



# SILVERDALE

## CENTRAL NEIGHBOURHOOD PLAN

August 2022

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# Silverdale Central Neighbourhood Plan

August 2022

Prepared for:



Prepared by:



Technical Team:





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# 1. OVERVIEW

## 1.1. PLAN AREA AND CONTEXT

With its dramatic hillside setting overlooking the Fraser River, the Central Neighbourhood Plan (CNP) represents the first completed Neighbourhood Plan within Silverdale's designated urban growth area. The Plan reflects the development of a more complete and walkable urban, mixed-use hillside neighbourhood.

The 733.6 ha (1,812.7 ac) Central Neighbourhood occupies the principal position within the Silverdale Comprehensive Planning Area (SCPA) in Southwest Mission. Defined largely by topography, the CNP is bounded to the east by Chester Creek ravine; to the north by the ridge of steep slopes that define Silverdale's summit; to the west by forested slopes above Manzer Street; and to the south by historic Silverdale Avenue and the Agricultural Land Reserve (Refer to Figure 1 – Neighbourhood Plan Context).

## 1.2. RATIONALE FOR NEIGHBOURHOOD PLAN

The Silverdale Central Neighbourhood Plan was undertaken to realize the vision of an urban destination mixed-use neighbourhood as outlined within Mission's Official Community Plan (OCP). Building on the SCPA's Master Infrastructure Strategy (MIS), the Neighbourhood Plan is intended to guide the growth of the community through comprehensive land use, infrastructure, civic facility, and environmental conservation planning.

Neighbourhood Plans respond to the need for a more sustainable region, as identified in the Regional Growth Strategy (RGS), and as outlined in the OCP. Adopted by City Council through the OCP, Neighbourhood Plans provide detailed guidance for new development within a given geographic area, structuring land use and servicing to effectively manage growth towards building a more healthy and complete community.

The CNP establishes a plan for the future, consistent with current community values, best practices in neighbourhood design, consideration of community and landowner engagement, and municipal goals, objectives and policies.

The CNP has been prepared in accordance with the 2018 OCP - Policy 8.3.8, the Silverdale Neighbourhood Plans shall be prepared in accordance with the neighbourhood plan structure in Section 8.2 of the OCP and the technical studies and development planning recommendations of the MIS as well as the SCPA Neighbourhood Planning Terms of Reference LAN.64(c).

## 1.3. FRAMEWORK FOR MANAGING CHANGE

The CNP structures land use and servicing decisions to effectively manage growth with the intent of building a healthy, complete and more sustainable urban neighbourhood. It provides greater detail concerning the planning and engineering required to assist in the reconciliation of land use, environment, density, infrastructure and implementation issues, serving as a comprehensive guide for managing future rezoning and subdivision applications.

Through encouraging new development within designated urban growth areas, community growth is more compact, socially supportive, and land efficient. This land-use efficiency serves to maintain the integrity of rural and resource areas, protect the environment, reduce greenhouse gas emissions, increase infrastructure efficiency, and foster healthy, diverse communities. Silverdale is located within the City of Mission's Urban Growth Boundary, which identifies where future growth is expected and encouraged as a means to reduce sprawl elsewhere and to build more complete communities.

#### 1.4. ALIGNMENT WITH RGS, OCP, MIS, LIVABLE STREET STANDARDS AND CITY MASTER PLANS

In establishing a comprehensive plan for Silverdale's Central Neighbourhood, the CNP aligns with the City of Mission's OCP and SCPA's MIS, as well as, with the goals and objectives of the Fraser Valley Regional District (FVRD) Regional Growth Strategy (RGS). The RGS provides overarching direction with respect to managing growth in the region.

Through implementing the objectives and policies found within the OCP, MIS, and RGS, the Neighbourhood Plan serves to bring greater resolution to the vision for a more sustainable region.

##### 1.4.1. Regional Growth Strategy

The Fraser Valley RGS, entitled Choices for Our Future, is a strategic, high-level policy document for coordinating planning in the Fraser Valley Regional District. The RGS provides a framework for OCPs in Fraser Valley municipalities. Adopted in 2004 and currently undergoing an update, the FVRD RGS envisions the future of the regional district as a network of vibrant, distinct, and sustainable communities that accept responsibly managed growth, while being committed to protecting the land resources and the natural environment to ensure that a high quality of life is accessible to all.

Designated within the Regional District's Urban Growth Boundary, the CNP is consistent with RGS Growth Management Goals to 'increase transportation choice and efficiency; manage urban land responsibly, develop a network of sustainable communities; protect the natural environment and promote environmental stewardship; protect and manage rural and recreational lands; achieve sustainable economic growth; and manage water, energy resources and water responsibly'.

The CNP is developed with consideration to the current FVRD RGS.

##### 1.4.2. Official Community Plan

In accordance with and in support of the RGS, the City of Mission's 2018 OCP contains long range planning objectives and policies to guide the future development of the community.

The City of Mission's Official Community Plan designates the 3,440 acre Silverdale Comprehensive Planning Area (SCPA) in southwest Mission for future community development. Situated within the City of Mission's Urban Growth Boundary, the SCPA represents a singular opportunity for a master-planned community in one of the Fraser Valley's last remaining large-scale designated growth areas.

The City of Mission OCP, Make it Your Mission, presents a vision -supported by a set of Guiding Principles and policies - outlining the City's objectives to address the fundamental aspects of life and living that will enable the community and its residents to function sustainably over the long term.

The following summary lists the City OCP Guiding Principles that have been considered in preparation of the CNP:

##### A Sustainable Mission

"Mission is committed to meeting our present needs without compromising the ability of future generations to meet their own needs. We will achieve sustainability through involving the community in realizing the vision and an ongoing dialogue that addresses economic, social, environmental and cultural well-being. Our sustainability strategies will focus on health for all members of the community."

## Environmental Stewardship

“Our residents place high values on the natural environment. Mission will achieve environmental sustainability through protecting and enhancing ecosystems, providing opportunities for residents to enjoy and learn about their natural heritage, and working towards being a carbon-neutral community. This will involve the following:

- increasing the extent of protected environmentally sensitive areas
- appropriate management of natural areas including protection and enhancement of lakes, creeks, forests and the Fraser River
- guiding new development to achieve efficient use of land, transportation, energy, water and other resources, and to reduce greenhouse gas emissions
- protecting the connectivity of natural areas, including wildlife habitats and corridors
- encouraging individuals and the community to take responsibility for the appropriate handling and disposal of wastes, working towards zero waste
- providing public access to forests, lakes and rivers where appropriate
- encouraging ‘green’ technologies that use fewer non-renewable resources
- encouraging all residents, businesses and institutions to become more environmentally sustainable
- protecting and enhancing the urban forest
- managing the interface between developed and forested lands
- using green infrastructure”

## Economic Vitality

“Mission residents require economic sustainability so they can raise families and live here for the long term. Mission will enable the growth of a healthy, diversified, and sustainable economy through the following:

- developing policies to support existing businesses and attract and maintain new businesses to support more employment
- supporting the development of a hub for innovation, creativity, and progressive thinking that includes environmentally friendly, high-tech industries
- achieving fiscal sustainability through efficient and cost effective municipal services
- supporting the development of more tourism opportunities, including eco- and agri-tourism
- supporting the revitalization of downtown and the waterfront
- providing infrastructure that will help to attract businesses, including utilities, public and private transportation networks, and trails
- supporting local agriculture, organic food production and small- and large-scale farming in the community for food security and community health”

## Social Strength

“Mission’s residents need services that will enable them to be socially content. Mission will help support the infrastructure and social networks that help to make residents safe, healthy and socially connected through the following:

- supporting the provision of health care, social services, education and daily living requirements
- supporting a wide range of recreation, social and cultural opportunities that are accessible to all
- encouraging a wide range of transportation options
- encouraging opportunities for people to connect with each other



- supporting the development of a wide variety of residential options that include housing for all ages and abilities, household types, and financial capacities
- providing a range of housing and activities that are appealing to young families
- supporting policies that enable people to “age in place”
- supporting the large number of societies and volunteer organizations that are engaged in helping to keep residents healthy, active and engaged in arts, culture, and recreation activities”

### Compact and Complete Community

“Environmental, economic and social principles will be best achieved if Mission is a compact, complete community that meets the everyday needs of residents in an efficient manner. This will be accomplished through the following:

- establishing downtown as the centre of commerce with higher residential densities, multiple services, walkable distances, safe bicycle options, and good transit
- establishing the waterfront and other residential nodes as communities offering mixed land uses, walkable streets, parks, trails and good transit
- planning for infrastructure to be efficient, with land use planning decisions based on pollution reduction, decreased automobile use, and environmental sustainability
- placing priorities on infill, redevelopment, densification strategies and mixed use
- focusing on enhancing the quality of life through clustering of services, good access to transportation, local food, and experiences of nature”

### Distinct Character

“Many residents choose to live in Mission because of its small town, friendly atmosphere. Mission will aim to protect and enhance the character that is attracting residents to the community through the following:

- continuing to blend urban and rural settings, without sacrificing one for the other
- embracing change while retaining Mission’s unique historic, social and cultural character
- identifying and respecting the character of Mission’s distinct neighbourhoods, including older and developing neighbourhoods
- discouraging infill that is out of character with the neighbourhood
- encouraging view corridors to Mission’s natural features, including Westminster Abbey, Fraser River and surrounding mountains
- promoting Mission as a unique community that differentiates itself based on the historic downtown, access to nature, arts and culture, affordability and recreation opportunities

### Working Together

“Mission recognizes that engaged citizens and collaboration with others are essential to establishing a sustainable community, and will accomplish those relationships through the following:

- engagement with the community on an ongoing basis
- partnering with First Nations, developers, School District 75, the Province, BC Hydro, and others as appropriate to meet the needs of the community
- acknowledging and recognizing the importance of considering the values of the community in all decisions
- collaborating with the Fraser Valley Regional District and surrounding municipalities with regard to regional concerns such as infrastructure, transportation, land use, the environment, employment, waste management, and social services”

### 1.4.3. Master Infrastructure Strategy

The 2020 Council-adopted MIS determined the development potential of Silverdale, setting the stage for the preparation of individual neighbourhood plans in the East, Central and West plan areas. The MIS laid the foundation for the CNP through the following outcomes:

- Green Conservation Framework;
- Unit + Population Targets;
- Major Street Network;
- Civic Water, Sanitary + Rainwater Infrastructure Plans;
- Conceptual Development Sequencing;
- Municipal Infrastructure + Cost Recovery Strategies; and,
- Neighbourhood Plan Areas + Implementation Recommendations.

The OCP Policy 8.3.7, requires “developers to work with Mission to delineate appropriate land areas for neighbourhood plans based on geographic characteristics, transportation and servicing areas”. Through the technical analysis undertaken for the MIS, the following three future neighbourhood planning areas were recommended based on the criteria of geographic characteristics, municipal transportation and infrastructure servicing areas:

- West Neighbourhood;
- Central Neighbourhood; and,
- East Neighbourhood.

The MIS included an implementation policy requiring a new Terms of Reference for Neighbourhood Plans within the SCPA be prepared and adopted, resulting in adoption of Council-policy LAN.64(c). The policy outlines the specific technical studies and public consultation requirements for Silverdale Neighbourhood Plans. The CNP has been prepared in accordance with the MIS and the LAN.64(c) Terms of Reference.

### 1.4.4. Livable Street Standards

The MIS included an implementation recommendation for the preparation and adoption of “Livable Street Standards” for the SCPA that incorporate hillside protection and urban design standards.

The City has prepared Livable Street Standards, including specified cross-sections and design criteria for a range of street conditions.

The CNP implements Mission’s new Livable Street cross-sections and design standards for multi-modal streets in hillside conditions.

### **1.4.5. Municipal Master Plans**

The City has undertaken the updating of its municipal infrastructure master plans to advance the required future servicing and transportation infrastructure in Mission.

The CNP has been prepared in consideration of the updated Municipal Master Plans.

#### **1.4.5.1. Transportation Master Plan**

Preparation of the City's updated Transportation Master Plan (TMP), Mission Mobility 2050, was initiated in December 2020. A draft version of the Plan was presented to the public in January 2022, with the final Plan adopted in the Spring of 2022.

The TMP summarizes the long-term transportation vision for the City of Mission. The Plan identifies a range of strategies and actions to guide the City's transportation decision-making over the next thirty years and beyond.

The CNP has been prepared with consideration to the Goals + Pillars described in the TMP.

#### **1.4.5.2. Utilities Master Plan (UMP)**

The City has endorsed the UMP (2022), comprised of Drainage, Water and Sanitary Sewer Master Plans, to guide future infrastructure servicing in Mission. The CNP servicing infrastructure is intended to be compatible with the infrastructure planning of the UMP.

#### **1.4.5.3. Recreation, Arts + Culture, Fraser River Heritage Park + Centennial Park Master Plans**

The City's Recreation, Arts + Culture, Fraser River Heritage Park + Centennial Park Master Plans provide direction for managing and developing parks, recreation, arts and cultural facilities and programs within Mission.

Parks and community facility planning in the CNP has been prepared with consideration to the directions in this Master Plan.

#### **1.4.5.4. Facilities Master Plan**

The City's Facilities Master Plan describes the condition of existing facilities in Mission, demographic trends, and priorities for development of new facilities.

Community facility planning in the CNP has been prepared with consideration to the directions in this Master Plan.

#### **1.4.5.5. Gap Servicing Connections Study**

The City of Mission commissioned a Gap Servicing Connections Study (Watermain + Forcemain Connections Alignment Review | WSP 2022), to provide a feasible strategy for extending municipal trunk infrastructure into Silverdale, allowing for the phased development of new sustainable mixed-use neighbourhoods.

The study includes a route alignment assessment for new watermain and sanitary force mains between the SCPA and existing City services, as well as, a review of sizing and location of new sanitary pump stations to advance flows along the new sanitary force main.



## 2. NEIGHBOURHOOD VISION

### 2.1. A VISION FOR THE NEIGHBOURHOOD

The Vision for the CNP is predicated on sensitively integrating growth through principles of sustainability, to foster a more complete urban community within Silverdale.

The CNP provides the framework for the phased development of a sustainable, mixed-use community structured according to walkable neighbourhoods, connected parks and trails, offering a full range of housing forms, estimated at 10,470 homes with a projected population of 24,400.

Seeking the development of a more sustaining and complete urban form, the CNP provides for a series of socially-diverse, mixed-use urban neighbourhoods, linked together through a network of public parks - within a 5-minute walk of each home - accessed by a multi-modal transportation network of traffic-calmed streets, tree-lined pathways, and forest trails.

With its dramatic hillside setting and Legacy Forest Park, Silverdale's Central Neighbourhood is an opportunity to guide the growth of Mission through building a more sustaining and complete mixed-use urban neighbourhood in the heart of Silverdale.

### 2.2. PLANNING PRINCIPLES

The CNP reflects sustainable planning that balances the ecological, social and economic aspects of a community by utilizing the following CNP Planning Principles adopted by Council at the outset of the process in November 2020:

#### ECOLOGICAL | WORKING WITH NATURE

##### Conserve Ecological Integrity

- Protect significant terrestrial and aquatic habitats;
- Design an interconnected network of wildlife corridors to secure habitat and ensure functional ecology at a landscape scale;
- Minimize disturbance of significant natural systems through comprehensive master-planning; and,
- Promote stewardship of natural systems through interpretive programs and outdoor educational opportunities.

##### Create Integrated Networks of Park and Natural Space

- Provide public parks and natural spaces that are accessible within a 5-minute walking distance of each home;
- Establish connectivity between neighbourhoods and natural areas with a pedestrian and cycle pathway network;
- Program active and passive community parks to accommodate different activities, abilities and age groups; and,
- Plan shared recreational facilities to ensure maximum community use and cost effectiveness.

#### SOCIAL | LIVING LIGHTLY

##### Design Compact, Walkable Neighbourhoods

- Create a sense of place within each neighbourhood;
- Provide a coherent neighbourhood pattern of streets and pathways with a variety of lot and home sizes for all generations and stages of life;

- Design streets for people to foster a positive pedestrian experience;
- Encourage walking through the incorporation of mixed-use areas and community destinations within a 5-minute walking distance of each home; and,
- Promote neighbourhood safety by designing homes that address the public realm with “eyes on the street.”

#### Foster a Vibrant and Diverse Age-Mixed Community

- Accommodate a range of lifestyles, life-stages and incomes;
- Provide a variety of housing choices and prices, from urban apartments and townhomes to compact single family and rural homes;
- Promote a variety of housing tenures (i.e. fee simple and strata ownership, rental); and,
- Provide a range of amenities for all age groups throughout the neighbourhood.

#### Incorporate a Sense of Place in the Design of Communities

- Integrate the public views and vistas, landforms and natural character into the design of the community;
- Nurture community history and local cultural activities, memorialize local people, places, events and known archaeological sites by promoting local and indigenous history;
- Implement Livable Street Standards to integrate the natural character of the landscape;
- Incorporate Dark Sky principles to limit light pollution and preserve the night sky; and,
- Retain the natural qualities and character of the landscape in the public realm, especially streets, parks and plazas through regionally-responsive design and the use of local materials.

#### Plan for Alternative Transportation

- Encourage all modes of transport, especially walking, cycling and public transit;
- Provide bike and pedestrian pathways throughout the neighbourhood;
- Establish a transit-friendly street network, with future opportunity for full-service transit;
- Reduce vehicle trips by locating basic neighbourhood services and associated employment opportunities close to home; and,
- Explore future alternatives to reduce auto-dependence.

#### Employ Green Infrastructure

- Foster local food systems through community gardening and outdoor educational opportunities;
- Utilize best practices for climate resilient rainwater and stormwater management;
- Design streets that minimize the visual, environmental and physical impacts from conventional roads;
- Encourage energy efficient buildings and use of sustainable technologies; and
- Promote native plantings in landscape design with special attention to water conservation.

## ECONOMIC | SUPPORTING LOCAL LIFESTYLES

### Support an Economically Sound Community

- Create walkable mixed-use centres serving as focal points for employment, shopping, education, recreation and social gathering;
- Ensure residential densities that support local businesses and community facilities and transit-supported mixed-use centres;
- Plan compact communities to reduce infrastructure networks and maintenance costs, which support best practices for asset management and sustainable service delivery; and,
- Develop a mix of uses within the community to foster local business, provide employment, and increase the local tax base.

## 2.3. NEIGHBOURHOOD STRUCTURE

Positioned between the lowlands of the West Neighbourhood and benchlands of the East Neighbourhood, the 733.6 ha CNP represents 53% of the total SCPA, as well as its most dramatic topography.

Responding to the scale and complex terrain of Silverdale, the CNP structures the neighbourhood into a series of three Development Districts, each reflecting its own landscape identity and character. While each is unique, the Districts of the CNP all share a walkable scale with direct access to natural park and open space.

The Development Districts are a consolidation and simplification of the smaller neighbourhood precincts used in the MIS; with precinct names working titles for planning purposes only.

### Lower Slopes District

The Lower Slopes District consists of south-facing hillside benches offering generous views over the Fraser riverfront and surrounding agricultural lands. Rising above the Silverdale Avenue floodplain, the lands include a collection of incised riparian streams that descend the hillside from above the existing Gunn Avenue. With its eastern extent defined by the Chester Creek ravine at Nelson Street and Highway 7, the Lower Slopes District is the closest to existing trunk water and sanitary infrastructure connections.



Illustration 1 | Lower Slopes



### Mid-Slopes District

Positioned above the Lower Slopes, the Mid-Slopes District is defined by its gentle east-west oriented terrace, and serves to connect Silverdale's summit with the infrastructure connection at Highway 7 intersection and Silverdale Avenue.

Extending to the west along an elevated ridge, the Mid-Slopes is centrally positioned in the CNP. Featuring steep forested slopes and riparian streams, this District offers panoramic south, west and north vistas over the Fraser Valley and Golden Ears Provincial Park.



Illustration 2 | Mid-Slopes

### Upper Slopes District

With its commanding position atop Silverdale's summit, the Upper Slopes District crowns the CNP with 360° views over the Fraser Valley and north shore mountains. Despite its elevated position, the Upper Slopes enjoys a relatively gentle topography defined by a backdrop of steep forested terrain, with specific routes providing street and servicing connections to the larger neighbourhood.



Illustration 3 | Upper Slopes

## 2.4. NEIGHBOURHOOD CHARACTER

The CNP presents the opportunity to define a future that goes beyond what is merely ‘conventional’, to a more sustaining lifestyle that integrates and embodies the best of West Coast Living. As the structure of Silverdale’s Central Neighbourhood is established by the pattern of urban neighbourhoods and natural parks, so too is its character defined by the relationship between the built form and the surrounding natural landscape.

In an effort to strengthen those relationships, the CNP identifies the following components which will define and preserve the unique character of Silverdale (Refer to Figure 6: Character Images of Neighbourhood Character and Form).

- **HOMES** | A diverse mix of home types, tenures and sizes with an emphasis on expanding the range of affordability and choice, that respects the character of adjacent rural neighbourhoods. More urban, compact housing forms better support the overall design intent of the CNP as a more walkable and complete community that protects a greater proportion of the natural landscape.
- **GREEN FRAMEWORK** | An extensive green framework defines a significant portion of the CNP to be preserved in its existing natural state. The Green Framework will preserve Silverdale’s character through the protection of defining landscapes, provision of active and passive recreation opportunities, and conservation of functional ecosystem habitat.
- **STREETS** | Livable neighbourhood streets designed with pedestrian and cycle pathways that fit the land, complement the system of parks and trails, and provide alternative pedestrian-oriented routes within the community.
- **FORM + MATERIALS** | Built form designed to relate to the human scale of walkable neighbourhoods and incorporates architectural forms and materials designed in response to the land, views and local climate.
- **PUBLIC REALM** | A public realm – including such elements as destination civic community centres, mixed-use village plazas, landscaping, streets, street furniture, public art, signage, and lighting – that establishes a pedestrian-oriented environment, linking the Central Neighbourhood to adjacent destinations within Mission.
- **LANDSCAPE** | Landscape design that serves to enrich and unify architectural elements and public realm spaces through the use of west coast materials, forms, colours and native plants to celebrate the presence of nature in the urban environment.

## 2.5. NEIGHBOURHOOD METRICS

The CNP realizes a viable community by achieving the community performance metrics established in the MIS. Key Neighbourhood Metrics for the CNP to inform decision making through implementation are described below.

### URBAN DENSITY

- Average residential density of 14.3 uph (5.8 upa) within the gross CNP area.
- Average residential density of 22.7 uph (9.2 upa) within the lands designated for development outside the Silverdale Urban Forest.
- Projected population of 24,400.

### HOUSING

- 10,470 expected homes, including 1,900 single-family homes, 5,390 townhomes, 1,980 apartments and 1,200 apartments in mixed-use complexes.

### RECREATION

- 3 Civic Community Centre Sites totaling 9.2 ha (22.8 ac)

### COMMERCIAL

- 4 Commercial and Mixed-Use retail sites totaling 6.0 ha (14.9 ac)

### SCHOOLS

- 3 Elementary School sites (Middle and Secondary Schools are planned for the East Neighbourhood, per the MIS).
- Projected student generation of 1,620 elementary school students, 590 middle school students, and 570 secondary school students.

### PARKS, FOREST + NATURAL AREA

- 273.2 ha (674.9 ac) of Natural Area within the Silverdale Urban Forest.
- 45.5 ha (112.5 ac) of active park in Neighbourhood and Community Parks.
- 24km of dedicated off-street Trails.

### ACCESS

- 4 Neighbourhood Gateway Access points provided through arterial and collector streets, including two intersections with Highway 7 as identified in Schedule D: Street Hierarchy Plan.

### SERVICING

- Integrated servicing area as identified in Schedule I: Water Engineering Plan, Schedule J: Sanitary Engineering Plan, and Schedule K: Drainage Engineering Plan.

### DISTRICTS

- 3 Development Districts of the Lower, Mid, and Upper Slopes.

