# EAST HANTS VULNERABILITY ASSESSMENT

**100 LOT SINGLE ACCESS AREAS** 

Planning Advisory Committee January 21, 2025

**Planning and Development Department** 





#### EAST HANTS VULNERABILITY ASSESSMENT

#### **VULNERABILITY ASSESSMENT**

The East Hants Vulnerability Assessment has been developed by East Hants staff to determine the vulnerability of areas with one egress/ingress and over 100 lots in East Hants to fire/flood events. The Assessment also considers the impact of these events on the residents that live within these single access areas.

Mapping and data used as part of the Vulnerability Assessment was collected from both Provincial and Municipal data sets. As with any data product produced by the Municipality, the results of the Vulnerability Assessment are based on the quality of data that is available at the time of the assessment.

A disclaimer has been added to the Assessment indicating the limits to the data.

The Vulnerability Assessment has been developed specifically for East Hants, for the purpose of evaluating the future potential of continued development in areas with one egress/ingress and with 100 lots or more.

Further data collection and refinement could be conducted to allow the Vulnerability Assessment to be used for EMO or climate change mitigation and adaptation planning.

## WEIGHTING OF VULNERABILITY ASSESSMENT

A weighting system was developed to rate each of the assessed areas out of 100. Detailed results of the weighting for each community assessed, has been attached as Appendix A. As weighted, every 20% increase is attributed to a different level of vulnerability.

- 0 to 20% very low vulnerability
- 21% to 40% low vulnerability
- 41% to 60% moderate vulnerability
- 61% to 80% high vulnerability
- 81%to 100% very high vulnerability

As a result of averaging the weightings, a vulnerability assessment ranking out of 100% has been provided to each of the areas evaluated. Although Kali Lane does not yet have 100 lots on a single access road, it has future development potential

and was added to the Vulnerability Assessment to demonstrate an area that would have a low vulnerability ranking.

Most to least vulnerable neighbourhoods:

- 1. Uniacke Mines Road overall score 79%- High Vulnerability
- 2. Piggott Lake Road overall score 75% High Vulnerability
- **3. Grand Lake Area** overall score 75% High Vulnerability
- **4. Old Mines Road** overall score 72% High Vulnerability
- **5. Lakecrest Drive** overall score 67% High Vulnerability
- **6. Elmwood Subdivision** overall score 55% Moderate Vulnerability
- 7. Kalli Lane overall score 36% Low Vulnerability

## ELEMENTS OF THE VULNERABILITY ASSESSMENT

Access/Road Ownership - Single access roads present challenges for ingress/egress and the ownership and quality of the road impacts residents and first responders' ability to use a road in the case of an emergency.

Length of Road – The longer the road length the farther residents have to travel to exit the neighbourhood or the farther first responders have to travel to respond and assist residents in an emergency event.

Type of Forest Cover - Determine the type of forest cover surrounds the neighbourhood. Research indicates that deciduous trees are less prone to burning than conifers, and that fires in deciduous stands burn slower and with less intensity than conifer stands (*Cumming*, 2001; Hély et al., 2000). Further to this, Provincial land cover data was used to create a Land Cover Risk Maps that categorizes risk of forest fire from the type of land cover.

Land Cover	Risk		
Water	None		
Bogs or Wetlands	Very Low		
Hardwood	Low		
Urban, Landfill, Quarry, Transport Corridor	Low		
Agriculture	Moderate		
Mixedwood	Moderate		
Harvests	High		
Softwood	Very High		

Slope - Wildfires burn up slope faster and more intensely than along flat ground. A steeper slope will result in a faster-moving fire, with longer flame lengths. While moderate or steep slopes greater than 20% are very dangerous, any slope can potentially increase the amount of heat a structure will be subject to during a wildfire (*Fire Safe Marin*).





Fire consolic results up obes since with beans inco

Fire threatens harns on steep follows. All free

Watercourses - Determined how many watercourses intersect roads within the single access area. Considered if there was potential for a flood event or tried to determine if there had been a flood event or washout in the past.

Fire Protection – does the neighbourhood have fire hydrants, do they have a dry hydrant, can a fire truck get access to a lake?

Impacted Residents - The number of residents and dwelling units located on a single access road will contribute to the speed of evacuation. Reviewed the type of homes, depending if they seasonal or permanent may impact how first responders respond to an event.

#### Disclaime

Civic address, Road and Property Boundary data reproduced and distributed with the permission of the Department of Service Nova Scotia.

This product has been produced by the Municipality of East Hants and includes data provided by the Department of Service Nova Scotia. The incorporation of data sourced from the Department of Service Nova Scotia within this product shall not be construed as constituting an endorsement by the Department of Service Nova Scotia of our product. Or any other notice approved in writing by SNS.

SNS MAKES NO REPRESENTATION AND GIVES NO WARRANTY OF ANY KIND WITH RESPECT TO THE ACCURACY, USEFULNESS, NOVELTY, VALIDITY, SCOPE, COMPLETENESS OR CURRENCY OF THE SNS DIGITAL DATA AND EXPRESSLY DISCLAIMS ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF THE SNS DIGITAL DATA.

#### **ELMSDALE - ELMWOOD SUBDIVISION**



#### **GEOGRAPHY**

Elmwood Subdivision is located in the South Corridor and Commercial Growth Management Area. The neighbourhood is bordered by Highway 102, Highway 1, Elmsdale Lumber and forested land, which has been approved for future development. As the Corridor continues to grow, the land surrounding Elmwood will be used for urban development and a new road will connect Elmwood Drive to Highway 214. The homes furthest from the intersection with Highway 2 are just over 1 km away from the intersection.

