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LAND FOR HOMES
IGLUQPIURVIKHAT

ARVIAT NU

COMMUNITY SUMMARY

DRAFT

DRAFT January 2025

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COMMUNITY EXECUTIVE SUMMARY



Figure 1: COMMUNITY MAP

Arviat, located in Nunavut's Kivalliq Region, is the southernmost mainland community in the territory with a population of 2,687 as of the 2021 Census.

The community's history is tied to the Pallirmiut Inuit, who established a trading post in 1921. Arviat faced significant challenges in the 1940s, including famine and epidemics. Permanent settlement coincided with the construction of a federal school in 1959.

The community is characterized by tundra, flat terrain, and notable views of the ocean. Technical challenges include poor native drainage, substandard road conditions, and low-quality aggregate supply.

Current development concerns include issues with new subdivision areas, a preference for rear service access for multiplex buildings, and a lack of funding for land development and infrastructure.

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Neighbourhood 'A' faces geotechnical issues and inadequate drainage infrastructure, has soft, waterlogged tundra and, making development risky without further assessments. This neighbourhood require significant infrastructure improvements before further development can proceed. A new plan of subdivision has been prepared that was not yet available on the GN PALS mapping system.

In summary, Arviat has a limited inventory of surveyed land that is further impacted by significant suitability challenges and a need for infrastructure such as roads, drainage or power. Without action, a lack of suitable land poses an extreme and immediate risk to new housing. 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 500m² 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

Arviat

Community Identifier Number

300

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General Comment on Planning and Lands

2024 NHC Tour: Need surveying for new development areas.

Demographic Characteristics

Current population

2,687 (2021 Census)

Official Community Plan

2024 NHC Tour: Community plan is being updated by Northern futures

COMMUNITY - GENERAL

Community geographic and historical context

The community of Arviat is located in Nunavut's Kivalliq Region. It is in the southernmost mainland community in Nunavut, and only the island community of Sanikiluaq is further south in the territory. (gov.nu.ca)

Arviat's history is deeply connected to the Inuit people, particularly the Pallirmiut, who were skilled traders. They established a permanent trading post in 1921, followed by the arrival of Roman Catholic and Anglican missions in the 1920s. The community faced hardships in the 1940s with famine and epidemics, leading to government relocation efforts. The construction of a federal school in 1959 and improved healthcare encouraged permanent settlement.

Community Input - Development Priorities or Concerns

2024 NHC Tour: LHO had significant concerns of the new subdivision area and geotech of the area. Preference for rear service access for multiplex buildings. Lack of funding for land development and infrastructure.

2024 L4H Tour: SAO, PLO mentioned concerns around multiplexes, "ghettoization". SAO noted huge demand for housing, particularly related to "Jordan" principle.

Council concerned about lack of space for recreational equipment, stairs (hard for elders) at multiplexes. Also suitability of surrounding lands, particularly with new development in east part of hamlet.

Housing Association interested in demolishing older housing stock due to mold, other issues. Repurposed for new housing. Concerned about NHC's plan for 10-plex at lot neat airport. (process for involving HA in development permit process?)

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Local or Traditional Knowledge - Land Suitability (technical)

2024 L4H Tour: Community concerns regarding multiplexes and lack of recreational facilities

Common Residential Building Forms

- 1 storey
- 2 to 3 storeys

Many recreational cabins

Notable Land Form Characteristics

- Tundra
- Flat
- Ocean (tides 1.2 to 3m)
- Lake

L4H Desktop review: Dillon 2020 report mentions Flat tundra terrain with numerous lakes and wetlands

Notable Flora/Fauna Characteristics

- Land mammals
- Polar bears

Risk to planning, design or construction: Medium

Notable Views and Vistas

- Ocean
- Tundra

Risk to planning, design or construction: Low

COMMUNITY - TECHNICAL

Surface Drainage Characteristics

L4H Desktop review: Dillon 2020 report mentions poor native drainage, and drainage infrastructure in poor condition causes water ponding and restricted flow.

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General Coment - Technical

2024 L4H Tour: Housing association noted that new 5-plexes already shift due to soft soils/tundra in new development area.

L4H Desktop review: Dillon 2020 report mentions poor drainage infrastructure causes water ponding and restricted flow. Lack of culverts exacerbates flooding. "The existing culverts and ditches have limited functionality due to being severely damaged or capacity restricted". "The Hamlet has raised concerns relating to challenges with seasonal drainage, requiring improvements to the existing infrastructure and drainage system."

Risk to planning, design or construction: High

COMMUNITY - INFRASTRUCTURE

Roads

L4H Desktop review: Dillon 2020 report mentions "The spring freeze-thaw conditions have resulted in substandard road conditions and increased municipal operations expenses."(page 1) "In addition, the majority of existing roads are dirt roads and do not have a normal-crown cross section; thus, leading to standing water on the roads"

General Comment - Aggregate or Granular Supply

2024 NHC Tour: 2 pits but quality of granular is low. Hamlet has no equipment and currently using private contractor EPLD.