## 3. BIOPHYSICAL ANALYSIS

Building upon the MIS technical studies, the CNP geotechnical, archaeological and environmental work confirmed and refined the findings to better inform the neighbourhood design and land use designations. The findings of the biophysical analysis and technical assessments are represented and summarized in Figure 2 - Biophysical Constraints Plan.

### 3.1. BIOPHYSICAL CONDITIONS – LANDFORM, SLOPE, ASPECT

The CNP presents both a challenging topography and a singular opportunity for future neighbourhood development. Characterized by complex landforms with deep ravines and steep forested slopes, the CNP offers dramatic valley views that reflect a distinct landscape within the larger community. The biophysical analysis of the CNP was completed using 2020 LiDAR data, providing a detailed understanding of the land's complexities, and provides the foundation for the technical studies undertaken.

#### Landform

Positioned centrally in the SCPA in Mission's southwest, the CNP rises from the floodplain elevation of the ALR lands along the north shore of the Fraser River through a series of well-defined hillside terraces, culminating in a narrow ridge at elevation 380 within the relatively gentle lands of the summit.

The height and central position of the summit results in a network of established forested ravines and watercourses that serve to drain the summit on all sides, ultimately feeding into the Fraser River.

#### Slope

Measuring approximately 4 km east-west, and over 3 km north-south, the CNP is expansive, characterized by a series of steep slope systems that rise dramatically above the gentle riverfront floodplain.

Defined on all sides by significant slopes, the CNP's gentle summit gives way to steep forested hillsides that extend to meet a mid-slope terrace draining to the west by the deeply incised ravine of Jamieson Creek. Chester Creek intersects the terrace establishing a deep ravine edge along the CNP's eastern boundary. From the mid-slope terrace, the CNP drops in a consistent hillside to the south interspersed by a network of incised streams and forested ravines.

#### Aspect

With its central summit, sunlight availability varies widely between north-facing and south-facing slopes. With dominant south and western aspects, the CNP receives significant sunlight throughout the seasons, as well as offering dramatic panoramic vistas in all four cardinal directions, from Mt Baker in the east, to the agricultural lands to the south, the meander of the Fraser River west, and the snow-capped mountains to the north. Within the mid-slope terrace adjacent to Jamieson Creek, the land provides a unique elevated view south and west over the Fraser Valley with both the Fraser River and Mt. Baker as dominant landmarks.

LiDAR data provides an appropriate level of detail for Neighbourhood Planning. More detailed site-specific topographic surveys will be required at the subdivision and rezoning processes.

### 3.2. GEOTECHNICAL FINDINGS

*Geotechnical Hazards Assessment Report  
Central Neighbourhood Plan  
Silverdale CNP, Mission, BC  
GeoPacific Consultants Ltd.  
September 2020 | Final*

Building upon the Geotechnical Assessment completed for the MIS (GeoPacific 2019), the Geotechnical Hazards Assessment Report presents a high-level geotechnical assessment that identifies major geotechnical limitations throughout the CNP. The report confirms the results of the MIS, with the following changes:

- Additional observations of slope movement and exposed bedrock;
- A previous observation of slope movement near the northeast portion of the CNP was removed as it was confirmed in the field to be an erosional feature and not evidence of a previous landslide; and,
- Areas potentially susceptible to slope instabilities were identified.

Refer to Figure 2: Biophysical Constraints Plan.

### Surface Conditions

Portions of the CNP are identified in the Geotechnical Hazards Assessment Report as having steep slopes (>40%), primarily in the ravines around Jamieson, Rae, and Chester Creeks, as well as along a large escarpment near the northwest portion of the CNP. Evidence of historical landslide events were observed throughout the CNP, typically near the top of steep slopes, on ravine slopes, and along the sidewalls of creek channels. Steeper slopes in vegetated areas often show evidence of soil creep as observed by pistol-butted trees.

### Soil Conditions

Surficial soils in the CNP consist of an organic horizon overlying weathered fine-grained sand to silt that extends to a depth of between 0.4 m and 1.8 m below current site grades. Below this depth, sand dominant glacial till with variable amounts of silt, gravel and cobbles was encountered at the majority of test pit locations. Tertiary sandstone or siltstone bedrock was observed at the surface in several locations throughout the CNP. Results of the test pitting and borehole investigation indicate depth to bedrock varies significantly throughout the CNP and can change significantly over a relatively short distance.

Based on the Geological Survey of Canada's Surficial Geology Map 1485A, a small area within the southern portion of the Chester Creek channel is expected to be underlain by Salish Sediments comprising upland peat. Peat deposits can pose challenges for development and typically require removal, ground improvement or pile support prior to construction. This area will require further investigation to confirm the location, depth and thickness of peat deposits prior to development.

### Groundwater Conditions

Static groundwater was not encountered during the test pit investigation, but light seepage was encountered in specific locations. It is expected that perched groundwater exists at varying depths throughout the soil profile. Several springs are located throughout the CNP. It is expected the springs may indicate the boundary between the sand dominant glacial soils and the underlying bedrock.

### Hazard Assessment

The nature, extent, frequency (probability), and potential effect of hazards relevant to the Central Neighbourhood were assessed using the numeric

hazard-related responses described in Hazard Acceptability Thresholds for Development Approvals by Local Governments, 1993 (Cave Report). Hazard-related responses are recommended on a scale of 1 to 5; 1 being approval without conditions relating to hazards, 5 being not approvable. Geohazards were assessed to have the lowest ratings on the scale.

Refer to Appendix A: Geotechnical Hazards Assessment.



### 3.3. ARCHAEOLOGICAL FINDINGS

#### ***Archaeological Overview Assessment***

*Master Infrastructure Strategy*

*Arrowstone Archaeological Research + Consulting Ltd.*

*December 2018 | Final*

The Archaeological Overview Assessment (AOA) prepared for the SCPA provides archaeological baseline information pertinent to the CNP, including the archaeological research methodology, the results of the fieldwork and desktop assessments, and recommendations for future archaeological assessment.

As a result of the search of the British Columbia Provincial Heritage Register Database (PHRD), one previously identified archaeological site was identified within the Central Neighbourhood. Site DgRo-15 is the historic Skinner Family Grave Site (site size 10 m x 10 m). The Central Neighbourhood also includes areas of Moderate + High Archaeological Potential located around watercourses or on flat benches nearby to watercourses (Refer to Figure 2: Biophysical Constraints Plan).

#### ***Archaeological Review of Draft Preferred Land Use Plan***

*Central Neighbourhood Plan*

*Arrowstone Archaeological Research + Consulting Ltd.*

*April 2022 | Final*

A review of the Central Neighbourhood Plan conducted by Arrowstone Archaeological Research + Consulting Ltd., confirmed that the findings and recommendations of the AOA remain suitable for the CNP scope.

Refer to Appendix B: Archaeological Review and Overview Assessment.

### 3.4. IRMP DATA COLLECTION

#### ***Water Resource Assessment: Technical Data Report***

*Central Neighbourhood Plan*

*PGL Environmental Consultants*

*February 2021 | Final*

The Water Resources Assessment: Technical Data Report presented the full year of groundwater, surface water and climate data that was collected for the CNP between August 2019 and January 2021, as well as a compilation of relevant historical data.

The data was collected and compiled to support preparation of the CNP Integrated Rainwater Management Plan to help ensure that the functions of the highest-value hydrologic and ecological features in the area are maintained as closely as possible to their pre-development state as the community builds out.

### 3.5. ENVIRONMENTAL FINDINGS

#### ***Environmental Baseline Report***

*Central Neighbourhood Plan*

*PGL Environmental Consultants*

*September 2020 | Final*

The Environmental Baseline Report is a baseline data collection report intended to confirm the findings of the MIS environmental studies and provide further detail for the CNP.

The report builds on the work completed for the MIS Strategic Environmental Assessment (September 2019), with the following additional environmental studies:

- Ground-truthing of previous watercourse and wetland mapping;
- Collection of preliminary Riparian Areas Protection Regulation data;
- Conducting ecological surveys of the six major wetland systems (Cox, Jamieson, Rae, Chester, Sylvain, Upper Jamieson);
- Collecting surface water quality samples in five of the major watercourses (Cox, Jamieson, North Smith Brook, Rae, Chester);
- Assessing hydrometric conditions at up to eight locations on six watercourses;
- Assessing groundwater conditions at six locations;
- Collecting localized climate data; and,
- Conducting field surveys for wildlife species at risk.

The results of this report were used to inform environmental planning for the CNP neighbourhood structure and the CNP Environmental Impact Assessment.

### ***Potential Environmental Opportunities and Constraints Plan***

*Central Neighbourhood Plan*

*PGL Environmental Consultants*

*September 2020 | Final*

The Potential Environmental Opportunities and Constraints Plan was prepared early in the CNP planning process to provide science-based recommendations for environmental planning objectives and guide environmentally responsible development planning. Recommendations based on detailed analysis of the environmental baseline information were provided for the protection of Environmental Management Zones and Wildlife Corridors.

### **Environmental Management Zones**

The purpose of Environmental Management Zones is to spatially identify areas that, (a) have uniform ecological values at a coarse level, (b) are relevant to the scale of community planning, and (c) can be linked to specific development design objectives. Environmental Management Zones include:

- EMZ 4 – Aquatic + Riparian Ecosystems
- EMZ 3 – Sensitive Ecosystems
- EMZ 2 – Other Important Ecosystems
- EMZ 1 – Developed or Disturbed Ecosystems

Environmental Management Zones were incorporated into the Biophysical Constraints Analysis used to guide preparation of the CNP.

### **Wildlife Corridors**

Wildlife Corridors are linear vegetated landscape features that provide wildlife with the means for safe movement between habitats.

The Wildlife Corridors identified within the CNP area are intended to link key wildlife habitats and to provide continuity for wildlife movement between major habitat areas. Wildlife movement in the CNP is expected to occur along stream corridors, in and around wetlands, and within the ravines and areas of steeper slope gradients, but can also occur through flat, upland habitat.

The CNP seeks to protect the function of identified Wildlife Corridors through habitat retention.



### ***Environmental Impact Assessment***

*Central Neighbourhood Plan*

*PGL Environmental Consultants*

*May 2022 | Final*

The CNP Environmental Impact Assessment (EIA) report builds on the considerable data collection and previous environmental reports completed at earlier stages of the CNP process, including the Environmental Baseline Report and Potential Environmental Opportunities + Constraints Plan.

The purpose of the EIA is to evaluate the CNP neighbourhood design to identify potential impacts of concern, propose high-level measures to mitigate those impacts, predict the significance of the impacts and recommend environmental monitoring programs. An objective of the CNP planning process was to achieve a finding of no significant residual environmental effects resulting from the neighbourhood plan once mitigations are applied.

Preparation of the CNP has been a concerted effort at environmental impact avoidance, and a high degree of success was achieved based on the findings of the EIA. The neighbourhood design was an iterative process that involved planning future streets, infrastructure and development land uses around those sensitive areas identified in the baseline assessments, and then evaluating planned layouts and structure to ensure impacts could be appropriately managed.

The EIA identifies that the environmental effects of the CNP are adequately understood and there is mitigation available to reduce the effects to the level of non-significance.

Future management plans and environmental surveys (at subdivision or development plan stages of approval) will carry this framework forward to the final detailed level of assessment.

Refer to Appendix C: Environmental Impact Assessment.

### **3.6. VISUAL IMPACT ASSESSMENT**

Building on the mapped environmental values and wildlife corridors provided for within the Neighbourhood Conservation Framework, the Visual Impact Assessment aims to identify and preserve the visual character of Silverdale's current forested ridgelines and hillsides within the CNP. Using LiDAR data, the terrain and existing tree canopy of the CNP were modelled using Infracore 3D modelling software to generate an accurate representation of existing conditions.

The 3D Visual Impact Assessment identified the forested ridgelines and areas of forested steep slopes that were most visually sensitive from the larger community and therefore important to conserve in order to prevent significant impacts to the visual quality of the hillside.

The neighbourhood development plan, including the street network and example buildings, was modelled during the planning process to test the efficacy of the Visual Impact Buffer.

### 3.7. NEIGHBOURHOOD CONSERVATION FRAMEWORK

Using the technical understanding assembled through the geotechnical, archaeological and environmental studies as a foundation, a Neighbourhood Conservation Framework has been established as the organizing structure for managing urban growth within the CNP area.

Balancing the competing interests of neighbourhood development with conservation planning - and building upon the MIS Green Framework - the Neighbourhood Conservation Framework is intended to ensure the protection of the functional integrity of the natural systems; the recreational opportunities for outdoor activities; and natural features that define the area's landscape character. While maintaining the environmental conservation objectives of the OCP, MIS, and CNP, the Neighbourhood Conservation Framework may be refined where appropriate through the future subdivision phases when more detailed technical information becomes available.

#### Neighbourhood Conservation Framework

- Target approximately 40% (293ha) of the CNP area.
- Includes steep slopes (+30%), watercourses and typical Riparian Area Protection Regulation (RAPR) setbacks, wetlands, Sensitive Ecosystem (SE), wildlife corridors, Silverdale Urban Forest and active parks – both Community and Neighbourhood Parks.

#### Neighbourhood Development

- Target approximately 60% (293ha) of the SCPA area.
- Includes large congruent areas of gentle and hillside lands; unique natural features; major views and south and west aspect; along with lands in proximity to existing roads.

The percentage of Neighbourhood Conservation Framework and Neighbourhood Development areas is an average target for the CNP as a whole. The proportion between the Neighbourhood Conservation Framework and Neighbourhood Development within each of the three Development Districts (Lower, Mid and Upper Slopes) varies according to landform, environmental features, proximity to infrastructure and historic development patterns.

Refer to Figure 3: Opportunities and Constraints

## 4. LAND USES

The general land use designations for the Central Neighbourhood Plan - as illustrated in Schedule A – Land Use Plan provide form and function to the vision for the community. This Section describes the land use designations, their planning rationale, and associated development policies to guide the development of Silverdale's Central Neighbourhood.

The CNP Land Use Plan consists of thirteen land use designations. A synopsis of the land use designations and areas is presented below in Table 1 – Central Neighbourhood Plan Land Use Summary.

Table 1 – Central Neighbourhood Plan Land Use Summary

	Land Use Designation	Area (hectares)
0.6%	Single Family Rural	4.27
20.9%	Single Family	152.99
14.9%	Townhome	108.96
1.7%	Apartment	12.20
0.7%	Mixed Use	5.00
0.1%	Commercial - Retail	1.04
1.0%	Institutional - Elementary School	7.19
1.2%	Institutional - Community Centre	9.13
0.9%	Firehall   Works Yard   Reservoir	6.28
3.8%	Neighbourhood Park	27.61
2.4%	Community Park	17.93
37.1%	Silverdale Urban Forest	273.17
14.7%	Street Right-Of-Way	107.82
100%		733.59

Land use areas and percentages are approximate, intended for planning purposes only. All designated areas and boundaries are subject to refinement through more detailed site design and engineering at the time of zoning and subdivision.

### 4.1. GENERAL LAND USE POLICIES

The CNP provides strategic guidance for the orderly growth of Silverdale's first urban neighbourhood. The following General Land Use Policies apply across all designations in the CNP.

#### Policy 4.1.1

Development should generally follow the Land Use Plan (Schedule A) where the development pattern supports the Planning Principles and Goals utilized to create the neighbourhood plan.

#### Policy 4.1.2

Allow minor adjustments to land use designation boundaries as new information (e.g. geotechnical, environmental, archaeological) becomes available during detailed design at the time of zoning and subdivision, where proposed modifications support the CNP Planning Principles and are approved by the City of Mission.

#### Policy 4.1.3

Require Development Permits to be obtained for all developments in accordance with the applicable Development Permit Areas (Schedule K) and Guidelines.

#### Policy 4.1.4

Archaeological Impact Assessments (AIA) are to be conducted under a Heritage Inspection Permit issued under Section 12.2 of the Heritage Conservation Act if development is proposed in areas encompassing moderate and/or high potential polygons (refer to Figure 2 – Biophysical Constraints Plan).

## 4.2. GENERAL RESIDENTIAL LAND USE POLICIES

The CNP provides for a wide range of housing forms, from Single Family Rural to Mixed-Use Apartment, to foster the development of a vibrant, socio-economic and age-mixed urban community.

Ground-oriented homes, clustered around the Neighbourhood Conservation Framework and walkable civic centres, establish a positive relationship between built neighbourhoods and provide access to natural areas. Compact housing in key locations reduces infrastructure networks and maintenance costs, while allowing for greater retention of natural character, landscape and ecological systems.

Silverdale's sense-of-place is expressed within the neighbourhood plan through its walkable neighbourhood scale, connected pedestrian-friendly street pattern, retained conservation framework and featured views, integrated parks and trail network, and emphasis on local materials and native landscape.

#### Policy 4.2.1

Encourage a variety of housing forms, lot sizes, and tenures to provide a diversity of residences that can support a range of lifestyles, life stages and incomes.

#### Policy 4.2.2

Encourage compact housing forms, including ground-oriented single-family, attached forms, and apartments, to foster walkable neighbourhoods and reduce construction materials and energy use.

#### Policy 4.2.3

Ensure that built forms respond to the hillside topography and manage the physical, visual and environmental impacts of hillside development, per the Hillside Development Permit Area (Section 6).

#### Policy 4.2.4

Recognize and avoid potential conflicts arising from adjacent land uses and/or housing types in the planning, design and construction of residential neighbourhoods through consideration of appropriate transition areas, landscape buffers, and/or other mitigating built form elements.

#### Policy 4.2.5

Consider the use of Comprehensive Development zones where the scale and complexity of residential designations make it practical.

#### Policy 4.2.6

Per the City's Zoning Bylaw, slopes >33% are defined as undevelopable. Slopes >33% may be incorporated into a lot but may not be used towards development area densities.

#### Policy 4.2.7

The IU - Institutional Utility Zone will apply to all residential designations in the CNP to allow for utility uses.

Existing corresponding zones are provided for residential land use designations as a reference for potential permitted housing forms. Future zoning may be developed to provide greater range and specificity of permitted housing forms.

### 4.3. SINGLE FAMILY RURAL POLICIES

The Single Family Rural designation provides for homes on rural acreages – those with independent drinking water wells and septic sanitary systems.



Illustration 4 | Single Family Rural - Barrett Street

As the Central Neighbourhood is envisioned to be a walkable neighbourhood developed at urban densities, the Single Family Rural designation is limited to the northwestern section of the Upper Slopes, where installation of urban servicing is prohibited by topography.

#### Policy 4.3.1

Permitted densities reflect local health authority minimum servicing requirements within the Single Family Rural designation with a minimum lot size of 0.7ha (1.73ac).

#### Policy 4.3.2

Implementing zones for the Single Family Rural designation shall be in conformance with the following table:

Colour	Land Use Designation	Implementing Zone
	Single Family Rural	RR7 – Rural Residential RR7s – Rural Residential Secondary Dwelling

#### Policy 4.3.3

Consider permitting Single Family development at higher densities if municipal servicing can be provided.

#### 4.4. SINGLE FAMILY POLICIES

Representing the largest area of residential land use, the Single Family designation includes a range of urban lot sizes – compact, standard and traditional – as well as duplex two-family residential homes. The Single Family designation provides for ground-oriented homes within a livable, pedestrian-scaled neighbourhood that reflects Silverdale's environmental features, conservation framework and topography.



Illustration 5 | Single Family - Silverdale Avenue + Gaglardi Street

Positioned with private individual yards and street frontage, Single Family homes foster a strong public realm and support social interaction among neighbours, including 'eyes on the street', with a safe pedestrian and cyclist experience.

The clustered arrangement of Single Family homes respond to the neighbourhood's complex landforms to establish coherent residential patterns of a walkable scale and defined sense of place. With access to natural parks and trails within a 5 minute walk (400m) of each home, the Single Family designation serves to create a healthy balance between residential development and natural open space and recreation.

Features of the Single Family designation include careful consideration of transitions between neighbourhood densities, hillside topography and views, as well as connections to parks, trails and other community destinations.

The Single Family designation also provides for the development of traditional neighbourhoods with homes on streets with garages accessed through rear lanes. Such traditional patterns provide safe, uninterrupted sidewalks, urban homes that address the public realm, and floorplans able to use the full width of the lot owing to the rear lane accessed garage. This form of residential neighbourhood is best suited for gentle sloping lands (e.g., <8%) and maybe required by a fronting arterial street condition, or where supported by the civic character and real estate market.

Figure 6 – Character Images - Single Family reflects a Silverdale sense-of-place of the form and character envisaged for homes within the Single Family designation.

##### Policy 4.4.1

**DENSITY** | Permitted densities within the Single Family designation range from 5 uph (2 upa) to 25 uph (10 upa), with an expected average density of 12 uph (5 upa). Generally, densities higher than the average shall be permitted on gentler lands and closer to designated walkable Civic Centres with community facilities and commercial shops and services.



**Policy 4.4.2**

ZONING | Implementing zones for the Single Family designation shall be in conformance with future Silverdale zones to be prepared, or with existing zones outlined in the following table:

Colour	Land Use Designation	Implementing Zone
	Single Family	R930 – Urban Residential 930
		R930s – Urban Residential 930 Secondary Dwelling
		R558 – Urban Residential 558
		R558s – Urban Residential 558 Secondary Dwelling
		R465 - Urban Residential 465
	Single Family Within 10-minute walk (800m) of Commercial Retail/Mixed Use (as above, plus:)	UC465 – Urban Compact 465
		UC465s – Urban Compact Secondary Dwelling
		MD465 – Multi Unit Duplex 465
		UC372 – Urban Compact 372
		UC372s – Urban Compact 365 Secondary Dwelling
	Single Family Within 5-minute walk (400m) of Commercial Retail/Mixed Use (as above, plus:)	CD44 – Comprehensive Development 44
		MR-1 Multi-Unit Row House One (existing Row Home zone)

**Policy 4.4.3**

ZONING | Allow for a new Multi-Unit Row House Zone to enable development of front-loaded rowhomes within a 10-minute walk (800m).

**Policy 4.4.4**

TENURE | All housing within the Single Family designation must be ground-oriented and shall be fee simple ownership, unless part of a bare land strata.

**Policy 4.4.5**

HILLSIDE | Densities lower than the average shall apply where topography and/or biophysical constraints result in excessive lot regrading and retaining walls.

**Policy 4.4.6**

CIVIC CENTRES | Densities higher than the average shall be permitted on gentler lands, or within a 5-minute walk (400m) to a designated Civic Centre with community facilities and/or commercial shops and services.

**Policy 4.4.7**

LANES | Maximum densities shall be permitted on gentler lands in combination with rear lanes.

**Policy 4.4.8**

HILLSIDE | To ensure development fits the topography, development within the Single Family designation on areas of >20% slope are subject to a Hillside Development Permit (Section 6).



#### 4.5. TOWNHOME POLICIES

Representing the greatest number of residential homes, the Townhome designation affords a higher density of urban living opportunities, while remaining ground-oriented and family-friendly.



Illustration 6 | Townhome - Lower Slopes

Concentrated in support of walkable Civic Centres and transit services along the Major Street Network, the Townhome designation also reflects Silverdale's network of environmental features, conservation framework, and hillside topography with its private infrastructure, shallower building depths, and use of strata standard lanes and yards.

Ground-oriented townhomes arranged within clustered, walkable enclaves establish a positive relationship between built and natural spaces. With access to natural parks and trails within a 5-minute walk (400m) of each home, the Townhome designation serves to create a healthy balance between residential development and natural open space and recreation.

Given its private infrastructure, shallower building depths, and use of strata standard lanes and yards, Townhomes reduce public infrastructure networks and maintenance costs, while allowing for greater diversity of lifestyles, life stages and incomes within the community.


Figure 6 – Character Images - Townhome reflects a Silverdale sense-of-place of the form and character envisaged for ground-oriented attached homes within the Townhome designation.

