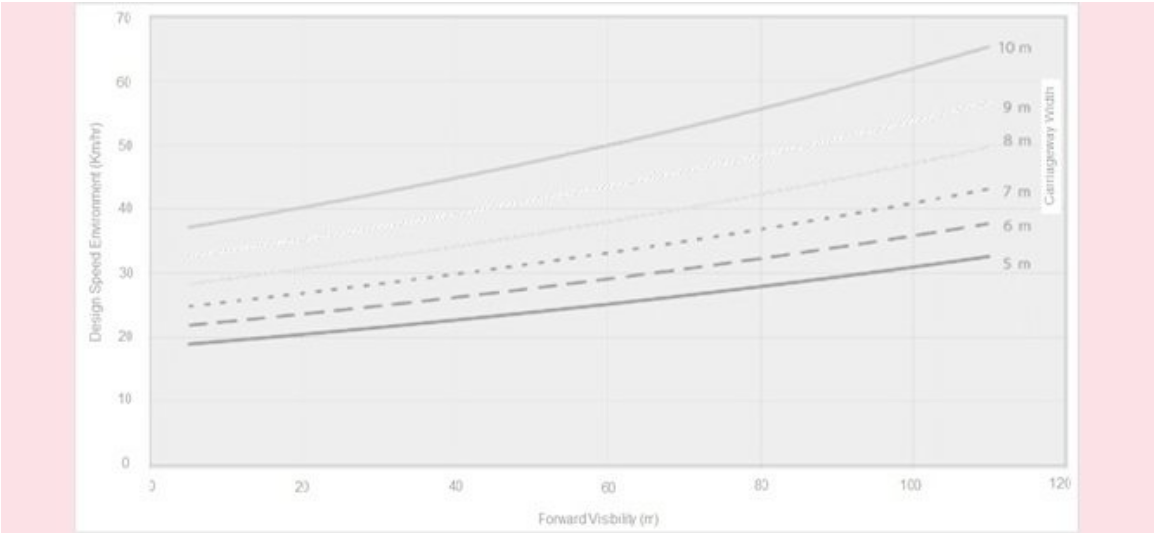
Speeds can be managed by physical and psychological devices such as narrowed movement lanes, reduced forward visibility, parking, slow points, build outs, leg lengths, chicanes, planting and landscaping, and street furniture and public art works.

Suitable guidance for designing to a design speed environment can be found in:

- The Austroads Guide to Road Design – Part 3: Geometric
- The Manual for streets (UK Department for Transport 2007)

The two key geometric factors that contribute to achieving the target operating speed are carriageway width and forward visibility. Figure 15-6c can be used to give an indication of the speed at which traffic will travel for a given carriageway width/forward visibility combination.

Figure 15-6c: Design speed environment – relationship between carriageway width and forward visibility



~~***Source:** Adapted from figure 7.16 of UK Department for Transport 'Manual for streets' and 'TRL661 - The manual for streets: evidence and research'*~~

