



Livability Assessment – Technical Background



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1.0 INTRODUCTION

Purpose of Technical Background Report

The purpose of this technical background report is to provide the reader with a detailed description of how the livability of Campbell River and its neighbourhoods was assessed. This document includes a description of the methodology used to rank neighbourhoods according to the numbers and types of amenities existing, their rank according to how they are categorically grouped, a description and comparison of the two methods used to measure walkability and connectivity to amenities in neighbourhoods, and how these methods were compared to assess the quality of neighbourhood design.

Methodology of Assessment

Several assessments were performed to determine the livability of each neighbourhood based on the number and capacity of existing amenities, street design and density of each neighbourhood, and walkability and connectivity by measuring distances from residential to amenities using two methods in GIS. Methods for each type of assessment are described below.

Livability Ranking Tables

The method of analysis involves assigning rankings (one being highest and seven being lowest) to neighbourhoods with highest to lowest number of amenities or spaces available per number of dwellings. Metrics include total area, total area of dwelling units, number of dwellings, neighbourhood density (as dwellings per total area), numbers of the amenity, and total area of the amenities. Totals are calculated where appropriate. From this data, dwellings per amenity are derived and compared, with subsequent ranking assigned. In the case of Child Care Facilities, both dwellings per facility and dwelling per 1,000 child care spaces were derived from the data, with the latter ranking being applied to a further set of neighbourhood amenity comparisons.

1.1.1 Grouped Amenity Indicators

In order to determine which neighbourhoods had better access to some types of amenities compared with others, amenities were grouped into categories with similar characteristics, and Livability Rankings were averaged for each amenity group. The first “primary” combination of amenities grouped those with obvious similar attributes together – Social Care (Child Care and Social Services), Social/Employment Nodes (Social Spaces and Employment Nodes), Transportation (Bus Stops and Paths/Trails), and Green Amenities (Green/Public Spaces and Parks/Playgrounds). The amenities were then re-grouped for sensitivity, to discern if any neighbourhoods had “outlying” better or poorer amenity categories when assembled differently. The “secondary” re- grouping used amenity categories of Social Care (Child Care and

Social Services), Employment and Amenities (Employment Nodes, Social Spaces and Bus Stops), and Active Amenities (Paths/Trails, Public/Green Spaces, Parks/Playgrounds). The “tertiary” re-grouping used amenity categories of Social Care and Spaces (Child Care and Social Services), Employment and Transportation (Employment Nodes and Bus Stops), and Active Amenities (Paths/Trails, Public/Green Spaces, and Parks/Playgrounds). The highest three averages of Livability Rankings from each group were highlighted for each of the Primary, Secondary and Tertiary groupings. The incidence of neighbourhoods in the top three in every group was then determined. Despite re-grouping the amenity categories into second and third re-groupings, neighbourhoods with considerably higher numbers of amenities per dwelling unit consistently placed in the top three for that amenity category. Results also showed that other neighbourhoods with consistent and significantly lower numbers of amenities did not place in the top three in any amenity grouping or re-grouping.

1.1.2 Neighbourhood Design Quality (Comparison of Walkability Methods)

Compact, walkable street designs of cities and neighbourhoods can be evaluated by comparing outcomes of different methods of assessing walkability. This assessment used two methods to measure walkability from amenities to dwelling units – the Multiple Buffer and Selection by Point method, and the Topographical Network Analysis method. The Multiple Buffer and Selection by Point method measured the number of dwelling units within 400m, 800m and 1000m radiuses of a selected amenity or group of amenities (in the case of Village Centres or employment nodes). Results showed cumulative number of units within these circles. The Topographical Network Analysis method measured the number of dwelling units within 400, 800m and 1000m using walking and other active transportation routes along streets and sidewalks, taking into account other boundaries and limitations. (Advantages and disadvantages of these methods are discussed in the following section). The percentage of dwelling units within these distances out of the total number of dwelling units (in the neighbourhood) was then calculated, resulting in a comparable percentages for each method between neighbourhoods. Subsequently, the difference in these percentages between each method was calculated. This resulted in a number under 100 for each amenity at each distance in each neighbourhood. These numbers were averaged at the 400m, 800m and 1000m distances for each neighbourhood and compared against each other. Lower averages indicate neighbourhoods with better street design, connectivity and walkability. Higher averages indicate less connected neighbourhoods, possibility with increased reliance on vehicles for transport.

1.1.3 Walkability Maps and Geographic Information Systems (GIS)

Two methods, the multiple buffer and selection by point method (also known as the circular buffer), and the topographical network analysis method (also known as the road network buffer) were used to evaluate walkability within neighbourhoods, each having attributes that consider diverse factors addressing different but valid results. In some cases, both these methods may result in similar walkability outcomes, however results may be skewed when assessing natural environment features and other forms of urban development. It is assumed that each distance has a corresponding average walking time. Walking 400 metres would be expected to take five minutes, 800 metres would take approximately 10 minutes, and 1000 metres would take appropriately 15 minutes.

Many walkability studies have used the multiple buffer and selection by point method to establish a circular buffer around a location at a given radius to determine walkability to that particular point. Results using this method can be used when comparing those of the network analysis method to identify areas with the highest walkability. Results between the two methods will be most similar in very walkable areas, indicating good street design and dense networks (as described above). However, this method may not accurately represent the spatial area that influences walking. It proves inaccurate in areas with natural features such as rivers, lakes and cliffs, or around built features like railways or suburbs with poor street connectivity. Areas within a buffer may be inaccessible by a pedestrian but still calculated in walking distance or time.

The network analysis method results in a more accurate assessment of actual land area that influences walking. The method does take into account restrictions in which a pedestrian or cyclist is forced to travel along existing roadways, however it also assumes that walking occurs on sidewalks or roads, and does not include informal footpaths, etc. Furthermore, using roads as safe, accessible walkways should not be considered as good walkability. The method also joins road vertices using straight lines, which may lead to inaccuracies in areas that do not have dense, regular street patterns, or in those areas with large parcels of industrial or park land. The method adds substantial amounts of land to neighbourhoods that are not actually accessible by an individual, and thus may overstate the importance of industrial land (for example) within a neighbourhood, in terms of influence on walking. As listed under the assumptions, this assessment included taking into account topography as part of the network analysis. This assumes that routes with increased slopes or other topographic features which may hinder walking or active transportation will result in longer walking routes, as well as longer walking times, as each distance assumes an average walking time. Therefore, using the topographical network analysis method, walkability becomes a combined function of street layout and topography.

Assumptions used in this assessment were created to aid in the accurate measurement of identified indicators related to mapping and GIS (ArcMap application). The assumptions and methods include:

- Use of the city's average household size (2.3) multiplied with the total number of dwellings (parcels) in a neighbourhood to estimate the population size of a neighbourhood;
- Number of dwellings (parcels) in a neighbourhood includes all residential, manufactured home park, and commercial zones, while excluding all rural, public, and industrial zones;
- Calculating the dwelling density of a neighbourhood by dividing the number of dwellings (parcels) in a neighbourhood by the total land area per hectare of a neighbourhood's residential zones;
- Use of School District 72 zones and identified schools to measure accessibility and walkability;
- Use of core retail or commercial areas as a centre for accessibility and walkability analysis;
- Use of location geometry of the map document using its Projected Coordinate System (NAD 1983 UTM Zone 10N) for elevation to consider the walkability of a service area using the Network Analysis method;
- Use of Network Analysis tools method to measure the closest entrance with great connectivity to public roadway or sidewalk or by default;
- The Network Analysis method assumes that topography of a given route is taken into consideration when calculating distances travelled;
- Combining multiple parcels of same feature (Village Centre, Parks and Playgrounds) and using its centre for walkability calculation purposes;
- Use of the Selection by Point method to select dwellings within 400-1000 metres and acquiring the area of these selected parcels with a given buffer distance;
- Approximate expected walking times are associated with each circular or network buffer: 400 metres would take five minutes, 800 metres would take 10 minutes and 1000 metres would take 15 minutes;
- Walking distances in neighbourhoods with clusters of amenities where amenities are located within a Village Centre (as defined in the OCP) or within a shopping complex will be calculated based on a centre point within these clusters. Clusters with the same features outside Village Centres or shopping complexes will be merged and used as a single point to determine walking distances from dwellings to locations.

These assumptions apply only on the produced maps created for neighbourhood design and walkability analysis.

1.3.3.1 North Campbell River Neighbourhood

North Campbell River: Child Care Facilities

There is one child care facility existing in the North Campbell River with a capacity of seven. It is located in the southern part of the neighbourhood, providing walkability to 250-314 of the 831 neighbourhood dwellings. There are 307 dwellings located within 1000m of the facility, with 2.2 spaces per 1000 dwellings.

Figure 1: North Campbell River- Walking Distance to Child Care – Topographical Network Analysis Method

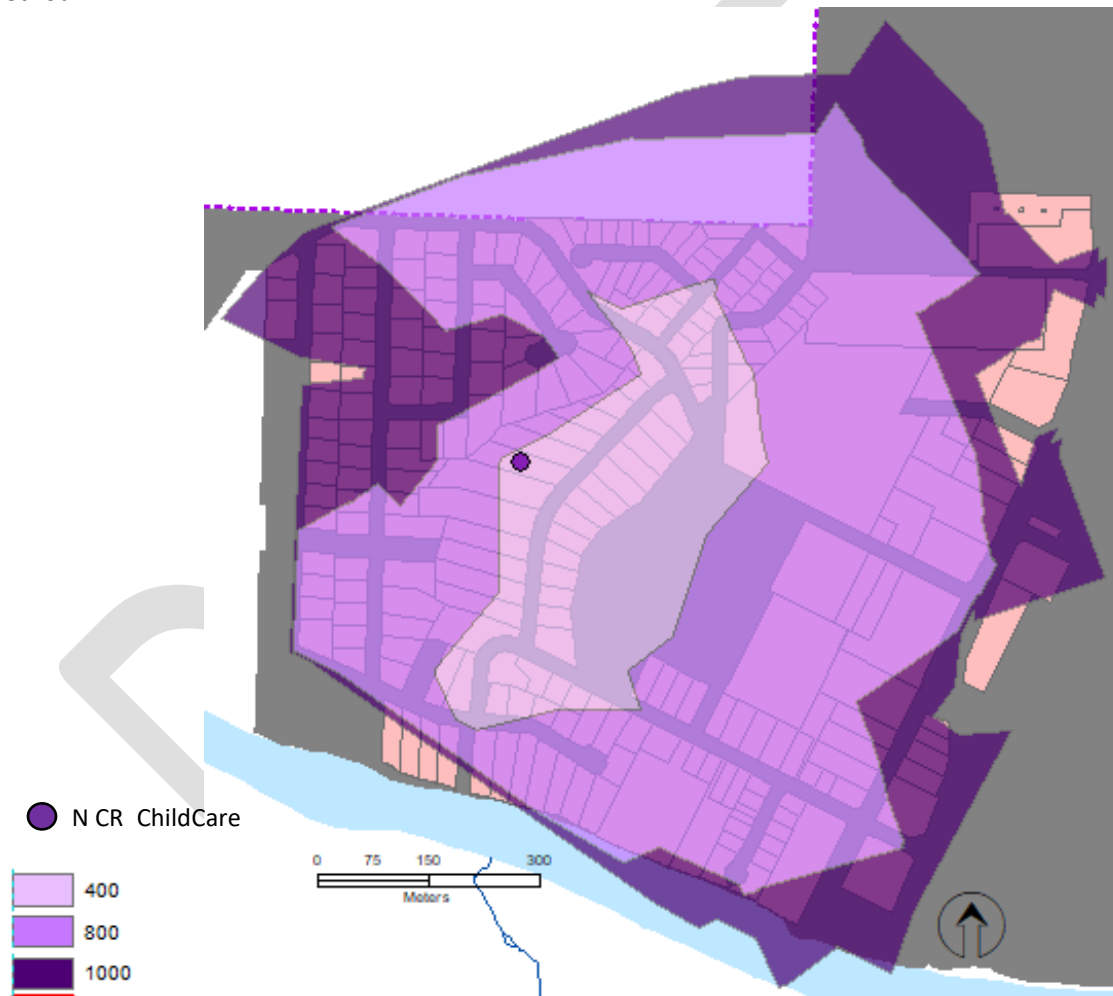
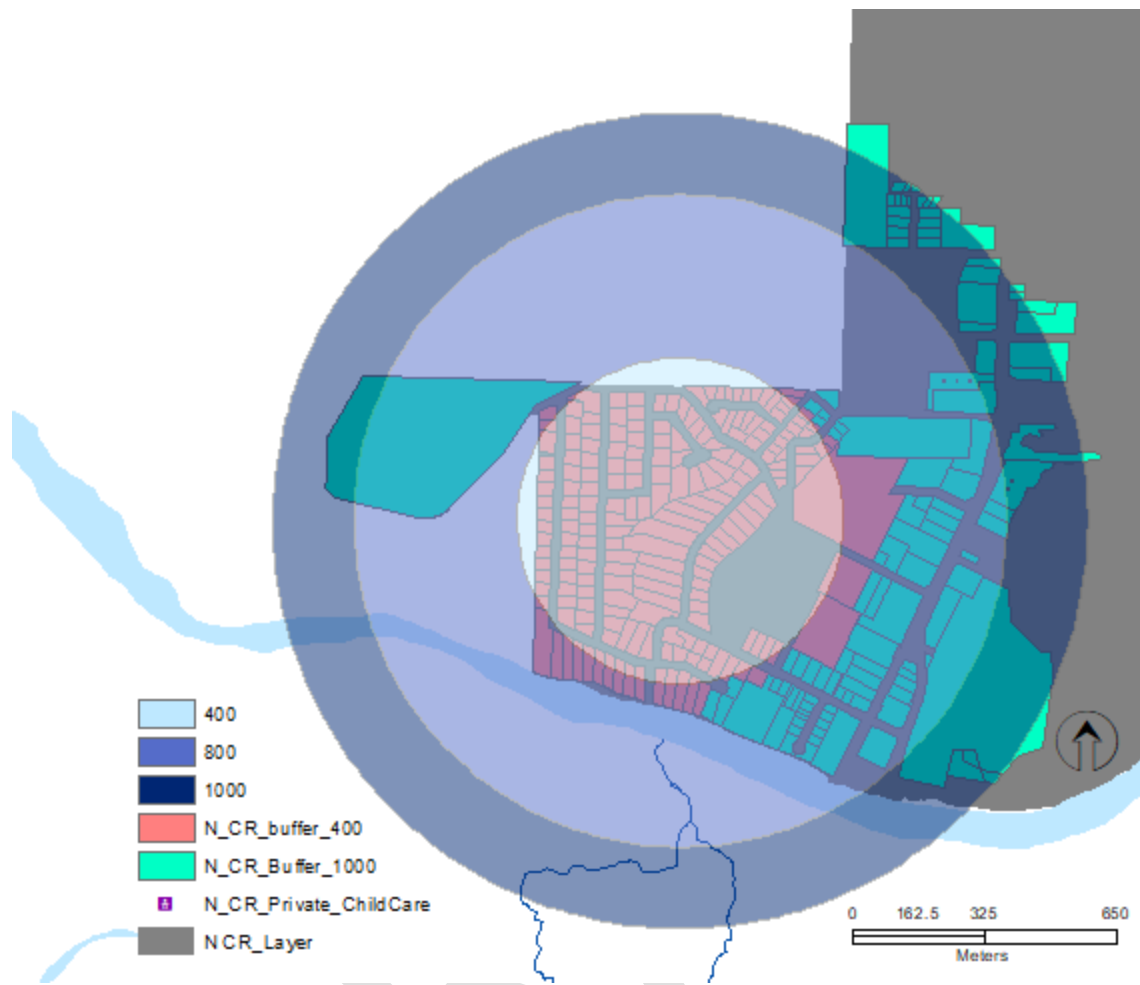


Figure 2: North Campbell River- Walking Distance to Child Care - Multiple Ring Buffer and Selection by Point Method



North Campbell River: Parks and Green Spaces

North Campbell River neighbourhood has 6 parks, protected areas, and green spaces, including: the Campbell River Cemetery, Baikie Island and Raven Park (the estuary), and four small areas dedicated as parks. To analyse the walkability and accessibility of parks in this neighbourhood, the park features were converted from polygon to point and parks were subdivided into two groups: Parks and Green Spaces 1 being more “usable” park space (the cemetery, Baikie Island/Raven Park), and Parks and Green Spaces 2 being less currently usable spaces (the other four small areas dedicated as park space).

Figure 3: North Campbell River- Walking Distance to Parks and Green Spaces 1 – Topographical Network Analysis Method

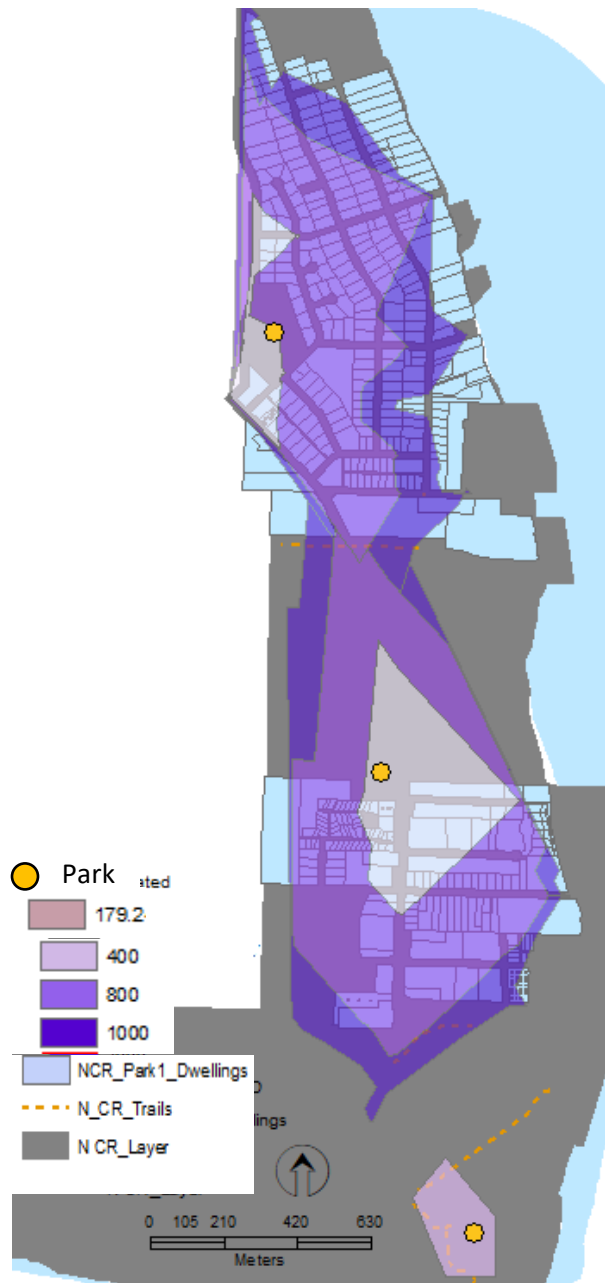


Figure 3 is Parks and Green Spaces 1 (the cemetery and Baikie Island/Raven Park). The Figure shows that although Baikie Island/Raven Park is a usable park within itself, it is minimally walkable from most areas of the neighbourhood.

Figure 4: North Campbell River- Walking Distance to Parks and Green Spaces 2 - Topographical Network Analysis Method

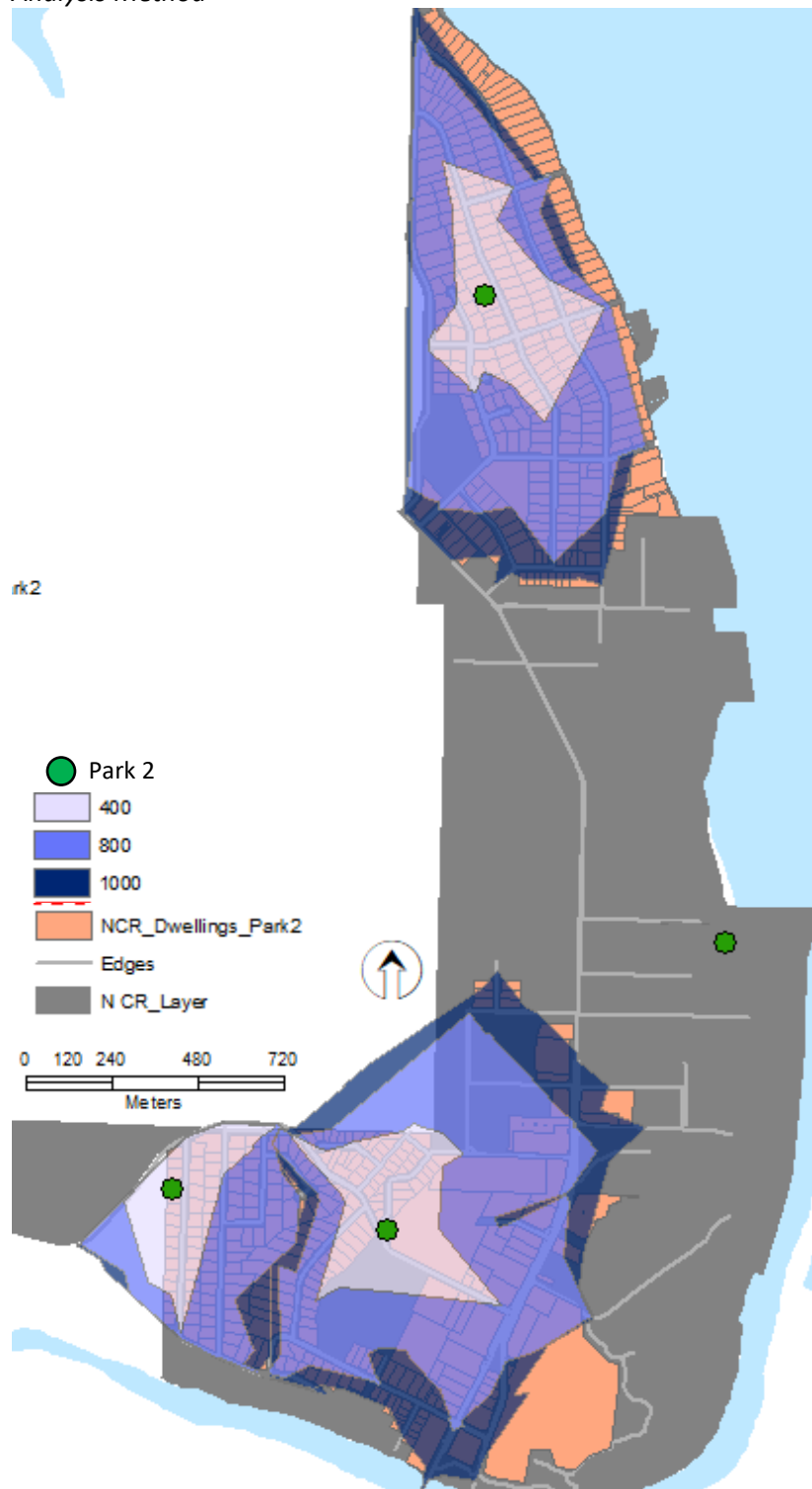


Figure 4 shows the remaining smaller parks in North Campbell River, located in the residential area of Painter Barclay, and in the southern residential portion of the neighbourhood.

Figure 5: North Campbell River- Walking Distance to Parks and Green Spaces 1 - Multiple Ring Buffer and Selection by Point Method

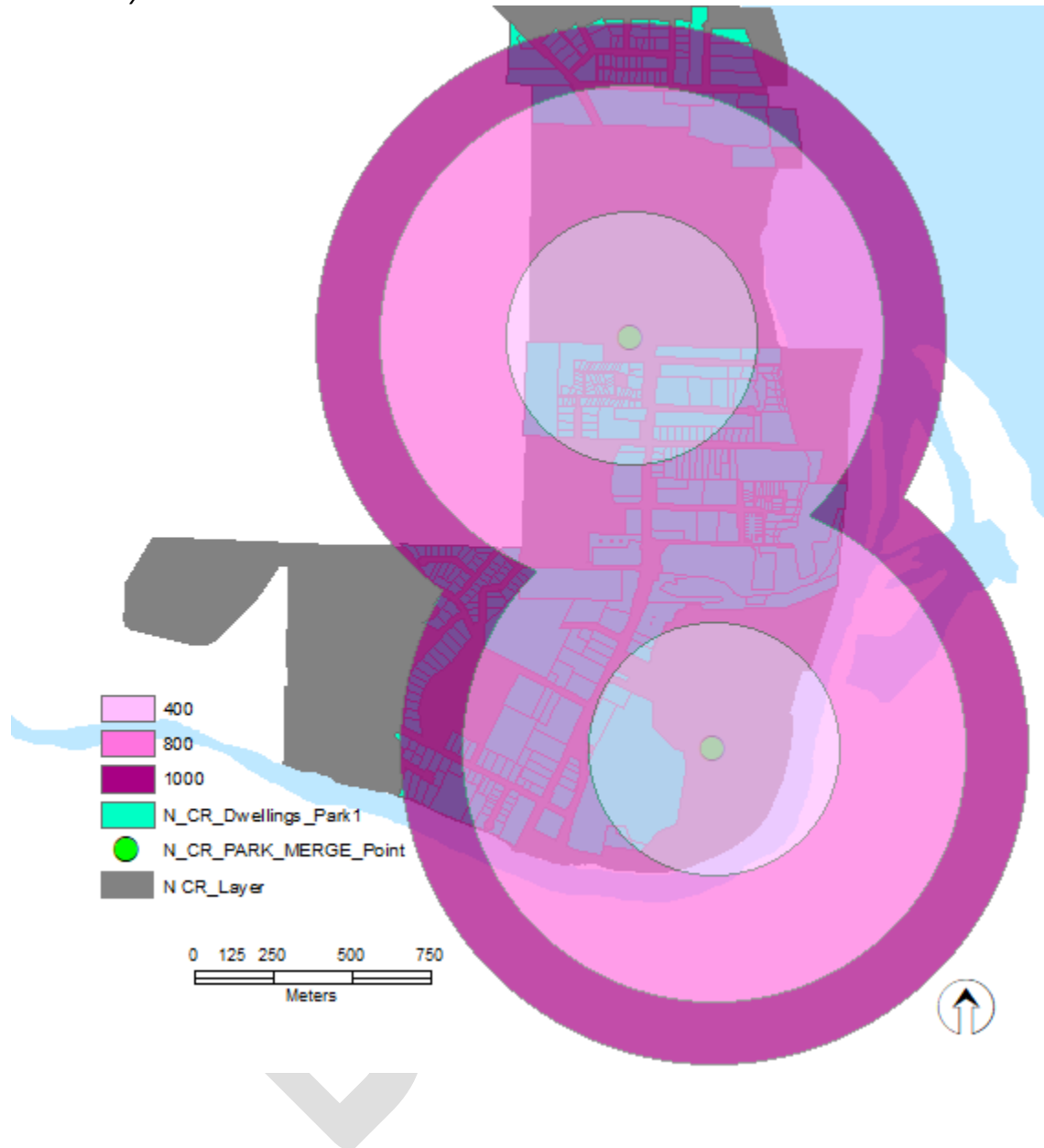


Figure 5 shows the walkability of Parks and Green Spaces 1 (the cemetery and Baikie Island/Raven Park) using the Multiple Ring Buffer and Selection by Point Method. It highlights the short distances from the points, however does not take into account poor pedestrian connections and unappealing walking routes.

Figure 6: North Campbell River- Walking Distance to Parks and Green Spaces 2 - Multiple Ring Buffer and Selection by Point Method

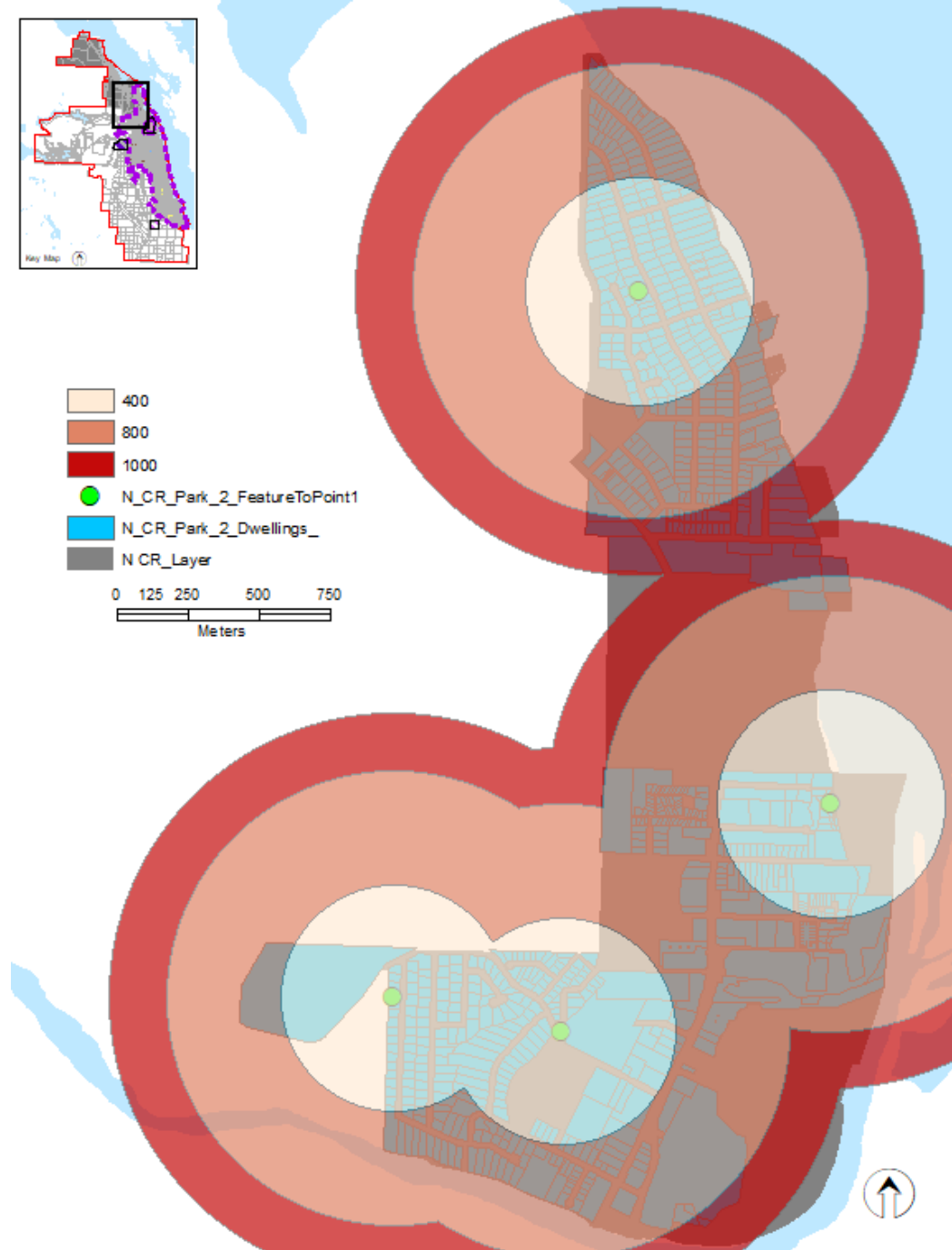


Figure 6 shows the walkability of Parks and Green Spaces 2 (four smaller dedicated park spaces in both the north and south areas of the neighbourhood) using the same method as above. Again, while the distances are relatively short, walkability is limited especially to the parks in the south.

North Campbell River: Convenience Stores, Cafés, and Restaurants

Figure 7: North Campbell River- Walking Distance to Convenience stores, Cafés, and Restaurants – Topographical Network Analysis Method

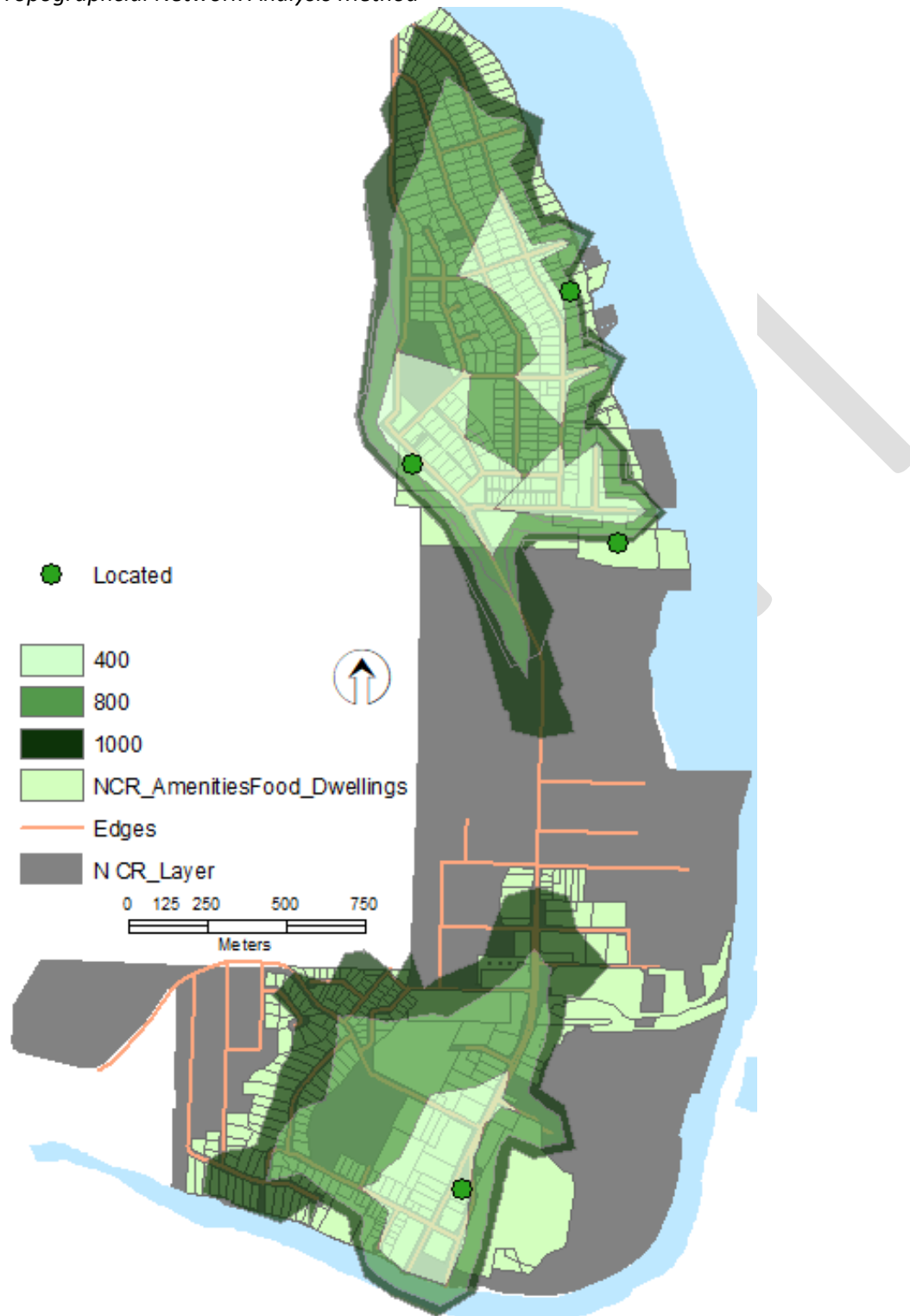
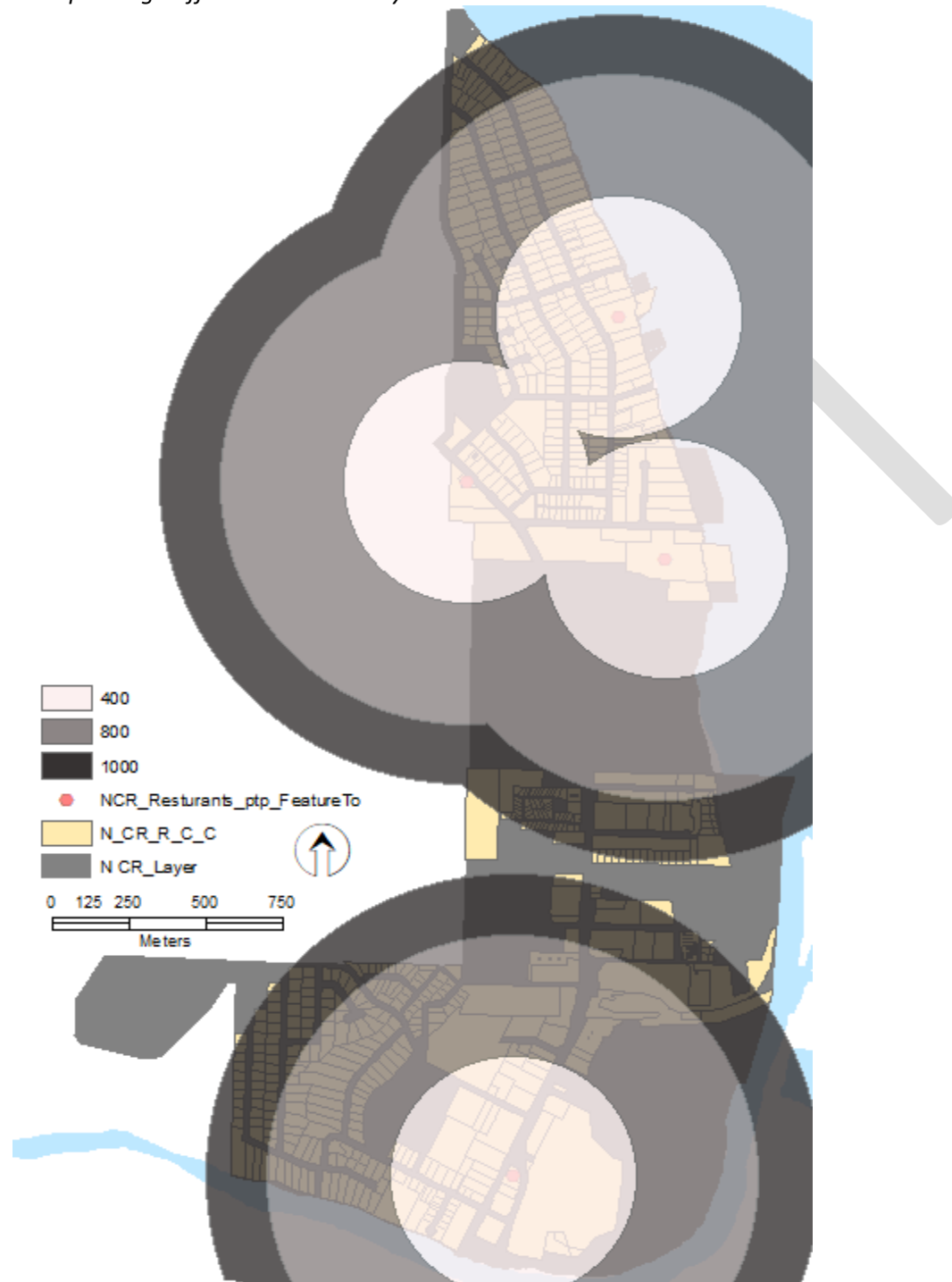


Figure 8: North Campbell River- Walking Distance to Convenience Stores, Cafes, and Restaurants - Multiple Ring Buffer and Selection by Point Method



North Campbell River: Transit Stops

Figure 9: North Campbell River- Walking Distance to Bus Stops - Topographical Network Analysis Method

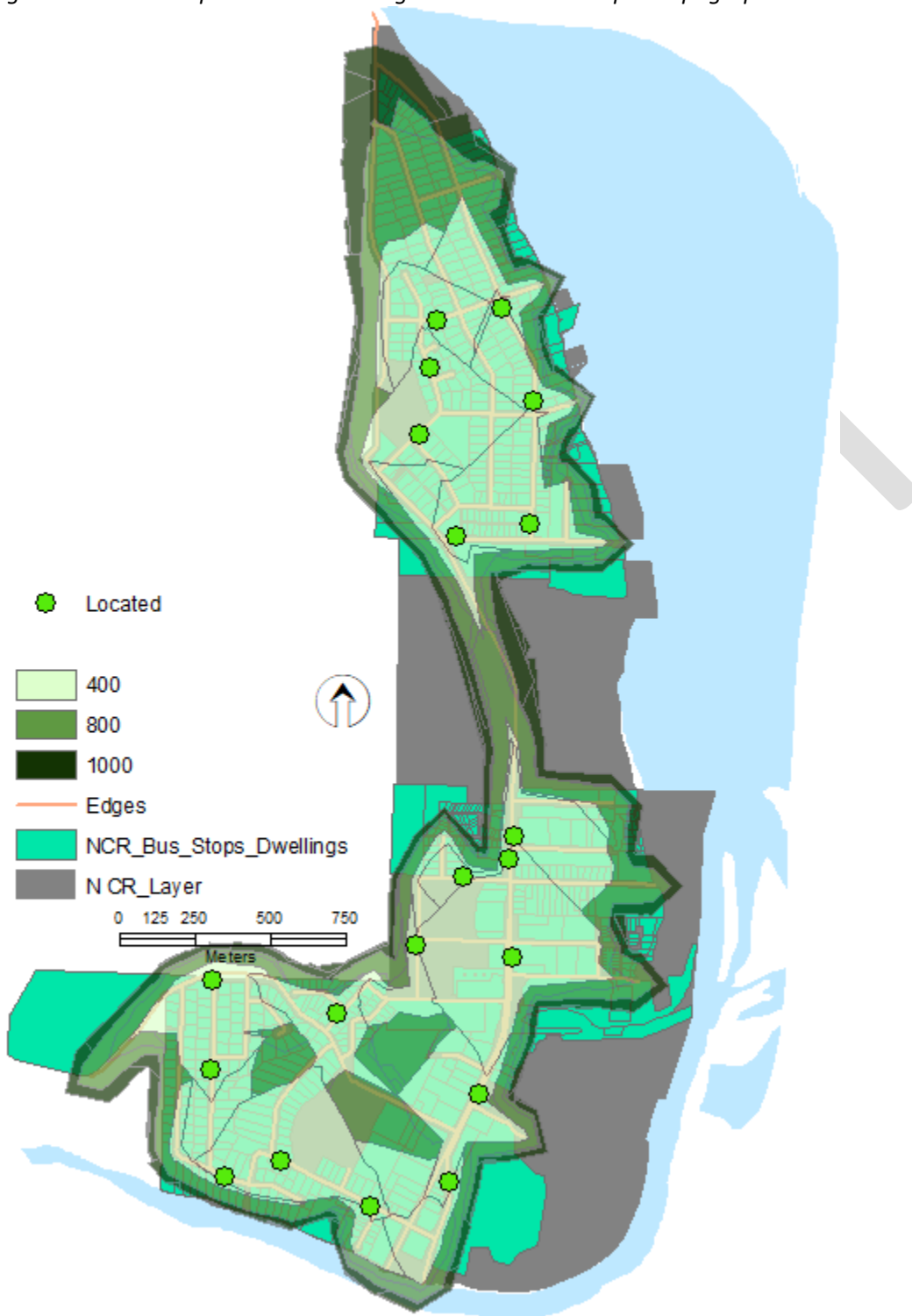
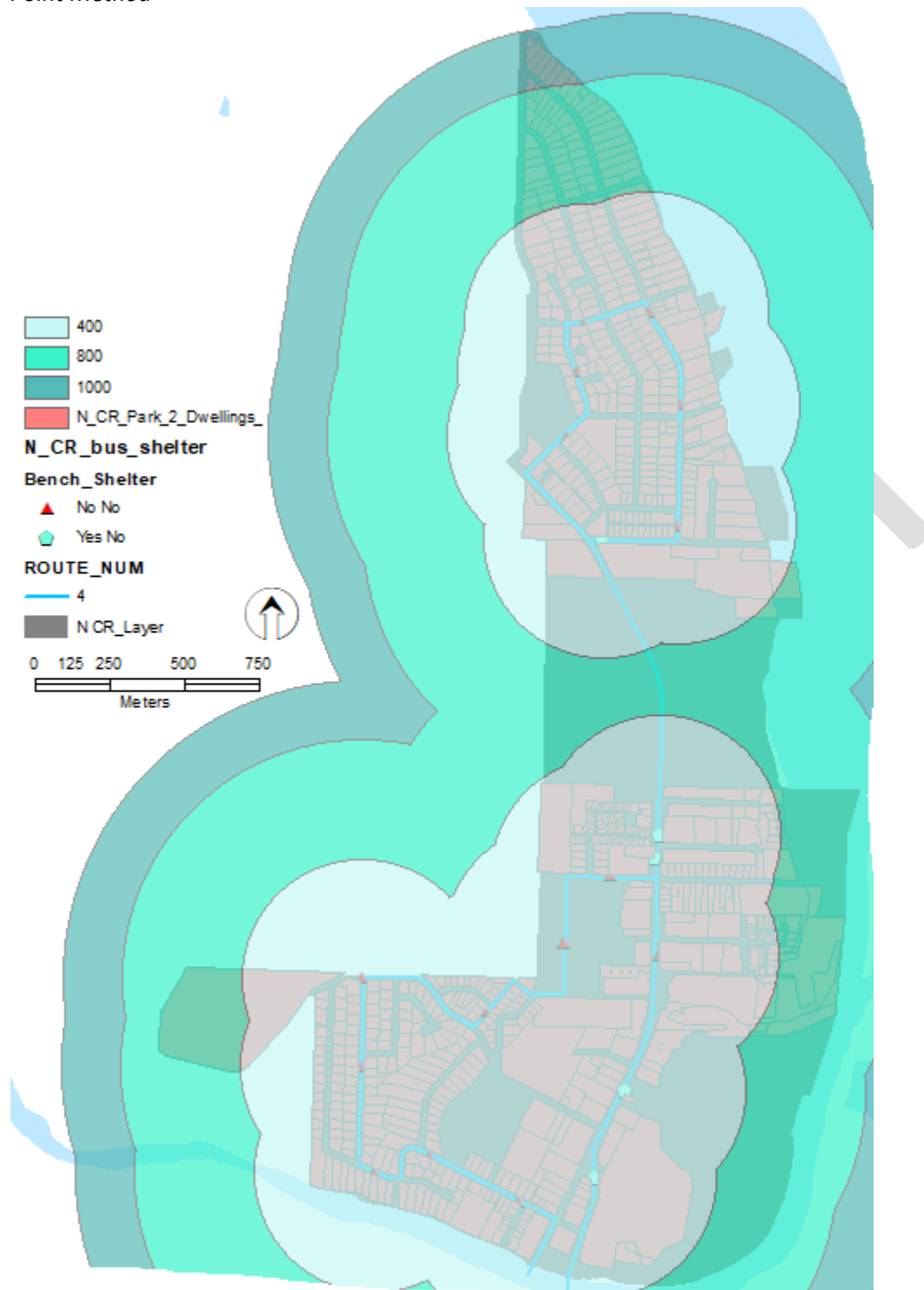


Figure 10: North Campbell River- Walking Distance to Bus Stops - Multiple Ring Buffer and Selection by Point Method



North Campbell River: Village Centres

According to the City's OCP vision, Village Centres are described as distinct walkable nodes which may include residential and commercial uses and community amenities. They are intended to serve a large area of the community with retail and services, and serve as transit nodes with connections to the downtown and other neighbourhoods.

North Campbell River Village Centres (Figure 24 and 25) serve as nodes and are connected to some residential areas, parks and transit. Although the analysis used to represent walking distances from Village Centres to amenities do not account for walkability and accessibility to the area, it shows estimated amenities that are within the range of 400-1000 metres to the neighbourhood Village Centres.

Figure 11: North Campbell River- Walking Distance from Village Centres – Topographical Network Analysis Method

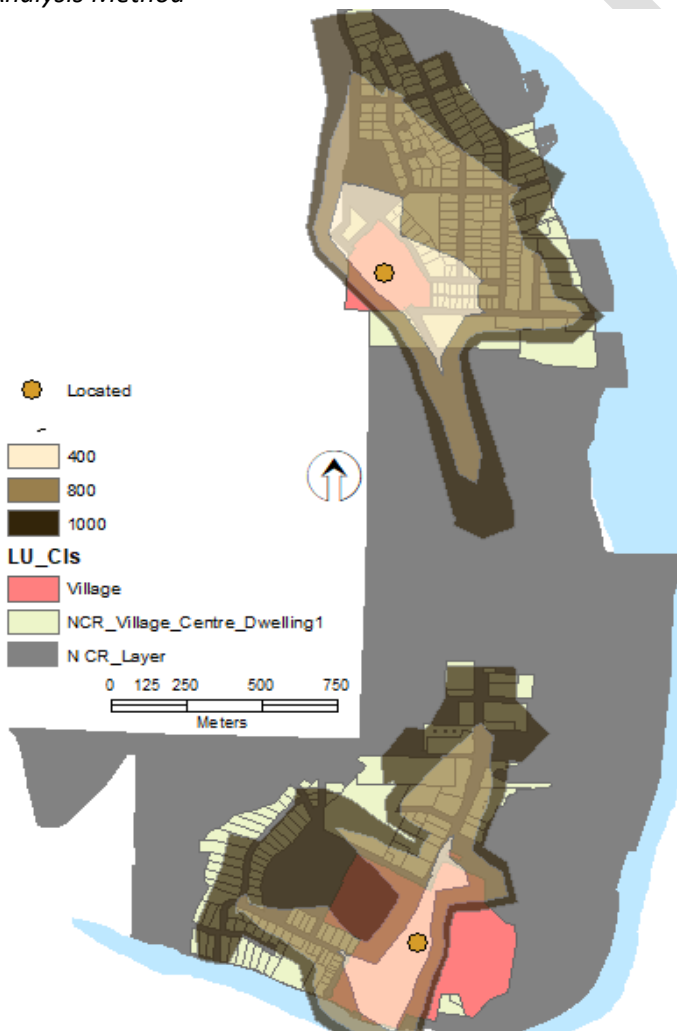
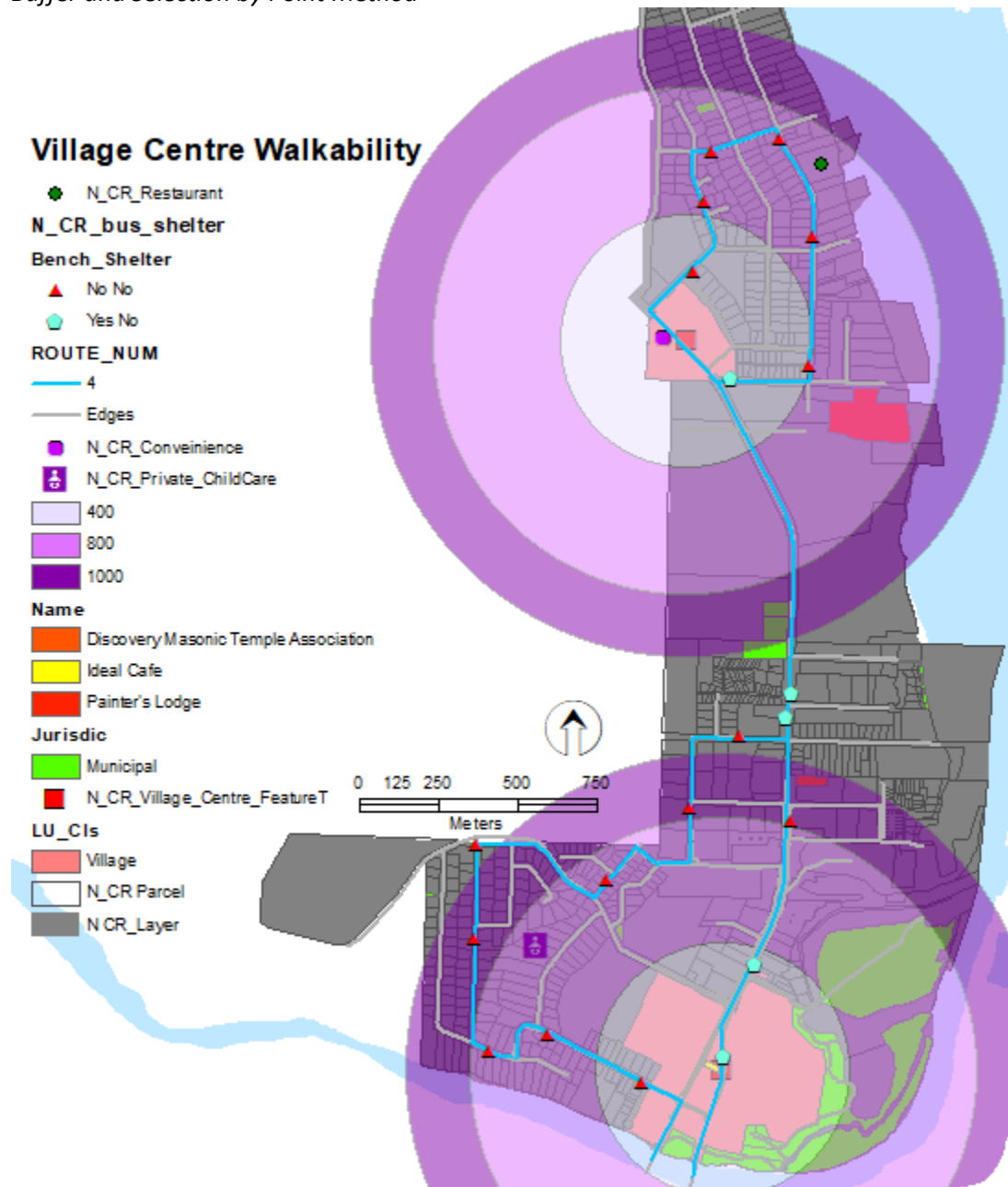


Figure 12: North Campbell River- Walking Distance from Village Centre to Amenities - Multiple Ring Buffer and Selection by Point Method



2.2.1.2 Campbellton Neighbourhood

The use of multiple ring buffer and selection by point method to show the difference in walking distance between it and network analysis walking distance will not be used for all Amenity Categories in Campbellton Neighbourhood because of its size (less than 1000m in distance). Rather, it will be used for selected nodes in the neighbourhood (Village Centres).

