



# **Parks and Greenways Strategic Plan**

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City of North Vancouver

Lanarc Consultants Ltd.



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# **PARKS AND GREENWAYS STRATEGIC PLAN**

## **1.0 Defining the Vision**

### **1.1 Relationship to Our Official Community Plan**

Parks and open spaces have played a major role in the liveability of the City of North Vancouver since its inception. The City is fortunate to have a high percentage of natural open space due to the creeks and ravines that border and define many neighbourhoods.

Major urban open spaces such as Victoria Park and Grand Boulevard were created by the original town plan. The City also takes much of its character from its location between the waterfront and the mountains. Historically, the port created an industrial waterfront with limited public access. Developments such as Waterfront Park and Kings Mill Walk are improving public access to the water's edge, and provide dramatic public views of the ocean, the cityscape and the North Shore Mountains.

The Official Community Plan for the City of North Vancouver is considering goals that reflect the words 'livable, sustainable, diverse, and complete community'. These concepts balance social, environmental and economic objectives. Their success relies on integration of many different factors. The role of parks in contributing to these goals will also involve careful integration of the parks system with other systems – including land use, social interaction, transportation, and environmental systems.

The vision of the future of parks in the City of North Vancouver extends beyond the park boundary, to include consideration of the role that all public lands play in the City's open space system. A major part of this public land is the street system; therefore parts of the street system may need to be integrated and adapted with the parks system to become linear 'greenways'.

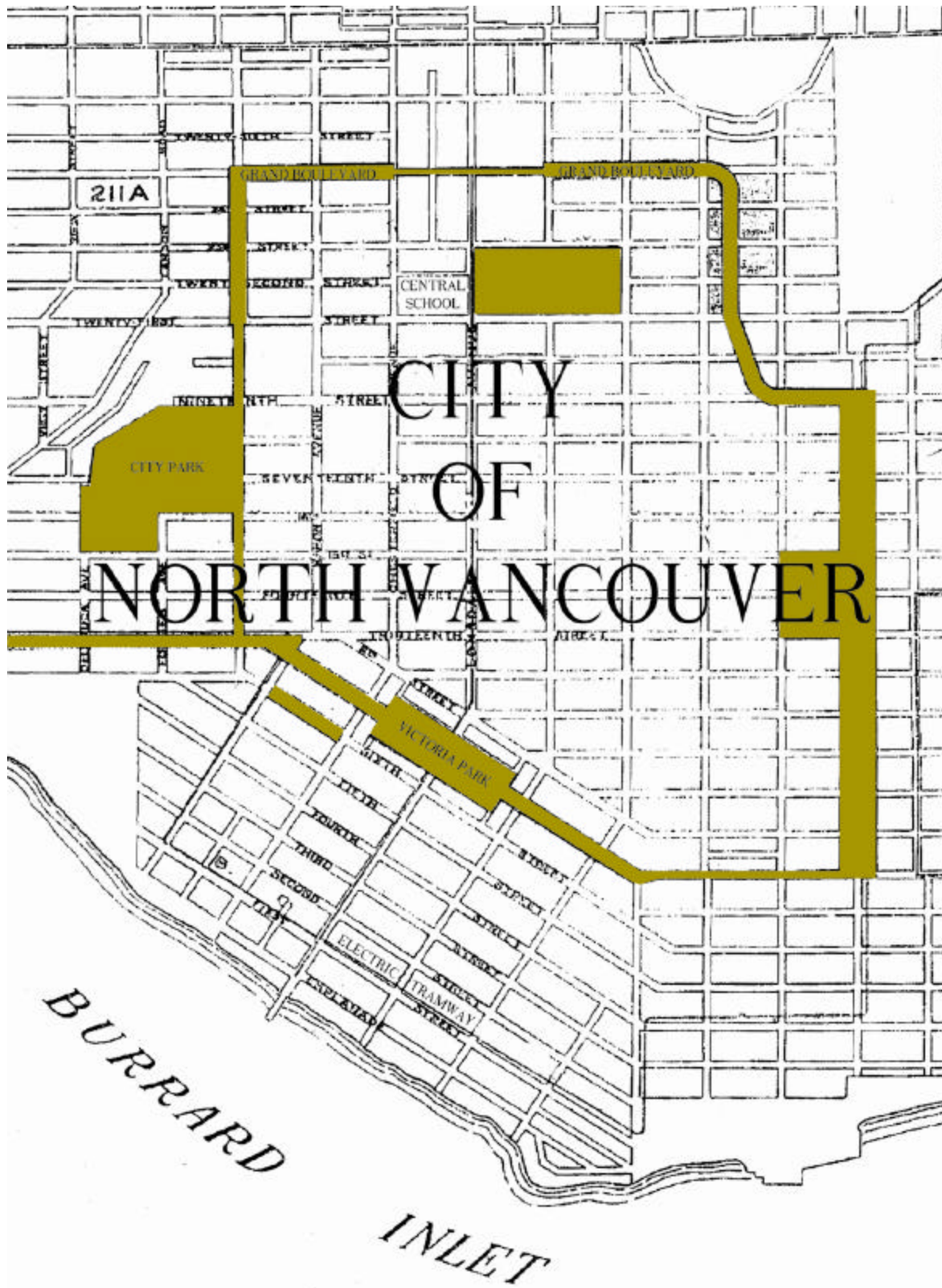


Figure 1: The 'Green Necklace' in the original town plan

## 1.2 Greenways in the City of North Vancouver – Past and Present

The street and parks systems have historically been linked in the City of North Vancouver. Victoria Park and Grand Boulevard are classic ‘parks within the street system’. The original town plan envisioned a ‘Green Necklace’ as shown in Figure 1, creating “an approximate quadrangle of boulevards . . . surrounding the central square mile of the city, and supported by numerous parks and grounds”.

In modern terms, the ‘Green Necklace’ would be termed a system of ‘Greenways’, which are continuous linear green spaces that may combine parts of parks systems and street systems. The two types of greenways can be classified as:

- Recreational greenways designed primarily for public enjoyment.
- Environmental greenways managed primarily for habitat purposes (e.g. a riparian corridor along a salmon bearing stream).



*Recreational greenway*



*Environmental greenway*

Both types of greenways are common in the City of North Vancouver, with the ‘Green Necklace’ being a primary example of a recreational greenway.

