



Loggers East Neighbourhood Plan

Schedule "P" to the Official Community Plan Bylaw No.2500, 2017

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INTRODUCTION PLAN AREA

The Loggers East Neighbourhood Plan area is located east of Loggers Lane between Raven Drive to the north and Robin Drive to the south, located adjacent to the newly developed Ravenswood neighbourhood to the north and west.



Figure 1 Plan Area

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INTRODUCTION PLAN PURPOSE

The Loggers East neighbourhood is a mostly rural community between Raven Drive and Robin Drive comprised of rural, residential and industrial properties. Defined by large parcels sizes, serviced and centrally located close to Downtown, Business Park and recreational facilities, the area is seeing growth interests rising. Loggers East is identified in the District of Squamish Official Community Plan (OCP) as a “Neighbourhood Planning Area” where a detailed plan is required prior to major new growth.

The Neighbourhood Plan is intended to provide direction for future land use, employment, housing, recreation and services within the context of neighbourhood views, natural constraints and growth-related policies. When finalized, the Neighbourhood Plan will be adopted as an amendment to the OCP.

As described in the OCP, the scope of the Loggers East plan includes:

- ▶ A detailed land use plan, including industrial, agricultural and residential land uses and consideration of neighbourhood nodes;
- ▶ Density targets and housing mix for build out of the sub area;
- ▶ Inventory of natural hazards and hazard mitigation/response strategies;
- ▶ Inventory of environmentally sensitive areas and wildlife habitats, and identification of significant, contiguous areas for protection and restoration;
- ▶ Inventory of existing recreational values and opportunities for trail corridors, parks, open space and greenway corridors;
- ▶ Inventory of employment generating uses and identification of lands to be reserved for employment;
- ▶ Healthy built environment principles, including walkability, concentration of uses and services, transportation, proximity to natural areas and green spaces, accessible and affordable housing and food, and opportunities for social connections;
- ▶ Agricultural opportunities, including local food production, as well as rural uses such as kennels;
- ▶ Design guidelines, including consideration of sustainable design and technologies;
- ▶ Climate change mitigation and adaptation measures;
- ▶ Strategies to address stormwater, groundwater, drainage and water quality issues in order to mitigate impacts on existing natural or developed areas; and
- ▶ Consideration of opportunities to increase connectivity to other neighbourhoods in Squamish.

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INTRODUCTION PUBLIC INPUT

The District of Squamish initiated a public engagement process for the Loggers East Neighbourhood Plan in the fall of 2019.

Community Engagement

Communication with area residents began with an early mail out to residents/property owners, a web page on the District website, online survey and an Open House held on October 23, 2019. These steps provided background information including links to technical reports completed as part of the plan process.

Due to the Covid-19 emergency, typical Open Houses were not held to review the draft plan. Instead, in the fall of 2020 a notice was mailed to residents/property owners, followed by an online open house and an online survey.

What We Heard

During the early engagement in 2019, the key messages received from survey responses indicated concerns with preserving the rural lifestyle of the neighbourhood, environmental protection, future traffic impacts and limited neighbourhood amenities. There was some support for additional housing and local commercial uses.

Public engagement regarding the draft Neighbourhood Plan in fall of 2020 generated very different responses. The majority of respondents supported the environmental policies, although some individual owners were concerned with possible loss of future density on their properties. Many respondents objected to the proposed agricultural use on a portion of the Rural/Multifamily designated properties, indicating this would reduce housing affordability. Other responses noted that the proposed industrial and/or mixed-use designations would bring too much commercial or industrial development to the neighbourhood.

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BACKGROUND

CURRENT PLANNING POLICY

Official Community Plan (OCP)

The Loggers East neighbourhood is designated as **Residential Neighbourhood** in the OCP. These areas are intended to accommodate a diverse mix of housing and employment forms to create complete neighbourhoods. OCP policies support increasing the range of attached multifamily housing types to create compact neighbourhoods and maximize efficient use of municipal infrastructure and transportation. **Industrial/Business** use is designated for lands to the south on Loggers Lane and northeast of the neighbourhood. Lands to the west and north are designated **Parks, Greenway and Recreation** and **Conservation & Ecological Reserve**. Lands further east and south are designated for **Future Residential** (long term).

Current Zoning

The current zoning in the neighbourhood is a mix of residential and rural zones, predominantly RS-1 (Residential One) in sloped areas and RL-1 (Rural Residential) which allows for single and two unit dwellings and rural uses such as kennels/horse stables. One property zoned RMH-2 (Residential Modular Homes) provides for clustered single family homes. Directly north and to the west, lands are zoned CD-38 (Small Lot Single Family) and CD-76 (Sport facilities/Recreation) for the Nordic Legacy Park. One property on Loggers Lane/Finch Drive is zoned CD-79 (Agriculture/Rural). Land directly south of Robin Drive on Loggers Lane is zoned I-7 (Rock Processing). Surrounding areas to the south and east are mainly zoned Resource and are currently undeveloped.

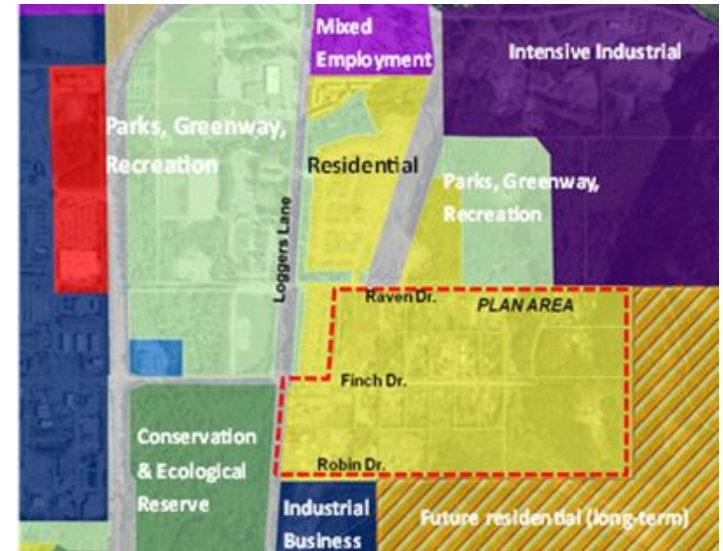


Figure 2 Official Community Plan Designations



Figure 3 Current Zoning

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BACKGROUND

LAND USE AND POPULATION

Current Land Use

The Loggers East Plan area is approximately 44 hectares in size, representing about 2% of land within the Squamish Growth Management Boundary. The area currently consists primarily of single family dwellings, home businesses and industrial storage uses. Much of the area consists of small acreages (approx. 0.8 ha in size) creating a rural character throughout the neighbourhood. The east sloped portion of the Plan area consists of larger parcels (RS-1 zone), with both vacant land and residential uses. Figure 4 outlines the current land uses by zone and parcel areas. As shown, there are 36 parcels in use for single dwelling units, while the remainder are vacant. No properties are currently assessed as industrial or commercial use, although there are 10 businesses holding a license in the area for business activities such as home office, carpentry and interior design, dog boarding and training, and transportation/industrial storage and repair representing 20 to 30 jobs.

Potential Population and Housing Growth

Although the Loggers East area currently consists of less than 40 households, combined with the Ravenswood neighbourhood, the area population is nearly 550. In terms of accommodating growth in housing units, the Loggers East neighbourhood is estimated to have infill potential for approximately 790-1100 housing units based on the designations shown on the land use plan Schedule A. This represents about 7% of future growth within the current Growth Management Boundary. The Rural/Low Density Multifamily area could sustain between 335-450 additional units, while the Hillside Housing area could accommodate 335-500 additional units. The lower numbers represent ground-oriented housing, while the higher numbers anticipate some low-rise apartment units. An additional 140-180 units are estimated for the Mixed Use Development area. Figure 5 indicates overall projections for Loggers East and the broader Ravenswood area.

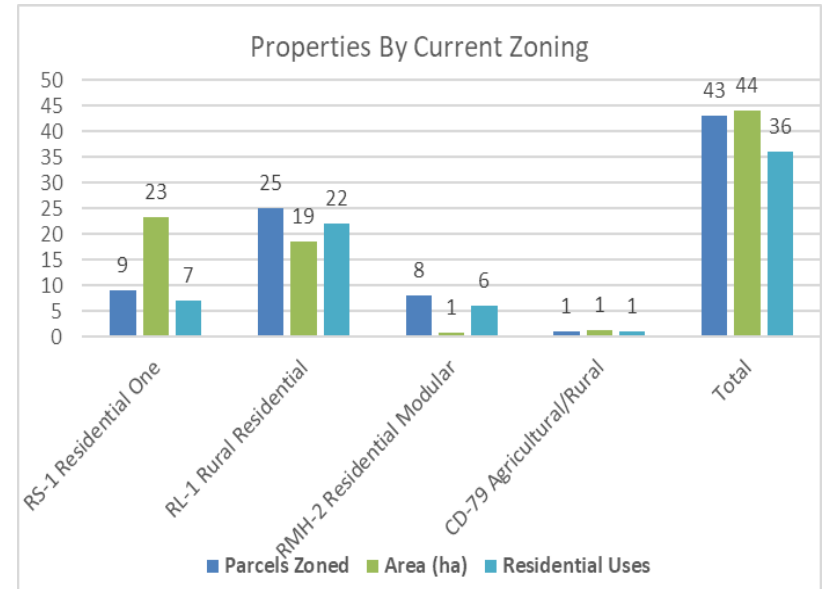


Figure 4 Existing Land Use

Area	Current		Additional est.		Long-term est.	
	Housing Units	Pop.	Housing Units	Pop.	Housing Units	Pop.
Loggers East	36	90	810-1,130	2,105-2,940	845-1,165	2,195-3,030
Kingfisher/Falconcrest	175	450	-	-	175	450
Total	210	540	810-1130	2,105-2,940	1,020-1,340	2,645-3,480

Figure 5 Current and projected population and housing units

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BACKGROUND LAND USE

Rental and Affordable Housing; Child Care Facilities

Loggers East does not have any purpose built rental housing units or child care facilities. There are less than 10 accessory dwelling units (suites, carriage homes) currently registered in the area, including the Ravenswood neighbourhood. There is one residential child care provider in Ravenswood. According to the 2018 Housing Needs Assessment, Squamish is facing a shortage of affordable and market rental housing. Based on current demand for rental housing, it is estimated that the need for purpose built affordable and market rental housing will be around 30% of all units. For Loggers East, the need for rental housing will be between 245-340 housing units of which 40% should be affordable. Plan policies provide further detail on the requirements for rental housing in the Rural/Low Density Multifamily and Hillside Housing designations.

Archaeological Potential

A portion of the Loggers East neighbourhood north of Finch Drive is identified as having moderate archaeological potential, based on an overview archaeological assessment completed in 1997 for the Ministry of Forests and Archaeology Branch, Ministry of Small Business. The report provided an overview of locations believed to have the greatest potential for cultural and archaeological significance. Lands further north along the Mamquam River are indicated as having high potential. Archaeological sites on both public and private land are protected under the Heritage Conservation Act and must not be altered without a permit issued by the Province. Developers are responsible for undertaking any assessment required to determine the presence of archaeological resources.

