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LAND FOR HOMES
IGLUQPIURVIKHAT

PANGNIRTUNG NU

COMMUNITY SUMMARY

DRAFT

DRAFT January 2025

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COMMUNITY EXECUTIVE SUMMARY

Figure 1: COMMUNITY MAP

Pangnirtung, located in Nunavut, has a population of 1,504 as of the 2021 Census. The community is historically significant for its rich habitat for marine mammals and its history of permanent habitation beginning in 1921 around a Hudson's Bay Company trading post.

Development priorities include building staff housing and exploring funding options for capacity building. Most new development lots are 1-2 km away from amenities and services, and the bridge connecting the east and west parts of the hamlet is not intended to be a permanent replacement, presenting challenges for moving materials and equipment. There is a lack of reliable geotechnical and surface drainage information, creating higher risks. The extreme wind conditions in Pangnirtung necessitate appropriate design and engineering for construction projects.

Infrastructure challenges include the need for a functional excavator for gravel processing and the delay in power pole installation until 2025.

Neighbourhood 'A' is mostly vacant land with some commercial use, characterized by mountains, tundra, fjord, and moderate slopes. The area is vulnerable to storm surges, sea level rise, and flooding due to seasonal drainage and possible permafrost melt. Overall, the report emphasizes the need for updated community planning, addressing infrastructure challenges, and ensuring the safety and durability of structures in Pangnirtung.

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

COMMUNITY LAND GAP ASSESSMENT

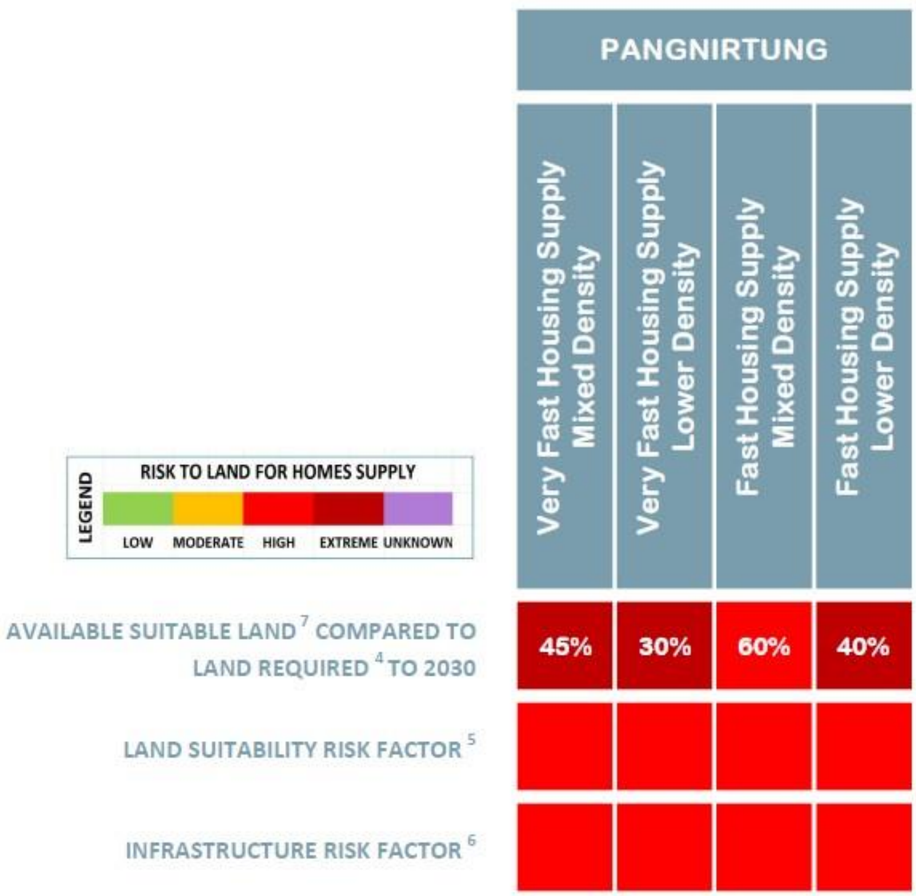

Figure 2: LAND SUPPLY RISK TO 2030 (existing infrastructure only)

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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 $500m^2$ 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 $275m^2$ per unit and other housing at 675m2 per unit; "Lower Density" assumes all housing averaging $675m^2$ 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.