Part of the ‘Green Necklace’ is gone, removed by the development of the Upper Levels Highway in 1961. This loss brings to a focus the important need for the long-term aspects of and why we set the goal of creating a sustainable community, namely: “to ensure future generations’ ability to create, renew and maintain such a community is not unduly compromised”. The “Green Necklace” was an important part of the original plan for the City of North Vancouver. There is a need now to recreate this important element to help achieve the new vision for the City of North Vancouver and our goal of creating a livable, sustainable and complete community.

Ravine corridors in parks such as Mosquito Creek are classic environmental greenways. Trail corridors create 'recreational greenways' within these environmental greenways. Sustaining the natural systems in these ravines will require careful management of both recreational use and environmental protection and enhancement. Stormwater inputs from surrounding urban land uses can severely limit the environmental quality of a stream and must be managed properly.

### 1.3 Recent Progress and Priorities

The 1991 Parks and Recreation Master Plan made recommendations on several areas for parks system improvements, including:

- ❑ **Informal Play** - identifying parts of the City where expanded or new neighbourhood parks in the 3-5 acre size range with flat open play areas would be desirable.
- ❑ **Environmentalism** – recognizing the demand for nature oriented parks and activities, and the preservation of trees and habitat.
- ❑ **Trail** development – calling for development of a comprehensive trails system.
- ❑ **Formal Play** – recognizing the need to meet requirements of sport users.
- ❑ **Waterfront** access and the lack of it.
- ❑ **Special Needs** - persons with a disability, seniors, children, multi-cultural and youth.

Progress has been made on most of these objectives:

- ❑ A Development Cost Charge has been established to support purchase of additional parkland, and funds are being collected as development proceeds. Public plazas such as Jack Loucks, 14<sup>th</sup> St. and the RCMP facility have added public amenities in areas that were lacking.
- ❑ The on-going Environmental Protection Program has been established to increase environmental sustainability throughout the City, and several environmental improvements have been completed in the Parks system, including the Mosquito Creek enhancements, the Sunrise Park habitat creation, and the award-winning Thain Creek Daylighting project.
- ❑ Trails systems are being improved, both for user enjoyment and to protect the natural environment along the trails. However, the goal of a comprehensive trails system has yet to be addressed.
- ❑ Playing field and playground systems have been improved, and a new artificial turf facility has been developed.

- Tennis facilities have been augmented by the creation of a year-round tennis facility at the Grant Connell Tennis Centre, through a public-private partnership in conjunction with the North Vancouver Recreation Commission. Waterfront access is being improved by the King's Mill Walk, by use of Waterfront Park, and by proposed access through the Versatile redevelopment.
- A Skate Park Facility is under study, with a focus on youth.

#### **1.4 A Parks and Greenways Vision for the 2007 Centennial**

Looking ahead, the City has an opportunity to celebrate improvements to its parks and open space system as a part of the 2007 Centennial festivities. The purpose of this review of the Parks Plan is to set priorities and focus for the 5 year period from 2002 to 2007. At the same time, this review will also take a longer view, towards what the parks and open space system might become over the next 20 years.

This parks review is being named the **Parks and Greenways Strategic Plan**. It is a general, city wide document that identifies goals, objectives, policies and implementation strategies for parks and greenways in the City of North Vancouver.

The goal for the Parks and Greenways Plan is **'To create a linked system of parks and greenways that balances recreational use of parks and streets with sustainable ecological and transportation objectives, and to contribute to community pride during the 2007 Centennial Celebration.'**

#### **1.5 Parks and Greenways Objectives**

- 1.5.1 To create a comprehensive trails and recreational greenway system that links major parks and public destinations throughout the City.
- 1.5.2 To conserve, protect and improve fish & wildlife habitat values in City Parks.
- 1.5.3 To define an appropriate role for City Parks in stormwater management.
- 1.5.4 To refine to what extent purchase or designation of additional parkland and greenways are required.
- 1.5.5 To identify new park facilities that are needed and supported by the public in the City of North Vancouver.

- 1.5.6 To refine the role that City streets and boulevards can play in a sustainable community.
- 1.5.7 To maintain and enhance the important historical, traditional, cultural and social elements of our parks and greenways that add to the quality of life and sense of place of the City, including the integration of public art into the parks system.
- 1.5.8 To recognize the importance of and examine opportunities for protected public viewpoints to major regional landmarks and features including views of the ocean, mountains and the Vancouver Skyline.



*Views of the ocean and Vancouver*



*Mountain view*

## **1.6 Parks and Greenways Public Process**

The vision and objectives for the Parks and Greenways Plan have been reviewed in a public process, including:

- two public events in the Winter of 2001
- presentation to Council in a Discussion Paper in July, 2001
- circulation to City committees for comment
- and a third public workshop in November 2001.

Response forms and results are available on request.

The parks and greenways concepts have been incorporated into drafts of the current review of the Official Community Plan (OCP), and have figured prominently in the public displays of the OCP proposals.

The parks and greenway system concepts are derived from input received at the public events, as well as from working sessions with staff. The final version of the Parks and Greenways Strategic Plan incorporates refinements as a result of the public process.



## 2.0 Detailing the Objectives

### 2.1 Trails and Recreational Greenway System

*Objective 1: To create a comprehensive trails and recreational greenway system that links major parks and public destinations throughout the City.*

The Parks and Greenways Plan determines priorities for trail improvements in the City of North Vancouver. Trail connections and associated green corridors – recreational greenways - may be in parks, on the waterfront, and on street or other public lands.

Figure 2: Trail System illustrates in general concept how existing trails may be linked through use of streets and other existing or potential public lands. Four trail systems are proposed:

- **Necklace Trail System** – which recreates the ‘Green Necklace’.
- **Waterfront Trail System** – which sets a goal of waterfront or ‘waterfront view’ access along the lower slopes of the City of North Vancouver.
- **Ravine Trail System** – which recognizes and links the major trails through the ravine parks.
- **Upper Levels Trail System** – which creates a trails system crossing the Upper Levels highway, integrated with existing and proposed grade-separated crossings.



*Waterfront trail*

Each of the four trail systems is organized as a series of connecting loops. This allows users to choose either a short local loop or a longer excursion. The four trail systems also connect to one another, so that a myriad of travel options are possible. Solid lines on Figure 2 indicate a primary trail route. Dashed lines indicate secondary trails to connect residential areas to the primary route, or to interconnect trail systems. The focus of the park and greenway trail system is walking or slow-speed recreational cycling.