Number of Roads: 8 Number of public roads: 8 Number of Private Roads: 0

#### **DEMOGRAPHICS**

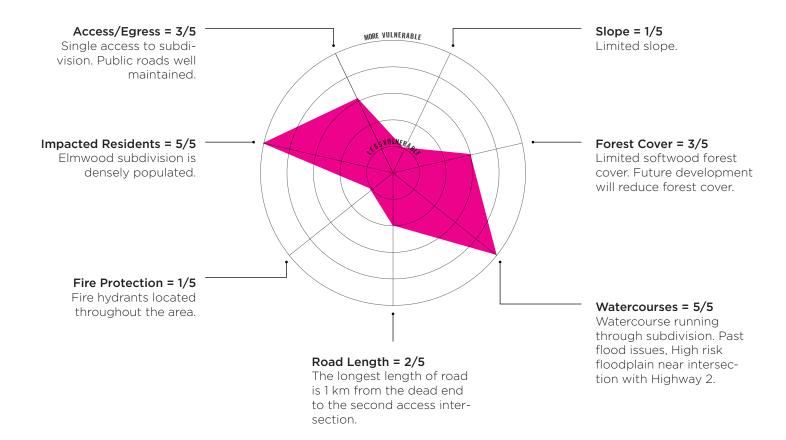
Number of lots: 328

Number of dwelling units: 325 Approx. Potential Population: 780

#### **INFRASTRUCTURE & AMENITIES**

• Municipal Open Space - Elmwood Park

#### **VULNERABILITY ASSESSMENT**



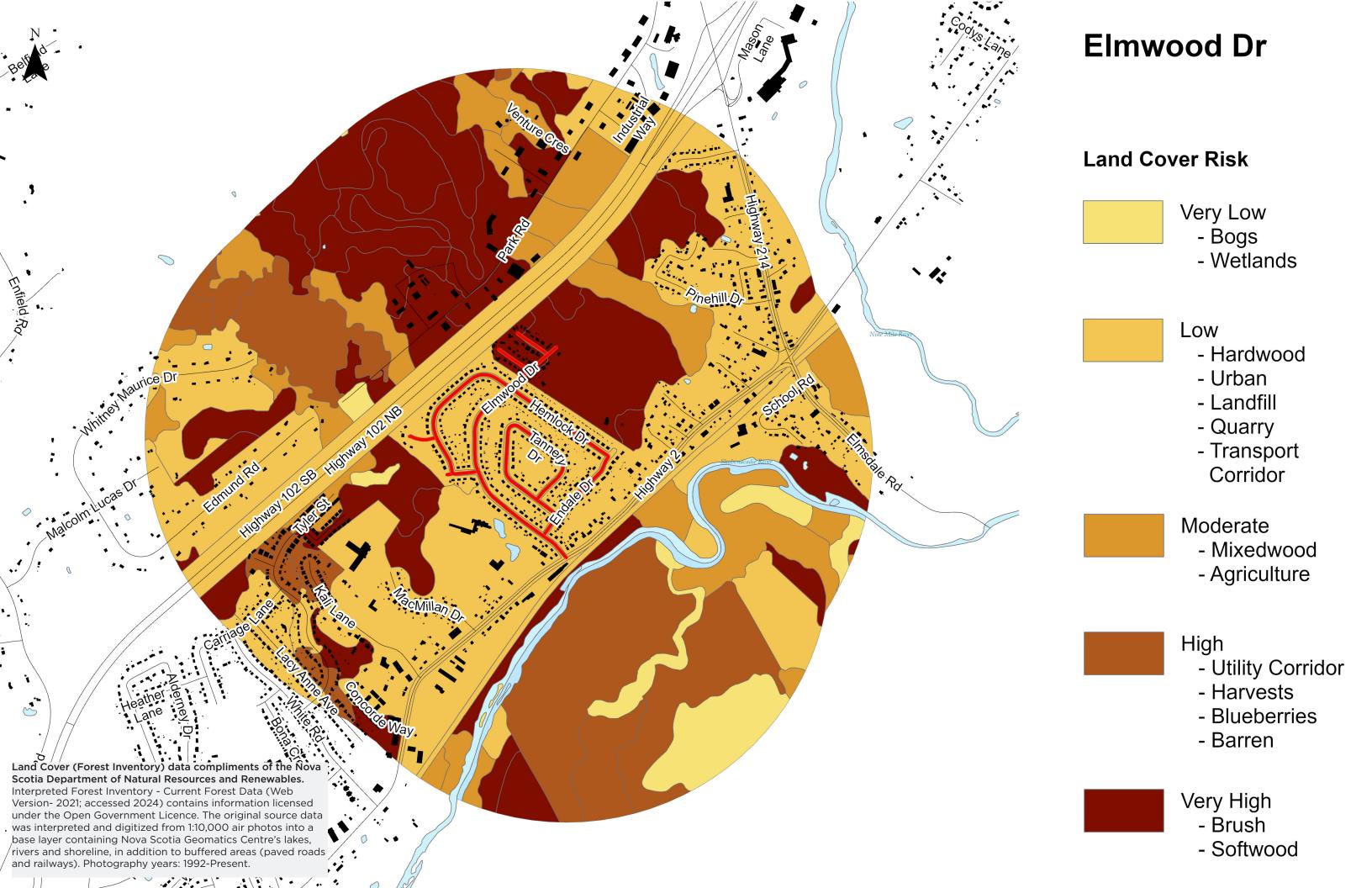
#### HOUSING

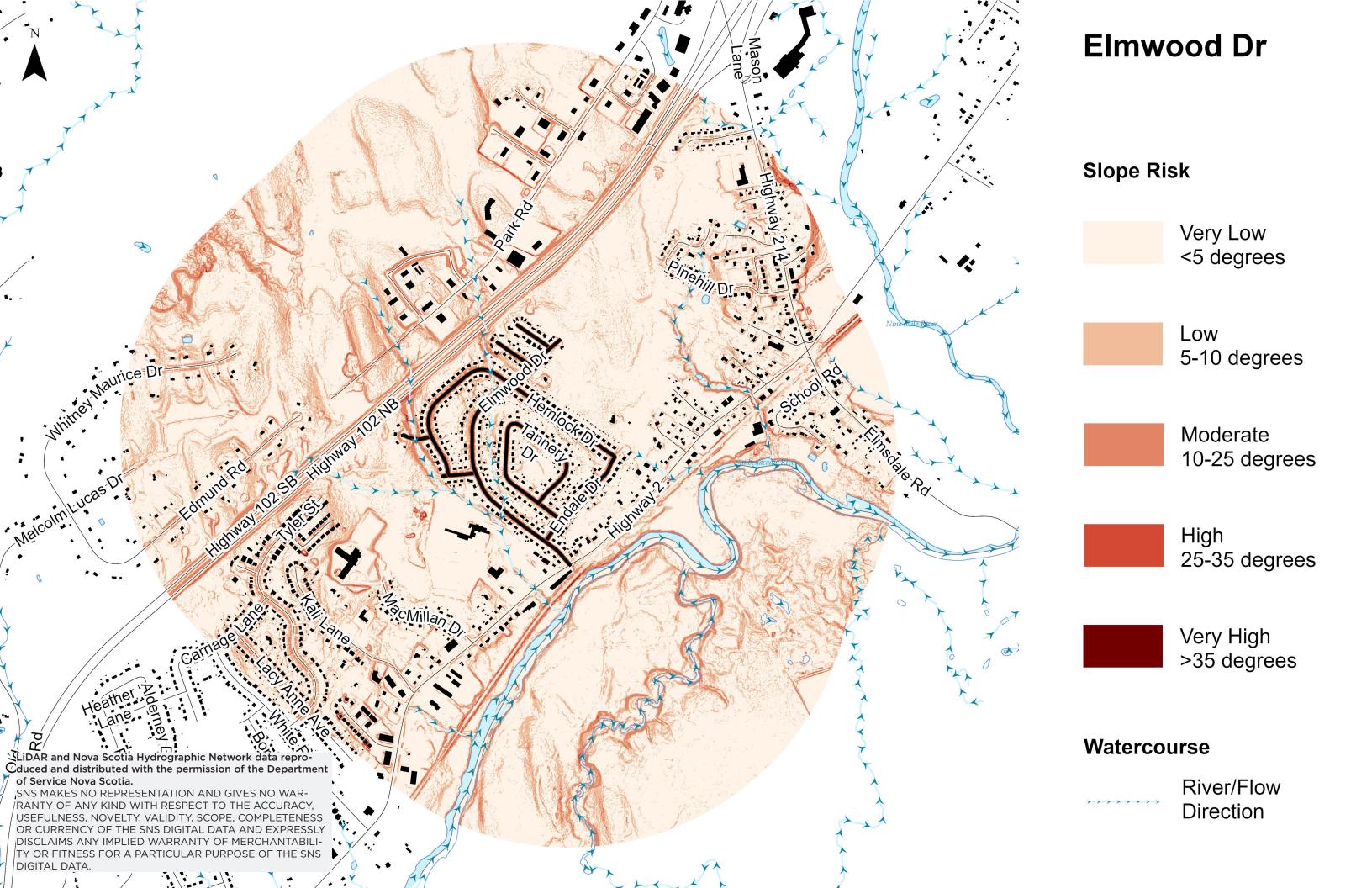
Housing is a mixture of single unit dwellings and semi-detached dwellings. Lots are all serviced with Municipal water and wastewater. The subdivision does have fire hydrants.

#### **CONSIDERATIONS**

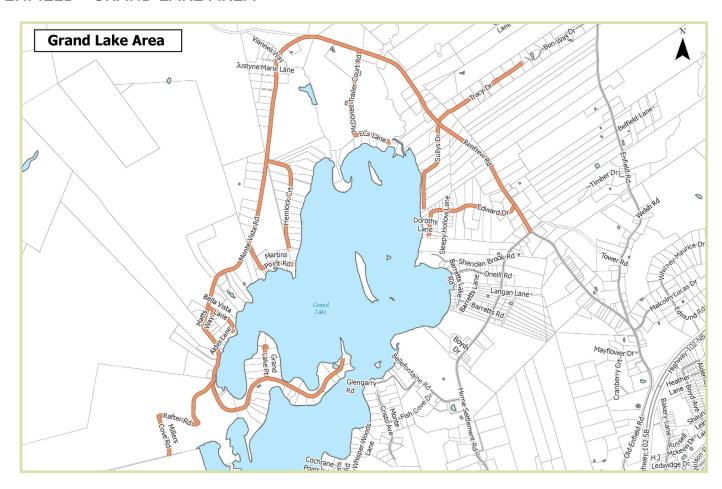
A watercourse runs through the subdivision and flooding in the neighbourhood has occurred in the past. Future flooding has the potential to make access to Elmwood difficult. The neighbouring lumber mill could be a cause for concern for fire issues or if there was an incident at the mill and the access to Elmwood was restricted.

There are approved development plans that show a road connection between Elmwood Drive and Roulston Drive. No construction has started to date.





#### **ENFIELD - GRAND LAKE AREA**



#### **GEOGRAPHY**

The total length of the single access section of Renfrew Road and Monte Vista Road is approx. 8 km. The surrounding terrain is mostly woodland, with a portion of the area bordering Grand Lake. The majority of woodland is comprised of mixedwood, with pockets of hardwood and softwood. There are multiple locations along the Renfew Road and Monta Vista Road where watercourses intersect with the roads.

Number of Roads: 16 Number of public roads: 2 Number of private Roads: 14

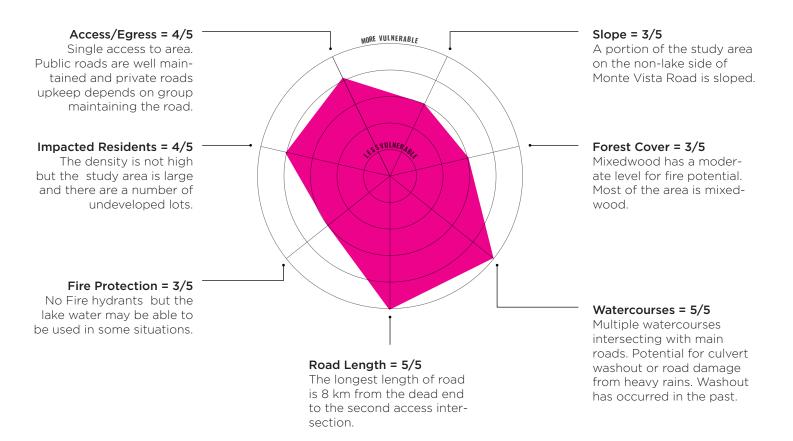
#### **DEMOGRAPHICS**

Number of lots: 267 Number of dwelling units: 172 Approx. Potential Population: 413