Campbellton: Child Care Facilities

There are 376 dwellings located 400, and 800 metres of the two child care facilities in Campbellton. The facilities are located at the centre of the neighbourhood providing accessibility and walkability to approximately 376 dwellings of 386 dwellings in the neighbourhood. The facilities have a total capacity of 14, with 37.2 spaces per 1000 dwellings.

Figure 13: Campbellton- Walking Distance to Child Care Facilities – Topographical Network Analysis Method

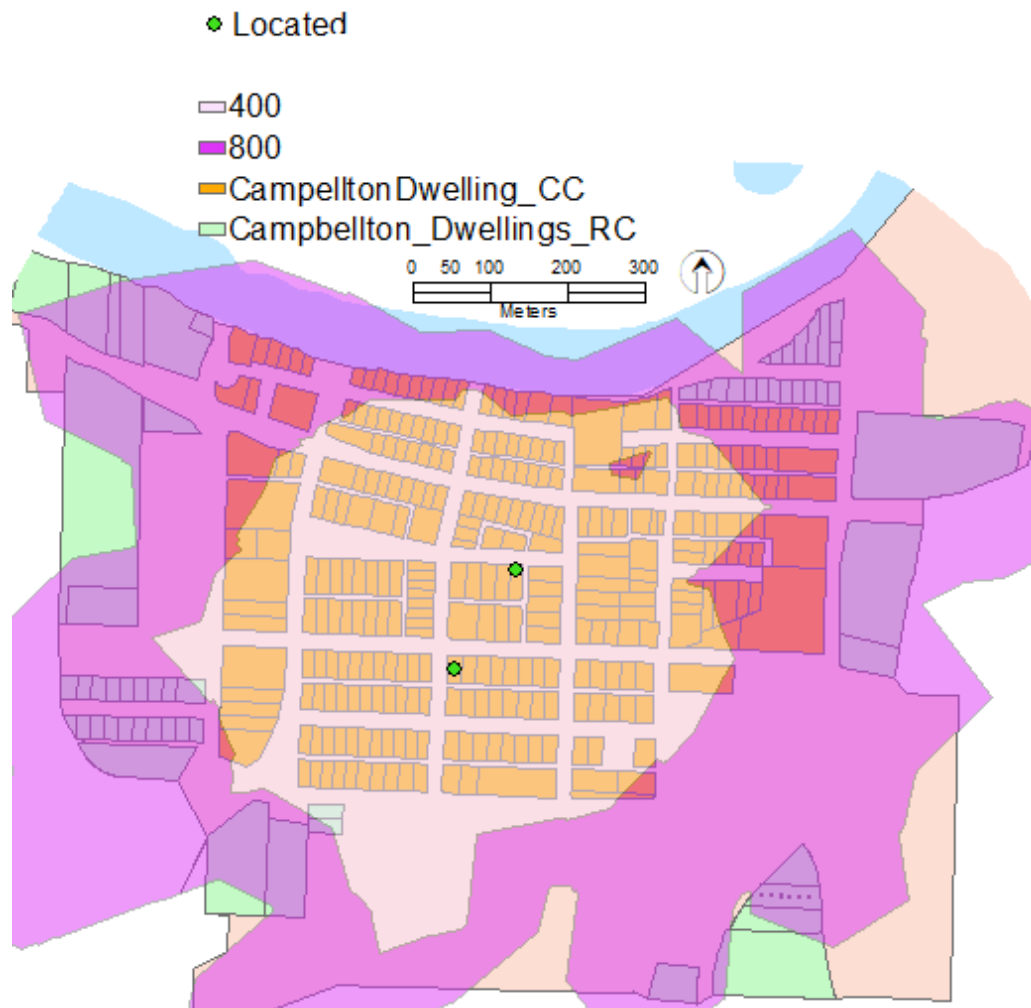
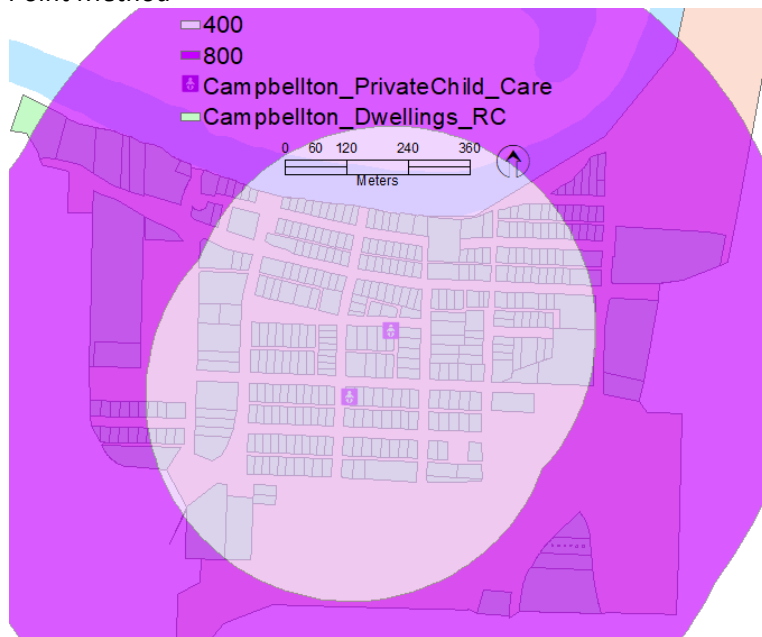


Figure 14: Campbellton- Walking Distance to Child Care Facilities - Multiple Ring Buffer and Selection by Point Method



Campbellton: Parks and Green Spaces

Figure 15: Campbellton- Walking Distance to Parks and Green Spaces – Topographical Network Analysis Method

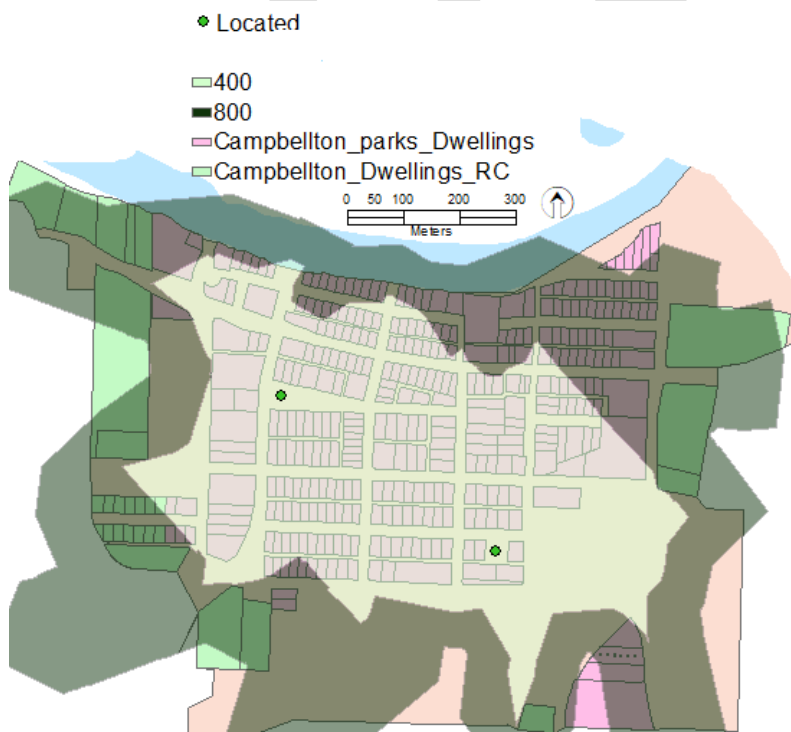
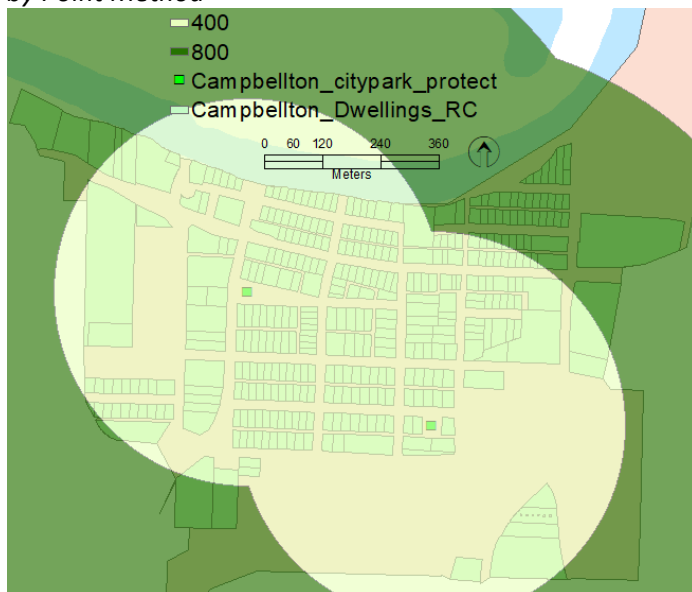
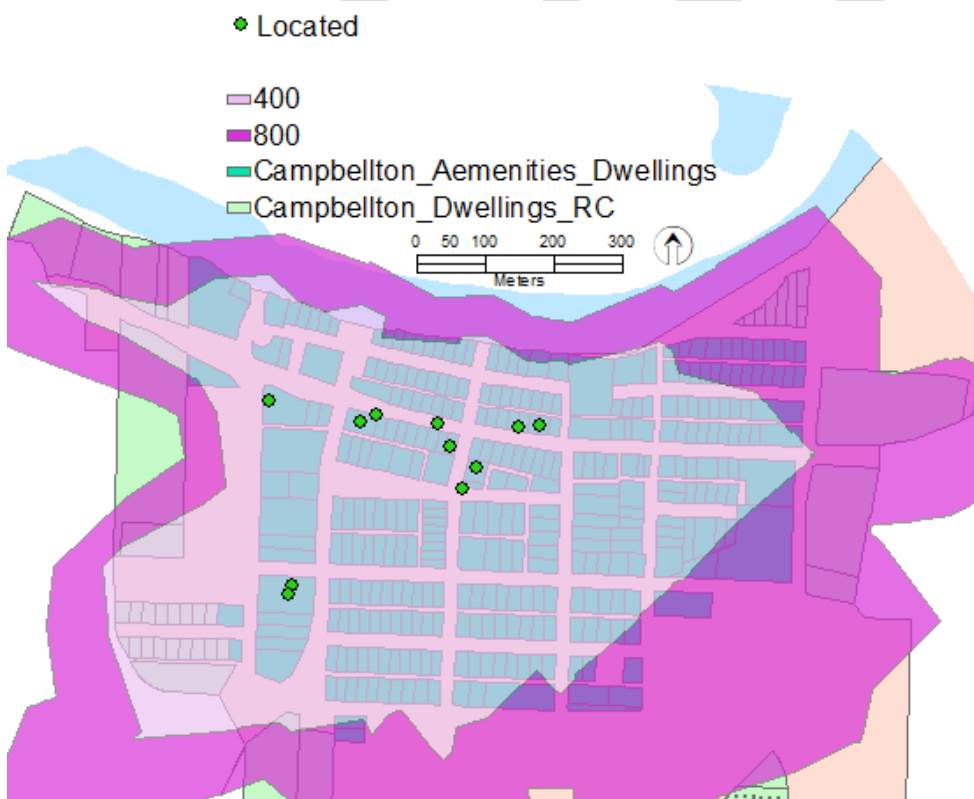


Figure 16: Campbellton- Walking Distance to Parks and Green Spaces- Multiple Ring Buffer and Selection by Point Method



Campbellton: Convenience stores, Cafés, and Restaurants

Figure 17: Campbellton- Walking Distance to Amenities – Topographical Network Analysis Method



Campbellton: Health Services

Figure 18: Campbellton- Walking Distances to Walk-in Clinic and Medical Centre – Topographical Network Analysis Method

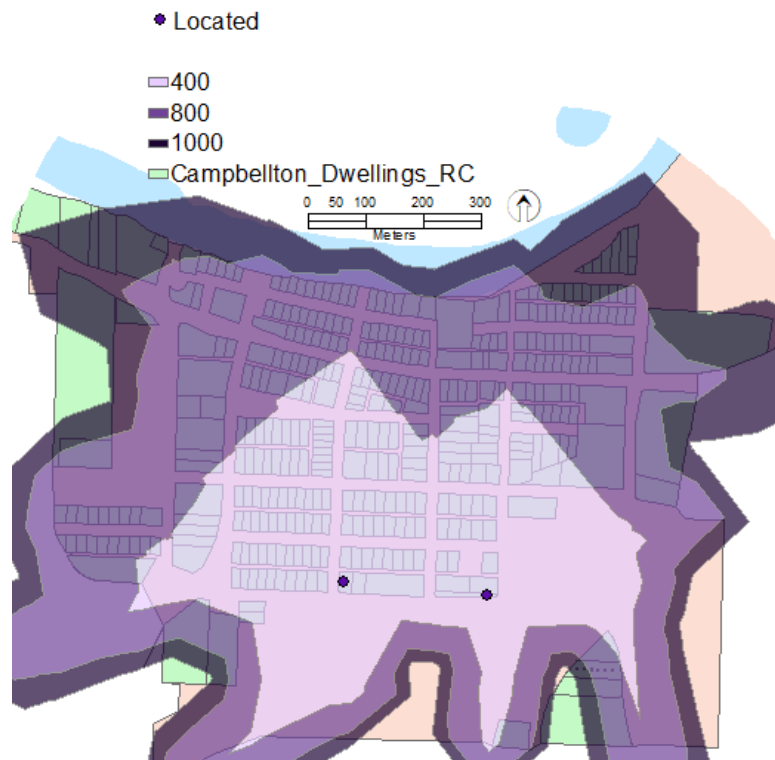
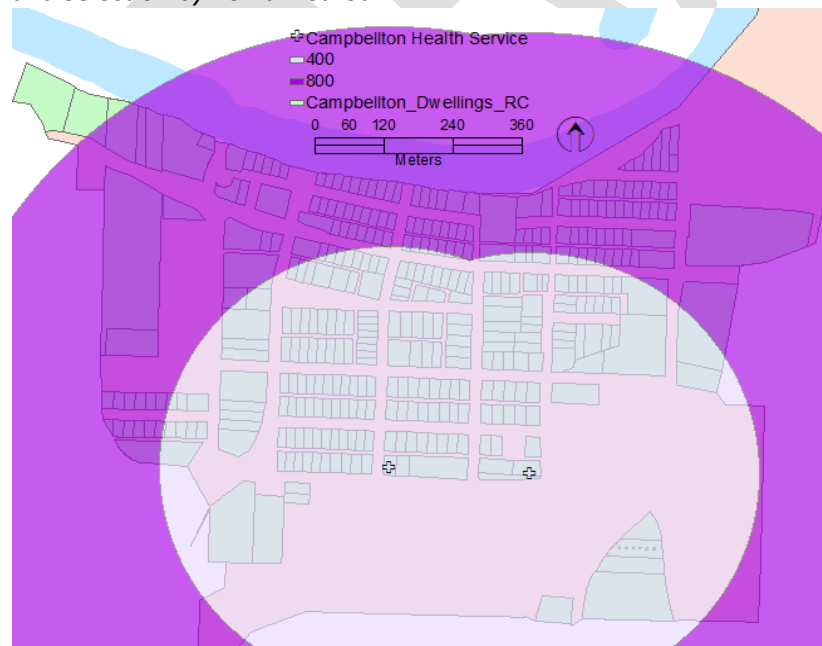


Figure 19: Campbellton- Walking Distance to Walk-ins Clinic and Medical Centre - Multiple Ring Buffer and Selection by Point Method



Campbellton: Transit stops

Figure 20: Campbellton- Walking Distances to Transit Stops – Topographical Network Analysis Method

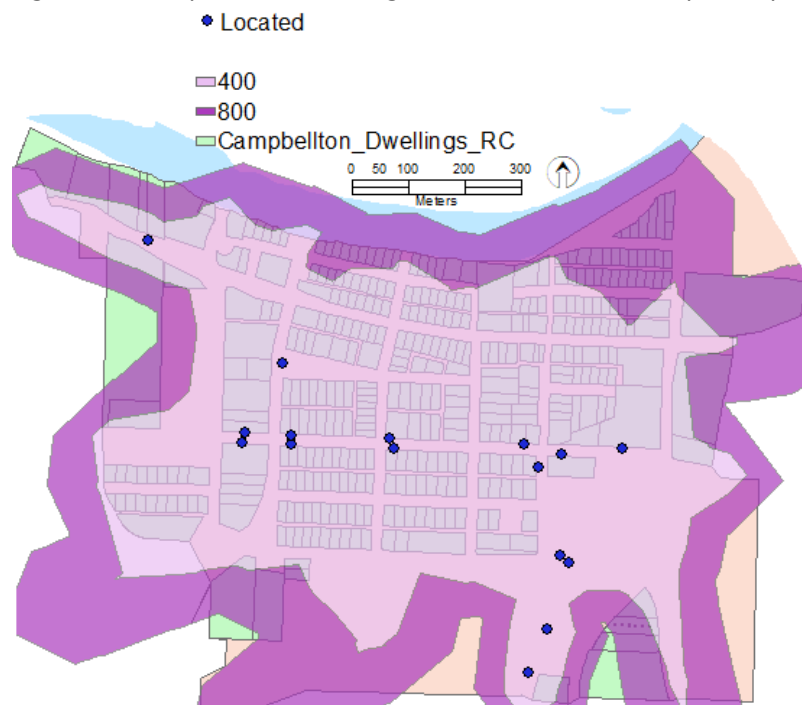
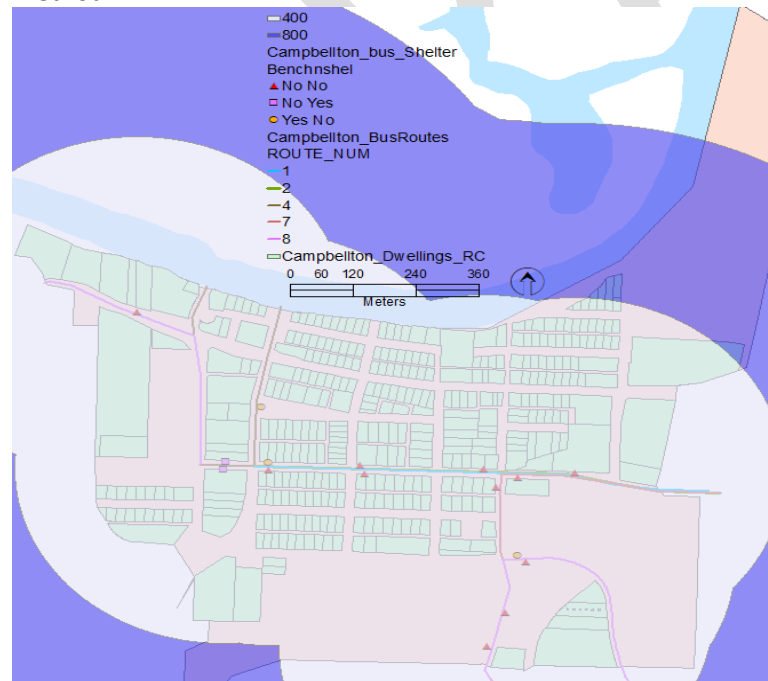


Figure 21: Campbellton- Walking Distance to Transit Stops - Multiple Ring Buffer and Selection by Point Method



Campbellton: Employment Nodes and Village Centres

Campbellton Village Centre is located in the centre of the neighbourhood and is well-connected to available community amenities.

Figure 22: Campbellton- Walking Distance from Village Centre and Employment Nodes - Topographical Network Analysis Method

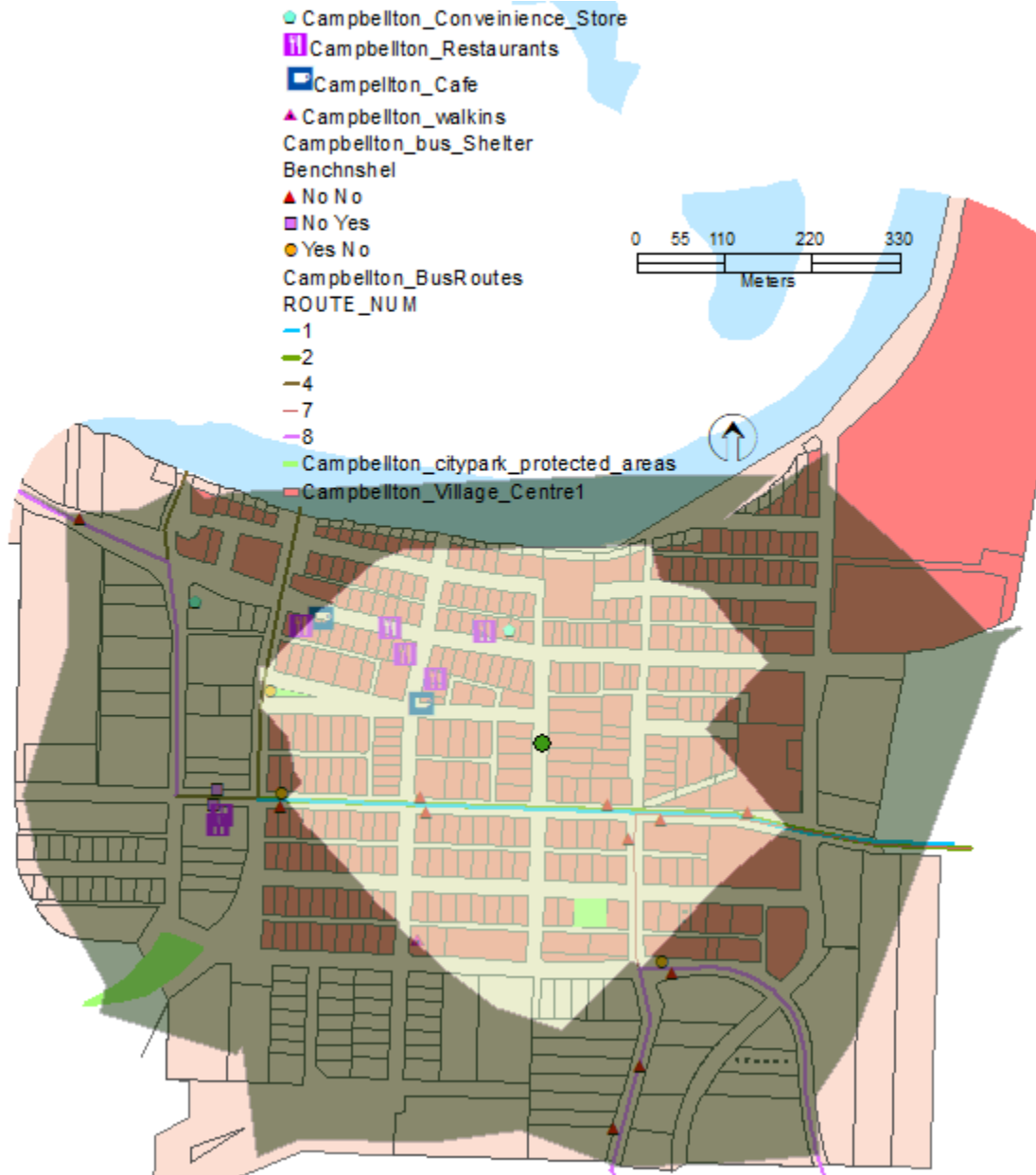
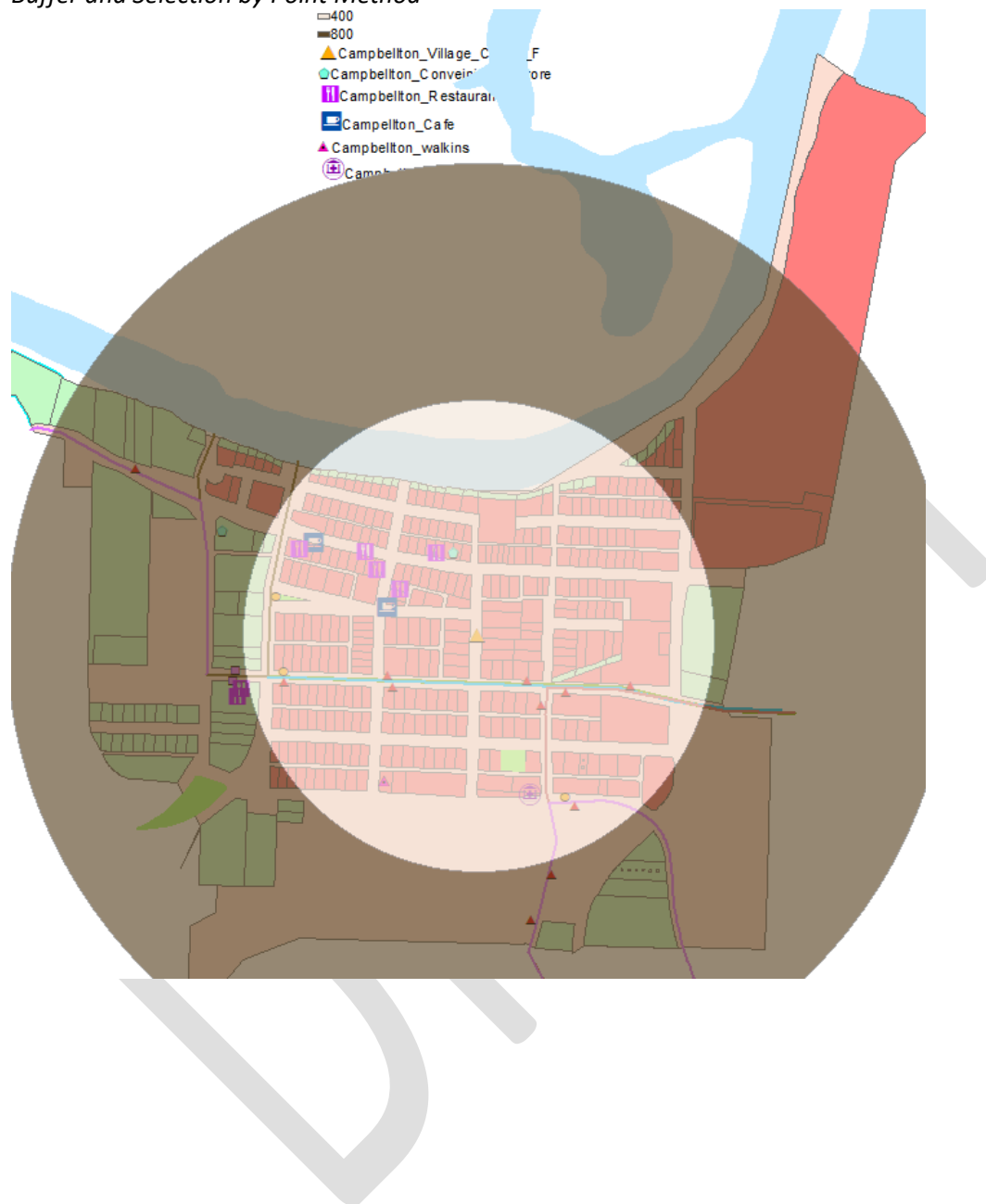


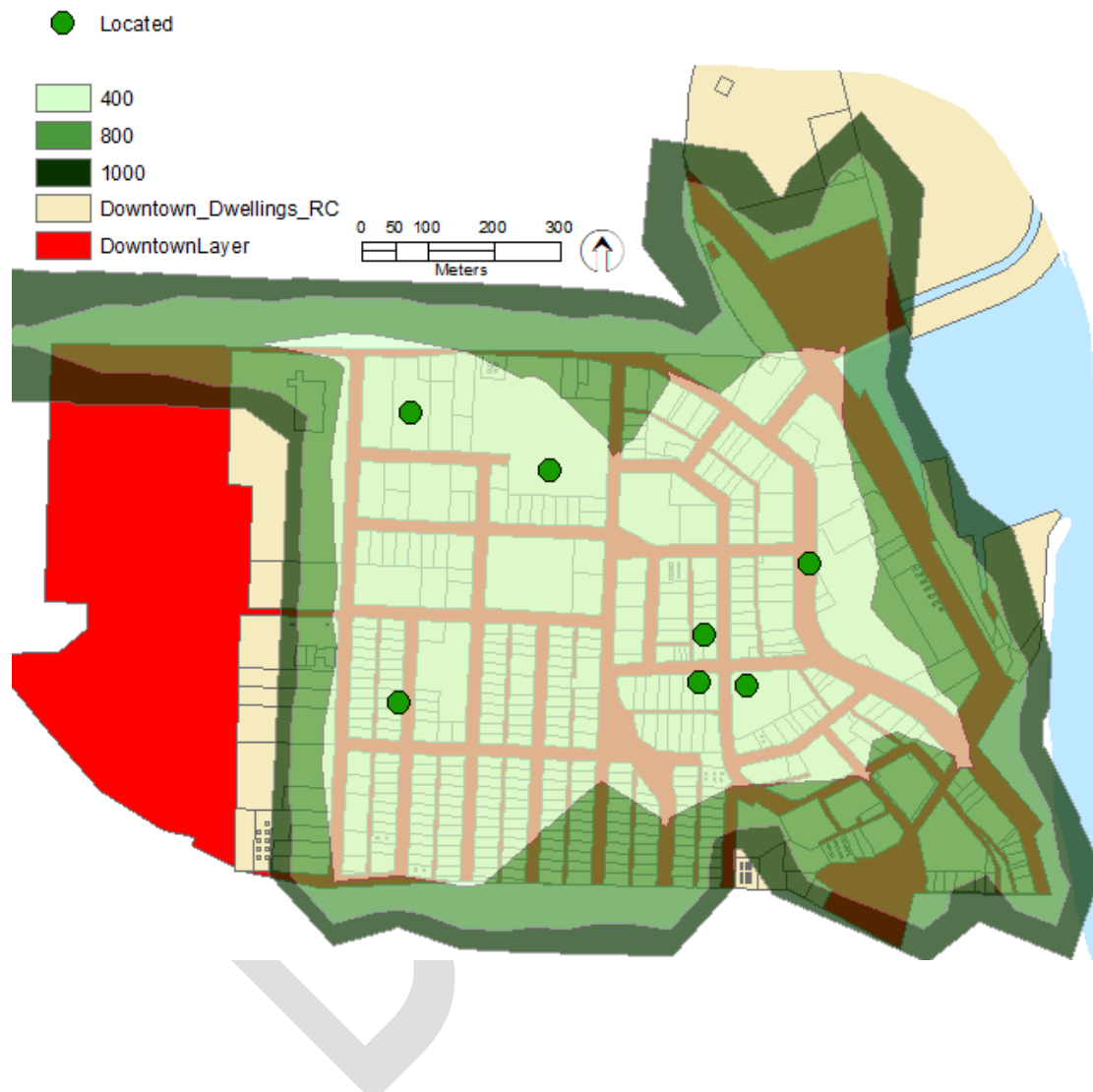
Figure 23: Campbellton- Walking Distance from Village Centre and Employment Nodes - Multiple Ring Buffer and Selection by Point Method



1.3.3.2 Downtown Neighbourhood¹

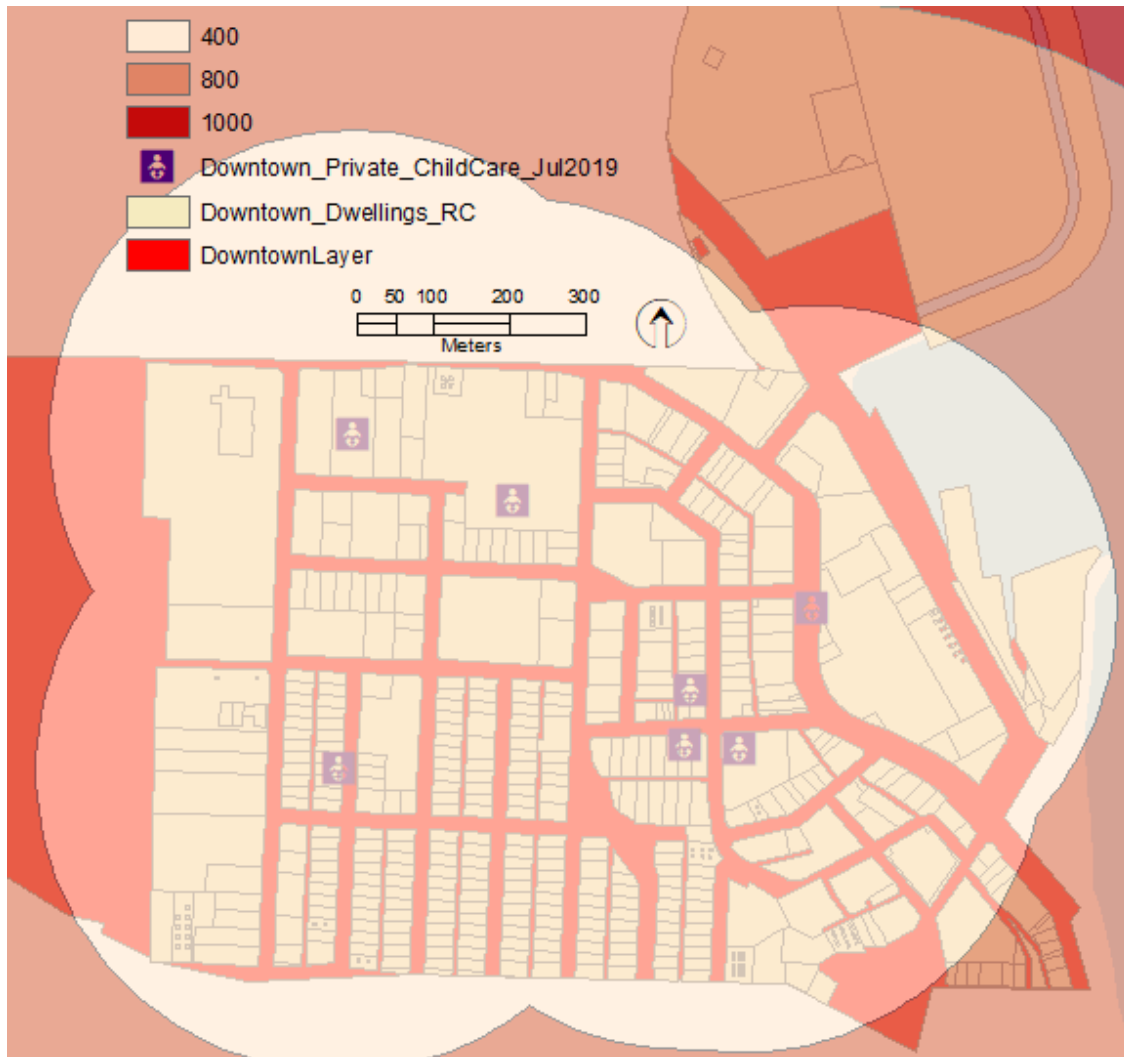
Downtown: Child Care Facilities

Figure 24: Downtown- Walking Distance to Child Care Facilities – Topographical Network Analysis Method



¹ Dwellings located north of the neighbourhood were excluded in the counts for dwellings within walking distance to a facility because the dwellings are mostly businesses located at the mall (Discovery Mall).

Figure 25: Downtown- Walking Distance to Child Care Facilities - Multiple Ring Buffer and Selection by Point Method



Downtown: Education- College

Figure 26: Downtown- Walking Distance to College - Topographical Network Analysis Method

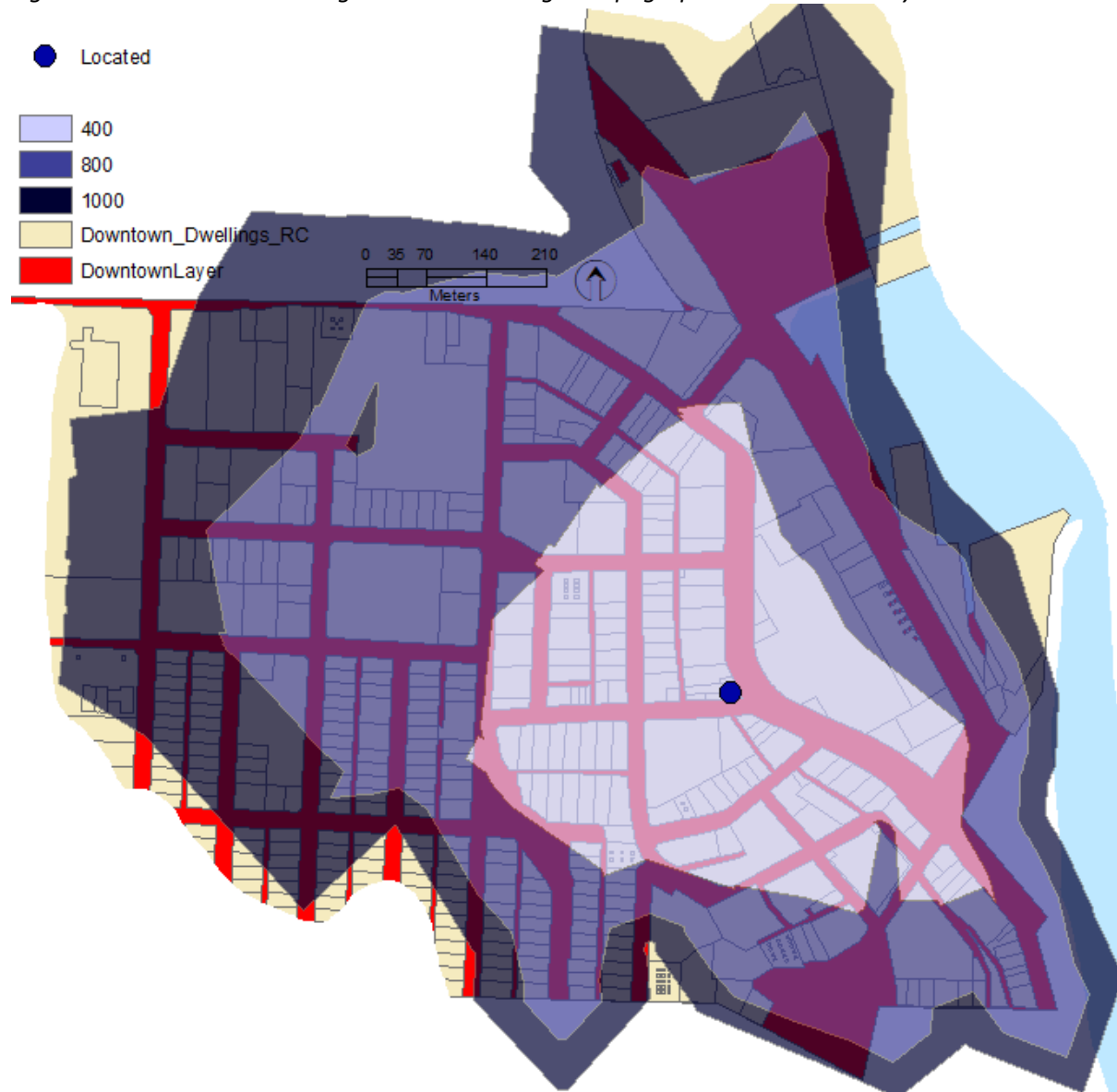
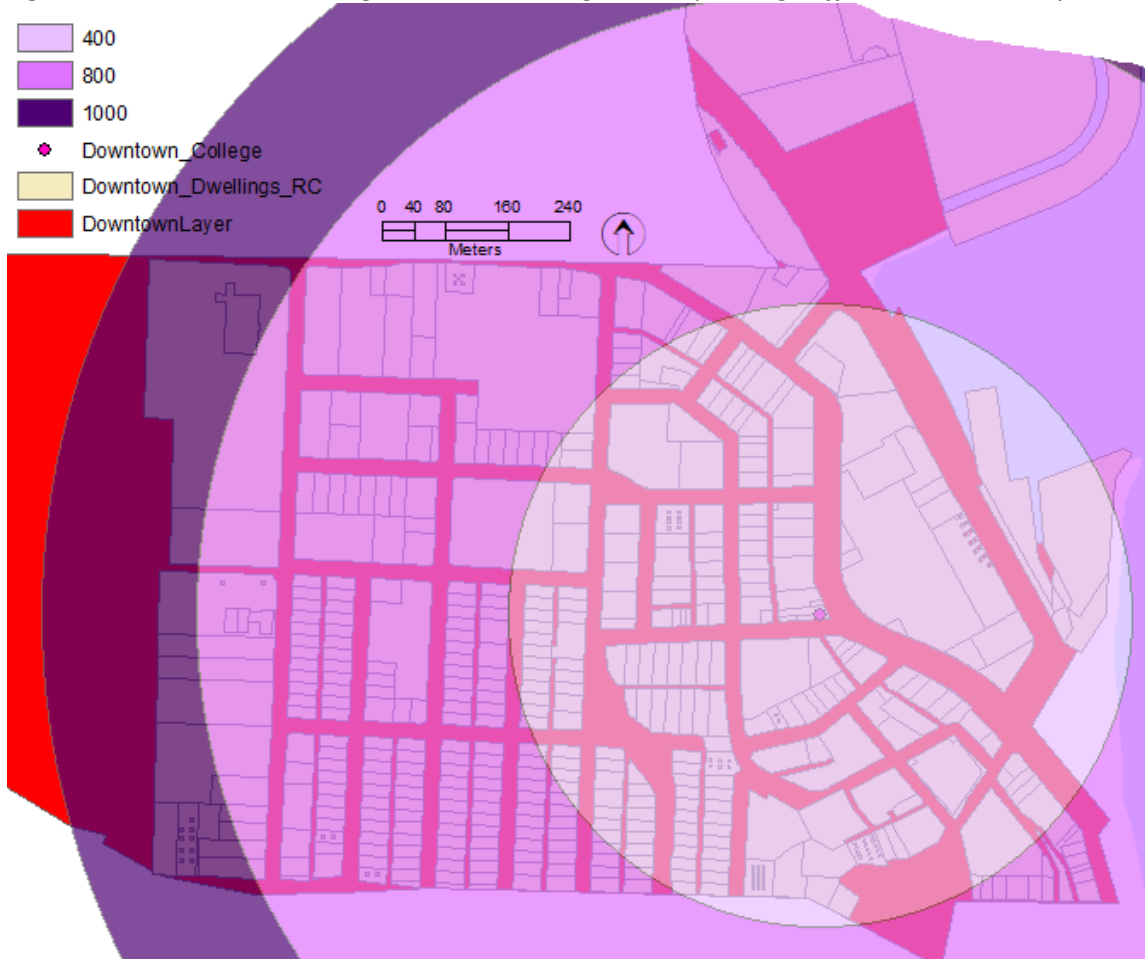


Figure 27: Downtown- Walking Distance to College - Multiple Ring Buffer and Selection by Point Method



Downtown: Parks and Green Spaces

The park west of the neighbourhood (Nunn's Creek Park) was not represented in the topographical network analysis method because of the absence of roadways for connectivity, accessibility, and walkability. However, it was represented using the multiple buffer and selection by point method which shows the park's isolation within 400 metres from residential areas, however it is within 800 metres walking distance to these areas.

Figure 28: Downtown- Walking Distance to Parks and Green Spaces – Topographical Network Analysis Method

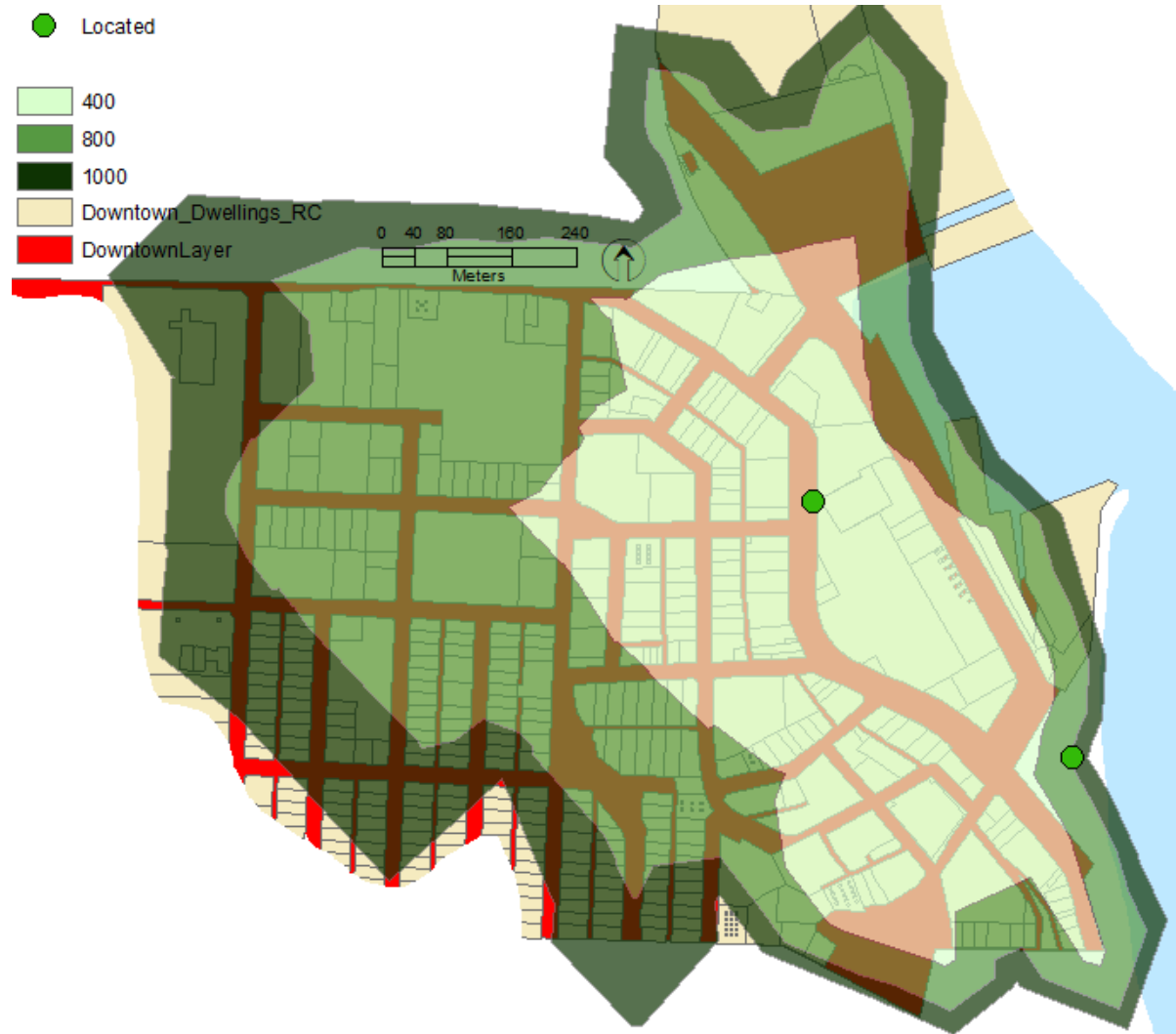


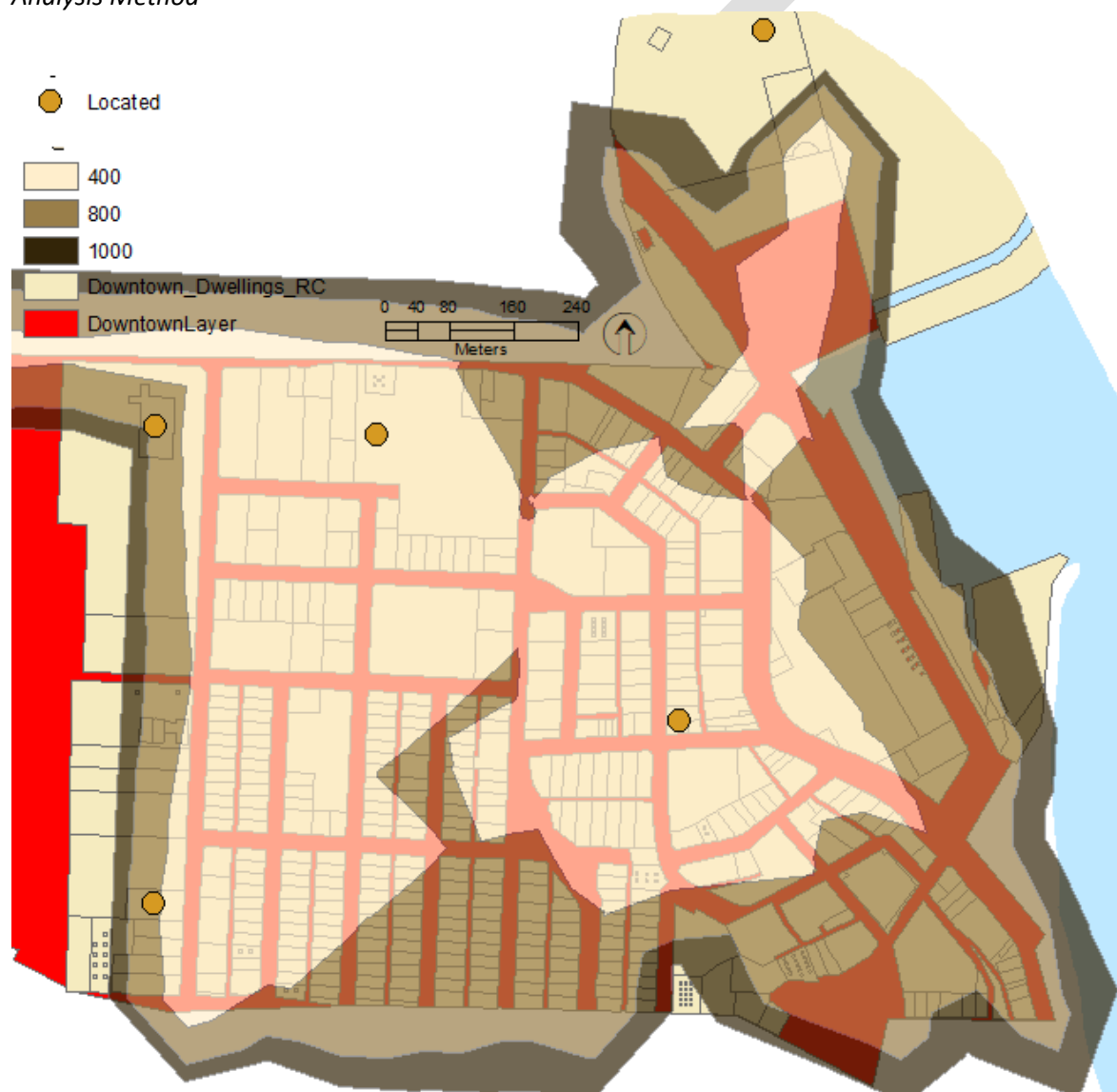
Figure 29: Downtown- Walking Distance to Park - Multiple Ring Buffer and Selection by Point Method



Downtown: Grocery Stores and Convenience Stores

The grocery store (Superstore) on the north boundary of the neighbourhood was not properly represented in the topographical network analysis method because of its location and absence of roadways for connectivity and accessibility, however part of the Discovery Mall shopping area was represented.