The greenway trail system is complementary to the cycle routes that have been designated in cooperation with the Joint Bicycle Advisory Committee (JBAC). The JBAC-designated cycle routes give priority to the commuting cyclist, and tend to be along arterial and collector roads for the most direct connection to destinations. The greenway trail systems, on the other hand, are designed for casual recreational cycling mixed with pedestrian use, and tend to follow low-volume local streets. There are occasions where the greenway trail and the commuting cyclist trail coincide, and these should be appropriately designed.

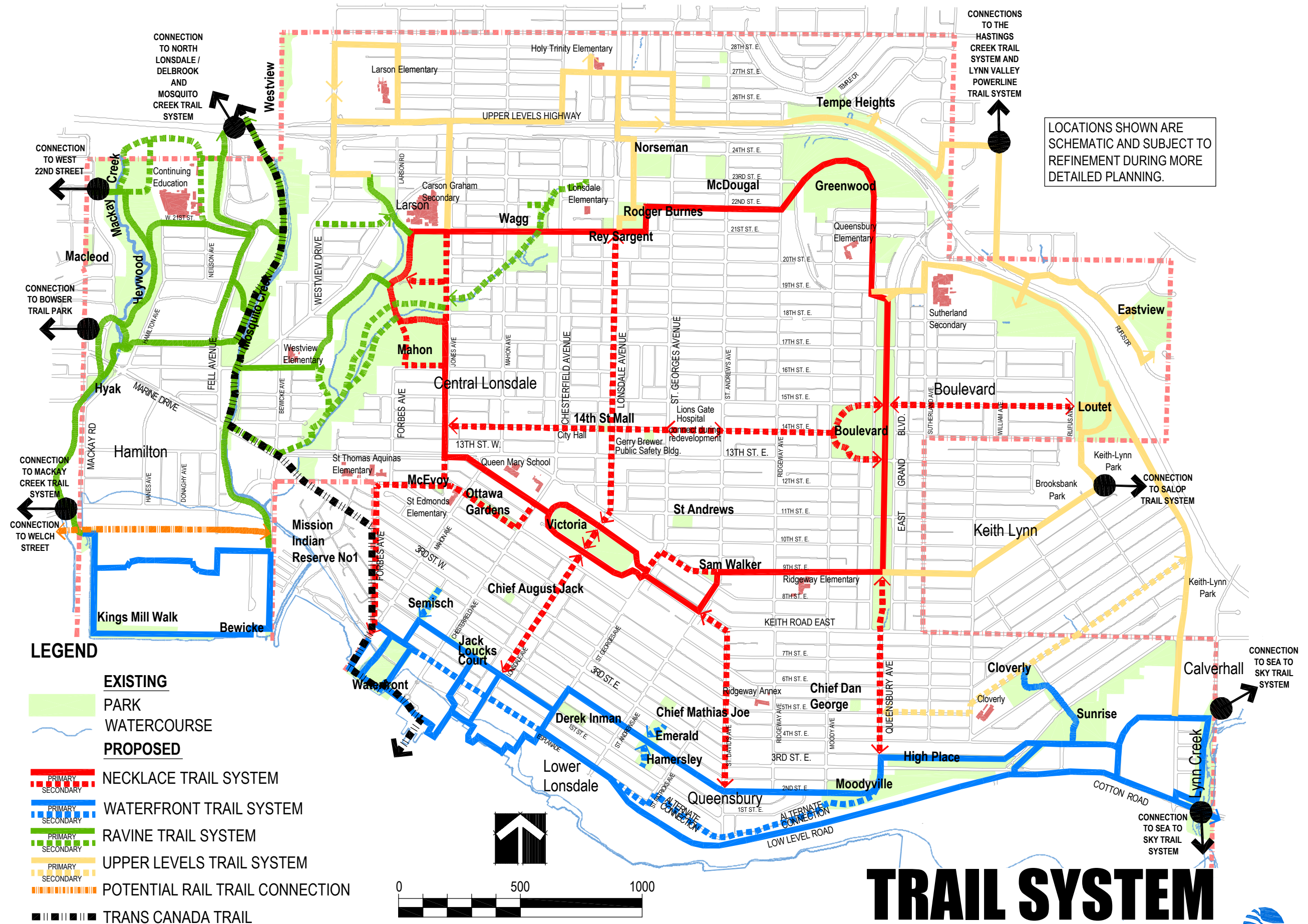
Figure 2 shows an ambitious trails system, that may represent a 20 year goal. Priorities may be set for the next five year period. Priority actions include:

- 2.1.1 Choose a set of trail linkage priorities that can be accomplished in time for opening in the Centennial Year (2007). For example, completion of the 'Green Necklace' may be an achievable goal over five years.
- 2.1.2 Undertake a 'greenway street' demonstration project, to show how traffic calming, bicycle and pedestrian enhancements, and possibly a green buffer and wider sidewalks may be incorporated into a street reconstruction or retrofit.
- 2.1.3 Incorporate greenway street locations and design objectives into the City's transportation traffic calming and street improvement programs, so that street improvements incorporate the greenway street concepts.
- 2.1.4 Complete a trail repair and upgrading program, to address safety and habitat impacts due to disrepair or misuse of existing trails.
- 2.1.5 Open a cooperative dialogue with the Squamish First Nation about their waterfront development plans, and the opportunities for trail linkages associated with development.
- 2.1.6 Complete feasibility and capital cost studies on the development of the trails network, including both park and street improvements, as well as major structures associated with the trails system (e.g. BC Rail grade separations, ravine bridges, Upper Levels Highway overpass).

- 2.1.7 Establish a capital funding mechanism for long-term implementation of the trails system.
- 2.1.8 Provide opportunities for trail systems that achieves wheelchair accessible grades.
- 2.1.9 Provide opportunities to City residents by connecting with the larger trail systems beyond our boundaries like the Trans Canada Trail.



*Trail improvements can protect habitat.*



LOCATIONS SHOWN ARE SCHEMATIC AND SUBJECT TO REFINEMENT DURING MORE DETAILED PLANNING.