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NEIGHBOURHOOD 'A'- PLANNING AND LANDS

Plan Number: 4377 (prior resurvey)

Block Number: 2 (prior resurvey)

General Description: Eastern resurveyed subdivision area (Block 2, 19, 20 in the new resurvey plan)

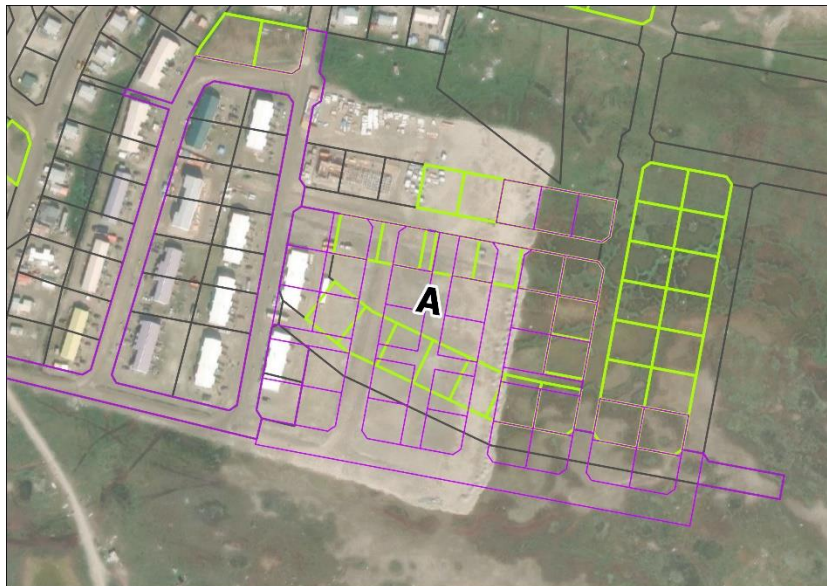


Figure 2: NEIGHBOUHOOD 'A' MAP (showing new plan of subdivision overlaid)

NEIGHBOURHOOD 'A' - GENERAL

Local Input Development Priorities or Concerns - Neighbourhood

2024 NHC Tour: New survey plan does not appear to accommodate drainage requirement. Community noted they are not installing drainage infrastructure as per design.

Local or traditional knowledge on neighbourhood land suitability (technical)

2024 NHC Tour: There is a new surveyed subdivision plan. LHO board had concerns about the development of the new subdivision because of geotech. They suggested development preferred in western edge of community. No plan in place.

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Current Land Uses and Activities - Neighbourhood

2024 NHC Tour: Concerns regarding multiplex alleys

Built Form Characteristics - Neighbourhood

- Mostly 1 and 2 storeys

Adjacent neighbourhood mainly multiplexes

Risk to planning, design or construction: Low

Important Flora/Fauna - Neighbourhood

Polar bears known to travel through neighbourhood

Risk to planning, design or construction: Medium

Views and Vistas - Neighbourhood

- Mainly tundra

Risk to planning, design or construction: Low

NEIGHBOURHOOD 'A' - TECHNICAL

Geotechnical Characteristics - Neighbourhood

Soft, waterlogged tundra

2024 L4H Tour: Trip technical participants noted that, based on their observations, that the soil conditions in the new development are not suitable for housing. They recommended a detailed geotechnical investigation be completed before any further development is undertaken and significant drainage and dewatering work likely necessary.

Council noted concerns about the suitability of the surrounding lands, particularly with the new development in the east part of the hamlet (highlighted in image).

The Housing Association noted that the new 5-plexes built near the highlighted subdivision are already shifting due to the soil conditions.

Risk to planning, design or construction: High

Surface Drainage Characteristics - Neighbourhood

2024 L4H Tour: Poor drainage, many ponds throughout neighbourhood. Particularly susceptible to excess runoff from snow melt.

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New subdivision will be vulnerable and will require careful drainage design and consideration.

2024 L4H Desktop review: Dillon 2020 report mentions "The new development area, not yet constructed, southeast of the 8th Avenue problem area, is expected to convey a relatively larger catchment that currently flows through this future development. To accommodate the larger anticipated flows, rather than relying on the lower capacity roadside ditches to convey these larger flows, a dedicated drainage easement is proposed between future residential properties to adequately convey the 2-year storm flows. This will require planning and consideration during the design of the new subdivision"

Risk to planning, design or construction: High

Topography Characteristics - Neighbourhood

2024 L4H Tour: Flat

Risk to planning, design or construction: Low

Climate Characteristics - Neighbourhood

2024 L4H Tour: Vulnerable to flooding

Risk to planning, design or construction: High

Environmental Contamination or Noxious Uses - Neighbourhood

2024 L4H Tour: Dump is south of neighbourhood

General Comment - Neighbourhood (technical data)

2024 L4H Tour: Technical members of team recommend development not take place until further drainage and geotechnical assessments can be completed to determine whether neighbourhood can be adequately dewatered.

Risk to planning, design or construction: High

NEIGHBOURHOOD 'A' - INFRASTRUCTURE

Road Infrastructure - Neighbourhood

- Planned

2024 NHC Tour: Road is partially constructed in the new subdivision.

Development of future lots requires roads be constructed first due to soil conditions

Risk to planning, design or construction: High

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Drainage Infrastructure - Neighbourhood

- Planned

2024 BCP Hamlet Call: Public works director mentioned new culverts were added in select locations in the new subdivision in Late August. Additional culverts are scheduled to be installed after spring melt 2025.

Development of future lots requires drainage infrastructure be constructed first due to soil conditions.

2024 NHC Tour: Plans for drainage construction unknown. Hamlet advised they are not constructing drainage infrastructure. Concern about stability of pad construction.

Risk to planning, design or construction: High

Wastewater Utilidor Infrastructure (if applicable) - Neighbourhood

2024 L4H Tour: Trucked service

Water Infrastructure - Neighbourhood

2024 L4H Tour: Trucked service

Power Distribution Infrastructure - Neighbourhood

- Planned

2024 NHC Tour: Power poles partially completed

General comment on neighbourhood

2024 L4H Tour: Accessing this area will require significant amounts of fill for roads and lots before construction could be considered due to the soil conditions.

Risk to planning, design or construction: High

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PHOTOGRAPHS

From 2024 NHC Community Tour



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