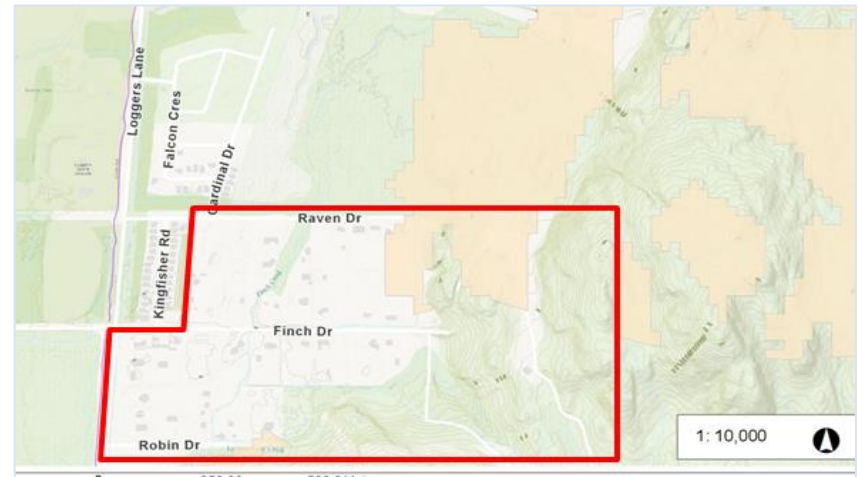


Figure 6 Archaeological Potential (moderate potential shown in orange)

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BACKGROUND ENVIRONMENT

As part of the neighbourhood plan process, an **Environmental Review**^[1] was completed to assess overall environmental conditions, identify environmentally valuable resources (EVRs), environmentally sensitive areas (ESAs) and wildlife habitat. The report identified sensitive ecosystems in the Plan area associated with high-value riparian habitats, red and blue-listed ecological communities in wetland/swamp and young forest areas, and an abundance of other EVRs such as coarse woody debris, wildlife trees and rock outcrops that provide habitat for reptiles, birds and small mammals. A well-established wildlife trail was observed in the northeast portion of the Plan area. Extensive ditching on roads and along property lines is also present throughout the neighbourhood, with some ditches connecting to the stream system and having high to moderately productive habitat.

Lands shown in red on Figure 7 with High environmental sensitivity are designated as **Conservation** on the Schedule A Land Use Plan. Sensitive design practices are recommended for areas of medium sensitivity shown in yellow on Figure 7.

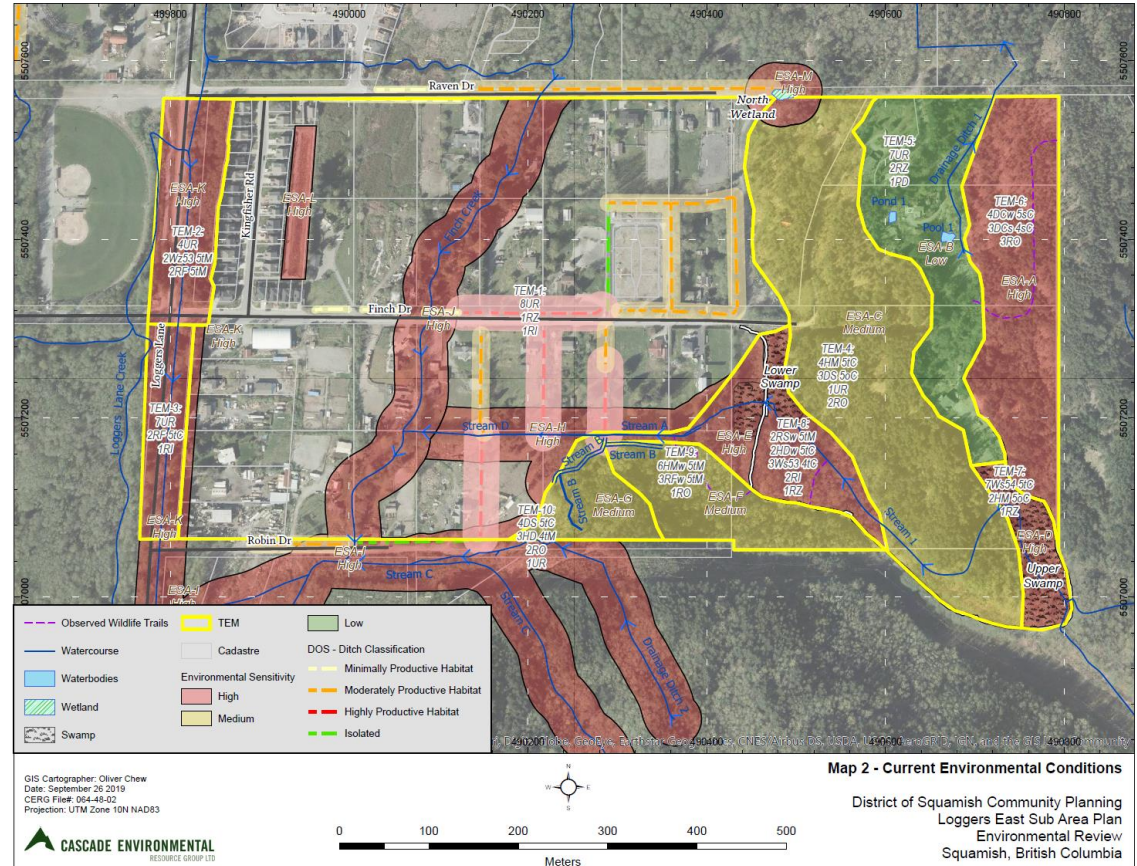


Figure 7 Current Environmental Conditions

1 https://squamish.ca/assets/Planning/Loggers-East-Sub-Area-Environmental-Review_Final-web.pdf

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BACKGROUND ENVIRONMENT cont.

The Loggers East neighbourhood contains significant waterbodies, with most connecting to the Finch Creek/Loggers Lane creek system. Finch Creek flows southwest through the Plan area and into Loggers Creek approximately 300 m southwest of the Plan area, which then flows approximately 1.5 km into the Mamquam Blind Channel. Tributary streams flow from upper swamp and bench areas west and into the Finch Creek south of the Plan area. Finch Creek is a significant watercourse providing habitat for regionally significant fish (cutthroat trout), coho salmon and coarse fish species, as well as riparian habitat for wildlife living in and travelling through the Loggers East neighbourhood. Drainage ditches are also part of the stream system habitat as indicated on Map 7.

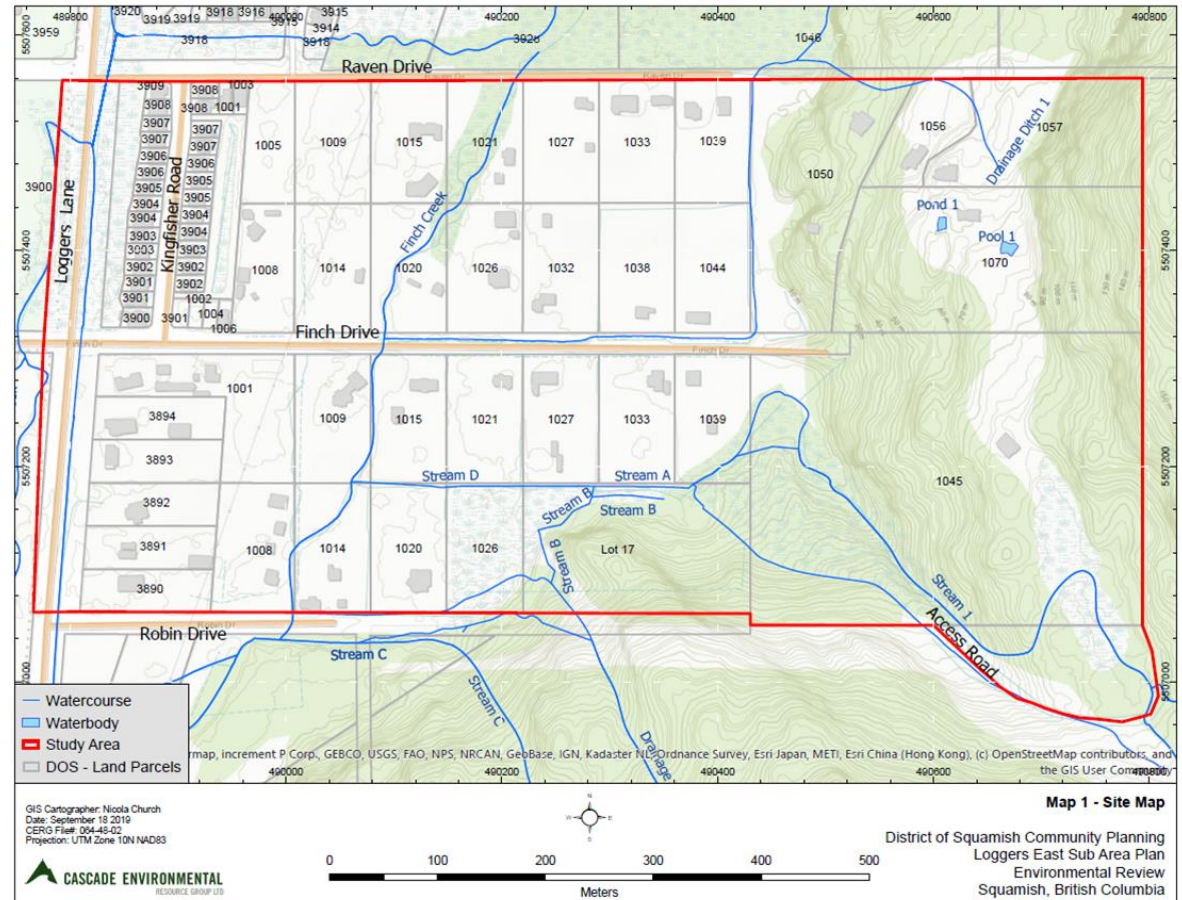


Figure 8 Existing Watercourses

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BACKGROUND

STEEP SLOPES | HAZARD ASSESSMENT

The Loggers East neighbourhood is characterized by generally flat and low topography in the west section, with steep rocky slopes in the eastern and southern portions of the neighbourhood. As background to the Loggers East plan, an overview **Slope Hazard Assessment**² was completed to review the slope and geotechnical conditions in more detail. The report indicates the sloped areas consist primarily of bedrock and the most critical geological hazard is expected to be rockfall. Large portions of the bedrock outcrops were noted to be highly fractured, especially along the steep rock bluffs, therefore rockfall is expected to continue over time. The report also indicates the potential for landslides, particularly if oversteepening of existing slopes were to occur or vegetation removed.

Current OCP policies recommend no single family development where slopes exceed 25%, possible development of multi-family development up to 40% slopes, and no development of slopes over 40%. Approximate slope gradients are shown on the adjacent map, indicating two main north-south bands of relatively flat developable area within the steep sloped properties, as well as some smaller pockets requiring detailed assessment to determine suitable road access and building sites. Steep slopes also affect Raven, Finch and Robin Drives, each of which encounters steep grades with any eastward extension.