# TRAIL SYSTEM



## 2.2 Fish and Wildlife Habitat in Parks

*Objective 2: To conserve, protect and improve fish & wildlife habitat values in City Parks.*



*Park wildlife*

Most watercourses in the City of North Vancouver are in City Parks. Most remaining native woodlands are also in the ravines and steep slope areas within parks.

Since most parks are fully developed, impact on habitat and vegetation in parks is largely the result of human use and dog activity. While the City recognizes the social health values of pet ownership there is an important need to address the issue of dogs in parks which can have significant negative impacts on riparian habitat, and wildlife.

Gradual widening or 'braiding' of trails by people avoiding mud puddles and dogs exploring off-trail creates damage by trampling vegetation or compacting soils. Vegetation is also impacted by mountain bike use, in particular where users are leaving established trails in search of more difficult terrain. Loss of vegetation often leads to erosion. It is important for the recreational and educational aspects of urban parks to continue. However, it is also critical to sustainability that the current use of these parks does not impede future generations' ability to renew and maintain the parks' environmental resources, including fish and wildlife. To manage the balance between human use and fish and wildlife values in City Parks, the following actions may be taken:

- 2.2.1 New trails or facilities in sensitive habitats will be discouraged, and installed only where they provide a net gain for habitat by e.g. by reducing pressure on another, more sensitive, area.
- 2.2.2 Trailside barriers and signage may be installed along heavy use trails that enter sensitive habitats, particularly along ravine edges and creeks. These barriers may vary in design, to include fences,

- hedges, natural plantings, brush barriers, etc., designed to be as unobtrusive as possible, while still being effective.
- 2.2.3 Erosion and riparian area restoration, and/or trail consolidation, will be pursued where prior park use has damaged sensitive habitat, e.g. along the shoreline of Lynnmouth Park, Wagg Creek ravine of Mahon Park.
  - 2.2.4 Trails alignments that are causing extensive damage may be closed, e.g. west side of Heywood Park above Keith Rd. access, east side of Mosquito Creek above 19<sup>th</sup> St.
  - 2.2.5 Consideration will be given to designated, low impact, sites for dog off-leash use and for mountain bike challenge riding.
  - 2.2.6 Habitat restoration efforts will continue, such as the Mosquito Creek side channel, or the reconnection of Mackay Creek with its estuary.
  - 2.2.7 The City should initiate management of invasive non-native species (such as english ivy, himilayan blackberry, Scotch broom etc.) in sensitive areas of greenways and parks.
  - 2.2.8 Naturescape approaches that emphasize plantings that support a diversity of bird and other wildlife use will be continued.
  - 2.2.9 No-mow zones may be considered to create meadows, wetlands and marshes that support increased habitat values.
  - 2.2.10 The City will review the implications of the Streamside Protection Regulation on parks and ravines adjacent to watercourses in the City, and will include a parks strategy as part of an Intergovernmental Agreement that applies to both public and private lands. In addition, the City will develop Best Management Practices for parks and environment operations, and will train crews in proper maintenance and management practices for these areas.



*Protect stream banks and restore riparian vegetation*

## 2.3 Stormwater Management in Parks

*Objective 3: To define an appropriate role for City Parks in stormwater management.*

Problems of erosion and sedimentation in City watercourses and parks are partly the result of increased impervious surface caused by urban development in the watersheds. There is a need for creative solutions to increase storage, infiltration or reuse of stormwater to mitigate this problem. Some of this storage could be provided as detention ponds in City Parks, where runoff would be stored to attenuate peak flows, to reduce downstream erosion in the creek channels, and to increase water quality. At-source storage could also be provided on development sites – e.g. in cisterns under streets or buildings, by use of pervious paving, in absorbent soils over parking garages, or by use of bioretention areas or rain gardens in private developments.

- 2.3.1 The City will investigate creative solutions to the provision of moderate stormwater detention in parks, including community detention ponds, so long as existing wooded, watercourse, or important active play areas are not affected.
- 2.3.2 Where detention is provided in parks, it should be of the highest quality facility, properly graded and landscaped to be safe for public access, and to create an amenity.
- 2.3.3 The City will pursue designs that will allow safe public access to detention ponds, and signage fully explaining the function of the pond.
- 2.3.4 Wherever possible, new detention ponds should be off-channel, to provide ease of cleaning and to avoid impacts on the watercourse from construction and cleaning activities.



*Stormwater detention in park*

## 2.4 Purchase or Designation of Additional Parkland

*Objective 4: To refine to what extent purchase or designation of additional parkland and greenways are required.*

As an established City, most neighbourhood parks are already in place. This raises the questions of how much money the City should set aside to purchase additional land for parks, and where the City should negotiate for additional park space at the time of redevelopment. The 1991 Parks and Recreation Master Plan identified parkland deficiencies in Lower Lonsdale, Moodyville, Central Lonsdale, and Lonsdale above the Upper Levels Highway. These deficiencies were not for parkland in general, but for a specific type – flat, active play space in the neighbourhood park scale (1.2 – 2 Ha, or 3-5 acres). A development cost charge has been established to raise funds for the required purchases, and it is in the early stages of assembling the required capital.



