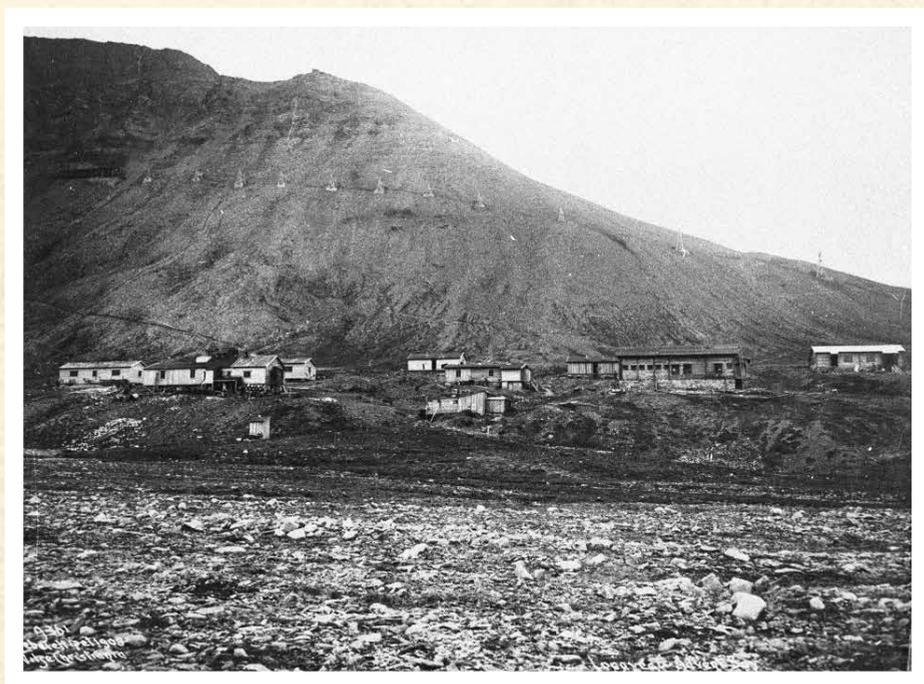




# Longyearbyen

By Per Kyrre Reymert



**From company town to modern town**



The Governor of Svalbard is the government's chief representative on Svalbard. One of the agency's tasks is to manage Svalbard's natural and cultural environment.

## Cultural heritage sites on Svalbard

*This booklet is intended as a guide for those who want to learn more about the cultural heritage sites in Longyearbyen and tour them on their own. It tells the story of a place that has evolved from a small mining town where the mining company operated everything to a local community with democracy, a university, tourism and a more diverse economy. Longyearbyen has many cultural monuments. The traces left behind by the mining industry are numerous and clear. Some people may view them as scars on the landscape, but they are important cultural monuments from the activities that provided the basis for settlement on Svalbard. Longyearbyen was founded in 1906 by John Munro Longyear.*

*Svalbard has its own appeal. It is hoped that as many people as possible, both now and in the future, have an opportunity to experience Svalbard's near pristine natural and cultural environment. Even the oldest remains lie uncovered by the thin soil cover and the buildings, installations and equipment are well preserved. These monuments therefore provide exciting encounters with the past.*

*The Svalbard Environmental Protection Act states that all traces of human activity dating from before 1946 are protected cultural heritage sites. This applies to all types of buildings or building ruins, hunting and fishing equipment, graves, crosses, inscriptions and, not least, the large number of movable objects. Movable cultural monuments may look like scrap, but are not without value. They tell us a lot about people's everyday lives and activities in the past. Destroying, removing or disfiguring fixed or movable cultural monuments is a criminal offence. This protection normally includes a protection zone of 100 metres around a monument. Camping on bare ground or lighting fires are not permitted in these zones and nor is leaving behind any traces of your visit. The booklet also discusses cultural heritage sites that are not protected. These are of great value for Longyearbyen's history and tell the story of the town's development after World War II. Since Longyearbyen is a vibrant town, which is undergoing and needs active development, the protection zones around several of the protected cultural heritage sites in the town have been adjusted and reduced as part of the land-use plan for the town.*

*Always remember to carry polar bear protection when moving on foot outside the town. Enjoy your hiking!*

**All the cultural monuments and heritage sites in this booklet are numbered in the text and on the maps. A list of maps, cultural monuments and heritage sites can be found on page 55.**

## A town emerges



Longyear City 1906.

Photo: Arctic Coal Company, Statsarkivet, Tromsø

In 1901, John Munro Longyear (1850-1922) embarked on a cruise on board the SS Augusta Victoria bound for Svalbard with his wife Mary and their five children. Longyear was a rich businessman from the United States with interests in mining, railways, forestry, timber, real estate and banking. He was a learned man, well-travelled and well-read, and interested in politics and history. Although he was on holiday, he had a keen eye for the economic opportunities provided by natural resources. On 15 July, Longyear was ashore at Advent Point, as Hotellneset was then called, and went for walks along the beaches. There were no coal operations here then, but just a month later a group from Trøndelag arrived and did some mining in the mountainside in the Blomsterdalen valley ① near Hotellneset.

In 1903, Longyear arrived in Norway at the invitation of businessman Christian Anker to assess a partnership in the iron ore mines in Kirkenes. Longyear decided not to join the project, but went to Svalbard and spent 36 hours in the Advent Fjord. Here he collected coal samples from the Trondhjem-Spitsbergen Kulkompani's site in Blomsterdalen and the mountainside. Back in the US, the results from

analysing the coal were positive. Longyear founded a company, Ayer & Longyear, and started negotiations to acquire the Trøndelag company's annexation. They reached an agreement in 1905.

Ayer & Longyear's first coal expedition to what would become Longyear City was led by William D. Munroe, John Munro Longyear's nephew, and arrived in the Advent Fjord on 2 June 1905. Their ship was called the SS Ituna and was carrying equipment and 25 miners. One of the Trøndelag company's mining sites was a bit further up the mountain near the path that now runs up to Platåberget, but Munroe found a better coal seam 700 metres further east. A 1,250 metre railway for wagons drawn by horses and people was laid. This ran up from the sea via a cutting that had been made to make navigating the steep slope easier. Skjæringa, which means the cutting, became one of Longyearbyen's first local names.

The search for coal in 1905 was so promising that the Arctic Coal Company was founded in February 1906. On one of the last days of May of that year, the SS Primo embarked from Trondheim and set course northwards for the

Advent Fjord. On board were 45 men and the deck was filled with supplies, mining equipment and timber for construction. W. D. Munroe was the leader. There was thick ice in the Advent Fjord and on 10 June they had to stop at Hotellneset. The Primo was moored here by the edge of the ice. The Arctic Coal Company owned the hotel building at Hotellneset and 40 men lodged there while the rest stayed in a tent outside. The hotel, which became a tourist cabin in 1896, was part of the 1905 agreement with the Trøndelag company.

A strong storm prevented the cargo from being unloaded for 12 days before they could bring the timber and equipment to Sjøområdet where the narrow gauge track that had been laid the year before was waiting. This was extended beyond the entrance of what became Mine no. 1, then the American Mine/Mine 1, and later Mine 1a, when Mine 1b was opened later ②. The mine's pithead can be seen on the mountainside above the ruins of Old Longyearbyen.

10 buildings were constructed, a water supply was arranged, and a cableway running from the mine entrance down to the sea was built.

The mine entrance was driven 65 metres into a 1.30 metre coal seam. Munroe described the mining potential as good and the director of Det Nordenfjeldske Dampskipselskap visited as a tourist and wanted to purchase 50,000 tons of coal for the following year. 22 men overwintered in 1906-1907. This was the first overwintering in Longyearbyen of an almost unbroken chain that runs up to the present day. The exception was one year during World War II.

The plan was to build a coal loading dock in the summer of 1906, but the ice and June storm prevented this. Work on the old dock ① first began in 1907. This was the first permanent dock on Svalbard and provided the town with communication and transport links for the goods that were arriving and the coal that was leaving. Remains of the oldest dock pillars can be found below the old dock. In 1906, the town got its first name, Longyear City. It was W.D. Munroe, who had led the first coal expedition in 1905, who named the town.

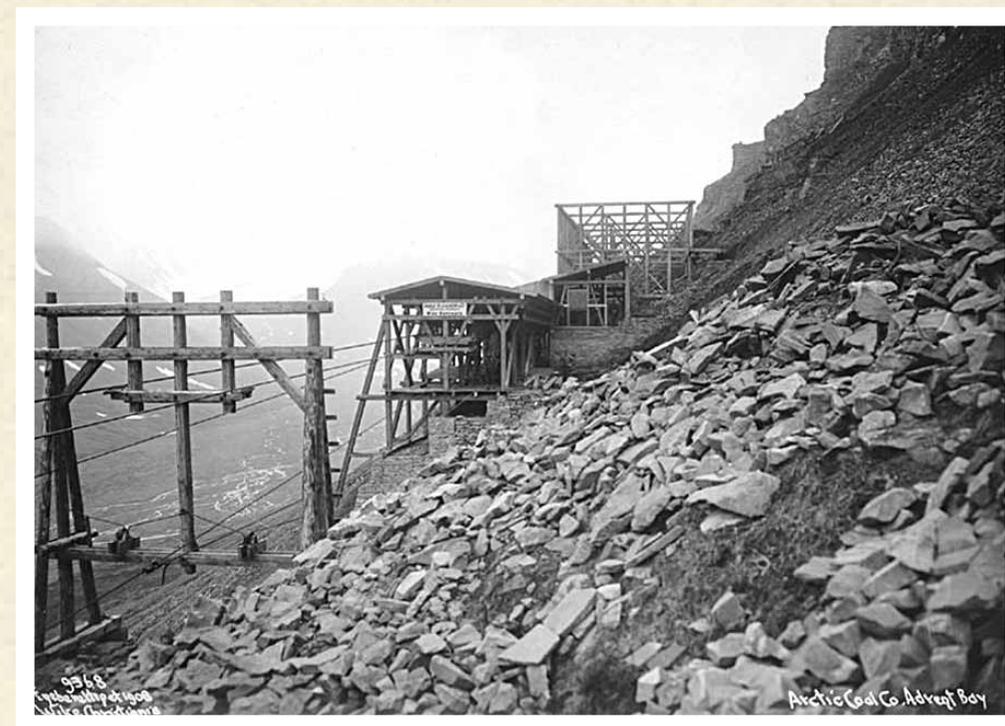


Old Longyearbyen in 1908. The hotel from Hotellneset is in the middle of the picture. ACC's offices on the right.  
Photo: A.B.Wilse, SNSK.



Mine no. 1, the American Mine, Mine 1a ② in 1908.