15~~-7~~-6 Area Specific ITA Requirement

Figure 15~~-7a~~-6a

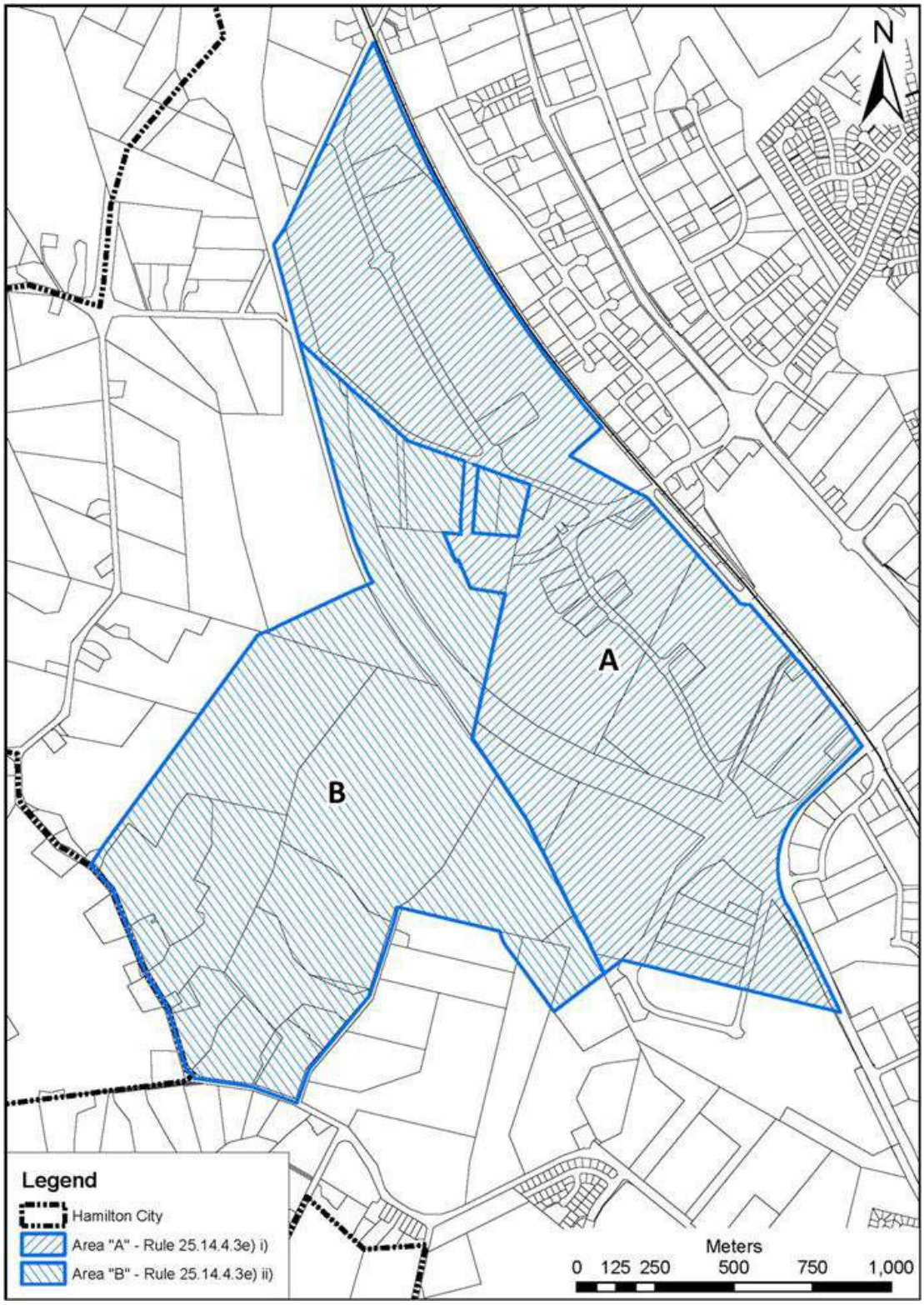


Figure 15~~-7b~~-6b