*Existing grassy park*



*Pedestrian connection to waterfront*

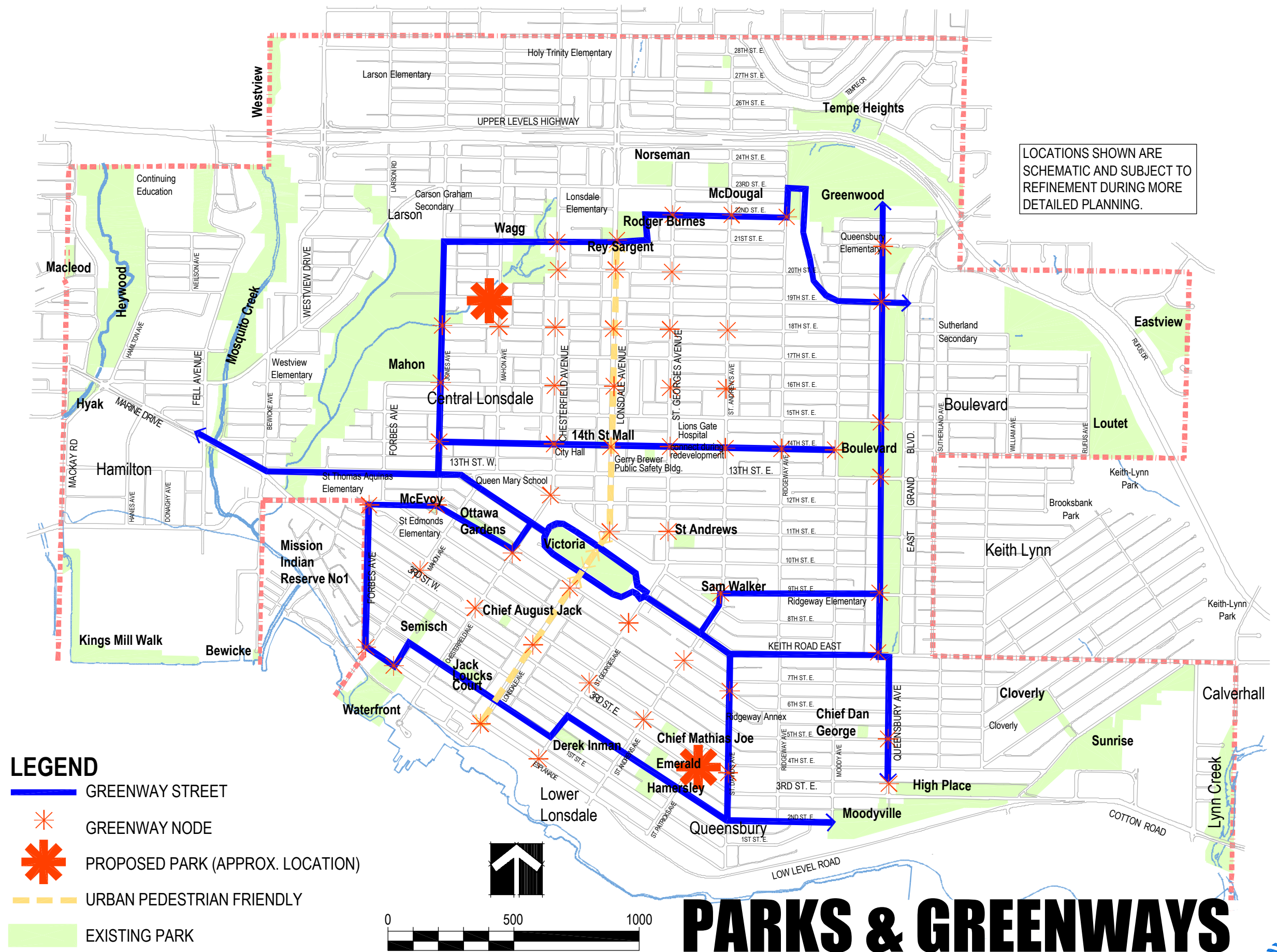
Investments in improvements to greenway streets might increase the ‘effective accessibility’ of existing parks by foot or cycle. If the ‘greenway street’ effectively becomes a part of the parks system, then all neighbourhoods would be well served for access to parkland. Streets between some smaller parks might be locally closed to increase ‘park area’ and to link the two parks. New park corridors might be sought, e.g. to link Emerald and Chief Mathias Joe Park. Other land acquisition issues focus on the public support for protection of riparian habitat along watercourses. There are only a few private properties containing watercourses in the City. Purchase of these remaining properties would put all watercourses in public management. The City should:

- 2.4.1 Continue to raise funds and pursue purchase of additional parkland to supplement existing parks in the Moodyville neighbourhood. These purchases might focus on expansion of Moodyville Park, or expansion and road closures in the vicinity of Emerald Park.





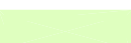


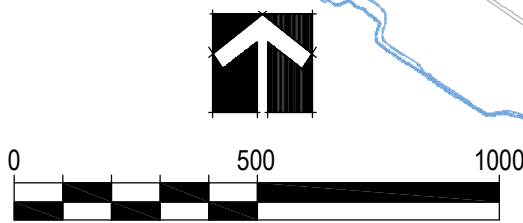
- 2.4.2 Develop a system of greenway streets to increase pedestrian and cycle access to existing 'open play' park spaces.
- 2.4.3 Consider negotiating or funding 'pocket parks' (<0.4 Ha or <1acre green/plaza space) at time of redevelopment in the Lower Lonsdale, Central Lonsdale in the vicinity of Lions Gate Hospital, and Upper Lonsdale above the Upper Levels Highway.
- 2.4.4 As a long term goal on a willing seller basis, consider purchasing remaining private properties that include watercourses and connecting fragments between ESA's.
- 2.4.5 Redefine the development cost charge funding formulas to balance funding of the above property purchases with funding of park and greenway street improvements.

Figure 3 shows schematically the location of existing and proposed parkland and greenway streets.



**LEGEND**

-  GREENWAY STREET
-  GREENWAY NODE
-  PROPOSED PARK (APPROX. LOCATION)
-  URBAN PEDESTRIAN FRIENDLY
-  EXISTING PARK



# PARKS & GREENWAYS

## 2.5 Park Outdoor Facility Development

*Objective 5: To identify new park facilities that are needed and supported by the public in the City of North Vancouver.*

In addition to trails and habitat improvements, the Parks and Greenways Plan will determine priorities for park and outdoor sports facility improvements in the City of North Vancouver.

The City recognizes the benefits of recreation and sport and the pursuit of excellence. To help facilitate these goals there has been ongoing investment in playing fields in the City of North Vancouver including a new field in Sunrise Park, upgrading lighting of existing fields, and the new artificial turf field at Mahon Park. Extensive investment has also been made in new playground facilities, including cost sharing with the School District. Future investments in playgrounds will emphasize innovative, high quality play environments.

- 2.5.1 The City will monitor the use and demand on existing playing field facilities to help determine the need for future facilities.
- 2.5.2 Future active recreation facilities will be considered in response to the demonstrated needs and support of the community and will be addressed in the ten-year capital plan. Interest has been expressed in review of improved track facilities within the next ten year period.
- 2.5.3 In the next five years, there will be a focus placed on outdoor facility investment in support of trail linkages, and the repair and maintenance of existing facilities.
- 2.5.4 Investment in accessibility in existing parks will be a high priority. The need is recognized for a variety of site furniture, for informal open play space, for improved maintenance of parks and urban plazas, for secure parking facilities for cyclists, and for special facilities for youth and the elderly. There is recognition of the need to continue to improve on our public involvement process.
- 2.5.5 In response to public interest in community gardens, a study may be commissioned to investigate the role of the City, the private sector or non-government organizations in providing and maintaining garden plots in areas accessible to the higher density residential areas of the City.
- 2.5.6 Efforts will be made to increase the usefulness of existing facilities through more innovative programming.