Figure 30: Downtown- Walking Distance to Grocery and Convenience Stores – Topographical Network Analysis Method



Downtown: Café and Restaurants

Cafés and restaurants located near the north boundary of the neighbourhood were not properly represented in the topographical network analysis method because of the absence of roadways for connectivity and accessibility, however part of the Discovery Mall shopping area was represented.

Figure 31: Downtown- Walking Distance to Cafés and Restaurants – Topographical Network Analysis Method

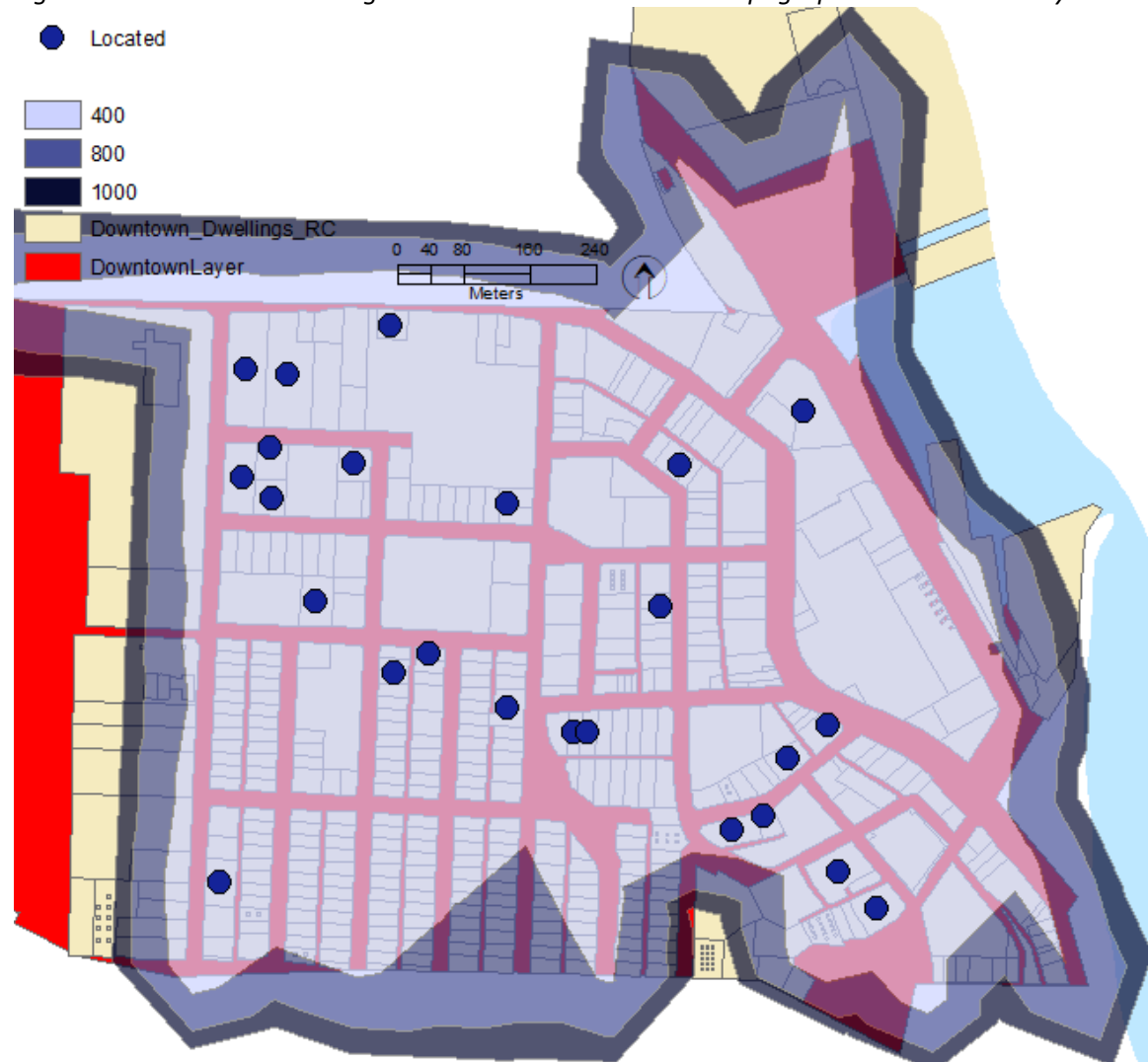


Downtown: Social Services and Health Services

Figure 32: Downtown- Walking Distance to Health Services – Topographical Network Analysis Method



Figure 33: Downtown- Walking Distance to Social Services – Topographical Network Analysis Method



Downtown: Transit Stops

Figure 34: Downtown- Walking Distance to Transit Stops - Topographical Network Analysis Method

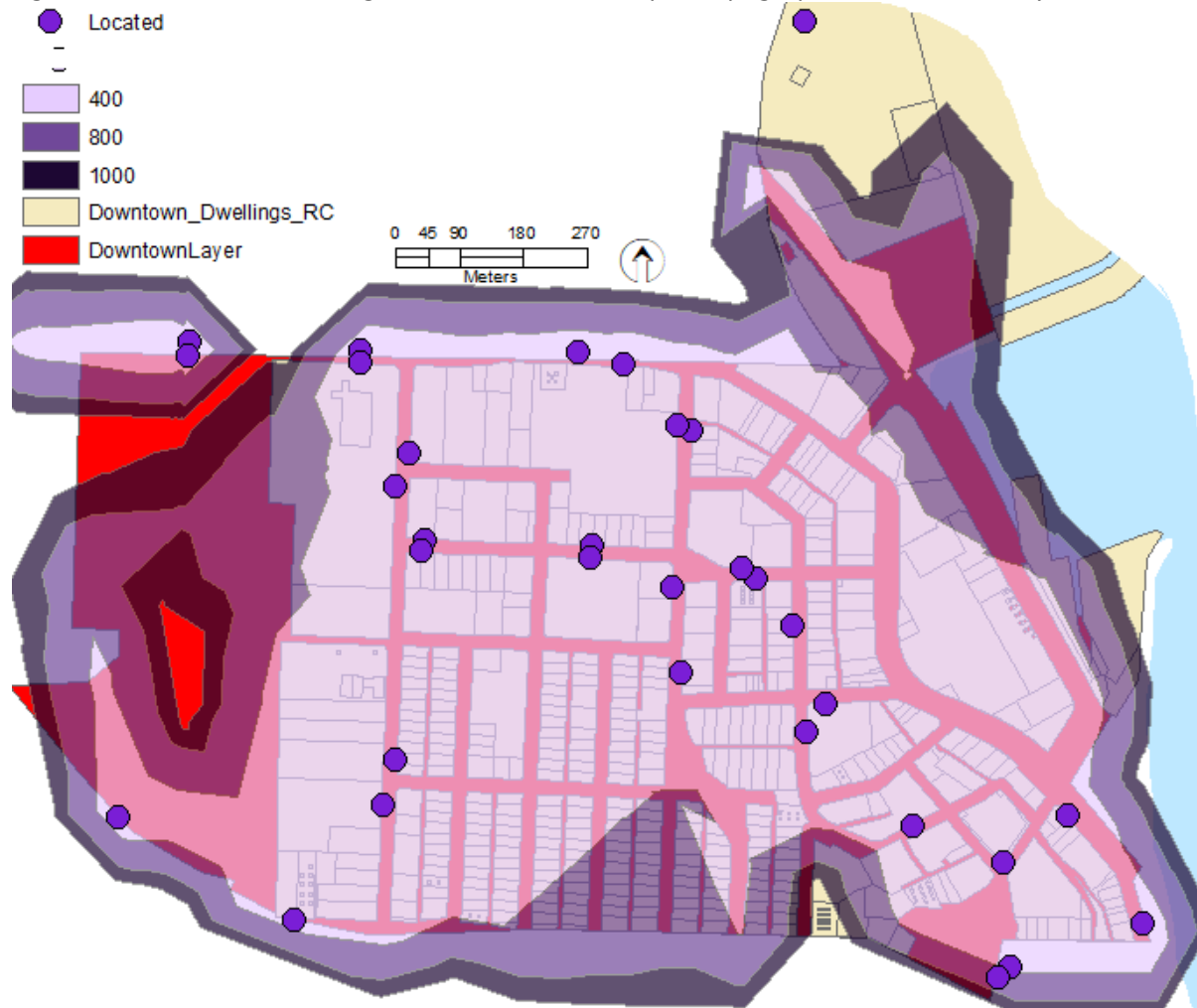
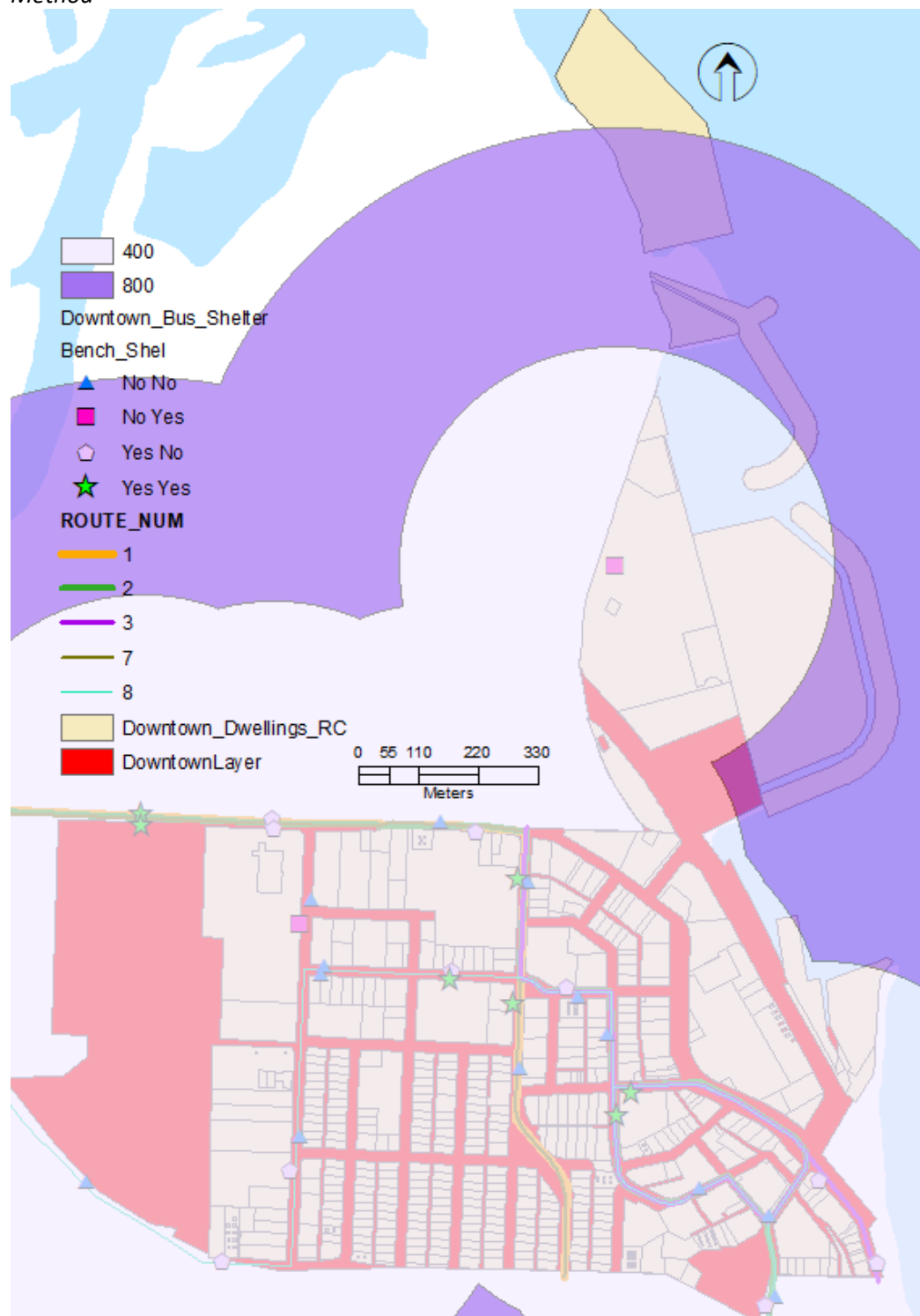


Figure 35: Downtown- Walking Distance to Transit Stops - Multiple Ring Buffer and Selection by Point Method



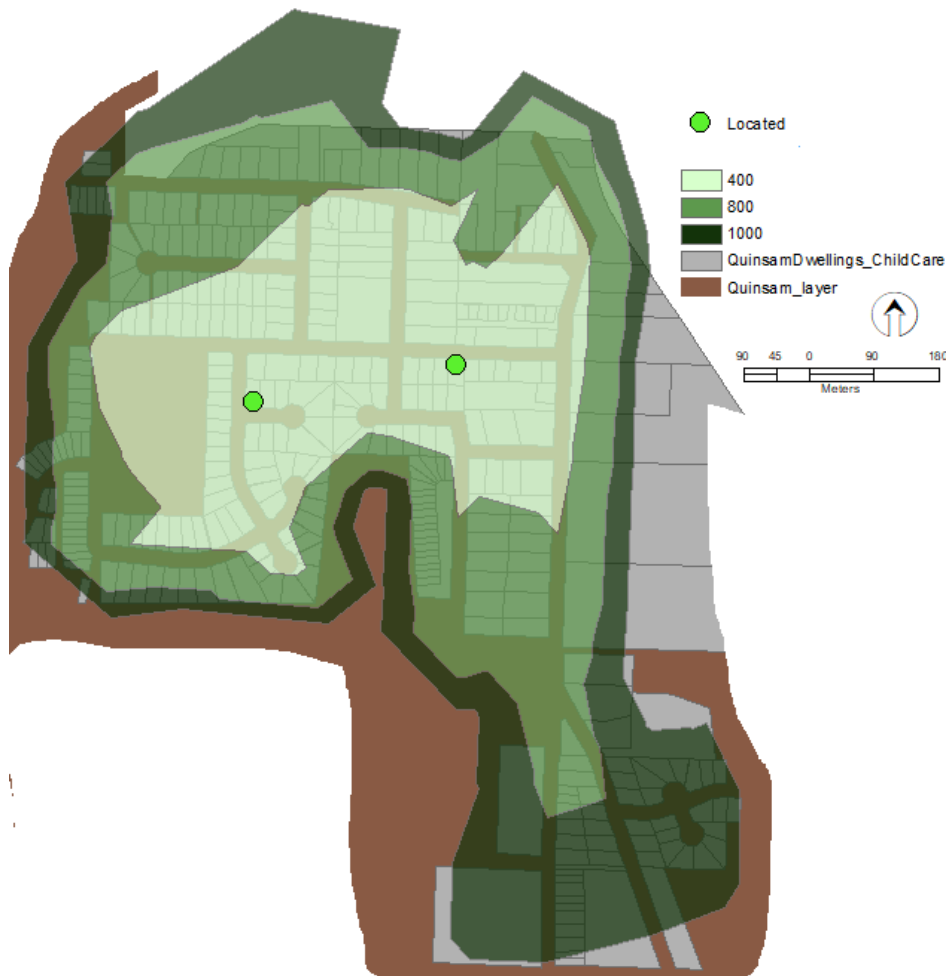
1.3.3.3 Quinsam Heights Neighbourhood²

Quinsam Heights has limited road networks and therefore service areas created using the network analysis will not include areas without a road network for accessibility of facilities.

Quinsam Heights: Child Care Facilities

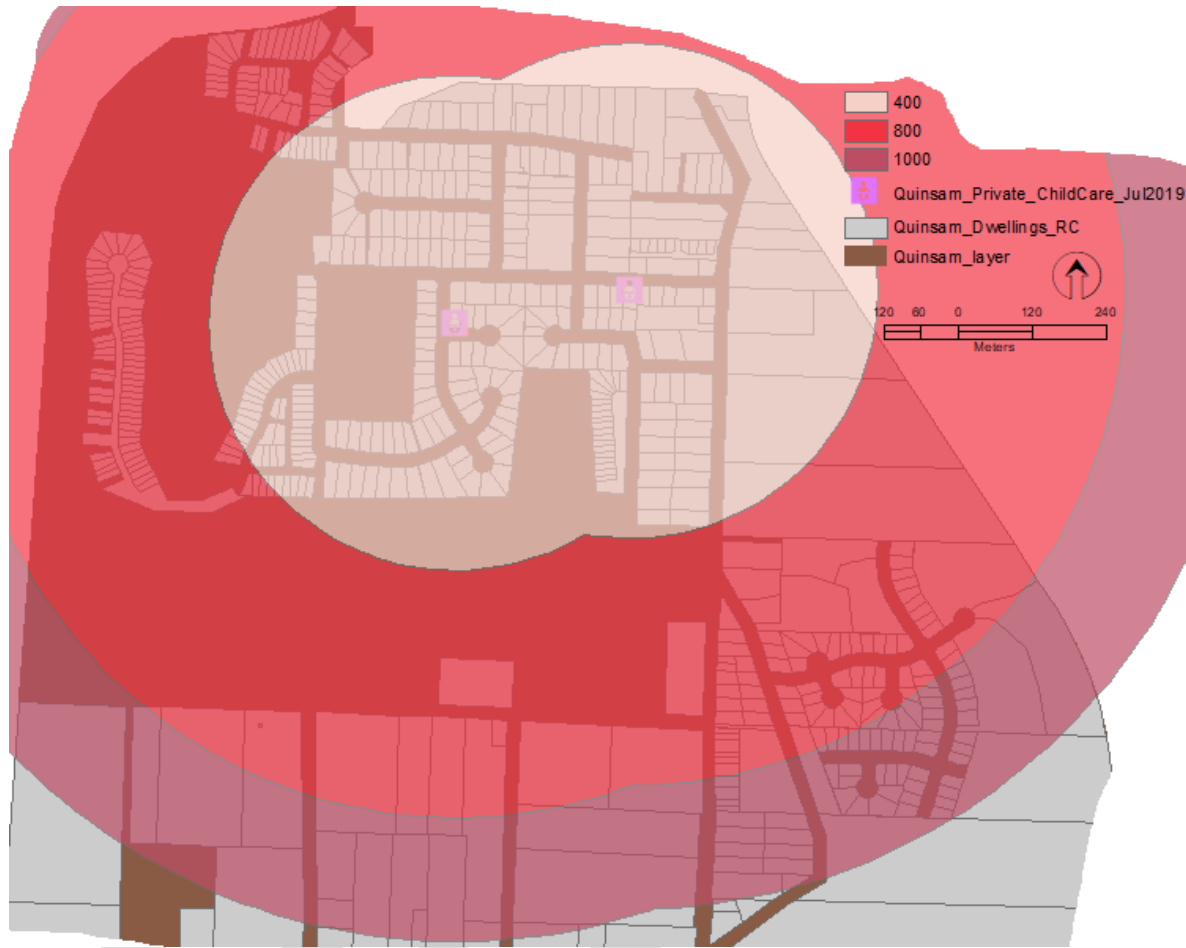
There are 350 dwellings located 400, 800, and 1000 metres of the two child care facilities in Quinsam Heights. The facilities are located near the northern boundary of the neighbourhood, providing limited accessibility and walkability (350 of 1257 dwellings in the neighbourhood are walkable to child care). The facilities have a total capacity of 15, with 42.86 spaces per 1000 dwellings.

Figure 36: Quinsam Heights- Walking Distance to Child Care Facilities – Topographical Network Analysis Method



² Areas in close proximity to the facilities within 400-1000m may not be represented by the network analyst but may be noted by other measurement or analysis.

Figure 37: Quinsam Heights- Walking Distance to Child Care Facilities - Multiple Buffer and Selection by Point Method



Quinsam Heights: Parks and Green Spaces

Figure 38: Quinsam Heights- Walking Distance to Parks and Green Spaces – Topographical Network Analysis Method

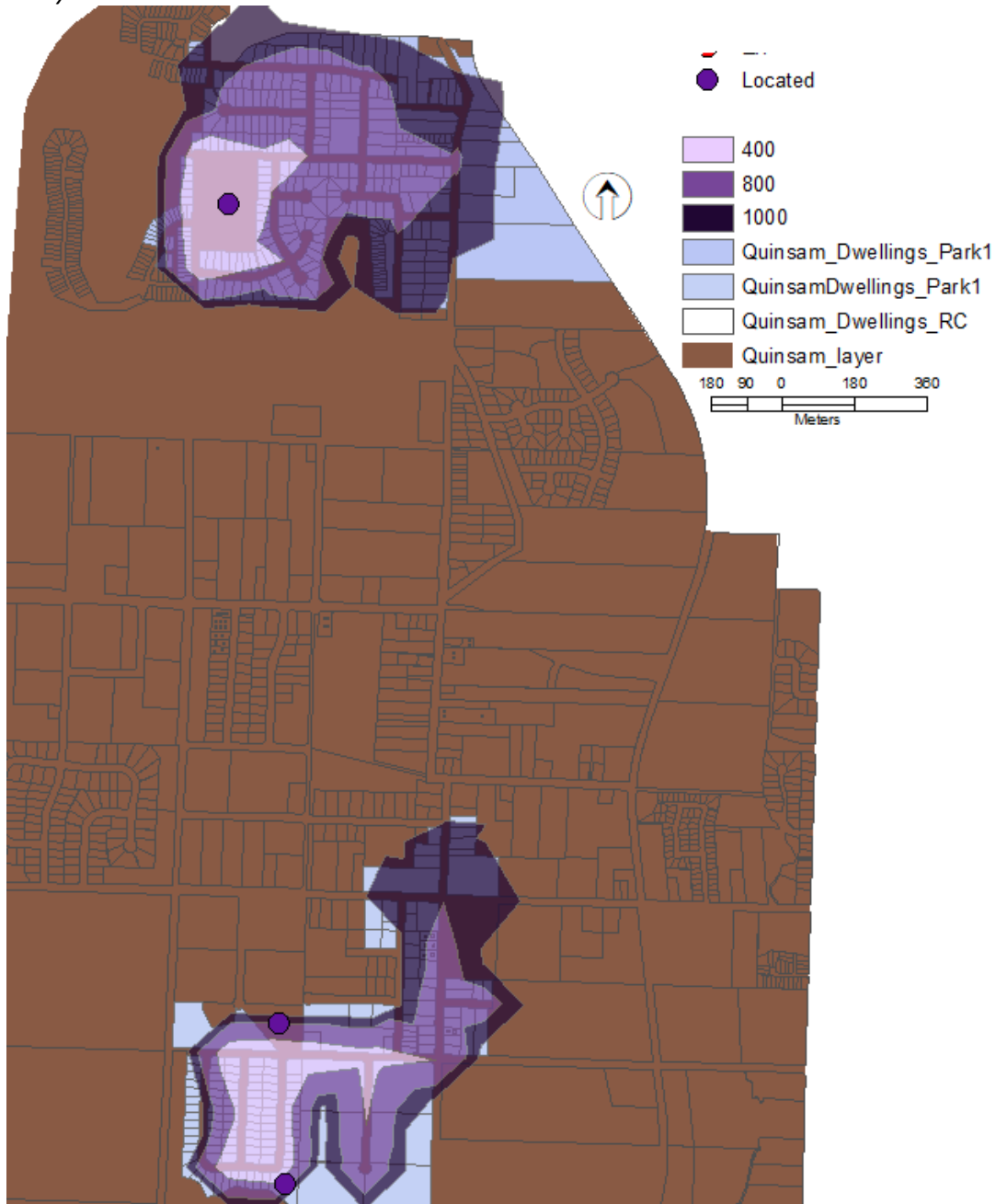


Figure 39: Quinsam Heights- Walking Distance to Parks and Green Spaces – Topographical Network Analysis Method

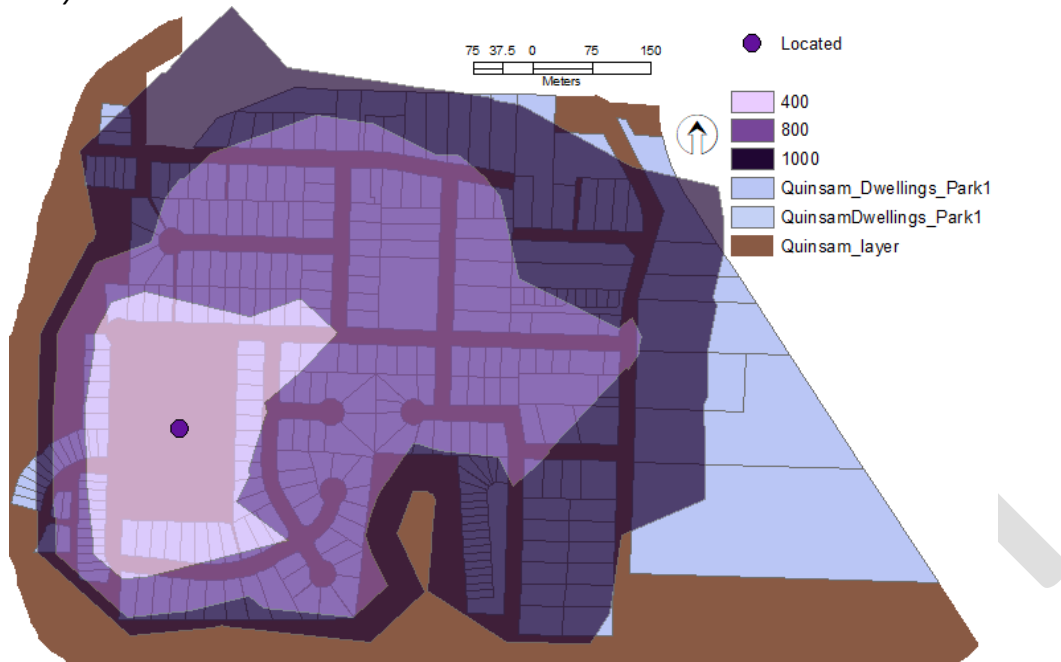
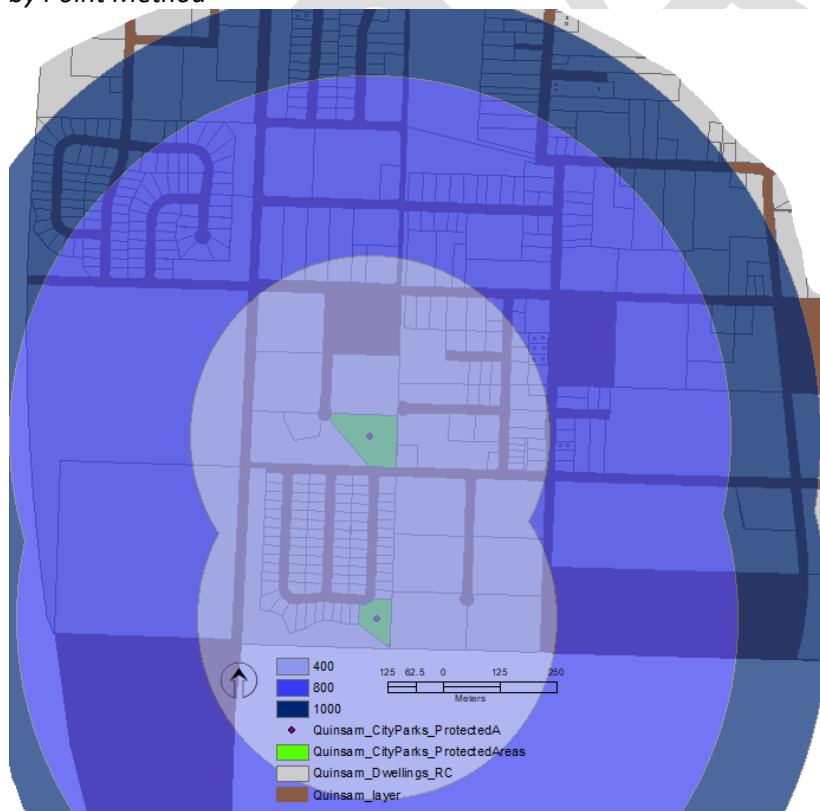
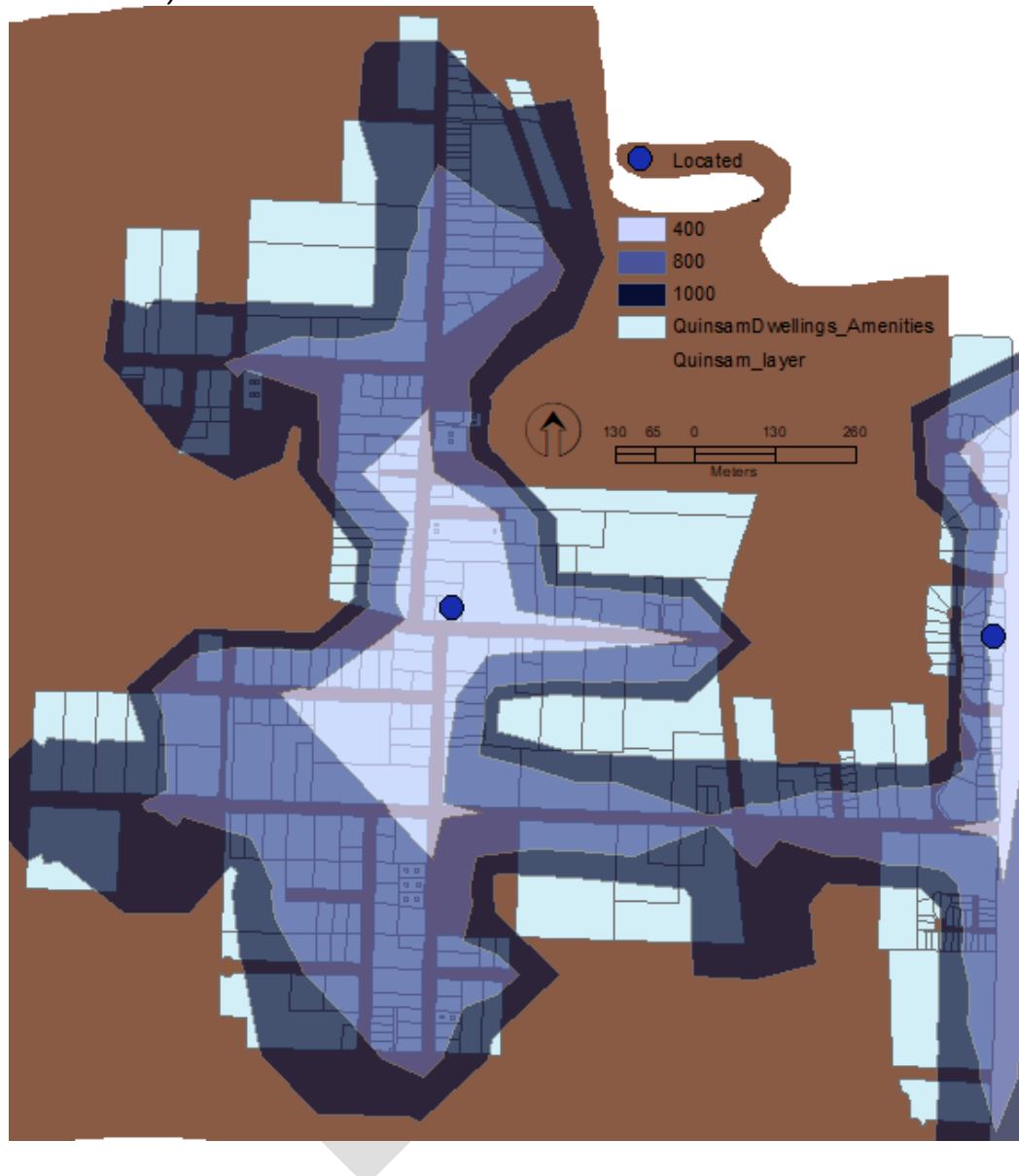


Figure 40: Quinsam Heights- Walking Distance to Parks and Green Spaces - Multiple Buffer and Selection by Point Method



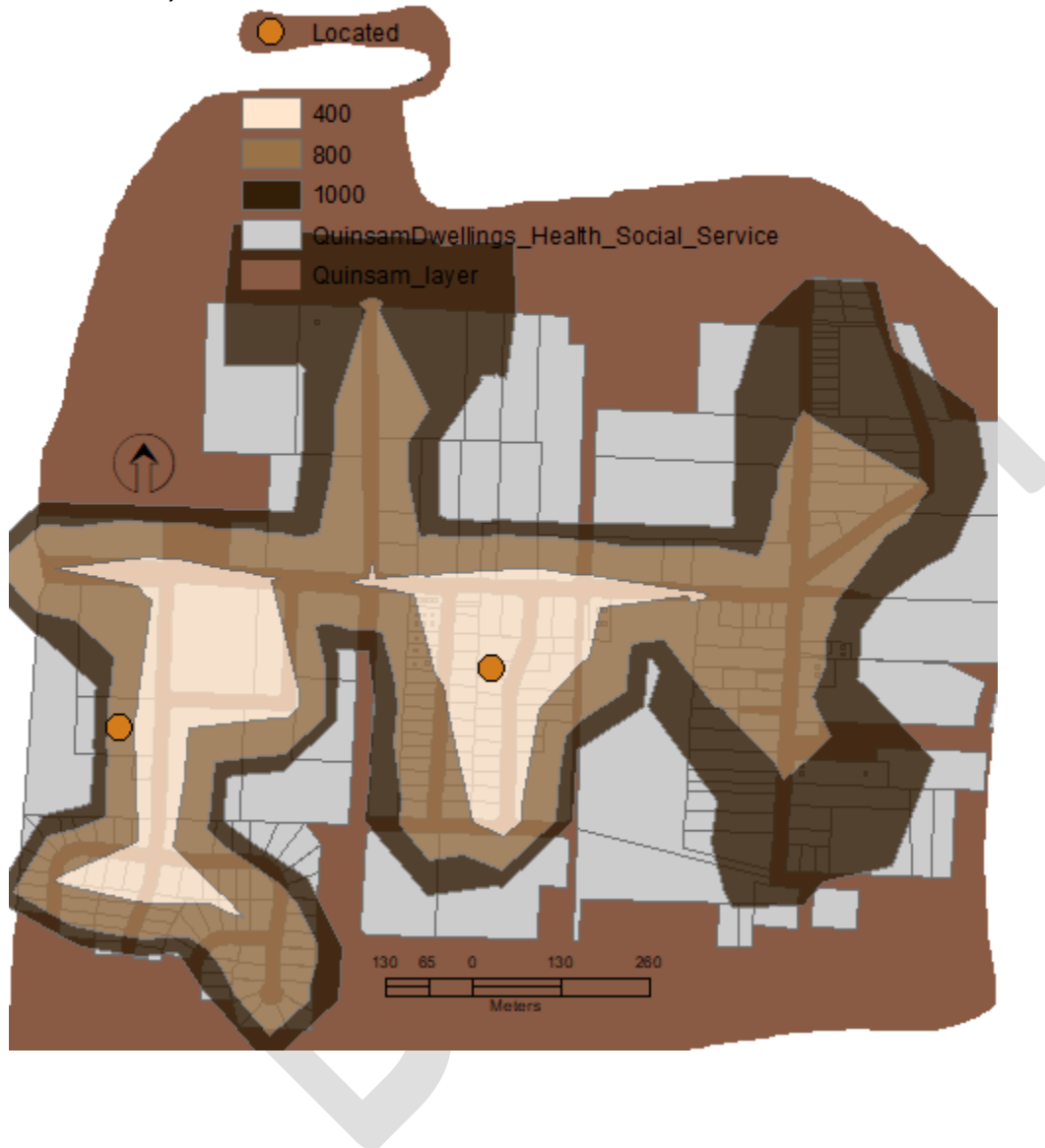
Quinsam Heights: Convenience Store and Cafés

Figure 41: Quinsam Heights- Walking Distance to Convenience Stores and Cafés – Topographical Network Analysis Method



Quinsam Heights: Social Services and Health Services

Figure 42: Quinsam Heights- Walking Distance to Social Services and Health Services - Topographical Network Analysis Method



Quinsam Heights: Transit Stops

Figure 43: Quinsam Heights- Walking Distance to Transit Stops – Topographical Network Analysis Method

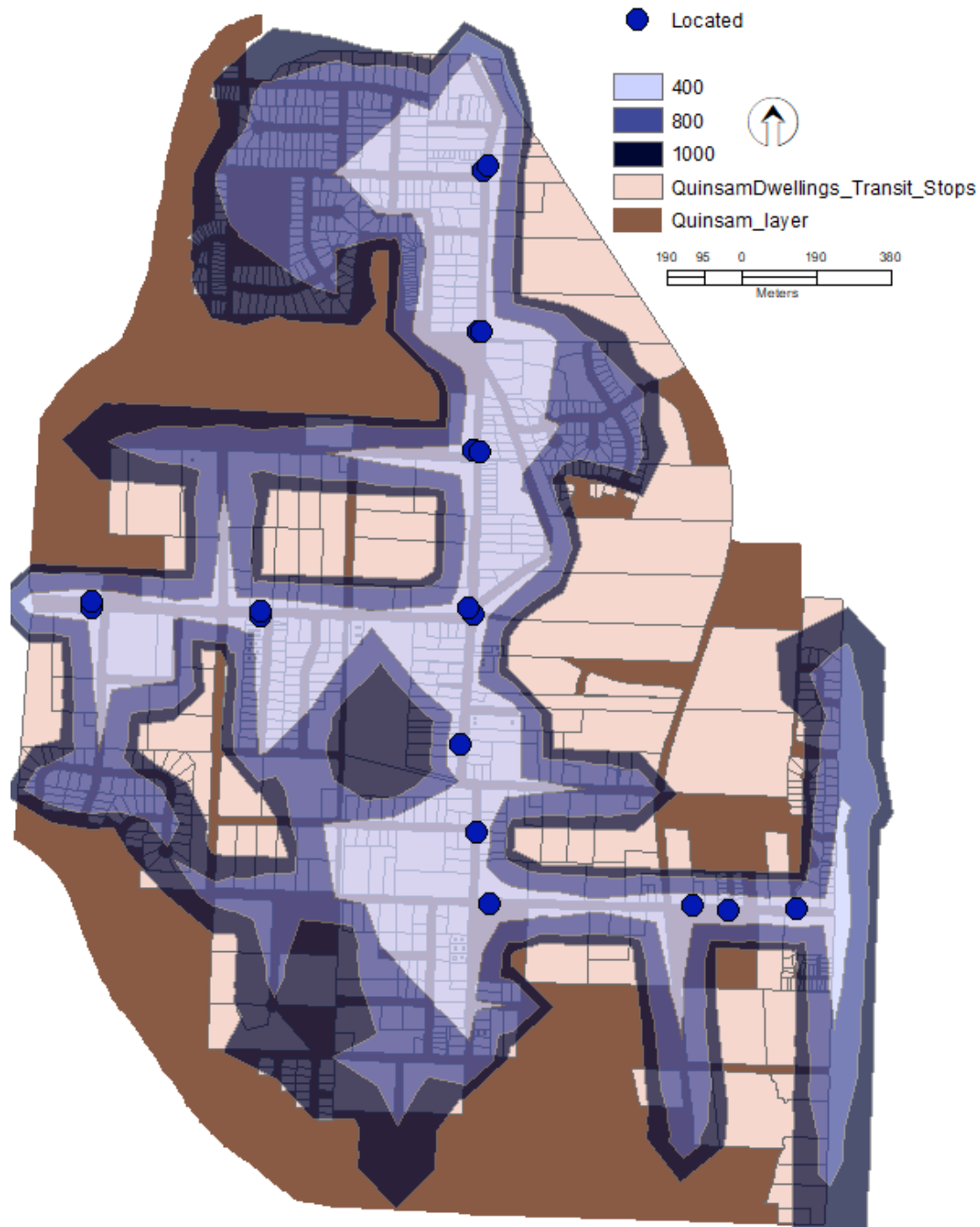


Figure 44: Quinsam Heights- Walking Distance to Transit Stops - Multiple Buffer and Selection by Point Method

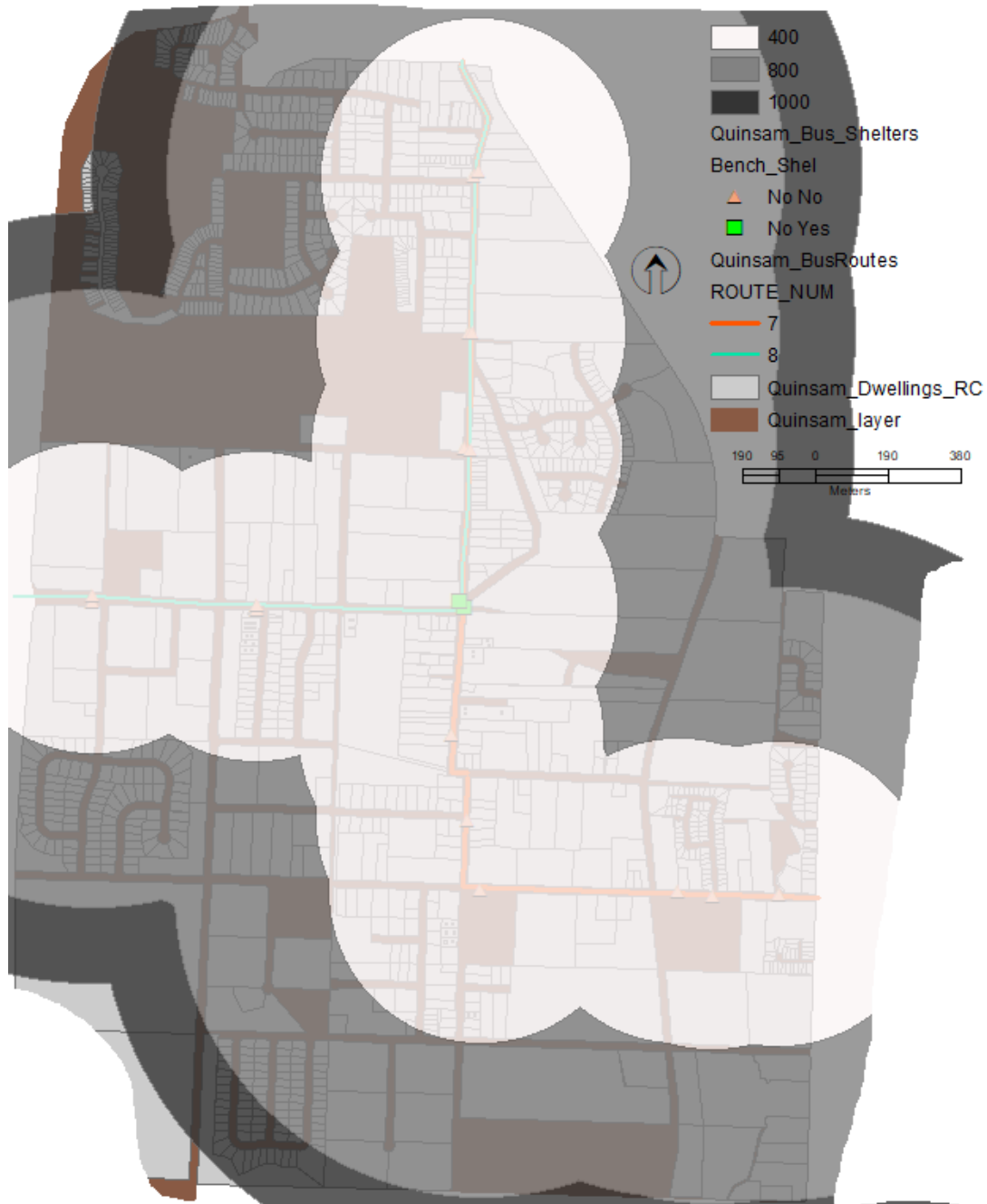


Figure 45: Quinsam Heights- Walking Distance to potential “Village Centre” locations – Topographical Network Analysis Method

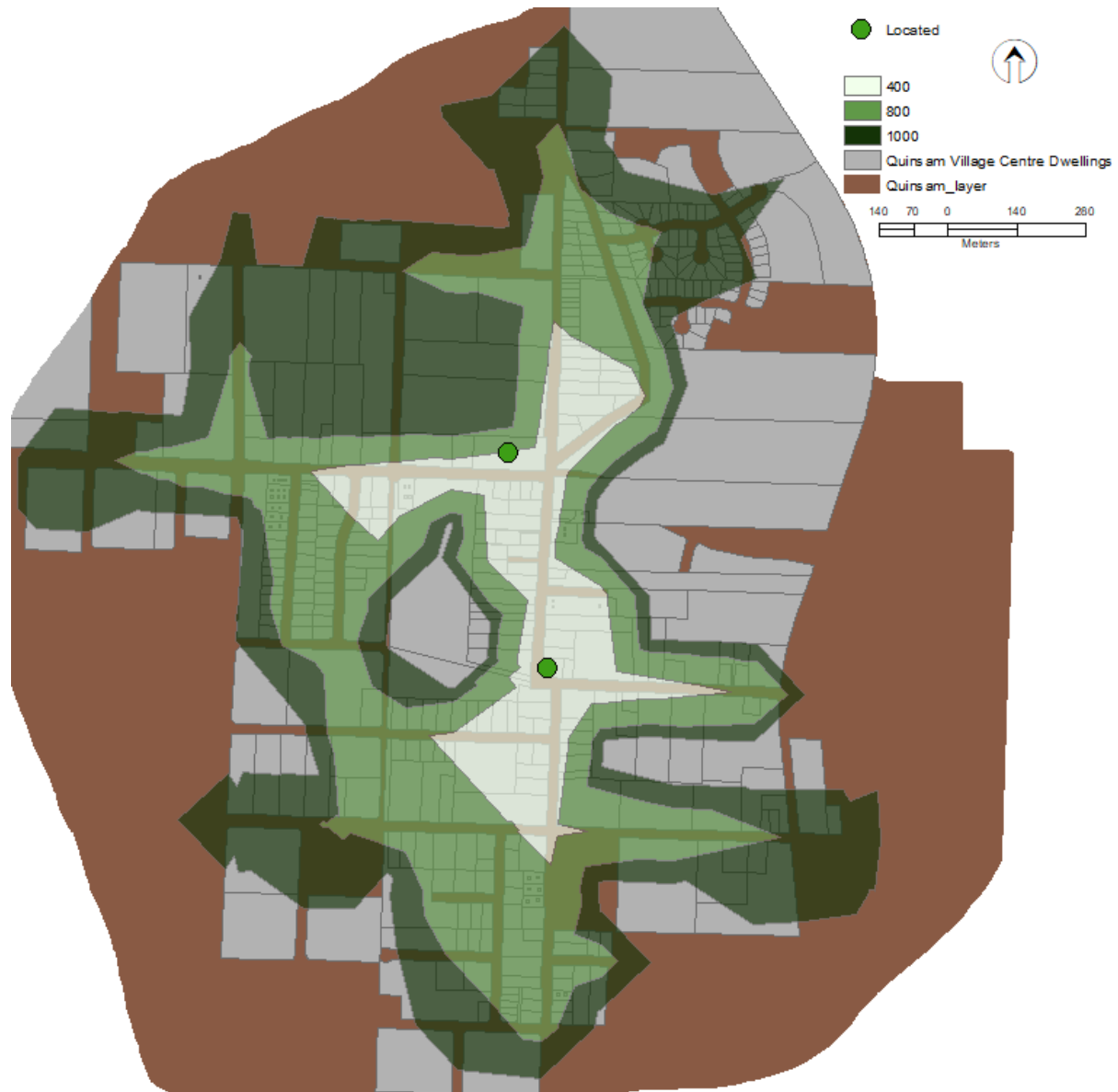


Figure 46: Quinsam Heights- Walking Distance to potential “Village Centre” locations – Multiple Buffer and Selection by Point Method



1.3.3.4 Central Campbell River Neighbourhood

Central Campbell River: Child care

Figure 47: Central- Walking Distance to Child Care Facilities – Topographical Network Analysis Method

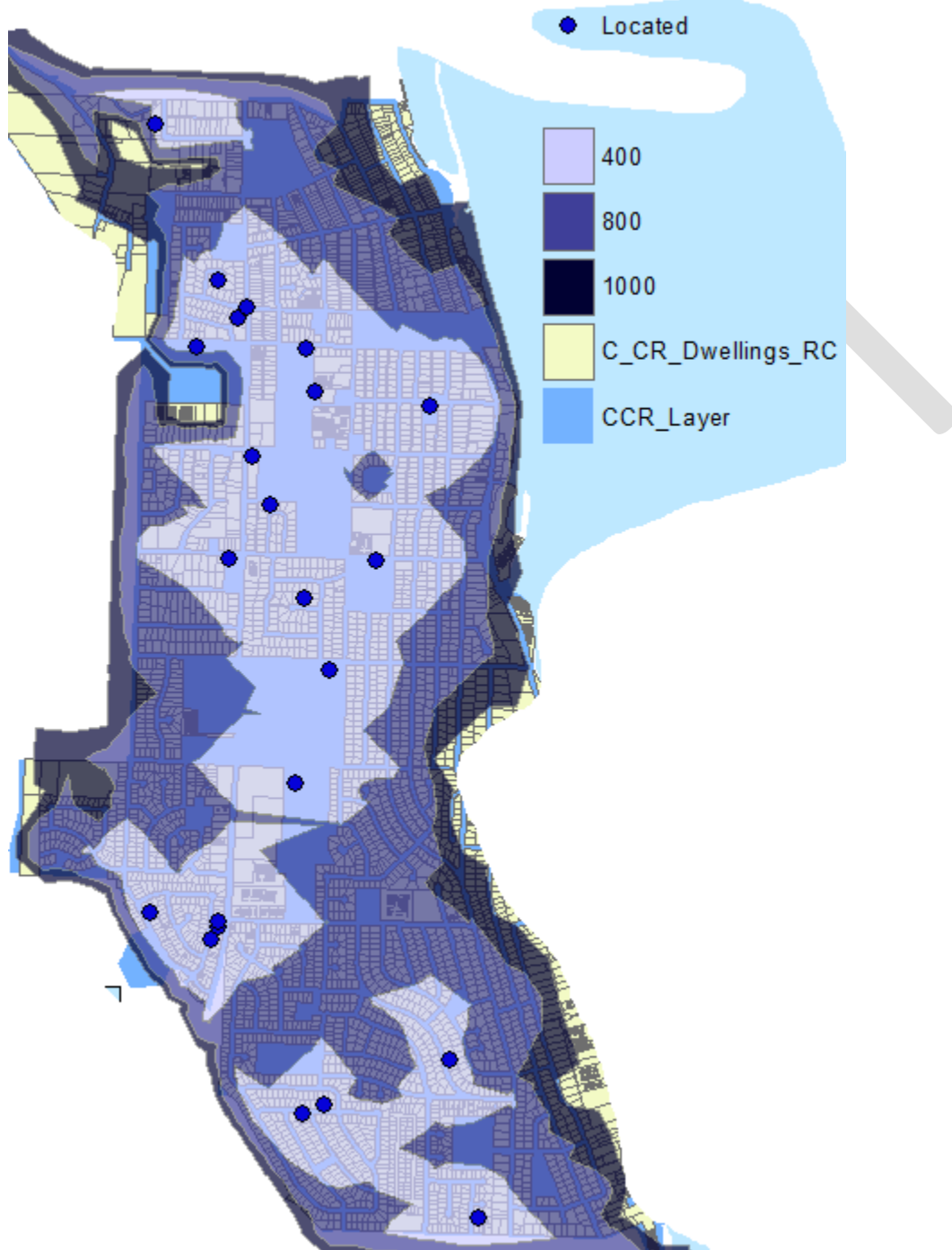
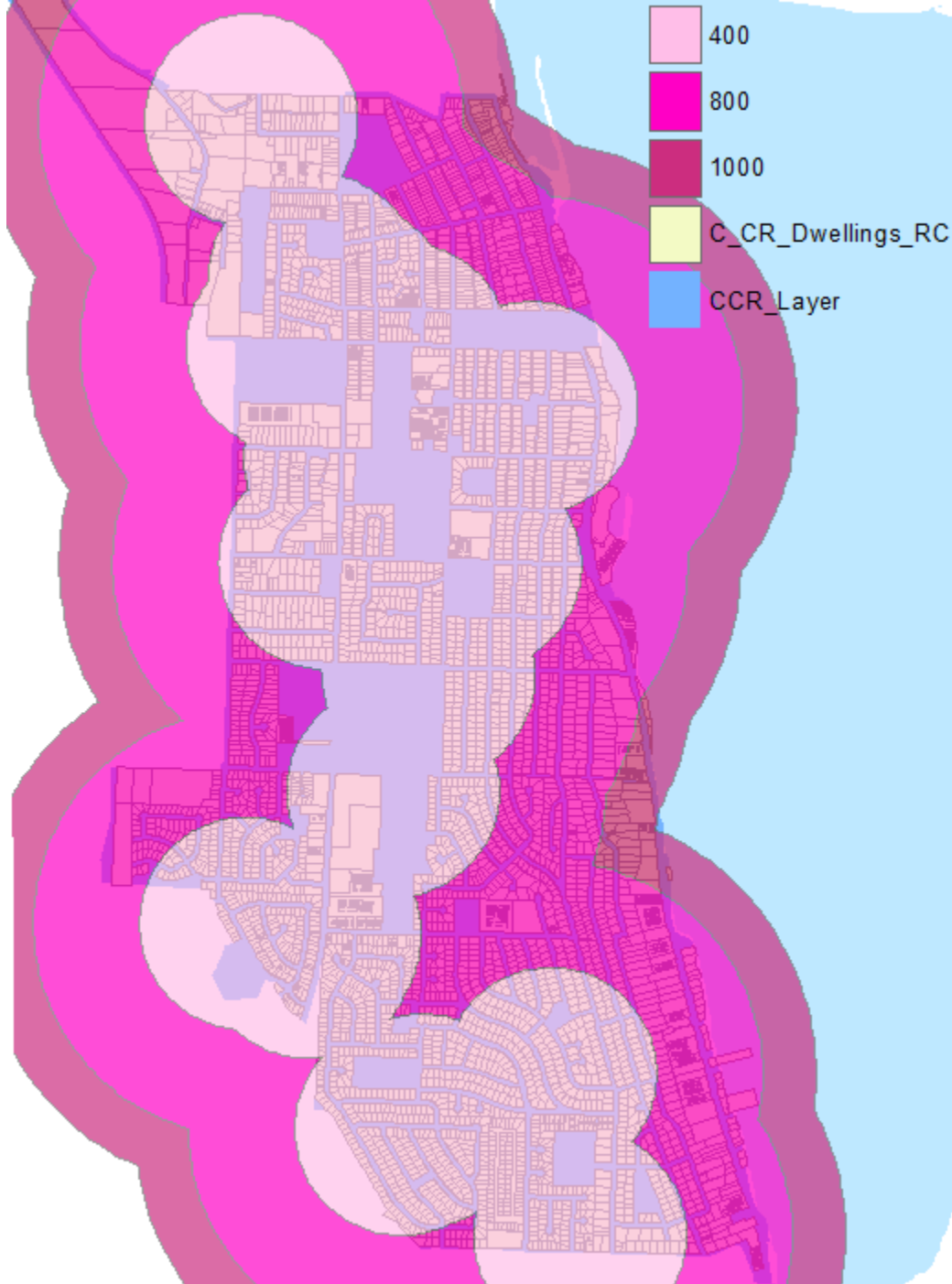


Figure 48: Central-Walking Distance to Child Care Facilities - Multiple Buffer and Selection by Point Method



Central Campbell River: Parks and Green Spaces

Note: the topographical network analysis method excluded walkability calculations for parks with more than one entrance (parks occupying two parcel lots on opposite sides of roads and streets). However, the multiple buffer and selection by point method used the centre of the point to allocate walking distance to parks, therefore accounting for multiple entrances to parks.