##### Policy 4.5.1

**DENSITY** | Permitted densities within the Townhome designation range from 28 uph (11 upa) to 60 uph (24 upa), with an expected average density of 45 uph (18 upa). Generally, densities higher than the average shall be permitted either on gentler lands, or closer to designated walkable Civic Centres with community facilities and commercial shops and services.

**Policy 4.5.2**

**ZONING** | Implementing zones for the Townhome designation shall be in conformance with future Silverdale zones to be prepared, or with existing zones outlined in the following table:

Colour	Land Use Designation	Implementing Zone
	Townhomes	MR-1 Multi-Unit Row House One (existing Row Home zone)
		MT1 – Multi Unit Townhouse One Zone

**Policy 4.5.3**

**FORM** | All housing within the Townhome designation must be ground-oriented.

**Policy 4.5.4**

**HILLSIDE** | Densities lower than the average (<18upa) shall apply where topography and/or biophysical constraints result in extensive lot regrading and retaining walls, to be determined through the Hillside Development Permit Process for slopes >20%.

**Policy 4.5.5**

**CIVIC CENTRES** | Densities higher than the average shall be permitted on gentler lands, or within 10-minute walk (800m) to a designated Civic Centre with community facilities and/or commercial shops and services.

**Policy 4.5.6**

**SIZE** | Provide for a range of housing choice including 2, 3, and 4 bedroom options.

**Policy 4.5.7**

**TENURE** | Permit the development of co-operative housing, purpose built rental, and/or strata housing within the Townhome designation.

**Policy 4.5.8**

**TANDEM** | Despite the zoning bylaw, limit the maximum percentage of tandem garage units within a Townhome development to 25% and maximum percentage of townhome garage units within a Townhome building to 50%.

#### 4.6. APARTMENT POLICIES

Concentrated in support of walkable Civic Centres and transit services along the Major Street Network, the Apartment designation affords a range of low to mid-rise tower residential forms (minimum four storeys in height) within a 5-minute walk of urban centres providing community facilities and high-quality public spaces.



Illustration 7 | Apartment - Upper Slopes

Positioned to celebrate Silverdale's dramatic topography, the Apartment designation provides access to natural parks and trails within a 5-minute walk (400m) of each home, and serves to create a healthy balance between residential development and natural open space and recreation.

The Apartment designation serves to reduce public infrastructure networks and maintenance costs, while allowing for greater diversity of lifestyles, life stages and incomes within the community. The increase in residential density of Apartments allow the neighbourhood to support the commercial services and civic facilities required within a more complete community.

Figure 6 – Character Images - Apartment reflects a Silverdale sense-of-place of the form and character envisaged for multi-storey homes within the Apartment designation.

##### Policy 4.6.1


**DENSITY** | Permitted densities within the Apartment designation range from 100 uph (40 upa) to 250 uph (100 upa), with an expected average density of 175 uph (70 upa). Generally, densities higher than the average shall be permitted in closest proximity to designated walkable Civic Centres community facilities and commercial shops and services.

##### Policy 4.6.2

**Density** | Allow Density Bonusing for apartments within 800m of Commercial/ Mixed-Use centres.

**Policy 4.6.3**

**ZONING** | Implementing zones for the Apartment designation shall be in conformance with future Silverdale zones to be prepared, or with existing zones outlined in the following table:

Colour	Land Use Designation	Implementing Zone
	Apartment	MA1 Multi-unit Apartment One MA2 Multi-unit Apartment Two

**Policy 4.6.4**

**SIZE** | Provide for a range of unit sizes, including units that have more than two bedrooms.

**Policy 4.6.5**

**TENURE** | Encourage the development of rental, co-operative housing and/or non-market housing within the Apartment designation.

**Policy 4.6.6**

**PARKING** | Investigate opportunities to reduce parking requirements for apartment developments that promote and/or accommodate car-sharing and/or other forms of alternative transportation.

## 4.7. MIXED-USE + COMMERCIAL

Building on the Retail Demand Analysis completed during the Master Infrastructure Strategy for the Silverdale Comprehensive Planning Area (Rollo + Associates 2019), the Central Neighbourhood Plan includes a Retail Demand Analysis to ensure appropriate provision of neighbourhood retail commercial and office space.

### *Retail Market Update*

*Central Neighbourhood Plan*

*Rollo + Associates*

*May 2022*

The Retail Market Update combines local demographic, sales performance, and spending data to forecast future demand for new commercial floor space, including at-grade retail and second floor office space in the Central Neighbourhood. The analysis suggests a requirement for 129,500 ft<sup>2</sup> (12,030 m<sup>2</sup>) of ground-floor retail space and 32,375 ft<sup>2</sup> (3,000 m<sup>2</sup>) of second-floor office space for a variety of commercial and professional uses.

The analysis forecasts retail and office employment within the Central Neighbourhood to be 240 full-time equivalent retail employees, and 150 full-time equivalent office employees.

The CNP provides a total of 5.0 ha (12.4 ac) Mixed-Use designated area and 1.0 ha (2.5 ac) of Commercial Retail designated area to meet the neighbourhood's future commercial retail and office demand, as well as provide additional lands to incorporate resilience and adaptability into the Neighbourhood Plan.

Refer to Appendix D: Retail Demand Study.



#### 4.8. MIXED USE POLICIES

The Mixed-Use designation is intended to create attractive, vibrant, pedestrian-friendly centres that serve as the social and commercial focus within the neighbourhood. Combining both residential and commercial uses within an urban public realm, the Mixed-Use designation provides for a wide range of commercial and civic programs - from restaurants to retail, professional and office space to entertainment venues, institutional and civic gathering to parks and urban plazas - all in conjunction with townhomes, and low to mid-rise apartment forms.



*Illustration 8 | Mixed-Use - Upper Slopes*

The Mixed-Use designation provides local employment and the day-to-day needs of residents, while expanding the City's tax base. The Mixed-Use designation is distributed in four strategic locations across the neighbourhood:

- **GUNN TERRACE** | A primary civic core positioned at the confluence of the Gunn Avenue Arterial and the 4-lane East-West Arterial. Situated between forest streams on a gentle terrace overlooking the Fraser River, the Mixed-Use Centre complements the Civic Community Centre, Joint Elementary School and Neighbourhood Park, all serving the civic, recreational and commercial needs within the Lower Slopes;
- **LOFTUS VILLAGE** | Located near Chester Creek at the southeast gateway to the neighbourhood. A secondary civic core in the Lower Slopes, the Mixed-Use Centre serves the neighbourhood's first homes, with connectivity to the on-street pedestrian and cycling networks and the off-street trail system;
- **WEST RIDGE** | Located centrally on the west-facing terraced landform of the Mid-Slopes. A primary civic core with a Civic Community Centre, Elementary School and Neighbourhood Park, along with Commercial Retail and Mixed-Use area with connectivity to the on-street pedestrian and cycling networks and the off-street trail system; and,
- **SUMMIT** | Positioned around the gentle landform of the neighbourhood's central summit in the Upper Slopes. A destination Mixed-Use village of Commercial Retail near the community summit, with supporting Civic Community Centre in the west and Joint Elementary School + Neighbourhood Park to the northeast.


The Lower Slopes, Mid-Slopes and Upper Slopes Mixed-Use Villages, as shown on Schedule A – Land Use Plan, represent approximately 1.1 ha (2.8 ac), 0.6 ha (1.5 ac), and 2.0 ha (4.8 ac) of the Plan area, respectively.

#### Policy 4.8.1

**DENSITY** | Permitted densities within the Mixed-Use designation range from 100 uph (40 upa) to 250 uph (100 upa), with an expected average density of 220 uph (90 upa). Generally, densities higher than the average shall be permitted in closest proximity to designated walkable Civic Centres community facilities and commercial shops and services.

#### Policy 4.8.2

**ZONING** | Implementing zones for the Mixed-Use designation shall be in conformance with future Silverdale zones to be prepared, or with existing zones outlined in the following table:

Colour	Land Use Designation	Implementing Zone
	Mixed Use	MU2 Mixed-Use Commercial/Residential Two NC1 - Neighbourhood Centre 1

#### Policy 4.8.3

Focus higher density residential uses at mixed-use centres and provide multi-family residential housing in close proximity to services.

#### Policy 4.8.4

Given the extended timeline of the CNP, later stages of the CNP build-out should consider higher residential densities for Mixed-Use Areas.

#### Policy 4.8.5

Reinforce and strengthen the viability of mixed-use centres by encouraging mixed-use buildings with commercial activities on the lower levels and residential or office uses above. Discourage commercial development located above residential uses.

#### Policy 4.8.6

Establish a retail 'High Street' within the Mid and Upper Slopes Mixed-use Village areas to support a range of neighbourhood retail, commercial services and amenities within a pedestrian-oriented environment.

#### Policy 4.8.7

Consider the siting of buildings, entrances, balconies and ground level uses as a means to frame views, define spaces and promote pedestrian activity.

#### Policy 4.8.8

Accentuate pedestrian connections to commercial and mixed-use developments through design features such as wayfinding signage, street design treatment and preserved view corridors, in conjunction with longer-term parking.



**Policy 4.8.9**

Promote high quality and complementary architectural form and character in keeping with the surrounding west coast community character – including physical designs sensitively integrated into the natural setting; human scale building massing and articulation; and materials and colour palettes inspired by the natural setting – and consider implementation of Design Guidelines as means to reinforce local sense-of-place and character.

**Policy 4.8.10**

Explore opportunities for community space within the Mixed-use centres, such as daycares or performance venues.

**Policy 4.8.11**

Investigate opportunities to reduce parking requirements for Mixed-use developments that promote and/or accommodate car-sharing and/or other forms of alternative transportation.

## 4.9. COMMERCIAL POLICIES

The Commercial Retail designation provides for dedicated commercial retail space that does not include attached townhome or apartment residences. This designation is intended to provide space for commercial uses independent from residential development.



*Illustration 9 | Commercial - Mid-Slopes*

As the CNP seeks to maximize walkability through application of the Mixed-Use designation, the Commercial Retail designation is limited to 0.9 ha (2.1 ac) located in the Mid-Slopes near the Elementary School, Civic Community Centre and Mixed-Use Village.

**Policy 4.9.1**

Encourage buildings to address the streetscape and plaza spaces as a means of creating a well-defined public realm.

**Policy 4.9.2**

Ensure safe and secure pedestrian connections to Commercial Retail space through use of buffered sidewalks, multi-use pathways, marked street crossings and controlled pedestrian crossings.

**Policy 4.9.3**

Encourage and facilitate the provision of shade and protection from the elements for pedestrians through landscape features (i.e., trees), awnings, overhangs, canopies and/or arcades over walkways.

**Policy 4.9.4**

Encourage electric vehicle charging stations and suitable parking for electric scooters and e-bikes.

**Policy 4.9.5**

Establish landscape buffers that create a transition between residential areas and adjacent commercial buildings and parking areas, through landscape design that incorporates layering of shrubs, trees, landscape structures and lower walls, as required.

**Policy 4.9.6**

Parking should be provided behind buildings where possible, or screened through landscape design to establish a pedestrian friendly environment and reduce the visual impact of parking areas.

**Policy 4.9.7**

Sidewalks and parking areas are to be designed according to barrier free access standards.

**Policy 4.9.8**

Implement Dark Sky Lighting for commercial parking to limit ambient light and preserve the night sky.

**4.10. INDUSTRIAL**

There are no industrial designated lands in the CNP.

#### 4.11. PUBLIC SCHOOLS

Three new Public Elementary Schools are required in the CNP according to School District 75 - Enrollment Projections and the CNP unit and population projections. The Joint Elementary + Neighbourhood Park sites are distributed strategically across the Lower, Mid, and Upper Slopes to ensure the entire neighbourhood is properly served.



Illustration 10 | Elementary School - Mid-Slopes

The school sites are planned with a capacity of 500-600 students each on 2.4 ha (6 ac) sites with sports fields located on adjacent to 1.62 ha (4 ac) Neighbourhood Park sites operated as a joint facility between the School District and the City:

- **LOWER SLOPES** | The first Elementary School to be built in the CNP area will be in the Lower Slopes, centrally located and taking advantage of a gentle, south-facing site near mixed-use village at the intersection of the Major Street Network. The school forms part of a destination civic core with 4.3 ha (10.5 ac) Community Centre and commercial retail space.
- **MID SLOPES** | Reflecting the land use densities and population projections, one Elementary School will be located in the Mid-Slopes. The proposed site is situated within a central terrace adjacent to the planned civic core featuring, mixed-use retail, active parks and community centre land uses.
- **UPPER SLOPES** | The highest elevation Elementary School in the CNP is positioned to the north of the looping Major Street Network on a gentle terrace with views of Dewdney Peak.

In accordance with the MIS, two additional Elementary Schools are planned in the future West Neighbourhood with an additional Elementary School, Middle School, and Secondary School planned for the future East Neighbourhood to serve the needs of the community. The City of Mission continues to work with School District #75 to ensure that sufficient school lands are acquired and built to serve the community's anticipated educational needs.

Refer to Schedule A: Land Use Plan for Elementary School distribution within the CNP.



#### 4.12. FIREHALL

As outlined in the City's Facilities Master Plan and MIS, a new firehall, Firehall No.5, is required within the CNP. The CNP provides a centrally-located 1.1 ha (2.6 ac) Firehall in the Mid Slopes, in close proximity to the boundaries of the Lower + Upper Slopes.



Illustration 11 | Firehall No. 5

The Firehall site provides access + egress from a Collector Street near the 4-lane East-West Arterial to facilitate rapid emergency response. The location is uphill from most of Silverdale's planned mixed-use centres, particularly important for emergency response during winter conditions.

Refer to Schedule A: Land Use Plan for the location of the Firehall in the CNP.

#### 4.13. CIVIC CENTRES



Illustration 12 | Civic Centre - Lower Slopes

The location of the Civic Centres within the CNP is convenient to all residents and establishes prominent landmarks near a mixed-use centre and/or public school.

Civic Centres are intended to accommodate a wide range of community facilities such as libraries, senior's and youth activity centres, leisure centres, day cares, community meeting and workspaces. With a focus on delivering community amenities within walkable civic cores, CNP Civic Centre sites can also provide an opportunity to accommodate a wider range of local facilities, from performing arts and makerspaces, to community histories and outdoor education, even including community healthcare delivery.

The CNP exceeds the Master Infrastructure Strategy's target of two Civic Centres by planning three destination Civic Centres distributed across the Lower 4.3 ha (10.5 ac), Mid 1.3 ha (3.1 ac), and Upper 3.7 ha (9.1 ac) Slopes.

Refer to Schedule A: Land Use Plan for Civic Centre distribution within the CNP.

#### 4.14. PUBLIC WORKS

The City's Facilities Master Plan identifies the potential benefit of locating a Satellite Public Works Yard in the west of Mission. Discussions with both City of Mission Parks and Engineering Department staff have identified interest in new satellite works yards for the storage and management of operations + maintenance equipment, as well as for the replacing or expanding of the Main Operations Yard at 33835 Dewdney Trunk Road.



Illustration 13 | Public Works Yard - Upper Slopes

The CNP provide three Satellite Yards for Engineering, Parks + Sewer Operations. Situated on Silverdale Avenue, the 1.2 ha (3.1 ac) Lower Slopes Yard provides direct access to the Major Street Network to facilitate delivery of equipment and materials along with application of salt and sand during winter conditions. Adjacent to the Jamieson Bench Community Park, 0.8 ha (2.0 ac) Middle Slopes Yard provides a convenient location for Parks Department equipment storage and operations. Located near the CNP's two reservoirs, the 2.0 ha (5.0 ac) Upper Slopes Yard provides a suitable site for Engineering + Sewer Operations.

Refer to Schedule A: Land Use Plan for Public Works Satellite Yard distribution within the CNP.



#### 4.15. INSTITUTIONAL POLICIES

##### Policy 4.15.1

Explore the potential for construction of public Elementary Schools through public-private partnerships.

##### Policy 4.15.2

Encourage the Community School model where school facilities are utilized by the community outside of school hours and managed by a community group. Uses such as before and after school childcare should be permitted.

##### Policy 4.15.3

Encourage co-location opportunities between the School District and the City for recreation and community needs.

##### Policy 4.15.4

Encourage electric vehicle charging stations and suitable parking for electric scooters and e-bikes.

##### Policy 4.15.5

Optimize configuration of the Firehall site in consultation with the City Fire Department.

##### Policy 4.15.6

Develop Public Works Satellite yards in concert with a comprehensive municipal facility lands strategy.

#### 4.16. NEIGHBOURHOOD PARK

Neighbourhood Parks seek to engage a diverse range of community needs, from quiet contemplative spaces for reflection to imaginative playgrounds and sports fields for active people. Serving as local gathering spaces, Neighbourhood Parks offer opportunities for both active and passive recreation, as well as community gardens, public art and outdoor classrooms, all within an easy walking and cycling distance of neighbourhood homes.



Illustration 14 | Neighbourhood Park - Lower Slopes



The CNP provides 68.2 ac of Neighbourhood Park distributed in 28 sites across the Lower, Middle and Upper Slopes, with a park located within a 5-minute walk of every home.

Refer to Schedule B: Parks and Trails Plan for Neighbourhood Park distribution and connectivity within the CNP.

#### 4.17. COMMUNITY PARK

Engaging a diverse range of community needs while celebrating the landscape scale, Community Parks are situated near significant natural features and serve as defining recreational destinations for the Silverdale community.



Illustration 15 | Community Park - Jamieson Bench

The Parks, Rec., Arts + Culture, Fraser River Heritage Park + Centennial Park Master Plans describe Community Parks as providing for passive and, to a lesser extent, programmed recreational needs of multiple neighbourhoods. Community Parks may also conserve locally important habitats and provide for functioning ecosystem processes and wildlife corridors. In Mission, Community Parks have traditionally been 4 to 12 ha in size.

The CNP provides three destination Community Parks in the Mid + Upper Slopes:

- **MID-SLOPES PARK (SOUTH)** | This 6.3 ha (15.6 ac) park's location is centrally positioned to take advantage of a generous, south-facing terrace near the intersection of the Major Street Network. It is envisioned to include playing fields with the potential for an event lawn capable of hosting destination festivals.
- **MID-SLOPES PARK (NORTH)** | This 6.4 ha (15.8 ac) park is located on the northern terraces of the Mid-Slopes. A dramatic ridge separates two gentle programmable spaces. While expected to remain primarily forested, there is potential to include complementary active uses such as a terrain bike park.
- **UPPER SLOPES PARK** | This 5.2 ha (12.8 ac) park is situated at the peak of Silverdale's summit. The proposed Park's elevated landform provides unobstructed panoramic vistas in all four cardinal directions, from the southern views across the agricultural patchwork of the Fraser Valley, to the western peaks of Golden Ears and the sunset over the Pacific, and from the northern views towards Mt Crickmer and Stave Lake, to the eastern vistas up the Valley and Mission's historic position on the Fraser River.

Each Community Park in the CNP features direct connectivity with both the on-street Multi-Use Path cycling and pedestrian network and the Forest Park Trail System. Community parks are expected to include destination Park Features, such as playgrounds, playing fields + courts, washrooms, flexible event space, picnic areas, and parking.

Refer to Schedule B: Parks and Trails Plan for Community Park distribution and connectivity within the CNP.

#### **4.18. PARK POLICIES**

##### **Policy 4.18.1**

Permit use of designated park space for alternative civic or cultural uses and facilities.

##### **Policy 4.18.2**

Ensure an interconnected network of pathways – including walking paths/trails, sidewalks and multi-use pathways – that connect Civic cores, parks and residential neighbourhoods is built-out along with development.

##### **Policy 4.18.3**

Preserve future opportunities for the provision of public park amenities such as signage (for wayfinding and interpretation), benches, garbage receptacles and bicycle racks in public trailhead/parking areas.

##### **Policy 4.18.4**

Establish destination points such as areas for sitting, picnicking and informal lookouts.

##### **Policy 4.18.5**

Preserve future opportunities to establish, maintain and improve appropriate active park programs (i.e. playgrounds, community gardens, off-leash dog parks, skateboards parks, etc.) based on identified community need.

##### **Policy 4.18.6**

Consider incorporating public art installations and outdoor performance facilities within parks and public spaces.

##### **Policy 4.18.7**

Implement policies to identify and manage invasive plants in parks.

##### **Policy 4.18.8**

Preserve the forested character of the Mid-Slopes (north) and Upper Slopes Community Parks.

##### **Policy 4.18.9**

Provide public streets adjacent to parks to ensure visual and physical access for the public.

#### 4.19. SILVERDALE URBAN FOREST

The Silverdale Urban Forest is the largest and most significant component of the Neighbourhood Conservation Framework described in Section 3.7 of the CNP. The intent of the designation is to retain values related to the forested hillside including steep slopes, wildlife corridors, Visual Impact Buffers, Environmental Management Zones, and passive recreation opportunities.



Illustration 16 | Silverdale Urban Forest - Jamieson Creek

The City's Parks, Recreation, Arts + Culture, Fraser River Heritage Park + Centennial Park Master Plans describes Natural Areas as unprogrammed sites that provide conservation and natural interpretive value for Mission residents and also provides walking trails to physically connect the community via active-transportation networks.

The CNP goes beyond the Natural Area designation through establishing a new land use designation that celebrates the distinctive natural character of the Silverdale landscape: the Silverdale Urban Forest. The Silverdale Urban Forest preserves the largest unfragmented forest in the SCPA for environmental conservation and sensitive recreational use and provide a singular opportunity to establish a Natural Parks Legacy for Silverdale.

With over 24 km of dedicated forest trail, the 675 ac Silverdale Urban Forest serves as the defining recreational feature for Silverdale's Central Neighbourhood, with potential connectivity to the future Silverdale Creek Park and Experience the Fraser trail systems.

Refer to Schedule B: Parks and Trails Plan for Silverdale Urban Forest + Natural Area distribution and connectivity within the CNP.

#### 4.20. SILVERDALE URBAN FOREST POLICIES

##### Policy 4.20.1

The Silverdale Urban Forest is a central feature for the urban landscape and is to be excluded from development to retain values related to the forested hillside including steep slopes, wildlife corridors, Visual Impact Buffers, Environmental Management Zones, and passive recreation opportunities.

**Policy 4.20.2**

For any development parcel that includes a Silverdale Urban Forest designation, those lands designated as Silverdale Urban Forest shall be dedicated to the City through the rezoning process. In cases where any lands in stratas cannot be dedicated to the City, those lands shall be protected by way of a statutory right-of-way granted for public access on trails or Multi-Use Paths constructed by the applicant and shall be accessible by City of Mission staff for long term monitoring, maintenance, and rehabilitation.

**Policy 4.20.3**

Areas not previously identified in initial mapping and designation should be further identified by a Qualified Environmental Professional (QEP) at the earliest stage of a development application in a detailed bio-inventory, and if protected under provincial or federal statute then such area may be included within the Silverdale Urban Forest.

**Policy 4.20.4**

Ensure functional ecosystem protection of all watercourses, including the Cox Creek, Jamieson Creek, Rae Creek, and Chester Creek headwater wetlands and ponds in accordance with industry standard best practices - including *Develop with Care* (2014).

**Policy 4.20.5**

Preserve habitat and stormwater function within the Silverdale Urban Forest designation in conjunction with recreational use, where feasible.

**Policy 4.20.6**

Explore opportunities for habitat restoration and enhancement in the Silverdale Urban Forest including streamside areas which collectively are significant components for stormwater management.

**Policy 4.20.7**

Avoid diminishment of significant areas of forest that act as Visual Impact Buffers unless it can be demonstrated that visual quality objectives are maintained.

**Policy 4.20.8**

Generally, avoid developing trails in provincially regulated Riparian Areas Protection Regulation setbacks unless on City-owned land and/or permitted by the City.

**Policy 4.20.9**

Provide pathway connections to existing neighbourhoods and Silverdale's future East and West Neighbourhoods, with consideration to Environmentally Valuable Resources and the guidance of a QEP.

**Policy 4.20.10**

Incorporate a range of accessible trail and pathway types to provide for a range of recreational uses and to maximize multi-modal connectivity, including 4m wide off-street paved Multi-Use Paths where trails form critical connections in the Pedestrian or Cycling Networks (Schedules E & F).