*New sports field*

## **2.6 Streets, Rails and Boulevards in the Parks and Greenways System**

*Objective 6: To refine the role that City streets and boulevards can play in a sustainable community.*

The integration of The Parks and Greenways Plan with the Traffic Calming Plan is an important objective since the two separate plans have many common and shared values. Integration in terms of planning, design and implementation will provide mutual benefits and demonstrate the integration of environmental values, transportation planning, habitat connectivity and community liveability. The 1992 OCP shows several cross-streets in the Lonsdale corridor as 'Park, Recreation and Open Space'. Figure 3 is a refinement of this designation, based on the concept that there are two potential treatments:

1. A greenway street, where priority is given to pedestrians, cyclists and green space in the street section, but where slow speed local vehicular traffic and emergency vehicle access, as well as limited on-street parking is allowed;

A greenway node, where pedestrian area bulbs at intersections and midblock, combined with traffic calming measures, increase the visibility of 'green' or high amenity pedestrian space on the street, but where the street between the greenway nodes has a normal load of local traffic and parking.

In general, Figure 3 shows greenway nodes at intersections of those streets that were Parks, Recreation and Open Space designations in the 1992 OCP. Full greenway streets are shown where they provide an effective connection to the parks and trails systems. Figure 3 also recognizes the Lonsdale retail corridor as a special, pedestrian-friendly, urban environment. The long term potential of the BC Rail corridor is also shown on Figure 3. A shared right of way, designed for adequate separation and safety, could provide vital linkages with the Squamish Nation, District of North Vancouver and beyond. The City should:

- 2.6.1 Close selected street segments to vehicular traffic (like 14<sup>th</sup> Street plaza).
- 2.6.2 Partially close certain street segments to traffic (e.g. Jack Loucks Court).
- 2.6.3 Provide traffic calming and bike/pedestrian amenities on designated greenway streets (e.g. narrower pavement, sidewalk bulbs, speed bumps, landscaped islands, public art, etc.)
- 2.6.4 Provide additional street tree planting and wider sidewalks on designated greenway streets.
- 2.6.5 Designate bike lanes for commuters on major streets.
- 2.6.6 Conduct demonstration projects for innovative stormwater management and low impact landscape maintenance on greenway streets.
- 2.6.7 Integrate 'naturescape' principles to increase habitat for small mammal and bird species and look for opportunities to connect habitat along greenways.



*Potential rail trail connection*

## 2.7 History and Culture in Our Parks and Streets

*Objective 7: To maintain and enhance the important historical, traditional, cultural and social elements of our parks and greenways that add to the quality of life and sense of place of the City, including the integration of public art into the parks system.*



*Public art in North Vancouver*

Parks and greenways are an important part of the social and cultural life of the City of North Vancouver.

All residents identify with the quiet enjoyment that the community gains in sharing the nature trails of the ravines.

The history of the City is engrained in its heritage open spaces like Victoria Park and Grand Boulevard. The cultural vitality of the City is showcased by the many special events that are held in City Parks and Streets.

Recent additions to the open space system like Waterfront Park, the plaza at Lonsdale Quay, and Jack Loucks Court incorporate public art and add to the City's sense of place.

The City should:

- 2.7.1 Consider how design of all outdoor spaces reflects and enhances the cultural vitality of the City of North Vancouver, and encourages the positive social interaction of residents
- 2.7.2 Ensure that park and greenway improvements respect the history of the City.

- 2.7.3 Provide an integrated approach to public art throughout the Parks and Greenways system, to help residents interpret their history, environment and culture, and to respect the goals of the Public Art Master Plan such as:
- 2.7.3.1 Public Art will recognize the topography of the City and the unique streamscape that flows from the mountains and follows the topography down to Burrard Inlet.
  - 2.7.3.2 Public art will be utilized to emphasize the original historic plan for the City by emphasizing “ring of parks” into an identifiable and beneficial component for all residents of the City to enjoy.
  - 2.7.3.3 Public art will acknowledge the environmental program and the streamscape that flow through the City to Burrard Inlet. The streamscape will be visual through daylighting or marking the stream flow on the ground surface in an artistic and creative way.
  - 2.7.3.4 Public art will acknowledge the original shoreline of the City.
  - 2.7.3.5 Public art will identify existing and lost landmarks.

## 2.8 Public Viewpoints

*Objective 8: To recognize the importance of and examine opportunities for protected public viewpoints to major regional landmarks and features including views of the ocean, mountains and the Vancouver Skyline.*

Access to spectacular views is a defining part of living in the City of North Vancouver. While not all residents have access to views from their dwelling, the preponderance of views from public parks and streets is an asset to City Residents.

The City should:

- 2.8.1 Identify existing viewpoints from public parks and streets.
- 2.8.2 Create a strategy to designate viewpoints that will be maintained as the City grows, and methods to protect these views and enhance the viewpoint.

## **Appendix A: Components of the Trails and Greenways Systems**

Necklace Trail System  
Waterfront Trail System  
Ravine Trail System  
Upper Levels Trail System



## **Appendix A: Components of the Trails and Greenways Systems**

*Appendix A provides notes on potential alignments of the proposed trails system. These notes are preliminary in nature, and are subject to more detailed assessment prior to implementation.*

### Necklace Trail System

Primary existing components:

Victoria Park  
Keith Road boulevards  
Grand Boulevard  
Greenwood Park  
Rodger Burns Park  
Rey Sargent Park  
Wagg Park  
Mahon Park

New linkages:

Victoria Park to Sam Walker Park: A pedestrian link uses the existing walkway and 9<sup>th</sup> St., to connect Victoria Park with Sam Walker Park. A section of 9<sup>th</sup> St. is closed to expand the size of Sam Walker Park. A cycle/pedestrian link follows the edges of Victoria Park and the Keith Road boulevard, turning up St. Andrew's to connect to Sam Walker Park.

Sam Walker Park to Grand Boulevard Park: traffic calming and greenway street improvements create a slow speed car/bike/walk street extending along 9<sup>th</sup>. Ridgeway Elementary school and related recreational facilities are also accessed by this greenway street.

