

## IGLOOLIK NU COMMUNITY SUMMARY

DRAFT



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#### COMMUNITY EXECUTIVE SUMMARY



Figure 1: COMMUNITY MAP

The use and occupancy of the area around Igloolik island goes back at least four thousand years. In the late 1950s the federal government increased its administrative presence in the Arctic, and a school, nursing station, and RCMP detachment were established, along with an Anglican Mission.

Igloolik has a population of 2,049 as of the 2021 Census

The land is characterized by prominent rocky buttes and lowland plains with old, raised beaches and continuous permafrost.

Future development is planned to the north towards the airport, with some lots on hold pending archaeological studies. However most surveyed development lots are deemed technically suitable for development,

Infrastructure details reveal no significant water and sewer issues, although the treatment plant is nearing capacity and may need to be relocated. The community pumps water from South Lake into a reservoir, but there are concerns about the stability of the reservoir walls. There are no major issues with aggregate or granular supply, although the quality of the material is a concern due to high clay content. Power infrastructure is generally in good condition.

In Neighbourhood 'A', the land is flat with tundra, and the area is largely undeveloped. The surrounding built form consists mostly of one-storey buildings, with a mix of 4-plexes and single-unit dwellings in the adjacent neighbourhood. Adequate drainage measures are



necessary for housing development, and the terrain features gentle slopes rising from the shoreline. There is no existing road or power distribution infrastructure, but the soil conditions appear suitable for vehicle access.

Neighbourhood 'B' faces similar conditions, with flat tundra and some gentle slopes. The area is primarily vacant land with some residential use. The land conditions are generally suitable for housing development, provided adequate drainage measures are implemented. The road infrastructure is partially complete, and power distribution infrastructure needs to be extended to some lots.

Neighbourhood 'C' is located in the southwest area and features flat tundra, ponds, and hilly terrain. The surrounding built form consists mainly of single-unit dwellings and 4-plexes. The land conditions are suitable for housing development with adequate drainage measures. The road infrastructure is partially complete, with plans to finish additional roads by 2025. Drainage infrastructure is also partially constructed, and power distribution infrastructure is partially complete.

In summary, though Igloolik has a substantial inventory of surveyed land, this is impacted by suitability challenges and a need for infrastructure such as roads, drainage or power. Without action, a lack of suitable land may pose a moderate risk to new housing within the next five years. Risks can be mitigated by responsive design, infrastructure investment, utilizing redevelopment sites, and efficient use of land.



#### COMMUNITY LAND GAP ASSESSMENT



Figure 2: LAND SUPPLY RISK TO 2030 (existing infrastructure only)

#### Overview

For more information, see L4H Nunavut Land Gap Assessment charts and L4H Guides.

The Community Land Gap Assessment chart estimates the risk for a shortage of suitable land prior to 2030. L4H extracted the GN's land inventory (legally surveyed, vacant, and greater than  $500\text{m}^2$  in area), and adjusted for lots known to be already reserved or leased. Infrastructure Risk and a Land Suitability Risk factors were applied to arrive at an estimate of suitable, build-ready land, which was compared to estimated land needs.



#### Housing Supply and Density Scenarios

Risk assessment scenarios allow for variables in the rate of new home supply ("Very Fast" assumes Nunavut 3000 targets; "Fast" assumes 75% Nunavut 3000 targets) and the amount of land required for each new home ("Mixed Density" assumes public housing at 275m² per unit and other housing at 675m² per unit; "Lower Density" assumes all housing averaging 675m² per unit).

#### Land Suitability Risk Factor

An overall Land Suitability Risk Factor was applied based upon social-cultural, legal, technical, environmental, and constructability characteristics. A High-risk assessment was assumed to reduce available lots by 40%; a Moderate risk assessment was assumed to reduce available lots by 20%.

#### Infrastructure Risk Factor

An overall Infrastructure Risk Factor was applied based upon the general status, condition, and capacity of the roads and drainage, power and water/wastewater services to development areas and lots. A High-risk assessment was assumed to reduce available lots by 40%; a Moderate risk assessment was assumed to reduce available lots by 20%. Timely infrastructure improvements can be expected to reduce the overall risk of land shortages.

#### COMMUNITY - PLANNING AND LANDS

#### **Community Name**

Igloolik

#### Community Identifier Number

230

#### **Demographic Characteristics**

Current Population: 2,049 (2021 Census)

#### Future growth area

2024 L4H Tour: SAO indicated future subdivisions would be developed to the northwest of hamlet past airport.



#### **COMMUNITY - GENERAL**

#### Community geographic and historical context

(www.gov.nu.ca)The present community of Igloolik dates back to the late 1950's and the federal government's increased administrative interest in the Arctic. By the mid-1960's a school, nursing station, and RCMP detachment were permanently established, as well as an Anglican Mission (1959) and the Igloolik Co-operative Ltd. (1963). Many Igloolik residents are descended from members of the Qidlarssuaq migration from Greenland in the 1800's.