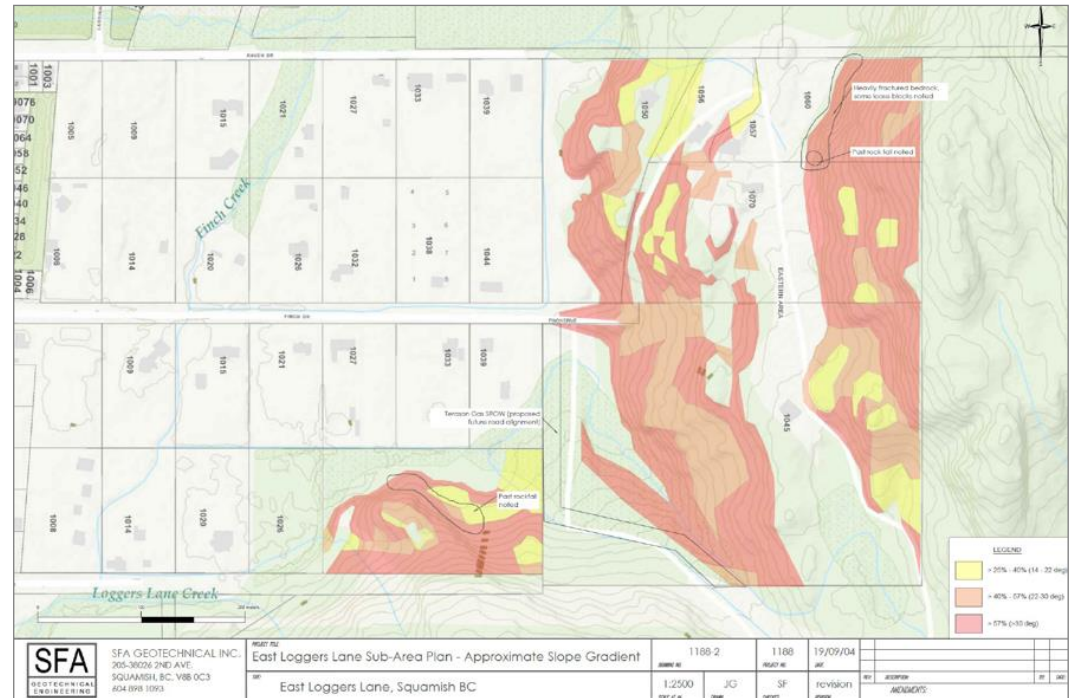


Figure 9 Slope Gradients (approx.)

2 <https://squamish.ca/assets/Planning/Loggers-East/4df7b43982/1188-East-Loggers-Neighbourhood-Slope-Hazard-Assessment-September-6-2019-web-v2.pdf>

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BACKGROUND FLOOD HAZARD

Much of the Loggers East neighbourhood is within the Squamish flood hazard area and overland flow area as shown on Figure 10. The probability of river flooding is considered low compared to other areas such as Downtown or Brackendale due to the protection provided by a dike along Centennial Way to the north. Coastal flood hazard is also considered low, although on-going sea level rise will likely exacerbate existing drainage issues in the neighbourhood. New development will be affected both by flood hazard and the high water table, meaning that properties may need to be raised and/or that the first storey of new buildings will be used for non-habitable uses such as parking and/or storage, with living space on upper floors. Additional measures may be required with any future redevelopment of these properties, subject to site-specific assessment during the development application process.

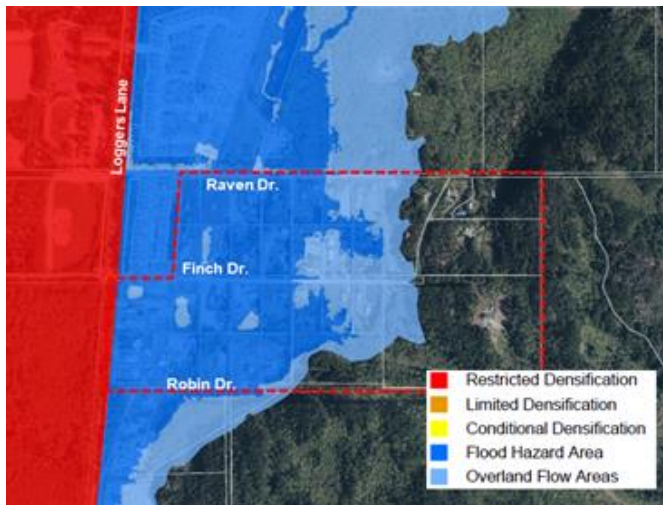


Figure 10
Flood Hazard

Historic Flood and Dike Protection

The neighbourhood has been significantly affected by earlier flooding. Historically, the Mamquam River flowed through this area, but during a large flood in 1921 the Mamquam River breached its banks, changing course towards the Squamish River. This diversion was made permanent by the 1922 when the lower portion of the Mamquam River was diked north of Brennan Park along Centennial Way. This diking provided protection for the Loggers East neighbourhood from Mamquam River flooding, but also confined the river to a relatively narrow corridor and disconnected important tidal channels, wetlands and critical spawning habitats. In 2005, the Mamquam Reunion project was initiated (as a joint project of the Squamish River Watershed Society, Squamish Nation, District of Squamish, Fisheries and Oceans Canada (DFO) and other agencies) to reintroduce water to critical spawning and rearing habitat. Over the course of 2005-2012, several culvert crossings, intakes and new channels were constructed, creating improved opportunities for fish passage to their critical habitats.

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BACKGROUND DRAINAGE

Much of the Loggers East neighbourhood is low-lying and has known high water table and drainage issues. Loggers East drains via Loggers Creek to Wilson Slough and Mamquam Blind Channel. Wilson Slough drains via culverts under Loggers Lane into the Upper Mamquam Blind Channel. During coinciding high tides and heavy rainfall there are drainage issues evident in the Raven/Robin areas. Current drainage infrastructure consists of ditches and culverts on Finch Drive and Robin Drive, with storm service lines on Loggers Lane and Kingfisher Road as shown on Figure 11. Several of the ditches also have high habitat value. New developments will be required to complete stormwater management plans to manage on-site and off-site drainage and protect environmental values in accordance with the policies and objectives laid out in the District's forthcoming Integrated Stormwater Management Plan.



Figure 11 Existing Stormwater Infrastructure

Integrated Stormwater Management Plan (ISMP)

To address the broader drainage issues in the municipality, the District initiated an Integrated Stormwater Management Plan covering the developed areas in Squamish south of the Mamquam River in 2019. As part of that process, a stormwater management review³ for Loggers East was completed in mid-2020 to assess the physical conditions, current watershed health and natural assets, and to assess the stormwater management implications of new development. An assessment of hydrological conditions and potential infiltration characteristics was also completed to assist in developing appropriate stormwater management practices, and a stormwater model was also developed to assess stormwater routing and land use impacts.

The review indicated the neighbourhood is underlain by two unconfined aquifers which have a high vulnerability to contamination. Groundwater levels are influenced by the stage of the Mamquam River, surface topography, surface water in the creeks and to some degree by tide levels given proximity to the Mamquam Blind Channel. The study confirms the eastern part of the neighbourhood has high groundwater levels and localized flooding at low-lying elevations which is accentuated during winter months (seasonally) or during simultaneous occurrence of high river stage (seasonally) with high tide (daily).

³ https://squamish.ca/assets/Planning/Loggers-East/acac4db70d/2020-07-17-Phase-2-ISMP-Loggers-East-Review-DRAFT_Rev2-web.pdf

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BACKGROUND DRAINAGE

Integrated Stormwater Management Plan (ISMP) – cont.

The report also assessed the implications of future land uses on the extent of pervious/impervious areas. Preliminary model results show significant impacts of future development on stormwater runoff due to loss of vegetation and increased impervious surfaces. Based on the results of soil, groundwater and aquifer mapping, much of Loggers East has low potential for stormwater infiltration, and any infiltration-based stormwater management practices will likely need to be combined with subsurface or other forms of storage.

The stormwater review highlights that forested and vegetated areas are important natural assets in Loggers East that provide rainwater attenuation, evapotranspiration and infiltration (flood protection and erosion protection) functions. Forests also provide water filtration, groundwater flow recharge, climate regulation (carbon storage) and temperature regulation, air quality and habitat functions. The report estimates that the combination of future development (if unmitigated) and climate change could potentially increase the flows through the existing culverts and storm sewers beyond current capacity. For these reasons, neighbourhood plan policies are focused on reducing stormwater impacts and providing on-site storage solutions.

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BACKGROUND SERVICING INFRASTRUCTURE

As a largely rural area currently, the Loggers East neighbourhood will require upgrades to the water, sanitary sewer and drainage infrastructure with any new development.

Water Supply

The existing water distribution system as shown on the adjacent map consists of an 18" water main on Loggers Lane, 8" water mains on Raven, Robin and Finch Drives, with smaller service lines in other parts of the neighbourhood. Upgrading of water service will be needed for new development, including upgrades to meet fire flow requirements. Replacement of some portions of the existing water main may also be needed if higher density is proposed. The water system may also need to be looped to achieve necessary fire flows.

Sanitary Sewer

The existing sanitary sewer system is shown on the adjacent map, consisting of sewer mains on Finch Drive, Loggers Lane and Kingfisher Road with a lift station near Brennan Park on Loggers Lane. New development will be required to extend and/or increase the size of sewer mains and likely upgrade or replace the sewer lift station depending on future development density, as the lift station is at or near capacity. Extension of sewer service may not be feasible in some areas due to slope.



Figure 12 Existing Water Infrastructure

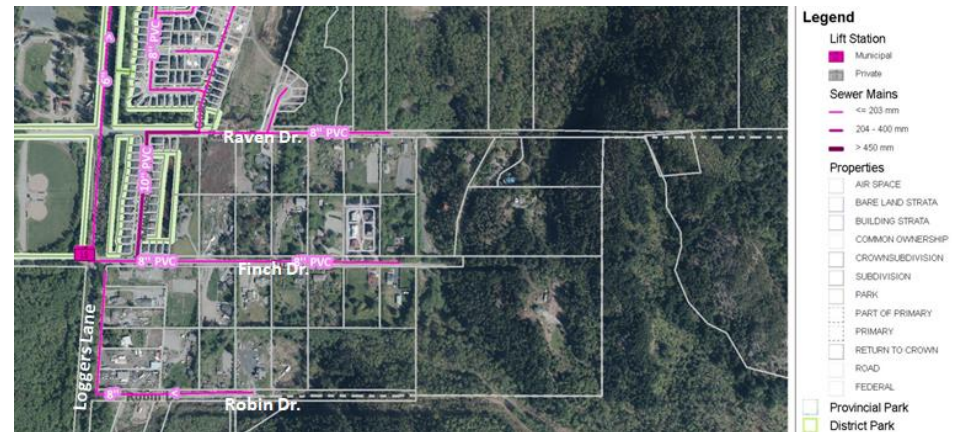


Figure 13 Existing Sewer Infrastructure

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BACKGROUND OTHER MAJOR UTILITIES

Hydro Corridor

The Squamish BC Hydro major transmission line corridor runs diagonally to the east of Loggers Lane, affecting future uses on some 10-12 properties in the Plan area. Within this 98 metre wide corridor, residential uses are not permitted by BC Hydro, although compatible uses such as trails, gardens or parking may be allowed (subject to BC Hydro approval).

Gas Pipeline

A Fortis gas pipeline runs east-west along the Finch Drive road right of way, then southeast through private lands. No structures or residential uses are permitted within the right of way. (Note: the 40m buffer shown is not a setback area, it represents the "call before you dig" area). Fortis BC received an Environmental Assessment Certificate in 2016 for construction of a new 24" high pressure gas pipeline to serve the proposed Woodfibre LNG plant. Fortis is currently evaluating route options for this pipeline to determine whether the new gas line will be installed within the existing right of way corridor along Finch Drive or an alternative route.



Figure 14 Fortis and BC Hydro Corridors

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BACKGROUND TRANSPORTATION

Road Network

Loggers Lane is the major road directly serving the neighbourhood, connecting to Highway 99 via Finch Drive. Raven, Finch and Robin Drives provide local access to properties and are not through roads due to steep terrain in the eastern areas

The OCP indicates a potential long-term route extending eastward from Finch Drive, as well as a future route extending north from Valleycliffe. The feasibility and routing of these potential roads will need to be considered as part of any future development plans for lands in the eastern portion of the area and further east beyond the Plan area (indicated as long-term development areas in the OCP).

Road connectivity to lands beyond the Loggers East neighbourhood owned by the Squamish Nation has been highlighted as an important consideration by Squamish Nation staff and will require detailed review at the time of any future development applications.

With any new development, improvements to fronting roads will be required. Upgrades typically include curb, gutter, sidewalk, street lighting and underground services. Neighbourhood plan policies recommend alternative standards be applied to Loggers East to protect habitat adjacent to roads.