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COMMUNITY - PLANNING AND LANDS

Community Name

Pangnirtung

Community Identifier Number

250

Demographic Characteristics

Current Population: 1,504 (2021 Census)

Future Growth Area Data

2023 NHC Tour: Phase 4 Uptown Expansion area seven lots requires additional investigation to assess suitability

COMMUNITY - GENERAL

Community geographic and historical context

(Source-Qikiqtani Truth Commission Community Histories 1950–1975): Pangnirtung has a population of over 1,300 and is the third largest community in Qikiqtaaluk.

The hamlet is situated in a rich habitat for marine mammals, historically significant for its abundant wildlife. Historically, people lived densely around the islands and shorelines of Cumberland Sound.

Permanent habitation in the hamlet began in 1921. The community grew around a Hudson’s Bay Company (HBC) trading post, established in 1921. This attracted the RCMP in 1923, an Anglican Mission in 1926, and a government hospital in 1930. Whaling Era (1824–1919): Scottish and American whalers established permanent stations in Cumberland Sound around 1860.

This era brought material and cultural changes but also significant population losses due to disease and the near extinction of the bowhead whale. Traditional Economy (1921–1962):

Population scattered into ilagiit nunagivaktangit (traditional camps), living off hunting, trapping, and trading with the HBC. Traded sealskins, seal oil, and fox pelts for imported goods. Resettlement Era (1962–1970): Government officials and services expanded in Pangnirtung. The hunting and trapping economy was disrupted, leading to permanent relocation to the settlement by 1970.

Community Input - Development Priorities or Concerns

2024 L4H Tour: Outgoing SAO indicated staff housing is an issue. Indicated Land Development Fund is in deficit.

2024 NHC Tour: Hamlet interested in building staff housing and exploring funding options to build staff housing. Hamlet interested in capacity building.

General Comment

2024 L4H Desktop Review: Most new development lots are 1-2km away from amenities and services Infill and development opportunities might contribute to 10% of the land need.

2024 NHC Tour: The bridge connecting the east and west parts of the hamlet is not intended to be the permanent replacement to the former bridge. The bridge is one lane and may present challenges to moving material and equipment from the sealift landing to the new subdivision.

2023 NHC Tour: Council may have rezoned the municipal reserve area. (to be verified)

COMMUNITY - TECHNICAL

Geotechnical Characteristics

2024 L4H Desktop Review: Lack of reliable technical information creates higher degree of risk.

Surface Drainage Characteristics

2024 L4H Desktop Review: Lack of reliable technical information creates higher degree of risk.

Climate Characteristics

2023 NHC Tour: Pangnirtung experiences extreme wind conditions, and any construction project in this area should prioritize appropriate design and engineering to ensure the safety and durability of structures. Wind load calculations and wind-resistant building materials should be integral parts of the construction planning and design process.

COMMUNITY - INFRASTRUCTURE

General Comment - Aggregate or Granular Supply

2024 L4H Tour: Outgoing SAO indicated granular study was pending; lack of equipment and contractors to process granular is an issue.