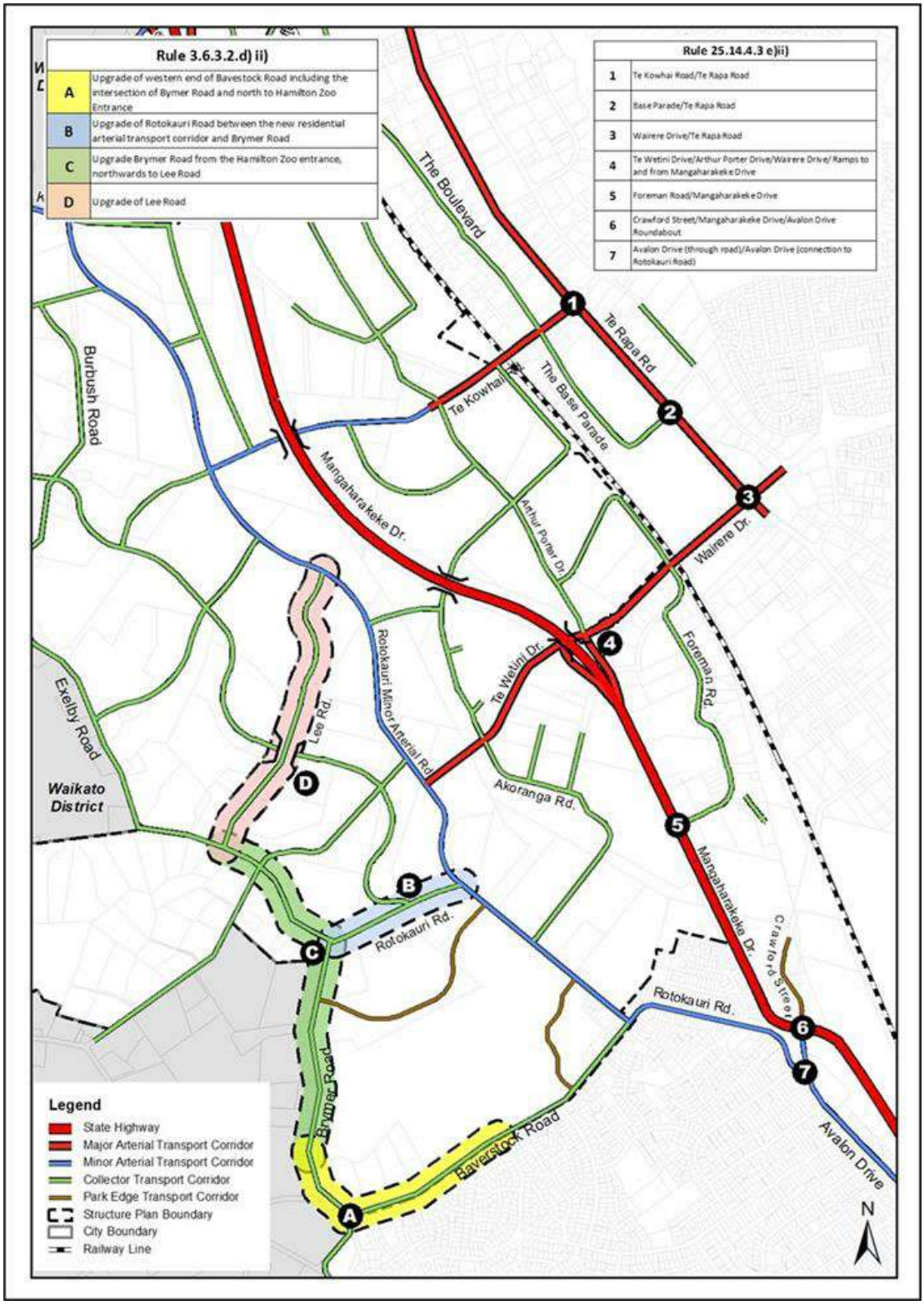
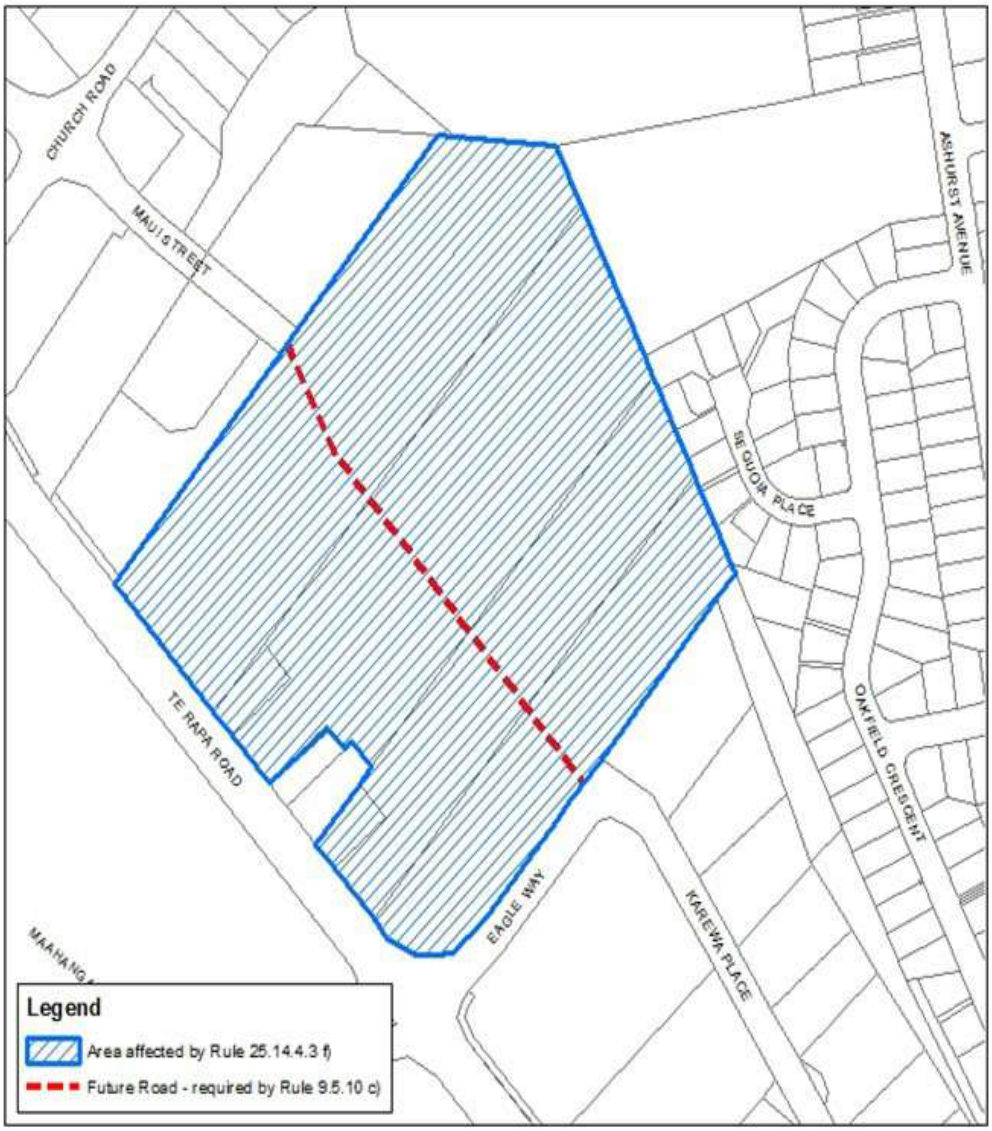