#### **INFRASTRUCTURE & AMENITIES**

- Little Grand Lake Campground
- Sully's Campground

#### **VULNERABILITY ASSESSMENT**



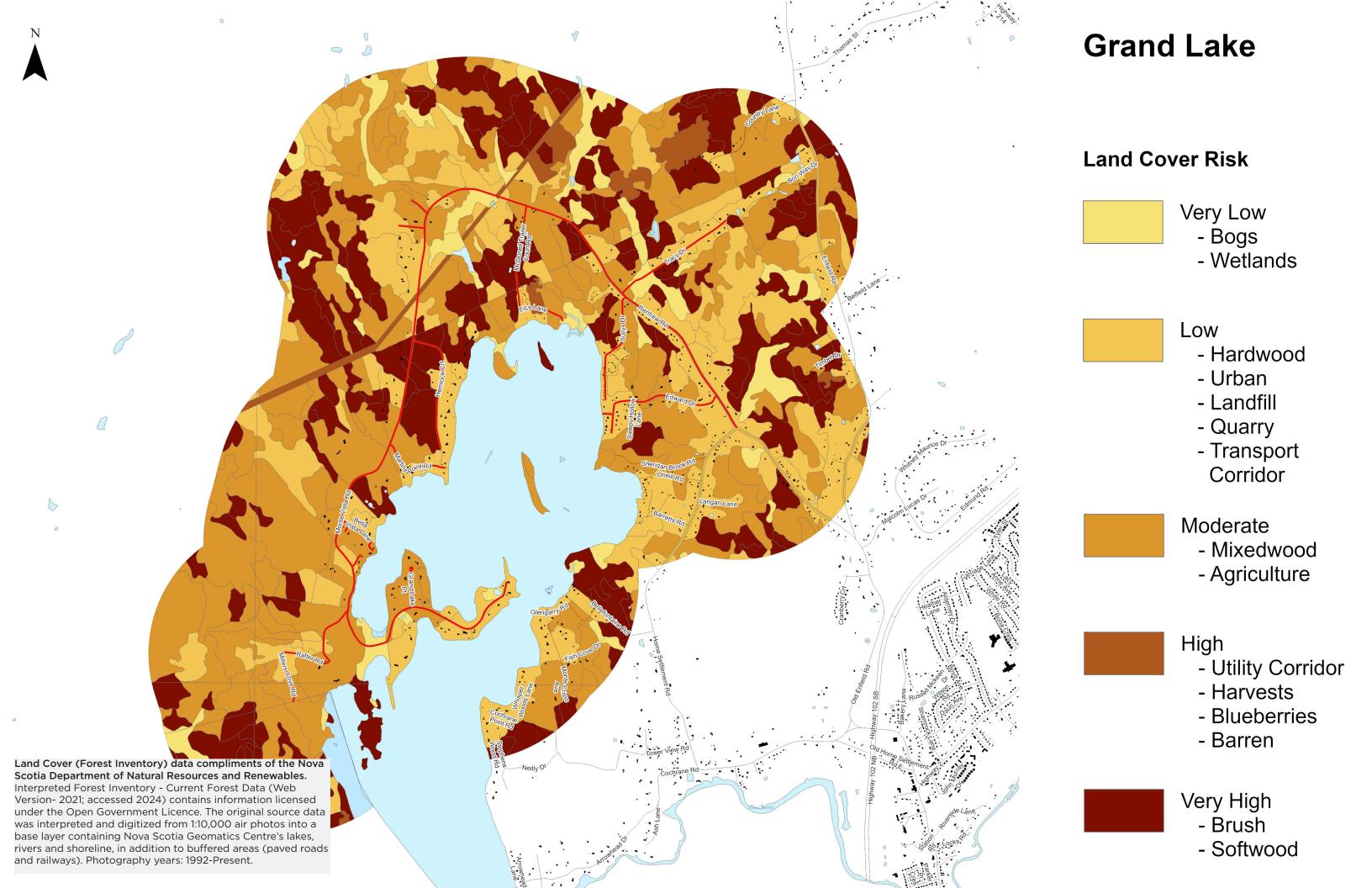
#### HOUSING

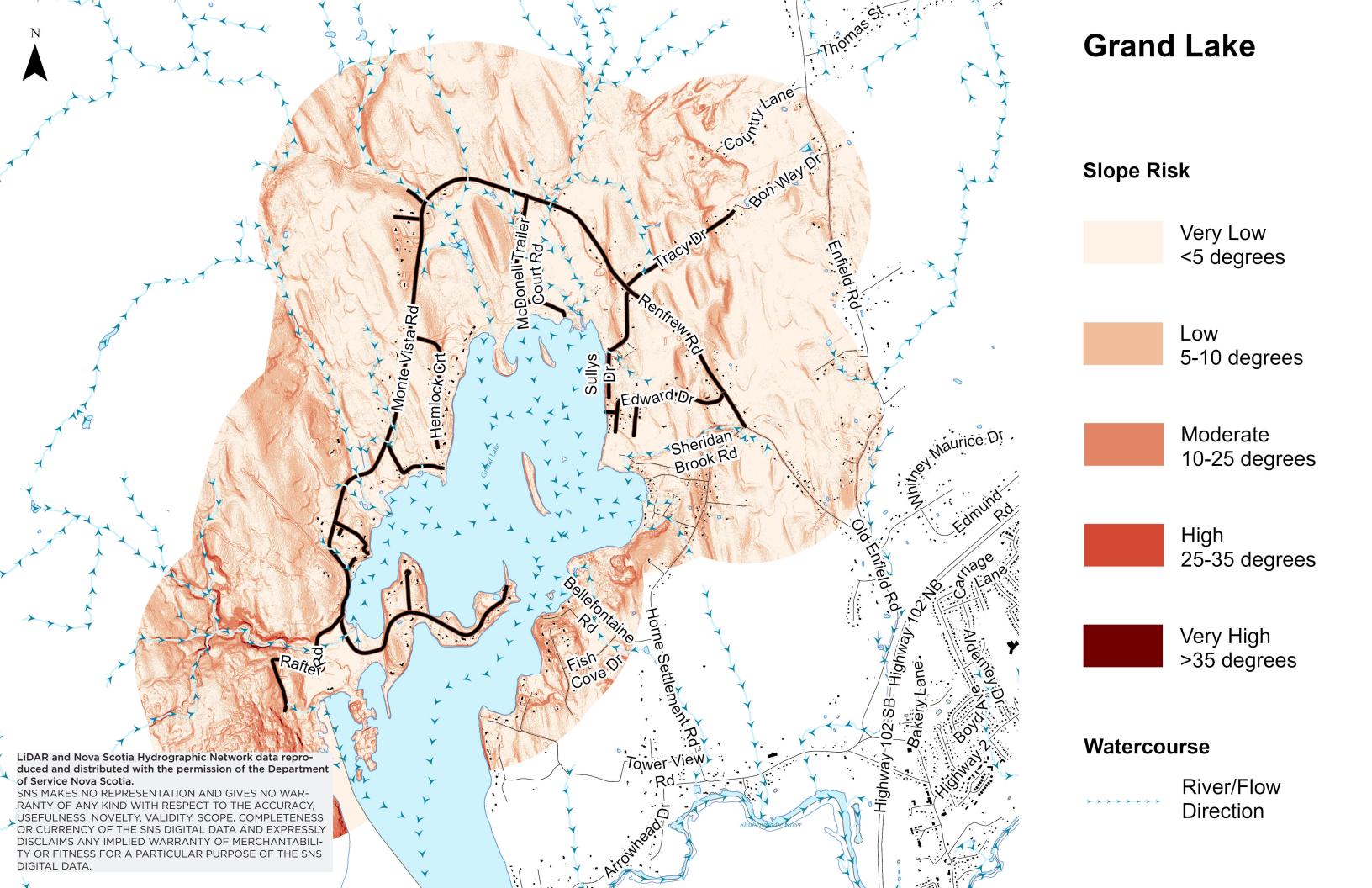
The majority of lots are over 1 acre in size. There are some smaller lots located around the shoreline of Grand Lake. The type of housing is mainly single unit dwellings with a variety of housing ages and sizes. There are two campgrounds with RVs and Campers for seasonal use.

#### **CONSIDERATIONS**

There may be one small farm with livestock evacuation considerations. There are unofficial camps located on Three Cornered Lake where property owners could be located without the knowledge of EMO officials.

There are a variety of forestry roads that run through the forested terrain beyond the developed area. These roads are not signed and could cause confusion if a resident was to use them during an emergency situation.





#### **MOUNT UNIACKE - OLD MINES ROAD**



#### **GEOGRAPHY**

The home located farthest from the Old Mines Road access to Highway 1, is approx. 3.3 km. The surrounding terrain is mostly woodland. The majority of the surrounding woodland is comprised of softwood, with pockets of mixedwood. Only one watercourse appears to intersect with Old Mines Road.