**Policy 4.20.11**

In locations where wildlife corridors are intersected by roads (municipal or strata), then roads will be reviewed for appropriate design for wildlife road crossings and/or for sub-surface crossings including culverts, open bottom culverts, bridges, and tunnels.

#### Policy 4.20.12

Mitigate Environmentally Valuable Resource impacts due to road alignments through avoidance and/or appropriate mitigation strategies as recommended by a QEP.

#### Policy 4.20.13

The “Silverdale CNP Environmental Impact Assessment - Table O: Recommended Commitments for the Silverdale CNP” are a requirement of development (PGL Environmental Impact Assessment, Appendix C, Page 46).

#### Policy 4.20.14

Adjustment of the boundary of the Silverdale Urban Forest may be proposed and considered by the City of Mission at its sole discretion to allow for development provided that the specific site is assessed by a QEP following industry standard best practice, including but not limited to Section 4 of *Develop with Care* (2014).

As new information becomes available, the total area of Silverdale Urban Forest shall continue to target 37% of the land area within the CNP. Minor adjustment of the Silverdale Urban Forest may be considered by the City within the context of the goals and objectives of the overall plan.

Any proposal to remove or adjust the Silverdale Urban Forest designation requires a dedication of land on the development site at a 1:1 exchange to be added to the Silverdale Urban Forest designated area. Dedicated land must be contiguous with the Silverdale Urban Forest to prevent fragmentation.

## 5. NEIGHBOURHOOD INFRASTRUCTURE

The extension and provision of municipal infrastructure is fundamental to the realization of an urban mixed-use community in Silverdale. The CNP infrastructure accommodates the functional demand of the neighbourhood's land uses and population, incorporating measures to better sustain our communities and lessen the impacts on the natural environment.

### 5.1. TRANSPORTATION NETWORK

Sharing is central to the design of 'livable streets' that serve everyone's needs, from the weekday commuter to the weekend stroller. Livable streets are those that are well suited to their purpose of making a place for everyone that is functional, safe, and enjoyable. In the spirit of sharing, and to reduce the use of fossil fuels, the CNP enhances the pedestrian experience, improves bicycle safety, and makes for more efficient traffic circulation.

Reflecting the principles of policy consistency, network connectivity, context-sensitive streets, and multi-modal transportation systems, the CNP pattern of streets is reflected in the Transportation Network, with each street tailored to its purpose and connected as a network to allow choice and flexibility in moving through the community (Refer to Schedule D: Street Hierarchy Plan).

Aiming to reduce the proportion of automobile-based trips in the neighbourhood, the following active transportation design principles were considered:

- Implement the City's Livable Streets Standards to lessen the physical, visual and environmental impacts of new streets;
- Strive for integrated networks for pedestrian, cycling and vehicular traffic, including dedicated Multi-Use Paths on all arterials and collectors;
- Provide sidewalks on at least one side of local streets; and,
- Provide trail connections between neighbourhoods, transit and cycling corridors.

Within the Transportation Network, measures to reduce greenhouse gas emissions and energy use include reduced pavement widths, tree-lined boulevards, rainwater infiltration galleries, and dedicated Multi-Use Paths that contribute to the pedestrian and cycling networks. (Refer to Schedule E: Cycling Network Plan; Schedule F: Pedestrian Network Plan; Schedule G: Transit Network Plan).

Within the context of considering the build-out of the CNP, the transportation strategy also considers the development requirements of the larger SCPA, ensuring efficient connectivity with surrounding neighbourhoods and the larger Mission community.

#### ***Transportation Impact Assessment***

*Central Neighbourhood Plan*

*Bunt + Associates*

*July 2022*

The Transportation Impact Assessment (TIA) was undertaken by Bunt & Associates to provide transportation planning analysis and modelling to guide development of the CNP Transportation Network. The report outlines the transportation planning and engineering considerations, as well as, analysis and recommendations toward development of the proposed CNP Transportation Network (Refer to Appendix F: Transportation Impact Assessment).

The CNP contemplates a future population of 24,400 people, equivalent to approximately 10,400 households. The forecasted CNP-generated traffic is approximately 5,900 vehicle trips for the weekday PM peak hour. The identified CNP street network will be able to manage the projected traffic through two-lane streets for the most part, with four-lane streets in specific areas of higher traffic volumes.



The street network configuration was forecasted using the EMME Regional Transportation Model, PTV Vistro 2021 software, and the PTV Visum traffic model, which allowed for a detailed and fine-grained traffic forecast that evaluated the capacity and delay for individual traffic movements at intersections.

The TIA confirms that the proposed CNP Transportation Network can adequately manage both through-traffic and traffic generated by build-out of the CNP.

**Master Servicing Report: Road Network**

*Central Neighbourhood Plan*

*InterCAD Services*

*July 2022*

InterCAD Services completed the civil engineering for the proposed CNP road alignments with street Right-Of-Way (ROW) widths reflective of the City's Livable Street Standards, and the design standards listed in the City of Mission's Development and Subdivision Control Bylaw 5650-2017 for road maximum grades, vertical curve lengths, maximum superelevation, grades at intersecting roads, and minimum horizontal radius, with limited variances required due to the mountainous terrain.

### 5.1.1. Street Network and Hierarchy

The CNP's complex topography serves to limit the options available for establishing a traditional network of public neighbourhood streets. The proposed Major Street Network works to lessen the physical, visual, and environmental impacts of arterial and collector streets through site sensitive design, including landscape buffering and traffic calming.

Arterial Streets provide the primary access to the neighbourhood, connecting the CNP with both Highway 7 and Mission. Following existing street ROWs where possible, the proposed arterial streets seek to avoid steep slopes and creek crossings, while respecting a maximum 8% design grade for the vast majority of length.

Collector Streets provide additional east-west and north-south routes, distributing traffic within the CNP. Three collector routes serve to access the Upper Slopes while respecting a maximum 10% design grade for the majority of length.

Local Streets provide a complete pattern of streets and convey the vision for the neighbourhood. While Local Street alignments are conceptual, they are included to test the feasibility of residential densities and servicing requirements. Local Street alignments are subject to change through detailed subdivision design.

Street Network intersections will include separated left-turn lanes and right-turn deceleration lanes where required based on the Transportation Impact Assessment.

The future extension of the CNP's 4-lane east-west Arterial through the East Neighbourhood, including the Silverdale Creek Crossing, is expected to be an effective addition to Mission's street network, reducing reliance on existing east-west corridors, such as Lougheed Highway.

Refer to Schedule D: Street Hierarchy Plan.

### 5.1.2. Cycling Network

The CNP provides a future cycling network through dedicated MUPs throughout the planning area, including on- and off-street connections.

MUPs are planned on Arterial + Collector Streets, including MUPs on both sides of most Arterials + Collectors <8% grade. MUPs are also included on specific local streets that form part of the Cycling + Pedestrian Connectivity Network.

The CNP Cycling Network supports multi-modal transportation by providing a safe and efficient alternative to the traditional vehicle commute.

Refer to Schedule E: Cycling Network Plan.

### 5.1.3. Pedestrian Network

Sharing is central to designing smart streets that serve everyone's needs; from the weekday commuter to the weekend stroller. CNP streets are well suited to their purpose of making a place for everyone that is functional, safe and enjoyable. In the spirit of sharing, and to reduce use of fossil fuels, the CNP enhances the pedestrian experience by providing safe streets with separated sidewalks and street tree landscaping.

The CNP Pedestrian Network links all homes to active parks, natural recreation areas, and destination civic cores through 1.8m wide sidewalks and dedicated 4m wide dedicated Multi-Use Paths on the street network, as well as over 19 km of forest trails.

Refer to Schedule F: Pedestrian Network Plan.

### 5.1.4. Transit Network

Expanding local transit service into the CNP is an important part of creating a multi-modal community, with future residential density playing an important role in the type of transit to be provided.

Based on the proposed average density of 13.7 dwelling units per hectare (5.7 dwelling units per acre), the CNP meets the minimum level required to provide local bus service. In contrast to conventional planning with evenly distributed lower densities, the viability of transit is maximized through the proposed series of destination civic cores and secondary mixed-use neighbourhoods with concentrated residential forms, separated by significant areas of natural open space. The CNP proposes potential transit routes along all arterials as well as the majority of collectors.

Refer to Schedule G: Transit Network Plan.

### 5.1.5. Street Network and Transportation Policies

#### Policy 5.1.1

**TRAFFIC MANAGEMENT** | Consider and incorporate the recommendations for traffic management and parking requirements presented in the CNP Transportation Impact Assessment.

#### Policy 5.1.2

**LIVABLE STREETS** | Implement the City's Livable Street Standards to limit physical, visual, and environmental impacts while providing multiple street connections with relatively direct routes.

#### Policy 5.1.3

**LIVABLE STREETS** | Implement the City's Livable Street Standards to build an interconnected pedestrian and cycling network.

#### Policy 5.1.4

**IMPACTS** | Minimize the impact of streets within residential neighbourhoods through site sensitive, pedestrian oriented design, including landscape buffering and traffic calming.

#### Policy 5.1.5

**LOCAL STREETS** | Further develop and refine local street alignments through the subdivision process.

**Policy 5.1.6**

EMERGENCY CONNECTOR | Provide emergency connectors (vehicular) with pedestrian use for cul-de-sac road lengths greater than 200m in length.

**Policy 5.1.7**

PUBLIC REALM | Create a positive pedestrian realm through the provision of pathways, street trees, landscaping, pedestrian scale lighting, street furniture and permeable surface treatment where possible.

**Policy 5.1.8**

PUBLIC REALM | Preserve future potential for public pedestrian amenities such as universally accessible pathways, benches, and plantings along new major streets.

**Policy 5.1.9**

OFF-STREET NETWORK | Construct an off-street network to accommodate walking and cycling, including trails network, sidewalks, cycle tracks and multi-use pathways through the development process.

**Policy 5.1.10**

OFF-STREET NETWORK | Where a Multi-Use Pathway is constructed off-street, ensure appropriate lighting is provided for safety.

**Policy 5.1.11**

END-OF-TRIP FACILITIES | Where identified, incorporate end-of-trip facilities for cyclists, including secure bicycle storage and/or bike racks in highly visible locations at destination civic centres and mixed-use villages.

**Policy 5.1.12**

TRANSIT | Design all arterial and collector roads to accommodate future transit service.

**Policy 5.1.13**

TRANSIT | Accommodate the provision of transit service through planning for future facilities and/or physical design requirements (transit exchange/bus stops).

**Policy 5.1.14**

LIGHTING | Explore alternative lighting standards to limit ambient light pollution in support of Dark Sky Lighting principles.

**Policy 5.1.15**

LIGHTING | Encourage use of energy efficient streetlights and consider use of adaptive lighting controls during nighttime hours, wherever possible.

**Policy 5.1.16**

PARKING | Provide parking for destination parks and trailheads through detailed park design.

**Policy 5.1.17**

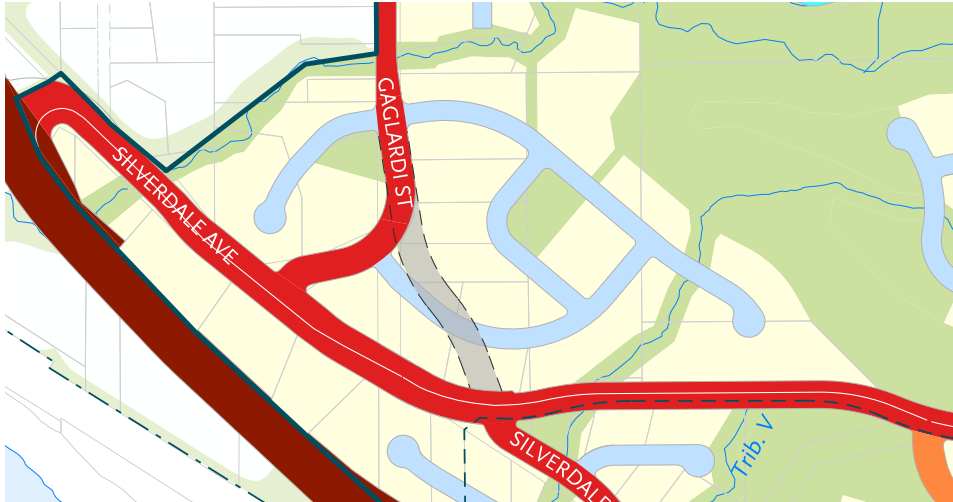
LANES | Encourage the use of rear lanes for homes on gentle lands to increase ground-oriented residential density, strengthen public realm, improve pedestrian safety, and reduce driveways on local streets.

**Policy 5.1.18**

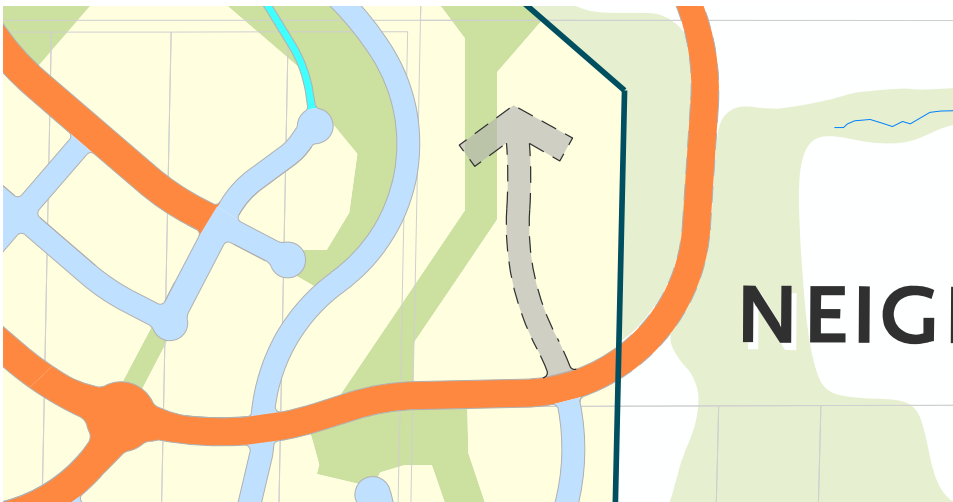
LANES | Where rear lanes are built, garages should be located in the rear yard and be accessed from the lane.

**Policy 5.1.19**

**GAGLARDI** | As the existing Gagliardi Street grade is 17% and new proposed grade exceeds 20%, consider potential future reconfiguration of Gagliardi Street in concert with more detailed planning or development of this area, or the preparation of a West Neighbourhood Plan as shown in the diagram below (Note: diagram reflects a conceptual realignment only and is not based on detailed engineering).

**Policy 5.1.20**

**CONNECTOR** | Consider potential future connector street to the northeastern part of the West Neighbourhood in concert with more detailed planning or development of this area, or the preparation of a West Neighbourhood Plan as shown in the diagram below (Note: diagram reflects a conceptual alignment only and is not based on detailed engineering).

**Policy 5.1.21**

**CLIMBING LANES** | Confirm the need for potential climbing lanes on steep streets, as determined by the City Engineer based on engineering requirements and transportation study guidance.

## 5.2. MUNICIPAL SERVICING INFRASTRUCTURE

The provision of municipal urban infrastructure in the CNP is fundamental to accommodating community development as part of Mission's growth management goals. The CNP accommodates the planned servicing demands through strategies that are cost effective, respectful of the environment, and conserve water and energy resources.

### **Master Servicing Report**

*Central Neighbourhood Plan*

*InterCAD Services*

*July 2022*

Building on the servicing plans included in the MIS, the Conceptual Servicing Engineering Plans for the CNP respond to the area's unique location and topography. While the CNP identifies the specific infrastructure requirements, associated costs, phasing and funding mechanisms to build the neighbourhood, modifications may occur through future development applications and further detailed engineering design.

Municipal Servicing Plans for the CNP consist of the following three infrastructure elements:

- Water Engineering Plan,
  - Refer to Schedule H: Water Engineering Plan;
- Sanitary Engineering Plan,
  - Refer to Schedule I: Sanitary Engineering Plan; and
- Drainage Engineering Plan,
  - Refer to Schedule J: Drainage Engineering Plan.

Refer to Appendix G: Master Servicing Report.

### 5.2.1. Water Conceptual Master Plan

#### **Mission Existing Water System**

The City of Mission and the City of Abbotsford share a water system under the authority of the Joint Abbotsford-Mission Water and Sewer Commission. Currently, the water source within the CNP consists of private wells only, with no municipal water services.

#### **CNP Proposed Water System**

The proposed CNP Water Distribution System was developed using the design criteria in the City of Mission Development and Subdivision Control Bylaw 5650-2017. The CNP will require 6 pressure zones proposed to be supplied by two reservoirs. Pressure zones 1, 2, and 3 share the same hydraulic grade line with existing pressure zones established within the City of Mission's existing network and are capable of interconnecting with existing infrastructure. Pressure zones 4 to 6 are unique to the CNP. There are two reservoirs proposed for the CNP lands including a mid-elevation reservoir (HGL 166m) servicing development on Zones 1 and 2 with a summit reservoir (HGL 355m) servicing Zone 3 through 5. Zone 6 will be serviced by a pump station to reach a 410m HGL.

Water pressure Zone 1 and 2 will be serviced directly from the supply main with the pressure zone boundaries set to be consistent with the existing pressure zones established in Mission. The top of the Zone 1 boundary is set at 104m static head and the top of Zone 2 is set to be 154m static head. There are interconnections between the zones complete with pressure reducing valves so as to provide duplication of service.

Refer to Schedule H: Water Engineering Plan.

### 5.2.2. Sanitary Conceptual Master Plan

#### Mission Existing Sanitary System

The City of Mission and the City of Abbotsford share a sanitary system under the authority of the Joint Abbotsford-Mission Water and Sewer Commission. Sanitary within the CNP consists of private individual septic systems only, with no municipal sanitary services.

#### CNP Proposed Sanitary System

The proposed CNP Sanitary System includes both pumped sewer, gravity sewer and siphon sewer. The MIS included a siphon sewer along the Lougheed Highway corridor that would service the western portions of South-West Mission. The current strategy is to replace the Lougheed highway siphon with a flat large pipe gravity sewer along Silverdale Avenue as well as the off-site Gap Service pumped forcemain service from Mission with a twin siphon sewer that extends into the CNP up Gunn Avenue. Gravity service from the Central Neighbourhood will be limited to areas above 73m elevation to provide adequate pressure head to drive flows through the siphon to the connection point east of the Mission Raceway near Dyke Road.

All sewers below the 73m elevation siphon point will be conveyed by gravity to a pump station located on Nelson Street near the Silverdale intersection. This pump station will be designed to manage flows from the CNP that are not directly connected to the siphon, as well as future build-out of neighbourhoods to the east (Clay and Israel Bench) and west (Fraser Landing, Silvermere, and Brookwood). The pump station will convey flows into the siphon sewer.

Sewage collected from the CNP will be connected to the City of Mission trunk sewage system. East of Nelson Street and Highway 7, the sanitary sewer line follows the proposed watermain line south of Lougheed Highway. The sanitary sewer connects into an existing gravity system on Wren Street that continues east, with flows ultimately siphoned south across the Fraser River to the JAMES Wastewater Treatment Plant.

Refer to Schedule I: Sanitary Engineering Plan.

### 5.2.3. Rainwater Management Conceptual Plan

#### Mission Existing Drainage System

Mission's current stormwater drainage system is a combination of enclosed pipes and open channels, separate from the sanitary sewer system. Drainage within the CNP currently flows overland through a network of roadside ditches, culverts, and creeks, ultimately emptying into the Fraser River.

#### CNP Proposed Drainage System

Post-development flow rates are intended to be limited to peak pre-development flow rates in order to protect creeks and ditches from high velocity flows that can scour creek banks and have the potential to negatively affect aquatic value, water quality, creek bank stability, and impact neighbouring properties. Development of the CNP Drainage Engineering Plan was a coordinated technical effort involving several expert consultants, resulting in the following studies.

***Water Balance: Technical Report***  
*Silverdale Central Neighbourhood*  
*PGL Environmental Consultants*  
*December 2021*



A Site Water Balance Model was prepared to describe the monthly water cycle for Silverdale's Central Neighbourhood under existing undeveloped conditions. The Site Water Balance Model was essential to support the development of the Integrated Rainwater Management Plan and was used to evaluate land use alternatives, as well as placement and sizing of infiltration features in order to maintain, as close as possible, the pre-development hydrologic function of the landscape.

### ***Integrated Rainwater Management Plan***

*Central Neighbourhood Plan*

*InterCAD Services*

*March 2022*

The CNP stormwater management concept is a layered approach to provide a comprehensive system that accounts for water quality and manages peak flows within the neighbourhood's network of creeks. The intent is to intercept flows as close to the source of rainfall prior to discharging into a piped storm sewer. The ultimate goal of this layered approach is to restrict post-development surface runoff to the creeks and wetlands to pre-development rates and volumes so as to prevent or mitigate flooding and environmental impacts, or impacts on existing groundwater wells. Best Management Practices (BMP) will be implemented for each lot type in adherence to Section 5.0 of the City's Development and Subdivision Control Bylaw 5650-2017.

The layered approach of the stormwater management concept consists of the following:

- Layer 1 | BMPs within individual lots,
- Layer 2 | facilities within the roadways,
- Layer 3 | natural wetlands.

Each layer will contribute to water quality, groundwater recharge, and peak flow control.

**Active Detention + Infiltration:** Rainwater is slowed and infiltrated at multiple points before entering natural creeks; on-site retention and infiltration, on-street retention and infiltration, and neighbourhood ponds.

**Diversion Bypass to Fraser:** Storms with peak intensity events will be by-passed away from the natural creeks and directed to the Fraser River via a Diversion Sewer, which services the majority of the CNP area.

**Neighbourhood Detention:** For the portion of the Lower Slopes that cannot be serviced by the Diversion Sewer, neighbourhood detention will be implemented. This could be an open pond or closed tank depending on the type of development and if the detention system is servicing multiple properties.

**Creeks:** Flow control structures will be utilized to release base flows into the creek systems (with surplus flows collected by the Diversion Sewer). The natural ponds and wetlands (located in the upper portions of the creeks) are the final layer in the design approach and provide water quality treatment to the creek system.

Refer to Appendix H: Integrated Rainwater Management Plan and Schedule J: Drainage Engineering Plan.

### ***Erosion Impacts Assessment Technical Memorandum***

*Central Neighbourhood Plan*

*Kerr Wood Leidal (KWL)*

*April 2022*

An analysis of measured surface water flows from the Central Neighbourhood stream system, as well as modelled pre- and post-development flows at the same stream

locations, was undertaken to understand potential erosion and siltation effects of the proposed drainage system. The analysis was used to identify additional mitigation that may be needed to address residual flow with potential to cause erosion. This involved a review of the on-lot and other rainwater management measures stipulated in the Integrated Rainwater Management Plan and evaluation of additional measures that may be needed to fill the gaps.

#### 5.2.4. Franchise Utility Consultation

##### *Central Neighbourhood Franchise Utilities Servicing Brief*

*Central Neighbourhood Plan*

*Primary Engineering*

*March 2022*

Consultation with Franchise Utilities was undertaken as part of the CNP, including BC Hydro, Telus, Shaw and FortisBC Gas to ensure the neighbourhood design can accommodate the requisite utilities. Consultation with utilities will continue as phased neighbourhood development advances.

Refer to Appendix I: Franchise Utility Consultation Brief.

#### 5.2.5. Servicing Infrastructure Policies

##### Policy 5.2.1

INFRASTRUCTURE | Water, Sanitary Sewer and Stormwater Drainage systems shall be designed in accordance with City of Mission bylaws and regulations, as well as industry Best Management Practices.

##### Policy 5.2.2

INFRASTRUCTURE | Conduct detailed geotechnical and environmental assessments to enable pragmatic construction of infrastructure.

##### Policy 5.2.3

WATER | Water servicing shall be in general compliance with the Water Engineering Plan (Schedule H).