Figure 49: Central-Walking Distance to Parks and Green Spaces – Topographical Network Analysis Method

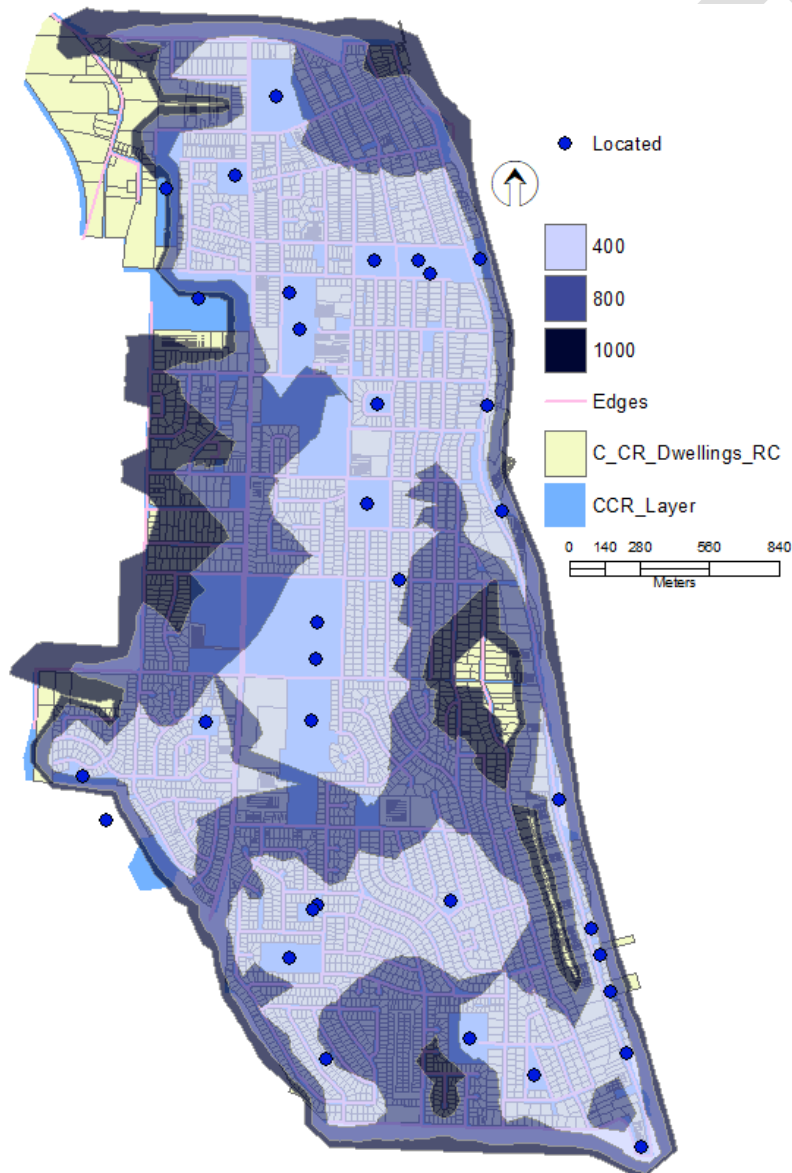
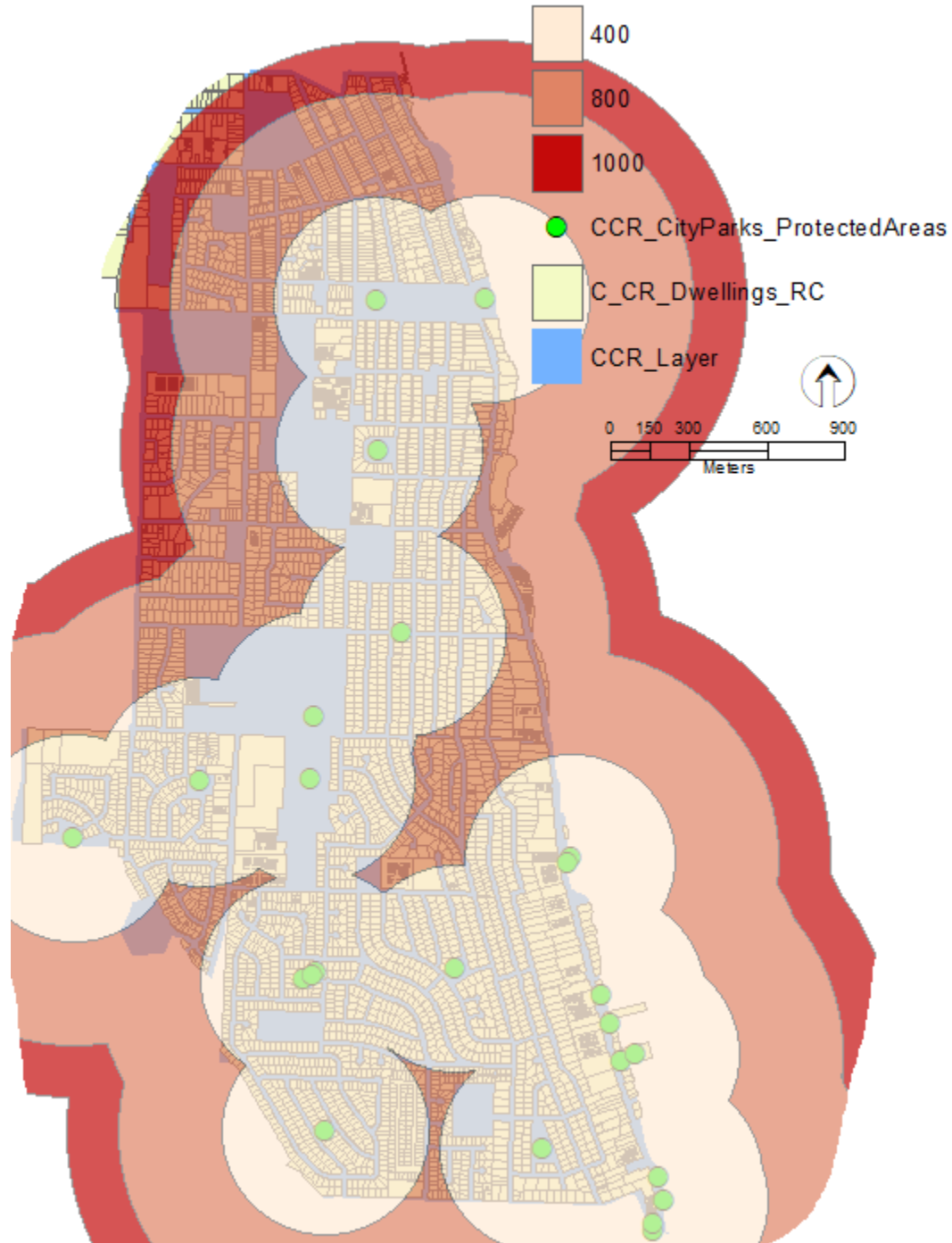
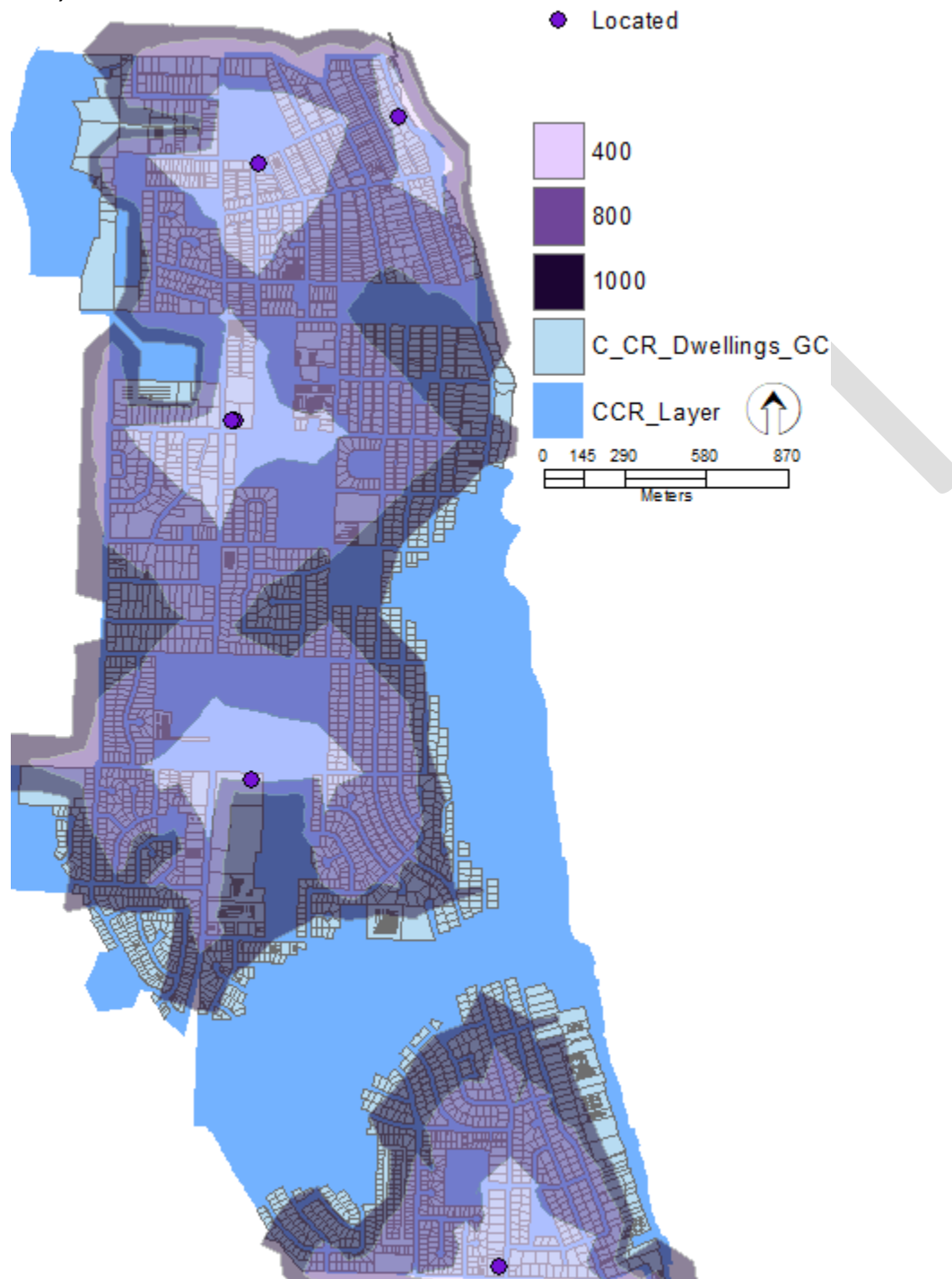


Figure 50: Central-Walking Distance to Parks and Green Spaces - Multiple Buffer and Selection by Point Method



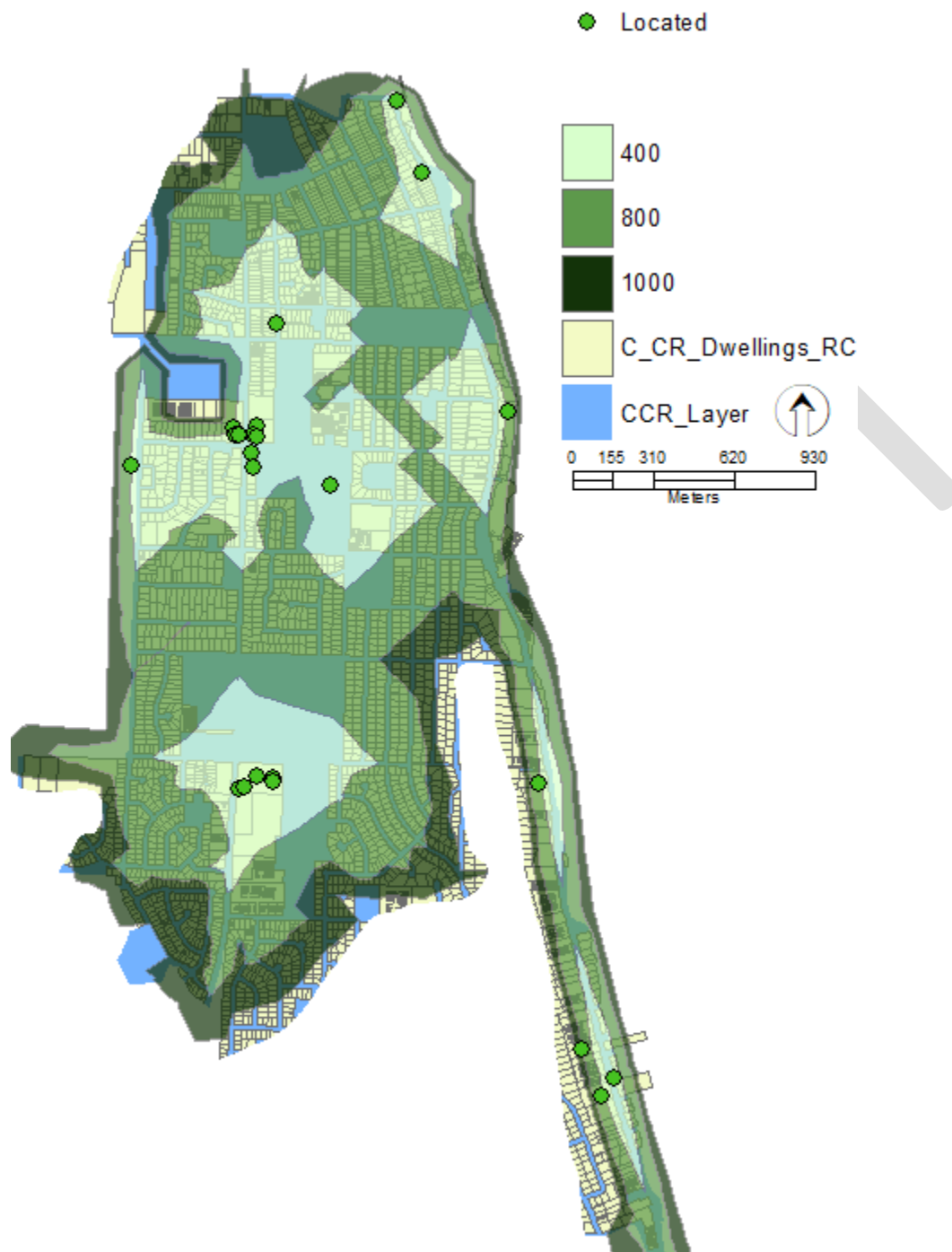
Central Campbell River: Grocery Stores and Convenience Stores

Figure 51: Central-Walking Distance to Grocery and Convenience Stores – Topographical Network Analysis Method



Central Campbell River: Cafés and Restaurants

Figure 52: Central-Walking Distance to Cafés and Restaurants – Topographical Network Analysis Method



Central Campbell River: Social Services and Health Services

Figure 53: Central- Walking Distance to Social Services – Topographical Network Analysis Method

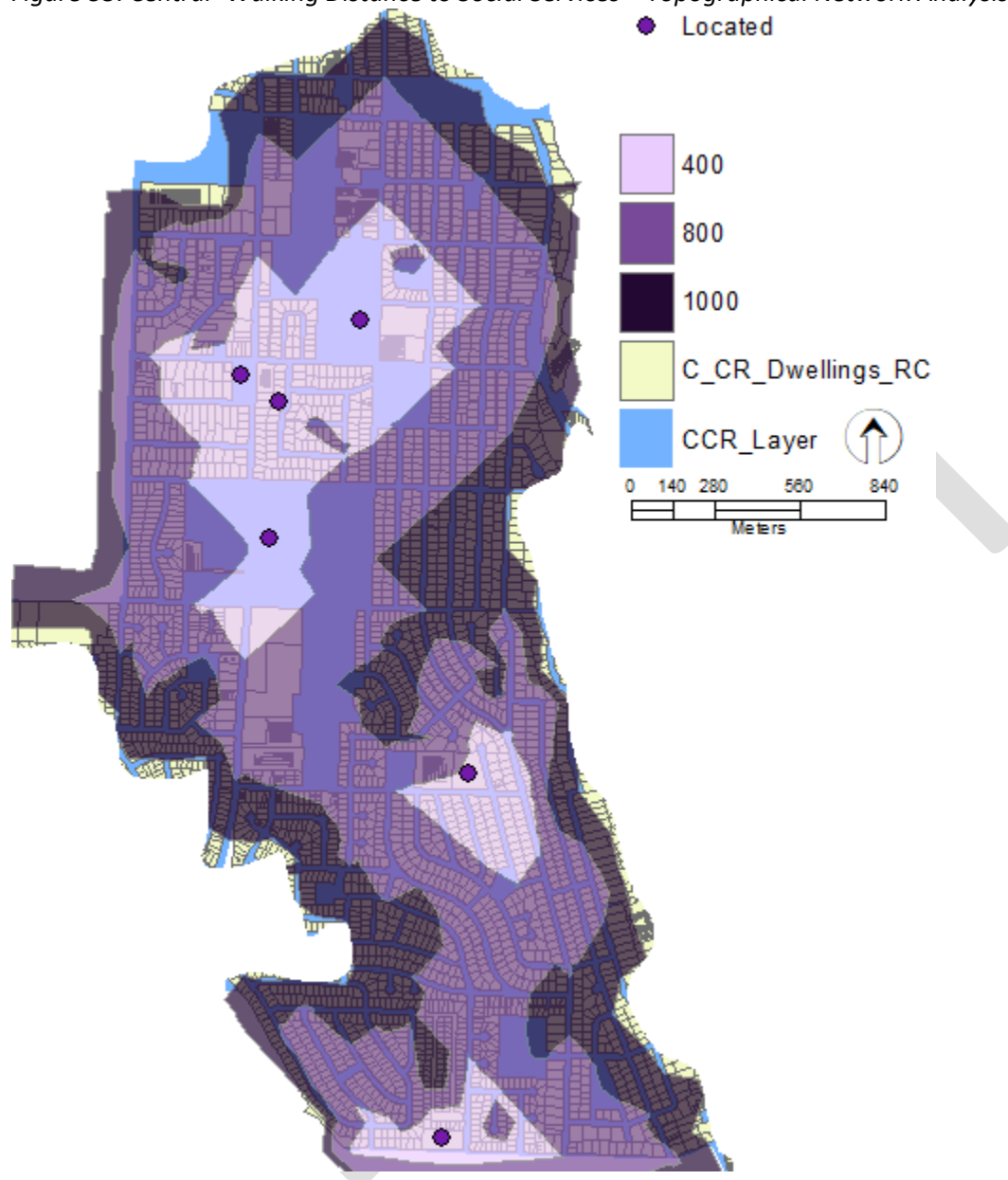
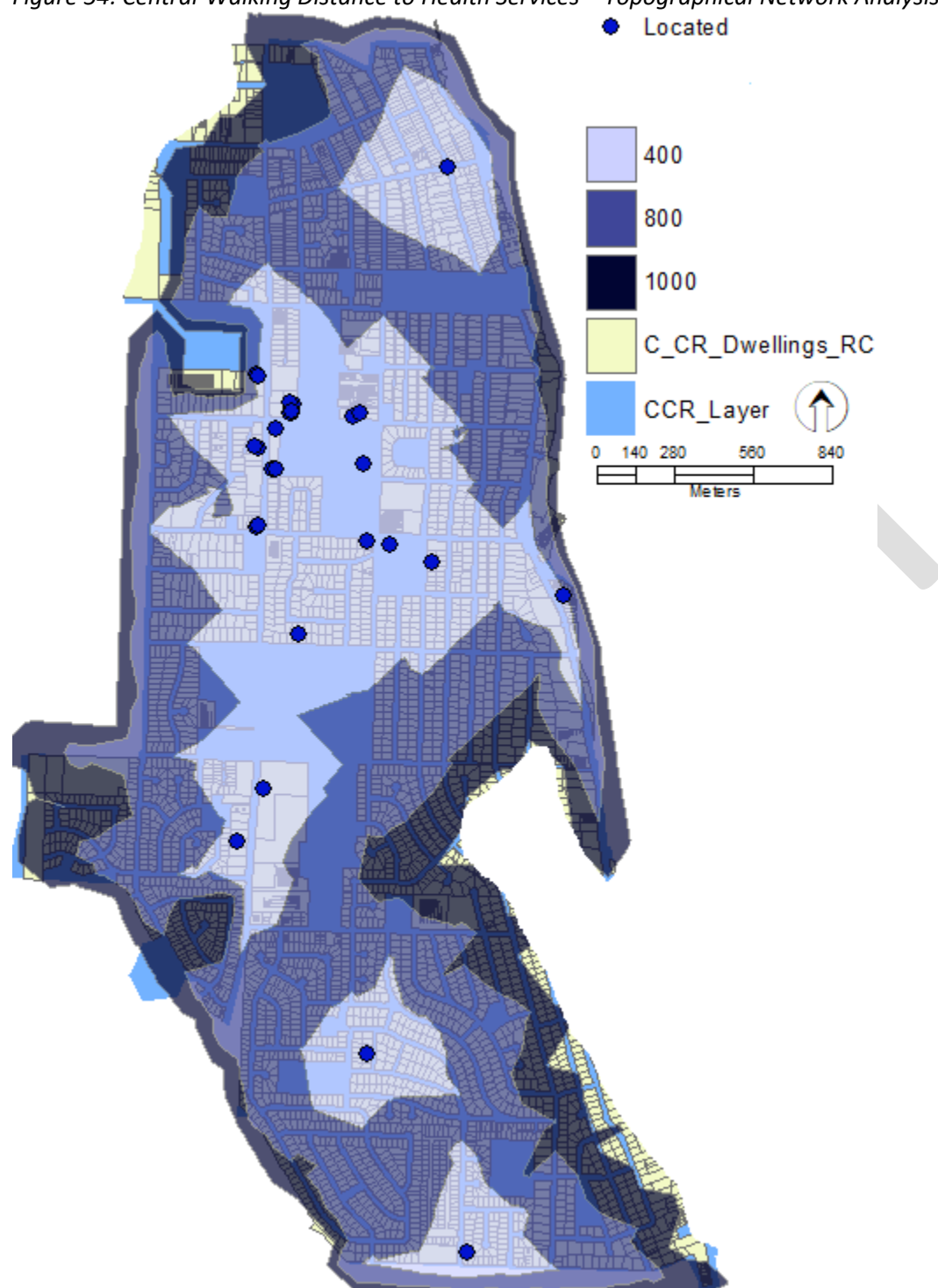


Figure 54: Central-Walking Distance to Health Services – Topographical Network Analysis Method



Central Campbell River: Transit Stops

Note: Although walking distance to bus stops are within 400 and 800m from dwellings, the bus schedule changes between routes, and therefore the use of bus stops within 400m may not be available. This results in the use of bus stops 800m to 1000m away from dwellings. Dwellings within 400m of major routes (e.g. Routes 1 and 2) are less fluctuating.

Figure 55: Central-Walking Distance to Transit Stops – Topographical Network Analysis Method

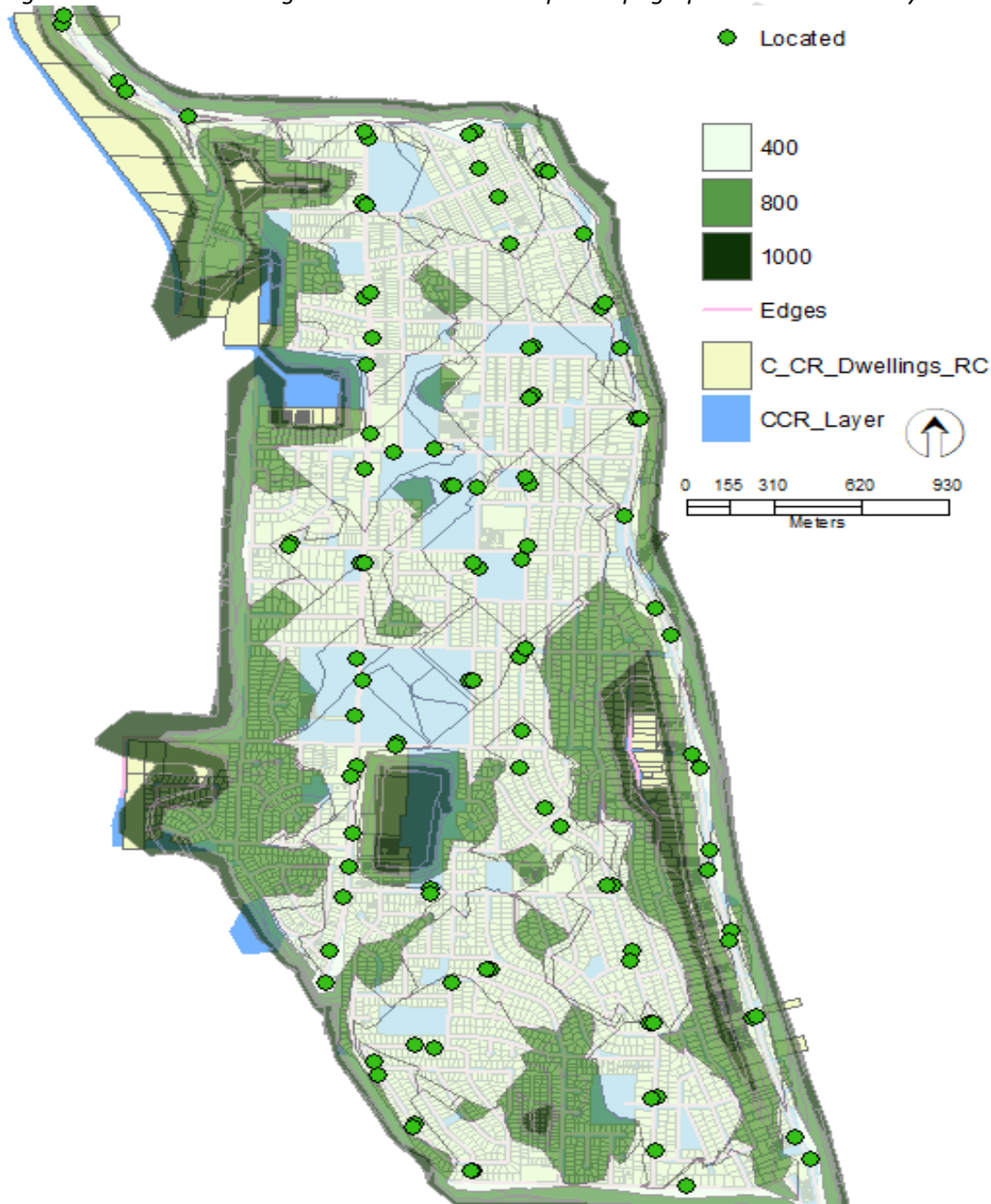
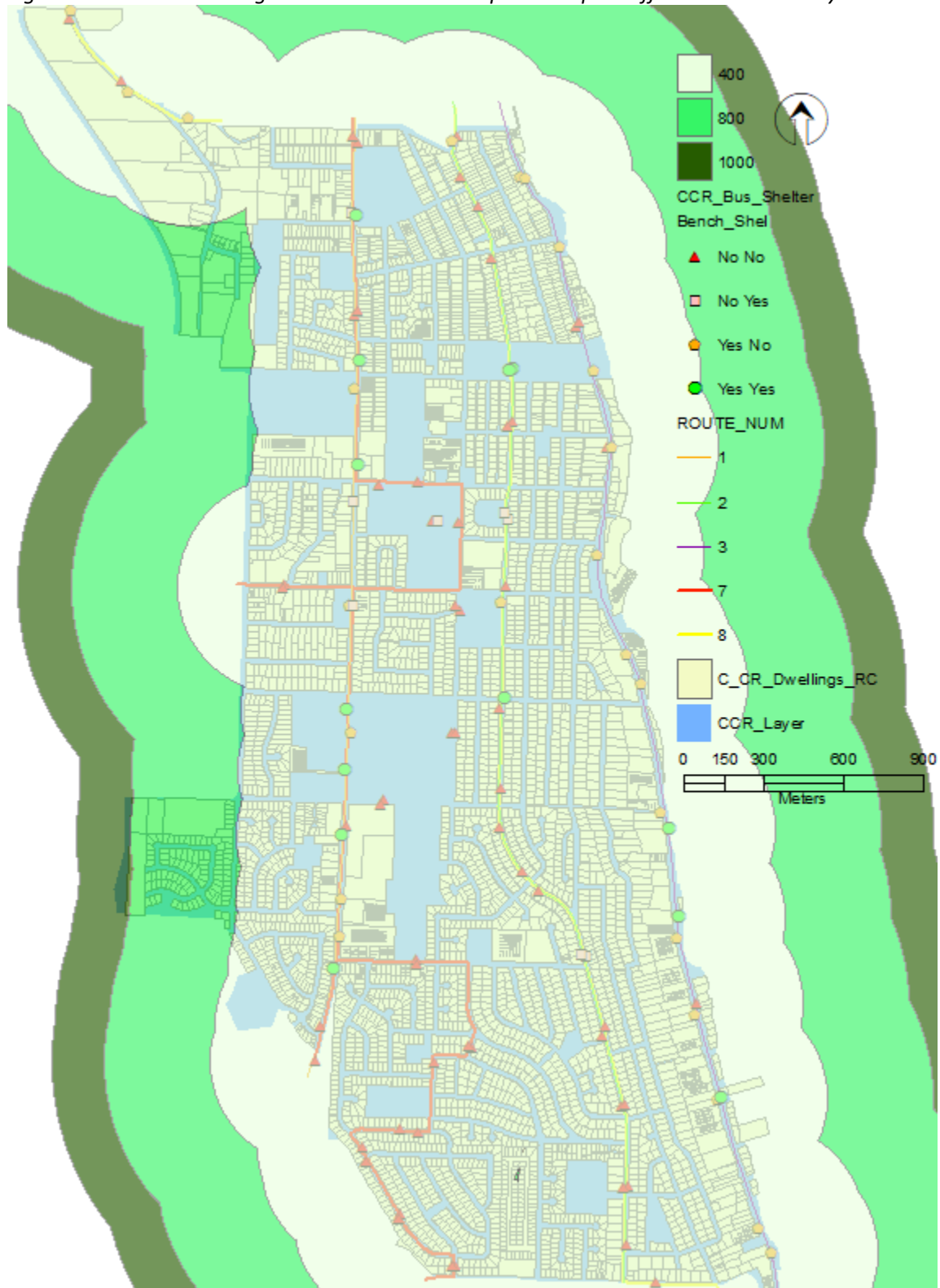


Figure 56: Central-Walking Distance to Transit Stops - Multiple Buffer and Selection by Point Method



Central Campbell River: Village Centres

Central Campbell River Village Centre is known for its concentration of commercial and retail amenities and some higher-density residential dwellings. Its location and connecting roads make it easily walkable to many areas of the neighbourhood.

Note: Counts includes dwelling units in the Village Centre.

Figure 57: Central-Walking Distance from Village Centre – Topographical Network Analysis Method

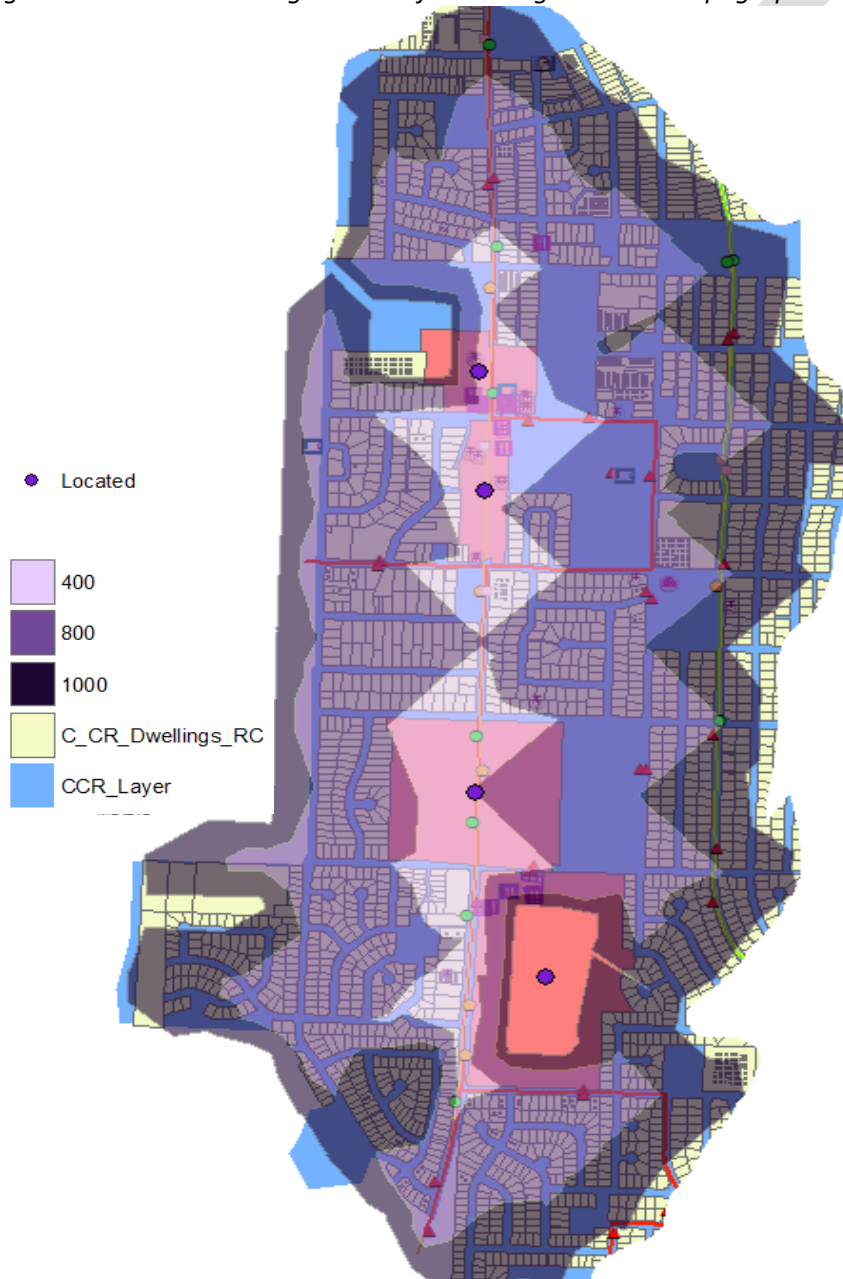
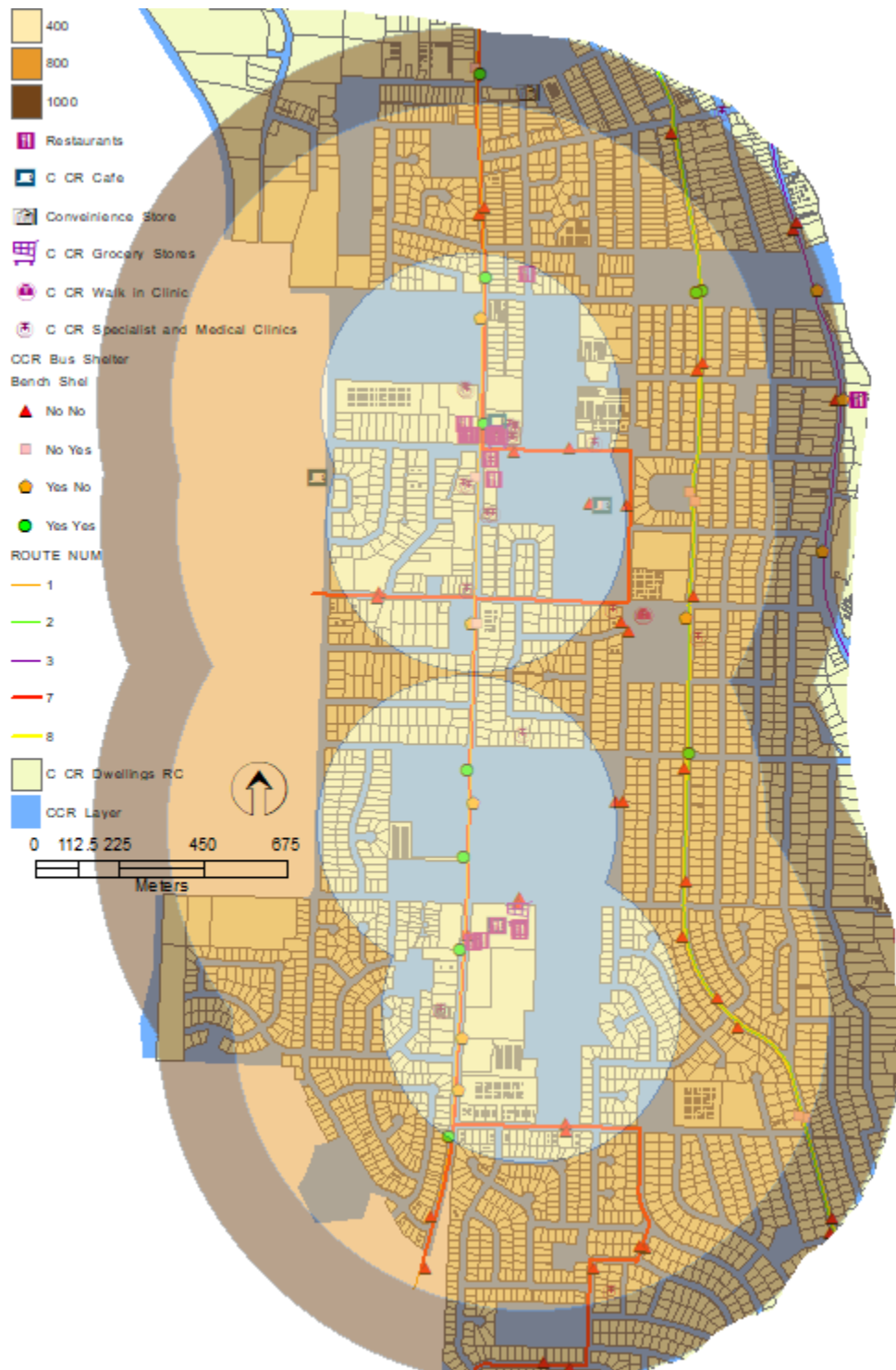


Figure 58: Central-Walking Distance from Village Centre - Multiple Buffer and Selection by Point Method



1.3.3.5 Willow Point Neighbourhood

Willow Point: Child Care

Figure 59: Willow Point- Walking Distance to Child Care Facilities – Topographical Network Analysis Method

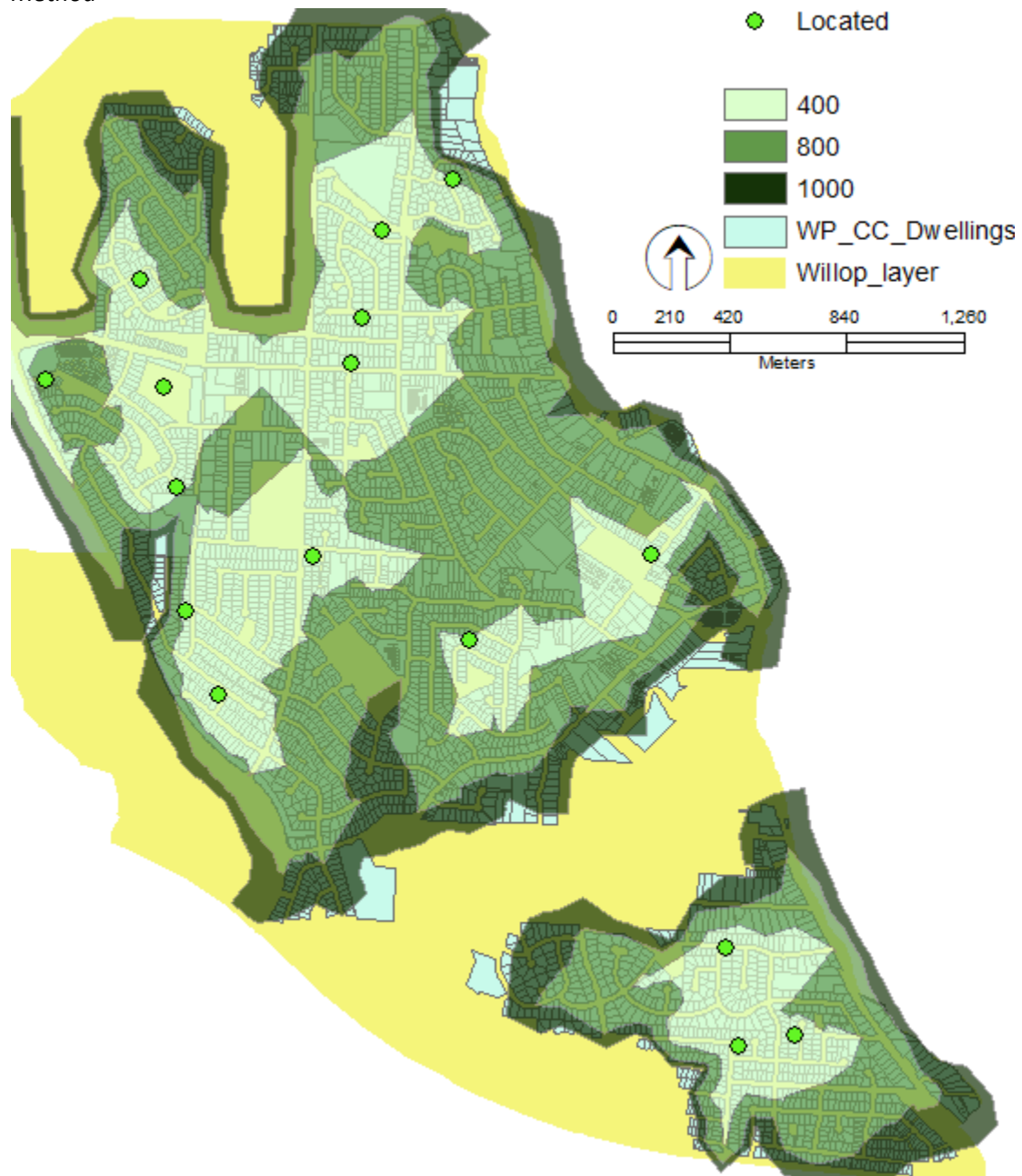
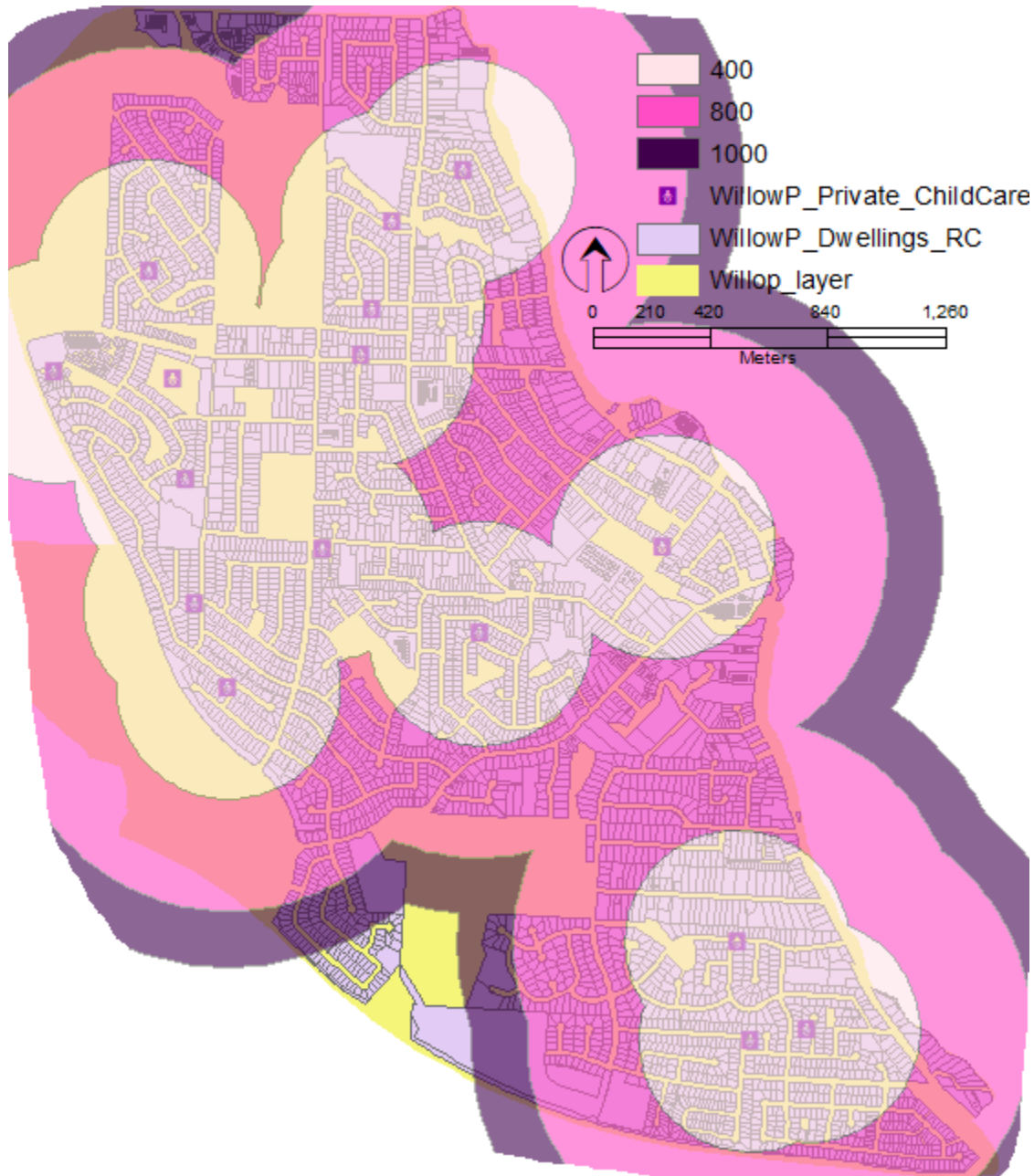