Figure 15-~~7c~~-6c



~~**Figure 15-8:** Sensitive transport network~~

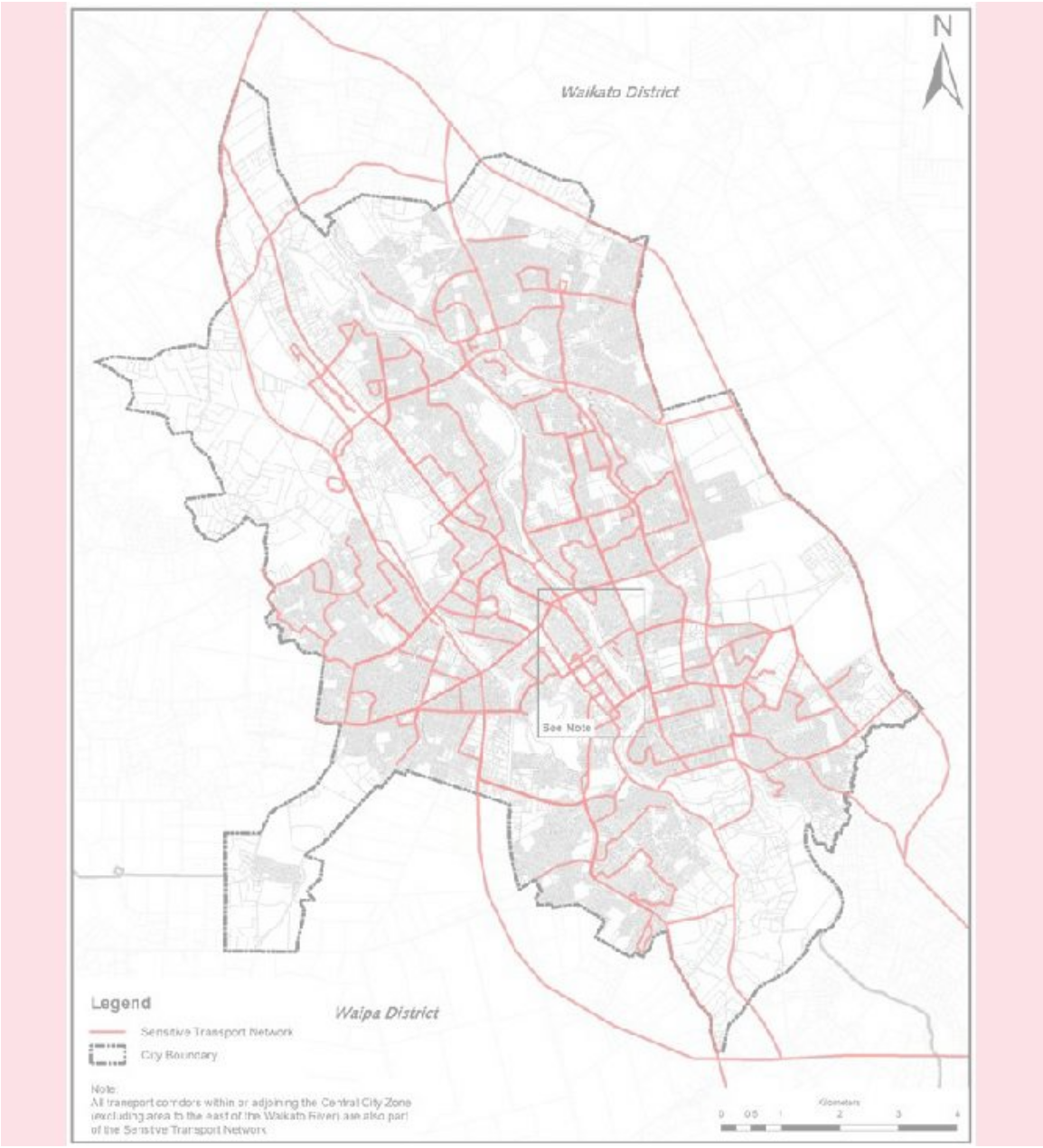


Figure 15-9-7: Airport protection overlay

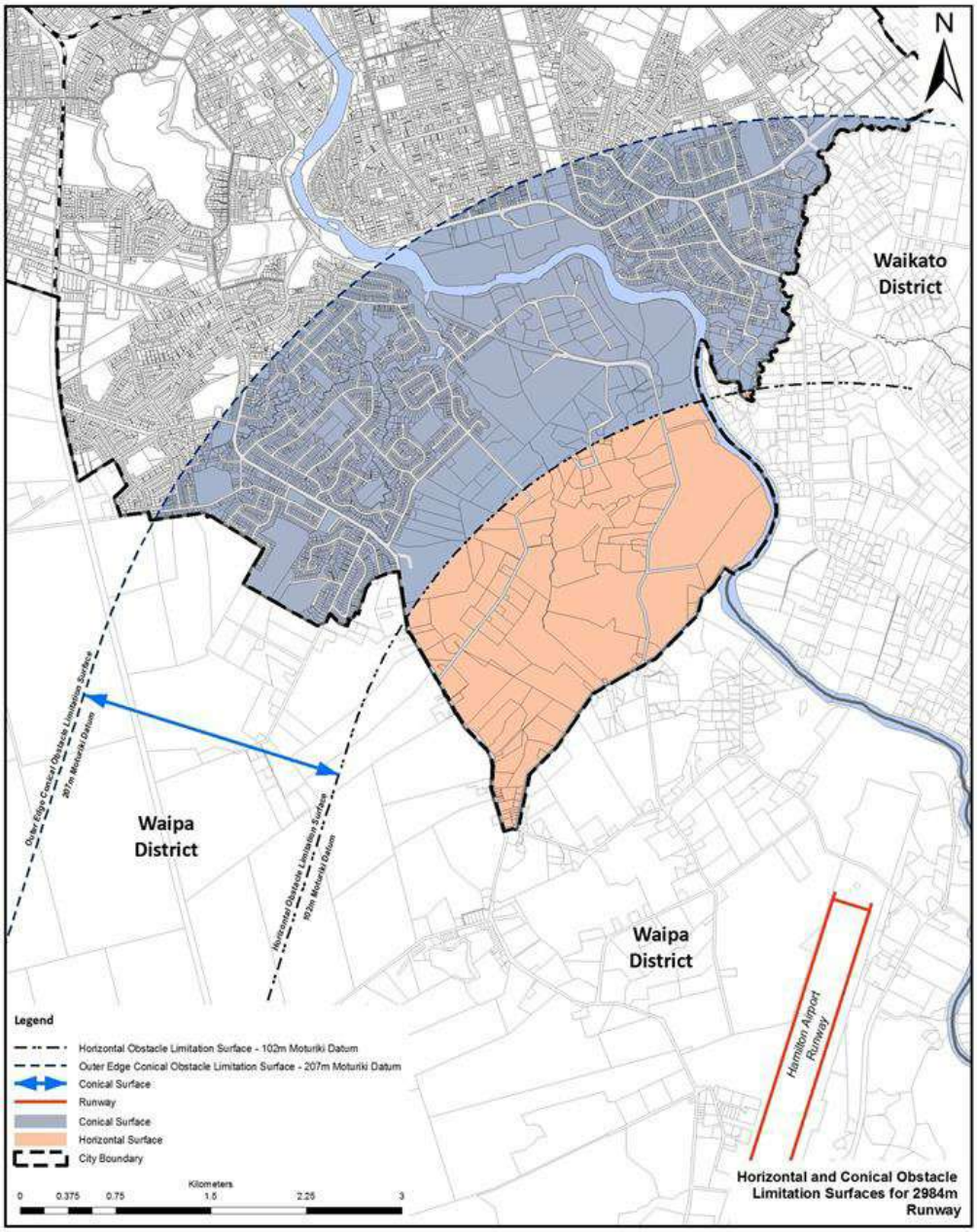


Figure 15-~~10~~-8: Rotokauri North - Transport Upgrades