##### Policy 5.2.4

WATER | Encourage residents to employ water conservation measures for indoor and outdoor conservation practices.

##### Policy 5.2.5

WATER | Encourage the use of Best Practices in green landscape management.

##### Policy 5.2.6

SANITARY | Sanitary Sewer servicing shall be in general compliance with the Sanitary Engineering Plan (Schedule I).

##### Policy 5.2.7

DRAINAGE | Prepare a stormwater management plan for developments in general compliance with the Drainage Engineering Plan (Schedule J).

##### Policy 5.2.8

DRAINAGE | Ensure stormwater management systems are designed using Best Management Practices as suitable for each specific development site.

**Policy 5.2.9**

**DRAINAGE** | Incorporate rainwater management BMPs at all phases of development including bioswales, flow control barrels, mechanical treatment systems, neighbourhood detention systems, and oil-water separators.

**Policy 5.2.10**

**DRAINAGE** | Water quality treatment will be provided through the use of bio-swales (where practical), mechanical oil/grit separators and sediment ponds.

**Policy 5.2.11**

**DRAINAGE** | Develop requirements for ongoing maintenance of rainwater management BMPs.

**Policy 5.2.12**

**DRAINAGE** | Implement a monitoring and adaptive management program to ensure the objectives of the Integrated Rainwater Management Plan are met.

**Policy 5.2.13**

**DRAINAGE** | Employ localized flow attenuation to reduce erosion and limit infiltration to incidental infiltration from bioswales, waterways and green spaces.

**Policy 5.2.14**

**UTILITIES** | Continue consultation and coordination with Franchise Utilities including BC Hydro, Telus, Shaw and FortisBC Gas.

## 6. DEVELOPMENT PERMIT AREAS

### 6.1. DEVELOPMENT PERMIT AREAS AND GUIDELINES

In accordance with the OCP, the CNP includes designated Development Permit Areas (DPA) that stipulate specific requirements for development in areas with special conditions. Development within DPA's will require submission of a Development Permit Application to the City of Mission with application requirements specific to each DPA. As not all applications warrant the same level of detail, a Pre-Application Meeting with the City will be required to determine the application requirements.

In general, the Development Permit Guidelines for the CNP are consistent with those outlined in the OCP. The CNP proposes additional development permit guidelines relating to Natural Environment and Hillside Development.

Refer to Schedule K: Development Permit Areas.

#### 6.1.1. Intensive Residential

The Intensive Residential DPA is applicable to all properties in the CNP that may be developed to intensive residential densities. This DPA is designated to establish guidelines for the form and character of intensive residential development to achieve a higher standard of building design, housing alternatives, site compatibility and site aesthetics that are consistent with a vibrant residential neighbourhood.

Development Permit Guidelines for the Intensive Residential DPA are described in Section 9.3 of the OCP.

#### 6.1.2. Multi-Unit Residential

The Multi-Unit Residential DPA is applicable to all properties in the CNP that may be developed to multi-unit residential densities. This DPA is designated to establish guidelines for the form and character of multi-unit residential development to achieve a higher standard of building design, housing alternatives, site compatibility and site aesthetics that are consistent with a vibrant residential neighbourhood.

Development Permit Guidelines for the Multi-Unit Residential DPA are described in Section 9.4 of the OCP.

#### 6.1.3. Mixed-Use and Commercial

The Mixed-Use and Commercial DPA is applicable to all properties in the CNP that may be developed for mixed use or commercial use. This DPA is designated to establish guidelines for the form and character of developments that include commercial and multi-unit residential uses to achieve a higher standard of building design, housing alternatives, site compatibility and site aesthetics that are consistent with a vibrant downtown, community nodes and commercial areas including the Lougheed Highway corridor.

Development Permit Guidelines for the Mixed-Use and Commercial DPA are described in Section 9.5 of the OCP.

#### 6.1.4. Industrial Development Permit Area

There are no industrial lands proposed for development in the CNP.

### 6.1.5. Natural Environment

The Natural Environment DPA is applicable to all properties in the CNP that may be developed. This DPA is designed to establish guidelines for the protection of the natural environment, its ecosystems and biodiversity, and to promote practices that will limit negative impacts on these areas. The Natural Environment DPA guidelines included in the CNP are intended to replace the OCP guidelines for development on CNP lands.

Mission has extensive natural areas that include the Fraser River, creeks, lakes, ponds, wetlands, riparian areas, significant forested areas, and steep hillsides and rock features. These areas are ecosystems that provide many functions necessary for the health and well-being of fish, wildlife and humans.

The intent of this DPA is to guide development to avoid negative effects on environmentally sensitive and significant areas, habitat, water quality, biodiversity, air quality, greenhouse gas emissions, watercourse maintenance and dredging costs, outdoor recreation opportunities, food production, and many other tangible and intangible benefits of natural areas.

Building on the findings of the MIS, the CNP Neighbourhood Conservation Framework serves to protect the neighbourhood's environmental values by directing future development to lands better able to accommodate community development. Additional Natural Environment DPA Guidelines have been identified within the CNP to guide development on lands outside the Conservation Framework.

#### 6.1.5.1. New CNP Natural Environment Development Permit Guidelines

- a. HABITAT | Design and implement artificial habitat features, such as nesting boxes or spawning beds, where natural features are not present or practical, and as recommended by a Qualified Environmental Professional (QEP).
- b. HABITAT | Design roadways and connections to mitigate habitat fragmentation, disruption and impedance to wildlife travel, with a preference for open-bottom culverts or clear-span bridges for stream crossings.
- c. HABITAT | Prevent ecosystem fragmentation by preserving natural area connectivity.
- d. INFILTRATION | Limit impervious surfaces to improve stormwater absorption by using permeable materials and techniques, including permeable pavers and structural grassfields.
- e. LAYOUT | Limit encroachment into adjacent environmentally sensitive areas by adjusting building construction and site layouts.
- f. LAYOUT | Locate development on portions of the site that are least environmentally sensitive by retaining a QEP to complete a bio-inventory prior to site design in accordance with industry standard best practices, including *Develop with Care* (2014).
- g. LIGHT | Design development to limit ambient light pollution and reduce impacts on those habitat areas reliant on darkness.
- h. LIGHT | Develop phase-specific plans to comply with Dark Sky policies.
- i. MITIGATION | Implement QEP recommendations approved by the City of Mission, including environmental mitigation measures.



- j. MONITORING | Require environmental monitoring by a QEP during construction adjacent to or within an Environmentally Valuable Resource or the Silverdale Urban Forest.
- k. RAINWATER | Incorporate rainwater Best Management Practices into development as described in the Integrated Rainwater Management Plan.
- l. RIPARIAN | Enhance and, where feasible, restore watercourses that are compromised by riparian invasive plants to improve watercourse quality.
- m. SEDIMENT + EROSION | Install both temporary and permanent sediment/pollutant containment and erosion control measures for any development or redevelopment.
- n. SEDIMENT + EROSION | Require phased and site-specific Erosion and Sediment Control Plans to be prepared for developments by Professional Engineers, including requirements for discharge water quality and monitoring during construction with reports provided to the City as requested.
- o. VEGETATION | Create continuous vegetated corridors, wherever possible, through planting or linking tree retention areas from within the development to other retained natural habitats.
- p. VEGETATION | Mitigate impacts on mature trees or require replacement planting as recommended by a QEP. Replacement plantings should be native to the Coastal Western Hemlock Biogeoclimatic Zone (preferably drought-tolerant species). Ensure the root systems are protected from disturbance.
- q. VEGETATION | Prevent disturbance of animal and bird nesting sites and breeding areas by preserving adequate animal habitat through the retention of appropriate trees and vegetation and by timing construction activity to avoid bird breeding windows as directed by a QEP.
- r. VEGETATION | Retain existing vegetation across developing neighbourhoods where practical to ensure the health and integrity of the urban forest and topography.
- s. VEGETATION | Revegetate unavoidable interruptions along ridgelines with timely landscape plantings in clusters to mimic the natural environment.
- t. VEGETATION | Require a Vegetation Restoration Plan to be designed and implemented under the supervision of a QEP or Registered Landscape Architect for areas of vegetation impact.
- u. DESIGN | Consider Bird-Friendly Design into building and landscaping.
- v. DESIGN | Design and incorporate access deterrents for Environmentally Sensitive Areas.
- w. DESIGN | Require incorporation of landscape plants which benefits birds and invertebrate pollinators.

#### **6.1.6. Fraser River**

The Fraser River DPA is designed to establish guidelines for the protection of development from hazardous conditions related to flooding. This DPA establishes guidelines for development in floodplains in order to protect people and property in those vulnerable locations. With climate change, water levels are rising and weather events are becoming more severe so this is particularly important.

Some existing parcels in the CNP located along Silverdale Avenue have portions currently located within the Fraser River DPA, defined by the Flood Construction Level. The upgraded Silverdale Avenue is expected to be built to an elevation above the Flood Construction Level.

Development Permit Guidelines for the Fraser River DPA are described in Section 9.8 of the OCP.

#### **6.1.7. Geotechnical Hazards**

The Geotechnical Hazards DPA is applicable to all properties with slopes greater than 30%. This DPA is established to protect areas from hazardous conditions, and requires a site specific geotechnical report to be prepared by an engineer with experience or education in geotechnical study and geohazard assessments for all proposed development.

Development Permit Guidelines for the Geotechnical Hazards DPA are described in Section 9.9 of the OCP.

#### **6.1.8. Fire Interface**

The Fire Interface DPA is applicable to all parcels in the CNP. This DPA is established to protect residents, structures and property from the potential risk of wildfires. Reducing wildfire hazard involves a multi-layered approach that includes education, community prevention activities, subdivision design, and building and landscape design that include Fire Smart measures.

Development Permit Guidelines for the Fire Interface DPA are described in Section 9.10 of the OCP.

#### **6.1.9. Hillside Development**

As a new hillside community visible from Mission, Maple Ridge, and Abbotsford, it is essential that the CNP preserve the natural hillside visual character of Silverdale. While development will be visible, Visual Buffers composed of retained natural treed hillsides and new planted landscape and trees will ensure that the new community blends into the existing visual quality of the landscape.

The CNP Proposes new Hillside DPA with Development Permit Guidelines to help tailor development to the complex terrain of Silverdale's Central Neighbourhood, support visual quality objectives, and limit development impacts on existing site conditions.

The Hillside Development Permit Area applies to portions of parcels that include slopes greater than 20%.

### 6.1.10. New CNP Hillside Development Permit Guidelines

- a. HILLSIDE | Retain and, where possible, enhance significant natural scenic features, such as gullies, rock outcrops and knolls.
- b. HILLSIDE | Consider use of single loaded streets or split lanes with narrow roads to avoid scenic features and reduce grading.
- c. CLEARING | Limit vegetation clearing, stripping of top-soils, and bulk grading, to the extent required by development phase.
- d. GRADING | Recognize the existing topographic conditions and locate development and infrastructure - including building layouts and roads - in a manner that manages the need for significant cuts and fills.
- e. GRADING | Where practical, avoid large cuts/fills to create 'build-able lots' or flat yards.
- f. GRADING | Avoid site and lot grading that negatively impacts designated visual impact buffers.
- g. GRADING | Situate manufactured slopes behind buildings.
- h. RETAINING | Where possible, design final lot grades to mimic the natural slope thereby limiting use of retaining walls.
- i. RETAINING | Utilize stepped building foundations and terraced retaining walls to manage lot grade changes.
- j. RETAINING | Integrate retaining structures with the onsite architectural character to reduce slope disturbance.
- k. RETAINING | Limit the total height of new building lot retaining walls across the property.
- l. RETAINING | Design road, driveway, and retaining walls to conform to the natural terrain, where possible.
- m. MITIGATE | Re-vegetate recontoured slopes promptly using native plant palette.
- n. BUILDINGS | Design buildings to limit the visual impacts associated with development along ridgelines and edge of steep ravines and hillsides greater than 30% slope.
- o. BUILDINGS | Set back buildings, retaining walls and fences from the edge of natural features, such as ravines, cliffs, rock knolls or outcrops.
- p. BUILDINGS | Ensure building and retaining design, color and finish complement natural features and terrain.
- q. MITIGATE | Incorporate scenic natural features into the subdivision design.
- r. MITIGATE | Limit individual lot impacts through the use of extensive screening with mature landscape materials, greater rear yard setbacks, stepped building massing, planted hedges in place of fencing.
- s. MITIGATE | Avoid uniform retaining walls or mitigate with mature landscaping.

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## 7. IMPLEMENTATION

### 7.1. REGULATORY REQUIREMENTS

Development within the CNP will be conducted in compliance with applicable regulatory requirements of Federal, Provincial, and Municipal legislation.

The following non-exhaustive list describe Acts, regulations and bylaws that govern build-out of the CNP area:

#### 7.1.1. Federal

- Canada Wildlife Act;
- Fisheries Act;
- Migratory Birds Convention Act;
- Canadian Navigable Waters Act;
- Species at Risk Act;

#### 7.1.2. Provincial

- Local Government Act;
- Building Act;
- Environmental Management Act;
- Contaminated Sites Regulation;
- Heritage Conservation Act;
- Riparian Areas Protection Act;
- Riparian Areas Protection Regulation;
- Water Sustainability Act;
- Water Sustainability Regulation;
- Weed Control Act;
- Wildlife Act;

#### 7.1.3. Municipal

- Building Bylaw 3590-2003;
- Development and Subdivision Control Bylaw 5650-2017;
- Good Neighbour Bylaw 5524-2015;
- Land Use Application Procedures and Fees Bylaw 5001-2008;
- Soil Deposit Bylaw 5506-2015;
- Soil Removal Bylaw 3088-1997; and,
- Zoning Bylaw 5949-2020.

### 7.2. CONCEPTUAL DEVELOPMENT PHASING

The CNP is projected to build-out through phased development over the next 60+ years to accommodate community growth. In general, construction of major infrastructure components or linkages will define how development phasing proceeds.

As municipal trunk servicing infrastructure extends to the CNP from Silverdale Avenue and Highway 7, the Lower Slopes District is expected to be the first portion of the neighbourhood to develop with new urban services - with phased development generally



proceeding from east to west. Sequencing of the Mid + Upper Slope Districts will depend on future market demand and servicing efficiencies.

The following describes the major infrastructure requirements for phased build-out of the CNP Development District and identifies those items needed at the start of each conceptual development phase.

#### Lower Slopes Major Infrastructure Requirements

- **TRUNK SERVICES** | Construction of Gap Servicing Infrastructure connection along Nelson, Gill, crown lands and raceway. Required to begin CNP construction.
- **STREETS** | Construction of Arterial Street connection into the CNP; construction of the Lower Slopes Street Network, including a new 4-lane Arterial Street along Silverdale Avenue between Highway 7 and Loftus Street; a new 2-lane Arterial Street from Silverdale Avenue to Gunn Avenue; upgrades to provide improved capacity for left-turn vehicles from Nelson Street onto Highway 7.
- **WATER** | Construction of a new Water Pump Station near Nelson Street and Highway 7; new Supply Watermain from the pump station to Olson Avenue; and a new Water Reservoir at the elevation near Olson Avenue. Required to begin Lower Slopes construction.
- **SANITARY** | Construction of two new Sanitary Pump Stations near Nelson Street and Silverdale Avenue, and the central portion of Silverdale Avenue; new Gravity Sewer, Siphon Sewer or Forcemain within the ROW of the Gunn Avenue and Silverdale Avenue Arterial alignments. The first pump station and siphon sewer are required to begin Lower Slopes construction.
- **STORM** | Construction of storm sewer diversion main and outfall.

#### Mid-Slopes Major Infrastructure Requirements

- **STREETS** | Construction of the Mid-Slopes Street Network, as well as the 4-Lane East-West Arterial Street from Silverdale Avenue in the west through the CNP to Clay Street in the East Neighbourhood; upgrades to provide improved capacity for east-bound left-turn vehicles from Highway 7 onto Silverdale Avenue.
- **WATER** | Construction of a new Water Pump Station near the Olson Avenue Water Reservoir; new Supply Watermain from Olson Avenue to the summit of the Upper Slopes; and a new Water Reservoir at the summit. Required to begin Mid-Slopes construction in water pressure zone 4.
- **SANITARY** | Construction of a new Sanitary Pump Station at Silverdale Avenue and Gaglardi Street; new Gravity Sewer and Forcemain within the ROW of the new 4-Lane East-West Arterial and Gaglardi Street Arterial alignments.

#### Upper Slopes Major Infrastructure Requirements

- **STREETS** | Construction of the Upper Slopes Street Network; and the 2-Lane Collector Street connection to Clay Street northeast of the CNP through the East Neighbourhood.
- **WATER** | Construction of a new Water Pump Station at the summit Water Reservoir. Required to begin Upper Slopes construction in water pressure zone 6.

#### Interim Servicing Strategy

The City of Mission is exploring the potential for Interim Servicing to enable the development of the initial residential units in the eastern portion of the Lower Slopes. Interim Servicing is not expected to delay construction of the Trunk Servicing required for the CNP.

### 7.3. TAXATION ANALYSIS AND FINANCIAL COST RECOVERY

*Taxation Analysis for Silverdale CNP  
Central Neighbourhood Plan  
Rollo + Associates  
June 2022*

Land Economists, Rollo + Associates, completed a Taxation Analysis to determine the likely impact of the CNP on Mission's overall expense burden, tax base, and therefore tax burden. The analysis indicated that with tax fluctuations averaged over time, the CNP will tend to decrease Mission's residential property tax burden over the full build-out of the neighbourhood.

The City of Mission will use the CNP Neighbourhood Metrics and Infrastructure Cost Estimates to establish appropriate rates for municipal Development Cost Charges and Community Amenity Contributions, ensuring that development - not existing Mission taxpayers - pays the costs of the required servicing infrastructure and community facilities.

Refer to Appendix J: Taxation Analysis Report

### 7.4. PRE AND POST CONSTRUCTION REGULATIONS

In addition to the orderly phasing of development in accordance with policies as described within the CNP, the following outlines additional requirements (as detailed within the Recommendations of the Environmental Impact Assessment and not already reflected elsewhere within the CNP) to guide the implementation of the Plan through the construction phase:

- a. Conduct and submit a pre-construction stage RAPR Assessment to define the riparian setbacks and protection methods for watercourses.
- b. Conduct an arborist's assessment of tree retention and management with CNP development sites.
- c. Conduct and submit an Archaeological Impact Assessment in areas of potential risk specified in the AOA (as may be refined through focused Preliminary Field Reconnaissance work during the detailed design stage) based on detailed design.
- d. Prepare Phase-specific management plans to address species at risk habitat impacts.
- e. Develop and submit a Construction Environmental Management Plan (CEMP) prepared by a Qualified Environmental Professional (QEP), for construction near Environmentally Sensitive Areas, that includes:
  - i. erosion and sediment control plan;
  - ii. spill contingency and response practices;
  - iii. terrain management practices;
  - iv. fire protection practices;
  - v. tree management and vegetation restoration measures;
  - vi. protection measures for works near water and riparian areas;
  - vii. any mitigation measures from plant and animal species at risk surveys;
  - viii. any mitigation measures from Archaeological Impact Assessments;
  - ix. construction schedule that avoids or limits activities during sensitive environmental periods;
  - x. water quality parameters and targets for sediment control and other substances used around waterbodies;

- xi. requirements for vegetation clearing to avoid destruction or disturbance of bird nests, including pre-clearing nest surveys if during applicable nesting season;
  - xii. practices for amphibian salvages where necessary; and
  - xiii. construction traffic management.
- f. Include the CEMP in construction tender documents and require construction contractor adherence to the CEMP as part of contractual obligations.
  - g. Engage a QEP to monitor and report on the construction activities' adherence to the CEMP, regulations and other environmental best management practices.
  - h. Retain the services of a QEP to secure permits from respective regulatory agencies and undertake fish and wildlife salvages prior to disturbing areas in and around wetlands, streams, riparian habitats, or other sensitive habitats.
  - i. Restrict clearing and other disturbances within the applicable bird nesting windows and if unavoidable, retain a QEP to conduct a nest survey which adheres to industry standard protocols.
  - j. In accordance with recommendations of a qualified arborist or QEP, identify the number of wildlife trees (under supervision by a biologist) that are planned for removal and compensate in nearby protected areas.
  - k. Restore disturbed riparian habitat following a vegetation restoration procedure prepared by a qualified arborist or QEP.
  - l. Conduct environmental monitoring for any restored or enhanced environmental areas for a time specified by applicable federal or provincial authorizations or permits, or by the City of Mission.

#### **7.5. NEIGHBOURHOOD PLAN REVIEW**

To confirm that the objectives of the CNP are achieved through implementation over the course of neighbourhood build-out, the CNP should be reviewed every 5-years to provide an opportunity for corrective adaption if needed based on future conditions, demographic trends, or new information.

Schedule A  
LAND USE PLAN

LEGEND AUGUST 2022

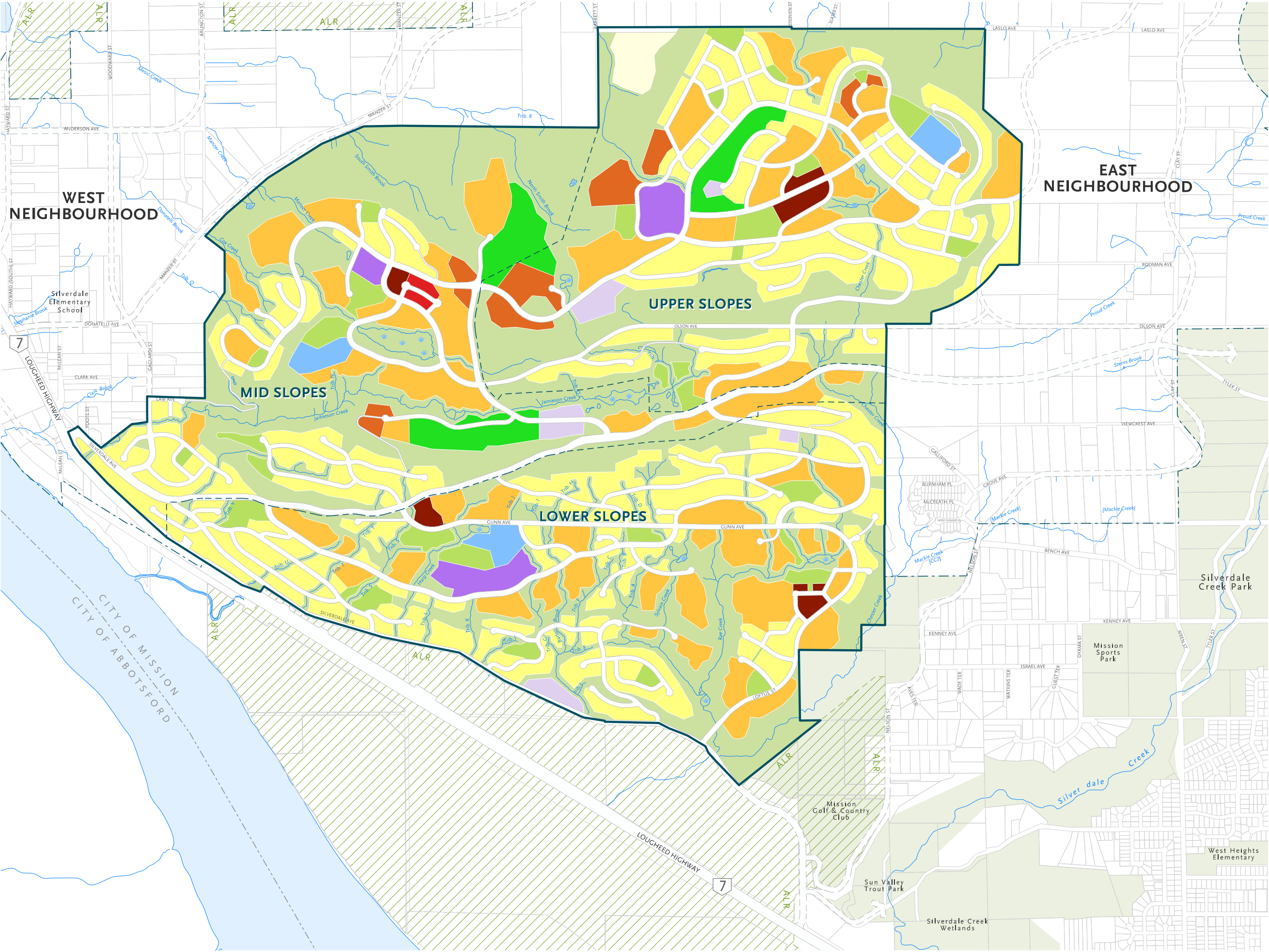
- Silverdale Comprehensive Planning Area
- Central Neighbourhood Plan Boundary
- Development District Boundary
- Legal Parcel
- Watercourse
- MIS Major Street Alignment
- Agricultural Land Reserve
- Parks + Open Space
- Single Family Rural
- Single Family
- Townhome
- Apartment
- Mixed Use
- Commercial - Retail
- Institutional - Elementary School
- Institutional - Community Centre
- Institutional - Firehall | Works Yard | Reservoir
- Neighbourhood Park
- Community Park
- Silverdale Urban Forest
- Road + Strata Access ROW

NOTES

Local street alignments are conceptual and presented for illustrative purposes. Final local street alignments will be determined through the subdivision process.