Grand Boulevard Spine: subject to an upcoming detailed plan, a new system of walkway/bikeway and landscape improvements would respect this heritage asset. The improvements would include more safe pedestrian and cycle crossings of streets in this area.

Boulevard Park and local greenway streets: To provide local walking/cycle access to Boulevard Park, it is proposed that 14<sup>th</sup> St. to the east of Boulevard Park be redeveloped to a slow speed car/bike/walk greenway street. As an objective, a pedestrian route as a part of hospital redevelopment would allow pedestrian continuity from the 14<sup>th</sup> St. and Lonsdale pedestrian area to Boulevard Park. A greenway street treatment to 15<sup>th</sup> St. east of Boulevard Park would ease walking/cycle access to open space.

Queensbury Ave. and Greenwood Park: Queensbury Ave. and fronting parks would be designed for safe walk/cycle connection between Grand Boulevard and Greenwood Park. A new walk/cycle trail would follow the contour around the hill at Greenway Park, to connect to the east end of 22<sup>nd</sup> St.

22<sup>nd</sup> St. Greenway to Rodger Burns: Traffic calming and walk/cycle improvements would create a greenway street to connect Greenwood Park to Rodger Burns Park at Lonsdale. Cyclist routes would go around Rodger Burns Park, with pedestrian routes skirting the lawn bowling club. Both cyclists and pedestrians would cross Lonsdale at 21<sup>st</sup> St.

21<sup>st</sup> St. Greenway to Mahon Park: A greenway street would be improved to nurture existing and increased pedestrian/cycle traffic between Rey Sargent Park and Carson Graham Secondary School and Mahon Park. To facilitate cyclists, a more gently sloping crossing of Wagg Creek might be created.

Mahon Park Accessible Greenway: A new, accessible gently sloping, walk/bike trail would extend along the plateau from Carson Graham Secondary School through to Jones St. The route may run between the proposed artificial turf playing field and the ravine, and run to the west of the existing baseball diamond. A dramatic proposal is to carefully site a high level pedestrian/cycle bridge to cross the Wagg Creek ravine in this area. It is possible that a light weight bridge could be designed to allow disabled persons (and others) the opportunity to enjoy the wilderness of the ravine without having to travel down into the ravine proper. Providing this level grade overlook would allow the scaling down and repair of the badly damaged trails in the ravine bottom in this area. Thus major public use would be on the high level bridge, with the in-ravine trail use reduced to nature trail levels. A secondary access trail could also connect the high level bridge with residents of the 16<sup>th</sup> St. neighbourhood. Other secondary trails would connect parking on Jones St. to local sports facilities and the trails system.

Jones St. Greenway and 14<sup>th</sup> St connections: Pedestrian/cycle and landscape improvements along Jones could complete the "Green Necklace". Special attention to safe crossings of Keith Road will be required. A greenway street from Lonsdale east to Jones St. is proposed to increase pedestrian/cycle access to and from the Green Necklace.

Lonsdale Ave.: The pedestrian nature of Lonsdale Ave. is recognized as a significant connector to the Green Necklace.

Waterfront Trail System Connections: Three other connections to residents of the Lower Lonsdale slopes are proposed: McEvoy and Forbes; St. David's Ave., and Queensbury Ave. These also connect to the proposed Waterfront Trail System.

Waterfront Trail System

## Primary existing components:

Kings Mill Walk  
Waterfront Park  
Lonsdale Quay  
Derek Inman Park  
Emerald Park  
Hamersley Park  
Moodyville Park  
High Place Park  
Sunrise Park  
Lynn Creek Park  
Low Level Road Bikeway

## New linkages:

Kings Mill Walk to MacKay Creek: As a long term objective, the new waterfront walkway could be connected to residents of the Heywood neighbourhood with a walk/bike trail parallel to, but set back from, MacKay creek. Key new linkages would be a pedestrian/cycle overpass over the BC Railway at the foot of Mackay Ave. A safe crossing of W. 1st St. would allow a pedestrian/cycle connection into the District of North Vancouver trail west of Mackay Creek. Connections to the City's Hyak Park and across Marine Drive would then tie in to the Ravine Trail system.

Kings Mill Walk to Bewicke Park and Breakwater: Working in cooperation with private landowners in the area, a route could be found that crosses the marina property to connect with Bewicke Park. As a long term objective in cooperation with the Port of Vancouver, the potential could be explored for a public breakwater/walkway extending out into the harbour in this vicinity. Such a breakwater could both formalize protection of the marina from wind and currents, and also provide a valuable public amenity. Views of the city and mountainscape from the breakwater would be dramatic.

Kings Mill Loop: To provide a loop circuit in the Harbourside area, a walk/bike route would extend from Bewicke Park north along a linear greenway, west along Copping St. and along the existing trail to Fell Ave. From Fell Ave. the trail would follow Automall Drive to the west, using a trail right of way to complete the loop.

Squamish First Nation Lands (Mission Indian Reserve No. 1): Trail connections in this area are limited at present to sidewalk along Third St., which serves with Forbes Ave. as the Trans Canada Trail connection to Waterfront Park. It is proposed that a cooperative venture be sought with the Squamish First Nation, to facilitate a trail connection on or parallel to the waterfront. This waterfront

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connection is most likely to be achieved in concert with a redevelopment of these lands. The intent is that a trail alignment could be found that would complement First Nations development plans for this area, and that would support social and economic development for the First Nation, as well as provide a recreational amenity for both owners/tenants in the development and neighbours both on and off-reserve.

**Waterfront Park to St. George Ave.:** The urban waterfront in this precinct provides a high quality experience, and the Versatile Shipyards redevelopment will extend the waterfront trails system to the east. The major new linkages will increase accessibility across Esplanade Ave to the waterfront. Improved pedestrian islands and signalization are proposed on Esplanade at the foot of Semisch Ave. Continued improvements to sidewalks along Esplanade would also increase pedestrian use. Lanes and diagonal walkways also should be organized to promote safe access to the pedestrian overpasses in this area. The short block of Semisch between Esplanade and W. 1<sup>st</sup> St. could be made one-way to allow space for improved pedestrian access. Traffic calming and pedestrian friendly treatment should extend along 1<sup>st</sup> St. from Jack Loucks Plaza to St. George Ave. New developments in the vicinity of St. George Ave. may provide opportunities for highly pedestrian environments, with ties across St. George to Derek Inman Park.