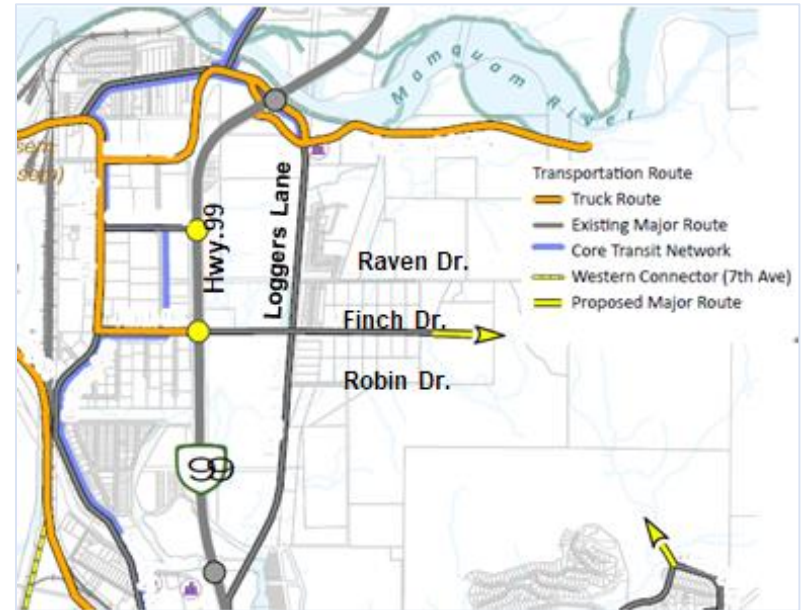


Figure 15 Major Transportation Routes (from OCP)

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BACKGROUND TRANSPORTATION

Active Transportation

The Corridor Trail located on the west side of Loggers Lane provides a multi-use pathway for pedestrians and cyclists. With any increase in density in the neighbourhood, additional north-south pedestrian connections between Raven Drive, Finch Drive and Robin Drive will also be required to improve local connectivity. Plan policies also recommend use of the BC Hydro corridor for trails.



Figure 16 Active Transportation Routes (from OCP)

Transit

There is currently no transit service available to the Loggers East neighbourhood, but the area has been indicated as a future expansion area in the Transit Future Plan (BC Transit). The transit plan recommends introducing local transit service to developing areas including Loggers Lane by 2025 (transit is already available to Brennan Park). Additional density in the Loggers East neighbourhood and areas to the north at Centennial Way will be key to developing transit service.

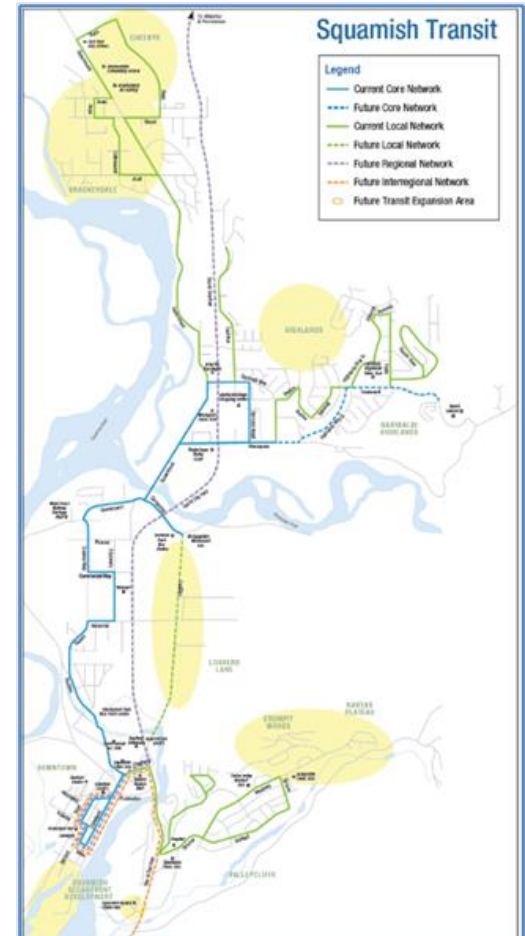


Figure 17 Future Transit

4 Neighbourhood Vision



Loggers East will continue to be a unique mixed use neighbourhood with a strong sense of community, that protects the high value natural assets of the area and provides for employment and agricultural/rural uses while also accommodating a moderate amount of growth with of a diverse mix of housing and flexible employment spaces, connected by common parks and open spaces.

Guiding Principles

- **Natural Assets** define this neighbourhood - streams, wetlands, forested areas, and steep slopes are key features of the neighbourhood. **Environmental protection and enhancement** of these natural assets will be essential with any new development.
- **Mixed Uses** – build on the unique mix of uses that characterize Loggers East with a balance of employment, rural and housing uses. Avoid a growth pattern that is mainly residential and presents few housing choices.
- **Stormwater/Drainage** – minimize hard surfacing and building footprints; retain or replace vegetation to preserve and restore riparian areas; store stormwater on-site.
- **Food Production/Agriculture** – integrate new and existing agricultural and related rural uses as the neighbourhood grows.
- **Employment Lands** – retain and expand lands for use by industrial and commercial uses, including flexible spaces in mixed use areas. Ensure that jobs grow along with population growth.
- **Connectivity** – create a walkable and connected neighbourhood by prioritizing active transportation and recreation connections over vehicle movement; ensure streetscapes are adapted to the unique and sensitive features of the area.
- **Housing Mix** – provide for a diverse range of housing types and tenures with lower densities appropriate to the area; minimize impacts on natural assets. Address the lack of affordable and market rental housing units in the area.
- **Neighbourhood Amenities** – provide basic neighbourhood services such as child care within walking distance of new residential growth; focus on livability and connectedness through provision of trails, local playgrounds/parks and gathering spaces.
- **Build to Respond to Climate Change** – Reduce greenhouse gas emissions (GHG) and eliminate non-renewable energy use associated with all new growth.

5.0 POLICIES

SCHEDULE A LAND USE PLAN

The Loggers East Neighbourhood Plan land use policies are intended to guide future growth with a focus on careful integration with the existing neighbourhood.

Five land use designations apply to the properties in the Loggers East neighbourhood. Policies for each of the land use designations shown on the Schedule A Land Use Plan are provided in the following sections.

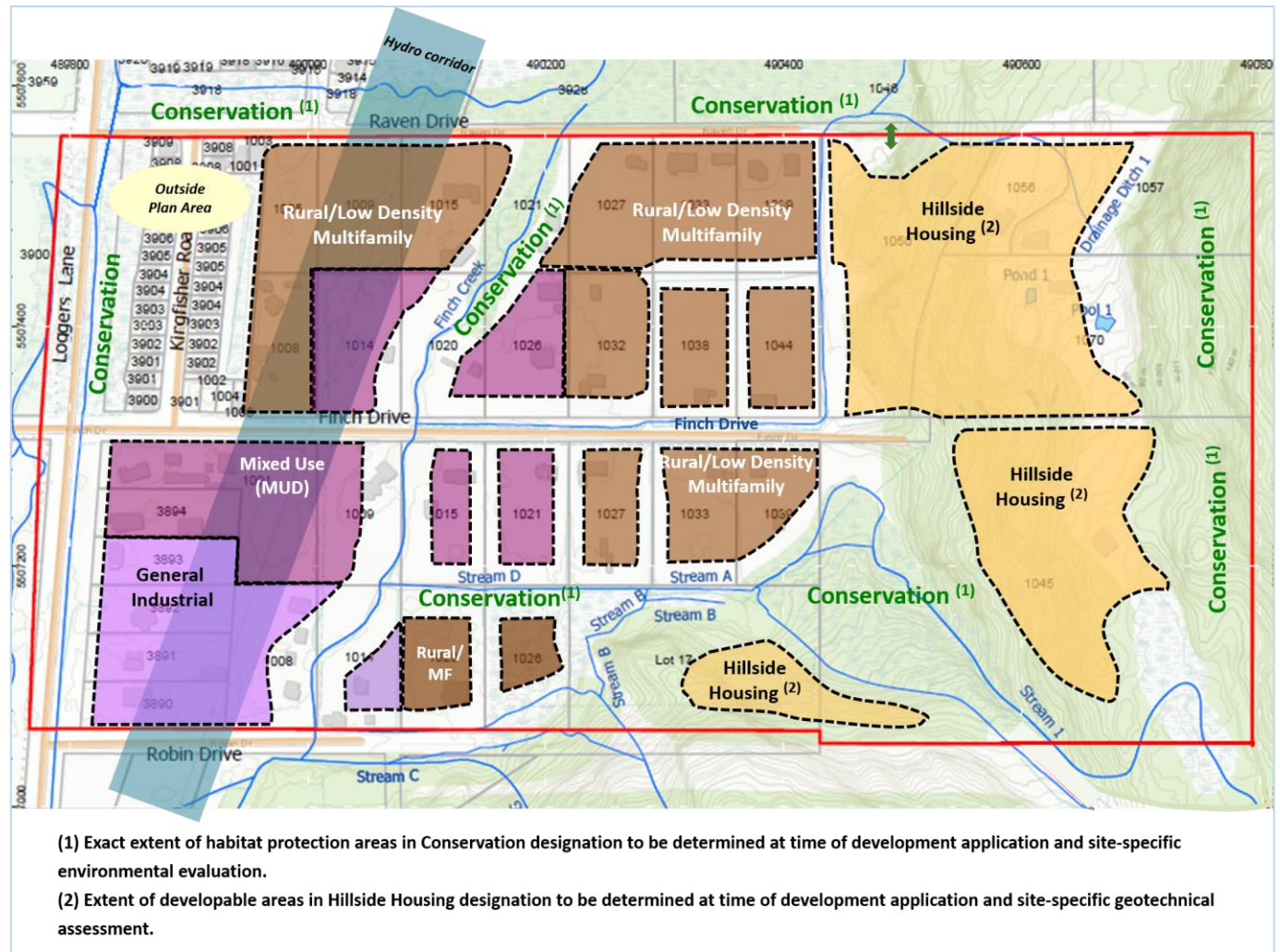


Figure 18 Schedule A Future Land Use Plan

5.1 POLICIES ENVIRONMENT



The Loggers East neighbourhood contains significant environmentally valuable resources (EVRs) associated with high value riparian or wetland (swamp) habitat that support a wide range of fish, amphibians, reptiles and other wildlife species. Forested upland areas include red and blue-listed ecological communities and established wildlife movement corridors.

Objectives:

- To protect and enhance the ecological values of the Loggers East neighbourhood.
- To ensure any new development minimizes habitat loss and fragmentation and rehabilitates and enhances previously degraded natural areas.
- To recognize the value of the natural assets as part of municipal infrastructure.

Environment Policies

1. All lands within the Recommended Habitat Protection Areas shown on Figure 19 are required to obtain a Development Permit in accordance with the DPA 1 (Environment) guidelines of the OCP in order to protect fish and aquatic habitat, associated riparian areas and wetlands, including ditches, and to protect terrestrial habitats. **The exact extent of habitat protection areas will be determined at the time of development permit application.**
2. The sensitive ecosystems shown on Figure 19 shall be protected and preserved as follows (note: the Environmental Review should be referenced for habitat details in each TEM polygon):

- a) Riparian Assessment Areas (red colour) associated with Finch Creek, Loggers Lane Creek, tributary streams, ditches, and wetlands/swamps shall be protected and enhanced with any new development in accordance with OCP Development Permit Area No.1 (DPA1) guidelines. These areas are shown as **Conservation** on Schedule A Land Use Plan.
- b) Recommended Preservation Areas (orange cross hatch) include red and blue listed ecological communities with an abundance of EVRs comprising over 70% of the TEM-6, TEM-7 and TEM-8 polygons are also shown as **Conservation** on the Land Use Plan. Preservation and retention of these areas, including the established wildlife corridor at the top of cliffs in TEM-6 needs to be considered with any future development.
- c) Sensitive Design Areas (green diagonal lines) on Figure 19 are lands where a portion of the property contains high value EVRs. Potential habitat for amphibians, reptiles, wildlife trees and the wildlife movement corridor should be protected with any development. These areas are indicated as **Hillside Housing** on the Land Use Plan; site specific evaluation of habitats and careful site design is required prior to tree/vegetation removal or development in these areas.