Number of Roads: 3 Number of public roads: 3 Number of Private Roads: 0

#### **DEMOGRAPHICS**

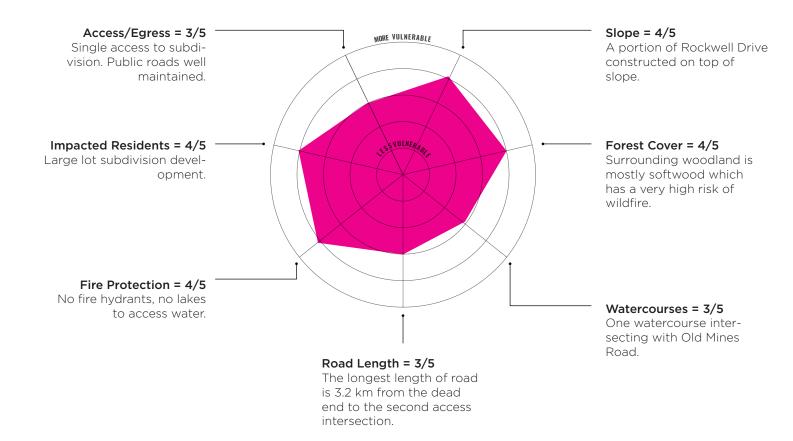
Number of lots: 169

Number of dwelling units: 149 Approx. Potential Population: 347

#### **INFRASTRUCTURE & AMENITIES**

- Royal Canadian Legion Branch 165
- Baseball Fields

#### **VULNERABILITY ASSESSMENT**

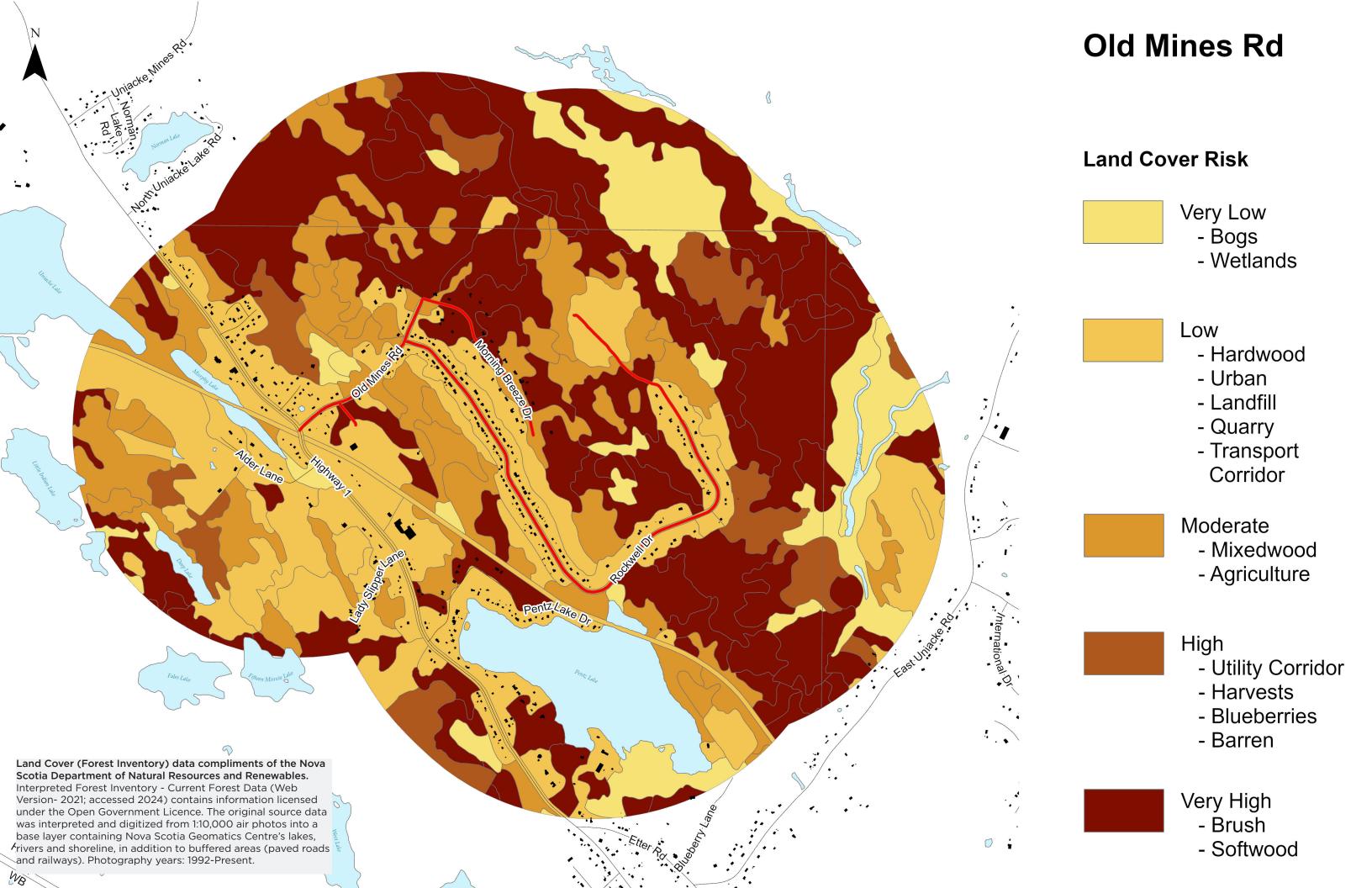


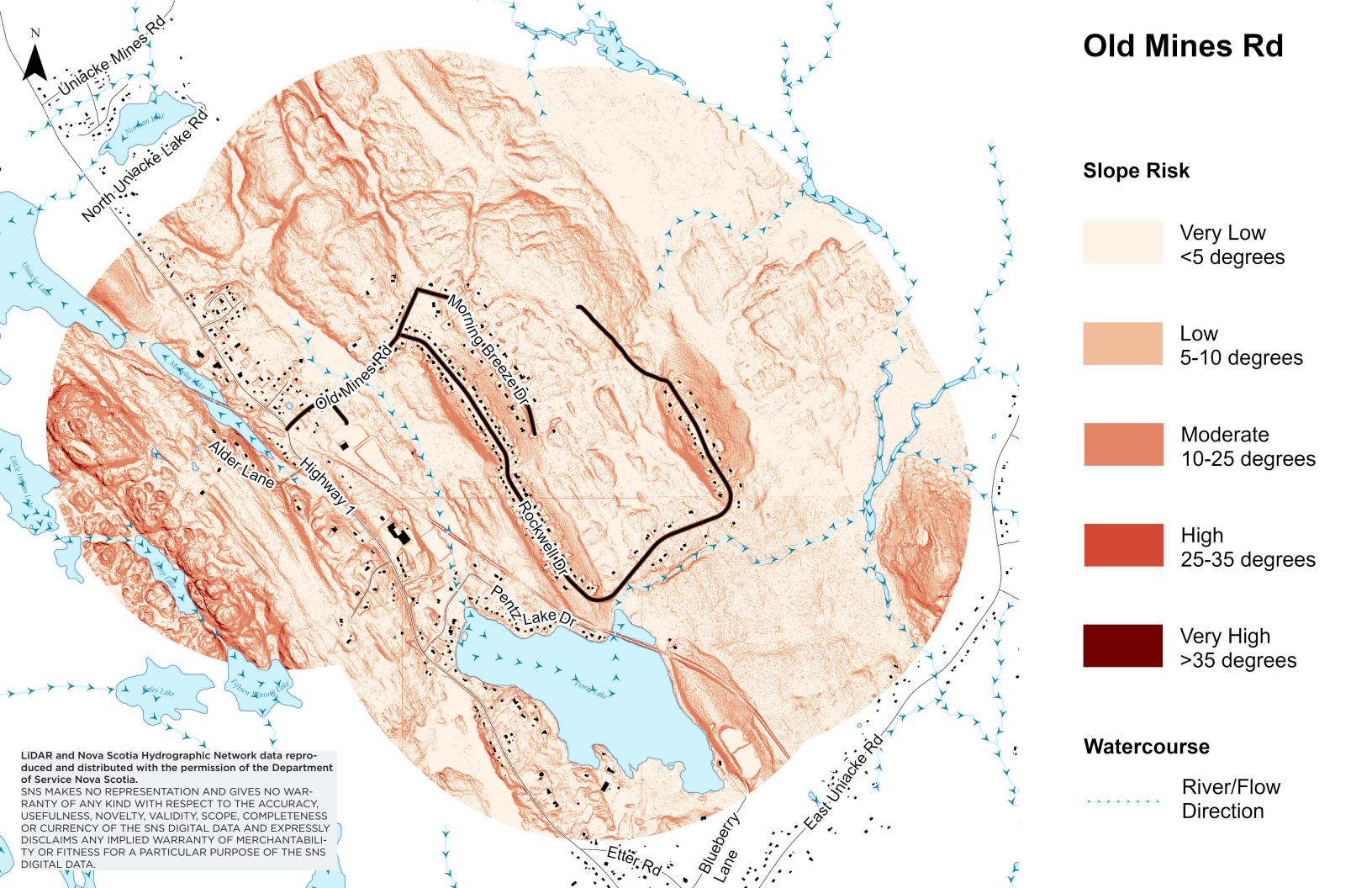
#### HOUSING

Housing is mainly single unit dwellings with a few accessory dwelling units. Lots are a mix of sizes ranging from 1,625 m<sup>2</sup> to over 4,050 m<sup>2</sup>. All homes are serviced with on-site well and septic.

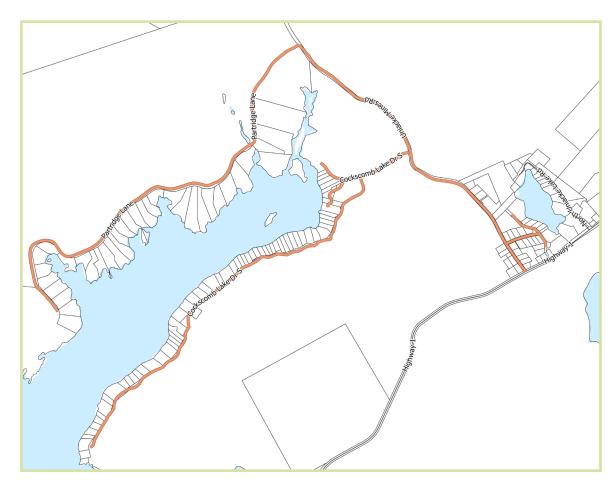
#### CONSIDERATIONS

The area is located in the Mount Uniacke Growth Management Area, which means that Council has identified the area as having a future growth potential. Under current regulations all future development will have public roads.





#### **MOUNT UNIACKE - UNIACKE MINES ROAD**



#### **GEOGRAPHY**

The home located farthest from the Uniacke Mines Road access to Highway 1 is approx. 5 km. The surrounding terrain is mostly woodland, with a portion of the area bordering Cockscomb Lake. Over 50% of the surrounding woodland is softwood, which has a very high risk for forest fires. There are also pockets of hardwood and wetlands. One watercourse intersects with Uniacke Mines Road and multiple watercourses intersect with Partridge Lane, which is a private road.