The first permanent presence of outsiders in Igloolik came after the establishment of a Roman Catholic Mission in the 1930's. By the end of the decade, the Hudson's Bay Company had also set up a post on the island. Igloolik grew rapidly as Inuit families from surrounding camps moved into the community to access services offered by the government.

(QTC) Before services and people were concentrated at the present hamlet, Igloolik, meaning, "there is a house there," was the name given to a cluster of large pre-contact dwellings east of the present community. The use and occupancy of the area goes back at least four thousand years.

#### Community Input - Development Priorities or Concerns

2024 L4H Tour: SAO wants to prioritize redeveloping abandoned units. Seeking \$7M in funding to remediate asbestos in former hamlet office and Arctic College residence to repurpose them as Youth Centre. Indicated ok with large multiplexes, housing need is so great. Would like to see NHC multiplexes on east end of hamlet reopened. Also indicated future subdivisions would be developed to the northwest of hamlet past airport.

### Local or Traditional Knowledge - Land Suitability (technical)

2023 NHC Tour: some lots are on hold subject to archeological study.

#### Notable Land Form Characteristics

2020 Tetra Tech Technical Report: Igloolik Island which is 18 km long, consists of prominent, rocky buttes, i.e. flat-topped hills, joined by lowland plains where a low bedrock outcrop is partly covered by old, raised beaches. (Dredge 1992).

#### General comment

2024 L4H Tour: Most lots are about 1km +/- from the many amenities and services.



#### **COMMUNITY - TECHNICAL**

#### **Geotechnical Characteristics**

2024 L4H Desktop Review: most development lots are with areas defined as technically suitable for development by 2020 Tetra Tech study.

#### **Permafrost Characteristics**

2020 Tetra Tech Technical Report: According to the Canada Permafrost Map (Heginbottom et al. 1995), the study area is located within the zone of continuous permafrost.

#### **COMMUNITY - INFRASTRUCTURE**

#### General Comment - Wastewater Infrastructure

2024 L4H Tour: Director PW indicated treatment plant nearing capacity. Would like to move it further away from hamlet, its growing and getting too close to existing plant.

Risk to planning, design or construction: High

2023 NHC Tour: The Hamlet reported no water and sewer issues.

#### General Comment - Water Infrastructure

2024 L4H Tour: Pump water from South Lake into reservoir. Director PW concerned about stability of reservoir walls, impact on capacity.

Risk to planning, design or construction: High

2023 NHC Tour: The Hamlet reported no water and sewer issues.

#### General Comment - Aggregate or Granular Supply

2024 L4H Tour: No supply issues, however, Hamlet staff noted quality issues due to clay content. No crusher but plenty of material. Concern over quality of material, higher amount of clay.

Risk to planning, design or construction: Medium

2024 L4H Desktop Review- NCCD advises hamlet has screener and will be operation for 2024 but medium risk.

2023 L4H Note: Operationally green; natural granular sources; no rock crusher needed; source capacity not known.



#### General Comment - Power Infrastructure Readiness

2024 L4H Tour: No issues noted.



### NEIGHBOURHOOD 'A'- PLANNING AND LANDS

Plan Number: 4448

Block Number: 5,6 and 7

**General Description:** North East Area (Block 5,6and 7, Plan 4448)



Figure 2: NEIGHBOUHOOD 'A' MAP

#### NEIGHBOURHOOD 'A' - GENERAL

### Land Form Characteristics - Neighbourhood

- Flat
- Tundra

Risk to planning, design or construction: Low

#### **Built Form Characteristics - Neighbourhood**

Mostly 1 storey

2024 L4H Tour: Ocean Neighbourhood still largely undeveloped. Abutting neighbourhood mix of 4-plexes and single unit dwellings



#### Important Flora/Fauna - Neighbourhood

Not Known

#### Views and Vistas - Neighbourhood

Ocean

Risk to planning, design or construction: Low

#### NEIGHBOURHOOD 'A' - TECHNICAL

#### Surface Drainage Characteristics - Neighbourhood

2024 L4H Tour: Noted that land conditions are generally suitable for housing development provided adequate drainage measures are implemented, consistent with a 2020 geotechnical and drainage report prepared by Tera Tech.

2024 L4H Tour: Drainage appears acceptable, slopes towards shoreline which appears to promote positive drainage. No large drainageways observed.