5.1 POLICIES ENVIRONMENT

Development Guidelines

3. The following recommendations of the Environmental Review apply to new development in Loggers East:
 - a) Development in Loggers East should follow guidelines and recommendations outlined in *Environmental Best Management Practices for Urban and Rural Land Development* (BC MOE, 2014). This includes best management practices for storm water, pollution prevention, wildlife, and ecosystem management;
 - b) All Streamside Protection and Enhancement Areas (SPEAs) should be viewed as significant habitat and protected; riparian buffers adjacent to watercourses will also protect wildlife use of water features;
 - c) A *Riparian Areas Regulation* assessment should be completed by a QEP early in the design process to inventory watercourses and riparian areas that may not be indicated in the Environmental Review

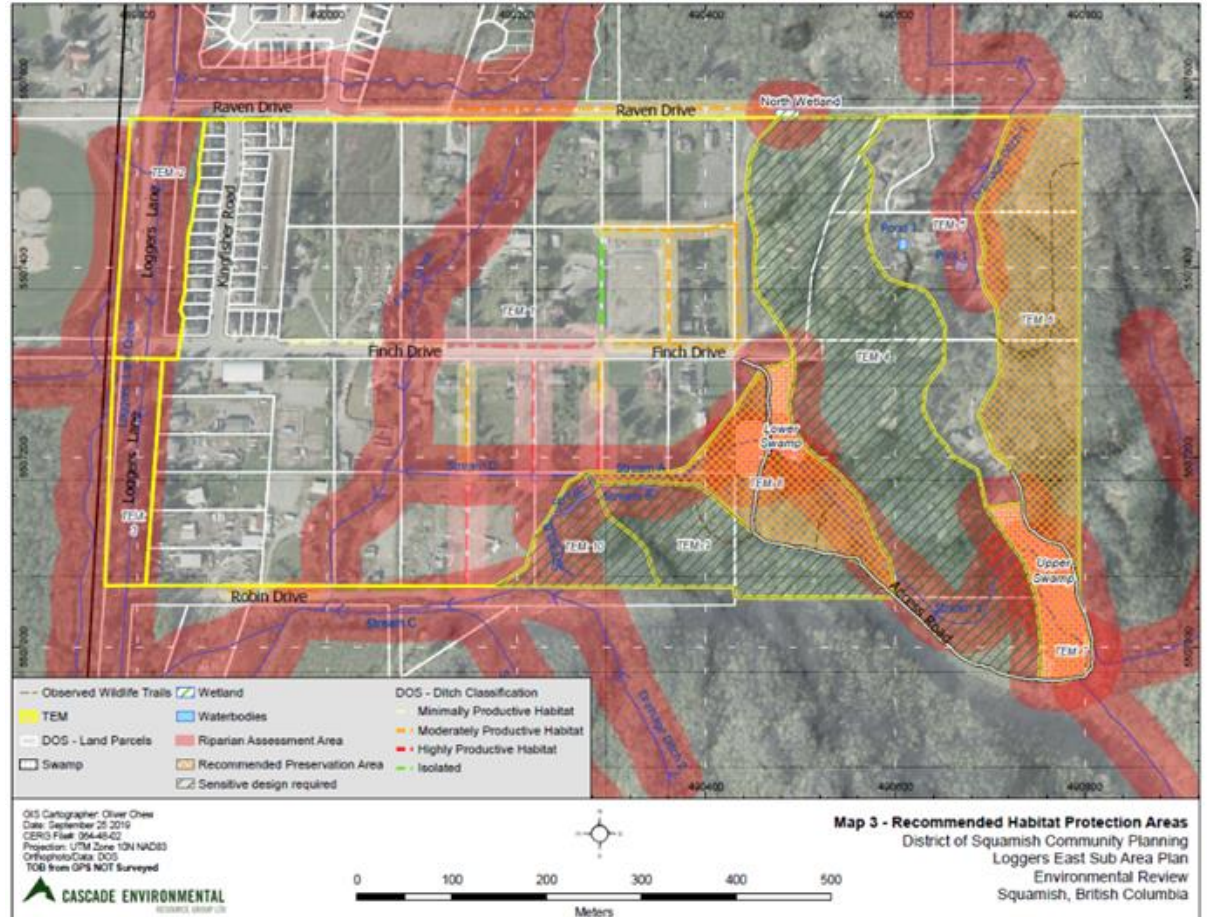


Figure 19 Recommended Habitat Protection Areas

5.1 POLICIES ENVIRONMENT

- d) Maintain vegetated corridors between watercourses and riparian areas where possible to provide wildlife movement corridors and prevent further fragmentation of available habitat. Incorporate amphibian and small mammal eco-passages under roadways via culverts to preserve and enhance connectivity;
- e) Amphibian and reptile dispersion routes shall be identified and protected;
- f) The wildlife trees in the eastern and southeastern areas as well as forested areas within riparian fringes have potential to provide nesting opportunities for western screech owl and other bird species. Preservation of TEM-6,7 and 9 will protect this habitat. If development is proposed for TEM-4, TEM-9 or TEM-10, a site-specific survey and habitat plan is required;
- g) Light pollution in the vicinity of sensitive habitats (i.e. riparian areas or rock outcrops) should be minimized by directing permanent/residential lighting away from these areas;
- h) Low impact creek crossing such as clear span bridges should be used where stream crossings are necessary. Permitting for stream crossings is required from Ministry of Forests, Lands, Natural Resource Operations and Rural Development under the *Water Sustainability Act*;
- i) An invasive species survey and management plan prepared by a Qualified Environmental Professional (QEP) prior to any development;
- j) A Stormwater Management Plan and a Sediment and Erosion Control Plan are required prior to any site development or construction to prevent release of any sediment, sediment-laden water or untreated stormwater into watercourses or Riparian Assessment Areas;
- k) Protect SPEAs during and after development. Silt fencing and orange construction fencing should be installed along riparian buffer boundaries prior to construction. A permanent fence, vegetated barrier or signage should be incorporated in the development design to prevent intrusions following construction;
- l) Any construction activities anticipated to have any potential effect on water quality in water bodies on or adjacent to the study area should follow best practices and be monitored by a QEP;
- m) All vegetation removal should occur outside of bird nesting season (April 1 to August 31) or should be preceded by a survey for the presence of active bird nests by a QEP and all active nests must be protected by a suitable buffer until nesting is complete. Heavy construction works during this period should also be preceded by a nesting survey for songbirds, raptors, and species at risk and a 'quiet' buffer maintained around any active nests. Particular attention should be paid to:
 - forest edges and openings for band-tailed pigeon;
 - rock outcrops and sparsely vegetated areas for common nighthawk, black swift and barn swallow; and
 - wildlife trees and snags for western screech-owl.

5.1 POLICIES

ENVIRONMENT

- n) Bear-safe design shall be provided for any garbage/composting facilities and landscaping
 - o) Avoid disturbance of rocky outcrops where possible and minimize impact when disturbance is unavoidable. If any blasting or other disturbance of rocky outcrops is to occur, it should occur between late spring and early fall. Prior to any disturbance of these habitats, targeted surveys should be conducted by a QEP for the following species at risk (if any are located, appropriate mitigation measures will be determined):
 - northern rubber boa, and
 - common nighthawk, black swift and barn swallow nests, particularly between April 1 and August 31.
 - p) Prior to any construction activities within the riparian areas for any necessary creek crossings, targeted surveys and salvages must be conducted by a QEP for the following species at risk and significant species. If any are found, they can be relocated to suitable riparian areas nearby.
 - northern red-legged frog,
 - western toad,
 - cutthroat trout, and
 - salmonid species.
 - q) Prior to any land clearing, areas to be cleared should be surveyed by a QEP for potentially occurring plant species at risk. Surveys for Vancouver Island beggar ticks and Roell's brotherella should be conducted in spring or early summer while surveys for mosses can be conducted at any time of year. If any are found, these can be carefully relocated to suitable areas nearby that will not be disturbed during construction activities.
 - r) It is recommended that as much coarse woody debris (CWD), of varying sizes and stages of decay be maintained as possible. CWD was noted in Polygons TEM-4, TEM-6, TEM-7, TEM-8, TEM-9, and TEM-10, with an abundance in the TEM polygons previously noted as preservation candidates. If CWD is to be removed, this should occur between late spring and early fall when mammals are less likely to be seeking shelter. There is the opportunity to improve existing riparian habitat by carefully relocating any pieces of CWD needing to be removed into the riparian areas.
4. Public ownership - In accordance with OCP policies, new development areas should exclude the protected riparian areas or other sensitive areas; the District may recommend public ownership of environmentally sensitive lands at the time of development application/rezoning.
5. Wildfire Protection – the District anticipates adopting a Wildfire Protection Development Permit Area (Wildfire DPA) in 2020 that will apply to portions of lands in Loggers East. All new developments in the Wildfire DPA are required to obtain a development permit in accordance with the DPA guidelines.

5.2 POLICIES

RURAL/LOW DENSITY MULTIFAMILY



Loggers East currently provides a unique setting with rural and residential uses, yet is close to the Downtown, employment areas and other developing neighbourhoods. This neighbourhood provides a special opportunity for small-scale agricultural uses and continuation of rural uses alongside compact infill development. An estimated 335-450 additional housing units could be sustained within the Rural/Low Density Multifamily area.

Objectives:

- To provide for a diverse mix of future housing forms and tenures including rental housing;
- To provide housing that retains a sense of openness and respects the environmental qualities and drainage conditions of the Loggers East neighbourhood;
- To support small-scale agricultural uses;
- To increase local food production, food assets and healthy food access in the neighbourhood.
- To increase food security in the community.

Rural/Low Density Multifamily (Rural/MF) Policies

1. The Rural/MF designation applies to small acreage areas of Raven, Robin, and Finch Drives, including a number of properties with high ecological value of Finch Creek and tributary streams. Some properties are also affected by the BC Hydro transmission line corridor, while other parcels have relatively few constraints.
2. The Rural/MF designation provides for continuation and development of rural and small-scale agricultural uses while also allowing for infill residential development at moderate densities that

will typically be lower than other areas of the District.

3. Neighbourhood amenities outlined in policy Section 5.4 shall be provided with any new development.

Housing Forms

4. Housing forms supported in the Rural/MF area include clustered small cottages 100 sq.m. or less in size, tiny homes (typically less than 50 sq.m. in size), townhouses, small duplexes, stacked townhouses and other ground-oriented housing. Apartments up to 3-4 storeys will be considered if compatible with the character of the neighbourhood and adjacent uses, address shortage of rental housing and additional environmental benefits are provided by the smaller footprint of apartment development.
5. New large or solely single-family development is not supported. Single residential uses in the Rural/MF designation will be limited to a maximum size of 300 m² (gross floor area) to retain land available for future agricultural/rural and other open space uses. (*Implementation: Zoning Bylaw amendment*).