Riparian corridors are based on preliminary Riparian Area Protection Regulation (RAPR) assessments. Detailed riparian buffers for creeks and environmentally sensitive areas will be determined during the rezoning, subdivision and development permit stages.

Major Street Network alignments in East and West Neighbourhoods reflect the findings in the SCPA Master Infrastructure Strategy | July 2020. Final alignments will be confirmed through future Neighbourhood Plans.





Schedule B  
PARKS + TRAIL PLAN

LEGEND AUGUST 2022

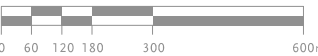
- Silverdale Comprehensive Planning Area
- Central Neighbourhood Plan Boundary
- - - Development District Boundary
- Legal Parcel
- Watercourse
- - - MIS Major Street Alignment
- ALR Agricultural Land Reserve
- Parks + Open Space
- Neighbourhood Development Area

- Neighbourhood Park
- Community Park
- Silverdale Urban Forest
- Institutional - Elementary School
- Institutional - Community Centre
- Mixed Use + Commercial
- 3m Multi-Use Trail
- 4m Multi Use Trail | Paved
- Multi-Use Path
- Sidewalk | Both Sides of Street
- Potential Trailhead
- Potential Stream Crossing
- Potential Parking Area
- Potential Pavilion

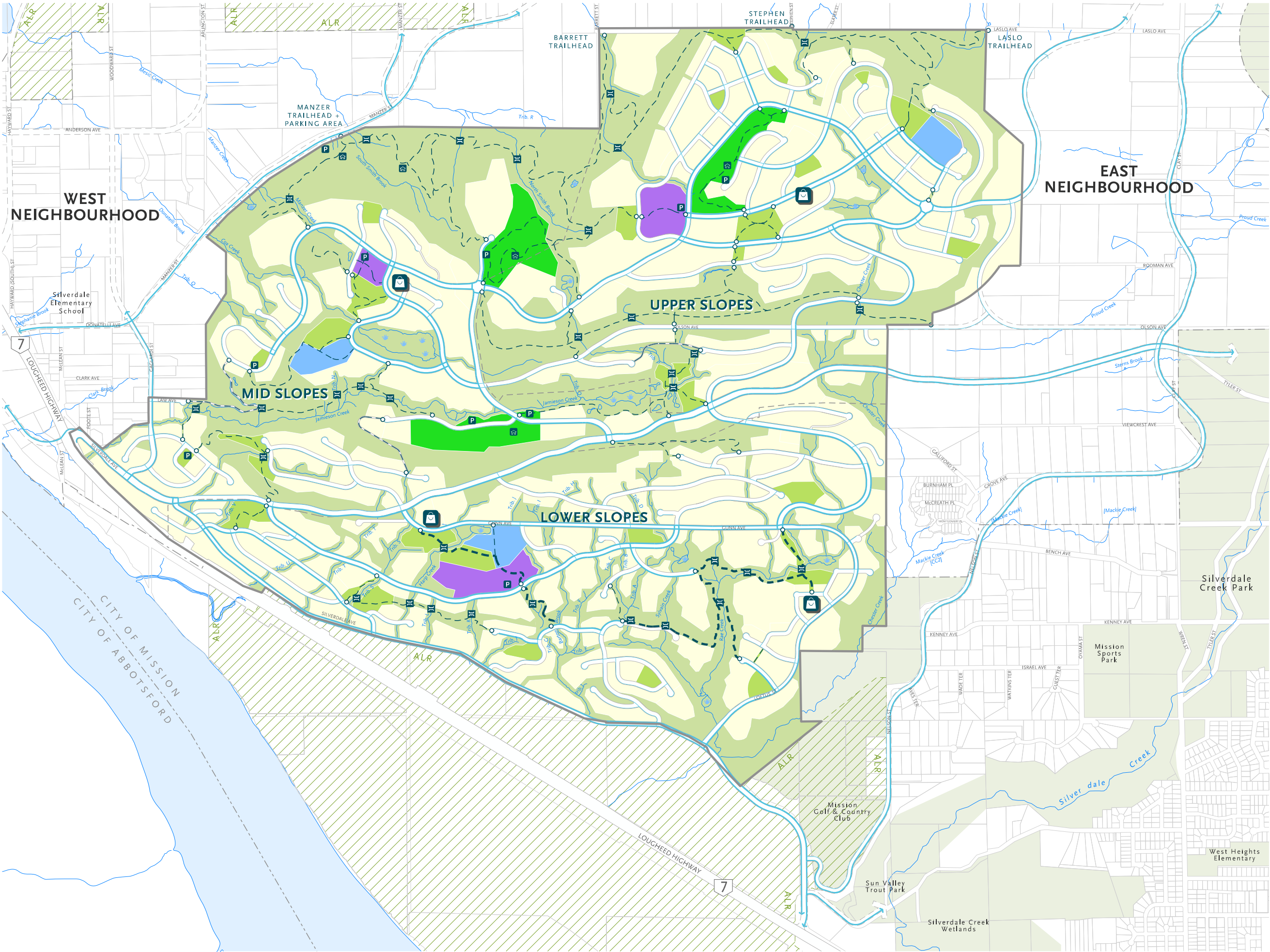
NOTES Local street alignments are conceptual and presented for illustrative purposes. Final local street alignments will be determined through the subdivision process.

Major Street Network alignments in East and West Neighbourhoods reflect the findings in the SCPA Master Infrastructure Strategy | July 2020. Final alignments will be confirmed through future Neighbourhood Plans.

For Park + Community Facility locations in East and West Neighbourhoods, refer to the SCPA Master Infrastructure Strategy | July 2020.



EKISTICS





Schedule C  
DESIGNATED  
ENVIRONMENTAL  
SENSITIVE AREA PLAN

LEGEND AUGUST 2022

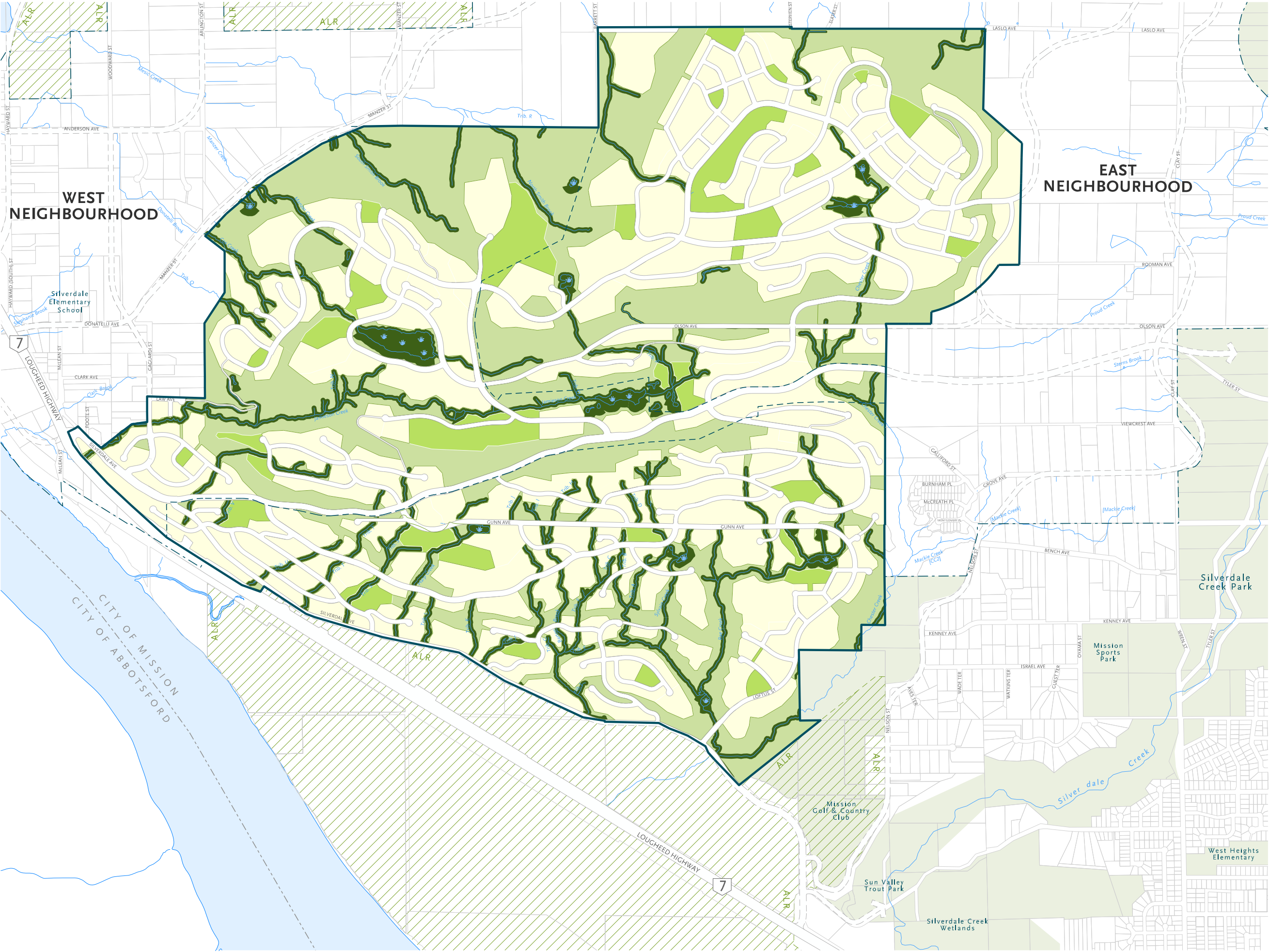
- Silverdale Comprehensive Planning Area
- Central Neighbourhood Plan Boundary
- Development District Boundary
- Legal Parcel
- Watercourse
- MIS Major Street Alignment
- ALR Agricultural Land Reserve
- Parks + Open Space
- Designated Environmentally Sensitive Area (Environmental Management Zone 4)
- Active Parks
- Silverdale Urban Forest
- Community Development Lands

NOTES

Local street alignments are conceptual and presented for illustrative purposes. Final local street alignments will be determined through the subdivision process.

Designated Environmentally Sensitive Areas are based on preliminary Riparian Area Protection Regulation (RAPR) assessments. Detailed riparian buffers for creeks and environmentally sensitive area will be determined during the rezoning subdivision and development permit stages.

Designated Environmentally Sensitive Areas are based on Provincially regulated riparian areas.





Schedule D  
STREET HIERARCHY  
PLAN

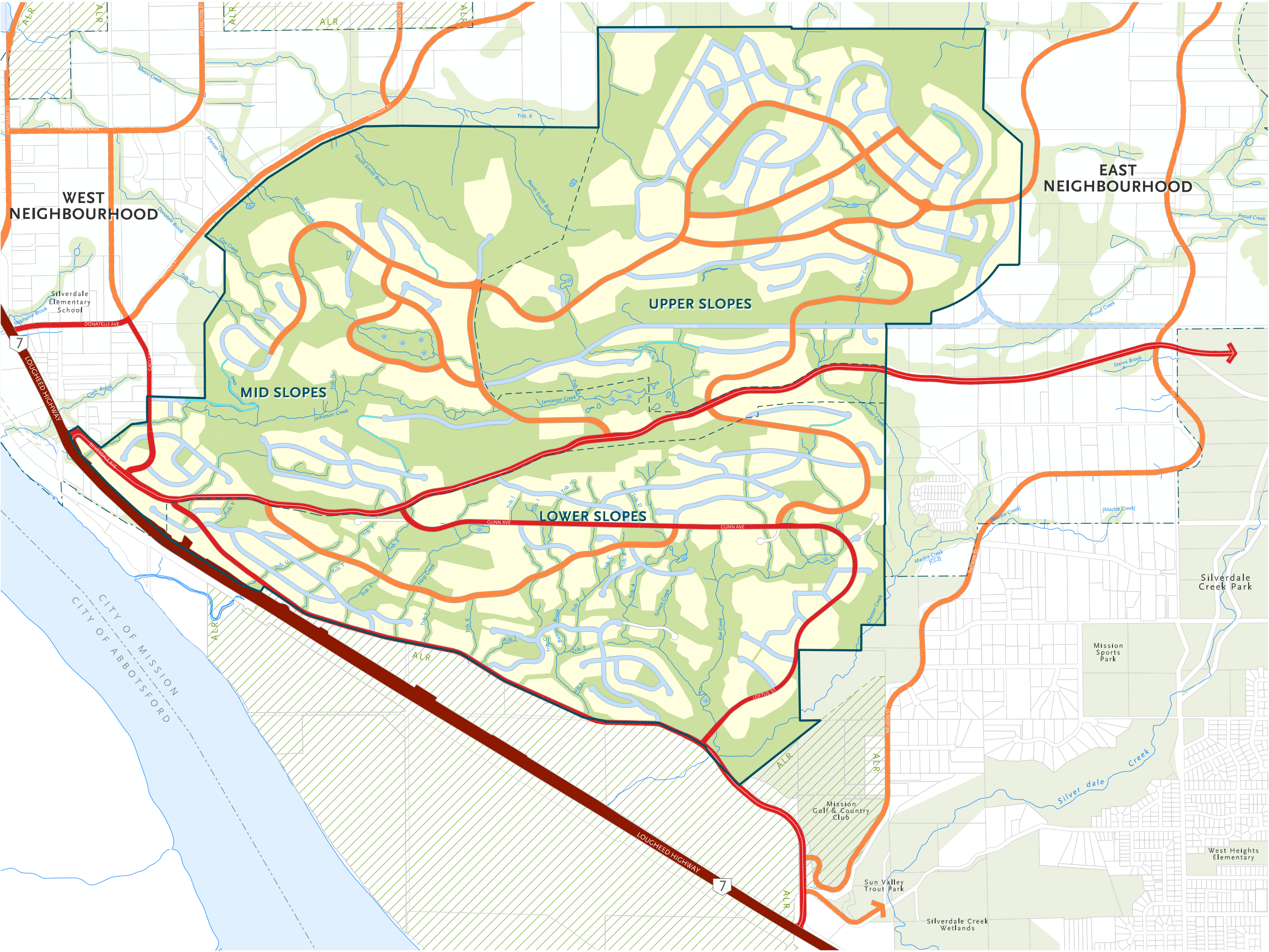
LEGEND AUGUST 2022

- Silverdale Comprehensive Planning Area
- Central Neighbourhood Plan Boundary
- Development District Boundary
- Legal Parcel
- Watercourse
- MIS Major Street Alignment
- Agricultural Land Reserve
- Parks + Open Space
- Neighbourhood Conservation Framework
- Neighbourhood Development Area

- Highway 7 | 4 Lane
- Arterial | 4 Lane
- Arterial | 2 Lane
- Collector
- Local
- Emergency Access
- Private Strata Access Driveway

NOTES Local street alignments are conceptual and presented for illustrative purposes. Final local street alignments will be determined through the subdivision process.

Major Street Network alignments in East and West Neighbourhoods reflect the findings in the SCPA Master Infrastructure Strategy | July 2020. Final alignments will be confirmed through future Neighbourhood Plans.



Schedule E  
CYCLING PLAN

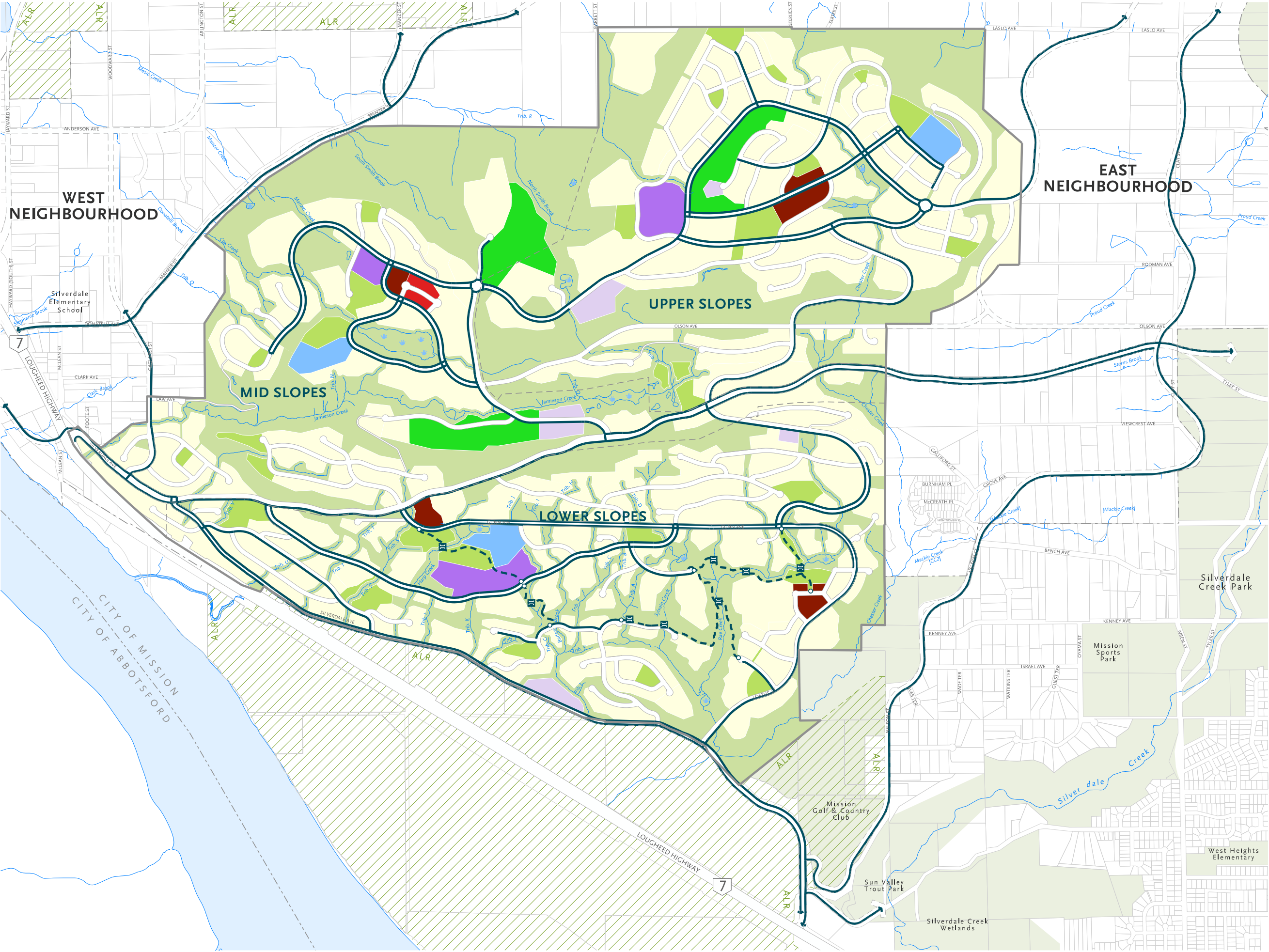
LEGEND AUGUST 2022

- Silverdale Comprehensive Planning Area
- Central Neighbourhood Plan Boundary
- - - Development District Boundary
- Legal Parcel
- Watercourse
- - - MIS Major Street Alignment
- ALR Agricultural Land Reserve
- Parks + Open Space
- Neighbourhood Development Area
- Mixed Use
- Commercial Retail
- Institutional - Elementary School
- Institutional - Community Centre
- Institutional - Firehall | Works Yard | Reservoir
- Neighbourhood Park
- Community Park
- Silverdale Urban Forest
- Multi-Use Path
- 4m Multi-Use Trail | Paved
- Potential Trailhead
- Potential Stream Crossing

NOTES

Local street alignments are conceptual and presented for illustrative purposes. Final local street alignments will be determined through the subdivision process.

Major Street Network alignments in East and West Neighbourhoods reflect the findings in the SCPA Master Infrastructure Strategy | July 2020. Final alignments will be confirmed through future Neighbourhood Plans.





Schedule F  
PEDESTRIAN NETWORK  
PLAN

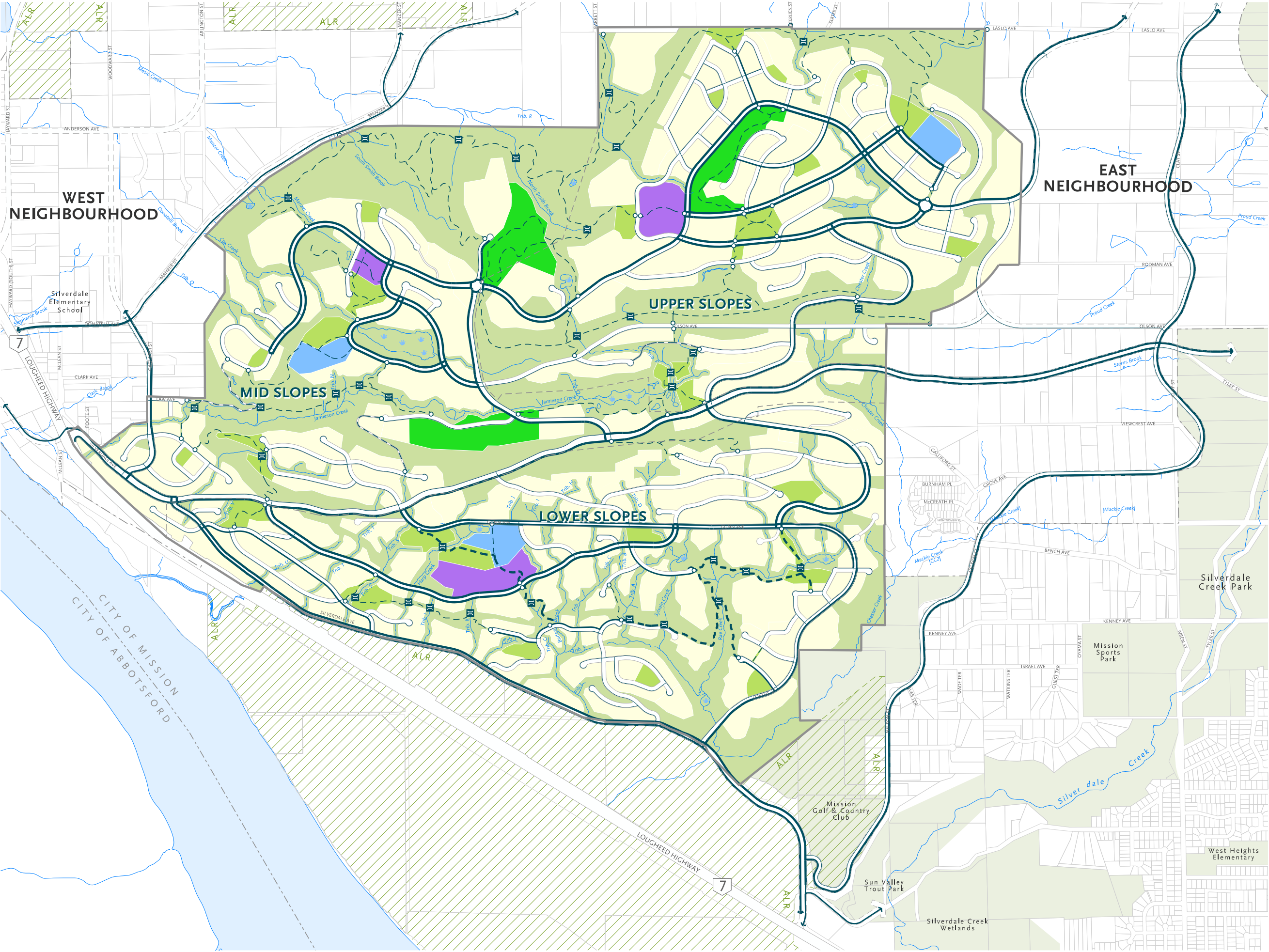
LEGEND AUGUST 2022

- Silverdale Comprehensive Planning Area
- Central Neighbourhood Plan Boundary
- - - Development District Boundary
- Legal Parcel
- Watercourse
- - - MIS Major Street Alignment
- ALR Agricultural Land Reserve
- Parks + Open Space
- Neighbourhood Development Area
- Neighbourhood Park
- Community Park
- Silverdale Urban Forest
- Institutional - Elementary School
- Institutional - Community Centre
- - - 3m Multi-Use Trail
- 4m Multi-Use Trail | Paved
- Multi-Use Path
- Sidewalk | Both Sides of Street
- Potential Trailhead
- Potential Stream Crossing

NOTES

Local street alignments are conceptual and presented for illustrative purposes. Final local street alignments will be determined through the subdivision process.