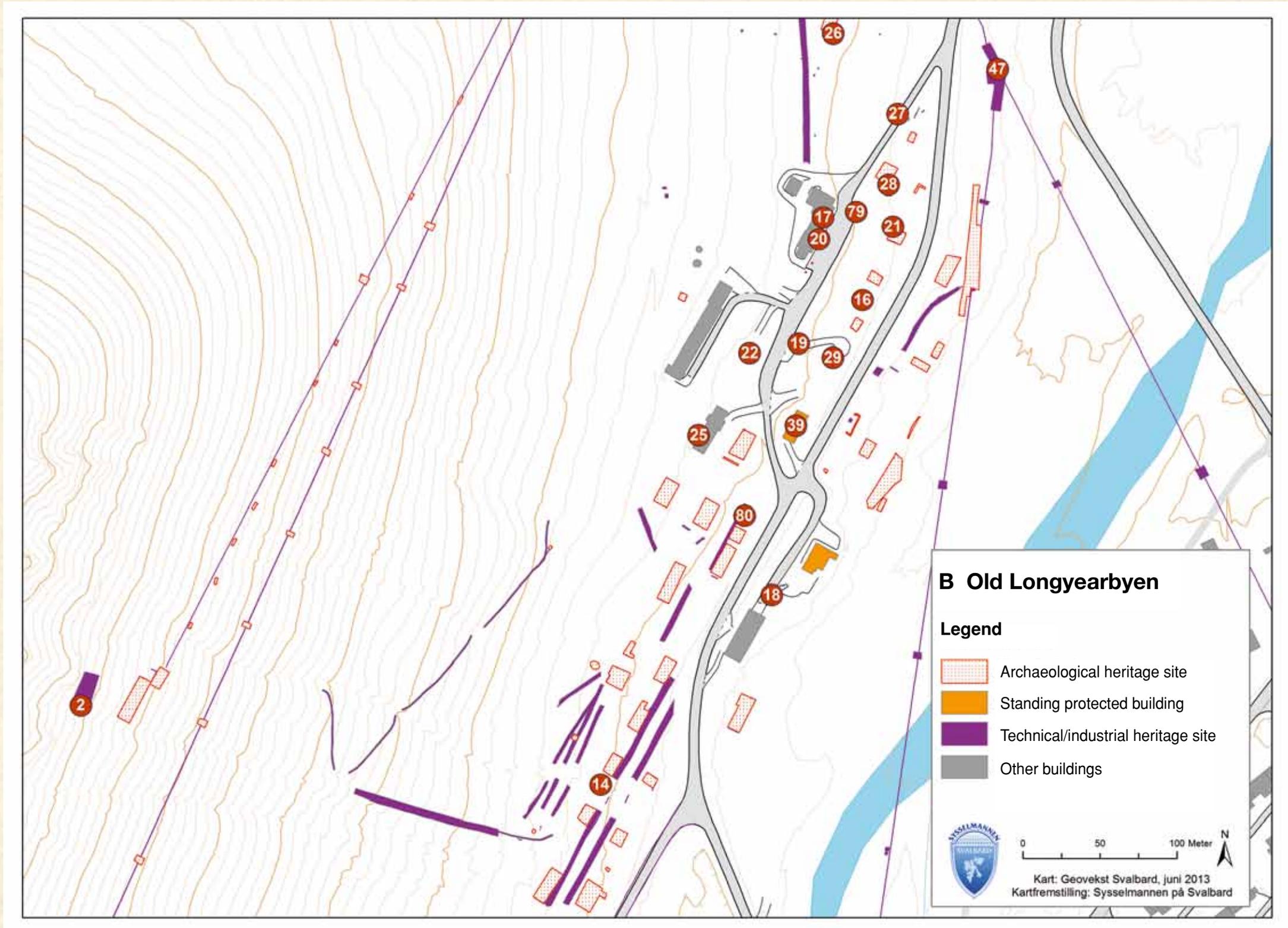
Photo: A.B.Wilse. SNSK



Mine no. 1, the American Mine, Mine 1a ② in 1908.

Photo: A.B.Wilse. SNSK

# Old Longyearbyen B



## Longyear City

The main reason for establishing a mining town was to establish favourable conditions for the mining: the shortest possible distance from the mine to the dock and from the residential barracks to the mine. Longyear City was laid out in an almost straight line from the old dock 11 and Sjøområdet 12, with its depot and power station 13, along the wagon track and the shortest route over Skjæringa to the barracks, which were located right below the mine area 14 up on the mountainside. From here the tram way ran in a straight line down to the coal depot 15 above the power station and out to the dock 11. A wide cutting with a four-track railway ran from the coal depot right down to the dock. The mining operations faced two challenges. The mine was on a steep hill without no space for storing the dug out coal. A depot was needed for the coal that was dug out in the winter since fjord ice prevented it from being shipped out for 6-8 months. The depot needed to be large because coal cannot be stored in piles higher than 10-15 metres. Higher piles of coal present a risk of spontaneous combustion. The cableway continued right out to the dock. The ships were loaded using both the cableway and the coal wagons that ran on rails.

Longyear's American business concept was to build up an industrial facility, get it up and running properly, and then sell it. This was also his plan for Longyear City. By 1916, Sjøområdet had gained a power station 13 and four warehouses with tracks, Skjæringa had gained a couple of residential buildings, and a small radio station had been built to the east of the mouth of the Longyear River. This provided contact with Spitsbergen Radio on Finneset in Grønfjorden, which was commissioned in 1911. The small radio station was later used as a post office 16 in Longyearbyen and now stands below Svalbard Church 17. The town and mine were electrified. Five 64-man barracks with four-man rooms and a large canteen 18 were built. In 1913, prospecting was carried out for a new mine on the other side of the valley, which later became Mine 2a 4. The offices and housing for engineers were built, along with horse stables, barns for pigs and warehouses. In 1916, the town area below the mine

consisted of around 25 buildings. They lay in two long rows on both sides of the extended 1905 railway. 245 people overwintered here in 1913-1914. The Arctic Coal Company Ltd dug out 173,000 tons of coal between 1907 and 1915.

## Longyearbyen

In 1916, Norwegian interests acquired Store Norske Spitsbergen Kulkompani AS (SNSK), Longyear's town and the Arctic Coal Company's mine. John M. Longyear remained a shareholder until his death in 1922. SNSK acquired a complete mining town with a good mine which produced 20,000 tons in the year it was purchased. The company embarked on two tasks, a new mine and a larger coal depot. It continued where the Arctic Coal Company had left off at Mine 2a 4 up on the side of the Sukkertoppen mountain. Hotellneset was chosen for the coal depot and new shipping dock. In 1920, there was an explosion in Mine 1a 2 and it was closed. In 1921, Mine 2a was in operation with a cableway over the valley and from there to a 3.5 kilometre long cableway out to Hotellneset. The remains of Mine 2a's 4 pithead can be seen above the so-called 'pointy houses', homes in today's town centre, and the cableway's foundations can be seen on the valley floor.

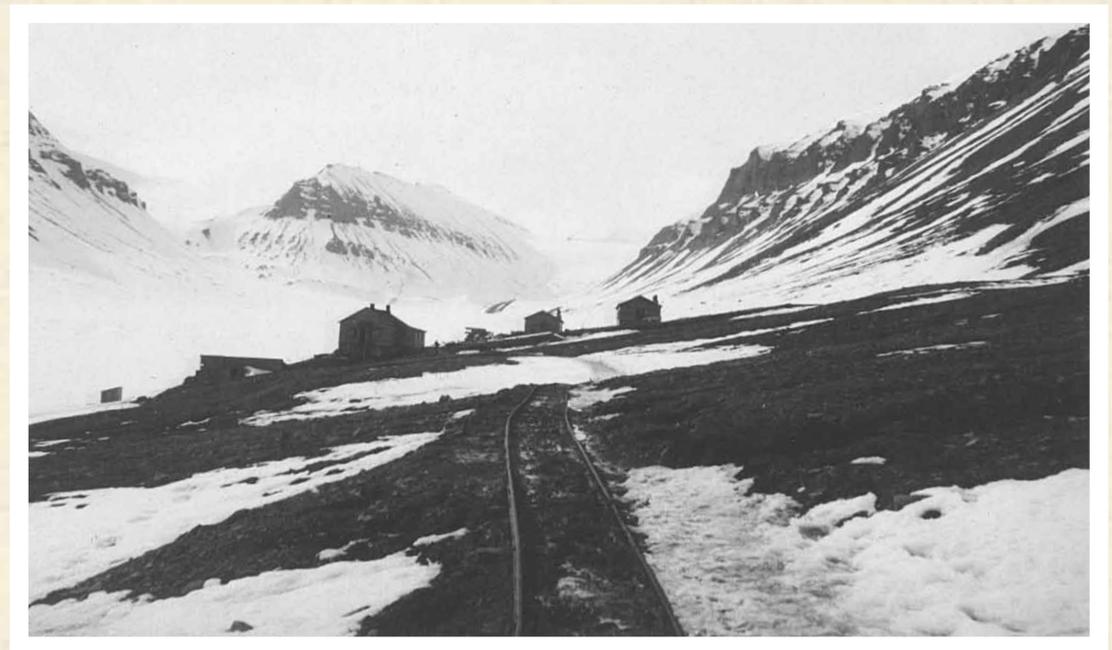
SNSK commenced a major construction process which lasted until the war in 1940. In 1916, the old power station 13 was expanded and a hospital 19 built. In 1918-1919, new barracks 14 and a canteen 18 for the workers was built, as were SNSK's first offices 20, a house for the winter manager 21, and family homes 22. Sjøområdet saw the construction of the Transporten office building 23 and a new power station 24 in 1920. Longyearbyen also gained buildings that were not directly related to mining: a church 25 in 1921 and a post office 27 and school 26 in 1936 and 1937.

In 1931, SNSK bought a prefab that had stood in the Murchison Fjord in the summer. It was used by Sveanor, a Swedish-Norwegian research expedition. The house was moved to Old Longyearbyen and renamed Ahlmann-kåken 29 after the leader of the expedition.



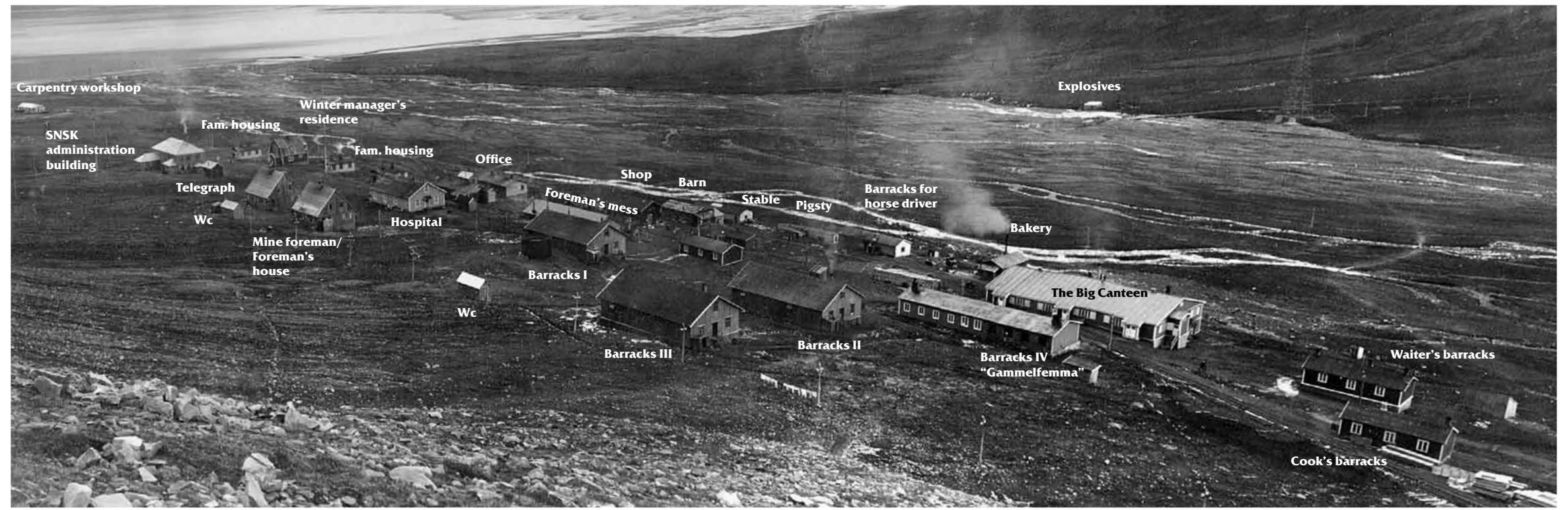
The railway up what would become Longyear City in 1906.