5.2 POLICIES

RURAL/LOW DENSITY MULTIFAMILY

Base Density and Bonus Density

6. Base residential density in the Rural/MF designation is 35 units/net hectare (14 units/net acre) for ground-oriented housing and 55 units/ha (22 units/acre) for apartments calculated on the net developable land area (i.e. excluding ESAs/Conservation areas).
7. Three to four storey apartments with density ranging from 60-80 units/ha (24-32 units/acre) will be considered in accordance with Policy 5.2.4.
8. Additional density (bonus density) up to 60 units/hectare (24 units/acre) for ground-oriented housing or up to 80 units/net hectare (32 units/acre) for apartments will be considered where developments propose to significantly address community open space, agricultural use, rental housing or other community amenities described in Plan Section 5.5 and in accordance with the following table.

Density Level	Maximum density - based on <u>net land area</u> ⁽¹⁾	Amenities Provided ⁽²⁾	
Current zoning	RU1 - 1 unit/0.8 ha (1 unit/2 acres) RS-1 - 1 unit/690m2	Min. 5% public park dedication at subdivision (Local Government Act requirement)	
Density Options at Rezoning - Base density is:			
<ul style="list-style-type: none"> • 35 units/hectare (14 units/acre) for ground-oriented housing. Min. 30% common open space (strata) required. • 55 units/hectare (22 units/acre) for apartments. Min. 30% common open space (strata) required. 			
Density bonus options	Option 1	+ 15% density	<u>Ground Oriented Housing:</u> Min. 30% open space if a portion is activated as publicly accessible park space and/or contains a public trail. <u>Apartments:</u> Min.35% open space if a portion is activated as publicly accessible park space and/or contains a public trail.
	Option 2	+20% density	Min. 30% open space if a substantial portion is activated as agricultural use or 30% or more of the property is within environmental protection area.
	Option 3	+ 20% density	If at a portion of the housing is rental housing
	Option 4	+ 10% density	With provision of 3 of energy climate change targets
(1) Net land area excludes environmentally sensitive/Conservation areas and steep slopes as described in the Neighbourhood Plan. (2) Some developments may propose a mix of amenities or combine density bonus options, to be evaluated at rezoning in accordance with the principle of additional density in exchange for greater public benefit.			

5.2 POLICIES

RURAL/LOW DENSITY MULTIFAMILY

Lot Consolidation; Density Transfer

- 9. No more than two (2) parcels should be combined for development unless significant benefits to site design, environmental protection or other community amenities is provided.
- 10. Transfer of development potential from one property to another will only be considered where significant environmental or food production benefits are provided.

Rental Housing

- 11. To address known demands for rental housing, approximately 30% of future housing units should be rental housing units, of which approximately 40% should be affordable units as indicated in the following table:

Overall Rural/MF Density	335-450 Housing Units
Market Rental Need	60-80
Affordable Rental Need	40-55
Total Rental Units Need	100-135

Agriculture/Food Production

- 12. Areas proposed to be activated to provide food production/agricultural uses will be protected with a covenant on the lands requiring continuous agricultural use by an approved community group, land trust, agricultural operator or strata. The covenant will ensure the land is protected in perpetuity as a community asset and that regenerative/organic agricultural practices are followed.
- 13. Agricultural uses such as crop production, greenhouses, sale of produce grown on-site, grazing, community orchards, equestrian facilities, kennels and other agricultural uses are supported on all Rural/MF properties. *(Implementation: Zoning Bylaw amendment).*
- 14. Agricultural use or other open space areas should be located where they can be combined with areas on adjacent parcels to create a larger agricultural area. Where applicable, the agricultural use may be located within the BC Hydro corridor, subject to BC Hydro approval.
- 15. Accessory structures for food processing, equipment storage and gathering should be provided in each agricultural area; shared facilities between users is encouraged.
- 16. Developers are encouraged to work with the Squamish Food Policy Council to determine future agricultural uses for the neighbourhood.

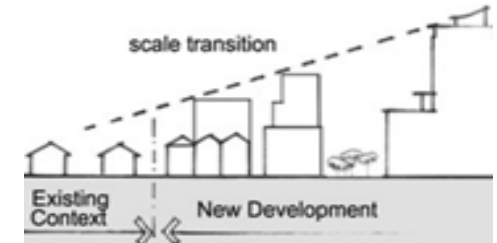


5.2 POLICIES

RURAL/LOW DENSITY MULTIFAMILY

Rural/MF Development Permit Guidelines

17. OCP Development Permit Area No. 3 (Universal Guidelines) apply to new multifamily residential development. Some of the more relevant guidelines, as well as new guidelines specific to the Loggers East neighbourhood, are:
 17. Provide appropriate and sensitive transitions between different scales of buildings. This may require increased setbacks from adjacent properties, setback of upper storeys and/or careful placement of windows and outdoor spaces to prevent overlooking;
 18. Create a welcoming streetscape that faces the neighbourhood instead of inward;
 19. Provide publicly accessible open space adjacent to the street frontage to create parklets with covered gathering spaces and/or play areas to provide opportunity for neighbourhood interactions.
20. Wherever possible, parking should be located at the rear or side of the site to retain an attractive streetscape;
21. Interior courtyards should not be dominated by parking.



5.3 POLICIES HILLSIDE HOUSING

The steeply sloping lands in the eastern and southern part of the neighbourhood contains two main bands of potentially developable areas within the steep slopes. An estimated 335-500 additional housing units could potentially be developed in the Hillside Housing areas, depending on housing forms and ability to provide access to developable areas.

Objectives:

- To manage development in steep slope areas in a manner that reduces the risk to life and property, prevents erosion and risks to down-slope properties.
- To protect the visual and environmental qualities of the sloped areas through careful site planning and clustered forms of development.
- To avoid creating car-centric neighbourhoods and ensure that housing is well connected by active transportation and recreational linkages to other neighbourhoods and recreational assets.

Hillside Housing Policies

1. Subject to site-specific geotechnical review and engineering assessment for access and servicing, residential use is supported in the **Hillside Housing** designation as shown on Land Use (Schedule A). This includes lands up to 40% slope as shown generally on the Loggers East Slope Hazard Assessment report.
2. All development, including roads and infrastructure, shall meet the recommended geotechnical setbacks and avoid rockfall hazard areas as shown on Figure 20.
3. In accordance with OCP policy, development is not supported on lands predominantly over 40% slope. These steeper areas may be considered for development following site specific evaluation, provided:

- a) District servicing and road standards are met;
- b) A professional geotechnical assessment concludes the land can be safely developed (as per Guidelines for Legislated Landslide Assessment for Proposed Residential Developments in BC, APEGBC, revised May 2010);
- c) Other objectives of the Loggers East neighbourhood plan regarding environmental protection and stormwater management are met; and
- d) The development is sensitively integrated with the surrounding areas and meets Hillside Development Guidelines.

Housing Forms

4. Mixed housing in the form of small duplexes, townhouses, tiny homes (typically less than 50 sq.m. in size), stacked townhouses and low-rise apartments (3-4 storeys) are supported in Hillside Housing areas.
5. New large or solely single-family development is not supported.



5.3 POLICIES

HILLSIDE HOUSING

Base Density and Bonus Density

- Base density in the Hillside Housing designation is 35 units/net hectare (14 units/net acre) for ground-oriented housing and 55 units/net hectare (22 units/net acre) for apartments calculated on the net land area (excluding steep slope and environmental/conservation areas). Actual density will be determined during the rezoning process based on site-specific geotechnical assessment and detailed design.

Rental Housing; Bonus Density

- Additional density up to 60 units/ha (24 units/acre) for ground-oriented housing and up to 80 units/ha (32 units/acre) for three to four storey apartments may be considered for applications proposing to significantly address rental housing availability or provide community amenities in accordance with density bonus provisions of Policies 5.2.6 – 5.2.8.
- Based on current demands, approximately 30% of future housing units should be rental housing units, of which approximately 40% should be affordable units as indicated in the following table:

Overall Hillside Density	335-500 Housing Units
Market Rental Need	60-90
Affordable Rental Need	40-60
Total Rental Units Need	100-180

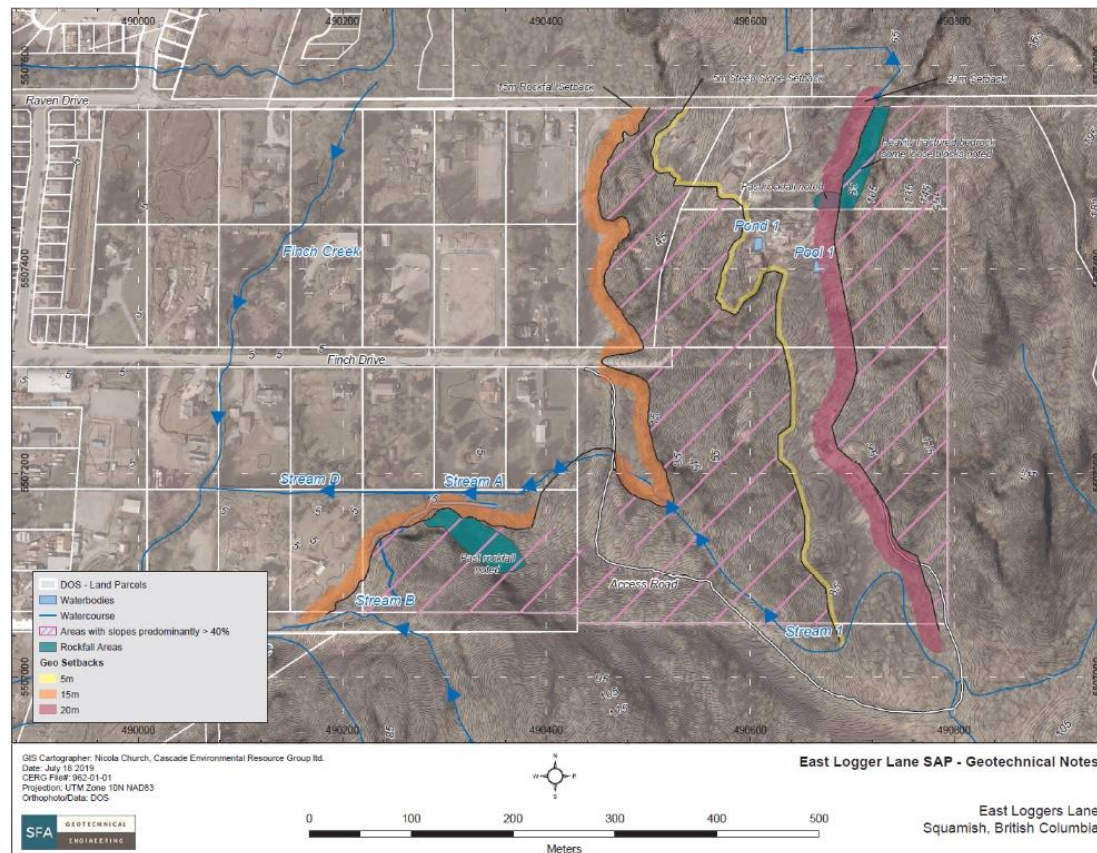


Figure 20 Slopes and Geotechnical Setbacks

Commercial Land Use

- Commercial uses such as child care or education facilities, or specialized service uses such as restaurant or retreat centre may be supported, subject to site-specific review of site conditions, neighbourhood impacts and provision of active transportation.

5.3 POLICIES HILLSIDE HOUSING



Hillside Development Guidelines

The District is preparing to develop Steep Slopes Development Permit Area (DPA) guidelines, anticipated to be in place by 2022. Until the Steep Slopes DPA guidelines are adopted, the following development policies will apply:

To the Loggers East neighbourhood at the time of rezoning, subdivision or development permit application:

1. All development with slopes greater than 20% shall meet the Hillside Standards, site grading and design, road and retaining wall design requirements of Subdivision and Development Control Bylaw No.2649.
2. Development should focus on conservation design principles to minimize alteration of natural slope conditions and cluster housing within the natural forested areas.
3. Where the natural grade of the slope on or adjacent to a proposed development site is 25% or greater as identified on Figure 20, or as required by the District's Building Inspector or Approving Officer, a slope stability assessment report prepared by a Qualified Professional is required to

identify any slope stability hazards, assess the safety of the site and propose any mitigation measures necessary to ensure the safety of the proposed development and existing neighbouring development.

