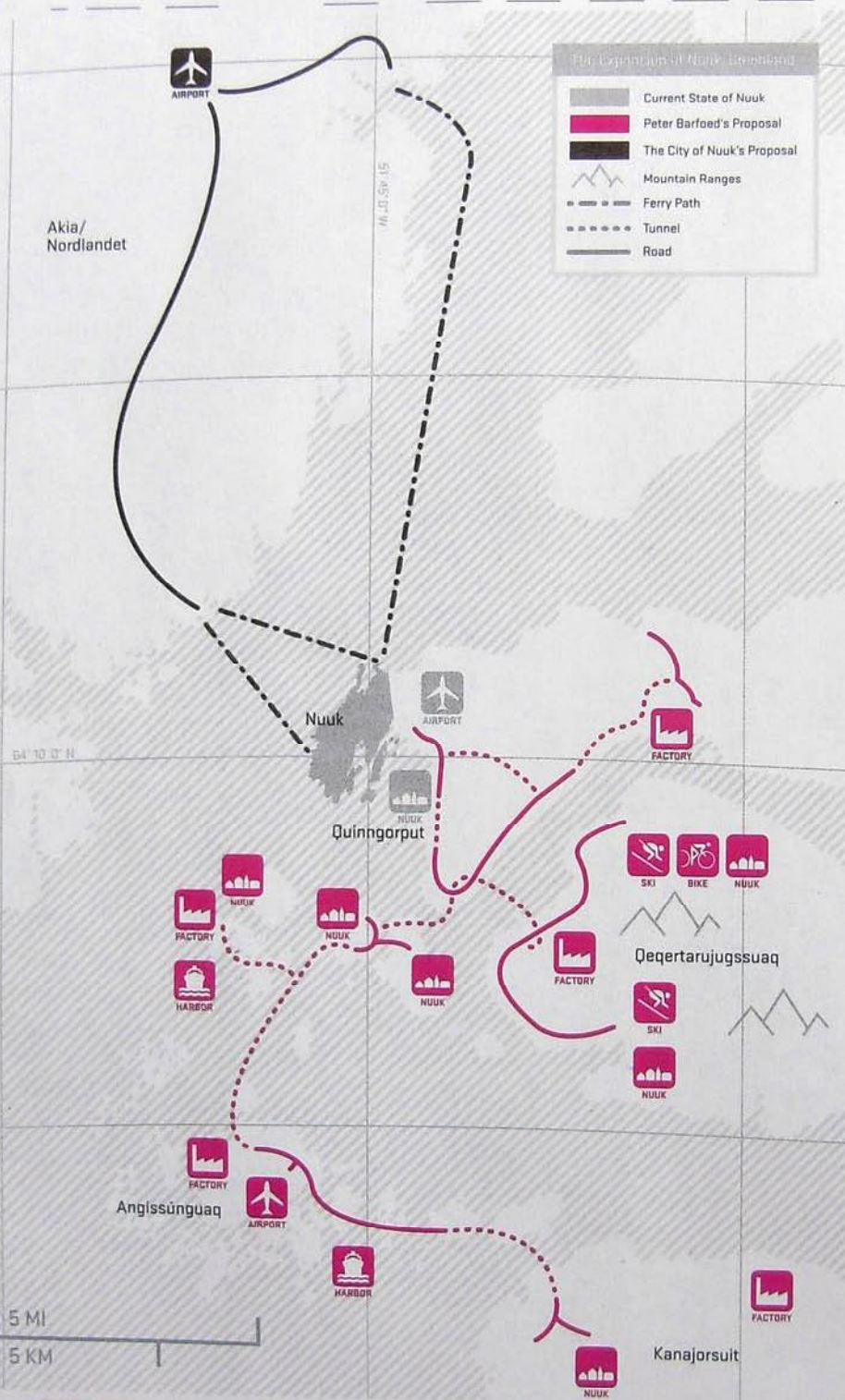


OBSERVED

planning

icebergs

infrastructure



Nuuk's vernacular architecture consists of low, brightly colored wood buildings; new construction, however, is often much taller.

Illustration by
Seista Studio
for Metropolis

Looking at Nuuk

Architect Peter Barfoed lays out his vision for the future of Greenland's capital.

Greenland's ice cap is melting, and strange things are happening in the frigid Danish province. As temperatures rise, cod are making their way into the arctic waters. Broccoli has been grown successfully in the south for the first time. Disko Bay, near the mouth of the fjord that spits out the most glaciers in the northern hemisphere, hasn't frozen over in four years. Much attention has been paid to what these conditions mean for polar species—and for the rest of the planet—but what about the 56,000 people who live on the rocky ring around the edge of the world's largest island?