Photo: Arctic Coal Company, Statsarkivet, Tromsø



The first buildings in Longyear City were erected in 1906.

Photo: Arctic Coal Company, Statsarkivet, Tromsø



Old Longyearbyen, probably 1920. Today, Svalbard Church sits where SNSK's administration building sits on the left of the photo. Photo: SNSK.

It is characteristic of mining towns such as Longyearbyen that workers' housing moves as new mines are established. After the establishment of Mine 1a and Old Longyearbyen in 1906, two new mines with their own cableways were opened in the Longyear Valley. These were Mine 2b ⑤ in 1937 and Mine 1b ③ in 1939. Sverdrupbyen was founded near Mine 1b ③ in 1938. The buildings moved with the place of work.

### Company town

Longyearbyen was owned and run by the mining company. First the Arctic Coal Company and then, from 1916, by SNSK. No one could own land on Svalbard before the Svalbard Treaty came into force in 1925. Instead, the companies had annexations. But they owned everything else in the town: the houses, docks and mines. When the property situation was formalised in 1926-1927, SNSK became the owner of all the land in Longyearbyen and still is. The mining

company provided everything. The only things employees had to have were clothes, a mattress and bed linen. Being a company town meant that the company was responsible for the food in the canteen, coal for heating and water for washing. The company decided who could visit, work in and live in the town. Company did not employ female workers until 1929. Those who did not eat in the canteen ordered food from Provianten and collected bread and milk from the bakery. Public eating places first arrived with the establishment of places to stay the night in the 1990s. The company also provided the church, school, post office and telegraph. The company ran everything in the city. It was responsible for snow ploughing and water, fire, lighting and telephone services. The company owned the road and decided who was allowed to own and drive a car. A driving licence requirement was first introduced in 1963.

The 1925 Mining Code instructed the mining companies to provide shelter, a community centre, a private library and a hospital. The profit from trading with the workers, including from the sale of alcohol, had to be "used for the general benefit of the workers". This code is still in operation: residents are given quota cards and the profit from alcohol sales is called 'cork money'. The money goes to clubs and organisations in the town (NOK 2,700,000 was distributed in 2012).

The winding down of the company town started after World War II. In the 1960s, a growing demand for greater co-determination emerged. In 1948, the Welfare Council was founded. It had permanent members and members elected from among employees of the company, labour unions and the Svalbard Turn sports club. The local Svalbard Council was established in 1971 and gained a few more elected members. In 1981, the Svalbard Council had four consti-

tuencies: SNSK, government employees, employees in Ny-Ålesund and other voters in Longyearbyen. Later political party electoral lists were permitted and these were introduced in 1993.

The biggest movement away from being a company town happened in 1989 when SNSK's operations were split up. The 'municipal' services were spun off into Svalbard Samfunnsdrift, Svalbard Næringsutvikling was tasked with attracting other business, and Spitsbergen Travel would run the tourism. SNSK would now become a pure coal company.

Local democracy was finally fully implemented with the creation of Longyearbyen Community Council in 2002. Today, the council has 15 elected members from political party lists and is the equivalent of municipal councils on the mainland.

Longyearbyen still has some elements of a company town. Most of the homes are still owned by employers like the government, community council and larger companies. Around 25% of Longyearbyen's population changes every year and the average residence period here is 7 years. The homes are typical of the temporary nature of mining towns. The buildings are long and low, have only two storeys, and are similar to barracks, or they are terraced houses and linked small houses with storerooms. Longyearbyen only has a few free-standing houses. The houses are not surrounded by fences, flagpoles, gardens, sheds or garages. The outside areas are empty except for parked cars and colourful snowmobiles. The storerooms are, with few exceptions, firmly attached to the houses. Altogether this generally gives the town the air of being a camp, a place where you only stay a short time. The houses show no signs of being private homes where people intend to live for a long time. The fact that the roads - with one exception - do not have names, but numbers, reinforces the impression of it being a camp and temporary. However, there are colloquial road names: Burma Road on the mountainside out to Hotellneset from 1963, Milky Way Road over the valley from 1985, and the path Dram Road from Nybyen to the spirits sales outlet at Haugen, which became a real road in 1950.



The first hospital <sup>19</sup> under being enlarged in 1939-1940. The oldest part dated from 1916 and it was one of the first buildings SNSK constructed after acquiring ACC.



SNSK's first offices <sup>20</sup> in 1920. Built 1918-1919.

Photos: SNSK.

### Longyearbyen during and just after World War II

Svalbard was almost untouched by World War II until August 1941. The entire population was then evacuated: the Soviet citizens to Arkangelsk and the Norwegians to the UK. SNSK wanted to secure their properties on Svalbard and the Allies wanted to monitor German operations. Therefore, a Norwegian garrison was established on Svalbard in May 1942 and remained there until after the war. The garrison lived in Longyearbyen and one of its tasks was to maintain the mines and buildings. The soldiers lived in Old Longyearbyen. They established a command post and several gun emplacements. The command post <sup>30</sup> was dug into a ledge on the mountainside above the cableway central, Taubanesentralen. It has a camouflaged wooden superstructure, almost like a trench with a roof, and narrow openings with views over the valley and the fjord. The command post has been restored by the Governor of Svalbard.

On the plain just north of the Radisson Blu Polar Hotel lies the remains of a gun emplacement <sup>31</sup>. A 12.7 mm Colt machine gun once stood here. The emplacement was partially excavated by archaeologists in 1993. According to a map from 1944, a Bofors 40 mm anti-aircraft gun was positioned in Skjæringa in the area near the memorial, a machine gun position with a guard house was sited on the plain north of the governor's residence, and there was an emplacement on the ledge above the Burma Road just after the first bridge past Taubanesentralen. A 20 cm Bofors gun <sup>32</sup> and two Oerlikon 20 mm guns were sited on Hotellneset.

The Germans had a weather station, Bansö, in an old cabin in the Advent Valley, and an easy landing place for aircraft near the old Auroral Observatory in the Advent Valley, which was mostly used in the winter. One plane was damaged while landing. The wreck is now partly submerged in the river <sup>33</sup>, not far from the old Auroral Observatory <sup>73</sup>.

On 8 September 1943, the town was attacked by shells from a German ship and a landing force. The Norwegian garrison defended itself and there was a fierce skirmish that left fallen on both sides. The town was burned down and

the stone walls and foundations where houses stood can still be seen in the area above and below the church. Today, there are only a handful of buildings left of what was Longyearbyen before the war. These are Ahlmannkåken <sup>29</sup>, the old post office <sup>16</sup>, a warehouse at Transporten <sup>23</sup>, an outbuilding <sup>12</sup> in the old governor's residence, now the old jail <sup>35</sup>, and the old power station <sup>24</sup>. In Sverdrupbyen, the workers' west canteen <sup>36</sup> and some smaller buildings remain. There are also some remains from before the war beneath the old dock <sup>11</sup> and Taubanesentralen <sup>37</sup>. The cemetery <sup>38</sup> was not damaged.

SNSK began the reconstruction of Longyearbyen in the summer of 1945. The first buildings were Swedish Lenhovda barracks. These were prefabricated huts. Some are still standing: the red flour depot <sup>39</sup> next to Ahlmannkåken, the green carpentry workshop <sup>40</sup> at the bottom of Nybyen, the red hut <sup>41</sup> near the coal dock on Hotellneset, and possibly the green Danish barracks <sup>42</sup> at the east end of the airport. In 1945, the government erected a barracks for its public functions: the governor, commissioner of mines, telegraph, post office and a pastor. It was named Bergmesterboligen <sup>43</sup>, the Commissioner of mines' residence, and is located next to the Telenor building.



Homes in Old Longyearbyen. On the left, office staff housing from the ACC era. On the right, the winter manager's residence <sup>21</sup> built in 1918.

Photo: NP.



The street between the barracks in Longyearbyen in 1928.

Photo: A.B. Wilse, SNSK.



The old post office 16, built in 1936.

Photo: Alfred Rydningen, SM.



The workers' canteen 18 in Old Longyearbyen in 1920.

It was built in 1918.

Photo: SNSK.



The old Commissioner's of Mines residence 26 in 1939. The residence was built in 1931.

Photo: NP.



Old Longyearbyen after the German attack on 8 September 1943. Note the smoke from the fire in Mine 2b and the barracks in Sverdrupbyen on the far right.

Photo: NP.

## Churches

### Church of Our Saviour on Spitsbergen 25

Choosing the site for a building as important as a church will always result in debate. Local interests and local knowledge will resist the wishes of those in charge. This was also the case when Svalbard's first church was built in 1921. In the summer of 1920, Karl Bay a director of SNSK, which was going to pay for and own church, came up from head office on the mainland and pointed out the site for the church. It would stand between the cemetery and the buildings, alone and visible to all. The site was chosen while the company's person responsible for the development of Longyearbyen, winter chief engineer Sigurd Westby, was away. He did not like this. Westby did not think Bay's site was particularly good. Snow melted late here and the area would become muddy. He wanted the church to be sited at the top of the row of buildings beneath the mountainside and in line with the family homes. Snow melted early here and the ground would be dry. The winter manager wanted the church to be inside the town, after all it was going to house the school and you could not have children walking around in the wilderness during the winter dark period. The church was also going to house the library and as the winter manager he did not want miners wasting precious time on long walks. "Head office does not know what winter

is like here, no director has overwintered here yet." Director Bay refused to heed Westby's protests and, in May 1921, the site was marked out and work on the foundations started.

On 7 July, Director Bay arrived for an inspection. His site showed off its worst aspects and the workers were grumpy as they struggled in the mud. Master Builder Vister also thought the site was useless. Bay bowed to the inevitable and the happy workers moved to Westby's site. Here the church would "not only be beautiful, but in the best possible place, all things considered," writes a somewhat immodest Westby. The construction took 50 days. The exterior was later painted white.

The church had 150 seats, of which 30 were in the gallery, and the reading room had space for 48 people. Churches should lie east-west with the altar in the east, but because of the wind out in the valley, they were allowed to align it with the terrain. On Sunday 28 August 1921, the Church of Our Saviour on Spitsbergen was consecrated. The church's first clergyman was Pastor Frederick Thorleif Østenstad. He had been hired the year before as a teacher and a pastor. SNSK built and owned the church and paid the pastor's travel and accommodation. The pastor's wages were split equally with the Norwegian Lutheran Inner Missionary Society.



The old Svalbard Church 25. Built in 1921 and burned down on 8 September 1943 by German soldiers.

Photo: NP.

The church's status remained unclear after Svalbard became a part of Norway in 1925. It was not until 1939 that the Ministry of Education and Church Affairs decided to establish a pastor position, although because of the war the first government pastor, Søren Henrik Ræder Riiber, was actually appointed in 1945.

During the evacuation in 1941, the then pastor, Just Phillip Christian Kruse, took the altar silver, baptismal bowl, baptismal jug and church books with him on the journey to Scotland and England. The church was burned down by German soldiers in 1943. The remains of the first church can be seen beneath the red barracks, Formannshuset, located just south of Longyearbyen nursery school.