Major Street Network alignments in East and West Neighbourhoods reflect the findings in the SCPA Master Infrastructure Strategy | July 2020. Final alignments will be confirmed through future Neighbourhood Plans.





Schedule G  
TRANSIT PLAN

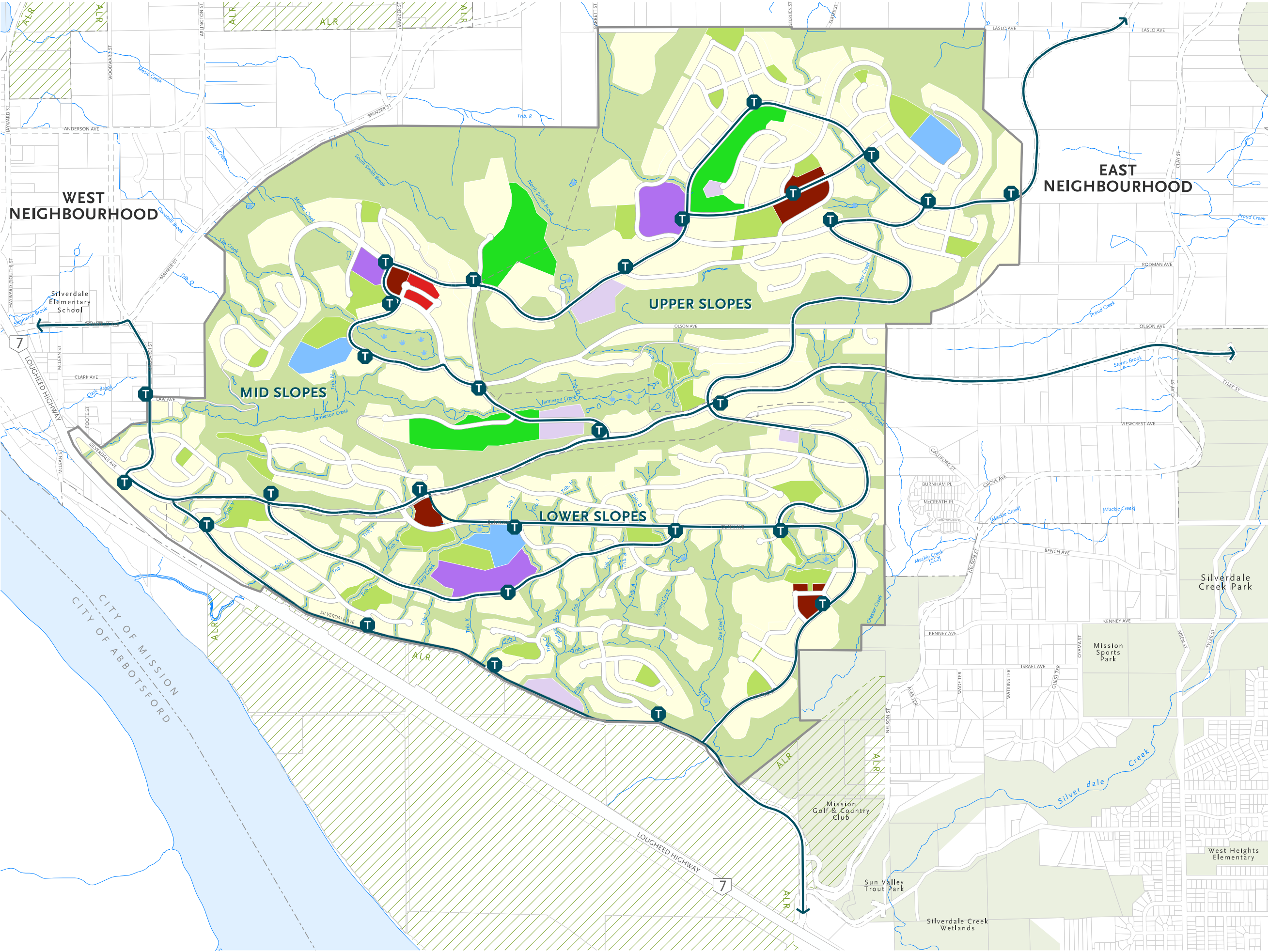
LEGEND AUGUST 2022

- Silverdale Comprehensive Planning Area
- Central Neighbourhood Plan Boundary
- - - Development District Boundary
- Legal Parcel
- Watercourse
- - - MIS Major Street Alignment
- ALR Agricultural Land Reserve
- Parks + Open Space
- Neighbourhood Development Area
- Neighbourhood Park
- Community Park
- Silverdale Urban Forest
- Institutional - Elementary School
- Institutional - Community Centre
- Institutional - Firehall | Works Yard | Reservoir
- Commercial Retail
- Mixed Use
- Potential Transit Route
- Potential Transit Stop | Both Sides of Street, Location Approximate

NOTES

Local street alignments are conceptual and presented for illustrative purposes. Final local street alignments will be determined through the subdivision process.

Major Street Network alignments in East and West Neighbourhoods reflect the findings in the SCPA Master Infrastructure Strategy | July 2020. Final alignments will be confirmed through future Neighbourhood Plans.



Schedule H  
WATER ENGINEERING  
PLAN

LEGEND AUGUST 2022

- Silverdale Comprehensive Planning Area
- Central Neighbourhood Plan Boundary
- Development District Boundary
- Legal Parcel
- Watercourse
- MIS Major Street Alignment
- Agricultural Land Reserve
- Parks + Open Space

WATERMAIN DISTRIBUTION by INTERCAD

- Pressure Zone Boundary + Contour
- 6 Pressure Zone Upper HGL Limit 410
- 5 Pressure Zone Upper HGL Limit 340
- 4 Pressure Zone Upper HGL Limit 266
- 3 Pressure Zone Upper HGL Limit 216
- 2 Pressure Zone Upper HGL Limit 154
- 1 Pressure Zone Upper HGL Limit 104
- Supply Watermain
- Distribution Watermain
- Distribution Watermain in Rights-of-Way
- Reservoir
- Pump Station
- Pressure Reducing Valve + Identifier

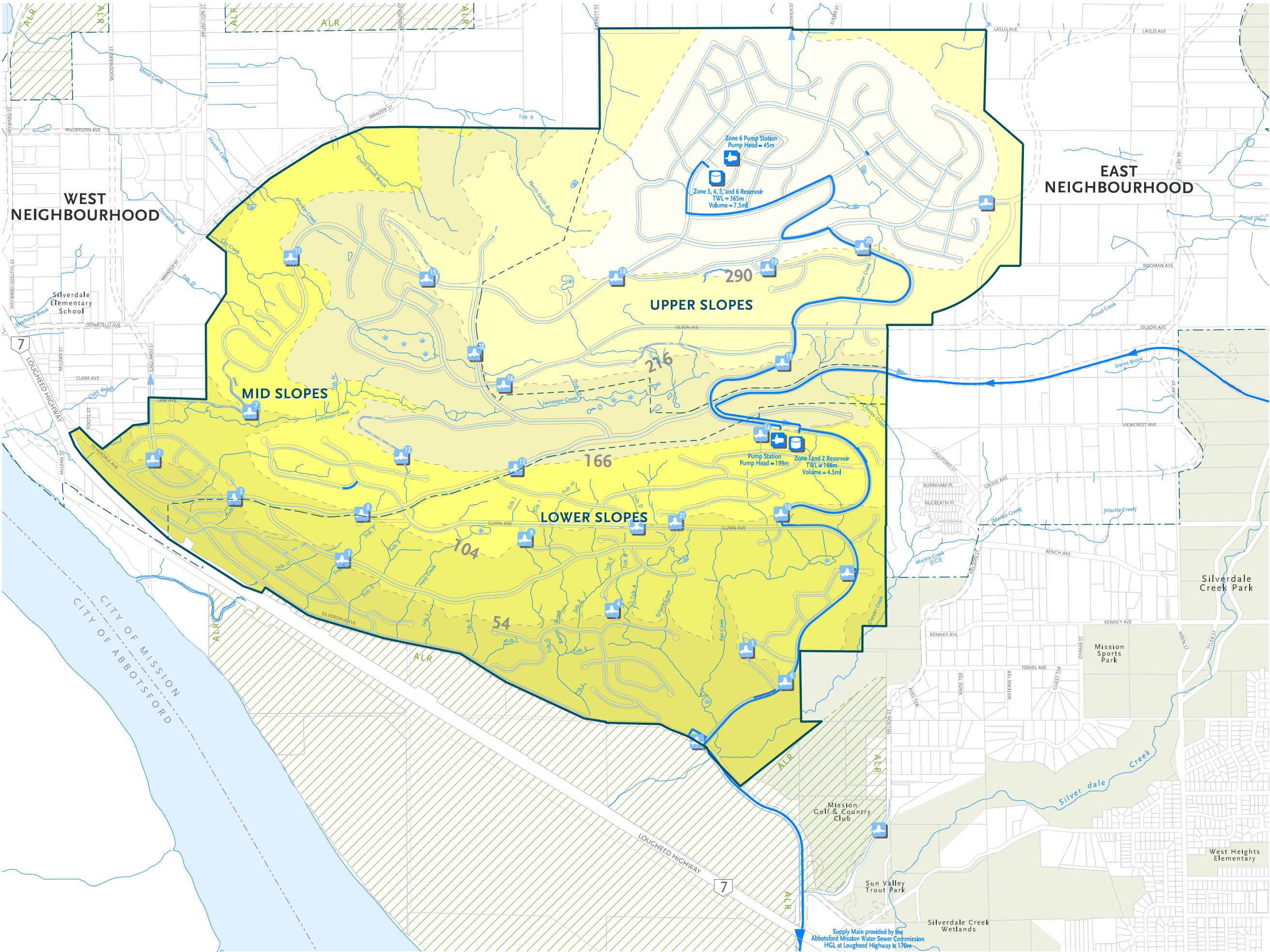
NOTES Local street alignments are conceptual and presented for illustrative purposes. Final local street alignments will be determined through the subdivision process.

Major Street Network alignments in East and West Neighbourhoods reflect the findings in the SCPA Master Infrastructure Strategy | July 2020. Final alignments will be confirmed through future Neighbourhood Plans.

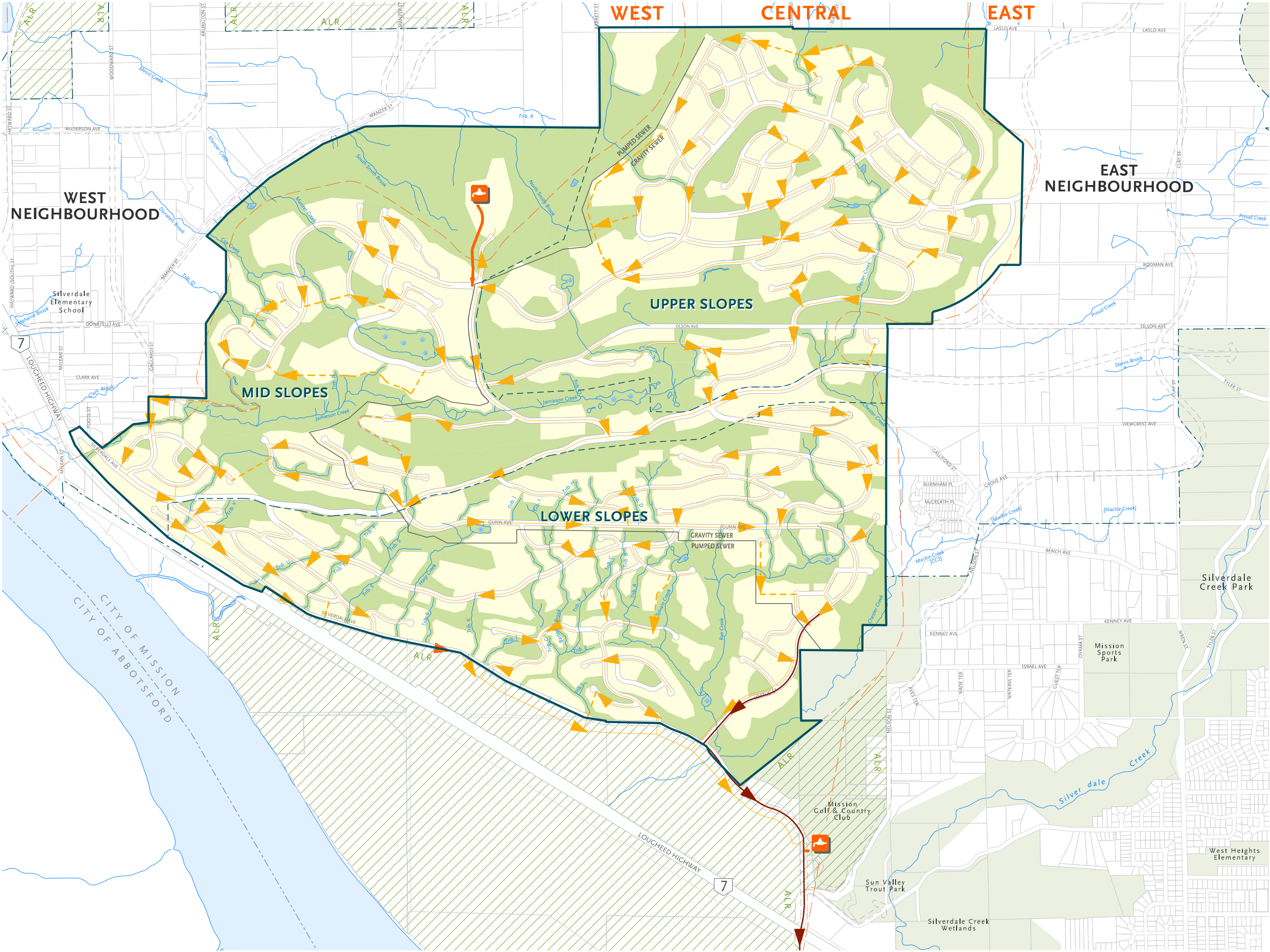
Pipe sizes, Pump Head, and Reservoir Volumes provided are preliminary and based on population assumptions for this study. A detailed analysis is needed to confirm this infrastructure.



EKISTICS







Schedule I  
SANITARY  
ENGINEERING PLAN

LEGEND AUGUST 2022

- Silverdale Comprehensive Planning Area
- Central Neighbourhood Plan Boundary
- Development District Boundary
- Legal Parcel
- Watercourse
- MIS Major Street Alignment
- Agricultural Land Reserve
- Parks + Open Space
- Neighbourhood Development Area
- Neighbourhood Conservation Framework

SANITARY SEWER SYSTEM by INTERCAD

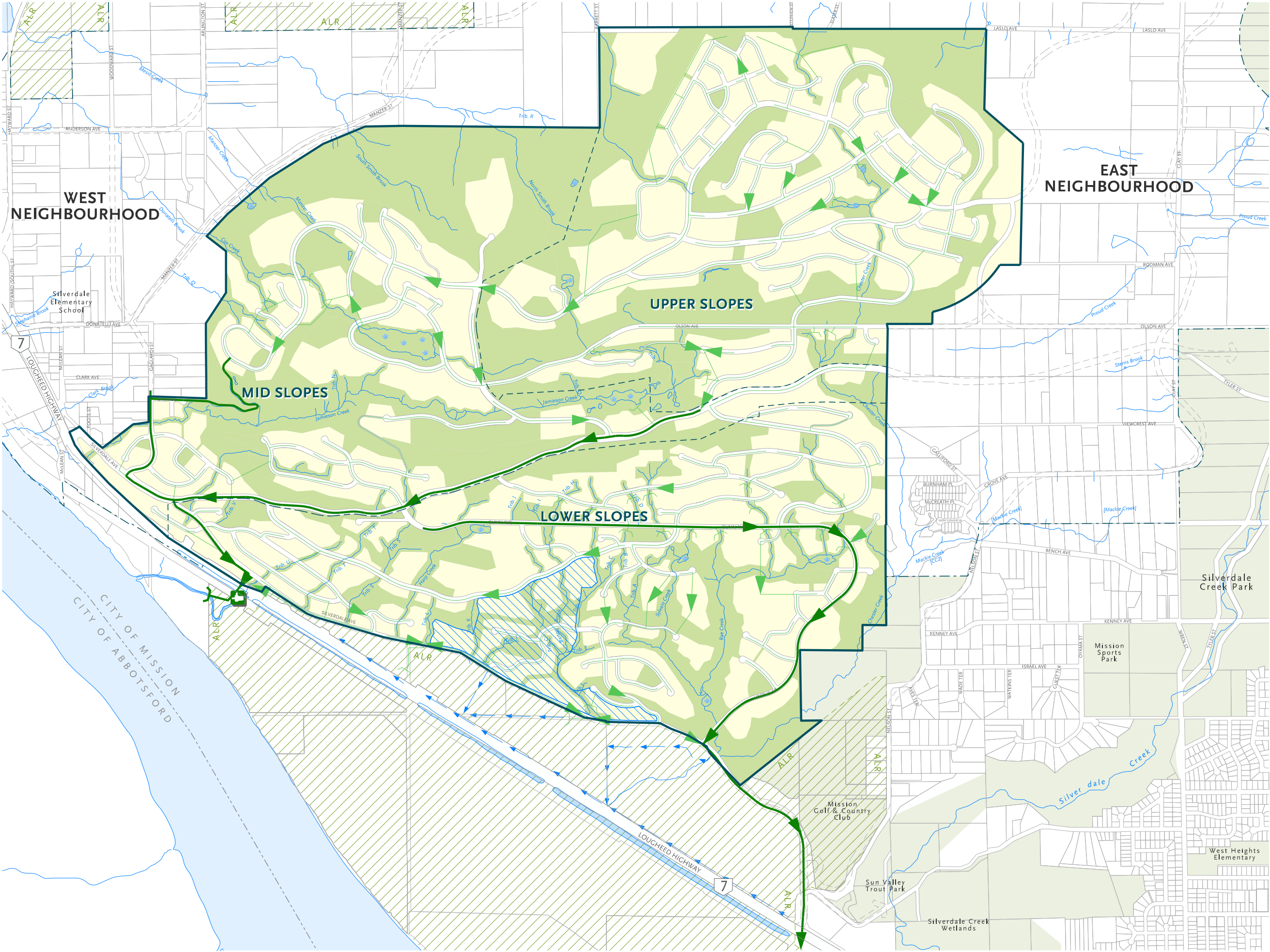
- Sanitary Gravity Sewer in Rights-of-Way
- Sanitary Gravity Sewer
- Sanitary Siphon Sewer
- Sanitary Forcemain
- Catchment Boundary
- Sanitary Gravity Sewer Boundary
- Sanitary Pump Station

NOTES

Local street alignments are conceptual and presented for illustrative purposes. Final local street alignments will be determined through the subdivision process.

Major Street Network alignments in East and West Neighbourhoods reflect the findings in the SCPA Master Infrastructure Strategy | July 2020. Final alignments will be confirmed through future Neighbourhood Plans.





## Schedule J DRAINAGE ENGINEERING PLAN

LEGEND AUGUST 2022

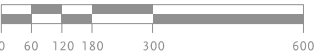
- Silverdale Comprehensive Planning Area
- Central Neighbourhood Plan Boundary
- Development District Boundary
- Legal Parcel
- Watercourse
- MIS Major Street Alignment
- ALR Agricultural Land Reserve
- Parks + Open Space
- Neighbourhood Development Area
- Neighbourhood Conservation Framework

### MAJOR STORM ROUTING PLAN by INTERCAD

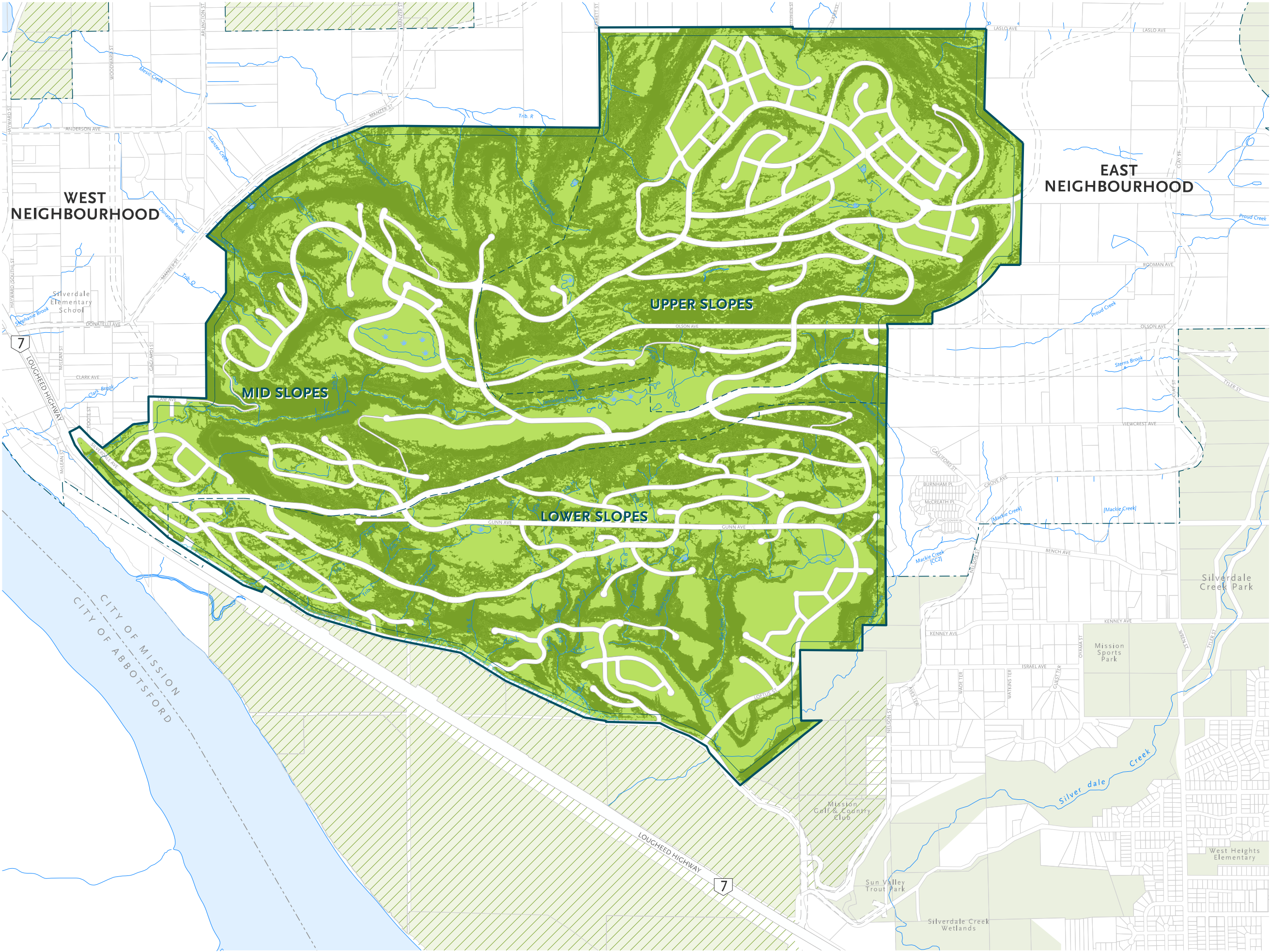
- Storm Sewer
- Diversion Storm Sewer
- Existing Wetland
- Outfall
- Existing Pump Station
- Existing Drainage Canals
- Existing Drainage
- Area Served by Neighbourhood Detention

**NOTES** Local street alignments are conceptual and presented for illustrative purposes. Final local street alignments will be determined through the subdivision process.