Figure 60: Willow Point- Walking Distance to Child Care Facilities - Multiple Buffer and Selection by Point Method



Willow Point: Parks, Green Spaces, and Recreational Centres

Figure 61: Willow Point- Walking Distance to Parks, Playgrounds, and Recreational Centres – Topographical Network Analysis Method

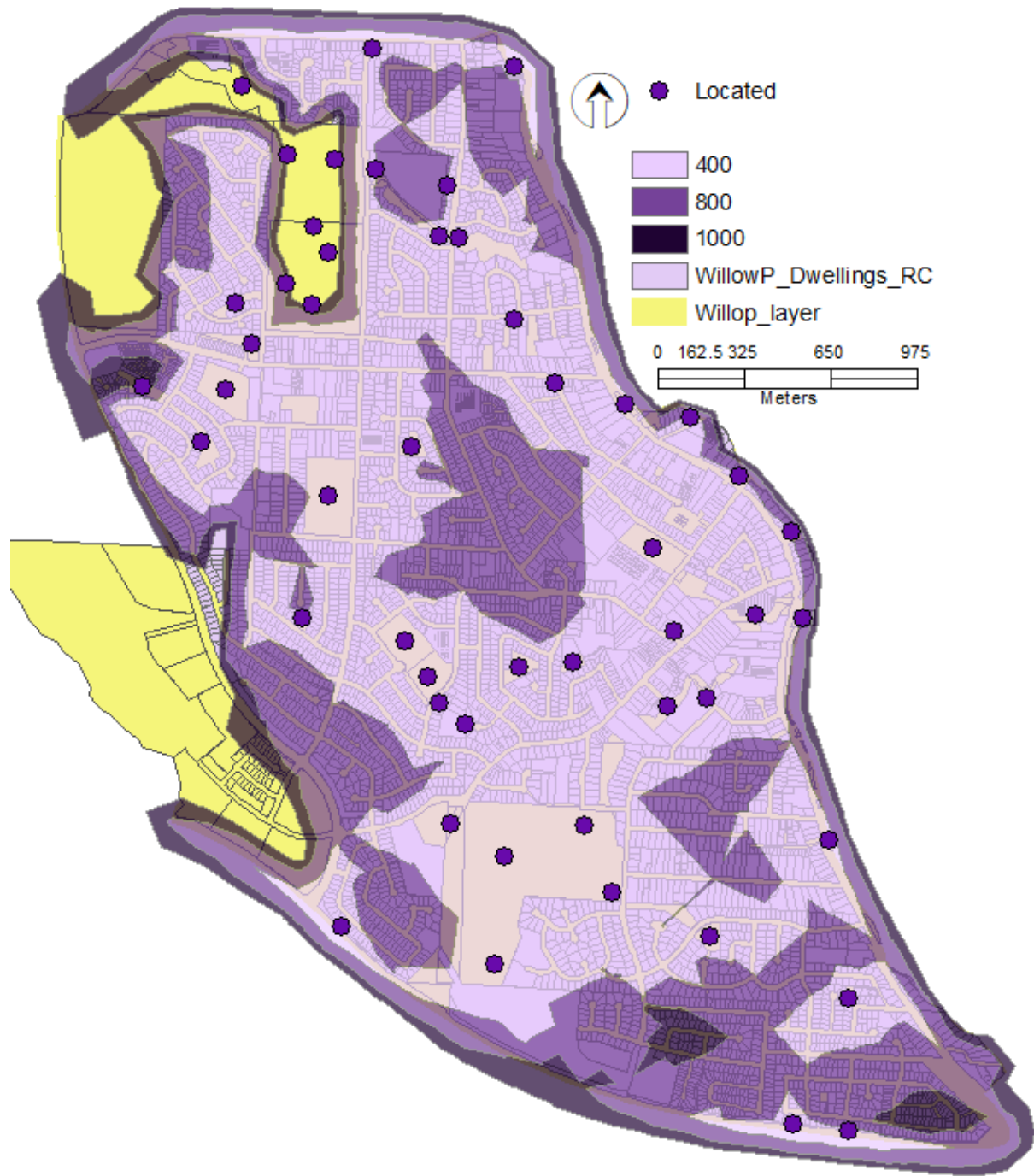


Figure 62: Willow Point- Walking Distance to Parks, Green Spaces, and Recreational Centres - Multiple Buffer and Selection by Point Method



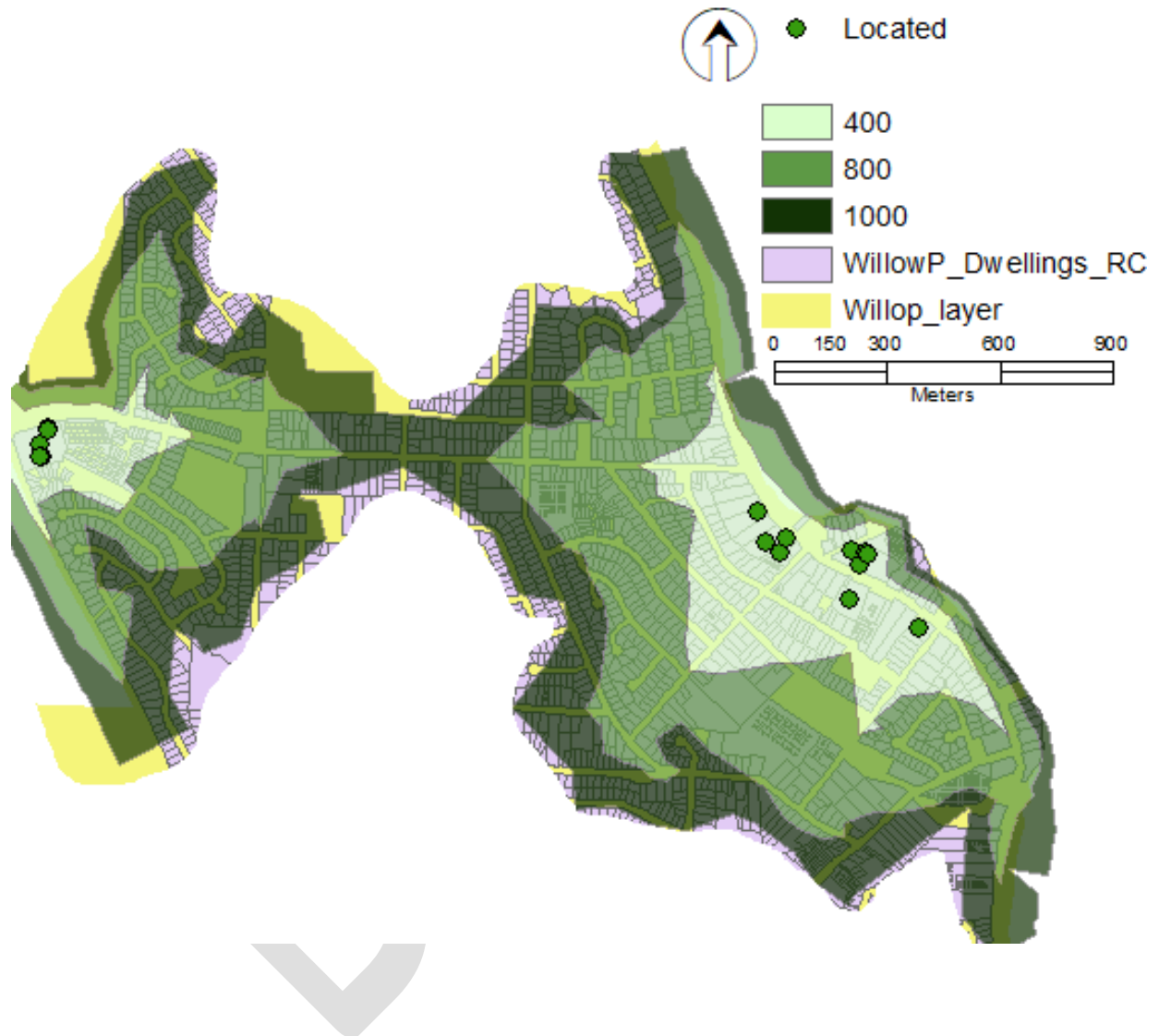
Willow Point: Grocery Stores and Convenience Stores

Figure 62: Willow Point- Walking Distance to Grocery and Convenience Stores – Topographical Network Analysis Method



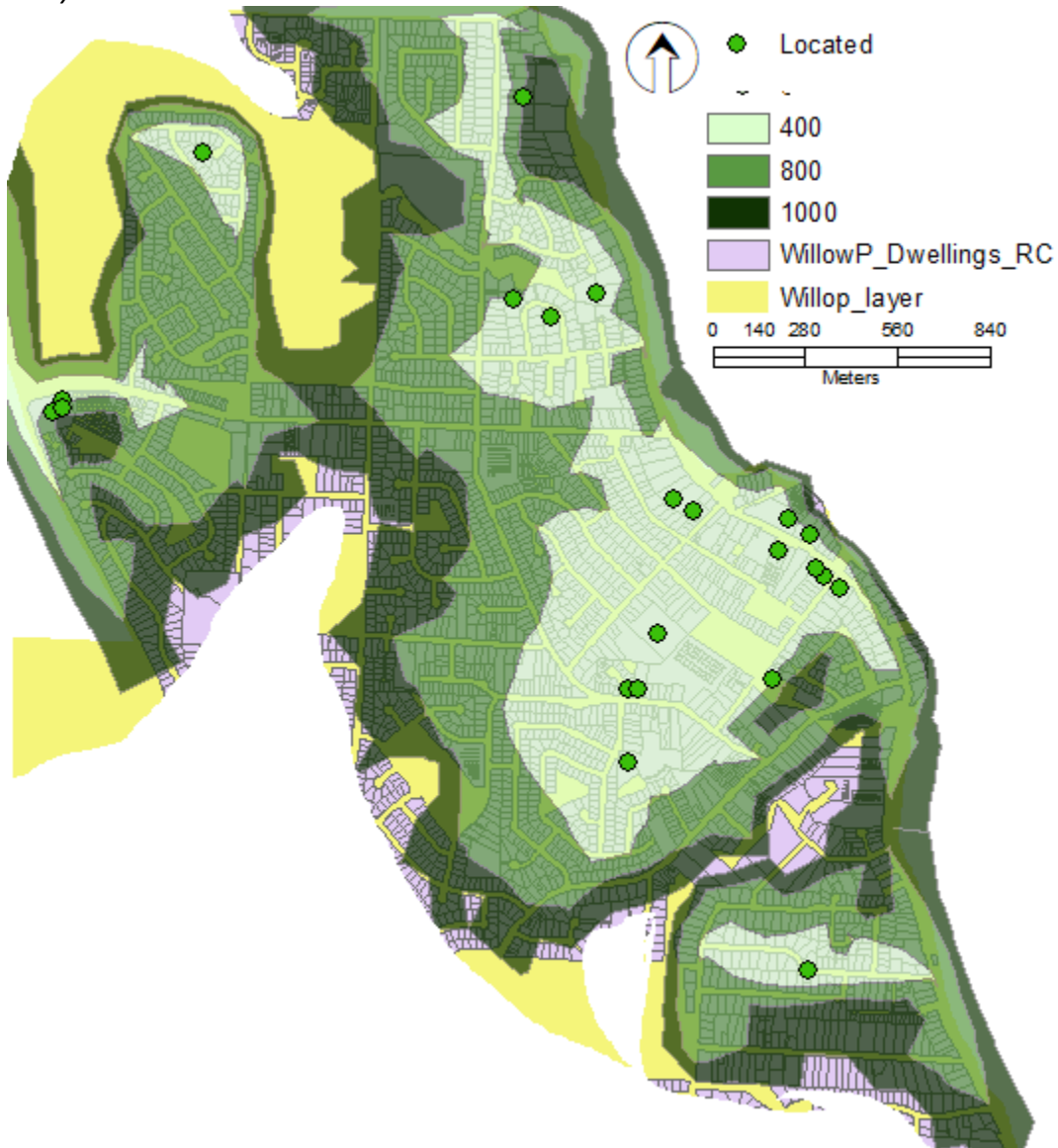
Willow Point: Cafés and Restaurants

Figure 63: Willow Point- Walking Distance to Cafés and Restaurants - Topographical Network Analysis Method



Willow Point: Social Services and Health Services

Figure 64: Willow Point- Walking Distance to Social and Health Services – Topographical Network Analysis Method



Willow Point: Transit Stops

Figure 65: Willow Point- Walking Distance to Transit Stops – Topographical Network Analysis Method

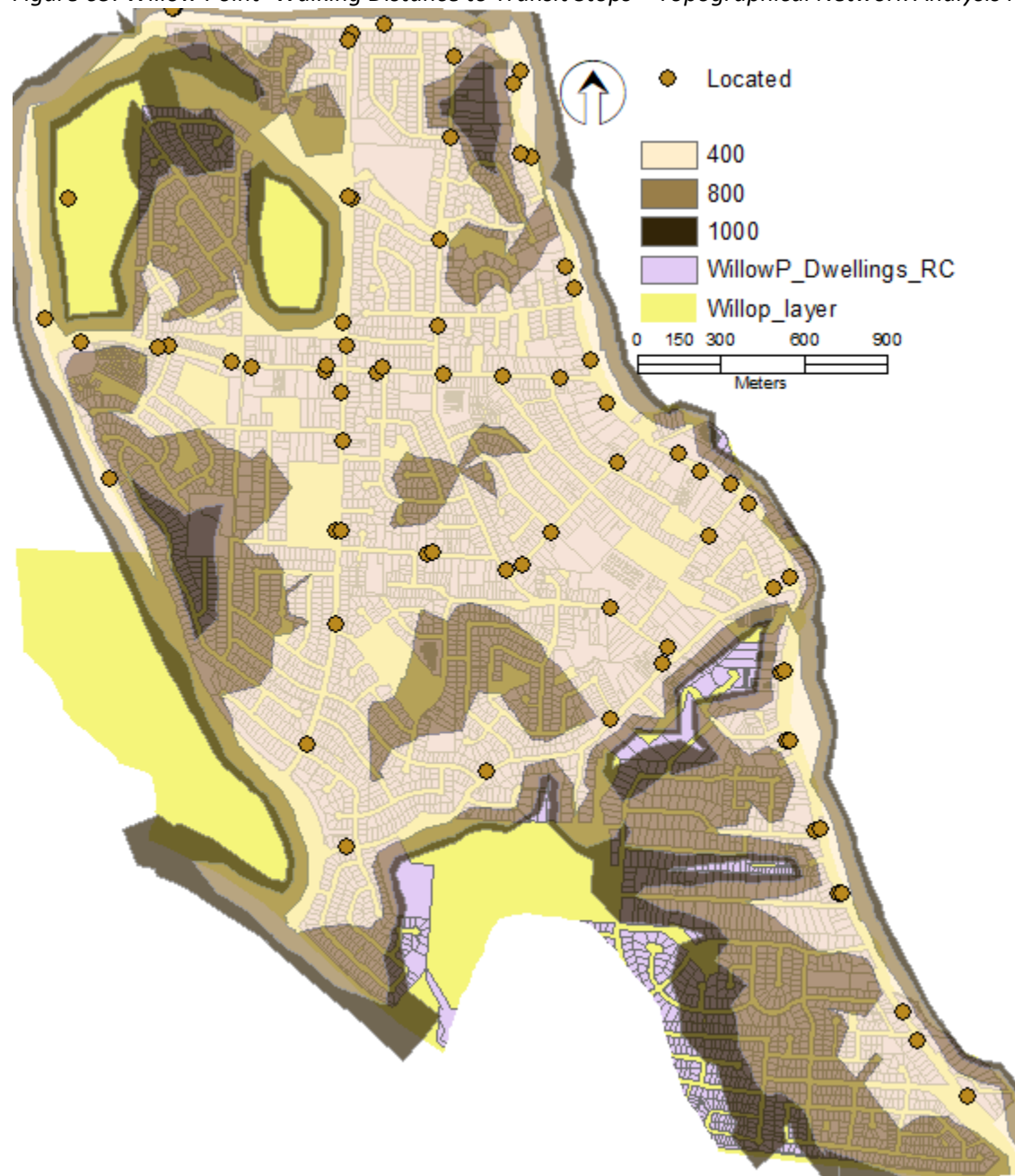
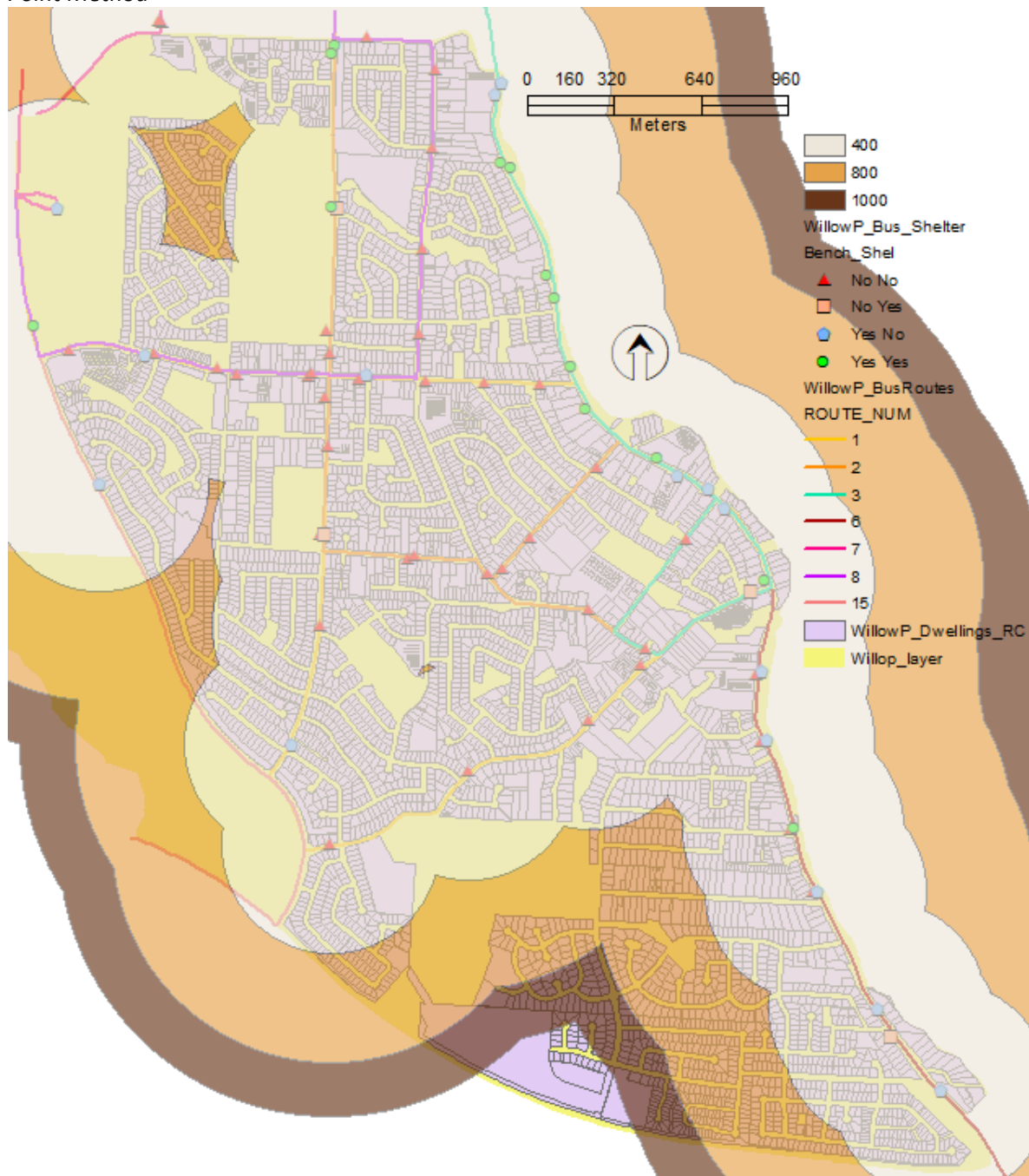


Figure 66: Willow Point- Walking Distance to Transit Stops (Bus Stops) - Multiple Buffer and Selection by Point Method



Willow Point: Village Centre

Note: Willow Point Village Centre is defined by the presence of retail and commercial amenities, as well as some higher density residential.

Figure 67: Willow Point- Walking Distance from Village Centre – Topographical Network Analysis Method

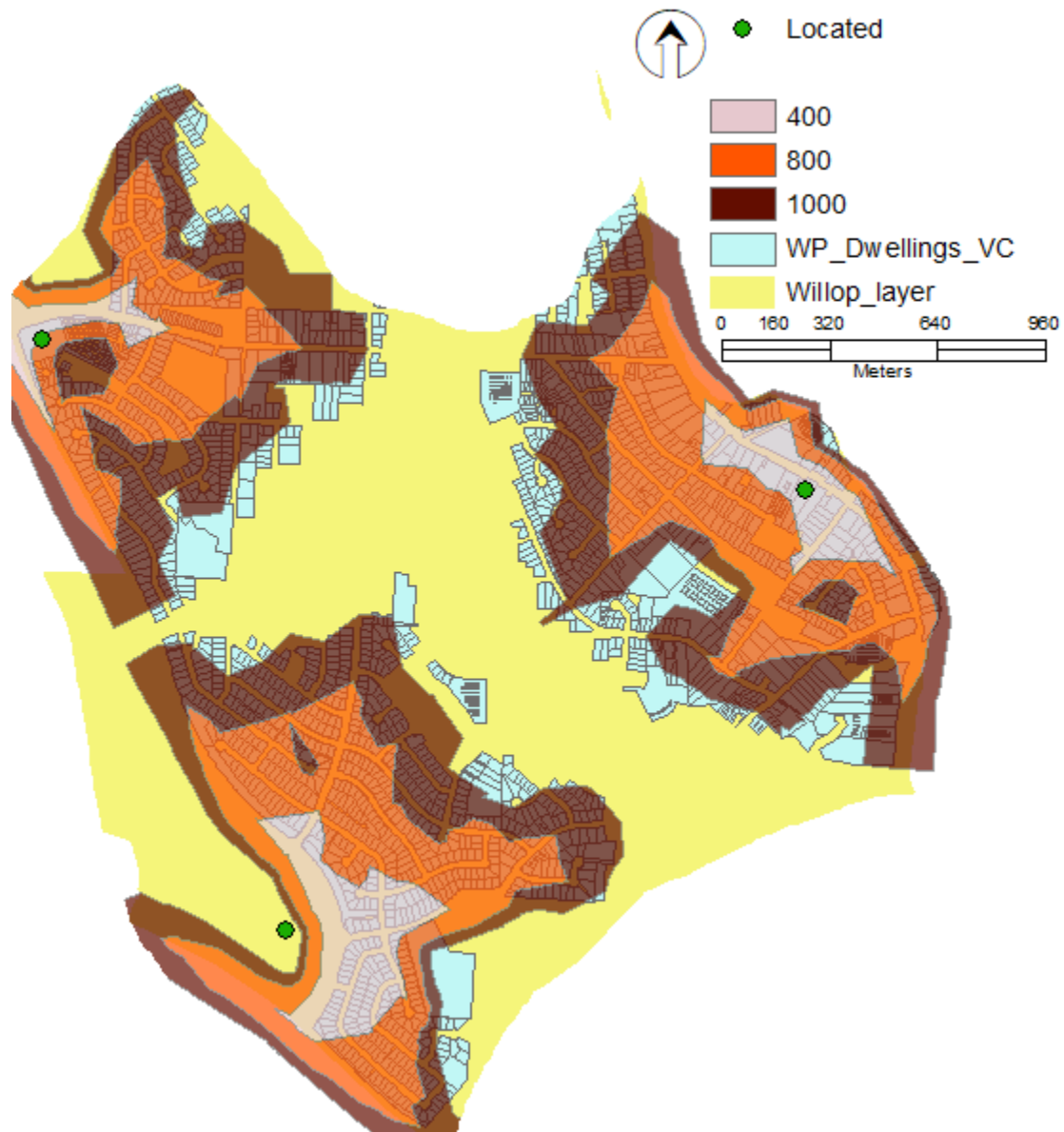
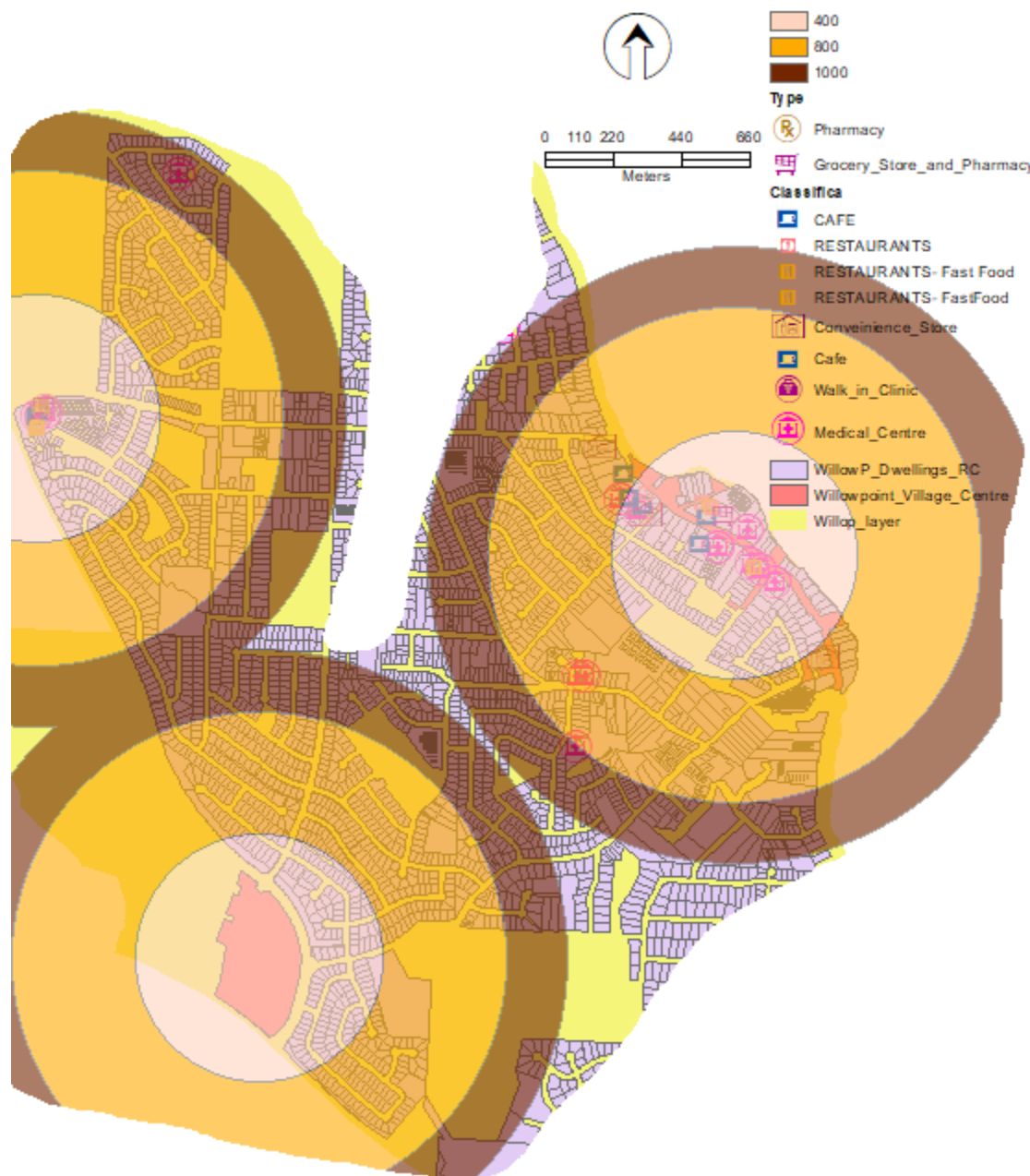


Figure 68: Willow Point- Walking Distance from Village Centre - Multiple Buffer and Selection by Point Method

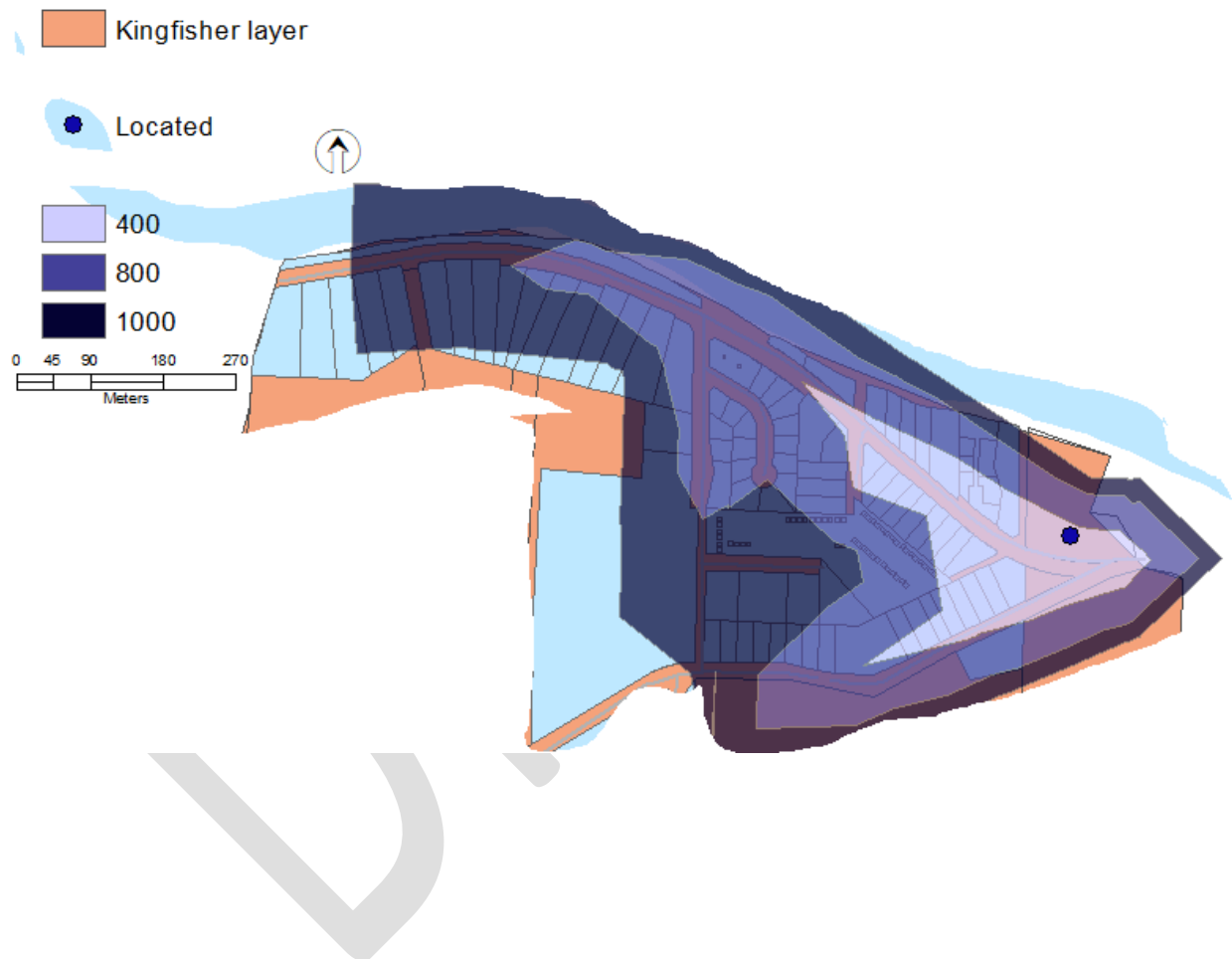


1.3.3.6 Kingfisher Neighbourhood

Kingfisher: Parks and Green Spaces

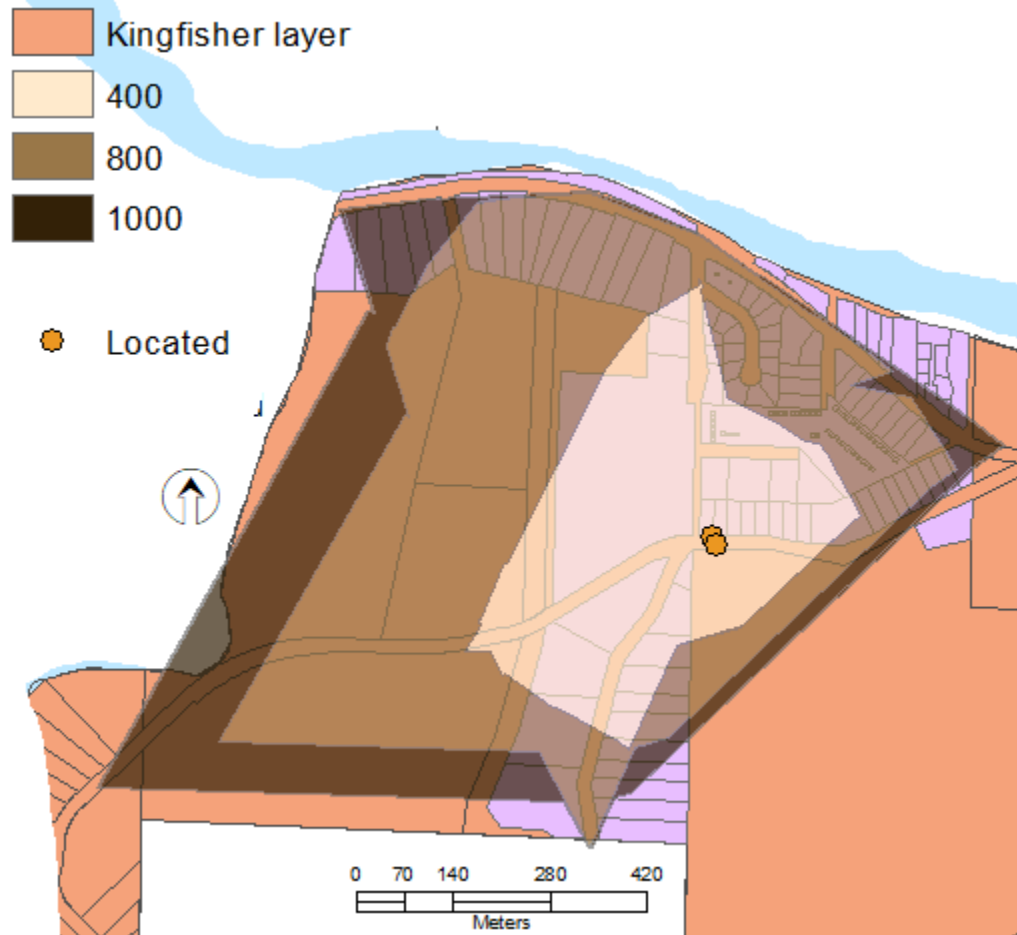
Kingfisher has two park areas within the Haig-Brown historic area, maintained jointly by the City and Province. Elk Fall Provincial Park is adjacent to Kingfisher to the west.

Figure 69: Kingfisher- Walking Distance to Natural Areas and Green Space – Topographical Network Analysis Method



Kingfisher: Transit Stops

Figure 70: Kingfisher-Walking Distance to Transit Stops – Topographical Network Analysis Method

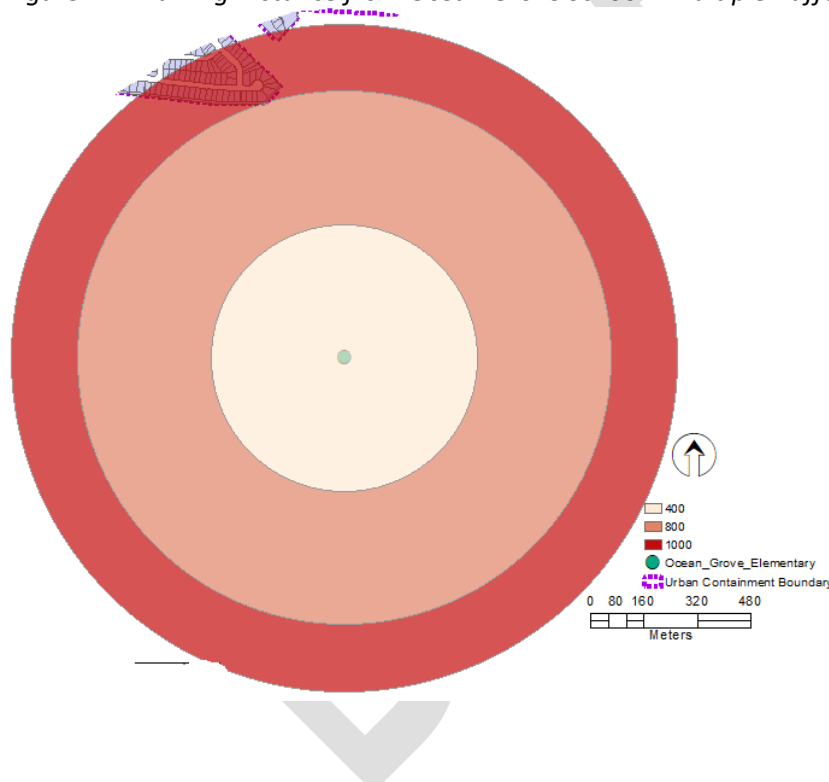


1.1.4 Education – Public Elementary, Middle and High Schools, Private Schools, and Colleges

Educational institutions in Campbell River are described in detail in Category 5. Locations of schools are spread across the city proving accessibility and connection to residential areas, many within walking distance. The City and School District 72 has identified maximum walking distances for schools before bussing is offered.

It should be noted that walkability to Ocean Grove School was not accounted for because of its distance outside of the UCB and subsequent lack of connectivity (see Map 18 for all School District 72 school locations). There are approximately 65 dwellings from the UCB within 1000m to the school site, however because the closest accessible road to the school is a highway, walkability between the 65 dwellings to the school is not supported for safety reasons.

Figure 71: Walking Distance from Ocean Grove School - Multiple Buffer and Selection by Point Method



2.2.1.7.0 All Levels of Education

The City's OCP identifies 400m to 1000m as the ideal distance to any school or other amenity in the city. There are approximately 14,036 dwellings in the city, and of these, 2223 dwellings are within 400m, 6568 dwellings are within 800m, and 8965 dwellings are within 1000m to some level of education (See Figure 74).

Note: The locations of Timberline Secondary school and North Island College make it difficult to allocate an accurate walking distance because of the absence of accessibility and connectivity along paths and road networks. Also, Ripple Rock School has similar challenges due to minimal connectivity of sidewalks to and within Quinsam neighbourhood.

Figure 72: Walking Distance to Elementary Schools, Middle Schools, High Schools, and Colleges in the UCB – Topographical Network Analysis Method

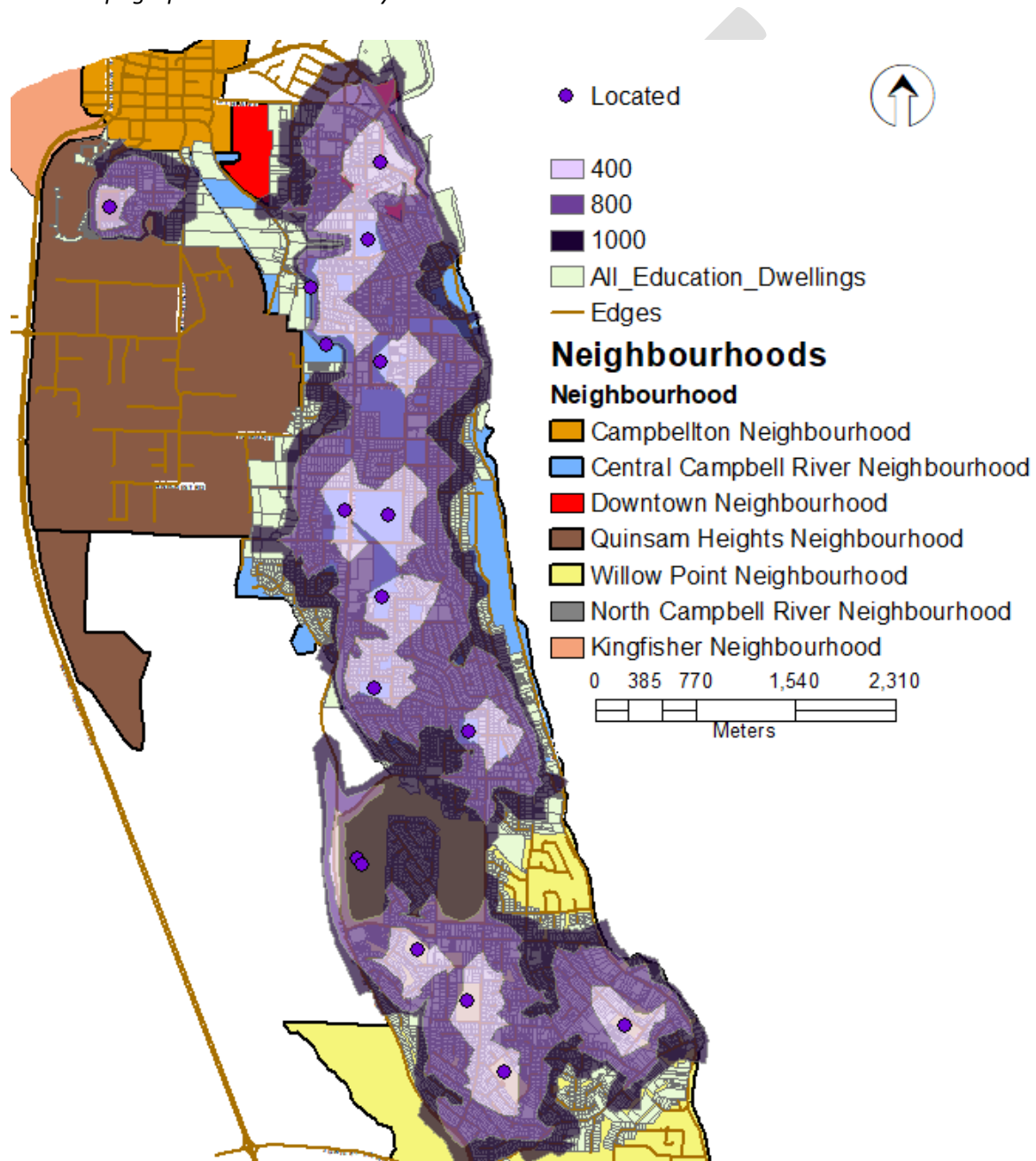


Figure 73: Walking Distance to Public and Private Schools – Topographical Network Analysis Method

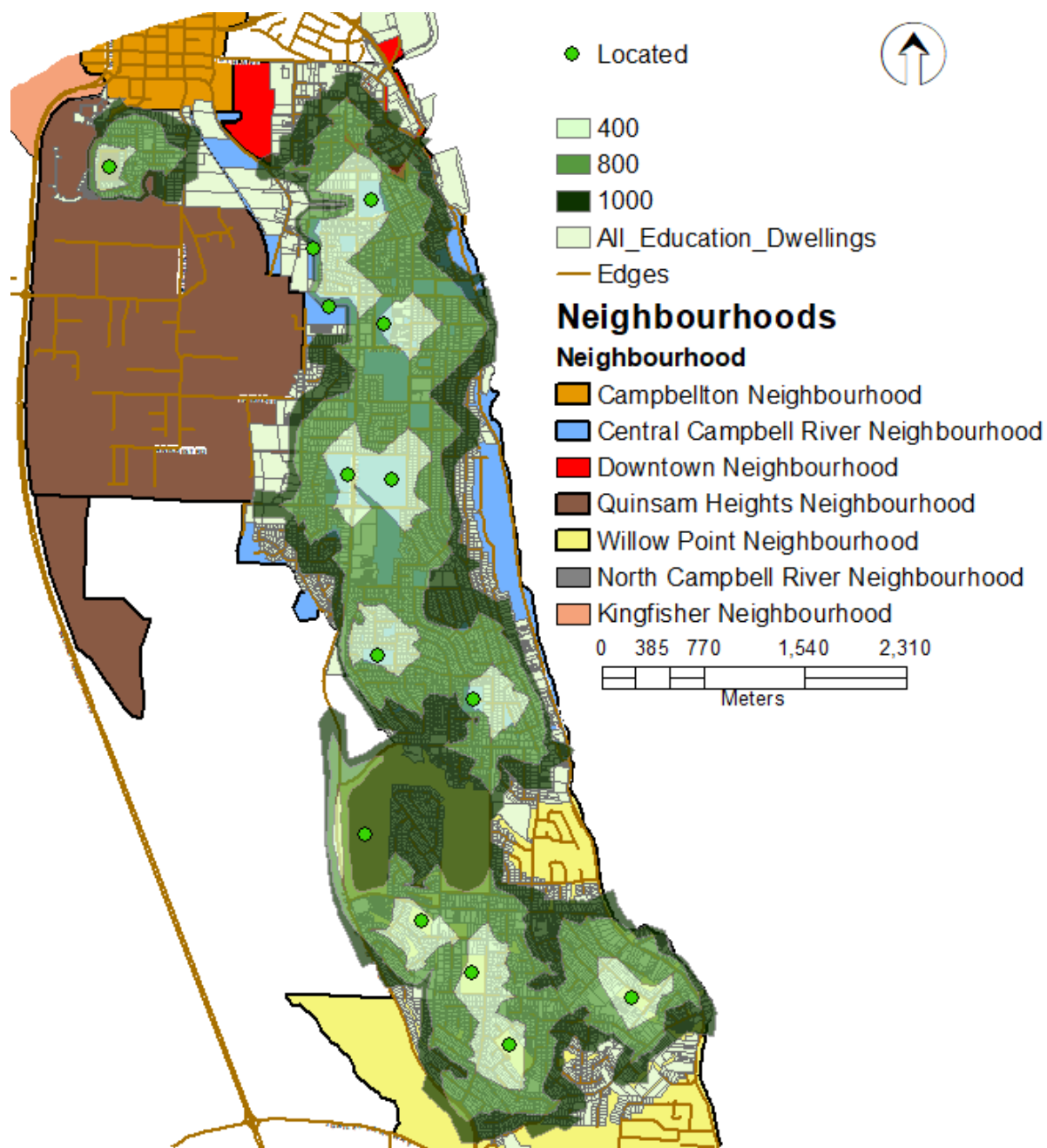
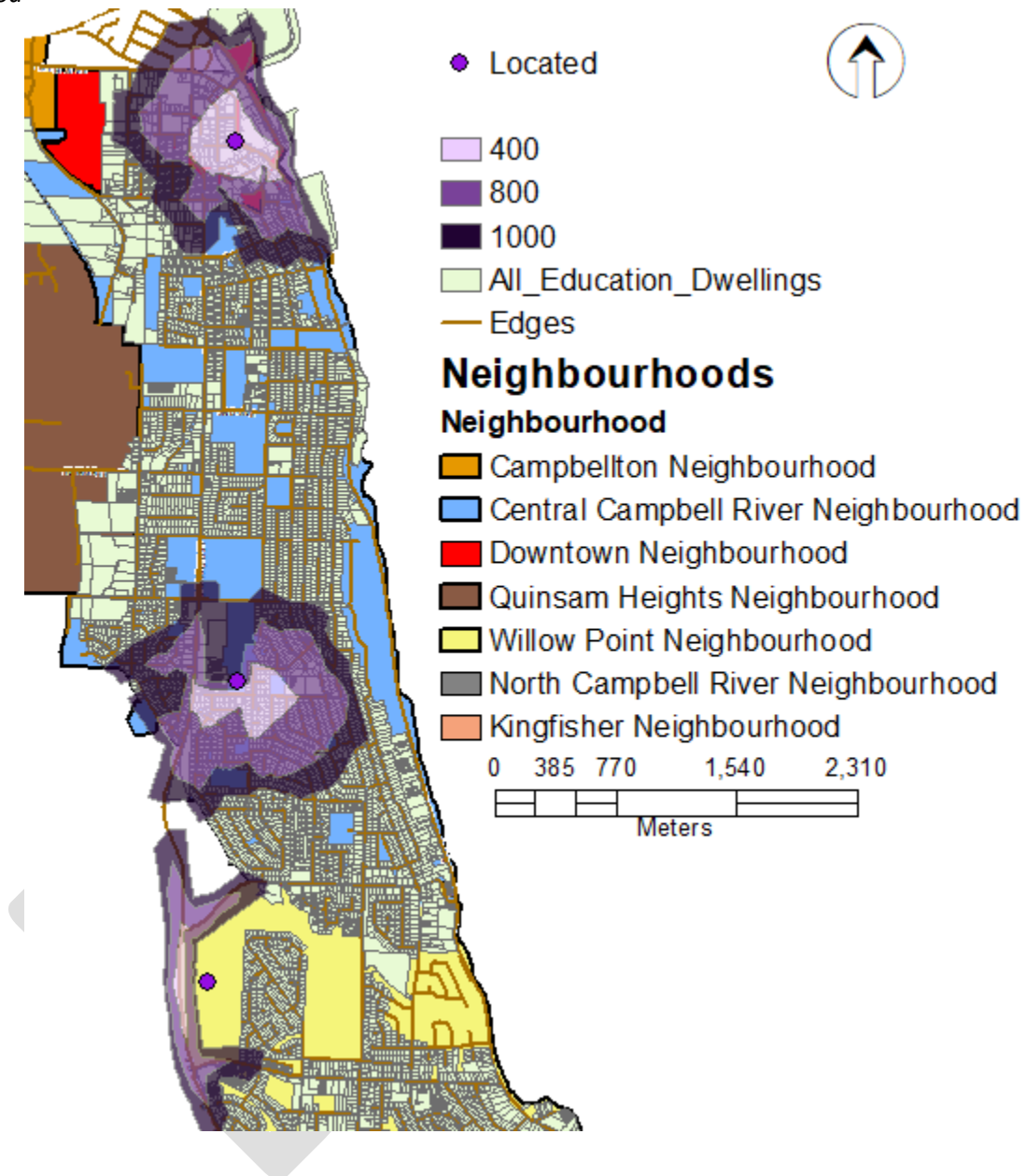


Figure 74: Walking Distance to Colleges and Post-Secondary Education – Topographical Network Analysis Method



2.2.1.7.1 School District Boundaries and Walking Distances³

School District 72 has allocated a maximum walking distance of 4km and 4.8km for elementary and middle school students respectively, before bus services are offered. School catchment areas are set to maintain consistent enrollment between schools, and encourage walking and other forms of active transportation. In public school catchment areas, there are approximately 1690 dwellings within 400m, 3498 dwellings within 800m, 2100 dwellings within 1000m, 3845 dwellings within 2000m, and 1469 dwellings within 3000m of all levels of public schools (see Figure 76).

³ School District 72 oversees only public schools in the city.