### Svalbard Church

It took some time to get a new church and its foundation stone was not laid until 1956. Actual construction began in 1957 and it could finally be consecrated and dedicated on 14 August 1958 <sup>17</sup>. The old silver altar candlesticks, which were a gift from King Haakon and Queen Maud, and the baptismal bowl and jug

are today in place in the new Svalbard Church. It is the northernmost church in the world. It is always open and is an inclusive church, regardless of nationality and denomination. The church was designed by the architect Hans Magnus from Oslo. The image above the church's altar is by the artist Kaare Mikkelsen Jonsborg.

### Longyearbyen cemetery

In August 1917, SNSK established a cemetery about 300 metres up the valley from the town <sup>38</sup>. It replaced the old cemetery that the Arctic Coal Company had established on Hotellneset. It is located near the mountain, behind a low gravel ridge that screens it from the city. The new cemetery was originally surrounded by a low stone wall. The wall was more of a ring of rough stones than a nice dry-wall, but it was slightly higher at the gate and in the corners. The cemetery was established to bury two people who had died of illness early in 1917. In October 1918, seven miners died of Spanish Flu and were buried in the new cemetery. They were buried quickly because of the fear of infection.



King Olav V at Longyearbyen cemetery in 1961 <sup>38</sup>. The King laid a wreath on the grave of Captain Trond Astrup Vigtel. He was the commander of the Norwegian garrison in Longyearbyen and fell in battle during the German attack on 8 September 1943.

Photo: Herta Grøndal.



Svalbard Church <sup>17</sup> in 2012.

Photo: Tone J. Sund.



The old school <sup>28</sup> under construction in 1938.

On the right, the post office from 1936 <sup>27</sup>. Photo: NP.

The cemetery was consecrated by a pastor in July 1919, just six months before an explosion in Mine 1a. Four of the 26 who died are buried in the cemetery. So is Captain Trond Astrup Vigtel, who fell in combat when the Norwegian garrison was defending itself against the German attack on 8 September 1943. There are 34 graves in the cemetery. The old wooden crosses were replaced with new ones in the 1980s, and the cemetery is now surrounded by a fence made of mine drill bits and chains. The cemetery is automatically protected, but is still used as urn grove. You must have been resident on Svalbard to be buried here.

### School

Not long after SNSK took over in 1916 a few families with children arrived. In 1920, a pastor was employed who was also required to be a teacher in order to provide for the children's education. In the first few years, classes were held in the church's reading room <sup>25</sup> and library. The pastor doubled as the teacher until 1954.

The private company school in Longyearbyen did not become a state school until 1937. A dedicated school building was completed the following year and the year after that a female teaching assistant was hired. In 1946, Longyearbyen's school reopened after the World

War II evacuation in a newly built flat in one of the buildings in Haugen. In 1951, the school moved into new premises in the community centre or 'Huset' <sup>45</sup>, which also housed the library.

The private high school, which was opened in 1964, was closed in 1971 when 9 year compulsory education was introduced in Longyearbyen. That same autumn, the school moved into a new, modern school building with a gym and swimming pool.

Norway's last company school closed in 1976 when the Ministry of Education and Research took over responsibility for the school. The school got an upper secondary department in 1977. Longyearbyen school is the northernmost school in the world. The school had only 16 pupils in 1926, while in the 2012-2013 school year there were 228 primary and lower secondary pupils and 46 upper secondary pupils.

# Coal operations C

## Coal

Coal is compressed, fossilised plant material from prehistoric swamps and peat bogs. Coal can occur in various forms depending on the age and disposition of the mass. The coal around Longyearbyen was formed in the Tertiary Period (2-65 million years ago) and is one of the youngest anthracites you can find. It has a high gas content and low phosphorus and sulphur content, which increases its value. The coal is suitable for steam engines, energy coal and metallurgical industries. The coal layers, or seams, in the mountains surrounding Longyearbyen and the Advent Valley are almost horizontal. The thicknesses of the seams range between 1.20 and 1.60 metres and less. Seams that are less than 0.70 metres thick cannot be worked.

## Mining

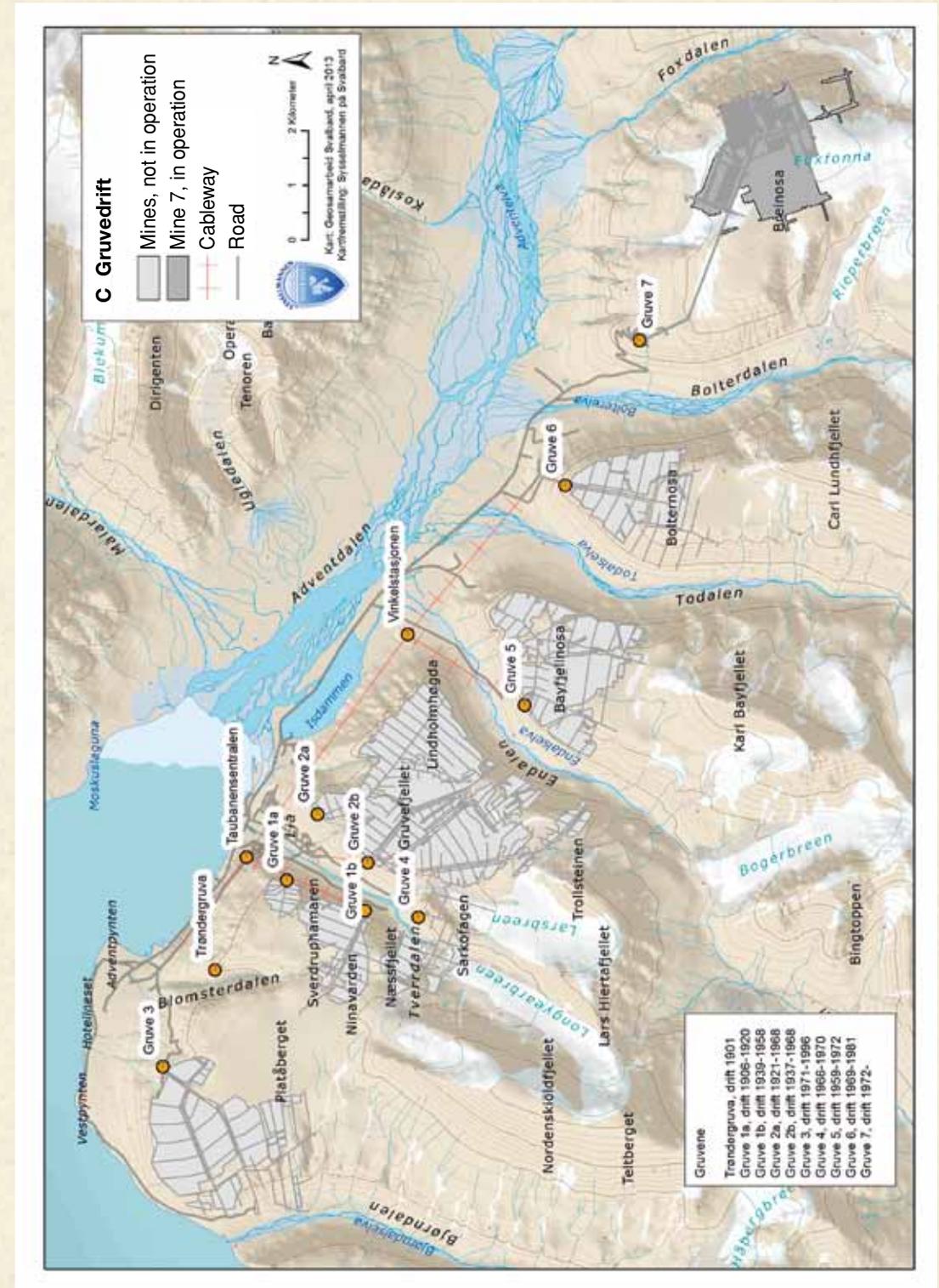
Before a mine can become a working mine, surveys have to be carried out to learn about its geology and the seam's thickness and extent. After this the mine is readied for operation; this is called preparatory development work. A road is constructed, electricity and a cableway are installed, and the pithead is built. All of the town's mines, except Mine 3 <sup>6</sup> and Mine 4 <sup>7</sup>, have entrances up on the steep mountainsides. The buildings located at the mine entrances are called the pithead. They contain workshops, offices and coal silos where coal from the mine is loaded on to the cableway or vehicles. A path, road or railway, called a mine lift or people lift, runs up to the pithead. The inside of the mine is then readied by blasting out rock to make mine shafts. Some mines, like Mine 3 and Mine 1b <sup>3</sup>, have large stone tips. This is the stone that has been taken out to get to the coal. The largest stone tips are from Mine 3 and are located in the Bjørndalen valley.

Mines can have shafts that have openings elsewhere, such as vents and escape routes. Electricity and tracks are installed in the mine shafts, and rest areas called stays are established. Ventilation fans and safety equipment are installed, rock dust is distributed to protect against explosions and the equipment used to actually carry out the coal is brought in. Preparatory development work can take a couple of years.

A mine is worked for as long as it contains mineable coal, it is closed down when it is empty, when there is too much stone in the coal or the geology makes for difficult operating conditions. Mining is a business that is always on the move. Once a mine is empty, a new one is established. SNSK has extracted around 24 million tons of coal from its mines in Longyearbyen between 1916 and 2011.

## The first mines

An English whaler, Jonas Pool, found coal on Svalbard in 1610. In 1869 and 1871, James Lamont, from the UK, sailed to Svalbard on his yacht. One year he took several bags of coal with him from the area around what would later become Mine 3 <sup>6</sup>. He called the mine Diana after his ship. This is the first known use of coal in Longyearbyen. In 1901, the Trondhjem-Spitsbergen Kulkompani had a small mine on the east side of the Blomsterdalen <sup>1</sup> valley. It was this that Longyear purchased in 1905. It was the coal in the mountain that determined the location of Longyearbyen.



No. on map	Mine name	Altitude above sea	Operational period	Mining type	Transport	Coal seam
1	Trønder Mine	225 m	Worked 1901			Unknown
2	Mine 1a, American Mine	230 m	Preparatory work 1905 Worked 1906-1920	First room and pillar, so longwall mining	Cableway	Approx 1 m
3	Mine 1b	185 m	Worked 1939-1958 Halted 1941-45 and 1954-55	Advancing longwall mining	Cableway	0,70-0,90 m
4	Mine 2a	274 m	Preparatory work 1913 and from 1918 Worked 1921-1968 Halted 1941-1945	Advancing longwall mining	Cableway	Approx 0,70-1,00 m
5	Mine 2b	230 m	Preparatory work, operated 1937-1968	Advancing longwall mining	Cableway	0,70-1,00 m
6	Mine 3	160 m	Found 1913, preparation from 1969, worked 1971-1996	Retreating longwall mining	Truck	0,80-0,90 m
7	Mine 4	160 m	Preparatory work 1954-1960, worked 1966-1970		Mine railway under Longyear Glacier and Sarkofagen to Mine 2b's cableway. Mine railway from Mine 1b over Løwøbrua.	0,70-0,80 m
8	Mine 5	260 m	Preparatory work 1956 Worked 1959-1972	Retreating longwall mining	Cableway with angle station.	0,70-0,80 m
9	Mine 6	323 m	Test working 1964-1965 Preparatory work 1967-1969 Worked 1969-1981	Retreating longwall mining	Cableway	1,00-0,70 m
10	Mine 7	390 m	Preparatory work 1966-1972 Worked 1972 -	Mechanised longwall mining from 1975-76. Continuous miner from approx 1983, Room and pillar.	Truck to Mine 6 and cableway further. From 1987 vehicle.	1,40-1,60

### Glossary

**Longwall mining:** The coal is broken down by blasting or mechanical means.

**Stoll:** Coal mineshaft with pithead, used for transport.

**Seam:** The coal seam delineated by other rocks above and below.

**Room and pillar:** The coal is dug out in rooms between pillars of coal, which are left in place to support the roof, keep the 'ceiling' up.