Number of Roads: 5 Number of public roads: 3 Number of Private Roads: 2

#### **DEMOGRAPHICS**

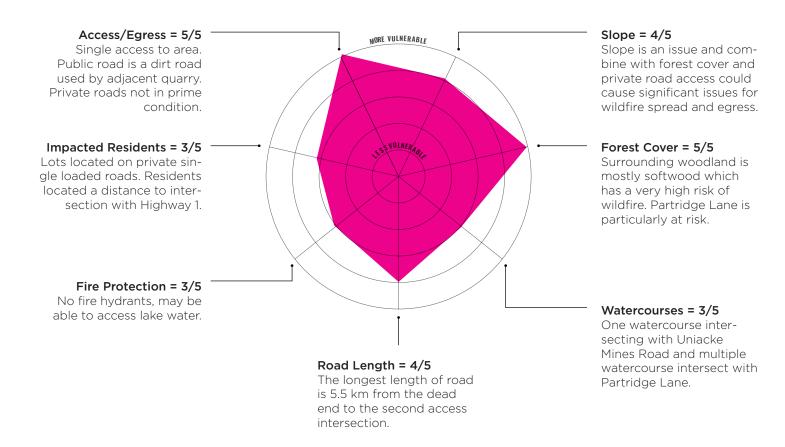
Number of lots: 138 Number of dwelling units: 120

Number of dwelling units: 120 Approx. Potential Population: 288

#### **INFRASTRUCTURE & AMENITIES**

- Quarry owned by Northumberland Capital Corp. Inc.
- Municipal Open Space Parcel on Partridge Lane.

#### **VULNERABILITY ASSESSMENT**

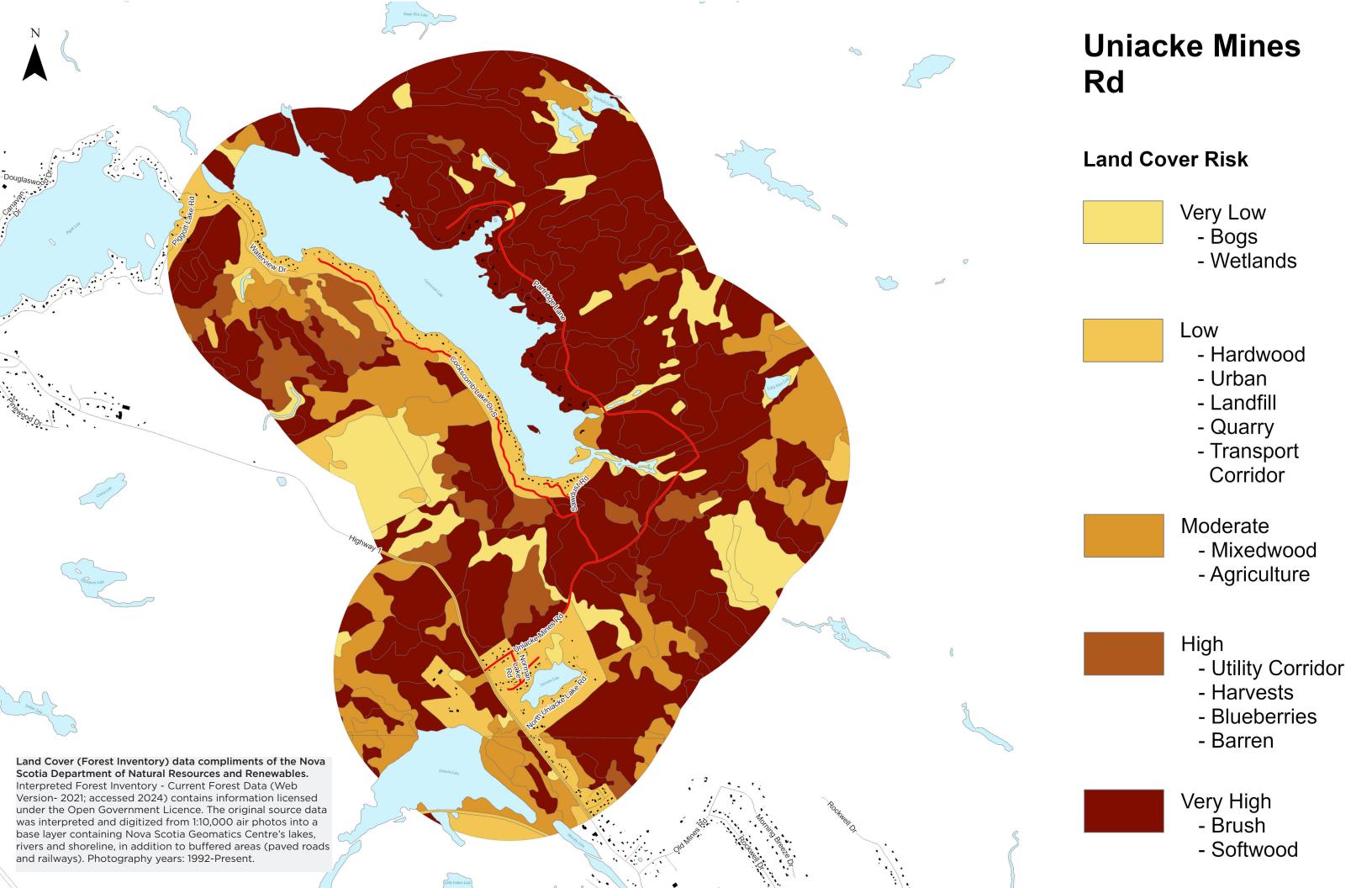


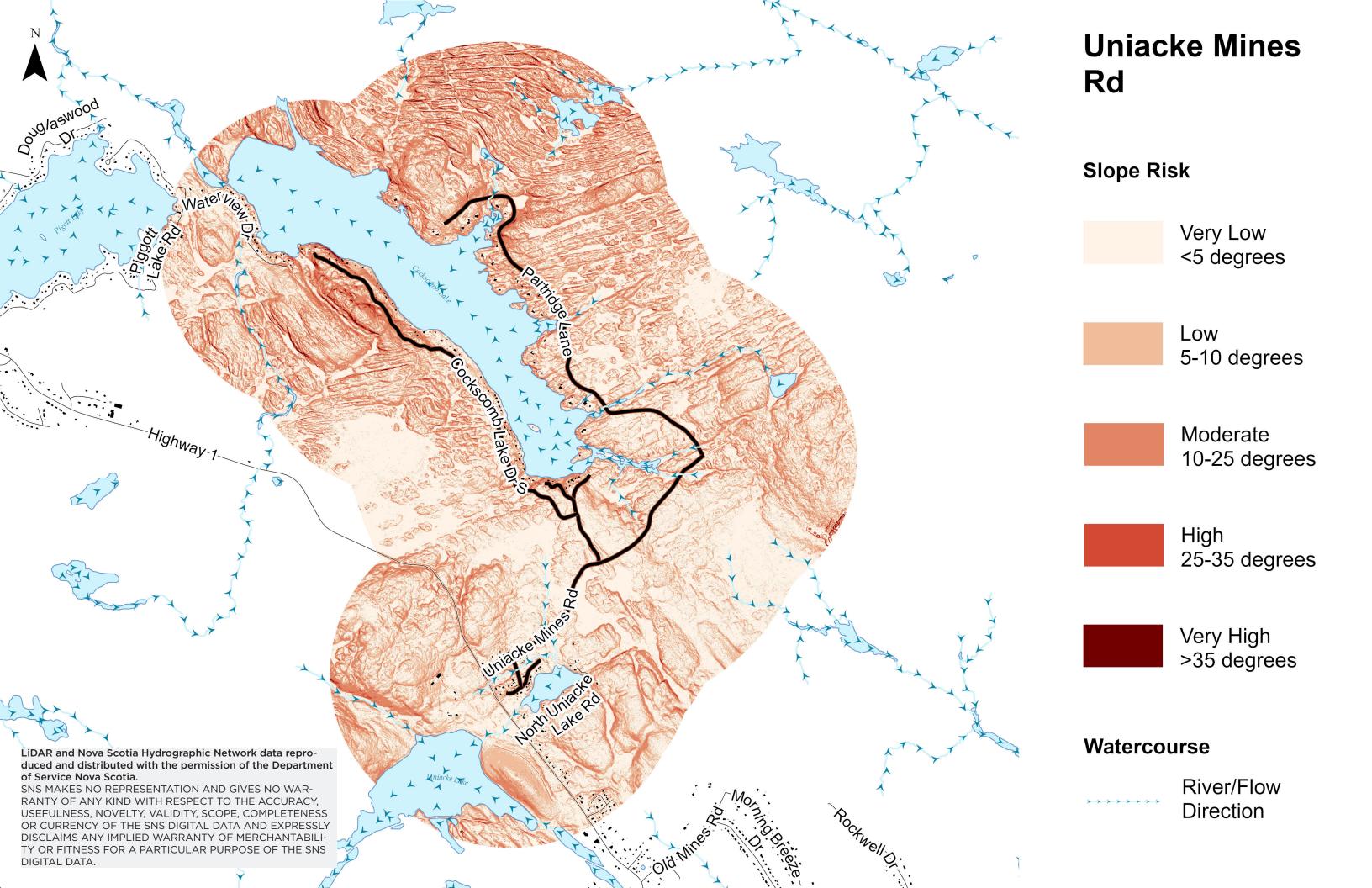
#### **HOUSING**

Housing are mainly single unit dwellings with a mix of permanent and seasonal dwelling units. The majority of lots are small with on-site services. Cockscomb Lake Drive and Partridge Lane are both single loaded roads.

#### **CONSIDERATIONS**

All roads located in the area are gravel roads. According to a resident, Cockscomb Lake Drive has had wash out issues during past heavy rainfall events.





#### **EAST UNIACKE - LAKECREST DRIVE**



#### **GEOGRAPHY**

The home located farthest from East Uniacke Road access is approx. 2.6 km. The surrounding terrain is mostly woodland, with a portion of the area bordering Lewis Lake. The majority of woodland is comprised of mixedwood and softwood. One watercourse intersects with Lakecrest Drive. Jorphie Drive is located on a slope.