Site Design:

4. Locate buildings, roads and infrastructure away from critical slope areas or areas where extensive regrading is required.
5. Avoid disturbing soils that provide effective infiltration and support stormwater management goals.
6. Building footprints and road construction shall be minimized to retain the natural capital functions, including stormwater impacts.
7. New road construction shall be designed to minimize loss of vegetation and minimize excavation, blasting and fill to reduce visual impact of development.
8. Applicants will be required to provide a 3D digital terrain model illustrating pre and post-development conditions, extent of cuts and fills, clearing and building placements. In highly visible locations, a view corridor analysis will also be required.

Minimum Setbacks

9. Unless otherwise determined to be safe by a qualified professional, minimum setbacks (including buildings, hot tubs, swimming pools, landscape ponds and outbuildings) shall be as shown on Figure 20, consisting of:
 - a) a minimum 5 metre setback from the top of any slope greater than 25%;
 - b) where the slope is greater than 40%, the minimum setback shall be increased to 15 metres from the base of the slope;
 - c) a minimum 20 metre setback shall be provided along the eastern boundary of 1060 and 1070 Finch Drive.

Open Space, Trails

10. Retain open space and corridors between development areas to provide continuous habitat linkages within the site as well as with neighbouring sites. Use trails or linear systems to link parts of the hillside community which are not otherwise linked by roads due to topographic constraints.

5.3 POLICIES

HILLSIDE HOUSING

11. Ensure that development layout considers and incorporates trail connectivity through the area to trail networks on lands beyond.
12. Development design will need to consider effective active transportation connectivity to adjacent neighbourhoods by ensuring that connectivity is not impaired by steep grades, safety hazards or lack of multi modal utility.

Stormwater Management

13. Any stormwater collected from perimeter drains, rainwater leaders or surface drains should not be discharged on to sloping terrain. All stormwater should be directed to a municipal storm system or approved stormwater dispersion system designed by a qualified professional in accordance with the District's Integrated Stormwater Management Plan.

Fill Placement

14. Any excavation or fill placement on slopes greater than 25% should be designed by a geotechnical engineer and seismicity should be considered.
15. Fill placement on sloping ground should be avoided; rather the ground should be terraced so that all fill is placed on a level subgrade

16. All permanent excavated or fill slopes should be sloped at a 3H:1V or flatter unless otherwise approved by a geotechnical engineer.
17. Fill should not be placed within 10 metres of slopes greater than 25% without a geotechnical design and review.

Erosion Protection

17. Minimize disturbance of natural vegetation and retain the natural topographic character of the site.
18. Existing vegetation should be maintained as much as possible to minimize erosion potential. Any disturbed slopes or new fill slopes steeper than 3H:1V should be revegetated and/or reinforced with an erosion control blanket or similar as soon as possible.



5.4 POLICIES

EMPLOYMENT LANDS

Loggers East has historically provided opportunities for some industrial, rural and home-based businesses. Areas designated for economic activity are shown on Land Use Plan (Schedule A), located on Loggers Lane, Finch Drive and Robin Drive at the centre and west portions of the neighbourhood, indicating lands where these uses can be continued, or new employment uses developed.

Background

Maximizing the density of employment-generating space in general industrial, commercial, office and home occupation sectors will be critical in the Loggers East area to ensure that the balance between population and job growth is achieved. It is equally important to ensure that general industrial areas are not commercialized and that new developments create effective live-work spaces in residential areas. The District's **Employment Space and Lands Model** highlights the scarcity of medium industrial lands, particularly for uses requiring large outdoor storage or service areas that can be difficult to accommodate within commercial areas, but can be located with some areas of Loggers East. Based on the proposed land uses, the area could support 420 jobs in general industrial, commercial and office categories.

Population (future)	2,195-3,030
Jobs (future)	420

While not explicitly recognized in the Plan, agricultural uses and food production in the area may also advance local employment capacity in the neighbourhood. Provision of accessible, affordable and high quality child care is also a critical component of economic development.

Objectives:

- To provide a diverse range of local employment opportunities in Loggers East that provide jobs close to home.
- To support overall District goals of retaining important industrial lands and expand employment space in accordance with the Employment Lands Strategy.

Employment Lands Policies

General Industrial

1. Lands designated as **General Industrial** on Land Use Plan (Schedule A) provide opportunity for a diverse range of light and medium industrial uses and businesses, particularly those that may require outdoor operating areas. Typical uses will range from light to medium industrial and include manufacturing, processing, assembly, service and repair uses. (*Implementation: Zoning Bylaw amendment*).
2. Building heights up of 3 - 4 storeys are supported, with uses to contain not more than 20% for accessory retail or office use.
3. Storage only uses (such as mini-storage) or similar uses that do not generate significant employment are not supported.

5.4 POLICIES

EMPLOYMENT LANDS

- 4. OCP Development Permit Area No. 9 (Industrial Employment) will apply to new development in this area.

Mixed Use Development (MUD)

- 5. Lands designated as **Mixed Use Development (MUD)** on Land Use Plan (Schedule A) provide for a flexible mix of light industrial, office, retail, and upper storey residential and “live-work” uses. Light industrial uses including low-impact manufacturing, wholesaling, warehouse, distribution and contractor offices that typically occur within enclosed buildings are supported in this area.
- 6. Buildings may range from 2-4 storeys. Residential use in Mixed Use Developments shall comprise no more than 40% of the total gross floor area of any development, which may be increased to 50% if residential units are purpose built rental housing.
- 7. Buildings with upper storey residential use shall provide adequate common open space areas.
- 8. The specific permitted uses, site density and building heights for the employment lands will be determined at the time of future development applications. Lot coverage should not exceed 50% to reflect drainage conditions.

Home Businesses

- 9. Home businesses provide important “live-work” sources of employment and are supported in all areas of the Loggers East neighbourhood.

Neighbourhood Commercial

- 10. Local commercial uses such as child care facilities, retail stores, restaurant/coffee shops and personal services that serve the immediate area should form part of any Mixed Use Development.
- 11. Other locations in the neighbourhood may be considered for neighbourhood commercial use, while addressing traffic, noise or other impacts on adjacent properties and providing local services such as retail stores, cafes and similar uses of benefit to the neighbourhood.
- 12. OCP Development Permit Area 3 (Universal Guidelines) will apply to new Mixed Use Development or Neighbourhood Commercial development. Projects will also be evaluated on their fit with the neighbourhood setting; an emphasis on an attractive streetscape facing Finch Drive will be a key consideration.



5.5 POLICIES

NEIGHBOURHOOD AMENITIES | CHILDCARE

Places to play, walk and connect with neighbours are central to creating community as the neighbourhood grows. New developments in Loggers East will be evaluated during rezoning for their contributions to the overall neighbourhood.



Background

Although the Loggers East neighbourhood is located in relatively close proximity (within 10-minute walk) to a major recreation facility and sports fields (Brennan Park), the Loggers East neighbourhood has no neighbourhood parks or gathering space and no public lands exist for this purpose. New developments in Loggers East will need to address the need for publicly accessible neighbourhood parks that serve residents within the catchment area and respond to demographics.

Child Care

The Squamish Child Care Needs Assessment identifies accessible, affordable and high quality child care as a critical need in the community relevant to the overall affordability situation for families and a meaningful contributor to social and economic development. The Strategy establishes a “reach” target rate of 30% for access to care (30 spaces per 100 children) and recommends the District set targets for child care spaces in each neighbourhood.

There are currently no childcare facilities in the Loggers East area and 58 spaces in the surrounding area (within 1km), which may increase to 74 spaces within the next few years. Considering a higher growth scenario for Loggers East, the future estimated child population will be 575 (24% of 2,400) which would result in additional 100 child care space need provided the existing 74 spaces remain.

Age group	Spaces Required
Infant toddler (0-36m)	30 (30% access)
Preschool age (30m-sch)	40 (40% access)
School age (5-12)	30 (30% access)

Most, if not all, of the new spaces will not be publicly owned in the area. There are, however, multiple possibilities to integrate child care in mixed use/neighbourhood commercial areas or as part of providers as a stand-alone use or part of residential developments closer to Loggers Lane.

Objectives:

- To ensure community benefits that meet the needs of the neighbourhood are provided with any new development.

5.5 POLICIES

NEIGHBOURHOOD AMENITIES | CHILDCARE

Neighbourhood Amenities Policies

1. All new developments seeking rezoning for additional density should consider targets set out in the District's Community Amenity Contributions policy. Any onsite amenities should provide direct benefit to the wider neighbourhood.
2. Priorities for community benefits in the Loggers East neighbourhood (beyond standard bylaw requirements) are:
 - a) Land for food production;
 - b) Secured affordable rental housing;
 - c) Child care facilities;
 - d) Affordable smaller homes (less than 1100 sq.ft.);
 - e) Neighbourhood park/open space that provides opportunity for public playground.
 - f) "Pocket parks" on the parcel frontage and/or adjacent to trail connections to create gathering spaces that are open to all residents.
 - g) Trails that provide opportunity for pedestrian/cycling connections through the neighbourhood, particularly providing north-south connections as described in Section 4.5;
 - h) Rural uses of benefit to the wider community such as dog kennels and equestrian facilities;
 - i) Additional lands for habitat restoration above the requirements of Development Permit Area No.1 (DPA 1 Environment) guidelines in the OCP;
 - k) Low carbon/net zero construction that provides significant reduction in greenhouse gas emissions

(GHG) and energy savings.

Neighbourhood Parks

3. New developments will need to address the need for publicly accessible Neighbourhood Parks to serve the needs of residents within the catchment area and respond to demographics. Neighbourhood Parks should include thoughtfully designed gathering spaces and sports/play areas.
4. Given the predominantly smaller parcel sizes in the area, shared park spaces between parcels may be required in order to create a park with a good level of activation (in the range of 0.25 to 0.5 acres in size). Smaller sizes will be considered where the level of activation will benefit all of the area.
5. Pollinator corridors should be established within the BC Hydro powerline right of way.

Child Care

6. Develop and integrate at least one larger child care centre (~ 36 spaces) in the Mixed Use/Neighbourhood Commercial area. Prioritize and include new licensed spaces for infants/toddlers in tandem with preschool spaces wherever possible.
7. Explore opportunities to integrate new child care and early learning facilities with agricultural components and parks in the Rural/MF neighbourhood.
8. Support inclusion of purpose-built smaller child care operations in multiage family-based form in the Rural/MF or Hillside Housing areas.



5.6 POLICIES

CONNECTIVITY: WALKING, CYCLING, ROADS

The Squamish OCP, Active Transportation Plan, Community Climate Action Plan and other District policies strongly support well connected, walkable neighbourhoods and actively shifting away from dependency on car travel.

Background

The Loggers East area is located next to the community’s main multi-use north-south connector, the Corridor Trail. However, no formal active transportation infrastructure currently exists within the neighbourhood. An important recreational trail network exists in Valleycliffe to the east of the neighborhood; however, no formal connection is yet established to the Loggers East area.

Most of the roads in the neighbourhood are built to a rural standard and will require improvements with new growth. The neighbourhood road network has also been identified as an important part of potential future road connection to adjacent Squamish Nation lands as well as a potential alternative access to the Valleycliffe area. Ensuring Finch Drive can function as a future connector, as well as a safe and attractive local road, will require innovative detailed design.