**Retreating longwall mining:** Two tunnels are dug, crosscut, from the main shaft. The crosscuts run in parallel at a distance of 300-400 metres. Inside the mountain, the crosscuts are connected by a tunnel, parallel to the main shaft. The tunnel has a longwall panel from where the coal is dug out while one works backwards, retreating, towards the main shaft.

**Advancing longwall mining:** The coal is dug out from the main shaft's walls and in towards the mountain.

**Continuous miner:** Electric powered machine with a rotating wheel with teeth at the front that cuts coal out.

**Bucket:** Suspended iron buckets for transporting coal by cableway.



Longyearbyen's first cableway was built in 1906. It ran from Mine 1a, the American Mine, to the coal depot and then onwards to the loading dock on the left of the picture. This cableway was in operation until 1920. Photo SNSK.

### Cableway (coal transport)

A large grey building on skinny legs can be seen from anywhere in Longyearbyen. And you can see rows of trestles leading from it in several directions. The cableway centre, Taubanesentralen, is the very heart of the cableway system. All of Longyearbyen's mines, except Mine 3 and Mine 4, are high up on steep mountainsides. There was nowhere to store the coal, and it had to be stored because the fjord ice often prevents all shipping for around six months every winter. John M. Longyear chose a cableway as the means of transport. He may have got the idea from the Trondhjem-Spitsbergen Kulkompani, which used a cableway in the mine in the Blomsterdalen valley ① in 1901.

Longyear built his first cableway in 1906. It ran from the American Mine, Mine 1a ②, to the depot and loading dock. This resulted in a scenario where the full, heavy buckets pulled the empty, light ones back up (this is called a brake line). In winter the coal was stored below where Taubanesentralen ③ is today. In summer, ships were loaded by cableway from the mines and using the four-track railway from the winter depot. This ran down to the dock with two tracks leading out to the ships.

There was only one cableway up until to 1921. Then SNSK built a cableway from the new Mine 2a ④. The cableway crossed the valley via six tall steel trestles. It was the only cableway with such trestles and was destroyed during the evacuation in 1941. So much coal was dug out that the depot at Taubanesentralen was too small and a new one was established on Hotellneset, called Nettet. A cableway leading there was constructed in 1921 and where the cableways met the cableway from Mine 1a a crossing station was built. This was the start of Taubanesentralen ③. At the end of the 1930s, SNSK opened two mines at the head of the Longyear Valley, Mine 1b ⑤ and Mine 2b ⑤. Long lines of trestles were constructed for both of these and most of them remain standing. The best design involved erecting the trestles in straight lines with an incline from the mine. This resulted in the minimum need for traction. However, a straight line from Mine 2b would run through the buildings in Old Longyearbyen. The solution was Kurven ④, a curve in the line of trestles.

Cableways were the solution when it was impossible to build a road on the steep, unstable mountainsides. Ground transport would require a lot of people and horses, and often be hindered by bad weather, snow and

the winter dark period. Cableways were cheap and easy to build, and they could be moved and extended.

The cableway trestles are made of round logs and planks held together with iron bolts. The coal was loaded into iron buckets, which hung from suspension cables. The mine wagons were emptied into large wooden silos in the pithead. The cableway ran under the silos and when they were opened, coal poured into the buckets. Mines 2a, 6 and 7 were on such steep slopes that the coal had to be sent via a chute down to the silo and cableway. Each bucket carried 700 kg coal and three buckets could be filled per minute, or 180 buckets an hour. The machinery in the cableway centre pulled the buckets from the mines to the depot. Here the buckets were tipped over, emptied and pulled, hanging upside down, through the centre back to the mine silos.

### Taubanesentralen

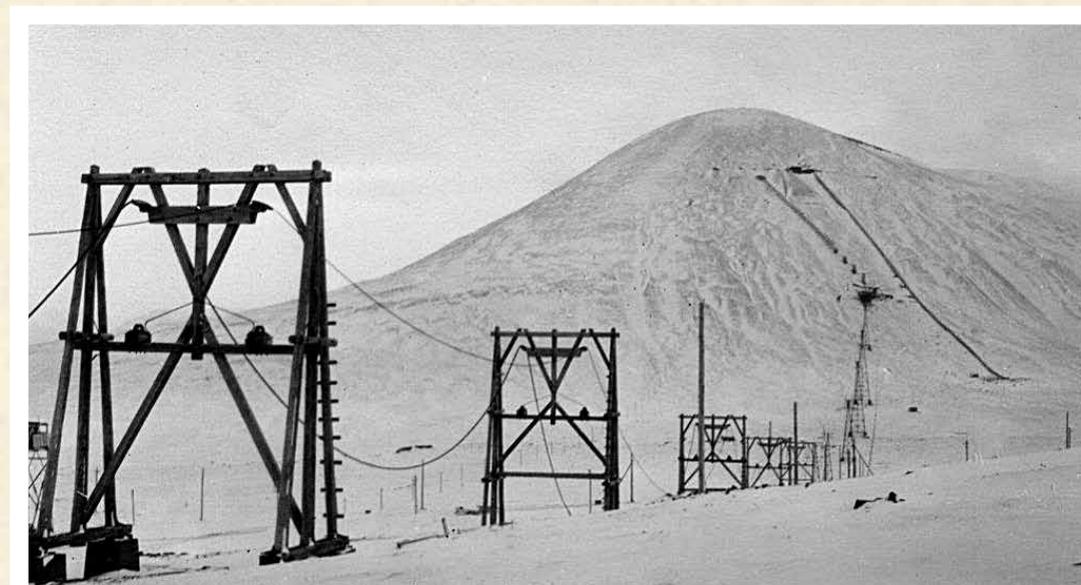
The person who ran Taubanesentralen, the cableway centre, the so-called 'cableway general', had a lot of power - it was he who decided which mine could send its coal on to the depot and dock. When several mines were being worked, Taubanesentralen 37 was like a railway station with tracks and wagons in the roof. It stopped and switched cableways depending on which buckets were going to the depot. The centre had a lubrication station and a place for splicing cables. Below it was a smithy that repaired the buckets and equipment. The centre made sure the power station received coal. It was emptied into a chute that ran to the power station just below the centre. Those who worked on the cableway were responsible for the lines, centre, cleaning plant and coal depot. This involved the operation, repair and maintenance of the angle station, cable tensioners, trestles, and splicing and stretching cables. The workers worked shifts, as they did in the mine. A shift had six operators and six repairmen, two of whom worked in the smithy.

The cableways were cold, dusty and noisy workplaces. This were perhaps the hardest place to work because operators had to work outside in all sorts of weather, while the

miners worked 'inside'. Wind, snow, ice and temperature changes meant the cables had to be tightened using solder. The lubricator had an important job. He made sure that the cable wheels on the trestles turned freely whatever the weather. If the wind speed exceeded 25 metres per second, the cableway was stopped because of the risk of full and empty buckets colliding. The bucket workers worked hard inside the centre. It was they who pushed the full buckets from the mining cableways over to the cableway out to Nesset. The situation improved greatly when, in 1957, a chain transfer system between cableways was introduced. The cableways ran day and night, year around, only interrupted by maintenance and a stoppage at the end of the year. At Christmas the Christmas bucket made the rounds. This was a bucket painted with Christmas motifs and decorated with lights. The cableway people were a tight-knit group with their own table in Huset 45 and cabin in Deltanaset.

Taubanesentralen was partially destroyed by the German attack in September 1943. It was rebuilt in 1957 and transported coal from a total of six mines. Mine 5 8 came online in 1959. It was the first one outside Longyearbyen. It was located some way up the Advent Valley and the cableway ran through an angle station 48 up to the silo in the Endalen valley, a distance of about 7.5 kilometres. The line from Mine 5 ran at 2.5 metres per second and transported 125 tons a day. The buckets were spaced at 48.5 metre intervals. This was continuously adjusted at each station. There was a sign at the angle station that read "WATCH OUT FOR BUCKETS". A warning that coal could fall out of the buckets.

There was more coal in the Advent Valley, and in 1969 Mine 6 9 opened. The cableway was extended by 3.8 kilometres from the angle station. This was the last cableway that was built. These cableways still stand and the angle station, where the cableway from Mine 5 enters, was restored and lit in 2010-2011. Mine 7 10, the mine furthest up the Advent Valley, is the farthest from Taubanesentralen. When Sjuva, as it is called, was started in 1983, the cableway was not extended from Mine 6.



Mine 2a with cableway under construction in 1920 4. On the right, the pithead at the top with the people lift down to the valley floor. Note the cableway's steel trestles on the valley floor. Photo: SNSK.



In 2013, we can still see the remains of Mine 2a's 4 pithead on the right up on the Sukkertoppen mountain.

Photo: Tone J. Sund, SMS.



Taubanesentralen being rebuilt in 1957 <sup>37</sup>. It was built on the site of the first one from 1921.

Photo: SNSK.

The coal ran down a chute to the silo at the foot of the mountain. From here it was driven by trucks to the silo at Mine 6 and where it could be loaded onto the cableway. Operating the cableway just for Mine 7 became more expensive than road transport and at the end of 1987 the cableway was closed. 60 years of cableway history was over. SNSK wanted to preserve the cableway centre and it was.

From Taubanesentralen <sup>37</sup> and out to the first tightening station, towards Hotellneset, there are trestles with cables and buckets.

Parts of the cableway system are automatically protected: the remains of the cableways from Mine 1a and 1b, Mine 2a and 2b, and the cableway out to Hotellneset. In 2003, the Directorate for Cultural Heritage protected the cableway centre and those parts of the cable-

way that were constructed after 1946 with a protection order.

A protection order is a rarely used form of protection; at the time, there was only one installation on Svalbard that was protected by a protection order, the Kinnvika research station dating from 1957-1959. The protection order covers the cableway system to Mine 5 and Mine 6 and silos, the angle station in the Endalen valley, 100 trestles, four tightening stations and the Taubanesentralen drives and cableway depot. The cableway system is protected because it is an important part of Longyearbyen's mining history and because, as it says in the protection order, "it provides a concrete and comprehensible picture of the coal's route from the mines to the loading dock" and "tells the story of the technical solutions associated with this means of transport".



The cableway from Mine 2a <sup>4</sup> in 1921. The six nearest trestles are made of steel and were called towers.

Photo: SNSK.



The cableway from Mine 2b <sup>5</sup> under construction in 1937.

Photo: SNSK.

# Skjæringa D



The old governor's residence 49. Built in 1934 by the governor's winter representative, Helge Ingstad. The small building on the left is still standing today.

Photo: NP

Skjæringa was the first part of Longyearbyen to get its own name. The steep slope literally presented an obstacle when moving goods and people from the dock and up to the mines. This was solved by the Arctic Coal Company digging a cutting through the slope. They then laid a narrow gauge track with a gradient that enabled horses to pull the wagons up. This is how Skjæringa, 'The Cutting', got its name.