Number of Roads: 2 Number of public roads: 2 Number of Private Roads: 0

#### **DEMOGRAPHICS**

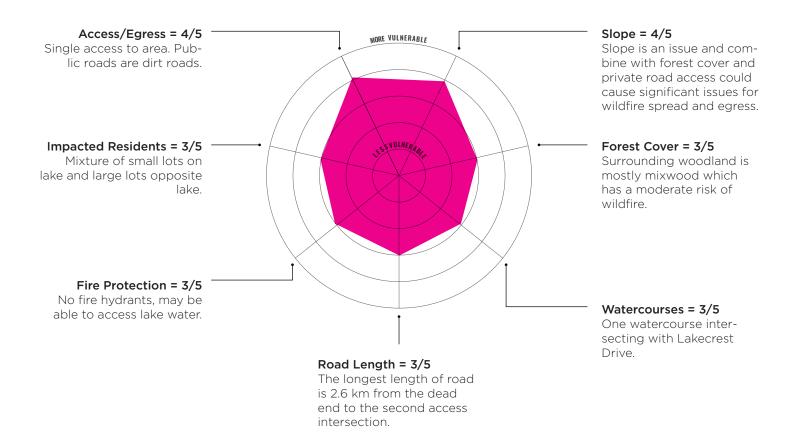
Number of lots: 120

Number of dwelling units: 99 Approx. Potential Population: 237

#### **INFRASTRUCTURE & AMENITIES**

 Municipal Open Space - Lewis Lake Boat Launch

#### **VULNERABILITY ASSESSMENT**

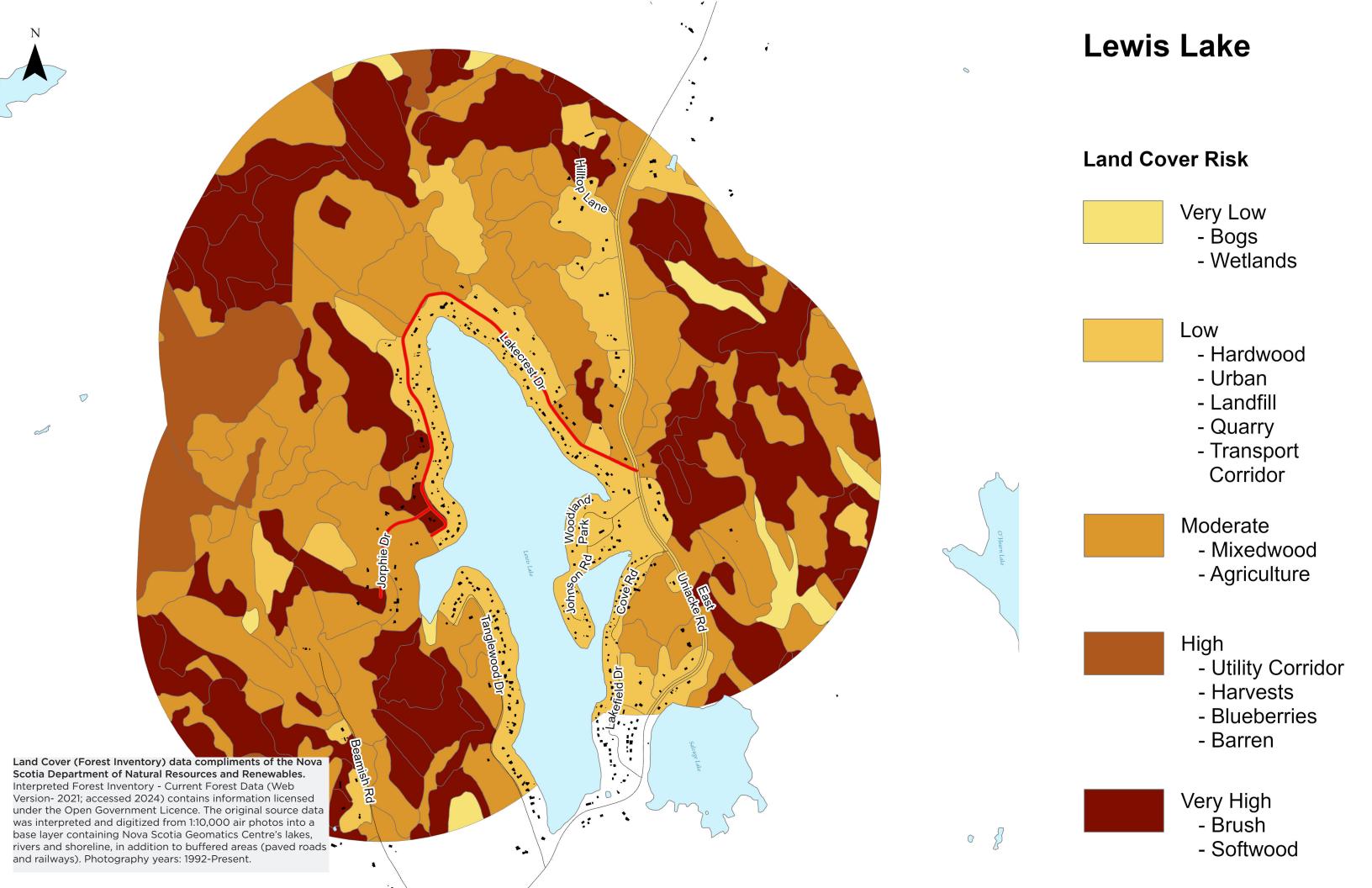


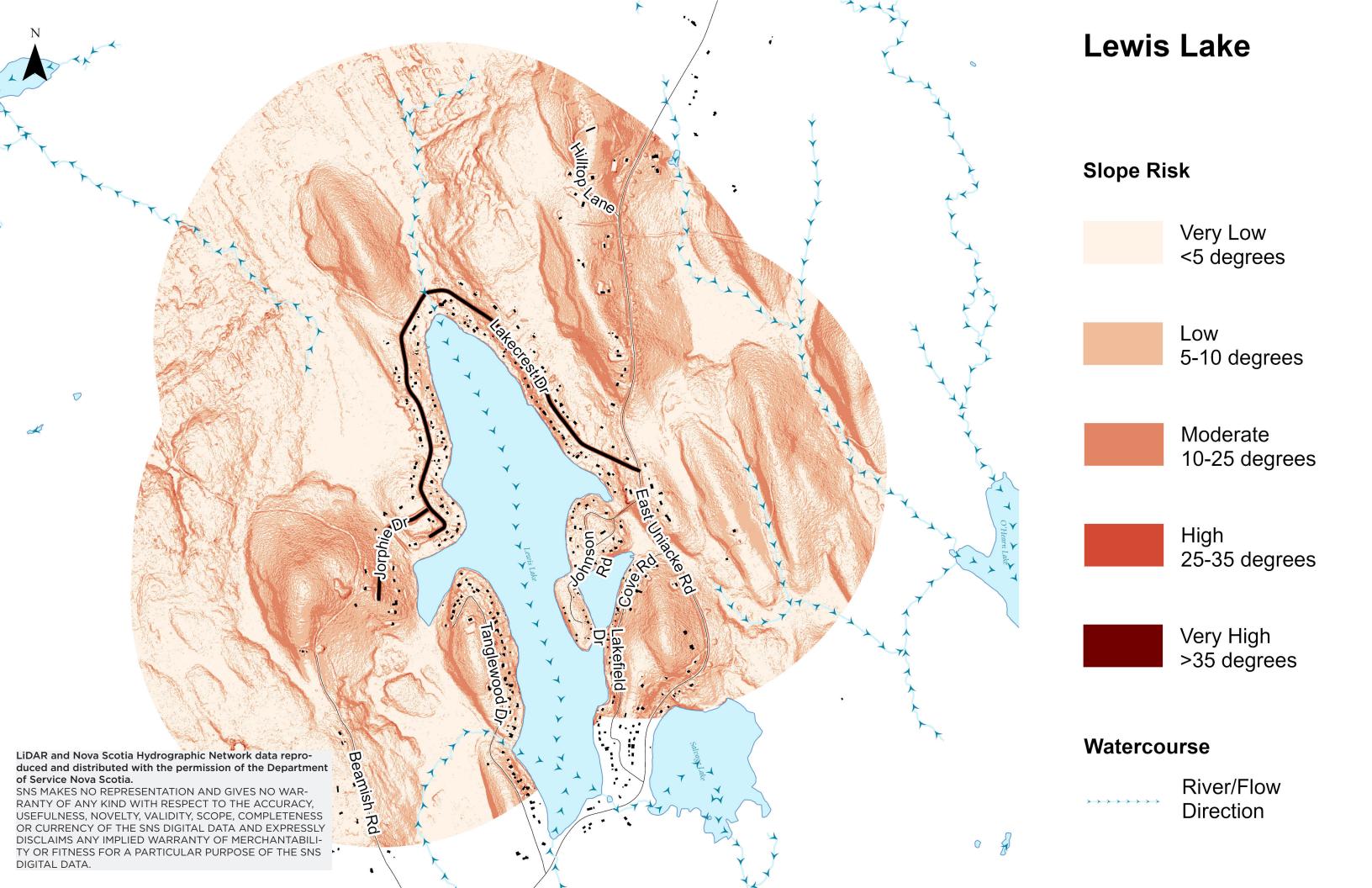
#### HOUSING

Housing are mainly single unit dwellings with on-site services. There is a mixture of lots ranging from 0.25 acres to over 1 acre.

#### CONSIDERATIONS

All roads located in the area are public gravel roads. There is a public boat launch located on Jorphie Drive.





#### **LAKELANDS - PIGGOTT LAKE ROAD**



#### **GEOGRAPHY**

The home located farthest from the Piggott Lake Road access to Highway 1 is 3 km away. The surrounding terrain is mostly woodland, with a portion of the area bordering Piggott Lake. The majority of woodland is comprised of softwood, with pockets of mixwood. At least two watercourses intersect with the private roads.