Objectives

- To establish a well connected walkable neighbourhood by establishing formal walking and cycling routes through the neighbourhood and to lands beyond, independent of the road network wherever possible.
- To incorporate active transportation as part of road upgrades, while respecting the environmental and slope conditions.

Transportation Policies

Roads

1. To address environmental values and steep slope conditions, modified “green” road standards will be developed for the Loggers East area to protect riparian areas, manage stormwater and may provide a separated active transportation facilities rather than conventional curb, gutter and sidewalk.
2. Modified road standards will also be considered in hillside residential areas, to reduce clearing, retaining walls and alteration of sloped areas.



Hydro corridors provide opportunity for agricultural use, trails and additional landscaping.

5.6 POLICIES

CONNECTIVITY: WALKING, CYCLING, ROADS

- On-street parking may be reduced or eliminated where necessary to provide for habitat protection, particularly for ditches with high habitat value.
- Any new strata developments must provide roads that do not exceed maximum 12% grade requirements and minimum width requirements for fire truck access.

Active Transportation

- New north-south active transportation (walking/cycling) trail connections between Raven, Finch and Robin Drives will be sought with future development applications to improve local connectivity and movement. Potential locations are shown generally on Figure 21. These connections need to be functional (e.g. trees, seating, bike racks, lighting where appropriate and wayfinding signs) and have grades less than 8% except for short sections that may be steeper.
- All new development will be required to upgrade fronting roads to provide for vehicle and active transportation (bicycle and pedestrian) uses.
- Subject to approval from BC Hydro, additional trail connections should be provided with any development of parcels affected by the transmission line corridor).

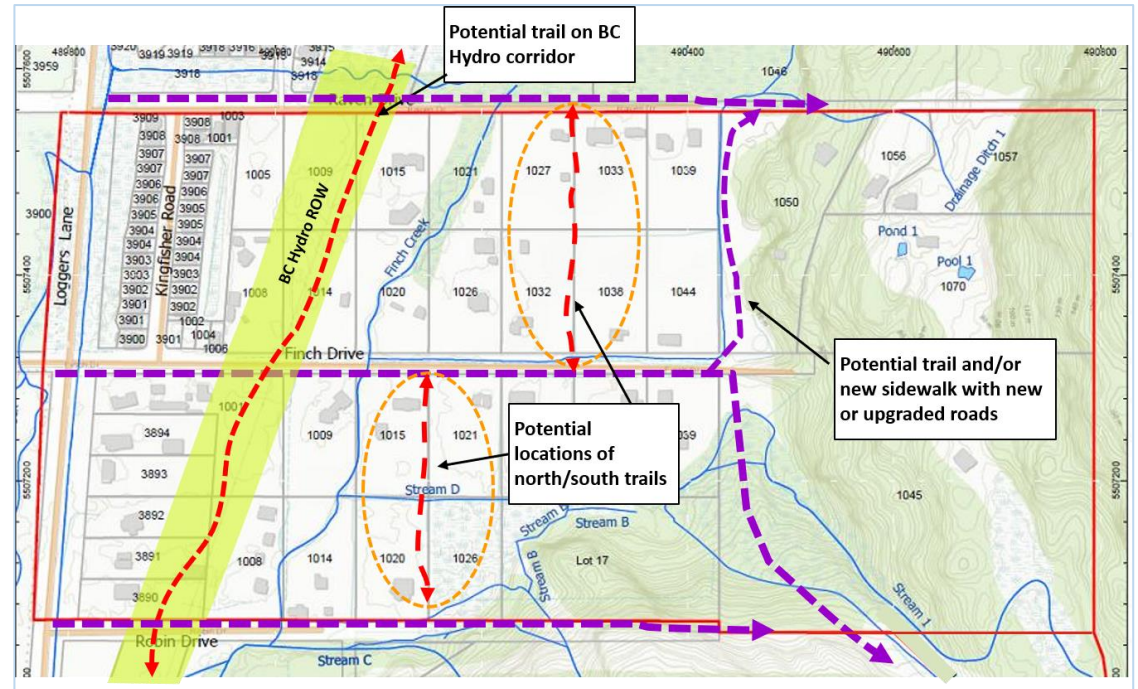


Fig. 21 Potential trail locations (to be determined with future development applications).

Finch Drive East Extension

- The most feasible road alignment for future extension of Finch Drive to the east of the neighbourhood will be determined as part of future Sub Area planning for lands to the east of the Loggers East neighbourhood. Grade, environmental and infrastructure challenges exist in most eastern areas. Future design and upgrades to Finch Drive shall ensure that the road can operate as a future connector to Valleycliffe, while also providing for protection of environmentally sensitive areas and reducing impacts on the Loggers East neighbourhood through innovative road design and focus on active transportation.

5.6

POLICIES CONNECTIVITY: WALKING, CYCLING, ROADS

Safe Routes to School

9. Elementary school students are within the Ecole Squamish Elementary catchment area, with the Corridor Trail on Loggers Lane providing the main safe route to school. Some residents may opt for an out-of-catchment transfer to Mamquam Elementary School, accessing safe routes via Loggers Lane to Centennial to Government at Mamquam Bridge. Maps for these routes are shown in Figure 21.
10. Middle school grades 7-9 will attend Don Ross Middle School and secondary grades 10-12 will attend Howe Sound Secondary School, with students bussed from stops on Loggers Lane at Ravenwood.



Fig. 22 Safe Routes to School.

5.7 POLICIES

FUTURE INFRASTRUCTURE



There are 1.3km of water and sewer mains in the Loggers East neighbourhood. Stormwater management currently occurs via a system of ditches. The neighbourhood will require upgrades to the water, sanitary sewer and drainage infrastructure to accommodate growth.

Objectives:

- To provide adequate infrastructure to serve the long-term needs of the Loggers East neighbourhood and lands beyond.
- To design infrastructure that protects environmental values through best design practices.
- To protect new development from flood risk and effects of groundwater conditions.
- To ensure new development does not increase stormwater flows or drainage issues.

Servicing Policies

1. All new development is required to provide road, sidewalk/bike paths, water, sanitary sewer and stormwater infrastructure etc. as required by the District of Squamish Subdivision and Development Control Bylaw No. 2649, 2018 unless otherwise varied by the District.

2. Alternative servicing solutions are supported for Loggers East where they provide environmental or community benefits while still meeting safety and engineering requirements of the District.

Flood Hazard

3. Any new construction must meet flood construction levels (FCL) in accordance with District Floodplain Management Bylaw requirements.

Drainage and Stormwater

4. Stormwater management practices shall minimize negative impacts to water quality, water quantity and ecosystem health in accordance with the following principles:
 - a) Reduce or avoid any impacts to public infrastructure;
 - b) Maximize the use of landscape-based solutions to meet both storage and water quality treatment requirements.

- c) Maintain and enhance natural assets and riparian forest integrity by maximizing tree canopy on each lot through tree retention and replanting/restoration of vegetation;
- d) Minimize total impervious area (TIA) and minimize the EIA (effective impervious area, or the area that drains directly to a watercourse or municipal systems) through development practices such as green roofs pervious paving and unpaved parking and access routes outside of accessible design requirements. The EIA can be achieved through techniques such as disconnecting roof leaders from the municipal system and drainage them to an aboveground or subsurface storage tank.

5.7 POLICIES

FUTURE INFRASTRUCTURE

- 5. New development will be required to:
 - a) Provide a site-specific stormwater management plan that meets the requirements of the District ISMP and Loggers East Drainage Plan (when completed).
 - b) Mitigate impacts of development on water quality and water quantity through on-site stormwater controls. Given the high groundwater and low infiltration potential in Loggers East, infiltration-dependent controls such as raingardens will not be sufficient for rainwater disposal in saturated conditions and above or below ground storage facilities will be required to mitigate impacts of additional runoff.
 - c) Source controls may be required to treat potential pollutant loading in runoff and to protect watercourses.
 - d) Provide sufficient land area for on-site detention of stormwater which may be in the form of detention ponds, above-ground or below-ground storage facilities.

- e) Provide a lot grading template in addition to flood construction (FCL) levels to ensure buildings are appropriately placed to avoid nuisance flooding during normal saturated conditions and catastrophic flooding during a design event. The plan should also provide for future sea level rise.
- f) Strata developments with stormwater detention or storage facilities will be required to establish a program for monitoring and maintenance of stormwater facilities, with yearly reports to the District.

Major (Non-district) Infrastructure

- 6. While not within municipal jurisdiction, the District encourages any future infrastructure facilities for hydro power or natural gas to be located and designed to minimize impacts on existing and future residential and employment lands in the Loggers East neighbourhood.



5.8

POLICIES ENERGY & CLIMATE CHANGE

In 2018, Squamish adopted the BC Energy Step Code setting out a progressive approach to energy efficiency in residential and commercial buildings above the minimum requirements of the Building Code.

In 2020, Squamish adopted the Community Climate Action Plan, which aims to reduce emissions by at least 45% below 2010 levels by 2030 with strategies and actions that account for 38% in emissions reductions.

In 2020, Squamish is also considering zoning changes to facilitate clean energy use in new buildings, as well as new guidelines for reducing community exposure to wildfires.

Many of the policies throughout this Neighbourhood Plan aim to reduce reliance on non-renewable energy and reducing community emissions while anticipating some of the inevitable/already occurring impacts of climate change.

Objectives:

- To prioritize/incentivize use of low carbon energy systems and highly efficient construction techniques in the built environment.
- To ensure that as the neighbourhood grows, development patterns shift away from the car to active transportation and required road networks that are efficient.

Energy & Climate Change Policies

1. Strongly encourage and provide density increases to development applications that commit to achieving the following targets:
 - a) Low carbon energy sources to be fully incorporated **as the exclusive energy source in the** development; **and**
 - b) **At least two of the following additional targets are provided:**
 - I. Provision of electric vehicle charging infrastructure above what may be required, including in commercial and industrial parking areas;
 - II. Provision of e-bike shares above what may be required;
 - III. Propose to maximize wood-based building materials or other carbon-storing materials beyond business as usual practices;
 - IV. Demonstrate site layout and connectivity that is highly integrated with active transportation and recreational networks.

6.0 POLICIES IMPLEMENTATION



The Schedule A Land Use Plan outlines the future land uses for the Loggers East neighbourhood. Any land use changes from current uses will require rezoning and Development Permits in accordance with Neighbourhood Plan policies.

Implementation Steps

1. The Loggers East Neighbourhood Plan will be adopted as a Schedule to the Official Community Plan (OCP) Bylaw. An OCP amendment bylaw is required to revise the OCP land use designations to those shown on the Schedule A Land Use Plan.
2. The Loggers East Neighbourhood Plan is intended to supplement the broader policies of the OCP. In case of any discrepancy with the OCP, the more detailed policies of the Neighbourhood Plan will prevail.
3. New development applications will be required to address the policies of the Loggers East Neighbourhood Plan at the time of rezoning, subdivision and/or development permit application.
4. The District may initiate a rezoning process that brings the current zoning closer in line with Plan policies to avoid development outcomes not aligned with the Plan and secure primary employment lands in the area.

5. New development applications are required to meet OCP Development Permit Area (DPA) requirements as applicable to the proposal:
 - DPA 1 (Environmental Protection)
 - DPA 3 (Universal Guidelines, Building Form and Character)
 - DPA 9 (Industrial Employment)
 - Wildfire Hazard DPA (under review District-wide)
 - Steep Slopes DPA (not yet established)

Infrastructure Planning

6. Prior to new development proceeding in Loggers East, the following infrastructure planning is required:
 - Road design for Raven, Finch and Robin Drives to provide alternative designs that protect adjacent riparian areas and focus on active transportation.
 - Completion of a neighbourhood-level drainage plan with specific guidance for Loggers East as follow up to the Loggers East Stormwater Review.