Skjæringa lies high up and offers great views of the Advent Fjord. The official Norwegian

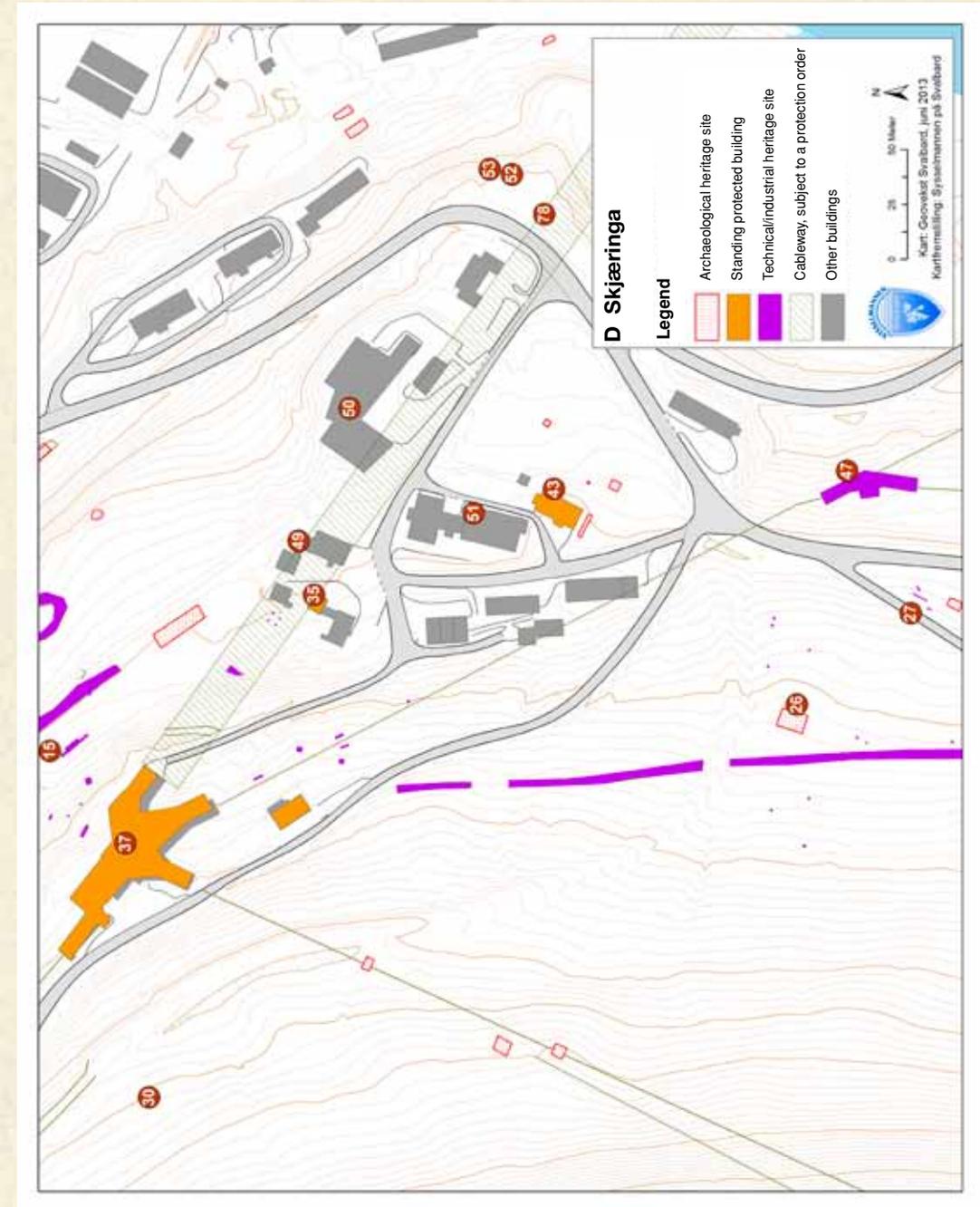
splitted flag was hoisted here on 14 August 1925 when Norway assumed sovereignty of Svalbard. This, and the views, were probably one of the reasons why the acting Governor of Svalbard, Helge Ingstad, sited his residence and offices here in 1934. The first governor's residence 49 was a bungalow with two small outbuildings and a dog kennel, and was not far from where another government institution, the Commissioner of Mines of Svalbard, had established himself in 1931. The Commissioner bore professional responsibility for mining

operations on behalf of the government. With two government agencies in place, Skjæringa became the seat of government in Longyearbyen. Both buildings were burned down by German soldiers in 1943. One of the governor's outbuildings was left standing. The only visible remains of the commissioner's residence are the stumps of the piles that were under the house.



Flag hoisting on Skjæringa on 14 August 1925 when Svalbard became part of Norway. In the middle of the picture you can see the cutting with its railway that ran between Sjøområdet and Old Longyearbyen.

Photo: NP.





Pointy houses 83 in 2012.

Photo: Tone J. Sund

In the summer of 1945, the government erected a Swedish prefab on Skjæringa. This was a barracks that would house all the government services. The governor, commissioner, postmaster and telegraph manager each had their own offices and lodgings here. They had a communal dining room and a chef who did the cooking. It was probably pretty cramped when fishermen, hunters, scientists and official guests ate and slept here. The building is today called Bergmesterboligen 43, the commissioner's residence. Officially it was called the Administration Building, but colloquially it was also known as the post office, telegraph and the Swedish building.

The barracks was temporary. In 1949, the governor moved into the new governor's residence 49. It sits on the same site as the old one and was designed by Eindride Slaatto. The governor's residence reminds you of the fairytale royal residences from the Middle Ages. The buildings are situated in a square around a courtyard with a large gate. On one side lies the long, red, two storey 'royal palace'. In one corner of the residence, which faces onto the fjord, there is a three-storey white, concrete tower with small, narrow windows. The tower looks like it belongs to a castle, which was probably the intention. Adjacent to the tower is the sitting open-heart hall, Gildehallen, with its notched logs. Next comes a gate facing north and two small houses, guest cabin and storehouse. The residence is completed by the senior staffs home. The small extension closest to the storehouse is the only surviving building from Ingstad's residence from 1934. It has been used as jail and is currently an outbuilding. Outside the courtyard is the governor's garage,

one of the few garages for private vehicles in Longyearbyen.

The governor's residence was restored in 2010-2011. The governor got his own offices 50, known colloquially as 'The Palace', next to the residence in 1978. The Commissioner of mines moved in here in 1989, after an office wing was added. The offices burned down in 1995 and the current offices were completed in 1998 and designed by Jarmund & Vignæs Architects.

In 1955, Liv Balstad, the wife of the then governor, wrote, in the book **Nord for det øde hav** [North of the Desert Sea], about a conversation she had had with the architect Eindride Slaatto in Longyearbyen:

*"We two increasingly talked about Valdres, about the forest there, the mountains, and the lakes. But most of all about the forest and then I got tears in my eyes my eyes.*

*I remember one day, we sat there and talked about the forest at home, then Eindride got up and went to the window and gazed out over the stark landscape for a long time. "Liv," he said. "I'll bring the forest into the sitting room for you!"*

*Every time I sit in the open-heath hall in the new governor's residence, I remember his words and rejoice at the way he kept his promise." That's why the governor's residence got a notched wood open-hearth hall.*

Before the war, SNSK ran the post office and telegraph in the same way as they ran everything else in town. After the war, the government assumed responsibility for these services. The post office moved into Huset 45 when it was completed in 1951. In 1954, the public telephone company's new facility with a house, offices, masts and telegraph station 51 was completed. It lies between the governor's residence and the commissioner's residence. Its nearest neighbour further up the valley is Svalbard Church 17. So now there were four government institutions in a row. In 1979,

Statsbygg, the Public Construction and Property Management, also got its own offices behind the public telephone company, thus consolidating Skjæringa as the seat of government.

Bergmesterboligen 43, The Commissioner of Mines residence, was one of the first houses built in Longyearbyen after the war. It was a Swedish prefab designed for temporary use and therefore not that solidly built. In 1989, the government wanted to demolish the barracks. The commissioner and governor were firmly against this. They emphasised the building's historic value and significance in Norway's commitment to Svalbard after the war. It was built following a decision by the Norwegian government in London in 1945. The protests were successful. In 1992, Bergmesterboligen was restored. The debate about what to do with it and its restoration played an important role for the government and Svalbard's population in their understanding of the cultural heritage on Svalbard. In 1992, new regulations were issued for cultural heritage sites on Svalbard. According to these, all structures and sites older than 1946 were automatically protected, and this included Bergmesterboligen.

Skjæringa is the site of Longyearbyen's public celebrations. It is the site of the town's official flagpole 52, which is located not far from the site where a flagpole was erected and used for the first time on 14 August 1925. That was the day Svalbard became part of the Kingdom of Norway. This is where the May Day and Norwegian Constitution Day parades end with speeches and a wreath laying ceremony. Skjæringa's clock tower 53 was built in 1949. The bell was cast in SNSK's mechanical workshop. The idea came from the miner's bell in Røros. The bell was also used as a church bell up until Svalbard Church was built in 1958.

### The town that migrates

Longyearbyen has many neighbourhoods. Up until the 1950s, the workers' barracks were located as close to the mines being worked as possible. It began with Mine 1a 2 and what is now called Old Longyearbyen. Then Svedrup-

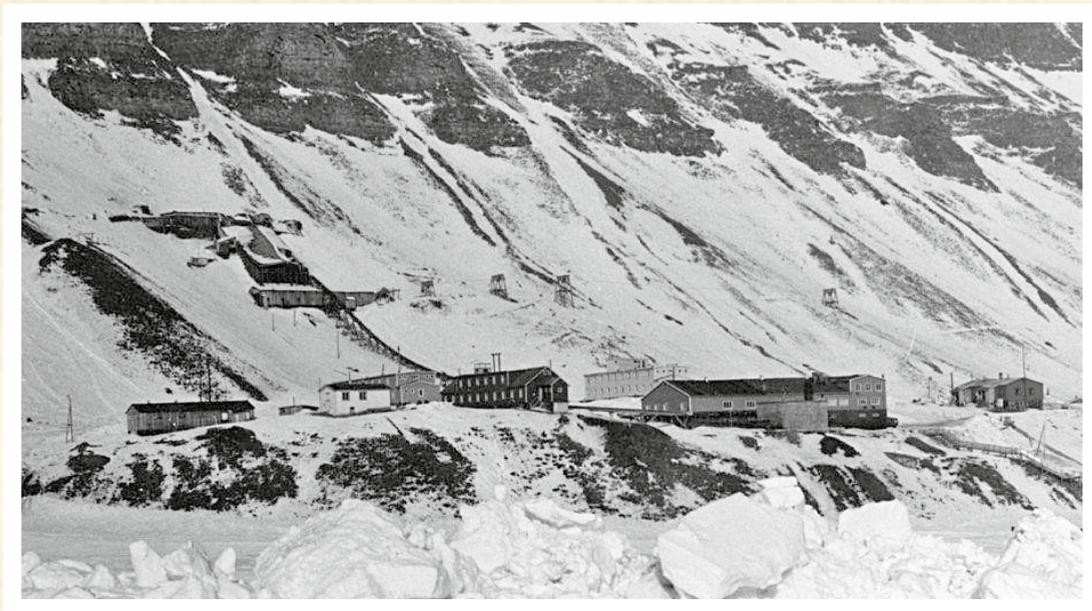
byen was established in 1938 along with Mine 1b 3. SNSK's activities after World War II required even more homes. The town then moved across the valley from Sverdrupbyen and Nybyen was established near Mine 2b. At the same time, the company's administration got its own district, Haugen. Offices, a hospital, and a canteen and homes for the office workers were built here and meant that the town had taken another step down the valley. The result of this was that the workers, office staff and government employees each had their own district.