Number of Roads: 3 Number of public roads: 0 Number of Private Roads: 3

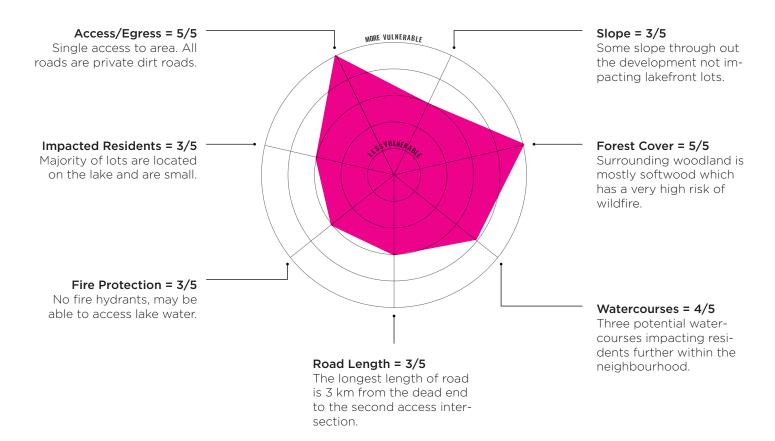
#### **DEMOGRAPHICS**

Number of lots: 143 Number of dwelling units: 98 Approx. Potential Population: 235

#### **INFRASTRUCTURE & AMENITIES**

None identified.

#### **VULNERABILITY ASSESSMENT**

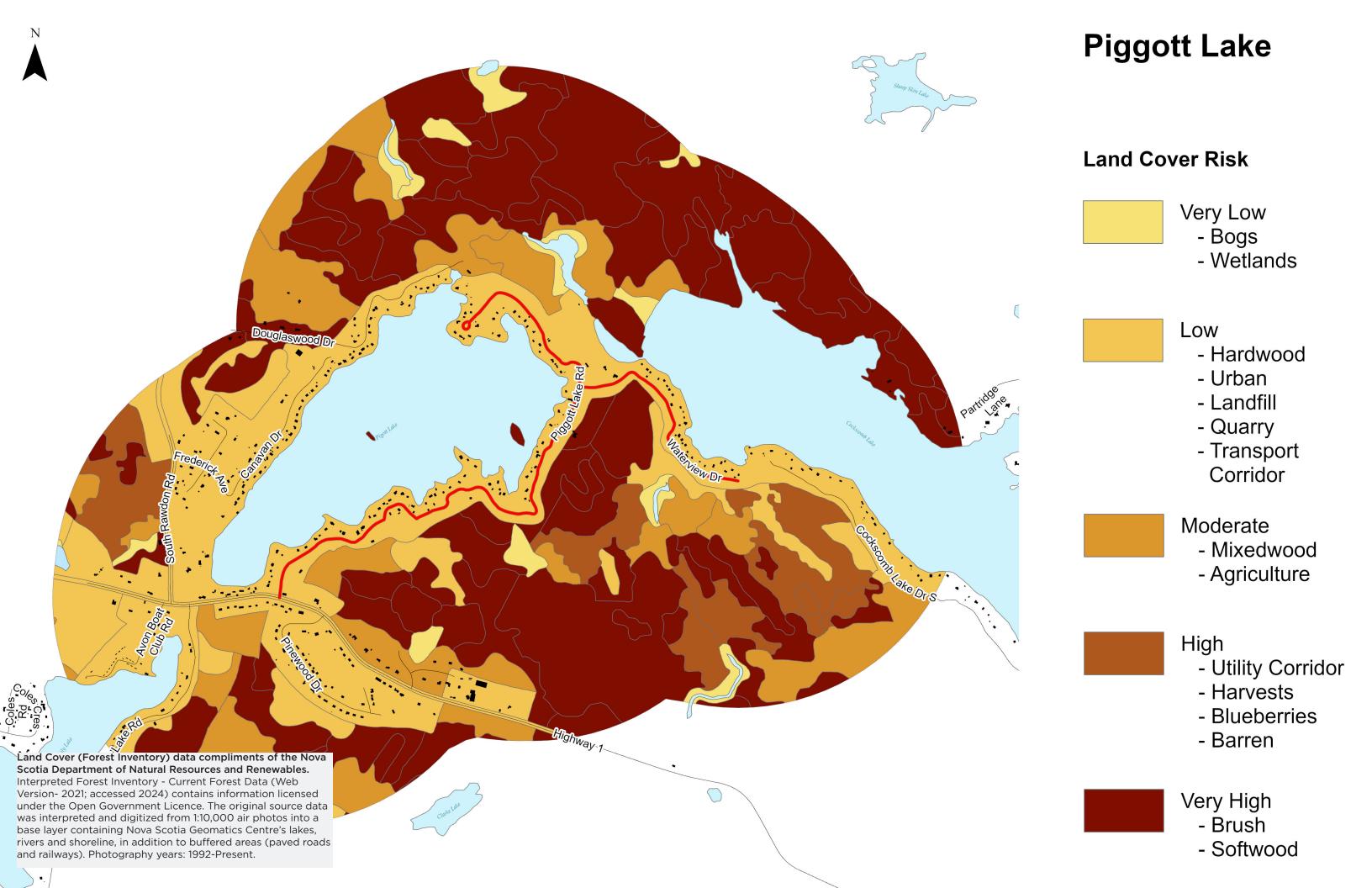


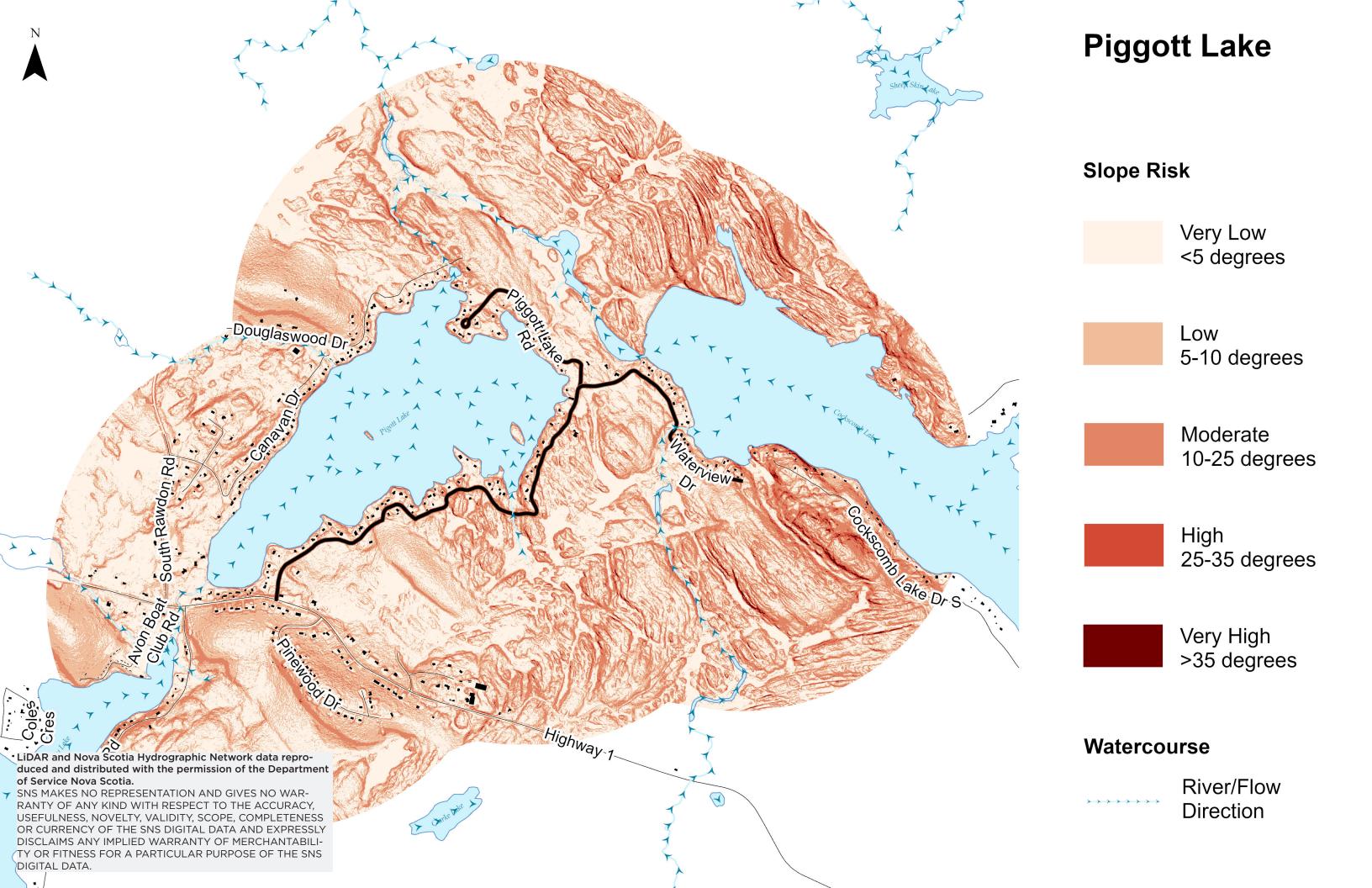
#### **HOUSING**

Housing are mainly single unit dwellings, including both permanent and seasonal dwellings, with on-site services. The majority of the lots are undersized. The roads are single loaded with homes generally located on the lake side of the road.

#### **CONSIDERATIONS**

All roads located in the area are private gravel roads. Roads are mostly single loaded roads. No public water access.





#### **ELMSDALE - KALI LANE**



#### **GEOGRAPHY**

Kali Lane is located in the South Corridor and Commercial Growth Management Area. There are currently 66 lot's located on the road but there are 2.4 hectares of undeveloped land that could increase the number of lots to 100, depending on the future land use pattern. The area is surrounded by residential development and an elementary school.