2024 NCCD: Hamlet has their own crusher. Their excavator broke down and currently waiting on ordered parts.

2023 L4H: Limited data from Hamlet - unclear operational and source capacity. NCCD (Concentric) noted problems with 2023 granular supply "hopefully resolved"

2023 NHC Tour: Quarry study is underway but there are gravel stockpiles. The hamlet has purchased a crusher and screen to get gravel to build the road to the future development area (Phase 2B in the Community Land Use Map, CGS-PALS (2023)

Risk to planning, design or construction: Medium

General Comment - Power Infrastructure Readiness

Risk to planning, design or construction:

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NEIGHBOURHOOD 'A'- PLANNING AND LANDS

Plan Number: 3113 and 3943

Block Number:

General Description: Phase 1 East Duval Subdivision 1 (Plan 3113) and Phase 3 Subdivision 2 (Plan 3943)

Figure 2: NEIGHBOUHOOD 'A' MAP

NEIGHBOURHOOD 'A' - GENERAL

Current Land Uses and Activities - Neighbourhood

- Vacant Land
- Commercial

2023 NHC Tour: Sea cans currently occupy the Lots 718-723 Plan 3113

2024 L4H Tour: Mostly vacant

Risk to planning, design or construction: Low

Land Form Characteristics - Neighbourhood

- Mountains

- Tundra
- Next to Fjord

Moderate Slope

Risk to planning, design or construction: Medium

Built Form Characteristics - Neighbourhood

- Mostly 1 storey

2024 L4H Tour: Adjoining subdivision mix of single unit dwellings and 4-plexes

Risk to planning, design or construction: Low

Important Flora/Fauna - Neighbourhood

- Not Known

Risk to planning, design or construction: Not known

Views and Vistas - Neighbourhood

- Mountain
- Fjord

Risk to planning, design or construction: Low

NEIGHBOURHOOD 'A' - TECHNICAL

Geotechnical Characteristics - Neighbourhood

2024 L4H Tour: Bridge between river and new lots has been subject to washout - federally funded community risk study underway, however detailed drainage/geotechnical study also recommended for new subdivision.

2024 L4H Tour: Soft wet tundra

Risk to planning, design or construction: High

Surface Drainage Characteristics - Neighbourhood

2024 L4H Tour: Seasonal drainage ways, overland flow. Possible permafrost melt.

2024 NHC Tour: This subdivision area observed as “boggy”. The ground is soft and the water from the mountain drains into subdivision.

Risk to planning, design or construction: High

Topography Characteristics - Neighbourhood

2024 L4H Tour: Shore lots (Plan 3113) appear to have downslopes of about 15% away from road and less than one meter above the ordinary high-water mark. Moderate slope rising from main road to base of mountains

2023 NHC Tour: The lots718-723 Plan 3113 have generally level terrain.

Risk to planning, design or construction: Medium

Permafrost Characteristics - Neighbourhood

2024 L4H Tour: Shore lots (Plan 3113) appear to have downslopes of about 15% away from road and less than one meter above the ordinary high-water mark.

2024 L4H Tour: Signs of slumping 2023 NHC Tour: The lots718-723 Plan 3113 have generally level terrain.

Risk to planning, design or construction: Medium

Climate Characteristics - Neighbourhood

2024 L4H Tour: Potentially vulnerable to storm surge and sea level rise. Flooding due to seasonal drainage, possible permafrost melt.

Risk to planning, design or construction: Medium

Environmental Contamination or Noxious Uses - Neighbourhood

2024 L4H Tour: Dump about 1km from subdivision

Risk to planning, design or construction: Medium

NEIGHBOURHOOD 'A' - INFRASTRUCTURE

Road Infrastructure - Neighbourhood

- Planned

2024 NHC Tour: New road will be constructed in 2024.

2024 L4H Tour: Needs roads into neighborhood built to support construction due to wet, soft soil conditions.

Risk to planning, design or construction: High

Drainage Infrastructure - Neighbourhood

- Planned

2024 NHC Tour: Drainage infrastructure plans and status to be verified.

2024 L4H Tour: Infrastructure needed to manage runoff from nearby mountains, dry out soils.

Risk to planning, design or construction: High

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

- Partially Complete

2024 NHC Tour: Power poles won't be in until 2025.

2024 L4H Tour: Located on roads abutting neighborhood boundary

2023 NHC Tour: Lots 718-723 Plan 3113 have access to power

Risk to planning, design or construction: High

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PHOTOGRAPHS

(From 2024 and 2023 NHC Community Tour)

APPENDICES

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