Metropolis senior editor Kristi Cameron recently sought out Peter Barfoed, principal of Tegnestuen Nuuk, to talk about sustainability and planning in Greenland's capital city. Barfoed has taken part in many of Nuuk's most prominent architectural commissions—including the Katuaq Cultural Centre and the Institute of Natural Resources—since founding the firm 25 years ago. With a growing population and increasing business ties to Europe and Canada, Nuuk needs more housing and a bigger airport. But in a country where the extreme landscape prevents even building roads between cities, development is exceptionally challenging. Here, Barfoed shares his plan for the future of Nuuk and explains why the next hot ski destination may be in Greenland.

How many architecture firms are there in Greenland?

There are five companies in Nuuk—two like us, with eight people, and three small firms. I think there is one firm in Sisimiut and one in Ilulissat.

How does the planning and building process work there?

There are building sites you can submit an application for. It's simply a lottery. You're not allowed to sell these sites, continued on page 59



Faced with the need for a bigger airport, the city of Nuuk suggested a northern location across an icy fjord. Alternatively, architect Peter Barfoed (left) has proposed a southern location that, in addition to following the existing path of new development in Quinngorput, offers recreational and industrial opportunities.

OBSERVED LOOKING AT NUUK



In addition to its rocky terrain, Nuuk faces extreme weather conditions that make growth challenging.

continued from page 56 you have to build within one year once you get them, and you have to pay for sewer and water. But you don't have to pay for the land: it belongs to Greenland.

In terms of city planning, what is the focus?

Housing is the big issue, especially affordable housing. About 15,000 people live here, and maybe 400 move in each year. When there are no jobs in other cities, people move to Nuuk. And it is said that it takes at least ten years to get into social housing here. If you have money, you can move right in—there are plenty of high-rise buildings. But overall there's just not enough housing.

Contextually, there is a fair amount of tall development happening in Nuuk. Does anyone have a vision for the city and what its texture should be?

I have a vision. Which way new settlement should develop, north or south, is a big topic of discussion. The municipality has proposed developing north, and I have proposed developing south. Two-thirds of the population prefers my proposal. It started with a discussion around 1995 about lengthening the airport runway. Right now it is about half a mile long and can only accept small airplanes. Fifty percent of the people coming to Greenland are going to Nuuk, so we need a direct airport—not only for people but for fruit and vegetables.

The municipality said the current location is bad because of the mountains—the falling winds create turbulence. They wanted to put an airport on the northern side of the Godthåbsfjord, where you have to take a ferry and then go 13.7 miles by bus or car. In winter, you may not be able to continue on to the city because there are icebergs and whirlpools in the fjord. If the weather is bad, people who go to work in Nuuk would risk having to stay overnight.

So what is your plan?

I think development should be somewhat dense because people would prefer to live to the south where there is less flat land. I proposed a subsea tunnel, but then those who wanted to develop to the north thought they might be able to build one there. They did seismic tests and found that it was 2,689 feet down to the rock, so the tunnel would be 2,788 feet—an extremely deep subsea tunnel. The world's deepest, in Norway, is 941 feet below sea level.

Your plan also shows several potential harbor sites. Is there a need for a new harbor?

It has to do with the ice melting north of Canada, in the Northwest Passage. Within a few years—maybe by 2015—

it will be open water from Europe, north of Canada and Alaska, to Asia. That means that someday boats going from Europe to Asia will pass Greenland, and we need a bigger harbor to service the ships that might stop here.

So have you convinced the city to adopt your plan?

It seems the plan will be to lengthen the existing airport, but parliament has decided they are going to continue the discussion until April. The big issue in Greenland right now is whether Alcoa will put an aluminum plant in Nuuk, Sisimiut, or someplace in between. If they put the plant in Nuuk, its location would determine the direction of future growth because, as part of the process for cooling aluminum, Alcoa would make enough hot wastewater to heat a city of 15,000. You can't just send that out into the ocean; you have to use it for heating if you are thinking sustainably. That's one of my arguments for putting the plant close to the city and not on the other side of a very deep fjord.

Do you use other sustainable methods of heating?

I'm interested in mountain heating. You drill maybe 650 feet down for heat held in the rock. You have to expend some energy, but you get out three times as much. It's proven effective in Sweden, where they build 50,000 of these systems a year. I'm trying to introduce it here. The power companies think it's interesting, as does the municipality.

In the United States the architecture community is talking a lot about its contribution to climate change. Is that part of the dialogue here?

Well, there's not much of an architectural community here, but I am encouraging clients, planners, and the city to be interested in these things.

The energy discussion there seems very Scandinavian—being savvy about the most efficient resources—but I guess you are limited in architectural materials.

Yes, it is very expensive to build up from rocks. Everything is imported. Concrete is local—the cement is made at the portland factory in Denmark, but the water and gravel are from here. There is no wood here; it's all imported from Denmark.

What's the largest industry in Nuuk?

Small fishing. About half the money we have is from Denmark. That's why I'm working to put an airport to the south, where there are high mountains you can ski on. Switzerland and Austria have too many people, and the snow is melting. In the future, tourists can come here to ski. ○●



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