Figure 75: Walking Distance to Public Schools According to Allocated School Catchment Areas and Walking Limits by School District 72 - Topographical Network Analysis Method

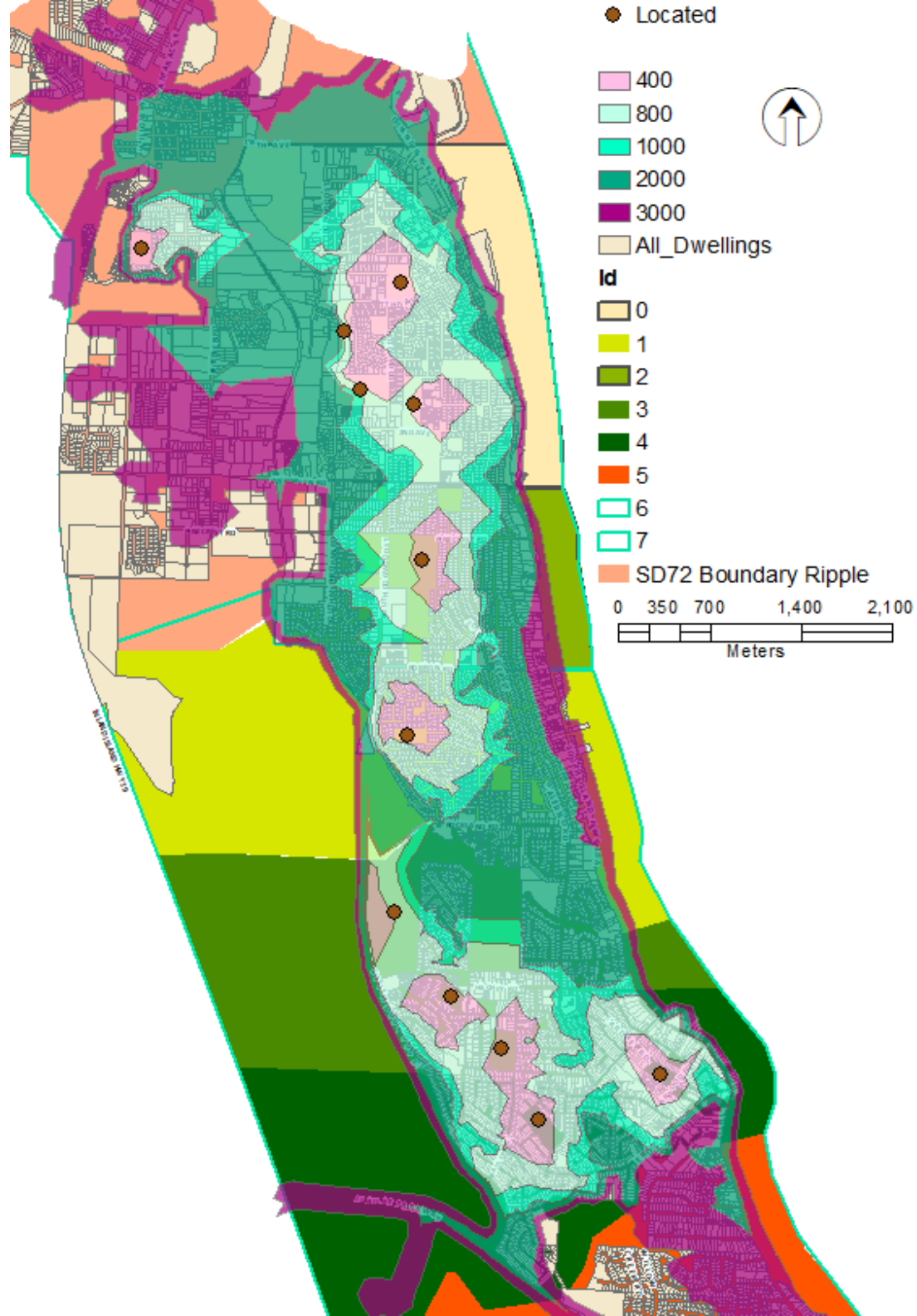


Figure 76: Walking Distance to Public Schools using OCP Guidelines – Topographical Network Analysis Method