Major Street Network alignments in East and West Neighbourhoods reflect the findings in the SCPA Master Infrastructure Strategy | July 2020. Final alignments will be confirmed through future Neighbourhood Plans.







Schedule K  
DEVELOPMENT  
PERMIT AREAS

LEGEND AUGUST 2022

- Silverdale Comprehensive Planning Area
- Central Neighbourhood Plan Boundary
- Development District Boundary
- Legal Parcel
- Watercourse
- MIS Major Street Alignment
- Agricultural Land Reserve
- Parks + Open Space
- Intensive Residential DPA
- Multifamily Residential DPA
- Mixed Use Commercial DPA
- Industrial DPA
- Fire Interface DPA
- Hillside DPA
- Fraser River DPA

NOTES

Intensive Residential, Multifamily Residential, Mixed Use Commercial Development, Industrial and Fire Interface Development Permit Areas apply to all lands in the CNP.

Hillside Development Permit Area applies to lands greater than 20% Slope, as reflected in City of Mission contour data.

Local street alignments are conceptual and presented for illustrative purposes. Final local street alignments will be determined through the subdivision process.



Figure 1  
NEIGHBOURHOOD  
PLAN CONTEXT

LEGEND

Municipal Boundary

Silverdale Comprehensive Planning Area

AUGUST 2022

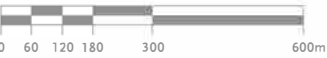
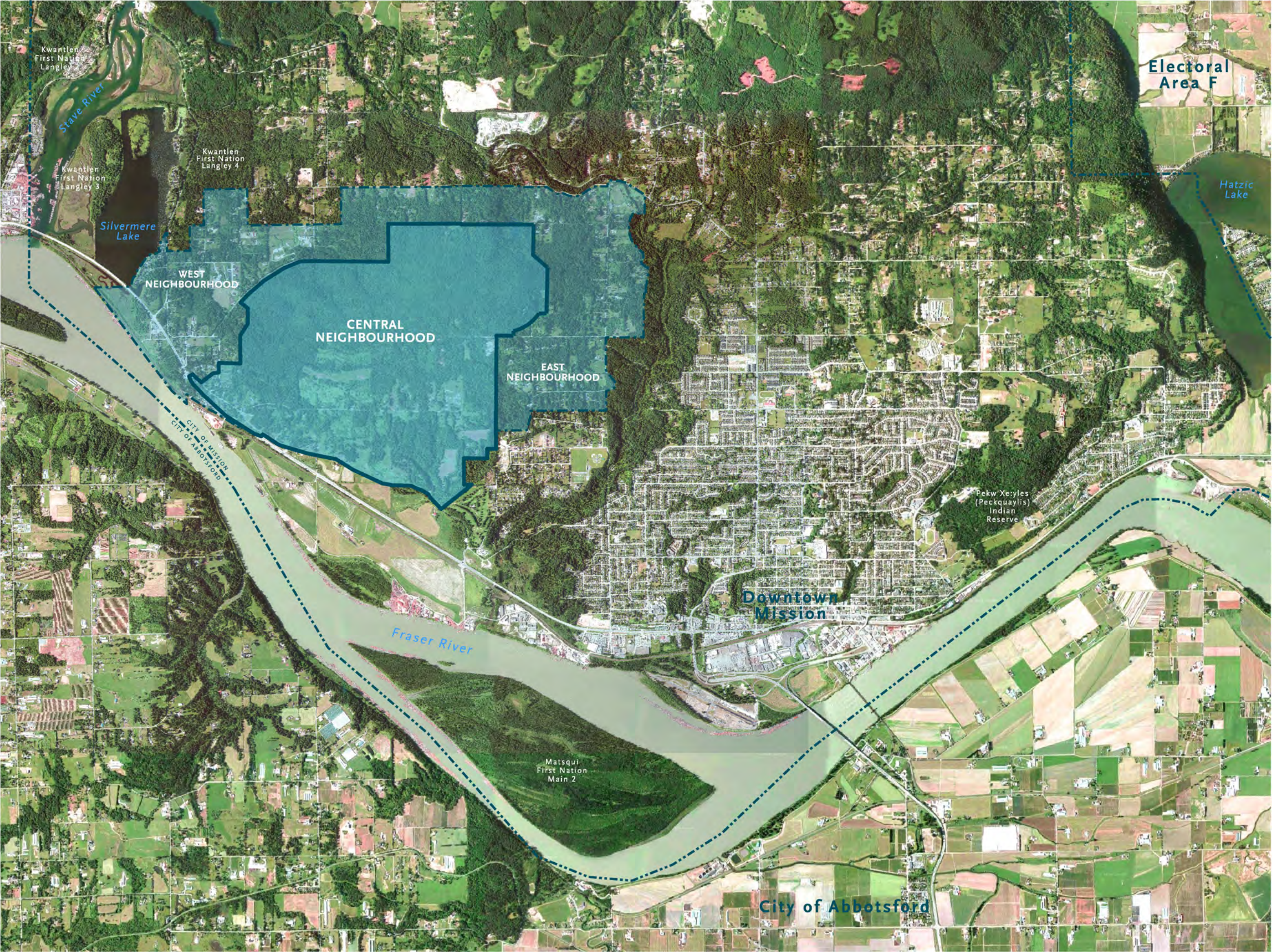




Figure 2  
BIOPHYSICAL  
CONSTRAINTS  
SUMMARY PLAN

LEGEND AUGUST 2022

- Silverdale Comprehensive Planning Area
- Central Neighbourhood Plan Boundary
- Development District Boundary
- Legal Parcel
- Watercourse
- 10m Contour
- Parks + Open Space
- Wetlands
- Floodplain
- Salish Sediments - Organic Soil
- Bedrock Exposure
- Bedrock Observed
- Previously Recorded Archaeological Site
- High + Moderate Archaeological Potential Area

BIOPHYSICAL FINDINGS

- Level 4 - Highly Constrained
  - Steep + Extreme Slops | +30%
  - Environmental Management Zone 4
- Level 3 - Moderately Constrained
  - Environmental Management Zone 3
  - Organic Soils
- Level 2 - Low Constrained
  - Environmental Management Zone 2
- Level 1 - Unconstrained
  - Environmental Management Zone 1

NOTES Biophysical Constraints Summary Plan reflects detailed findings located in the CNP Technical Appendix.

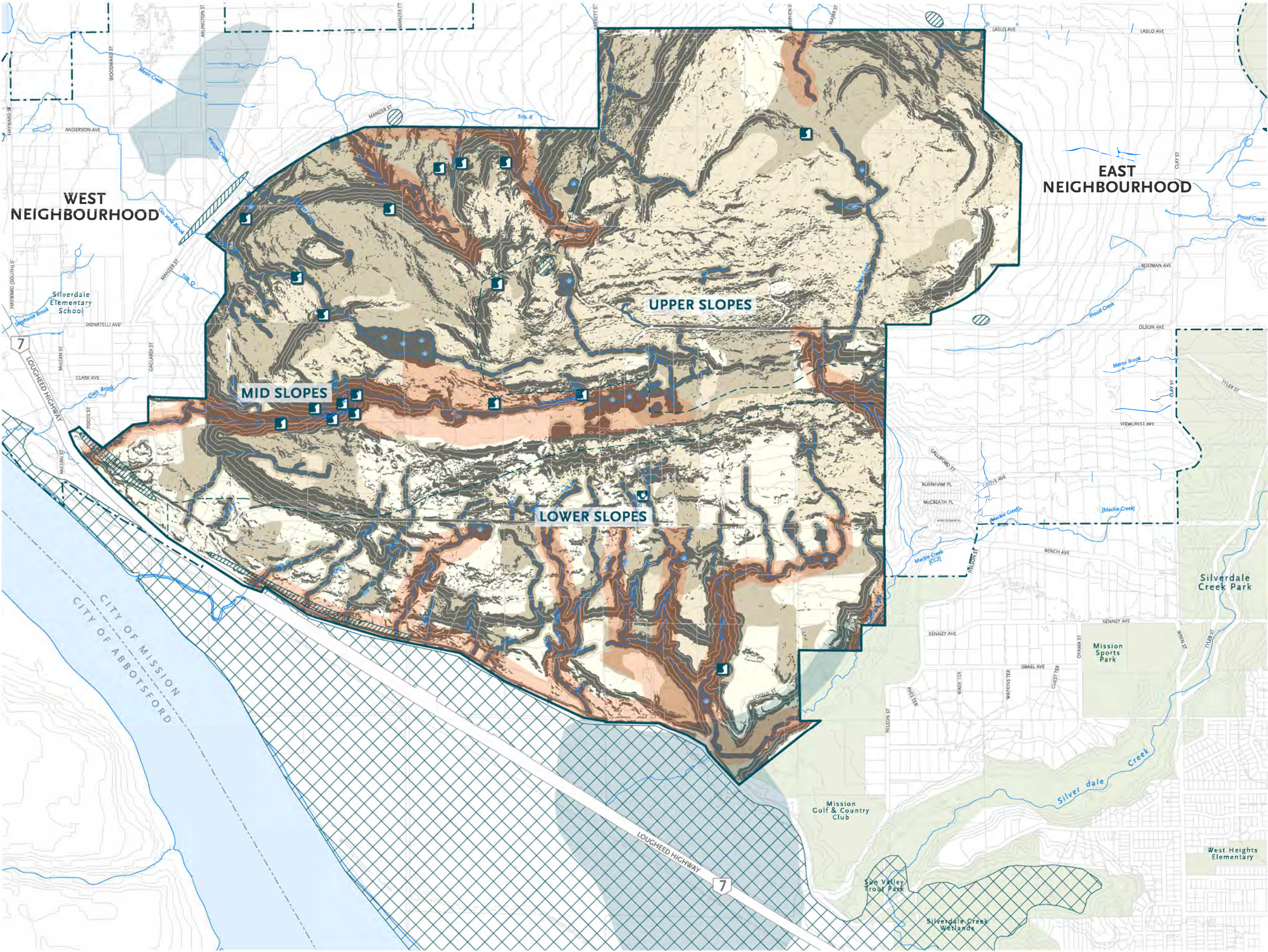
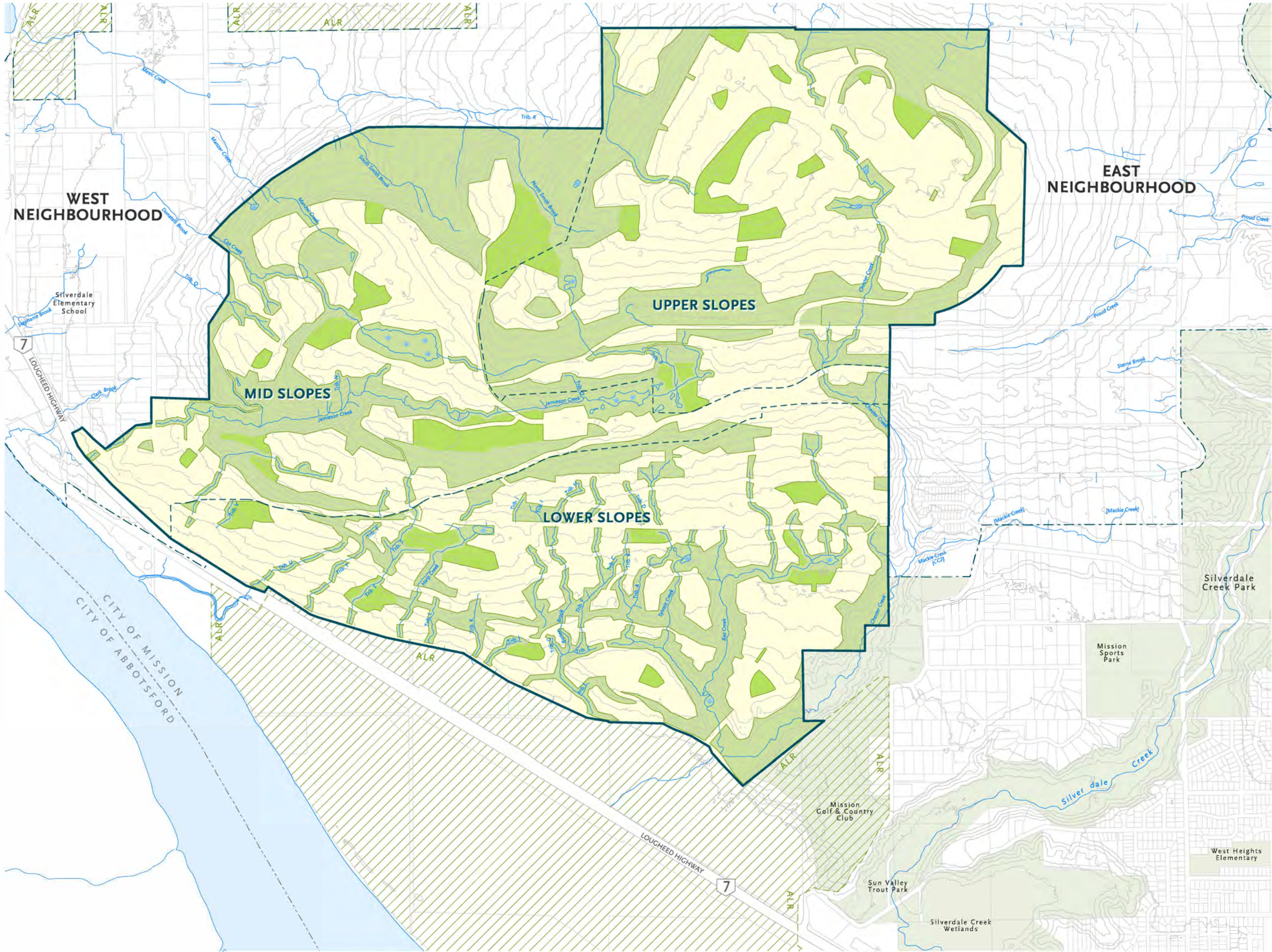




Figure 3  
OPPORTUNITIES AND  
CONSTRAINTS PLAN



LEGEND AUGUST 2022

- Silverdale Comprehensive Planning Area
- Central Neighbourhood Plan Boundary
- Development District Boundary
- Legal Parcel
- Watercourse
- 10m Contour Interval
- Agricultural Land Reserve
- Parks + Open Space

44%	Neighbourhood Conservation Framework
	318.71 ha   787.55 ac
6%	Active Parks
	45.54 ha   112.53 ac
38%	Silverdale Urban Forest
	273.17 ha   674.99 ac
56%	Community Development Lands
	414.88 ha   1025.19 ac
100 %	733.59 ha   1,812.74 ac



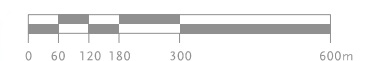


Figure 4  
AERIAL PLAN

LEGEND

AUGUST 2022

- Municipal Boundary
- Central Neighbourhood Plan Boundary



EKISTICS





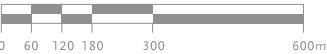
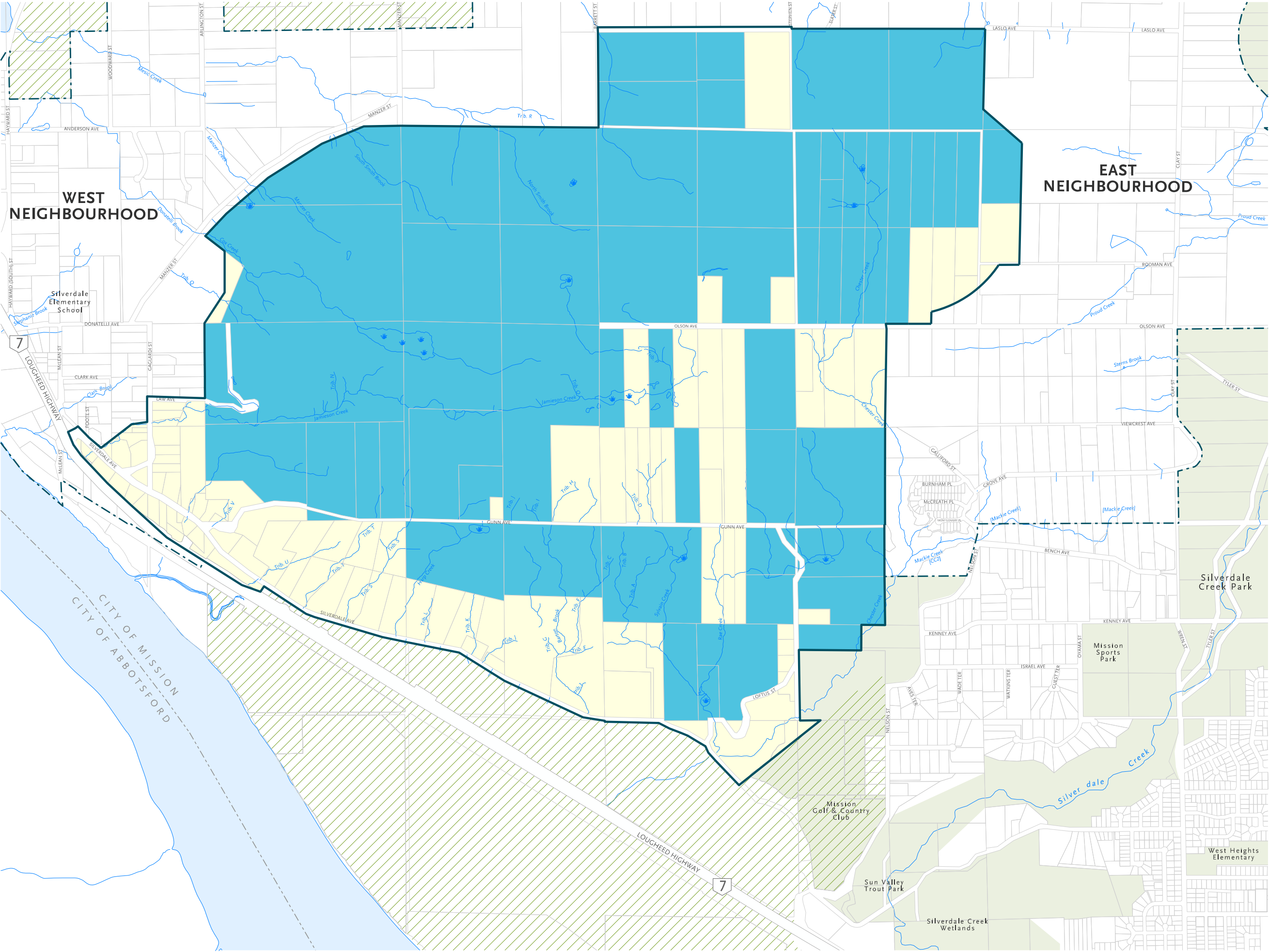
Figure 5  
LAND OWNERSHIP  
PLAN

LEGEND AUGUST 2022

- Silverdale Comprehensive Planning Area
- Central Neighbourhood Plan Boundary
- Legal Parcel
- Watercourse
- ALR Agricultural Land Reserve
- Parks + Open Space

CNP LAND OWNERSHIP

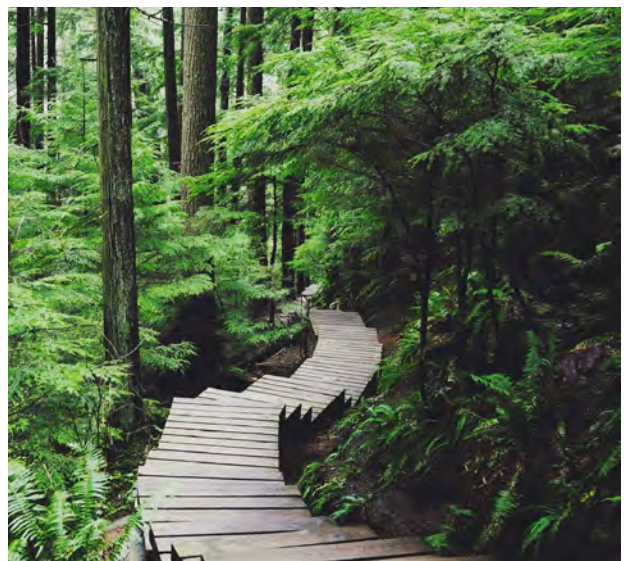
71%	CNP Proponent Land Holdings: Silverdale Hills GP Inc. 520.10 ha   1,285.20 ac
26%	CNP Private Ownership 188.26 ha   465.20 ac
3%	Existing Public Road ROW 25.23 ha   62.34 ac
100 %	733.59 ha   1,812.74 ac





# Working with Nature

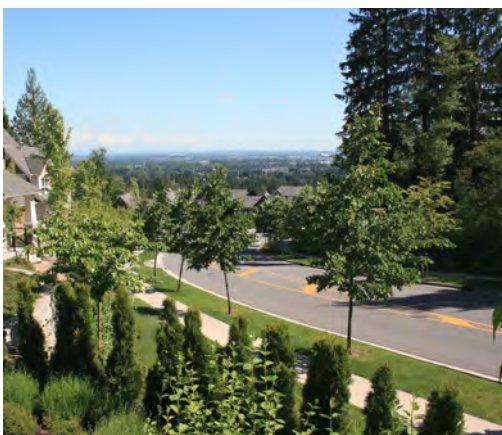
Figure 6 - Character Images





# Livable Streets + Pathways

Figure 6 - Character Images





# Community Facilities

Figure 6 - Character Images





# Active Parks

Figure 6 - Character Images





# Mixed-Use Commercial

Figure 6 - Character Images





# Residential - Apartment

Figure 6 - Character Images





# Residential - Townhome

Figure 6 - Character Images





# Residential - Single Family

Figure 6 - Character Images





Figure 7  
RENDERED ILLUSTRATIVE  
CONCEPT PLAN

- LEGEND
- AUGUST 2022
- Silverdale Comprehensive Planning Area
  - Central Neighbourhood Plan Boundary
  - Watercourse

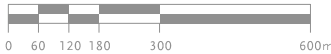




Figure 8  
DEVELOPMENT PHASING  
PLAN

LEGEND AUGUST 2022

- Silverdale Comprehensive Planning Area
- Central Neighbourhood Plan Boundary
- - - Development District Boundary
- Legal Parcel
- Watercourse
- - - MIS Major Street Alignment
- ALR Agricultural Land Reserve
- Parks + Open Space

CNP DEVELOPMENT PHASING

- Phase 1
- Phase 2 or 3
- Phase 2 or 3

NOTES Local street alignments are conceptual and presented for illustrative purposes. Final local street alignments will be determined through the subdivision process.

Phasing of the Mid + Upper Slopes will depend on future market demand and servicing efficiencies.