When Mine 5 8 was established in Endalen and Mine 6 9 in Todalen in the 1950s and 1960s, more homes with better standards were required for the families. The town did not move to these two new mines, but spread further down the valley from Haugen towards the fjord. The first houses reached here in 1968 and thus Lia was developed during the 1970s with its characteristic pointy houses 83, also called 'Indian Village'. The houses all lay on the east side of the Hilmar Rekstens Vei (road) named after SNSK's main shareholder and chairman from after the war up until 1962.

The Blåmyra 55 dormitories at the foot of Sukkertoppen were built in 1981. These were intended to provide the miners with better living conditions than the two-man rooms in Nybyen. The other functions had to be moved with the miners from Nybyen. In 1985, Lompen-senteret 56 and the mine baths were built.

Kafé Busen opened in the same building as a substitute for the large canteen, Stormessa 57. The shop, Sundt 58, was moved from Nybyen in 1992. These buildings, together with the post office and bank building 59, Kullungen nursery school 60, Longyearbyen hospital 61 and several shops, formed the town centre. New homes were built on the slopes at the foot of Sukkertoppen and when the UNIS building, now Svalbard Science Park 62, was constructed right next to the fjord in 1995, the town had migrated up and back down the valley and now lay in its original location where people had come ashore on the beach of Advent Fjord in 1906.

# Sverdrupbyen E



Sverdrupbyen and Mine 1b in 1939. Built in 1938. The mine's pithead was demolished in 1982. The barracks were burned down in 1985. Foto: SNSK.

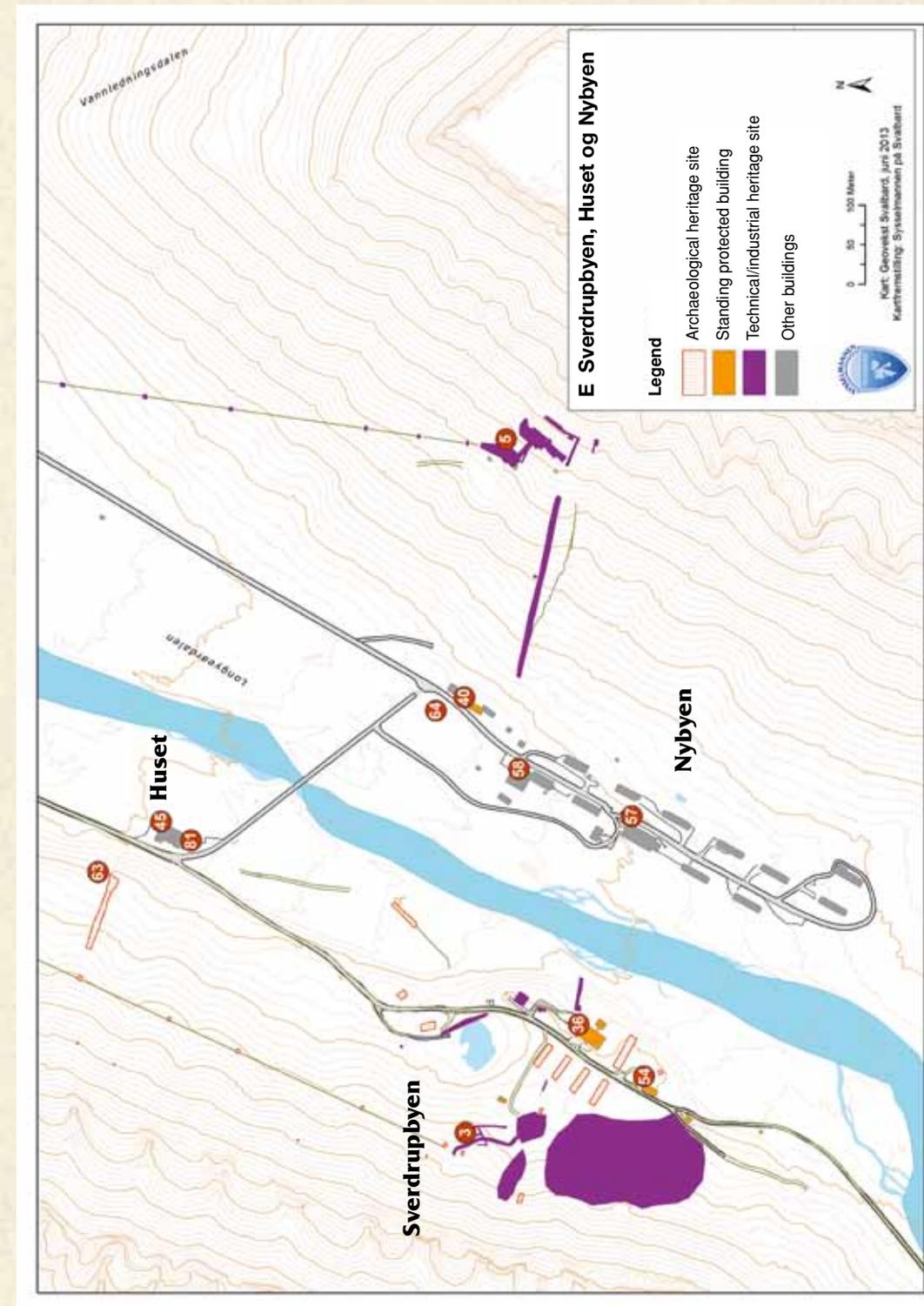
Mine 2a had been worked out by 1937 and SNSK had to look for a new mine. Mine 1a had been closed after an explosion in 1920, but the coal seam could be followed up the side of the valley. It was decided to open a new mine, Mine 1b ③, at the head of the valley and build a camp there to house "busen", the miners who would work the mine. Director Einar Sverdrup was the driving force behind the initiative and the camp was named after him, Sverdrupbyen.

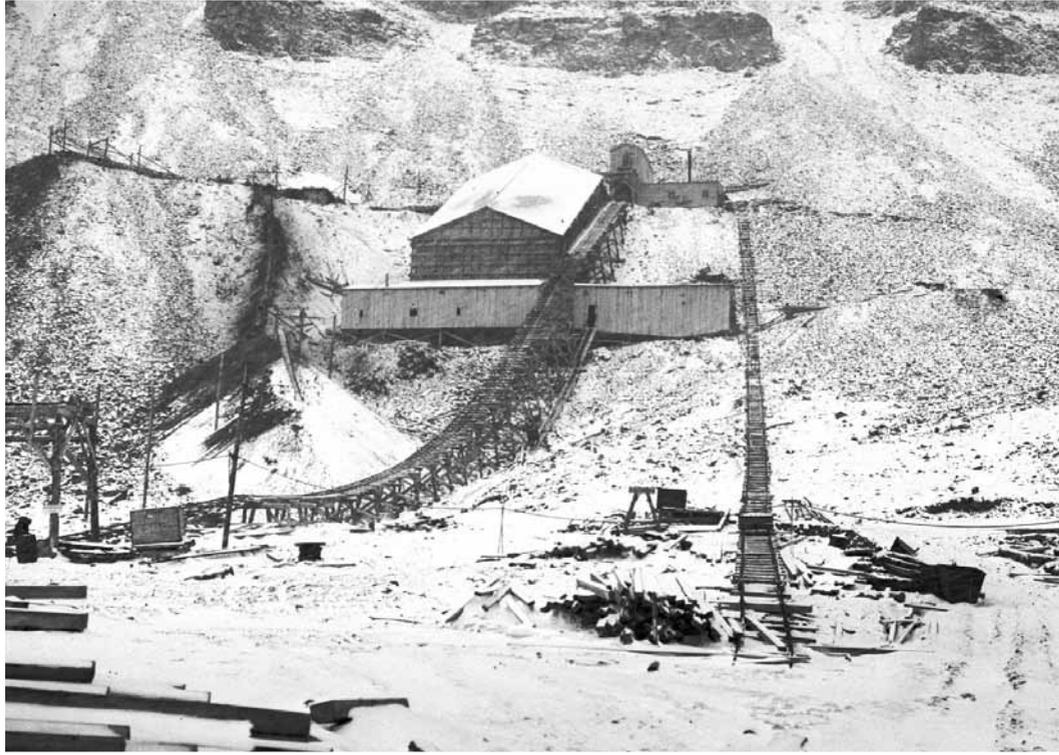
In 1938, a 3 kilometre long road was constructed from Old Longyearbyen and new power lines installed. In autumn 1938, the first barracks were erected, which later became known as No. 5 or Fjøsén, the 'Cowshed'. It was considered nice and warm, perhaps because it was closest to the boiler house? No. 5 lay just south of Arbeidermesse Vest ③⑥, AMV, the workers' west canteen that was built in spring 1939. 'Lompen' was established in the cellar. This housed showers and space for changing into work clothes. This was an innovation and built because of a desire to avoid water spillage

in the barracks. In 1939, the cableway between Mine 1b and Taubanesentralen was built.

A multi-family building was constructed on the ledge, north of AMV and in early winter barracks 2 was built. Three barracks were built in spring 1939. The barracks had room for 56 men in two-man rooms and lay perpendicular to the valley, while the AMW and boiler house lay parallel with the valley. The barracks had two floors, which was new in Longyearbyen. Living quarters was also built north of the workers' west canteen. Sverdrupbyen was a self-sufficient little community with housing, a canteen, a boiler house and a mine. The town had taken a long step in its migration up the valley.

160 men started mining in October 1939 and annual production was calculated at 100,000 tons. A 600 metre main gallery, a tunnel, was established in 1940 with three longwalls or work sites. There were stables for horses in the mine and they also had their own 'stay', as rest





Mine 1b's ③ pithead in 1939. Built in 1938, demolished in 1982.

Photo: SNSK.

areas in mines were called. The mine workshop in the pithead was on two floors and very well equipped. There was a reservoir of industrial water under the permafrost in Mine 1b. This could be pumped out through the pithead and across to the boiler house in Nybyen.

In 1940, Sverdrupbyen consisted of the AMV, three barracks, offices with a flat for the office manager, an engineer's residence, foreman's residence, a building for detonators and a building for explosives, and the dammed up water pool. Nothing in Sverdrupbyen was destroyed during the evacuation in 1941, but the horses were shot. The garrison, the Norwegian soldiers who came over from the UK in 1942, were tasked with keeping the buildings and rest of the mining facility in operational condition. It was important to pump water from the mines and keep the buildings watertight. During the attack on Longyearbyen on 8 September 1943, the German landing force was recalled to the

ships as they were heading up the hill to Sverdrupbyen. There was, therefore, little damage here. The two northernmost houses suffered gunshot damage and the northernmost dwelling was destroyed at the time or perhaps later. The Germans burned down all of the buildings in Old Longyearbyen, with a few exceptions. The garrison therefore moved up to Sverdrupbyen, and 50 men were posted here until after the end of the war.

Sverdrupbyen was repopulated as soon as mining restarted in the summer of 1945. After the war, there was a shortage of houses so Longyearbyen's post office had to move into the AMV (1948). The hospital was also located in a residence in 1945-1947. Several new buildings were built and the foreman's residence was repaired in 1945. In 1946, the workers' west canteen gained an extension, Nysalen, the town's temporary community centre. The AMV was extended and rebuilt in 1959 and 1964.



Sverdrupbyen in the 1950s.

Photo: SNSK.