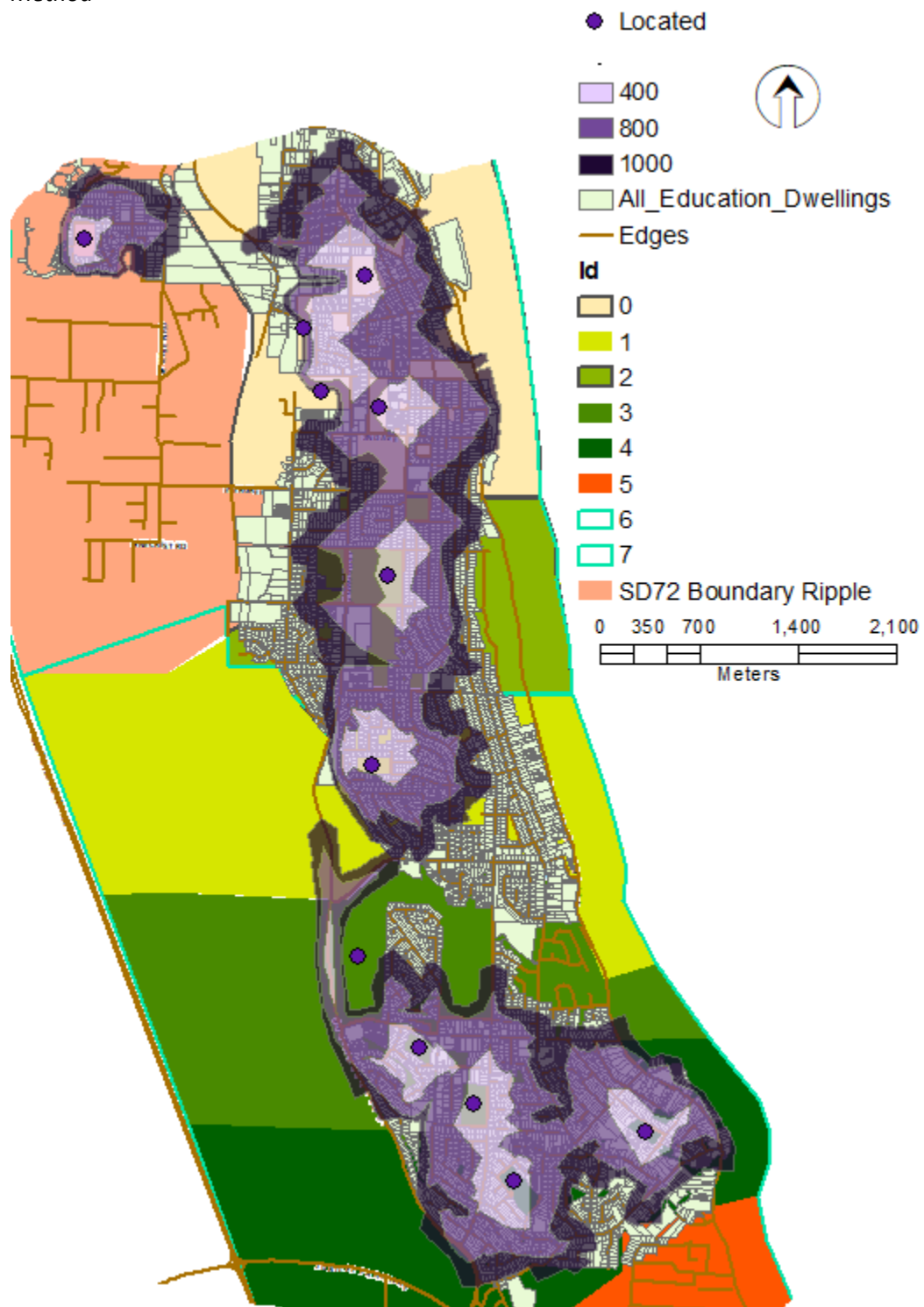


Figure 77: Expansion and Infill Sites

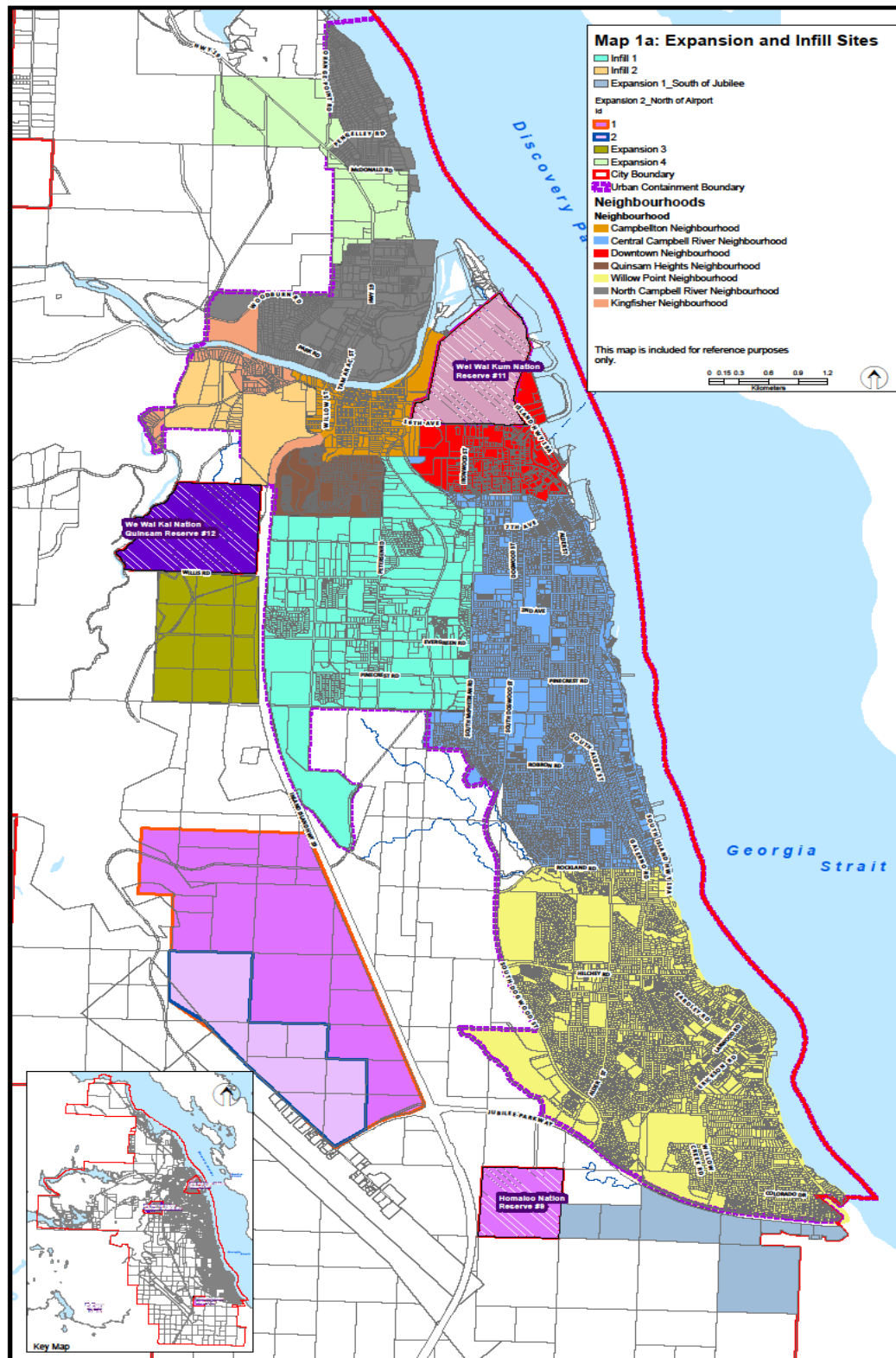


Figure 78: Child Care Facilities

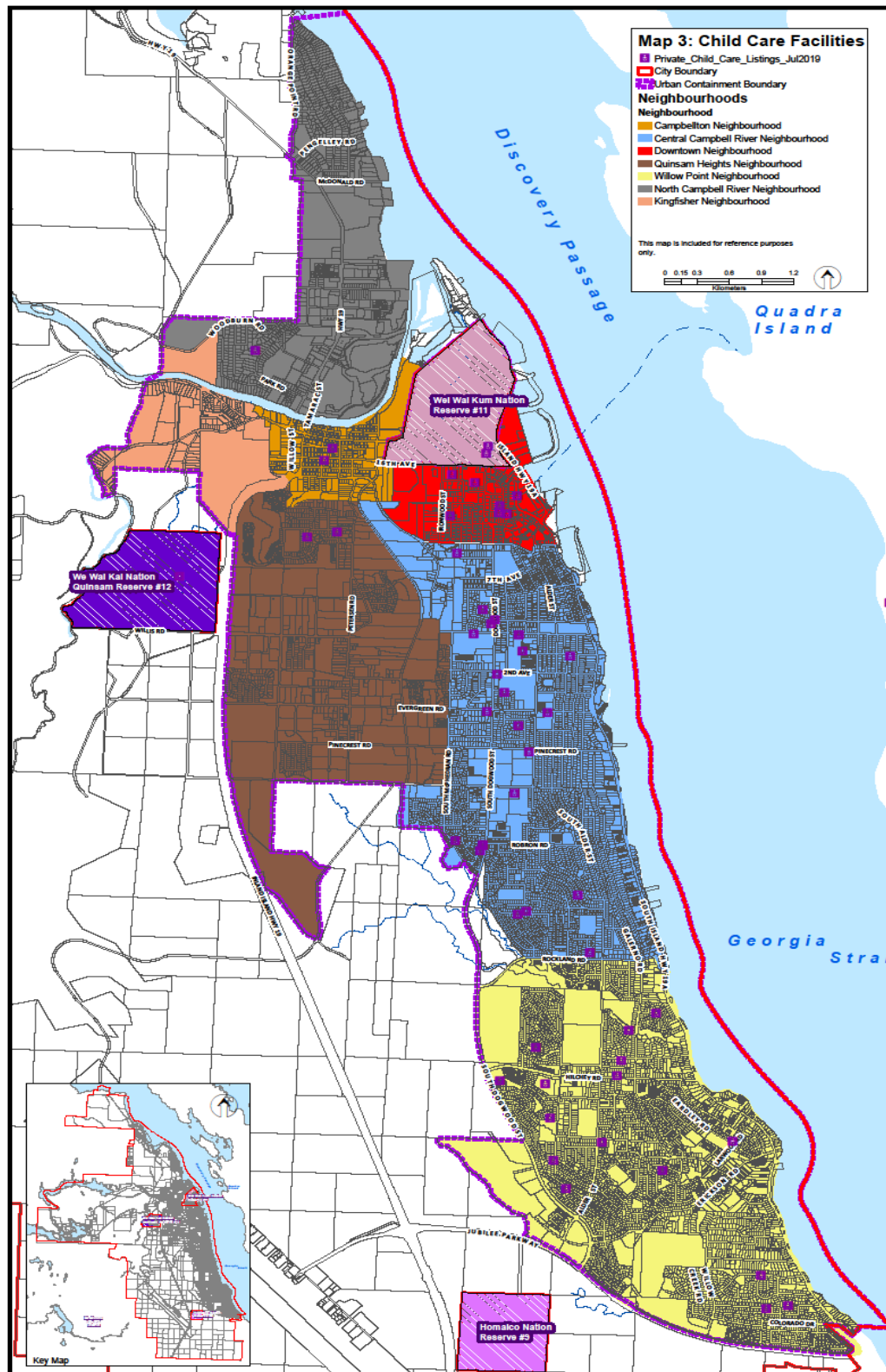


Figure 79: Streetlight Density

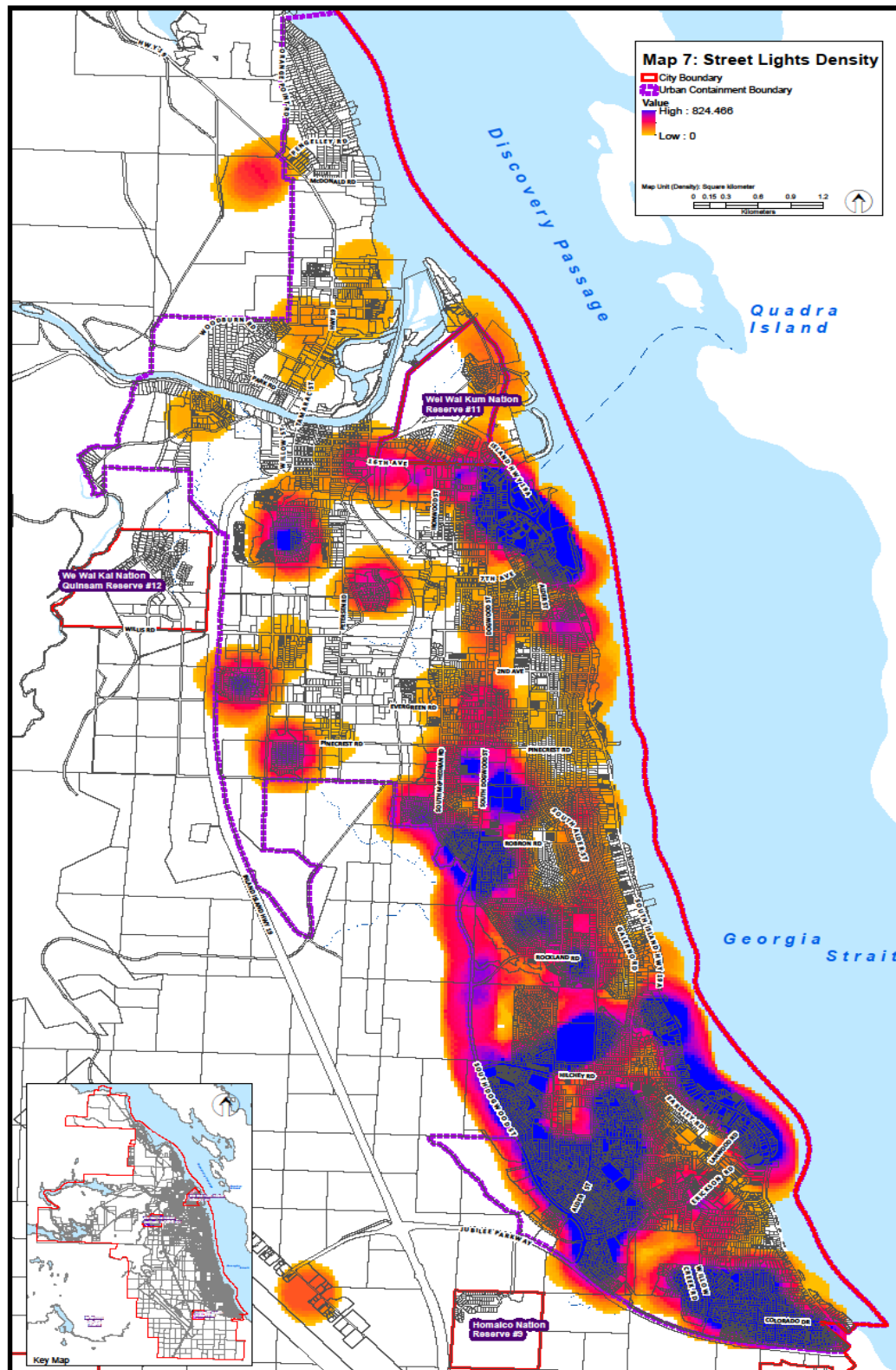


Figure 80: Sidewalk Density

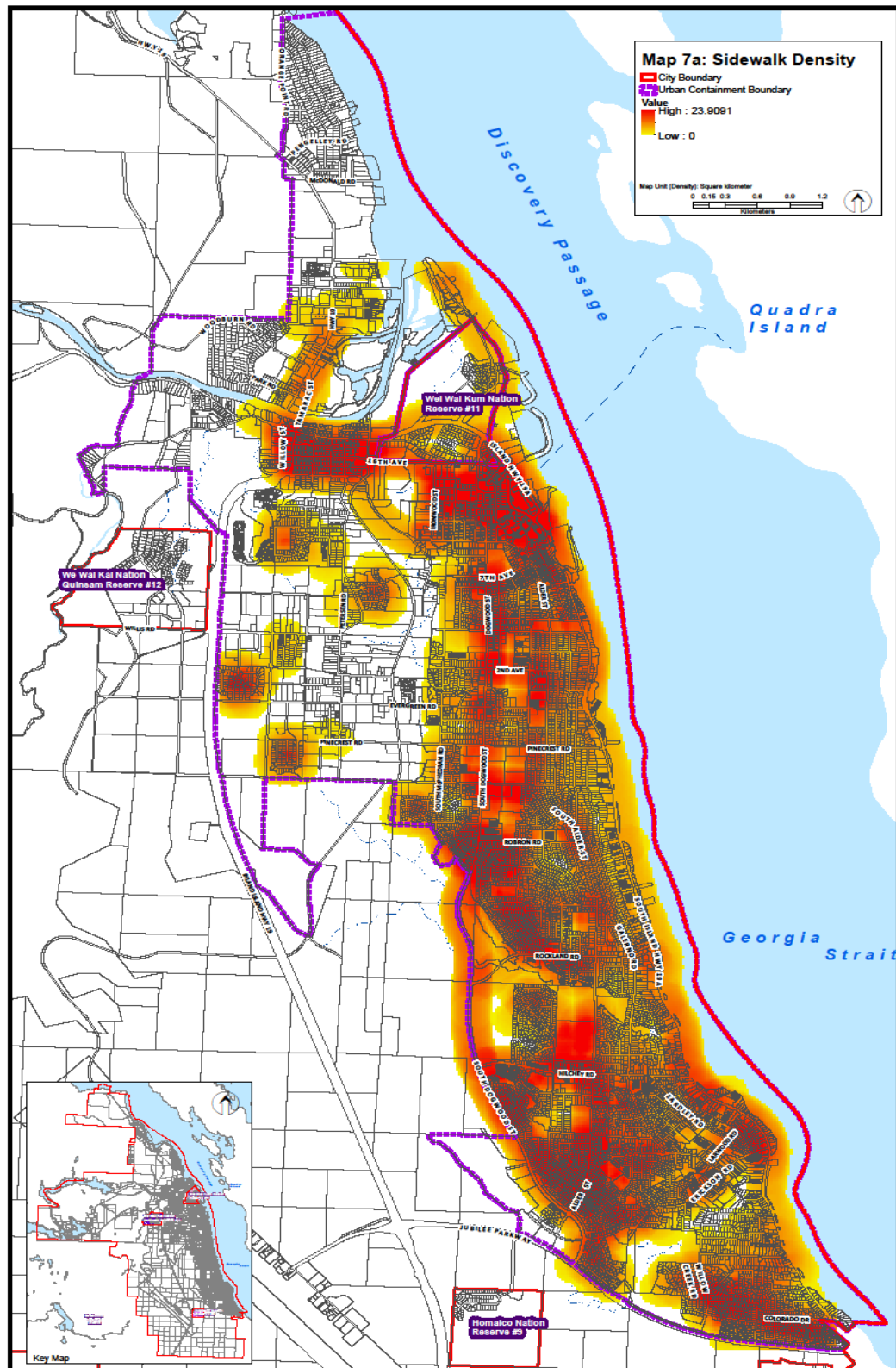


Figure 81: Bicycles Routes and Bicycle Racks

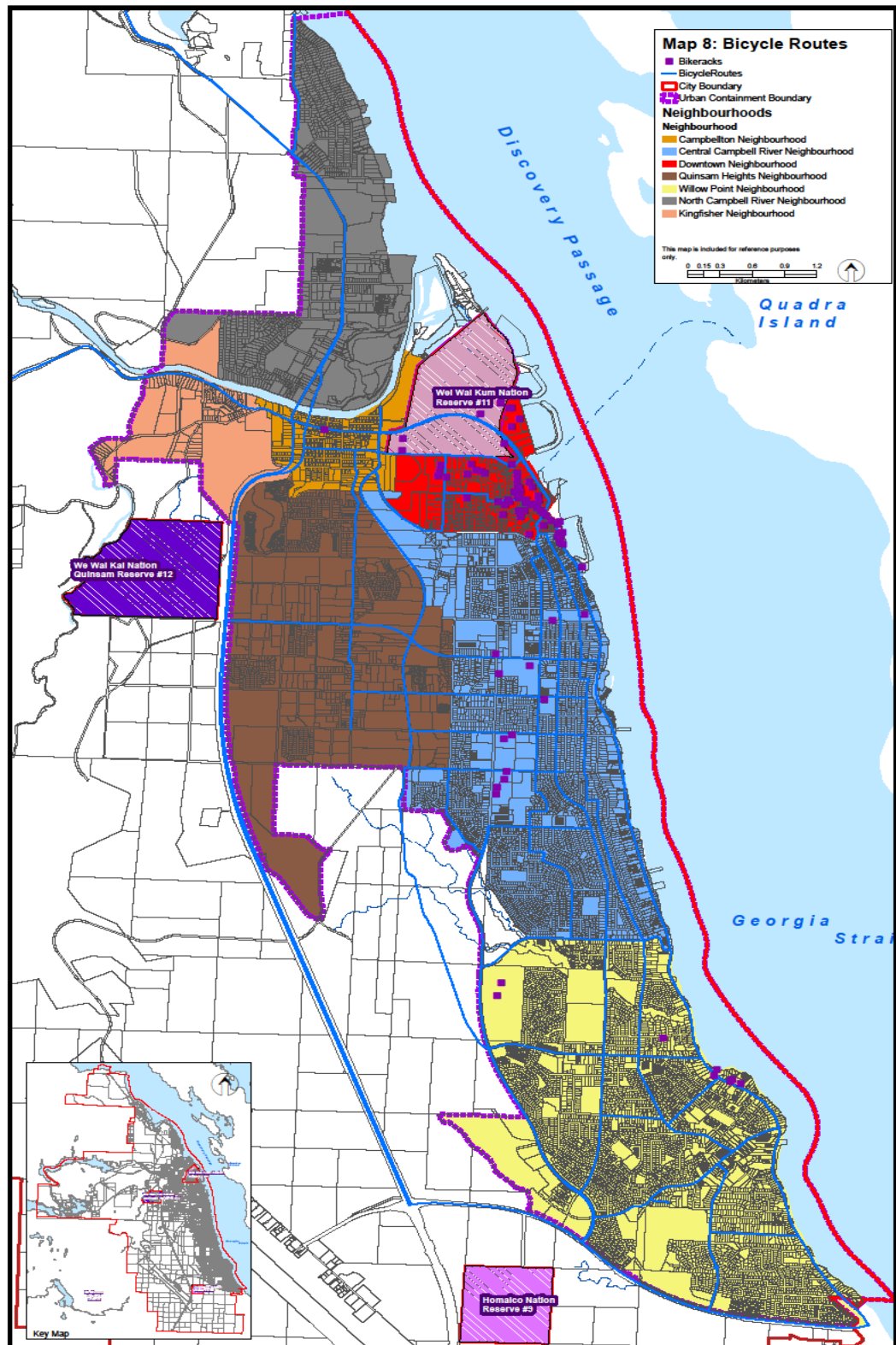


Figure 82: Public Art – Sea Walk Carvings

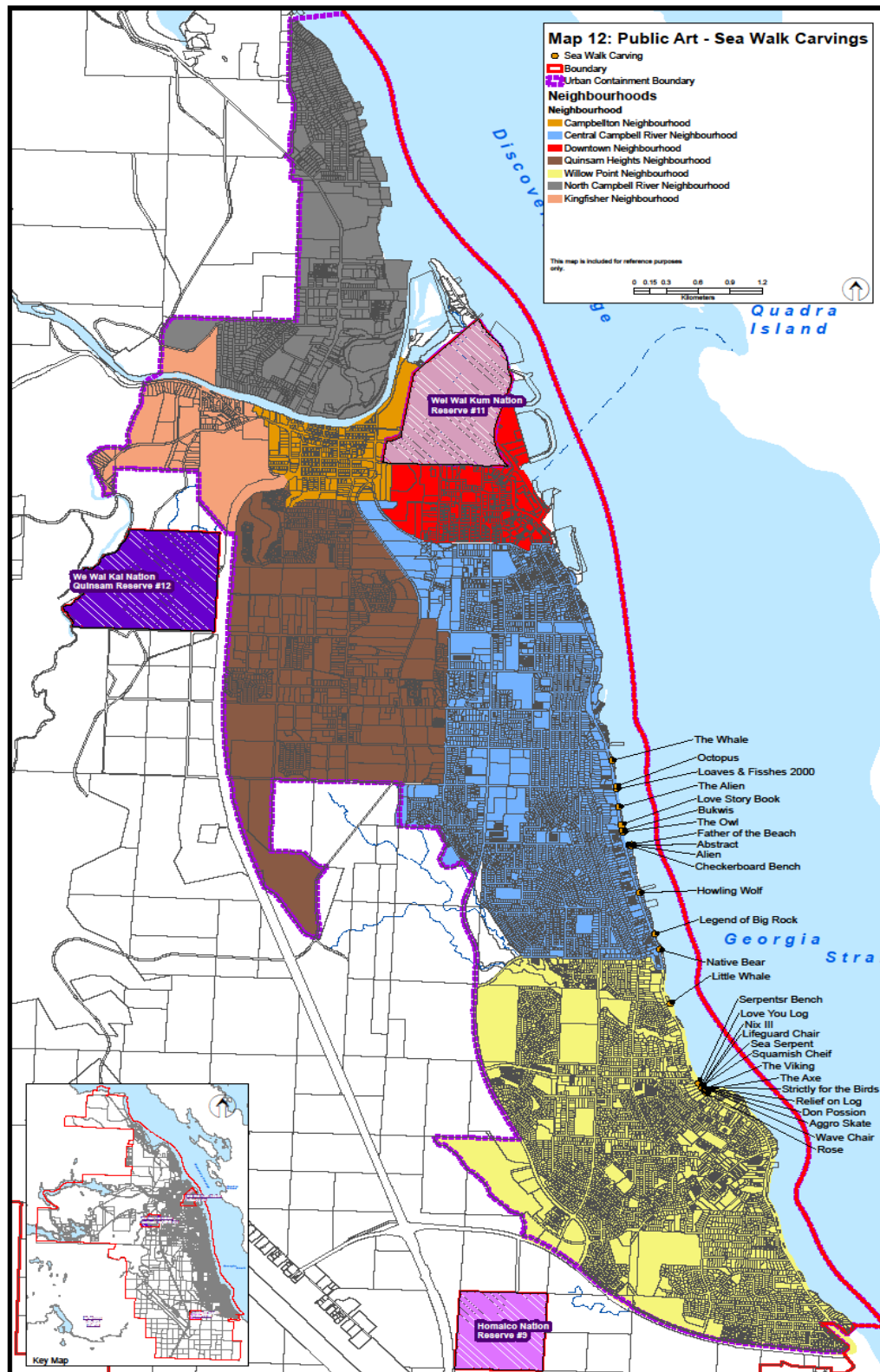


Figure 83: Public Spaces and Landmarks

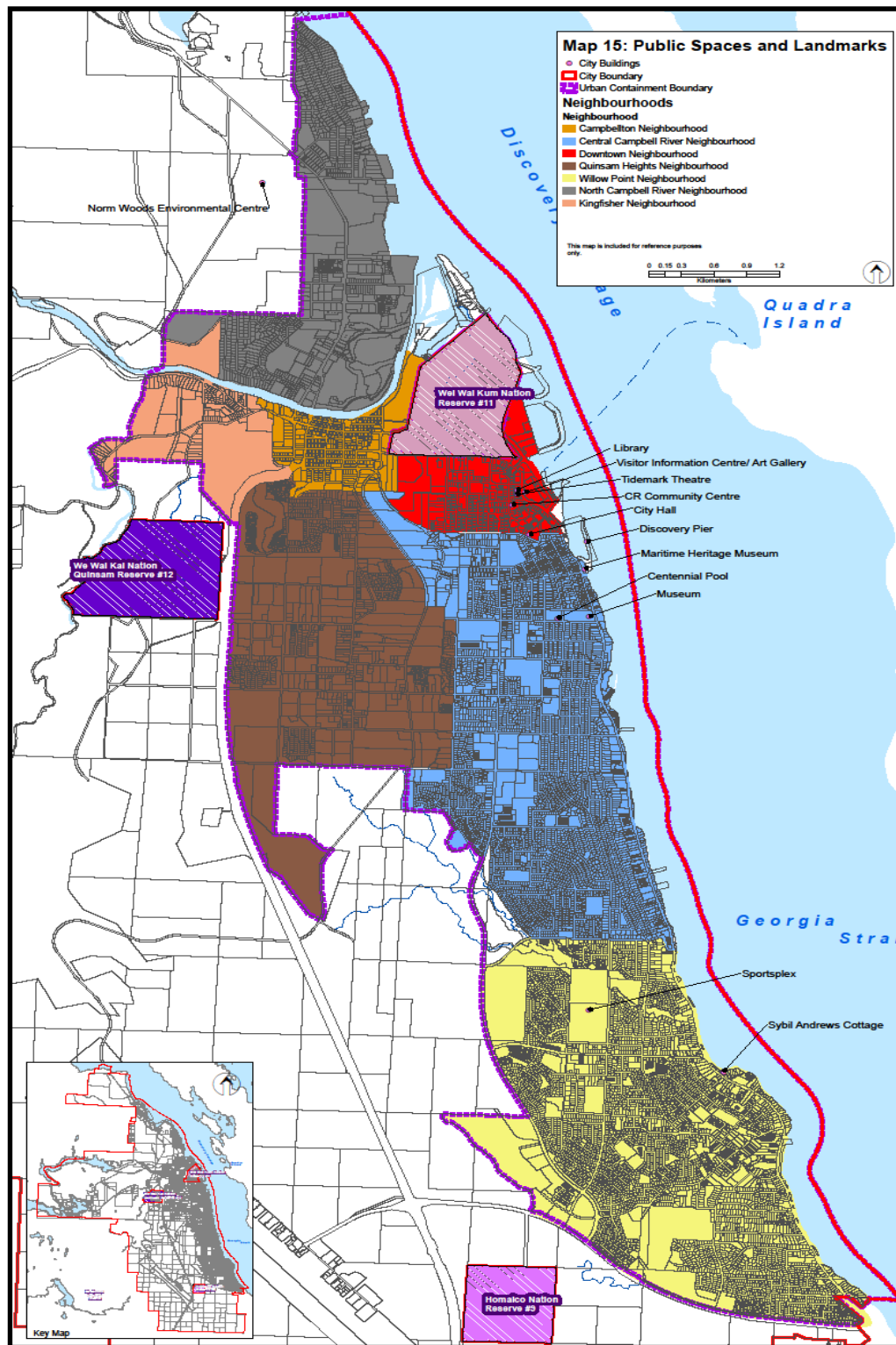


Figure 84: Social Spaces

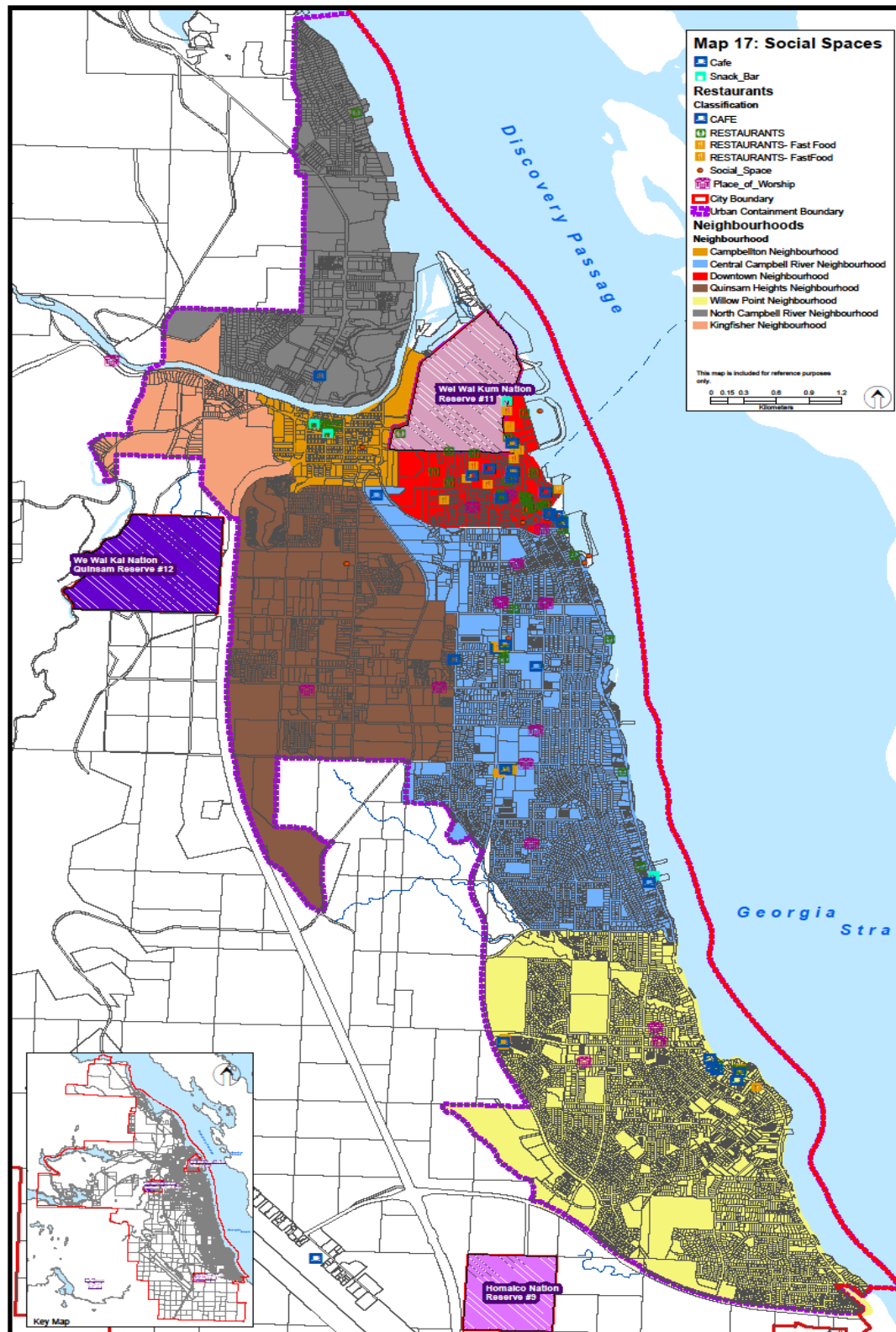


Figure 85: School Locations and Boundaries

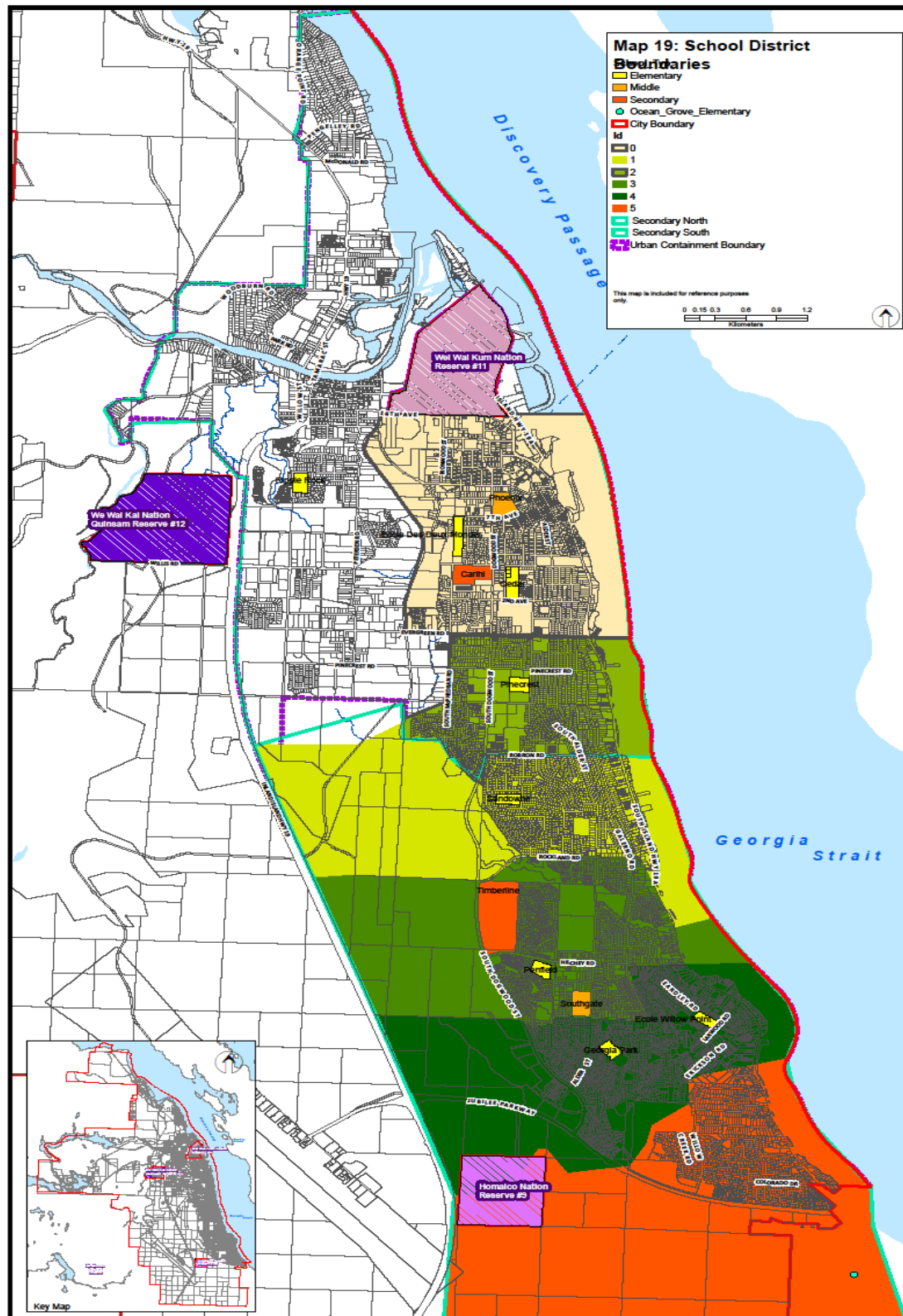


Figure 86: All Education – Schools and Colleges

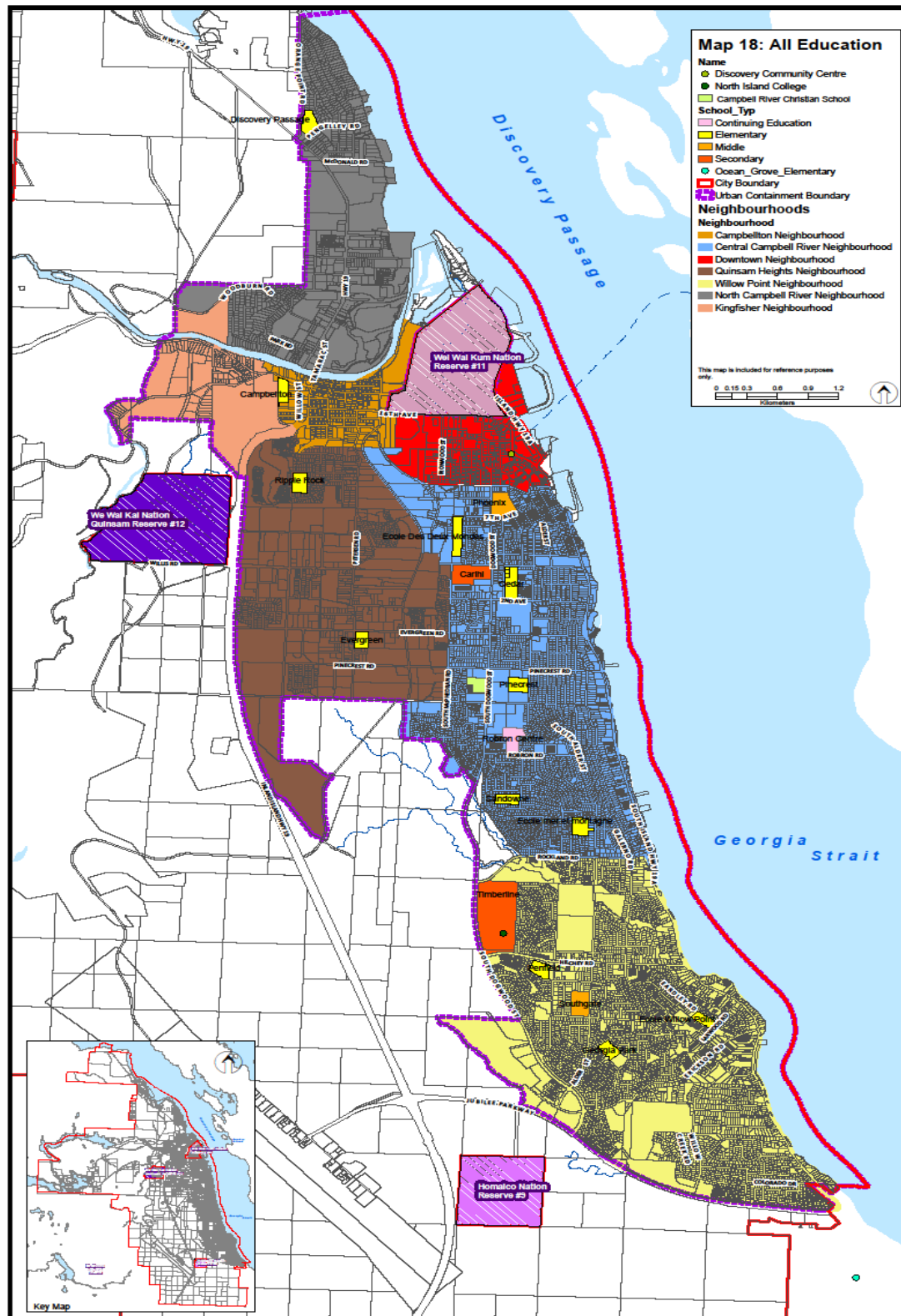


Figure 87: Health Services

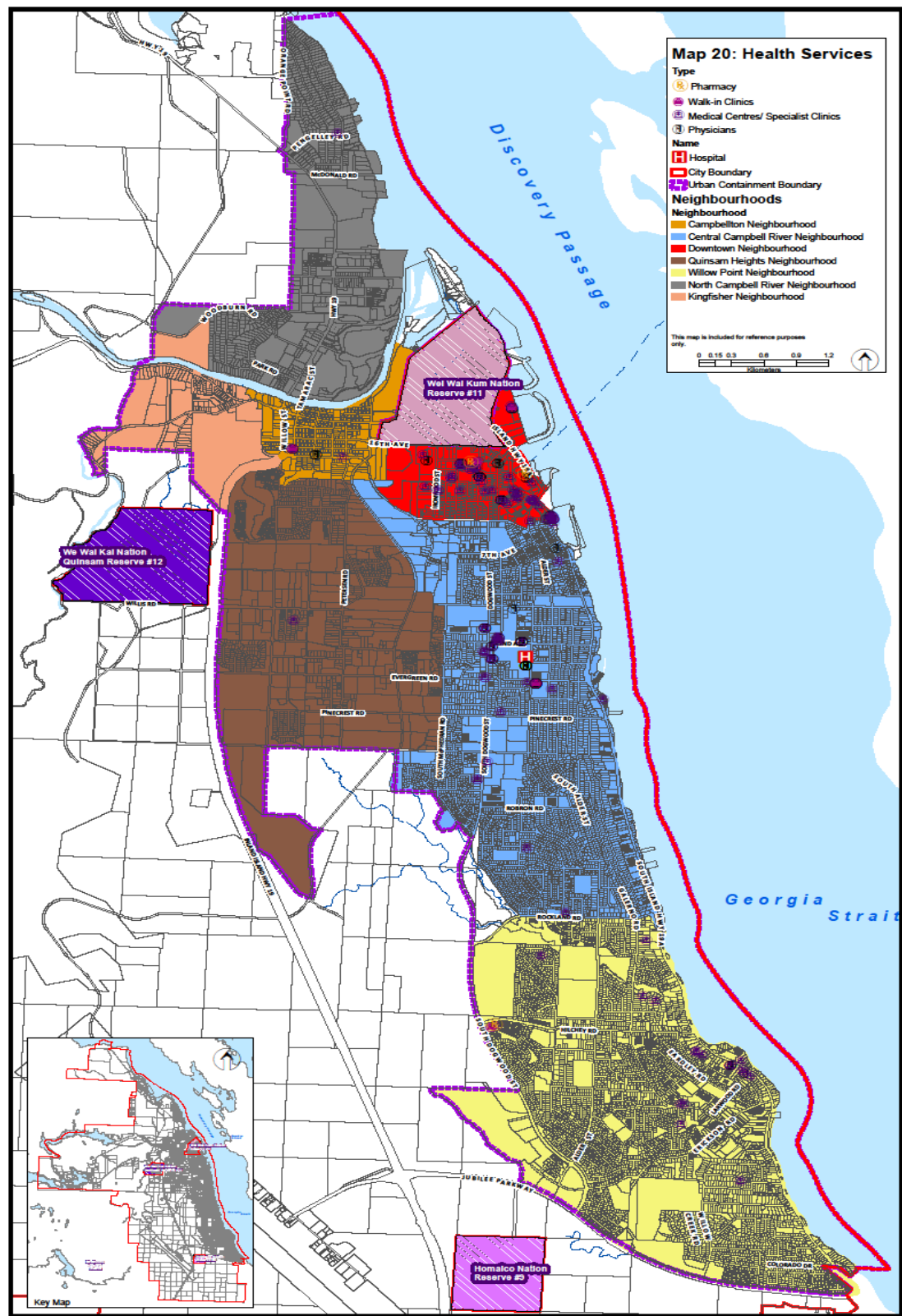


Figure 88: Social Services

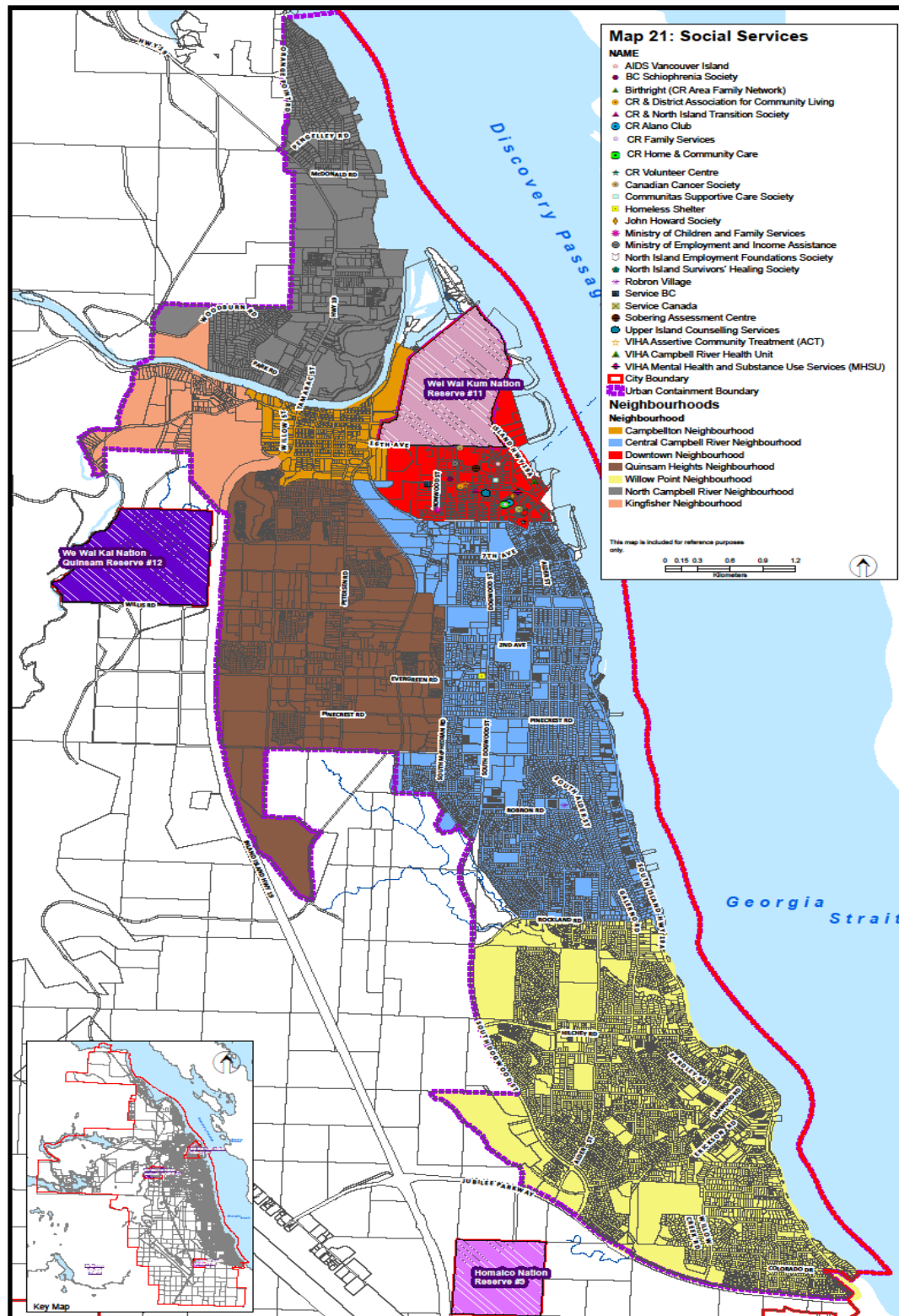


Figure 89: Food Oasis

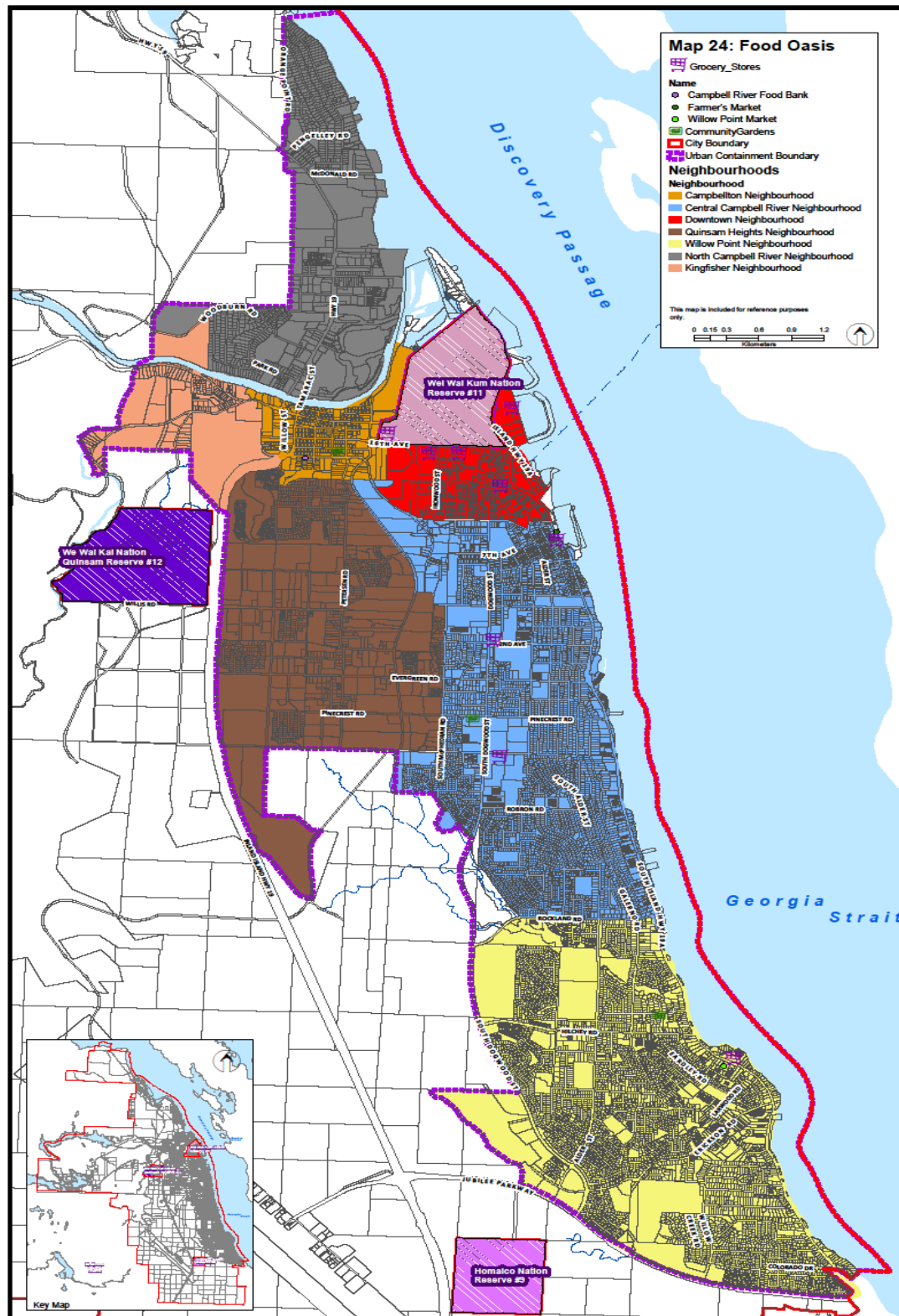


Figure 90: Food Swamps

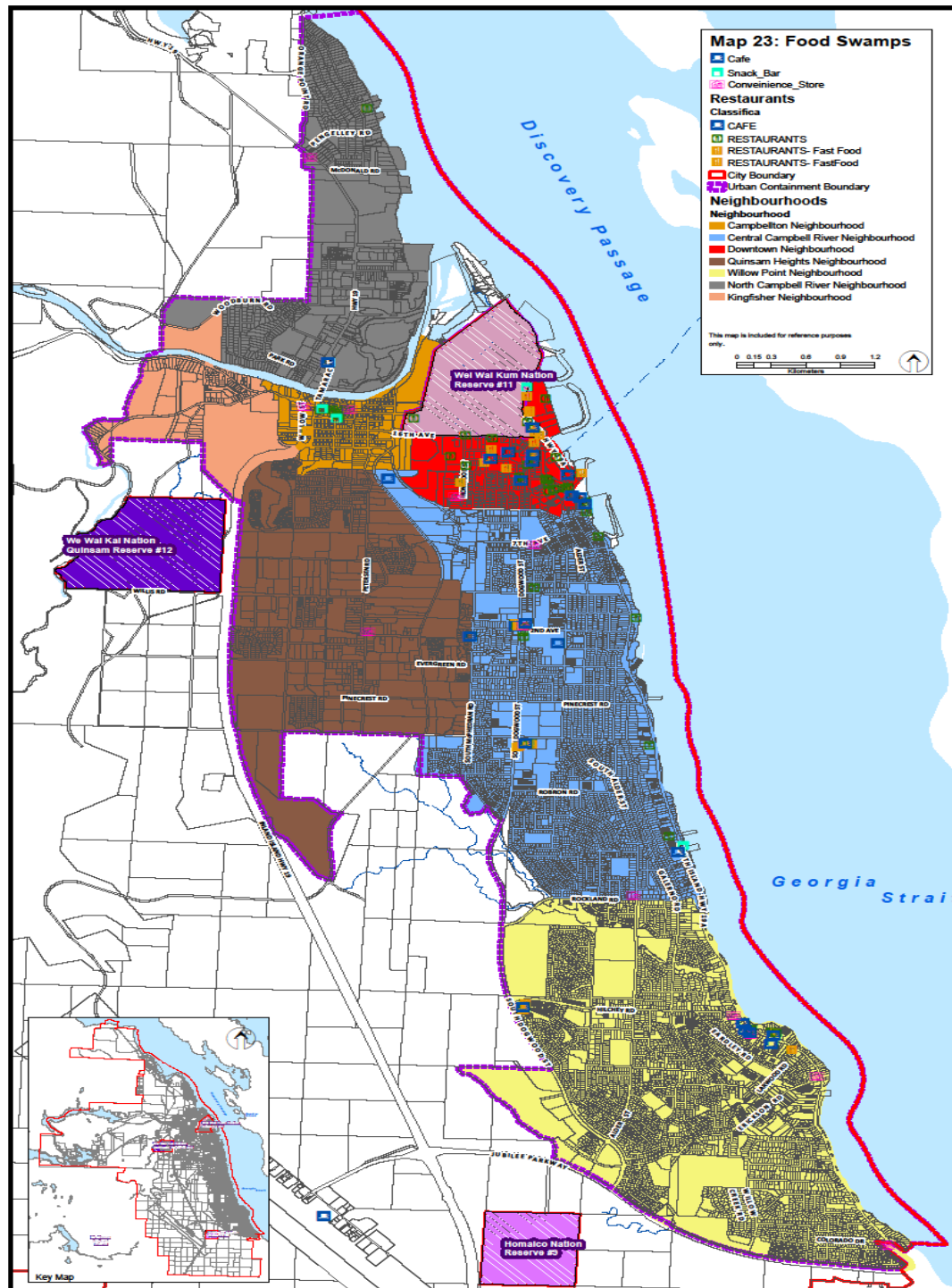


Figure 91: Natural Habitats and Environmentally Sensitive Areas

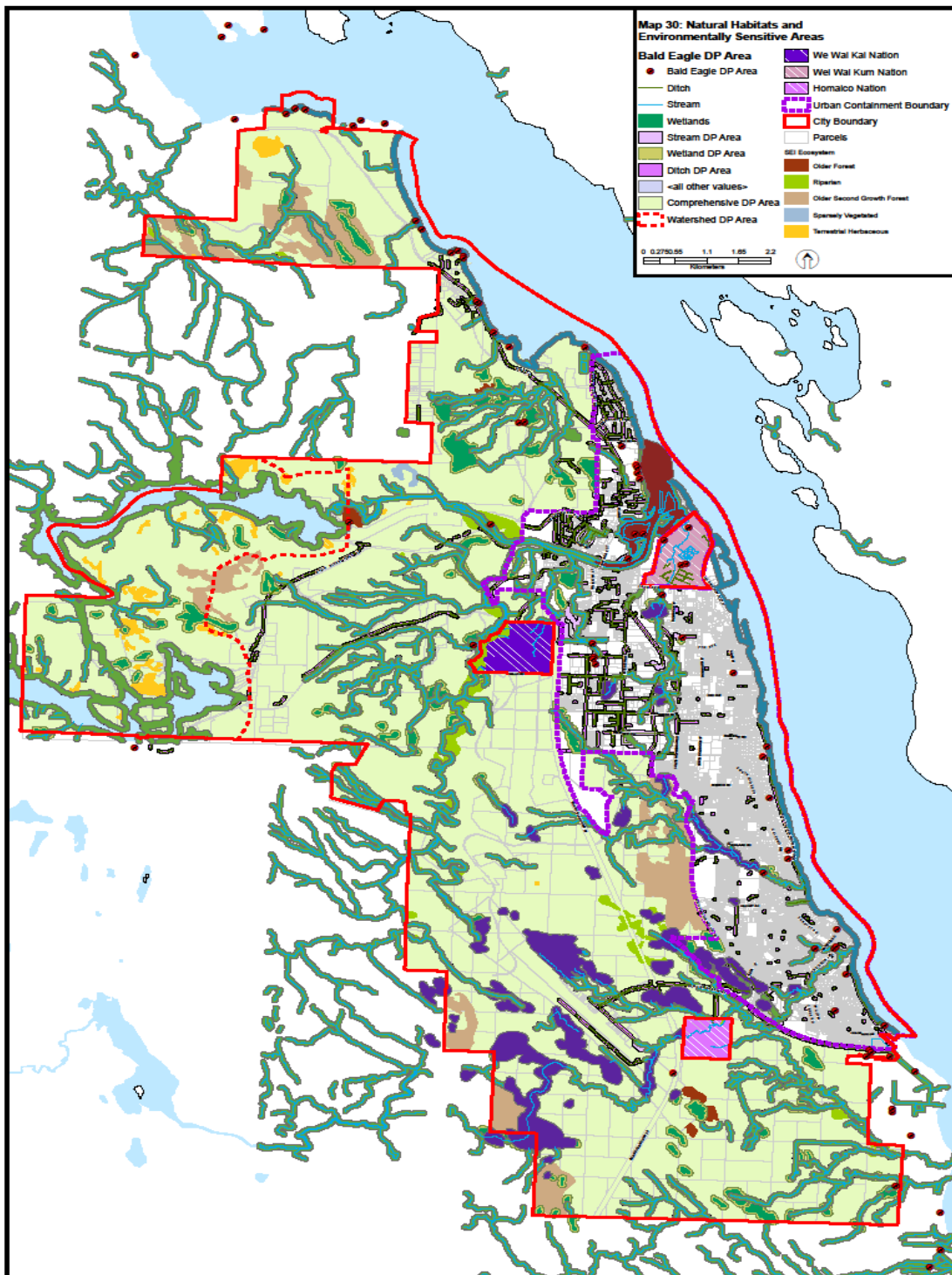


Figure 92: Woodstove Exchange Program

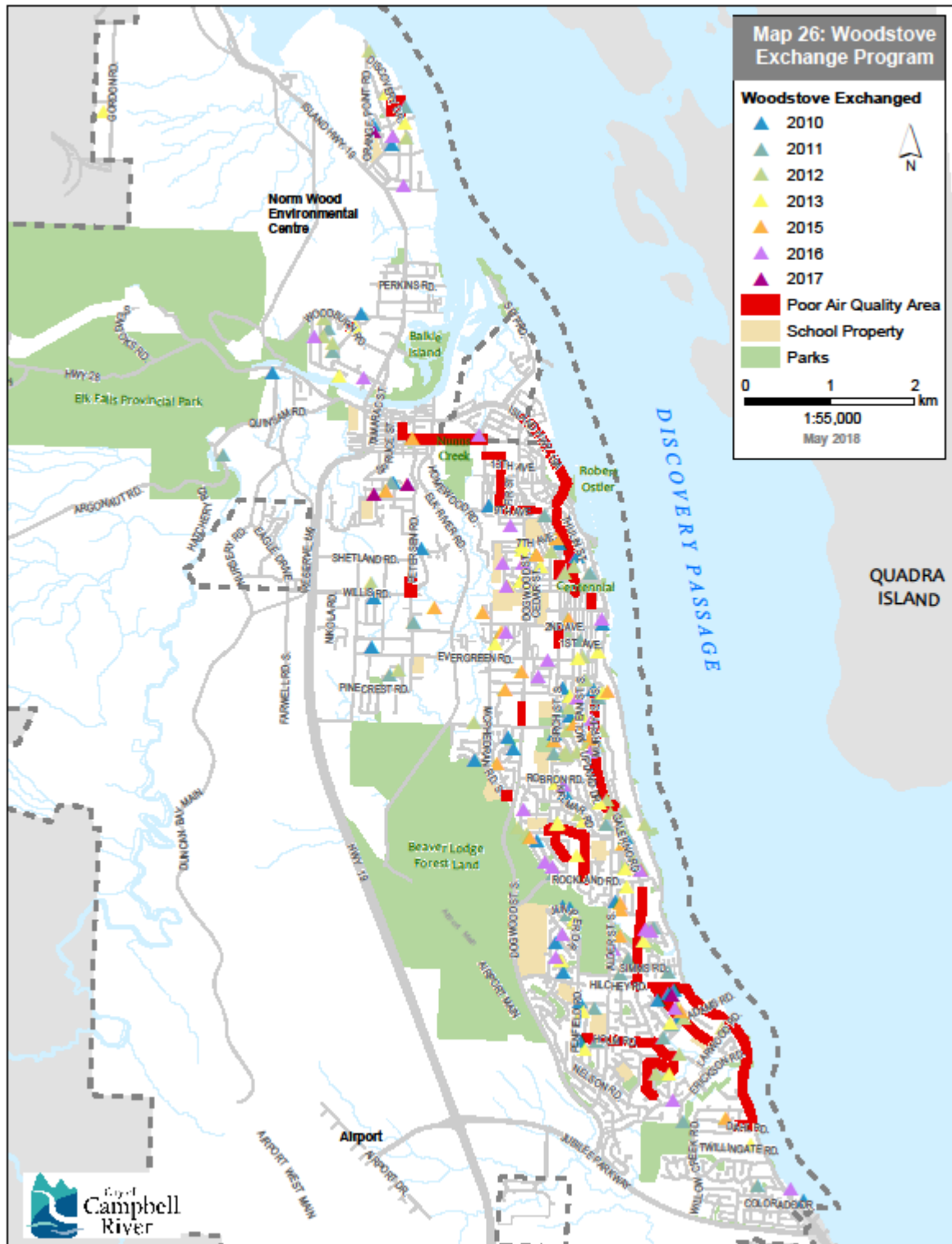
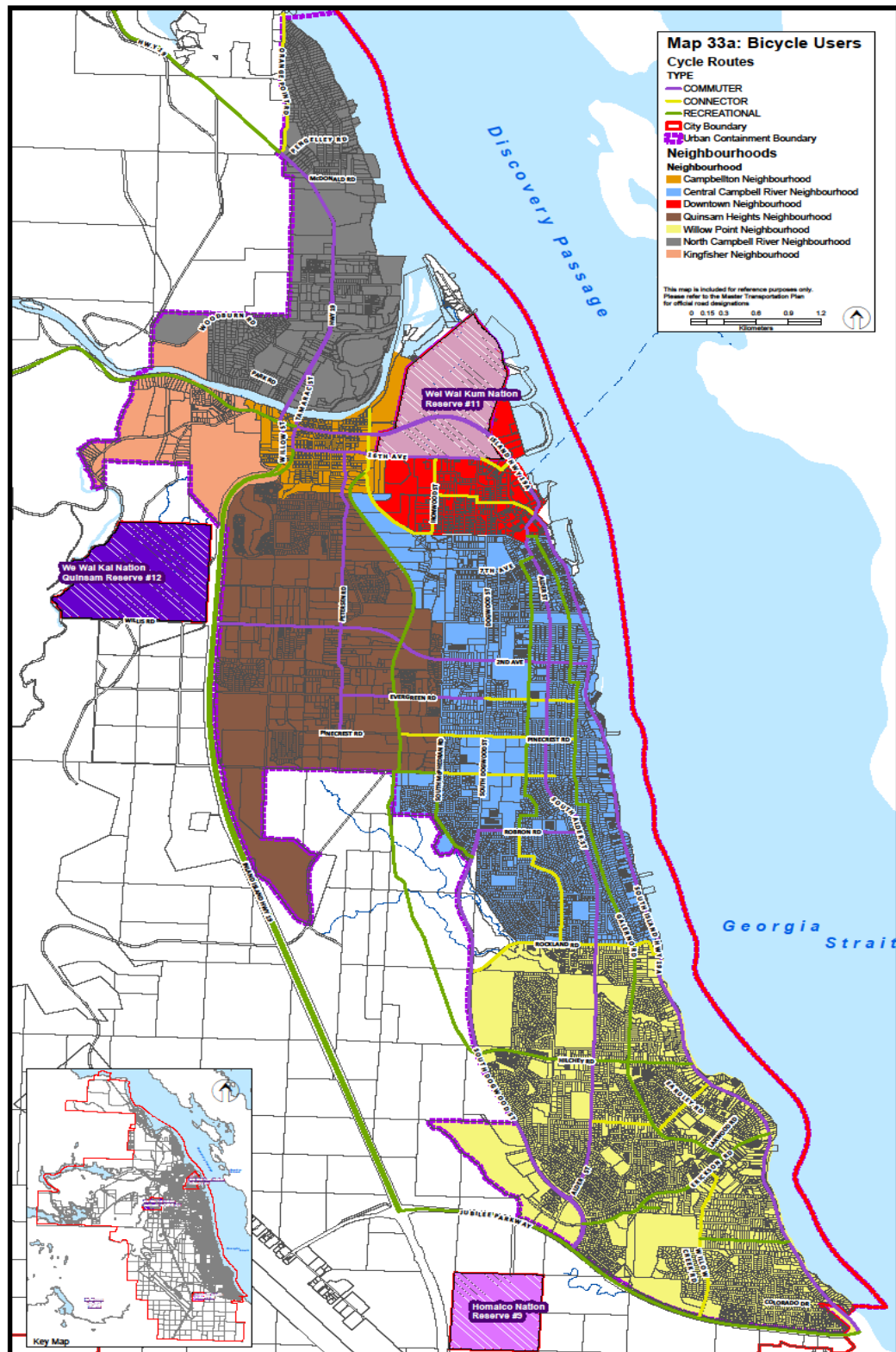


Figure 93: Bicycle Users



References

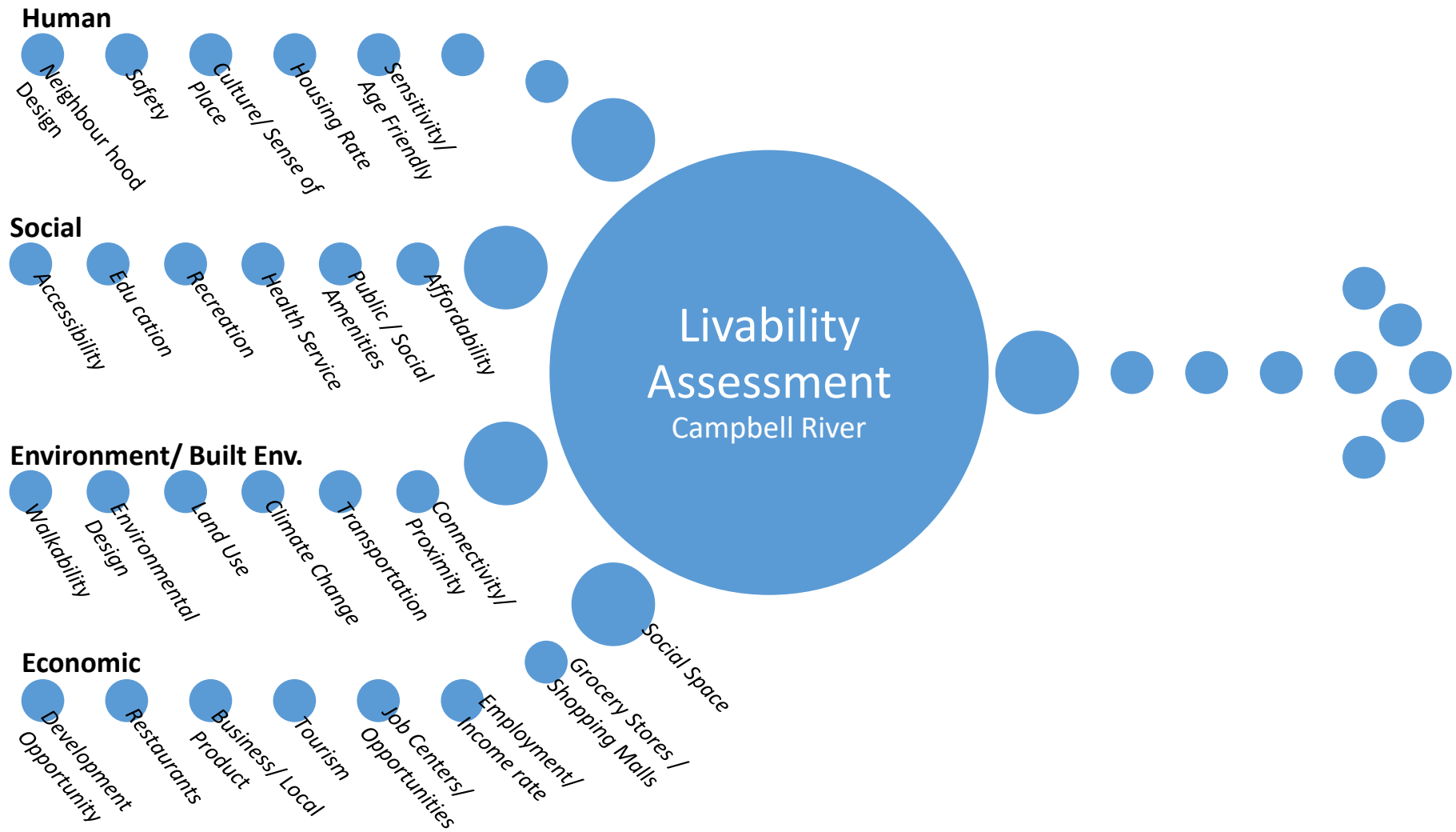
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APPENDICES

DRAFT

Appendix 1: Livability Assessment



Category	Indicator	Metric of Measurement
1. Neighbourhood Design	1.0 Housing Types/ Land Zoning according to OCP- Single Family, Multi family, Apartments, Mixed Housing	# of housing types available % of housing types according to OCP and Zoning regulation # of vacant lots available with zoning type
	1.1 Compact Housing- Density	Density: # of dwelling over street length
	1.2 Social Amenities	# and types of amenities
	1.3 Sidewalks and Trails	# of completed sidewalks and trails (one side or both sides of the street) % of off and on street bike paths
	1.4 Bus Shelters/ Routes	# of bus stops with a shelter/ without a shelter # of bus stops with a bench/ without a bench Bus routes in a neighbourhood/ # of accessible buses and routes
	1.5 Playground/ Parks	# of parks and playground % of green spaces present
	1.6 Safety- Traffic Control and Streetlights	# of traffic signal lights/ pedestrian lights

	1.7 Aesthetics and Livability- Attractiveness to sociability, businesses, connections	Ranking of Neighbourhoods according to features and amenities like child care, adult care, schools, grocery stores, washrooms, social centres, employment nodes, etc.
2. Safety	2.0 Crime Rate	Crime Severity % change in crime Police or crime prevention activities
	2.1 Street Lights, Paths and Sidewalks, Signs	# of pedestrian lanes or crosswalks # of pedestrian paths – bike or foot # of pedestrian lights # street signs – school zones, speed limits # of streets per kilometre with or without lights- pathways (paved and unpaved path), streets or sidewalks, waterfront paths, and parks # of traffic- fatalities and injuries (bicycle and pedestrian related)
	2.2 Emergency response aid	# of emergency units or stations e.g. ambulance and fire stations Response time
	2.3 Emergency equipment e.g. fire hydrate	# of fire hydrants present

3. Culture and Sense of Place	3.0 Festivals, Fairs, Public Art	# of activities held yearly (City and non-City organised)
	3.1 Public and Green Space - Community Gardens - Place Making	# of open public space- location hectare of public space # of green space % of usage
	3.2 Community Participation and Activities	# of community held activities Participation rate
	3.3 Cultural Venues and Facilities	# of performance centres # of community centres and halls # of accessible and affordable opportunities in the Arts
	3.4 Heritage Preservation/ Identity/ History	# of heritage preservation sites # of museum and activities held # of First Nations Lands
	3.5 Public Library	# of programs offered # of accessible options provided – Handy Dart or community transportation Circulation options available
	3.6 Social Space	# of churches # of space for events or socialization # coffee shops and restaurants

		# of theaters- movies, and plays # Live music venues # Sport stadiums and activities
4. Recreation	4.0 After School Program and Summer Program	# of programs offered by community, SRD, and other sponsors or partners- sports, arts, # of affordable or transportation options # of participants
	4.1 Private Program- Clubs	# of clubs present
5. Sensitivity/ Age Friendliness	5.0 Age group/ Demography/ Population density	Total population- % of population per year and annual growth % % of residents according to age group
	5.1 Respect and Inclusion	Reconciliation through place making
	5.2 Child Care / Adult Facilities	# of child care facilities and adult care facilities Capacity of care facilities and adult care facilities
6. Housing Rate	6.0 Vacancy Rate- rental and ownership	# owned occupied units # of rental units # of occupants in houses according to house type
	6.1 Age of housing	Year built # of new developments

	6.2 Brownfields or Vacant lots	# of individual sites per hectare # of white sites or undeveloped lots # of vacant lots use for parking
	6.3 Housing price and Affordability – Income level	Average sale price and average rent per one bedroom, two bedrooms, etc. Affordability of housing – housing need vs income Suitability of housing- rooms per person
	6.4 Housing Conditions- housing standards according to Provincial Bylaw	# of housing below standards Condition of housing- safe housing (needing maintenance)
	6.5 Non-market Housing Provision - Temporary/ Emergency Shelters	Transitional, supportive and affordable housing # of sites available Types of sites and vacancy rates % of usage
7. Accessibility/ Walkability	6.6 Proximity to Daycare, Elementary, High School, College	# of schools located within walking distance (400- 1000m) # of day cares located within walking distance (400- 1000m)
	7.0 Recreation – curling rinks, ball fields, golf, swimming pools etc.	# of recreational sites % of sites located within a residential area / proximity to a school

	7.1 Parks and playgrounds	# of parks and playgrounds within walking distance # of picnic tables or benches included
	7.2 Grocery stores, convenience stores, coffee Shops	# of stores within walking distance (400-1000m) # of stores with primary and complete food stocks within walking distance
	7.3 Social services and health care	# of Adult Care Facilities, Community Care Centers, Walk-in-Clinics, Pharmacies within walking distance # of Specialist Clinics/ physicians within walking distance
	7.4 Proximity to employment nodes and village centres	# of jobs within 10-20 minutes walk Major nodes at Village Centres in OCP
8. Education	8.0 School District 72	# of Elementary, Middle, and High Schools
	8.1 Private/ Public schools attendees	Child care on school sites Transportation services to school and to after school activities Historic enrollment and current enrollment capacity
	8.2 Higher education and Vocational learning – Skill training, Adult Education	# of post secondary institution # of vocational courses available and locations
	9.0 Hospitals, Walk-In Clinics, Pharmacies	# of walk-in clinics, hospitals, pharmacies # of doctors per capita

8. Health Service		# of specialists per capita
	9.1 Social services (mental health, substance abuse clinics, shelter)	# of social services available Capacity of shelters
9. Food Systems/ Food Security	10.0 Food banks	# of food banks
	10.1 Access to fresh products	# of grocery stores
	10.2 Community gardens	# of community gardens
	10.3 Food premises	# of food premises classified under food swamp, food deserts, and food oasis # of premises available in a neighbourhood # of Farmers market or local produce
10. Environmental Design	11.0 Waste Management and Services – Water, sewage, storm, energy, telecommunication	# of services available in the City # of landfills # recycling deposits Waste per capita
	11.1 Traffic Control	# of lanes and traffic signal lights # of ICBC policies – approximate number of drivers citywide

	11.2 Natural space and Habitats – green space, woodlands, trees, stream and lake systems	% of tree canopies coverage per street # of habitat present % of protected green space in the city e.g. ALR lands # of water bodies- streams and lake % of natural spaces used for tourism and recreational purposes
	11.3 Air Quality	% of fine particles annual
	11.4 Water Quality	Measured against Canadian Drinking water Quality Guidelines
11. Climate Change	12.0 Natural Hazards – sea level rise	% of areas to be affected # of dwellings/ properties in the area Degree of effect
	12.1 Greenhouse gas emissions	% of green house emission created annually and source of emission # of programs or methods available to mitigate emission
12. Transportation	13.0 Roads – bike routes, green loops, trails	% of mode of transportation- # of users # of traffic/ road related injuries- cycling and pedestrians
	13.1 Trails and Sidewalks	# of trails and conditions
	13.2 Public Transportation-Transit, Taxi	# of public transportation options available

		<p>\$ rate or fare of transportation</p> <p># of subsidies for other transit options e.g. UP pass for college students, student fare, seniors fare, etc.</p> <p>% of commuters?</p>
	13.3 Private Cars – electric and non-electric	<p># of charging spots</p> <p>% of mode of transportation</p>
	13.4 Bike Racks	# of bike rack and locations
	13.5 Walkability, connectivity, proximity	<p># of transit routes connected to a neighbourhood</p> <p># of trails and sidewalks connected to a neighbourhood</p>
13. Economy	14.0 Local products/ Local Business	Qualitative Description of all indicators
	14.1 Job Centers/ Opportunities	
	14.2 Tourism and Social space	
	Development Opportunity- Commercial, Retail, and Residential space	

Appendix 2: Interoffice Memo – Household Demographics

TO: City Staff
FROM: Heather Kauer
DATE: 29 August 2019
SUBJECT: Population Pyramids

Executive Summary

This memo is a supplement to the population memo provided in April 2019 and details population changes over time by age and gender as well as some specific migration data. The source for the population data is BC Stats and the source of the home buyer information is the Vancouver Island Real Estate Board 2017 Buyer Report.

Geography

The CS (Census Subdivision) covers the area of the City's jurisdiction, aligning with our boundaries. This does not include the three FN reserves, each of which is subject to a separate census count.

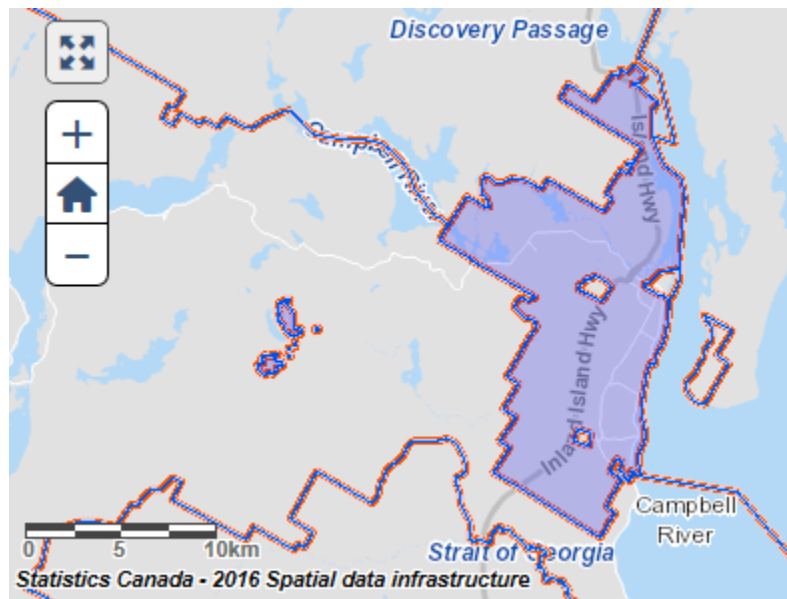


Figure 1: Campbell River CS

What the Data Shows

The graph below shows a comparison between 2016 populations by age and gender and what we might expect the numbers to be in each category, minus the number of deaths, if the 2011 populations had aged 5 years.

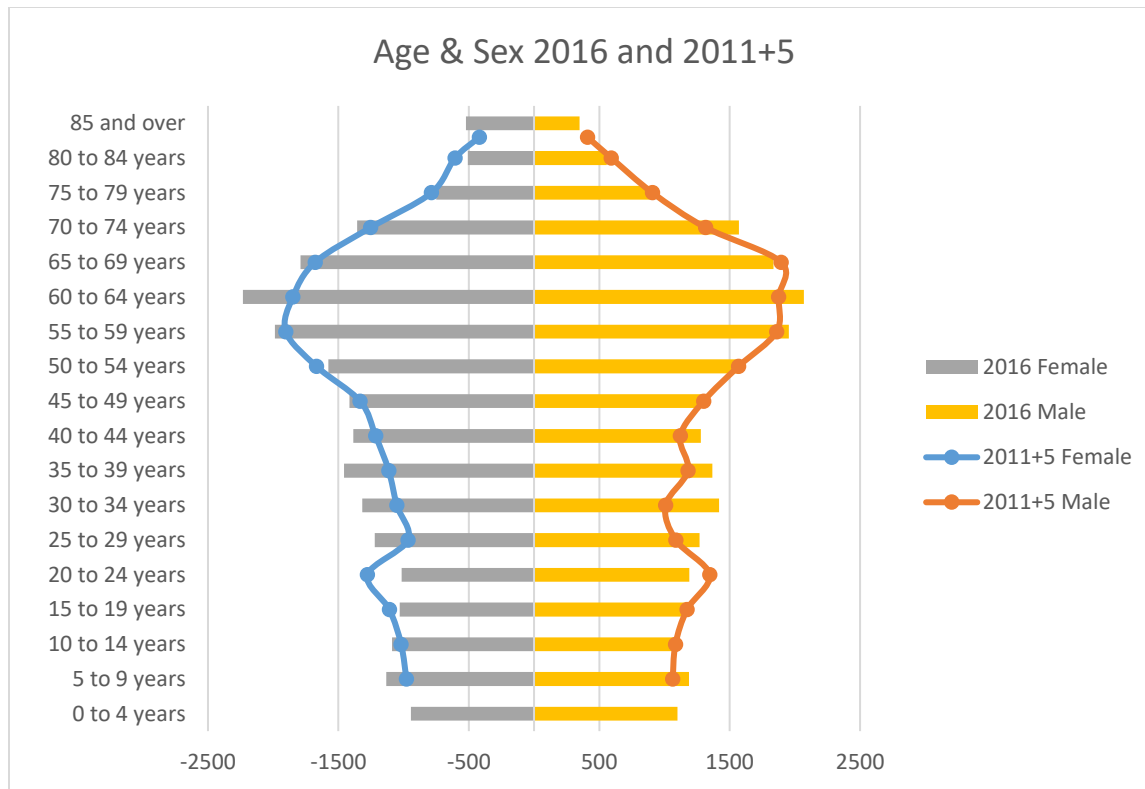


Figure 2: Age & Sex pyramid, 2015 population + 5 years and 2016

As we can see, the 2016 populations in several of the categories vary from what we would have expected if those numbers just represented a 2011 aging population that stayed in Campbell River. Differences in the data, therefore, can reasonably be assumed to be due to migration. The following graph shows these differences in more detail, by plotting the residuals between the two datasets. It appears that there were more women than men who were new to the community in 2016 who were in the 35 to 39, 60 to 69, and 85+ age categories. Conversely, there were more men than women who moved to the city who were in the 30 to 34 and 70 to 84 age groups.

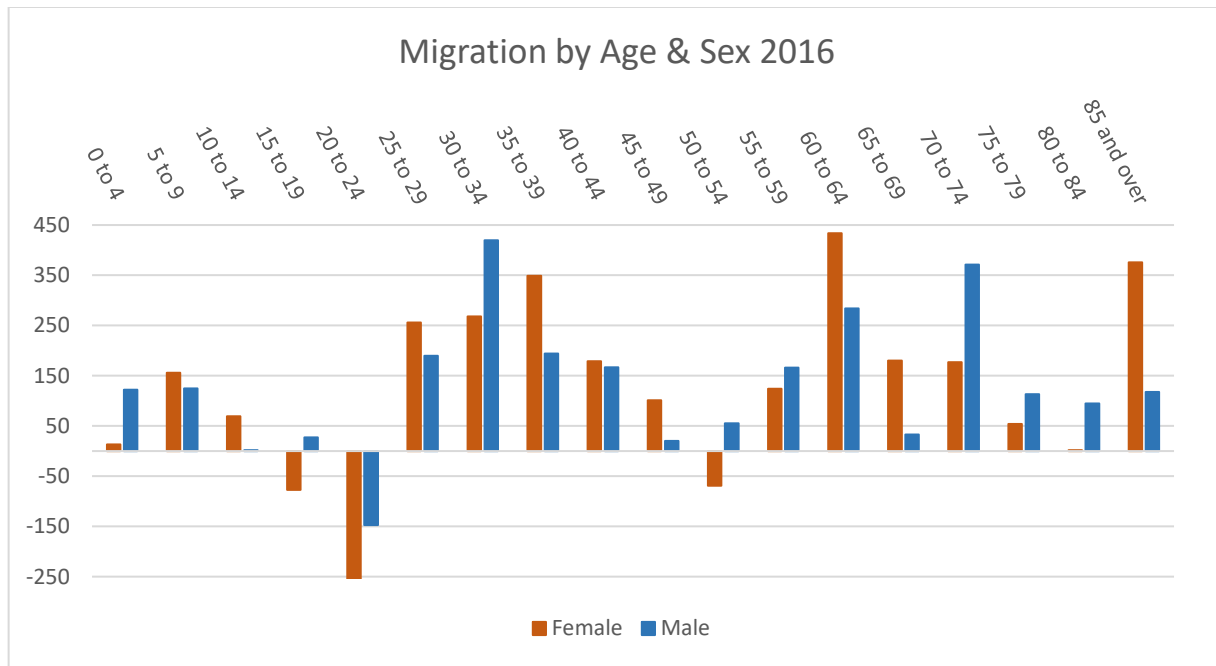


Figure 3: Immigration by Age & Sex 2016

With that in mind, older teenagers and those in their early 20's seem to have moved out of the community between 2011 and 2016 while 25 to 44 year-olds and 55 to 74 year-olds moved in. The largest in-migration groups seem to be women who are 85 and older and men who are 70 to 74.

The following table represents the percentage of the total population in each age category by year:

% of Population by age group	2001	2006	2011	2016
0 to 14	16%	14%	15%	15%
15 to 19	6%	6%	6%	5%
20 to 24	4%	4%	5%	5%
25 to 34	12%	11%	10%	12%
35 to 44	19%	15%	12%	12%
45 to 54	19%	20%	17%	14%
55 to 64	11%	16%	17%	18%
65 to 74	7%	8%	10%	13%
75+	5%	6%	7%	7%

Figure 4: Percentage of Population over time by Age Group

Figure 5 represents the same numbers in graph form:

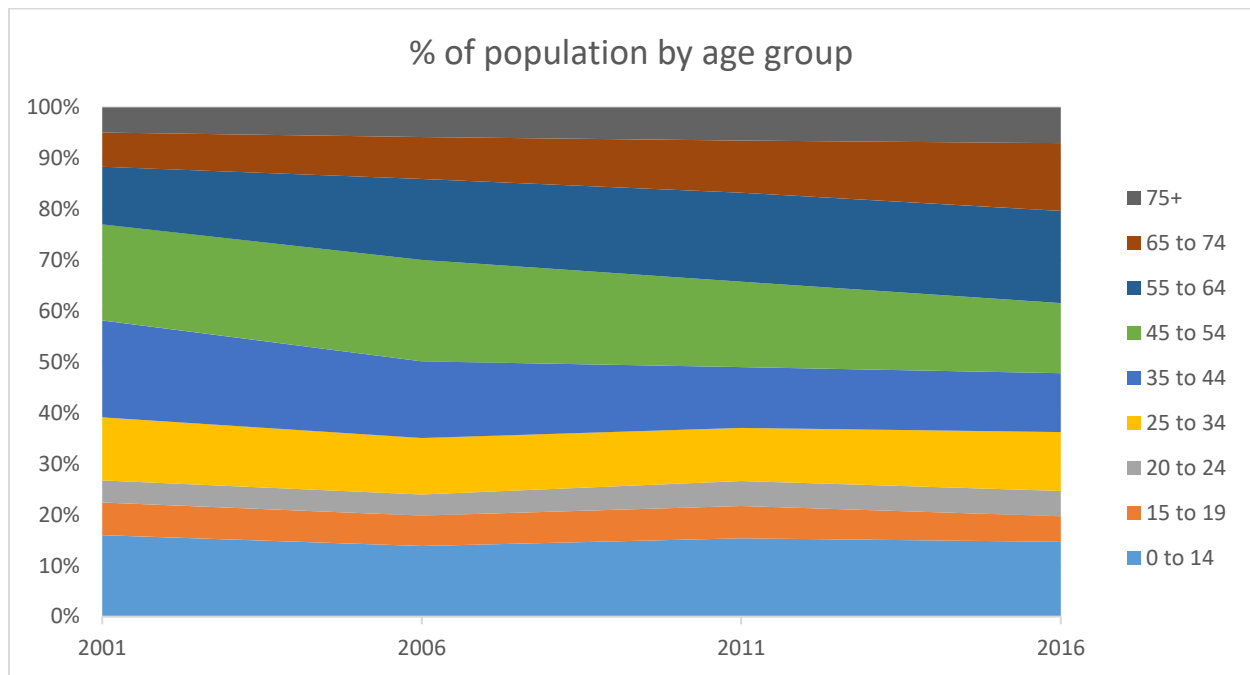


Figure 5: Percentage of Population over time by Age Group

Since the percentage of 20 to 24 year-olds seems to have remained rather steady over time, it appears that out-migration may be a common pattern in Campbell River for this age group, while the percentage of 55 to 74 year olds has climbed steadily, suggesting that Campbell River has become more attractive to seniors.

In terms of the geographical origin of people moving into Campbell River, the following graphs represent where home buyers moved from when they came to the City:

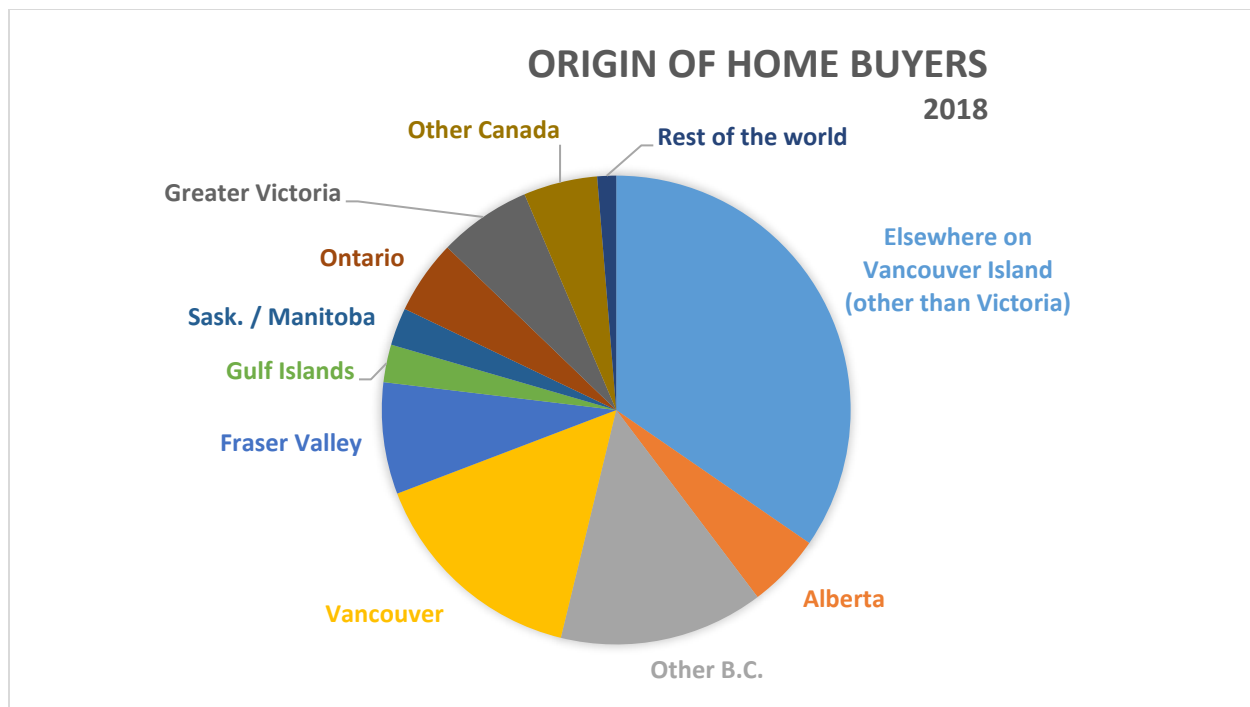


Figure 6: Origin of home buyers from outside Campbell River, 2018 Detail – VIREB 2018 Buyer Report

The 2018 Vancouver Island Real Estate Board 2018 Buyer Report points out that:

“For buyers of residential property, the primary buyer origin for the Campbell River sub-area (determined from 78 responses) was ‘Elsewhere on Vancouver Island’ at 34.6%, followed by ‘Vancouver’ at 15.4%, and ‘Other B.C.’ at 14.1%

‘Elsewhere on Vancouver Island’ and ‘Alberta’ decreased by 9.2% and 3.3%, respectively, from 2017. ‘Other B.C.’ increased 4.8% from 2017.

When aggregated, buyers originating from within B.C. totalled 80.8% of the respondents (an increase of 10.6% from 2017), and those coming from Vancouver Island totalled 41.1%, an increase from 2016 where the total from Vancouver Island was 32.9%...

The major reason for residential property purchase in the Campbell River sub-area was for ‘Principal Residence’, with 83.5% of survey respondents choosing this option. The next highest category was ‘Downsizing’ at 10.3%. These results were consistent with those from 2017.”

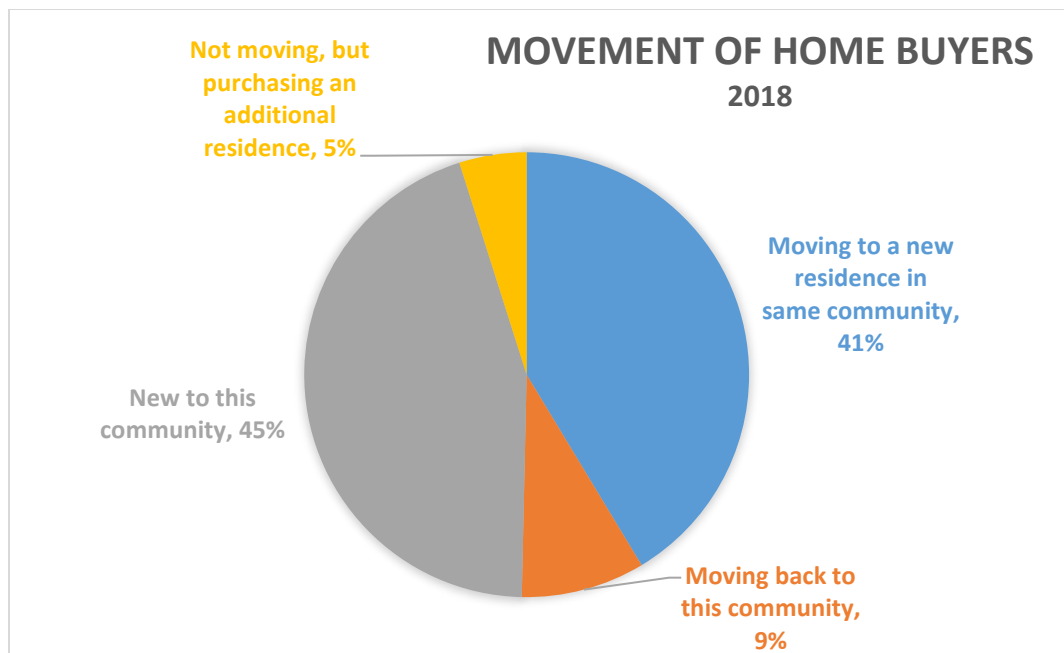


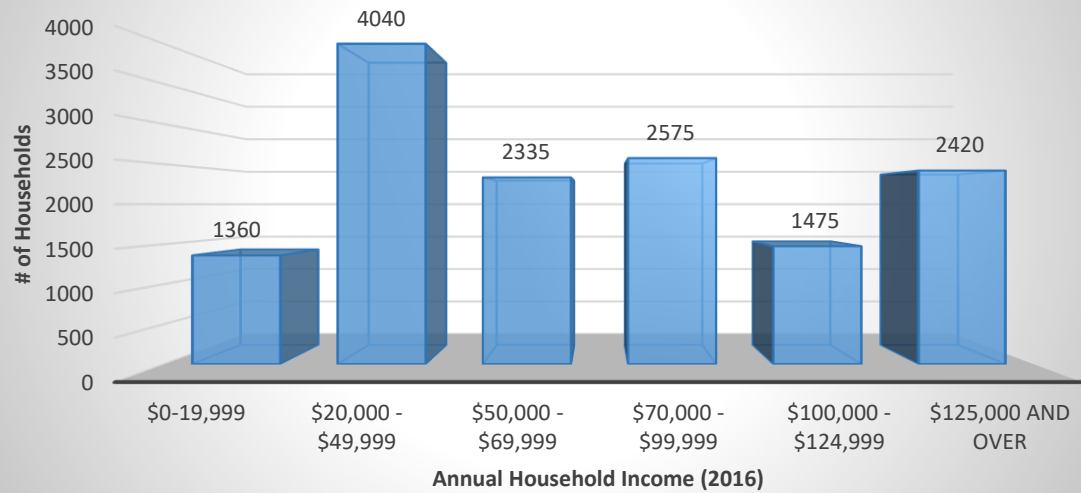
Figure 7: Movement of Home Buyers, 2018

There are three main measures of poverty in Canada but the most common measure is the Low Income Measure (LIM). LIM is a fixed percentage (50%) of median adjusted household income, where "adjusted" refers to the household size or the number of members in a household.