Risk to planning, design or construction: Low

### **Topography Characteristics - Neighbourhood**

2024 L4H Tour: Generally flat to gentle slopes rising from shoreline north.

Risk to planning, design or construction: Low

2023 NHC Tour: The terrain features a gentle slope leading towards the sea. Terrain is primarily rocky, with limited grass coverage.

### Permafrost Characteristics - Neighbourhood

Risk to planning, design or construction: Not known

#### Climate Characteristics - Neighbourhood

Wind

Risk to planning, design or construction: Medium

### **Environmental Contamination or Noxious Uses - Neighbourhood**



#### NEIGHBOURHOOD 'A' - INFRASTRUCTURE

#### Road Infrastructure - Neighbourhood

Planned

2024 L4H Tour: No Road infrastructure Although no roads, soil conditions appears suitable for vehicle access given informal trails and roads observed.

Risk to planning, design or construction: Medium

#### Drainage Infrastructure - Neighbourhood

Not determined

2024 L4H Tour: No Drainage infrastructure, No culverts or ditches observed

Risk to planning, design or construction: Low

#### Wastewater Utilidor Infrastructure (if applicable) - Neighbourhood

• Not applicable

**Trucked Service** 

Risk to planning, design or construction: n/a

### Water Infrastructure - Neighbourhood

• Not applicable

Trucked Service

Risk to planning, design or construction: n/a

#### Power Distribution Infrastructure - Neighbourhood

Planned

2024 L4H Tour: No Power distribution infrastructure. Infrastructure has been extended to abutting neighbourhood.



### NEIGHBOURHOOD 'B' - PLANNING AND LANDS

Plan Number: 4449

Block Number: 3 and 4

**General Description:** North East Area (Block 3 and 4 Plan 4449)

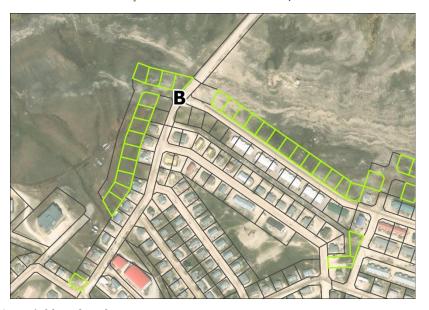


Figure 3: Neighbourhood B Map

#### NEIGHBOURHOOD 'B' - GENERAL

### Local or Traditional Knowledge - Neighbourhood

2023 NHC Tour: Lots 1-14 are pending clarification of archaeological issues.

#### Current Land Uses and Activities - Neighbourhood

- Vacant Land
- Residential

Risk to planning, design or construction: Low

#### Land Form Characteristics - Neighbourhood

- Flat
- Tundra



#### **Built Form Characteristics - Neighbourhood**

Mostly 1 storey

Mainly 4-plexes, some single unit dwellings

Risk to planning, design or construction: Low

### Important Flora/Fauna - Neighbourhood

Not Known

#### Views and Vistas - Neighbourhood

- Tundra
- Cemetery on hill to northwest

Risk to planning, design or construction: Low

#### NEIGHBOURHOOD 'B' - TECHNICAL

### Geotechnical Characteristics - Neighbourhood

L4H 2024: Noted that land conditions are generally suitable for housing development provided adequate drainage measures are implemented, consistent with a 2020 geotechnical and drainage report prepared by Tetra Tech.

2020 Tetra Tech Report: Generally, sand/granular mix overlain by tundra. Appears stable.

Risk to planning, design or construction: Low

#### Surface Drainage Characteristics - Neighbourhood

2024 L4H Tour: Noted that land conditions are generally suitable for housing development provided adequate drainage measures are implemented, consistent with a 2020 geotechnical and drainage report prepared by Tetra Tech.

Block 3 - Drainageways on north and south ends of neighbourhood, some lots potentially impacted

Block 4 - Potential drainageway to north of neighbourhood. Ponding observed in neighbourhood.



#### Topography Characteristics - Neighbourhood

2024 L4H Tour: Block 4: Generally flat

Block 3: Flat to gentle slope rising to the north from existing road

Risk to planning, design or construction: Low

#### Permafrost Characteristics - Neighbourhood

Risk to planning, design or construction: Not known

#### Climate Characteristics - Neighbourhood

2024 L4H Tour: Potential risk of periodic flooding from nearby drainageways

Risk to planning, design or construction: Medium

#### NEIGHBOURHOOD 'B' - INFRASTRUCTURE

#### Road Infrastructure - Neighbourhood

Partially Complete

2024 L4H Tour: Block 4 - Complete, Roads in Good Condition

2023 NHC Tour: Lots 5,6, 25-29 - Convenient road access is established. Roads may be needed to facilitate access onto undeveloped lots (Lots 1-3, 7-15; Block 3; Plan 4449)

Risk to planning, design or construction: Medium

#### Drainage Infrastructure - Neighbourhood

Planned

2024 L4H Tour: Block 3 - No culverts or ditches observed. Infrastructure likely needed to address waterlogged soil conditions observed.