Number of Roads: 1 Number of public roads: 1 Number of Private Roads: 0

#### **DEMOGRAPHICS**

Number of lots: 66

Number of dwelling units: 153 Approx. Potential Population: 367

#### **INFRASTRUCTURE & AMENITIES**

 Four apartment buildings with driveway access on Kali Lane.

#### **VULNERABILITY ASSESSMENT**



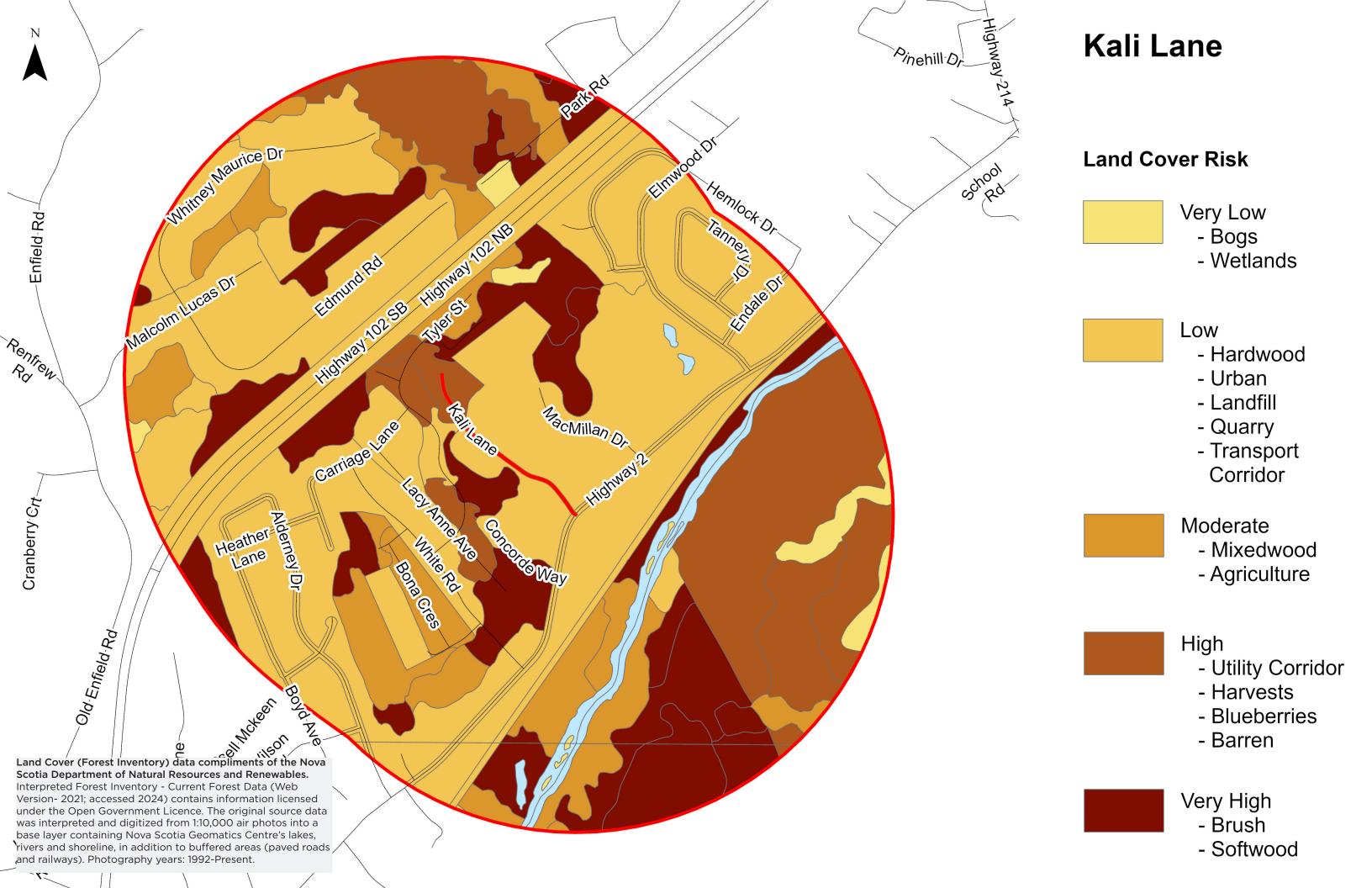
#### HOUSING

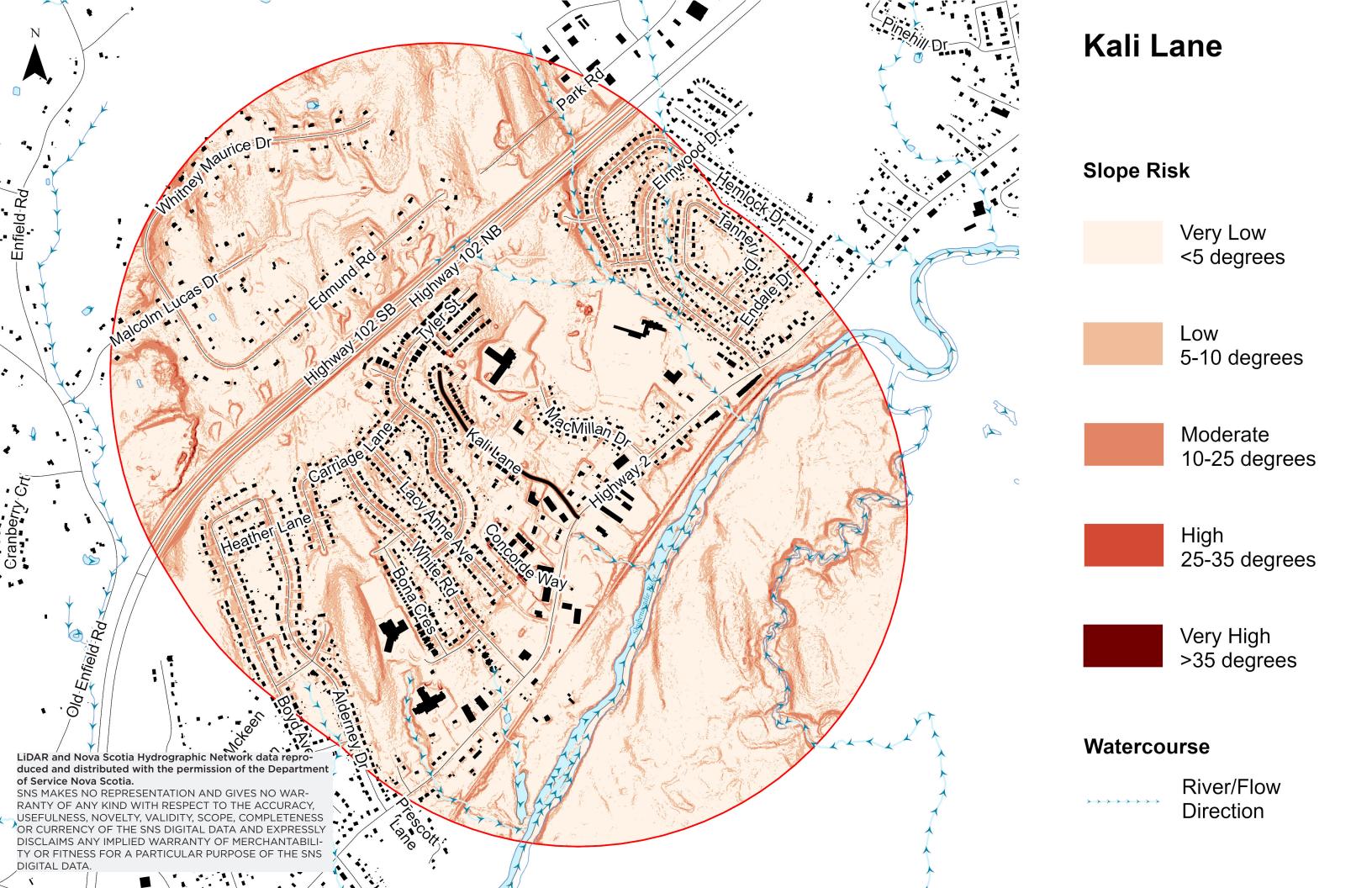
Kali Lane has a mixture of multiple unit buildings, semi-detached buildings, and single unit dwellings. There is also 2.4 hectares of undeveloped land available zoned Multiple Unit Residential (R3) Zone. The R3 Zone permits multiplexes or townhouses.

#### **CONSIDERATIONS**

Kali Lane is a single road with 2.4 hectares of land available for future development. Although, the number of lots are under 100, the apartment units result in a higher number of residents being impacted.

Kali Lane is unique in that in the future the road could service hundreds of dwelling units but have less than 100 lots.





### APPENDIX A - WEIGHTING

	Access/Egress	Impacted	Fire Protection	Road	Watercourse	Forest Cover			Total out of
Community	17%	Residents 15%	14%	Length 12%	s 10%	15%	Slope 17%	Total Points	100 %
Elmwood	10.2	! 15	2.8	4.8	10	9	3.4	55.2	55%
Grand Lake Area	13.6	5 12	7.8	12	10	9	10.2	74.6	75%
Old Mines Road	10.2	! 12	11.2	7.2	6	12	13.6	72.2	72%
Uniacke Mines									
Road	17	9	8.4	9.6	6	15	13.6	78.6	79%
Lakecrest Drive	13.6	5 9	8.4	7.2	6	9	13.6	66.8	67%
Piggott Lake									
Road	17	9	8.4	7.2	8	15	10.2	74.8	75%
Kali Lane	10.2	. 9	2.8	2.4	2	. 6	3.4	35.8	36%