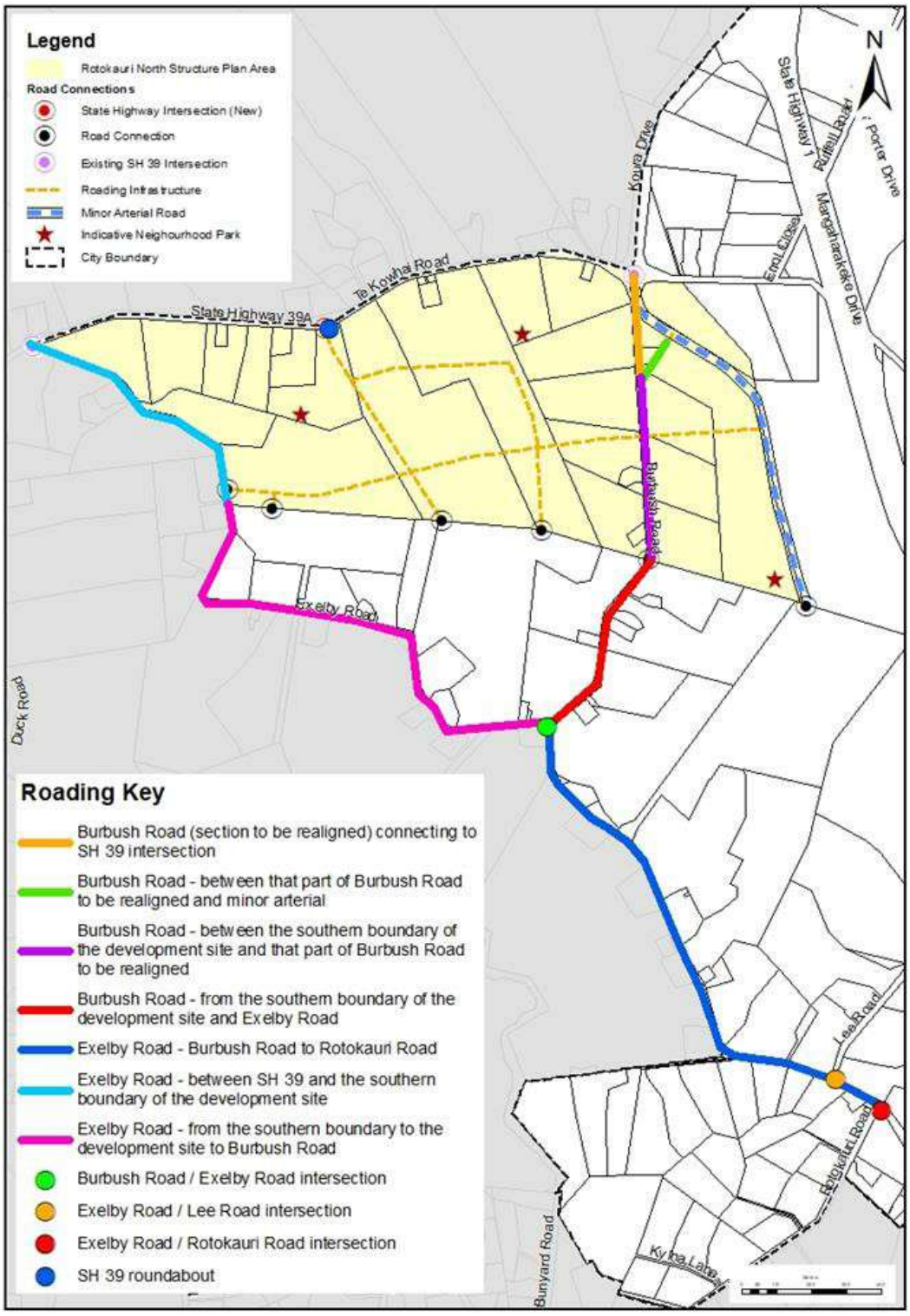
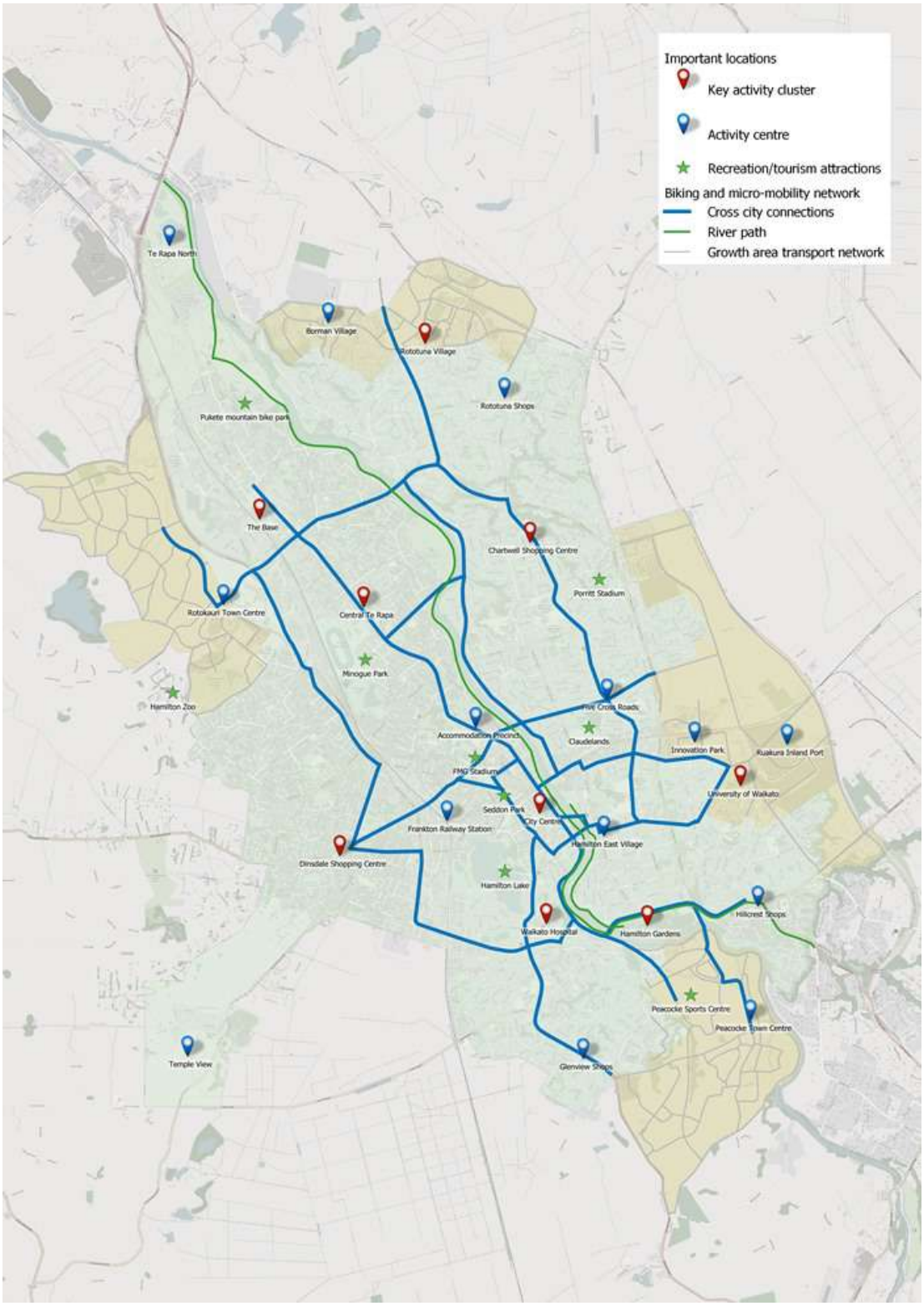


Figure 15-9: Cross-City Connections


Important locations
Key activity cluster
Activity centre
Recreation/tourism attractions
Biking and micro-mobility network
Cross city connections
River path
Growth area transport network
Te Rapa North
Borman Village
Rototuna Village
Rototuna Shops
Pukete mountain bike park
The Base
Chartwell Shopping Centre
Porritt Stadium
Rotokauri Town Centre
Central Te Rapa
Minogue Park
Hamilton Zoo
Five Cross Roads
Accommodation Precinct
Claudelands
Innovation Park
Ruakura Inland Port
FMG Stadium
University of Waikato
Seddon Park
City Centre
Frankton Railway Station
Hamilton East Village
Dinsdale Shopping Centre
Hamilton Lake
Hillcrest Shops
Waikato Hospital
Hamilton Gardens
Peacocke Sports Centre
Peacocke Town Centre
Temple View
Glenview Shops