2024 L4H Tour: Block 4 - No ditches observed. One culvert observed, may be undersized.

Risk to planning, design or construction: Medium

#### Wastewater Utilidor Infrastructure (if applicable) - Neighbourhood

Not applicable

Trucked service



### Water Infrastructure - Neighbourhood

• Not applicable

Trucked service

Risk to planning, design or construction: n/a

#### Power Distribution Infrastructure - Neighbourhood

• Partially Complete

2024 L4H Tour: Block 3 - Distribution infrastructure needs to be extended for Lots 1-3, 7-15; Block 3;

2024 L4H Tour: Plan 4449 Block 4 - Complete

2023 NHC Tour: Lots 25-29 are already connected to a reliable power source Lots 5-6

Power pole installation is required



### NEIGHBOURHOOD 'C' - PLANNING AND LANDS

Plan Number: 3916 Block Number: 2

General Description: South West Area (Block 2 Plan 3916)



Figure 3: Neighbourhood C Map

### NEIGHBOURHOOD 'C' - GENERAL

### Local Input Development Priorities or Concerns - Neighbourhood

2024 L4H Tour: SAO indicated additional road(s) for neighborhood to be completed by 2025.

### Land Form Characteristics - Neighbourhood

- Flat
- Tundra
- Pond
- Hilly



#### **Built Form Characteristics - Neighbourhood**

Mostly 1 storey

Mainly Single Unit Dwellings and 4-plexes in adjacent neighborhood.

Risk to planning, design or construction: Low

#### Important Flora/Fauna - Neighbourhood

Not Known

#### Views and Vistas - Neighbourhood

- Tundra
- Ocean

Risk to planning, design or construction: Low

#### NEIGHBOURHOOD 'C' - TECHNICAL

### Geotechnical Characteristics - Neighbourhood

L4H 2024 Tour: Noted that land conditions are generally suitable for housing development provided adequate drainage measures are implemented, consistent with a 2020 geotechnical and drainage report prepared by Tetra Tech.

2020 Tetra Tech Report: Mainly tundra overlain sand/granular mix, appears suitable for housing.

Risk to planning, design or construction: Low

#### Surface Drainage Characteristics - Neighbourhood

2024 L4H Tour: Noted that land conditions are generally suitable for housing development provided adequate drainage measures are implemented, consistent with a 2020 geotechnical and drainage report prepared by Tetra Tech.

Two main drainageways run generally west to east through neighbourhood. Receives drainage from lands above, may pose issue without new drainage infrastructure

Risk to planning, design or construction: Medium

#### Topography Characteristics - Neighbourhood

2024 L4H Tour: Steeper slope close to beach/shoreline then becomes gentler slope Risk to planning, design or construction: Medium



#### Permafrost Characteristics - Neighbourhood

Risk to planning, design or construction: Not known

#### Climate Characteristics - Neighbourhood

2024 L4H Tour: Part of neighborhood closest to beach may be vulnerable to sea level rise.

Risk to planning, design or construction: Low

### NEIGHBOURHOOD 'C' - INFRASTRUCTURE

#### Road Infrastructure - Neighbourhood

• Partially Complete

2024 L4H Tour: Roughly 50 percent of planned roads either constructed or will be constructed by 2025. (No road constructed for Lots 25-36) Roads on Road Reserve R30 (CGS PALS) complete, section of R28 next to Lot 6 Block 2 Plan 3916 completed. Rest of road on R29 and part of R28 to be completed by 2025.

Risk to planning, design or construction: Medium

#### Drainage Infrastructure - Neighbourhood

Not Determined

2024 L4H Tour: Drainage infrastructure partially constructed. (No drainage infrastructure constructed for Lots 25-36) Needed to address runoff from areas upland from neighborhood

Risk to planning, design or construction: Medium

#### Wastewater Utilidor Infrastructure (if applicable) - Neighbourhood

Not applicable

Trucked service

Risk to planning, design or construction: n/a

#### Water Infrastructure - Neighbourhood

Not applicable

Trucked service



### Power Distribution Infrastructure - Neighbourhood

• Partially Complete

2024 L4H Tour: Power distribution infrastructure partially constructed.(No power distribution infrastructure constructed for Lots 25-36)



### **PHOTOGRAPHS**

From 2024 NHC and L4H Community Tour











**APPENDICES** 



## ΔレͻϲϷ<sup>ς</sup>διος LAND FOR HOMES IGLUQPIURVIKHAT

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