Household size	Pre-tax income
1	22,495
2	31,813
3	38,963
4	44,990
5	50,300

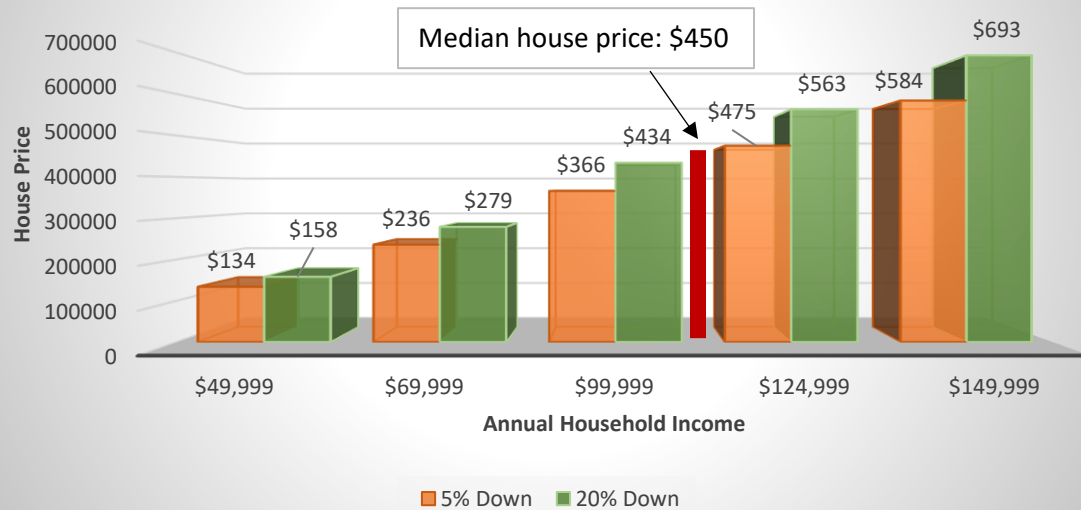
of Households by pre-tax annual income

(Median: \$33,153)



Mortgage Eligible house price by household income

(in \$1,000s)



Appendix 3: Child Care Facilities (VIHA Listing)

NAME OF CENTRE	CATEGORY	CAPACITY
Alisha's Angels	IHMACC	8
Aster Meadow Early Learning and Care	IHMACC	8
Bright Beginnings	Family Child Care	7
Cari's Infant and Toddler Centre	Group Child Care (under 36 months)	24
Central Station Daycare	Family Child Care	7
Christian Life Children's Centre	Group Child Care (under 36 months)	180
Coastal Friends Family Child Care	Family Child Care	7
CR Generations Children's Centre	Group Child Care (school age)	10
CR Parks and Recreation Community Kids Preschool	Group Child Care (30 months to school age)	16
Evergreen Child Care Centre	Group Child Care (school age)	20
Figgy's Place Family Childcare	Family Child Care	7
Forest Circle Child Care	Group Child Care (under 36 months)	40
Gabby's Place	Family Child Care	7
Gran's Little Paradise	Family Child Care	7
Hemlock Early Learning and Care Centre	Group Child Care (under 36 months)	12
Holling's Child Care	Family Child Care	7
Island Kids	Family Child Care	7
Island Life Early Learning Centre Ltd.	Group Child Care (30 months to school age)	16
Kid N Kaboodle Family Childcare	Family Child Care	7
Kidz Connection Childcare	Group Child Care (school age)	160
Kidz Corner	Group Child Care (30 months to school age)	85
Kindred Spirits Family Child Care	Family Child Care	7
Leishman Early Learning and Care Centre	Group Child Care (30 months to school age)	25
Little Duckling Childcare	Family Child Care	7
Little Forest Daycare	Family Child Care	7
Little Fry Daycare	Group Child Care (30 months to school age)	32
Little Hearts and Hands	Family Child Care	7

Little Lady Bugs Childcare	Family Child Care	7
Little Monsters Childcare	Family Child Care	7
Little Orca's Early Learning Centre	Group Child Care (30 months to school age)	16
Little People Family Daycare	Family Child Care	7
Little Squiddiez	Family Child Care	7
Little Wonders	IHMACC	8
Magic Daycare	Family Child Care	7
Magic Moments Montessori	Group Child Care (30 months to school age)	15
Merry Land Family Child Care	IHMACC	8
Mini Monsters Daycare	Family Child Care	7
Montessori Minds Childcare Centre Ltd	Group Child Care (30 months to school age)	30
Noah's Ark Family Daycare	Family Child Care	7
Ocean Grove Family Daycare	Family Child Care	7
Owl's Tree Daycare	Multi-Age Child Care	8
Panda Bear Daycare	Multi-Age Child Care	8
Playful Spirit	Family Child Care	7
Pookanooks Child Care	IHMACC	8
Puddle Jumpers	Family Child Care	7
Qwallayuw Aboriginal Head Start	Preschool (30 months to school age)	20
Ready Set Grow Family Daycare	Family Child Care	7
Right at Home Group Childcare	Group Child Care (school age)	19
Sara's Strawberry Patch	Family Child Care	7
Sea Stars Child Care	IHMACC	8
St. Patrick's Church Preschool	Preschool (30 months to school age)	20
Sunshine Playschool	Preschool (30 months to school age)	53
Sweetpeas Child Care	Group Child Care (30 months to school age)	25
The Little Rascals Early Learning Centre	IHMACC	8
The Wetcoast Childcare	Family Child Care	7
Willow Point Children's Centre	Group Child Care (30 months to school age)	24

Appendix 4: Change in Crime Severity

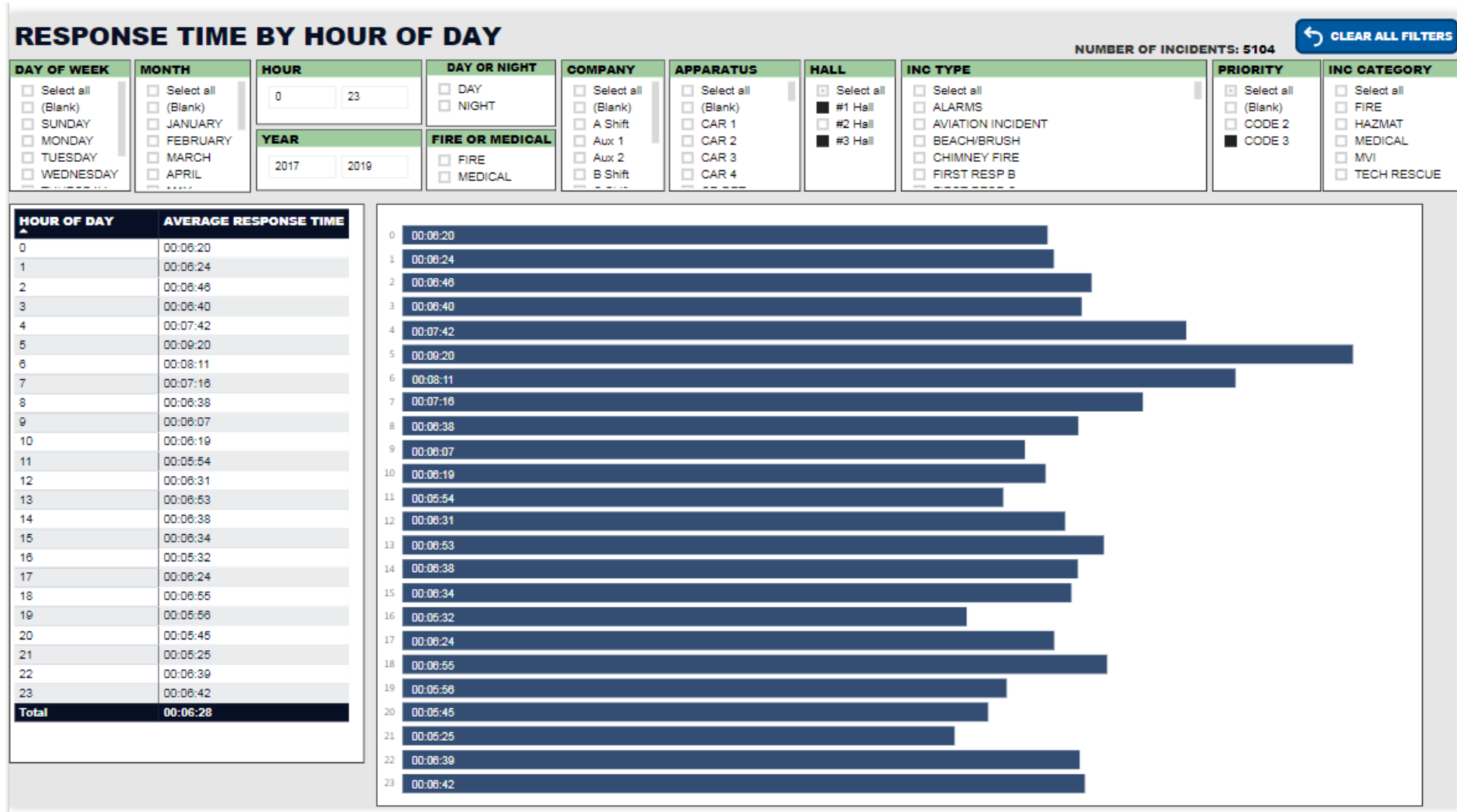
NATIONAL	2018	2017	+/- Chg.	% Chg.
Overall Crime Severity	75	73.6	1.4	1.9%
Violent Crime Severity	82.4	81.3	1.1	1.4%
Non-Violent Crime Severity	72.2	70.7	1.5	2.1%

BRITISH COLUMBIA	2018	2017	+/- Chg.	% Chg.
Overall Crime Severity	87.67	87.27	0.4	0.5%
Violent Crime Severity	73.42	74.61	-1.19	-1.6%
Non-Violent Crime Severity	92.59	91.62	0.97	1.1%

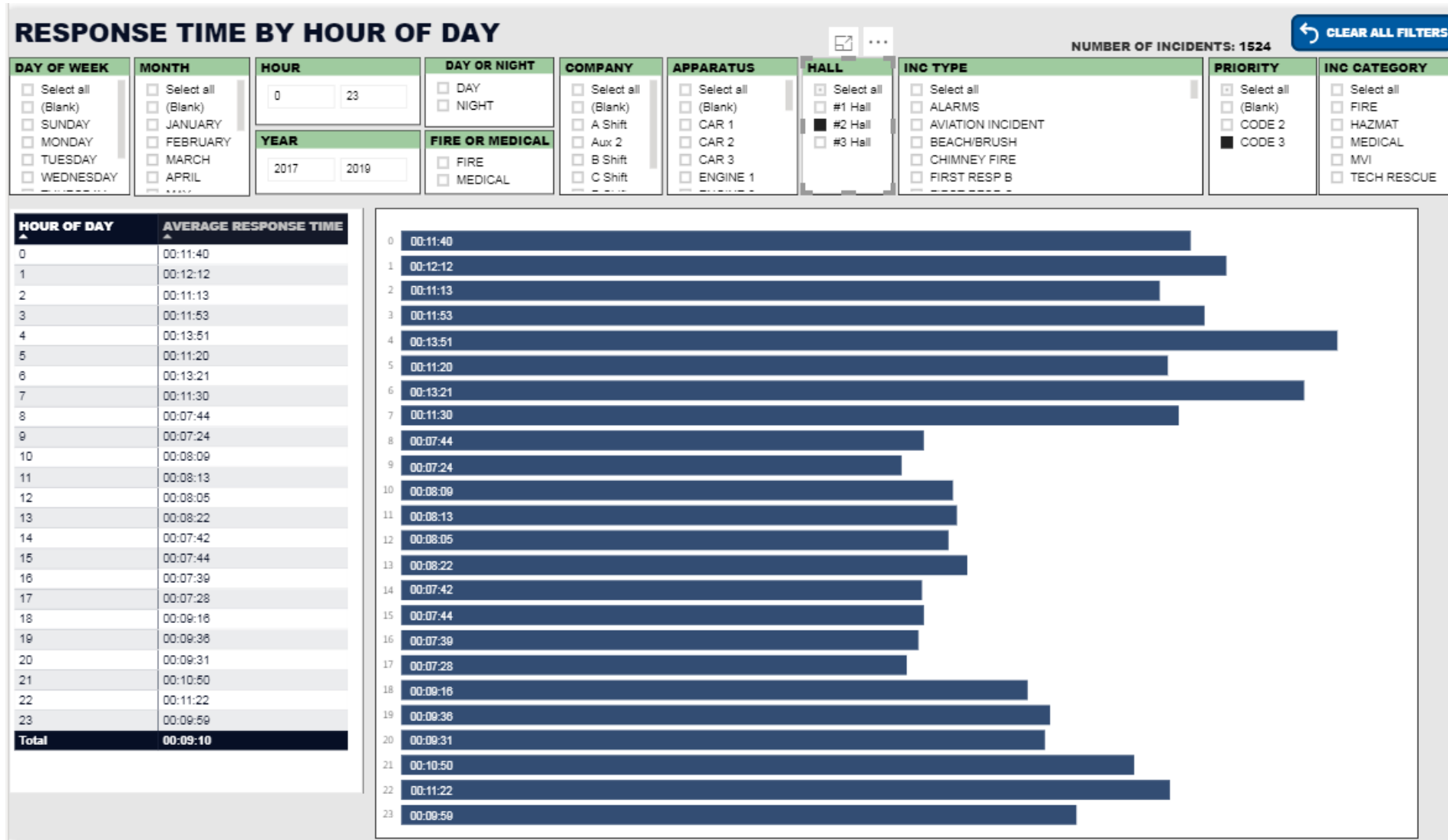
CAMPBELL RIVER	2018	2017	+/- Chg.	% Chg.
Overall Crime Severity	84.18	85.54	-1.36	-1.6%
Violent Crime Severity	76.69	81.38	-4.69	-5.8%
Non-Violent Crime Severity	86.68	86.84	-0.16	-0.2%
COURTNEY	2018	2017	+/- Chg.	% Chg.
Overall Crime Severity	96.18	109.63	-13.45	-12.3%
Violent Crime Severity	77.21	84.35	-7.14	-8.5%
Non-Violent Crime Severity	102.78	118.46	-15.68	-13.2%
PORT ALBERNI	2018	2017	+/- Chg.	% Chg.
Overall Crime Severity	148.4	137.99	10.41	7.5%
Violent Crime Severity	141.65	153.69	-12.04	-7.8%
Non-Violent Crime Severity	150.49	132.02	18.47	14.0%
PARKSVILLE	2018	2017	+/- Chg.	% Chg.
Overall Crime Severity	119.79	76.31	43.48	57.0%
Violent Crime Severity	44.9	39.9	5	12.5%
Non-Violent Crime Severity	146.45	89.23	57.22	64.1%
NANIMO	2018	2017	+/- Chg.	% Chg.
Overall Crime Severity	117.85	97.52	20.33	20.8%
Violent Crime Severity	83.81	76.71	7.1	9.3%
Non-Violent Crime Severity	129.81	104.78	25.03	23.9%

Appendix 5: Average Emergency Response Times

Number 1 Station Area, Robron Rd – North.



Number 2 Station Area, Robron Rd – South



Appendix 6: Participation Rates – Recreation Facilities

Type of Program

Registered Programs enter "R"

Drop in Programs enter as "D"

PROGRAM STATISTICS - 2018

FITNESS	Fall Sept-Dec 2017				Winter - Jan-March				Spring - April-June 2018				Summer July-August				Fall - Sept - Dec 2018				Totals
PROGRAMS	# Participants	Type of program	# of classes/sessions	Total	# Participants	Type of program	# of classes/sessions	Total	# participants	Type of program	# classes	Total	# Participants	Type of program	# of classes/sessions	Total	# Participants	Type of program	# of classes/sessions	Total	
Boot Camp Plus		D		947		D		843		D		660		D		179				1027	947
Spin		D		399		D		260		D		245		D		0				636	399
Spin		D		242		D		263		D		114		D		0				256	242
Spin & Core		D		154		D		162		D		106		D		0				205	146
Spin & Core		D		146		D		157		D		42		D		0				181	361
Circuit Fusion		D		361		D		392		D		389		D		169				442	341
HIIT		D		341		D		311		D		207		D		0				376	0
Triple SSS		D		766		D		671		D		595		D		205				777	0
Bottoms up/ABTs - Winter ff.		D		314		D		385		D		380		D		0				375	0
Pump it Up		D		637		D		498		D		579		D		202				539	
Couch to Walk		D		1		D		0		D		0		D		0				0	1
Balance & Stretch		D		616		D		760		D		636		D		0				724	2736
Bellyfit		D		99		D		129		D		57		D		0				160	445
Centre Strong		D		0		D		0		D		97		D		0				454	

Fit for Life		D		608		D		841		D		531		D		0			761	2741
Zumba		D		687		D		724		D		561		D		0			771	2743
Spin		D		161		D		281		D		120		D		0			235	
Shortcut Abs		D		98		D		112		D		61		D		0			130	
20/20/20		D		94		D		164		D		66		D		0			190	
Spin		D		62		D		162		D		51		D		0			110	385
Cardio Kick Box		D		148		D		96		D		33		D		0			75	
Zumba		D		84		D		171		D		63		D		0			251	
Sportfit		D		354		D		552		D		251		D		0			517	1674
Summer Shape up		D		0		D		0		D		0		D		72			38	
Evening Bootcamp /Spin Strong		D		83		D		98		D		25		D		62			201	469
Evening Bootcamp		D		140		D		93		D		69		D		0			107	409
ABTs		D		131		D		169		D		66		D		0			224	590
Yoga		D		145		D		266		D		197		D		0			399	1007
Balance & Stretch(Court 4)		D		114		D		113		D		17		D		0			110	354
Yoga		D		175		D		244		D		165		D		0			314	898
CRCC		D		0		D		0		D		0		D		0			0	0
Total Body Fit		D		711		D		1129		D		928		D		0			1066	3834
Chair Yoga		D		161		D		251		D		180		D		0			291	883
Yoga		D		423		D		554		D		407		D		0			685	2069
X-Fit		D		97		D		106		D		50		D		0			84	337
CR Common		D		0		D		0		D		0		D		0			0	0
Fit for Health		D		617		D		950		D		666		D		0			731	2964
Beginner Pilates	10	R	10	100	10	R	10	100				0				0			0	200

Newly Advanced Pilates	12	R	10	120	12	R	10	120				0				0			0	240	
Advanced Pilates	12	R	10	120	12	R	10	120				0				0			0	240	
			Total	10456			Total	12247			Total	8614			Total	889	0		Total	13433	27655
			Registered Programs" R"	Drop in Program # Cancelled "0"	# of Programs that ran (%)	# of Programs cancelled (%)	# Registered participants	Total # Drop in Participant	Total # of Visits												
Programs																					
Fall 2017	33	3									33	1	97%	3%	34	0	10456				
Winter 2018	40	3									37	0	100%	0%	34	0	12247				
Spring 2018	37	0									37	0	100%	0%	0	0	8614				
Summer 2018	37	0									37	0	100%	0%	0	0	889				
Fall 2018	0	0									48	0	100%	0%	0	0	13433				
Total	147	6									144	1			68	0	45639				

Appendix 7: Recreational Activities in Campbell River

List of private clubs/sports activities (children):

CR Comets Track and Field
CR Crush Volleyball
CR Minor Lacrosse
CR Minor Softball
CR Motocross
CR Rugby
CR Karate
CR Skating Club
CR Judo Club
CR Boxing and Fitness
CR KASK Karate
CR Killer Whales (swim club)
CR Minor Baseball
CR Minor Hockey
CR Salmon Kings (swim club)
CR Springs Gymnastics
CR Youth Soccer
NW Shito Karate
Strathcona Tri Club Juniors
Cadets (army and sea)
Children's Choir
Girl Guides
Teen Flight
Scouts

List of programs/classes through City of Campbell River/Strathcona Regional District (children):

Strathcona Regional District:

Learn to Swim – Red Cross Swim Kids
lessons – preschool and school age
Babysitting course
Lifesaving
First Aid

Water Safety Instructor
Diving club
Swim training
Preschool/school age learn to play hockey
Learn to skate – preschool/school age
Aquatic Arthritis
Yoga classes
Drop-in Aquacize
Pro-D Day camps and summer camps

City of Campbell River:

Family Place programs – babies
/preschoolers
Nature Preschool and Early Learning Centre
programs
Family programs – gym, badminton, music
After school programs – Sportsplex
Seasonal programs
Leaders in Training (LIT)

List of private clubs/sports activities (adults/seniors):

CR Dog Fanciers Society
CR Fish and Wildlife
CR Garden Club
CR Genealogy Society
CR Toastmasters
CR White Cane Club
Island in Focus Photography Club
North Island Cruisers
Ripple Rock Gem and Mineral Club
Ripple Rockets Square Dancing
River City Players Society
CR Amateur Radio Society
CR Bonsai Club
CR Badminton Club
CR Eagles
CR Quilters Guild

CR Italian Club
CR Newcomers Club
CR Pipe Band
CR Rock Climbing Club
CR Yacht Club
CR Gun Club
Highland Dancing
Island Voices Choir
Rotary Club
North Island Chefs Association
North Island Dragonboat Society
CR Comets Track and Field
CR Crush Volleyball
CR Masters FC
CR Paddlers Club
CR Skating Club
CR Judo Club
CR Tennis Club
CR Volleyball
River City Cycle Club
River Runners Association
Sailing CR Yacht Club
Tide Rippers Dive Club
Tyee Club
Ballroom Dance
CR ATV Club
CR Boxing and Fitness
CR Curling Club
CR Scuba Diving Club
CR Special Olympics
CR Trail Riders
Coopers Hawk Disc Golf Club
CR Willows Masters Soccer
Eagles Water Ski Club

Mid-Island Women's Soccer
North Island Snowmobile Association
Over the Hill Hockey
Pioneer Hockey League
Racquetball
Slo-Pitch Baseball
Squash
Strathcona Nordic Ski Club
Strathcona Tri Club
Tyee Judo Club
Windsor Floor Hockey

Strathcona Regional District:

Adult hockey
Aquacize
Aquatic Arthritis
Yoga
Learn to Swim
Fitness Centre

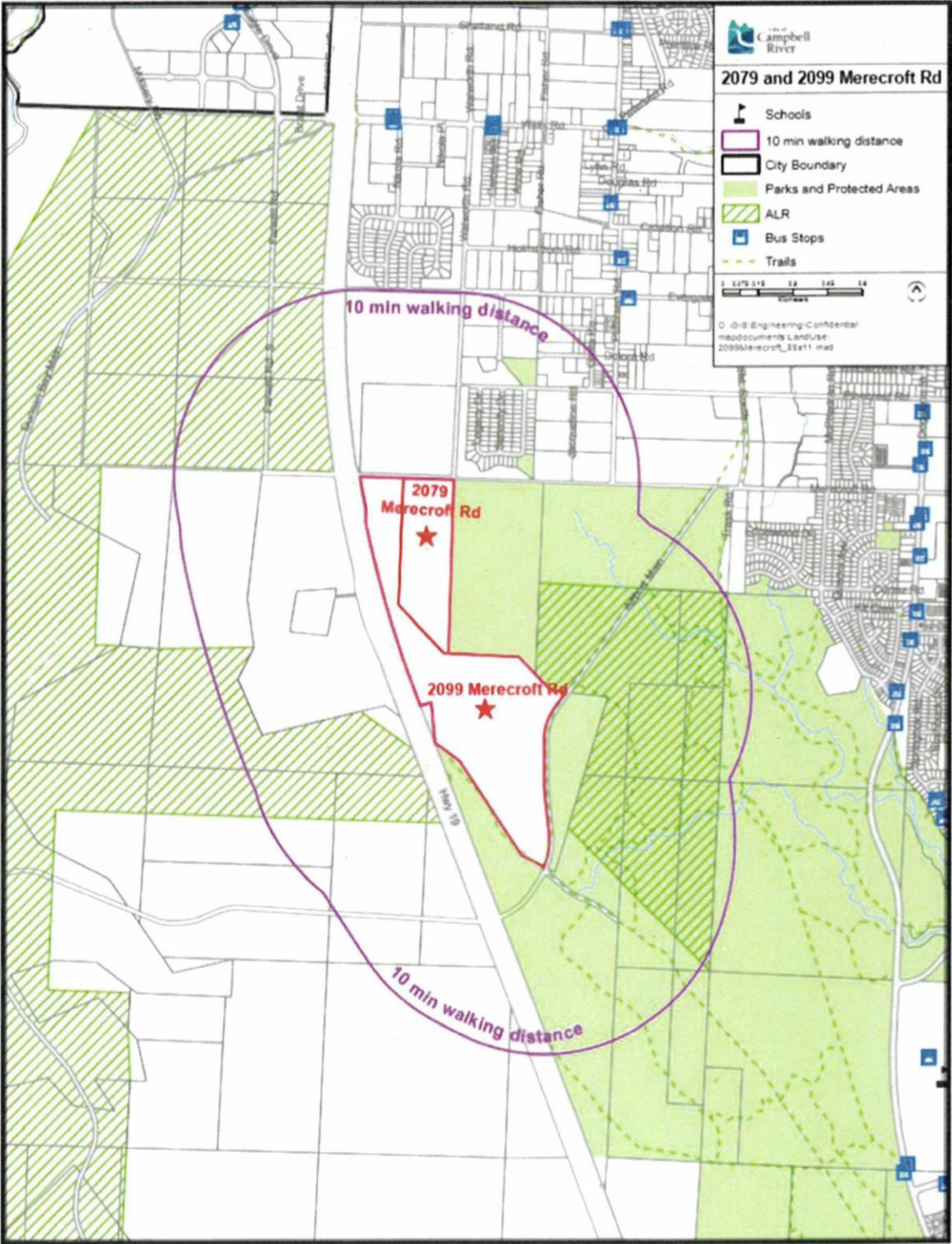
City of Campbell River:

Tennis lessons
Dancing
Arts – pottery, quilting, languages
Badminton
Weight room/fitness centre
Squash, racquetball
Fitness drop-in classes
50+ Active living classes – games, sports, crafts
Specialized recreation for disabilities – crafts, music, dance

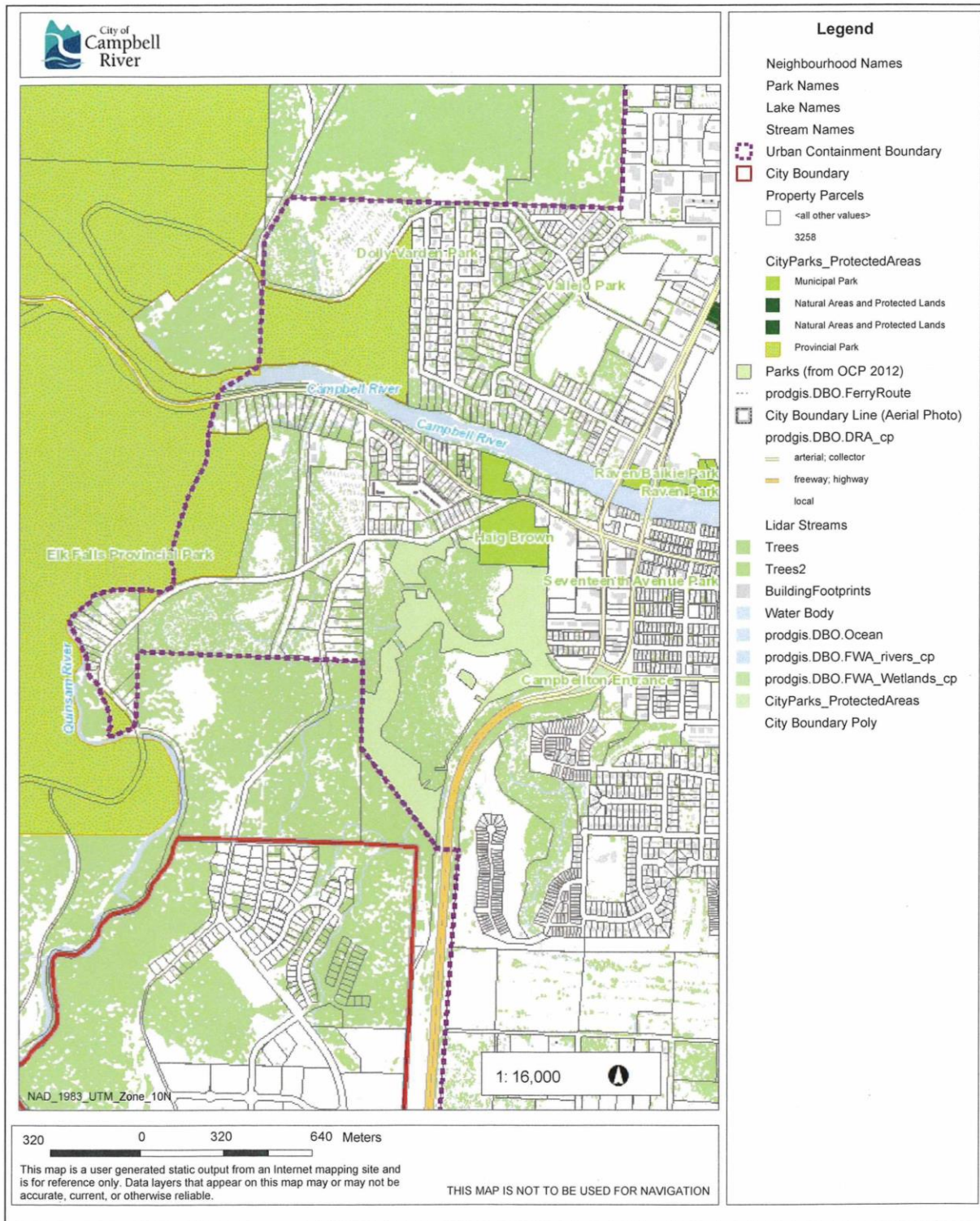
Appendix 8: School District 72 – School Enrollment History

City of Campbell River School Enrollment 2016 to 2019				
	Sep 2016	Sep 2017	Sep 2018	Sep 2019
Cedar	168	173	168	163
EDM	144	156	155	175
Willow Point	254	248	248	242
Georgia Park	279	300	303	305
Ocean Grove	244	255	295	303
Penfield	327	307	293	283
Pinecrest	258	258	256	243
Ripple Rock	329	315	309	302
Sandowne	255	257	259	259
Southgate	489	494	536	586
Phoenix	582	585	613	653
Carihi	817	807	796	782
Timberline	687	693	697	637

Appendix 9: South Quinsam Heights Walkability



Appendix 10: South Kingfisher Land Use Map



Appendix 11: Property Values – Available Properties on MLS

PROPERTY VALUES - AVAILABLE PROPERTIES ON MLS (Retrieved February 24, 2020)						
Address	Neighbourhood	Zoned	Acres	List price (MLS) (\$)	Assessment Value (\$)	Comments
980/990 Petersen Road	Quinsam	RM-1	2.184	\$800,000	\$768,000	One house existing
1505 Croatian Road	Quinsam	RM-1	5.807	\$999,990	\$869,000	One house existing
391 Island Highway	Central	RM-4	0.83	\$1,595,000	\$1,101,000	Previous motel site, waterfront
834 Island Highway South	Willow Point	RM-3	0.638	\$799,800.00	\$656,000	22 units
854 Island Highway South	Willow Point	RM-3	1.096	\$1,399,000	\$902,100	37 unit condo permitted
2100 Perkins Road	North	MHP	7.9	\$998,000	\$396,000	67 mobile home units permitted
2365 Quinsam Road	Kingfisher	RU-1	114.41	\$2,280,000	\$1,659,000	Development challenges

Appendix 12: Network Analysis Method – Neighbourhood Comparisons

NETWORK ANALYSIS - DWELLING UNIT RATIOS COMPARISON						
	400m		800m		1000m	
	# Dwelling Units	DU/Total DU (%)	# Dwelling Units	% DU/Total DU	# Dwelling Units	% DU/Total DU
NORTH CAMPBELL RIVER						
830 DU						
Child Care	53	6.4%	190	22.9%	250	30.1%
Park 1	102	12.3%	506	61.0%	651	78.4%
Park 2	180	21.7%	460	55.4%	560	67.5%
Café, Restaurant	127	15.3%	277	33.4%	306	36.9%
Bus Stops	455	54.8%	789	95.1%	818	98.6%
Village Centre	36	4.3%	142	17.1%	210	25.3%
DOWNTOWN						
535 DU						
Child Care	250	46.7%	350	65.4%		
College	104	19.4%	254	47.5%	334	62.4%
Parks	127	23.7%	234	43.7%	333	62.2%
Bus Stops	257	48.0%	303	56.6%	309	57.8%
Social Services	263	49.2%	307	57.4%	313	58.5%
Health Services	288	53.8%	321	60.0%		
Cafes and Restaurants	350	65.4%	428	80.0%		
Grocery/Convenience	250	30.1%	392	73.3%	399	74.6%
QUINSAM HEIGHTS						
1257 DU						
Child Care	145	11.5%	285	22.7%	350	27.8%
Parks and Playgrounds	124	9.9%	423	33.7%	661	52.6%
Bus Stops	431	34.3%	731	58.2%	831	66.1%
Health/Social Service	182	14.5%	337	26.8%		
CENTRAL CAMPBELL RIVER						
5335 DU						
Child Care	1584	29.7%	2764	5.2%	3016	56.5%
Parks and Playgrounds	2974	55.8%	4672	87.6%	4992	93.6%
Village Centres	298	5.6%	1698	31.8%	2552	47.8%
Bus Stops	3556	66.7%	4556	85.4%	4671	87.6%
Convenience/Cafes/Restaurants	795	14.9%	2438	45.7%	3008	56.4%
Grocery Stores	385	7.2%	1760	33.0%	2519	47.2%
Social Services	610	11.4%	2524	47.3%	3524	66.1%
Health Services	1620	30.4%	3630	68.0%	4388	82.2%
WILLOW POINT						
5247 DU						
Child Care	1830	34.9%	3830	73.0%	4530	86.3%
Parks and Playgrounds	3110	59.3%	5210	99.3%	5250	100.0%
Village Centres	161	3.1%	650	12.4%	1116	21.3%
Bus Stops	2850	54.3%	4302	82.0%	4674	89.1%
Convenience/Cafes	350	6.7%	1150	21.9%	1700	32.4%
Social/Health Services	1236	23.6%	2714	51.7%	3384	64.5%
Grocery Stores	397	7.6%	1297	24.7%	1997	38.1%
CAMPBELLTON						
386 DU						
Child Care	265	68.7%	376	97.4%		
Parks and Playgrounds	276	71.5%	378	97.9%		
Grocery/Convenience/Cafes	309	80.1%	350	90.7%		
Transit Stops	345	89.4%	380	98.5%		
Health Service	149	38.6%	322	83.4%	346	89.6%
Employment Nodes/Village Centres	229	59.3%	394			
KINGFISHER						
155 DU						
Parks/Playgrounds	30	19.4%	67	43.2%	133	85.9%
Transit Stops	30	19.4%	70	45.2%	84	54.2%

Appendix 13: Multiple Buffer and Selection by Point Method – Neighbourhood Comparisons

MULTIPLE BUFFER AND SELECTION BY POINT - NEIGHBOURHOOD COMPARISONS												
	Area 400m	# Dwelling Units	DU/Total DU (%)	Ratio (Density) Units/ha	Area 800m	# Dwelling Units	% DU/Total DU	Ratio (Density) Units/ha	Area 1000m	# Dwelling Units	% DU/Total DU	Ratio (Density) Units/ha
NORTH CAMPBELL RIVER												
Area (ha) of DU = 225.64												
Area total (km2) = 401.1												
830 DU												
Child Care	414230m2	200	24%	4.83	946030m2	269	32%	2.8	1035190m2	307	37%	29.5
	0.41423 km2				946 km2				1035.2 km2			
	41.4 ha				94.6 ha				10.4 ha			
Park 1	346990m2	113	14%	3.26	1057470m2	301	36%	28.4	1317470m2	434	52%	32.9
	0.347 km2				105.7 km2				131.8 km2			
	34.7 ha				10.6 ha				13.2 ha			
Park 2	161480m2	437	53%	27.1	2106600m2	806	97%	38.2	2224110m2	830	100%	37.4
	0.1615 km2				210.7 km2				222.4 km2			
	16.1 ha				21.1 ha				22.2 ha			
Parks Total	508470m2	550	N/A	10.8	3164070m2	1107	N/A	35.0	3541580m2	1264	N/A	35.7
	0.5085 km2				316.4 km2				354.2 km2			
	50.8 ha				31.6 ha				35.4 ha			
Café, Restaurant	940790m2	293	35%	3.1	1584540m2	539	65%	34.1	2005040m2	757	91%	37.7
	0.9408 km2				1584.5 km2				2005 km2			
	94 ha				15.8 ha				20.1 ha			
Bus Stops	2050440m2	756	91%	37.4	2211840m2	825	99%	37.3	2224110m2	831	?	37.4
	0.20504 km2				2211.8 km2				2224.1 km2			
	20.5 ha				22.1 ha				22.2 ha			
Village Centre	592030m2	173	21%	2.92	1363970m2	443	53%	32.6	1721010m2	608	73%	35.3
	0.592 km2				1364 km2				1721 km2			
	59.2 ha				13.6 ha				17.2 ha			
DOWNTOWN												
Area 400m												
Area (ha) of DU = 101.77												
Area total (km2) = 1.27												
535 DU												
Child Care	101470m2	512	96%	303580m2	530	99%	17.4	334960m2	533	99.6%	15.9	
	0.1015 km2			303.6 km2				335 km2				
	10.1 ha			30.4 ha				33.5 ha				
College	370160m2	288	54%	897130m2	517	97%	5.76	904180m2	530	99%	5.86	
	0.3702 km2			897.1 km2				904.2 km2				
	37 ha			89.7 ha				90.4 ha				
Parks	649430m2	230	43%	1007570m2	528	99%	52.3	1014480m2				
	0.6494 km2			100.8 km2				101.5 km2				
	64.9 ha			10.1 ha				10.2 ha				
Bus Stops	935560m2	533	99.6%	1014480m2	535	100%	60.0					
	0.9356 km2			101.4 km2								
	93.6 ha			10.1 ha								
QUINSAM HEIGHTS												
Area 400m												
Area (ha) of DU = 657.77												
Area total (km2) = 6.06												
1257 DU												
Child Care	478863m2	317	25%	6.6	924510m2	529	42%	5.7	1250500m2	593	46%	47.4
	0.4788 km2			924.5 km2				125.1 km2				
	47.9 ha			92.5 ha				12.5 ha				
Parks	845510m2	158	13%	1.9	739800m2	331	26%	4.5	2049850m2	455	85%	22.2
	0.8455 km2			739.8 km2				205 km2				
	84.6 ha			74 ha				20.5 ha				
Bus Stops	2518100m2	761	61%	30.2	3737850m2	1160	92%	30.7	3947310m2	1257	100%	31.8
	0.2518 km2			373.8 km2				394.7 km2				
	25.2 ha			37.8 ha				39.5 ha				
Village Centre (2 points)	1004810m2	181	14%	17.9	2670730m2	560	45%	21.0	3465860m2	844	67%	24.3
(potential)	0.1005 km2			267.1 km2				346.6 km2				
	10.1 ha			26.7 ha				34.7 ha				
CENTRAL CAMPBELL RIVER												
Area 400m												
Area (ha) of DU = 458.86												
Area total (km2) = 7.02												
5335 DU												
Child Care	3153440m2	3522	66%	111.8	4507060m2	5215	98%	115.6	4578650m2	5335	100%	116.5
	0.3153 km2			450.7 km2				457.9 km2				
	31.5 ha			45.1 ha				45.8 ha				
Parks	2966370m2	3735	70%	125.8	3964690m2	5012	94%	126.2	4195900m2	5258	99%	125.2
	0.2966 km2			396.5 km2				420 km2				
	29.7 ha			39.7 ha				42 ha				
Village Centres	887340m2	1197	22%	13.5	2352370m2	2948	55%	125.5	3246660m2	3773	71%	116.1
	0.8873 km2			235.2 km2				324.7 km2				
	88.8 ha			23.5 ha				32.5 ha				
Bus Stops	4370240m2	5202	97.5%	119.0	4578650m2	5335	100%	116.5				
	0.437 km2			457.9 km2								
	43.7 ha			45.8 ha								
WILLOW POINT												
400m												
Area (ha) of DU = 1086.61												
Area total (km2) = 8.8												
5247 DU												
Child Care	3250690m2	3461	66%	106.5	4823500m2	5004	95%	103.8	4957050m2	5201	99%	104
	0.3251 km2			482.4 km2				495.7 km2				
	32.5 ha			48.2 ha				50 ha				
Parks and Playgrounds	3944550m2	4120	79%	104.6	4976410m2	5120	98%	102.8	4996720m2	5139	98%	102.8
	0.3945 km2			497.6 km2				499.7 km2				
	39.4 ha			49.8 ha				50 ha				
Village Centres	603300m2	571	11%	9.5	2056010m2	2070	40%	100.5	2941500m2	3067	59%	104.3
	0.6033 km2			205.6 km2				294.2 km2				
	60.3 ha			20.6 ha				29.4 ha				
Bus Stops	4094690m2	4446	85%	108.4	4843670m2	5109	87%	105.6	4971040m2	5232	99.7%	105.3
	0.4095 km2			484.4 km2				497.1 km2				
	41 ha			48.4 ha				49.7 ha				
CAMPBELLTON												
400m												
Area (ha) of DU = 41.41												
Area total (km2) = 1.07												
386 DU												
Child Care	289456.490471m2	331	87%	11.4	424271.742982m2	55	14%	1.3				
	0.2895 km2			424.3 km2								
	29 ha			42.4 ha								
Parks and Playgrounds	367642.321357m2	345	89%	9.3	424271.742982m2	41	11%	0.97				
	0.3676 km2			424.3 km2								
	37 ha			42.4 ha								
Bus Stops	423448.312007m2	385	99.7%	9.2	424271.742982m2	1	0.3%	2.4				
	0.4235 km2			424.3 km2								
	42 ha			42.4 ha								
Health Services	262752.412824m2	257	67%	9.9	416560.674782m2	128	33%	3.1				
	0.2628 km2			416.6 km2								
	26 ha			42 ha								
Village Centres	281387.404415m2	321	84%	11.5	416560.674782m2	64	17%	1.5	7711.0682m2	1	0.3%	1.3
	0.2814 km2			416.6 km2				771.1 km2				
	28 ha			42 ha				77 ha				

Appendix 14: Grouped Indicators Ranking Tables – Overall, Primary and Re-grouped

GROUPED INDICATORS RANKING TABLE - OVERALL, PRIMARY AND RE-GROUPED						
OVERALL RANKING						
Indicator #	Indicator #	Indicator #	Indicator #	Indicator #	Average (not including child care per facility)	Overall Ranking (No weighting)
Employment Nodes	Bus Stops	Paths/Trails	Green/Public Spaces	Parks and Playgrounds		
4	3	7	5	4	4.9	5
2	2	2	3	3	2.6	2
1	1	1	2	2	1.3	1
6	4	5	7	7	5.6	7
3	7	4	6	6	4.1	3
5	5	3	4	5	4.3	4
7	6	6	1	1	5.1	6

Primary Grouped Indicators #1					
Social Care Group	Child Care per 1000 spaces	Social Services	Average	Top 3	
North Campbell River	6	6	6		
Campbellton	3	4	3.5		3
Downtown	1	1	1		1
Quinsam Heights	5	5	5		
Central Campbell River	2	2	2		2
Willow Point	4	3	3.5		3
Kingfisher	7	6	6.5		
Social/Employment Node Group	Social Spaces	Employment Nodes	Average		
North Campbell River	4	4	4		
Campbellton	2	2	2		2
Downtown	1	1	1		1
Quinsam Heights	6	6	6		
Central Campbell River	3	3	3		3
Willow Point	5	5	5		
Kingfisher	7	7	7		
Transportation Group	Bus Stops	Paths/Trails	Average		
North Campbell River	3	7	5		
Campbellton	2	2	2		2
Downtown	1	1	1		1
Quinsam Heights	4	5	4.5		
Central Campbell River	7	4	5.5		
Willow Point	5	3	4		3
Kingfisher	6	6	6		
Green Amenities Group	Green/Public Spaces	Parks and Playgrounds	Average		
North Campbell River	5	4	4.5		
Campbellton	3	3	3		3
Downtown	2	2	2		2
Quinsam Heights	7	7	7		
Central Campbell River	6	6	6		
Willow Point	4	5	4.5		
Kingfisher	1	1	1		1

Grouped Indicators #2 (Re-Grouped)					
Social Care Group	Child Care per 1000 spaces	Social Services		Average	Top 3
North Campbell River	6	6		6	
Campbellton	3	4		3.5	3
Downtown	1	1		1	1
Quinsam Heights	5	5		5	
Central Campbell River	2	2		2	2
Willow Point	4	3		3.5	3
Kingfisher	7	6		6.5	
Employment and Amenities Group	Employment Nodes	Social Spaces	Bus Stops	Average	Top 3
North Campbell River	4	4	3	3.7	3
Campbellton	2	2	2	2	2
Downtown	1	1	1	1	1
Quinsam Heights	6	6	4	5.3	
Central Campbell River	3	3	7	4.3	
Willow Point	5	5	5	5	
Kingfisher	7	7	6	6.7	
Active Amenities Group	Paths/Trails	Public/Green Spaces	Parks/Playgrounds	Average	Top 3
North Campbell River	7	5	4	5.3	
Campbellton	2	3	3	2.7	2
Downtown	1	2	2	1.7	1
Quinsam Heights	5	7	7	6.3	
Central Campbell River	4	6	6	5.3	
Willow Point	3	4	5	4	3
Kingfisher	6	1	1	2.7	2

Grouped Indicators #3 (Re-Grouped)					
Social Care and Spaces Group	Child Care per 1000 spaces	Social Services	Social Spaces	Average	Top 3
North Campbell River	6	6	4	5.3	
Campbellton	3	4	2	3	3
Downtown	1	1	1	1	1
Quinsam Heights	5	5	6	5.3	
Central Campbell River	2	2	3	2.3	2
Willow Point	4	3	5	4	
Kingfisher	7	6	7	6.7	
Employment and Transportation Group	Employment Nodes	Bus Stops		Average	Top 3
North Campbell River	4	3		3.5	3
Campbellton	2	2		2	2
Downtown	1	1		1	1
Quinsam Heights	6	4		5	
Central Campbell River	3	7		5	
Willow Point	5	5		5	
Kingfisher	7	6		6.5	
Active Amenities Group	Paths/Trails	Public/Green Spaces	Parks/Playgrounds	Average	Top 3
North Campbell River	7	5	4	5.3	
Campbellton	2	3	3	2.7	2
Downtown	1	2	2	1.7	1
Quinsam Heights	5	7	7	6.3	
Central Campbell River	4	6	6	5.3	
Willow Point	3	4	5	4	3
Kingfisher	6	1	1	2.7	2

Appendix 15: Dwelling Unit Ratios Comparisons Table - Multiple Buffer and Selection by Point Method and Network Analysis Method

Dwelling Unit Ratios (DU (m)/DU (total)) Ratios Comparisons between Multiple Buffer and Network Analysis Method				
NORTH CAMPBELL RIVER				
Amenity	Metres	Multiple Buffer	Network Analysis	Difference
Child Care	400m	24%	6.4%	17.6
	800m	32%	22.9%	9.1
	1000m	37%	30.1%	36.9
Park 1	400m	14%	12.3%	1.7
	800m	36%	61.0%	25
	1000m	52%	78.4%	26.4
Park 2	400m	53%	21.7%	31.3
	800m	97%	55.4%	41.6
	1000m	100%	67.5%	32.5
Café/Restaurant	400m	35%	15.3%	19.7
	800m	65%	33.4%	31.6
	1000m	91%	36.9%	54.1
Bus Stops	400m	91%	54.8%	36.2
	800m	99%	95.1%	3.9
	1000m		98.6%	
Village Centre	400m	21%	4.3%	16.7
	800m	53%	17.1%	35.9
	1000m	73%	25.3%	47.7
				Overall Average = 27.5
				400m Average = 20.5
				800m Average = 24.5
				1000m Average = 32.9
DOWNTOWN				
Child Care	400m	96%	46.7%	49.3
	800m	99%	65.4%	33.6
	1000m	99.6%		
Parks/Playgrounds	400m	43%	23.7%	19.3
	800m	99%	43.7%	55.3
	1000m		62.2%	
Bus Stops	400m	99.6%	48.0%	51.6
	800m	100%	56.6%	43.4
	1000m		57.8%	
				Overall Average = 42.1
				400m Average = 40.1
				800m Average = 44.1
QUINSAM HEIGHTS				
Child Care	400m	25%	11.5%	13.5
	800m	42%	22.7%	19.3
	1000m	46%	27.8%	18.2
Parks/Playgrounds	400m	13%	9.9%	3.1
	800m	26%	33.7%	7.7
	1000m	85%	52.6%	32.4
Bus Stops	400m	61%	34.3%	26.7
	800m	92%	58.2%	33.8
	1000m	100%	66.1%	33.9
				Overall Average = 21.0
				400m Average = 14.4
				800m Average = 20.3
				1000m Average = 28.2
CENTRAL CAMPBELL RIVER				
Child Care	400m	66%	29.7%	36.3
	800m	98%	52.0%	46
	1000m	100%	56.5%	43.5
Parks/Playgrounds	400m	70%	55.8%	14.2
	800m	94%	87.6%	6.4
	1000m	99%	93.6%	5.4
Village Centres	400m	22%	5.6%	16.4
	800m	55%	31.8%	23.2
	1000m	71%	47.8%	23.2
Bus Stops	400m	97.5%	66.7%	30.8
	800m	100%	85.4%	14.6
	1000m		87.6%	
				Overall Average = 23.6
				400m Average = 23.7
				800m Average = 22.6
				1000m Average = 24

WILLOW POINT				
Child Care	400m	66.0%	34.9%	31.1
	800m	98.0%	73.0%	25
	1000m	99.0%	86.3%	12.7
Parks/Playgrounds	400m	79.0%	55.8%	23.2
	800m	98.0%	87.6%	10.4
	1000m	98.0%	93.6%	4.4
Villages Centres	400m	11.0%	3.1%	7.9
	800m	40.0%	12.4%	27.6
	1000m	59.0%	21.3%	37.7
Bus Stops	400m	85.0%	54.3%	30.7
	800m	87.0%	82.0%	5.0
	1000m	99.7%	89.1%	10.6
				Overall Average = 18.9
				400m Average = 23.2
				800m Average = 17
				1000m Average = 16.4
CAMPBELLTON				
Child Care	400m	87%	68.7%	18.3
	800m	14%	97.4%	83.4
Parks/Playgrounds	400m	89%	71.5%	17.5
	800m	11%	97.9%	86.9
Grocery/Convenience/Cafes	400m		80.1%	
	800m		90.7%	
Transit Stops	400m	99.70%	89.4%	10.3
	800m	0.30%	98.5%	98.2
Health Service	400m	67%	38.6%	28.4
	800m	33%	83.4%	50.4
Employment Nodes/Village Centres	400m	84%	59.3%	24.7
	800m	17%		
				Overall Average = 46.5
				400m Average = 19.8
				800m Average = 79.7

Appendix 16: Tree Canopy Coverage (2018)