**2<sup>nd</sup> St. E. Greenway to Moodyville Park:** from Derek Inman Park and Neighbourhood House, it is proposed that 2<sup>nd</sup> Ave. have traffic calming and pedestrian/cycle improvements to create a Greenway Street. This route would improve pedestrian/ cycle access for this neighbourhood to open space, either in the vicinity of Emerald Park, or at Moodyville Park.

**Moodyville Park / High Place / Sunrise Park:** New walk connections would allow residents to travel from Moodyville Park to Sunrise Park along a trail. Grades make cycling difficult in this area, although designs should allow cycle use. Cycle and walking provisions in the Park and Tilford area would connect users to Lynn Creek Park.

**Low Level Road and Esplanade Trail:** The existing walk/cycle trail along the Lower Level Road should be extended both to the east to connect to Lynn Creek Park, and to the west along the south side of Esplanade to connect to the proposed Versatile Shipyards trail system.

Ravine Trail System

## Primary existing components:

Hyak Park  
Heywood Park  
Mosquito Creek Park  
Mahon Park  
Wagg Park

## New linkages:

Heywood to Waterfront Trail: a new trail linkage from Heywood Park across Marine Drive and Hyak Park would connect to existing District of North Vancouver Trails on the west side of MacKay Creek. An overpass over the BC Rail line at the foot of Mackay Road would connect to the waterfront trail.

Heywood to Fell Ave: using lands in the District of North Vancouver to the north of the Continuing Education site, a minor trail connection could be made between the Heywood Ravine and Fell Ave. A more southerly connection between Heywood and Mosquito Creek parks could be made along W. 17<sup>th</sup> St. The two connections together with existing trail allow a local circuit. Prior to trail development in Heywood Park, a review should be completed of any conditions set at the time of donation of parklands in this area, and a careful assessment of potential impacts on habitat conditions should be made to ensure no net loss of habitat.

Mosquito Creek to Fell Ave. Loop: A pleasant local trail loop could be provided by recognizing and improving connections between existing Mosquito Creek and Trans Canada Trail alignments in the City, the William Griffen Park trails in the District, and local street connections that provide a circle route using Fell Ave.

Mosquito Creek Low Level Loop: High use trails have been improved in the lower reaches of Mosquito Creek park. A pedestrian/cycle bridge crossing of Mosquito Creek in the ravine near 19<sup>th</sup> St. would provide a loop circuit, rather than a one way walk/cycle in this area. Such a loop circuit could be combined with physical barriers to close the trail on the east side of Mosquito Creek north of 19<sup>th</sup> St. Any bridge crossing would need to consider flood levels and potential debris flows in the river.

Mosquito Creek to Waterfront Connection: With an investment in a grade-separated crossing of Larson at Mosquito Creek, a major opportunity exists to connect the Mosquito Creek trail to the waterfront system. After crossing Larson travelling south, a trail could follow the east side of Mosquito Creek using existing lanes, and after a grade separated crossing of Marine Drive, the trail alignment exists between the City works yard and Mosquito Creek. The trail could then take an at-grade BC Rail crossing to connect to the Waterfront Trail system.

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Alternatively, a trail could cross Mosquito Creek on the Bewicke bridge, and then double back along the south side of the creek on unused road allowance to connect to the existing BC Rail overpass on Fell Ave, provided a grade separated connection to the Waterfront Trail system.

Mosquito Creek to Mahon Park Connection: If the Mosquito Creek trail can extend south under Larson Rd., an opportunity exists to provide a link to Mahon Park following a lane on the 16<sup>th</sup> Ave. W. right of way, extending south of Westview Elementary, and turning north along the top of the ravine to connect to Wolfe St. The route would follow Wolfe St. along Mahon Park, and would then use a bridge to cross the ravine to connect to the Green Necklace system, or would extend around the ravine at Larson Road.

Wagg Creek Trails: Figure 2 shows existing and proposed trails parallel to Wagg Creek. In general, it is proposed to reduce the scale and impact of these trails, so that they become minor, nature walk routes. There is considerable erosion and damage to riparian vegetation that needs repair in these ravines. The provision of alternative trail routes outside the ravines should allow the de-emphasis of the streamside trails, in Mahon Park in particular. As a long term objective, low use trails are shown extending the length of Wagg Creek up to 22<sup>nd</sup> St. E. , and it is recognized that property purchase would be required to allow trail continuity.

### Upper Levels Trail System

Primary existing components:

Tempe Heights Park  
Eastview Park  
Loutet Park  
Jones St. Overpass

New linkages:

Westview Overpass Connection: a new minor trail would extend from the vicinity of Carson Graham Secondary School up the Wagg tributary and follow 23<sup>rd</sup> St. West to and over the Westview Overpass.

Jones Overpass Connection: improvements to the Jones St. right of way would increase pedestrian and cycle comfort in the approaches to the Jones Street Overpass over the Upper Levels Highway.

Upper Lonsdale: pedestrian/cycle use of the Lonsdale Overpass should be enhanced, as a means of offering residents north of the Upper Levels Highway a connection into the loop trails system south of the Highway.

Upper Levels Greenway: A streetside trail would extend both directions along the 25<sup>th</sup> St. right of way just north of the Upper levels Highway. It would jog to the north to provide safe street crossings at Westview and at Lonsdale, and to connect to Larson and Holy Trinity Elementary Schools. There are opportunities for formalizing viewpoints along this route.

Tempe Heights Connection: the trail would follow the East 25<sup>th</sup> St. right of way to connect to the trails system in Tempe Heights Park.

Cedar Village Connections: Feasibility studies should review potential connections between Tempe Heights Park, across Lynn Valley Rd., and along the Upper Levels Highway frontage to connect to Casano Drive and Eastview Park. A connection could use existing streets in the District – Weymouth and William – to allow a safe crossing of Lynn Valley Rd. A pedestrian cycle overpass to connect over the Upper Levels Highway would provide a substantial link for Cedar Village residents to the parks and greenway systems in Loutet Park and across the City.

Loutet Park Trail Extensions: existing trails that run parallel to the Upper Levels Highway in Loutet Park could be extended: to the west to connect around Sutherland Secondary School to the Green Necklace Trail System; and to the south to connect through the District of North Vancouver to the Waterfront Trails System.

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