The footbridge across the valley to Nybyen was built in 1947 and a four-family house, a house for canteen staff, and a new, concrete boiler house were built at Nysalen.

Mining operations in Mine 1b stopped in 1958 and the pitheads was demolished in 1982. The buildings gradually fell out of use and on 10 June 1985 the four remaining barracks were burned down as part of a fire drill. The bridge to Nybyen was demolished in 1988. Today, the AMV is used for business activities. This and some small, empty buildings are all that remain of Sverdrupbyen. However, up on the mountainside you can see the huge tips of stone from the mine and the remains of the pithead.

On Maundy Thursday 1962, the first Shang Po-Lar evening was arranged in the room Nysalen in the workers' canteen in the west ③ of Sverdrupbyen. Welfare secretary Hans Engebretsen and some other enthusiasts wanted to have a restaurant in Longyearbyen, as an alternative to the canteens and the café. Those who were to conjure up a name for the restaurant wanted to include "polar" and also have an element to remind people of warm and exotic climes, and so it became Shang Po-Lar. The restaurant was to have a Far Eastern touch. Symbolic Chinese characters were painted on a broad band around the walls and exotic paper lamps were hung up. Above the stage a starry sky was painted. There was table service with fancy sandwiches, wine and champagne. And there was a bar. The guests were dressed up in their finest and local bands provided the dance music. The Shang Po-Lar evenings were popular and were held regularly right until the final one in 1984.

## Huset E

When mining restarted in summer 1945, space was at a premium; two or more workers had to share a room. The big canteen 18 in Old Longyearbyen had been burned down, like most of the other buildings. The workers wanted a building for recreation and socialising. SNSK understood the need, but had to prioritise mines and homes. A proper community centre was completed in 1951. Its official name was the Assembly Hall, but it has always been called Huset, 'The House'. It stood alone, but close to Sverdrupbyen and Nybyen where the miners lived. The location may seem odd, given that it stands entirely on its own. But one of the reasons for this is proximity to the workers. Another was, perhaps, the neutrality of the site in relation to the different social classes in the mining town. The office staff's district, Haugen, was not a place the workers could just visit when they felt like it, and Skjæringa was the government district. Instead the office staff and government people had to walk further to the cinema and parties.

In its first few years, Huset was a building that hosted many activities and social functions in Longyearbyen. It was home to the church, school, post office, dance hall, theatre, associ-

ations and recreational activities. In the large hall on the first floor, the Svalbard Turn sports association trained and put on exhibitions, and this was also the cinema. Huset was the residence of the caretaker, pastor and teacher, and even served, for a short time in the 1950s, as the town's hospital. However, the most important social factor was the café, which served beer. Huset was the only place in Longyearbyen where everyone could get together regardless of rank.

Huset was designed by architect Jacob Hansen, who is also known for designing the Colosseum cinema in Oslo. Today, it is home to a restaurant, café, bar and nightclub. The hall on the first floor is used for concerts, shows and other events. Huset's exterior is protected in the land-use plan for Longyearbyen.

The slope by Huset's main entrance was the landing slope of Longyearbyen's old ski jump 63, known colloquially as Svalbardkollen. This was built in 1924-1925. The jump record, but with a fall, is 63 metres. After the Winter Olympics in Lillehammer in 1994, the Norwegian Olympic athletes came here to jump the hill.



Large hall/cinema on Huset's 45 first floor in 2013. Is used for cabarets and concerts.

Photo: Tone J. Sund.

## Nybyen E



Nybyen in the 1950s. On the right, the footbridge to Sverdrupbyen.

Photo: SNSK.

There was great demand for housing when SNSK restarted mining in 1945. Old Longyearbyen had been burned down and Sverdrupbyen and the new Swedish barracks could not accommodate everyone. Nybyen was established in the summer and autumn of 1946 with barracks for workers below Mine 2b 5. True to tradition, the miners would sleep and eat as close to the mine as possible, as they had done when Longyear City and Sverdrupbyen were built. The pace of building was fast. In 1946, the company erected five barracks with 36 two-man rooms and a canteen for foremen. The following year, the workers' canteen, Stormessa, was built and so was Jomfruburet, an extension for female employees. 'The Cage', as it was also called, was located near Stormessa where most of them worked. The baths, Lompen, were built in 1948. This was where the miners changed clothes, showered and charged their mining lamps. The shop, Sundt 58, was built in the same year.

The long, two-storey buildings were built next to each other in two rows on both sides of the road in parallel with the valley and mountain-sides. The location of Nybyen was not just as far as you could go up the valley in the town's migration along the Longyear Valley, but also represented the first step over the valley. Any

further migration would have to move back down towards the sea.

At the north end of Nybyen there are buildings belonging to Mine 2b's pithead; there was a sand dryer, carpentry workshop, boiler house and mine lift. This took people up to the pithead at the mine entrance. Nybyen and Mine 2b's pithead and cableway, is the most complete mining facility that has been preserved in Longyearbyen. The only thing that has been removed is the boiler house and mine lift, which were demolished in 1986.

All of the buildings have been renovated several times and have received new windows and district heating. Lompen has been demolished and replaced by a housing barracks. Today, Nybyen is home to dormitories, student flats, guests flats, homes and various businesses. The old shop hosts Galleri Svalbard 58 and the Longyearbyen Arts Centre. Some of the oldest, preserved pipe ducts 64 in town can be found between Huset and Nybyen.

Jomfruburet and the foremen's canteen buildings were designed by Jacob Hansen, who also designed Huset. The same is probably true for all the other houses in Nybyen.

# Haugen F



Haugen in 1948. From left, six family homes 86, the office staff's canteen 87 at the top with the second hospital 88 on the right. The second offices 90 to the far right. In the snow up to the right, the site of the first offices that burned down.

Photo: SNSK.

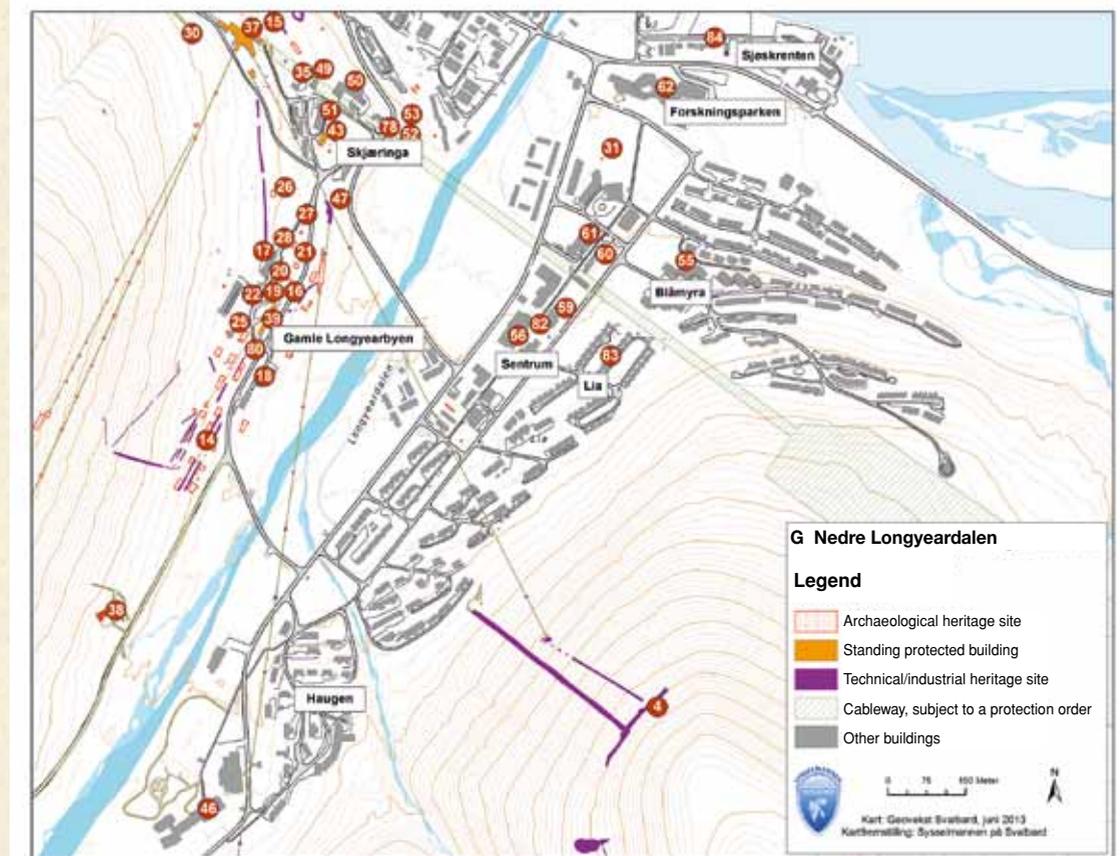
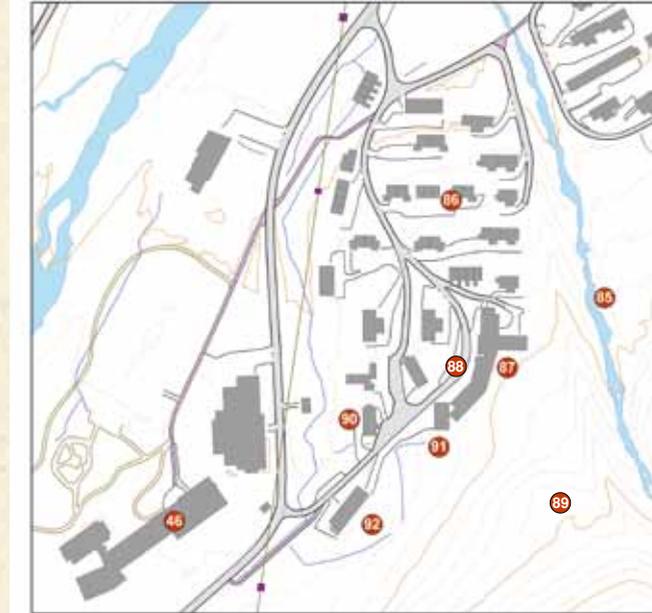
After the war, SNSK lacked offices and housing for engineers and office staff, both single people and those who brought their families with them. The company chose Haugen close to the Vannledningsdalen 85, an area that was on the same side of the valley as Nybyen and 1.5 kilometres further down the valley. The location was chosen not just because it was a dry knoll that got the sun. Haugen would also be convenient for the future mines outside the Longyear Valley. With the new houses on Haugen, the migrating town took its first step down towards the sea.

In 1946, the same summer the first barracks were built in Nybyen, three four-bed homes 86 were built on Haugen, and the foundations were laid for an office staff canteen, Funksjonærmessen, Funken 87, the second hospital 88 and SNSK's first office 89. In Longyearbyen the term messe is used both for a place where you eat and for a building that houses both homes and a place where you eat. The following year, in 1947, the buildings were built on the foundations and four-bed family homes were constructed. The sixth family dwelling was constructed in 1948-1949. The office, which was behind Funken, burned down in January 1948 and SNSK's 90 second office was constructed below Funken.

Rosekjelleren 91, a residential building in concrete for Funken's young canteen girls, the roses, was built in 1954 between Funken and the hospital. And in 1956 the dormitories and blocks of flats north of the offices went up. Longyearbyen had gained a new district. All of these houses were also designed by Jacob Hanssen.

In 1953, there was a landslide in the Vannledningsdalen. Three people were killed and the hospital and a family home were destroyed. The third hospital 92 was constructed the following year, down by the road up to Nybyen. This road was built in 1950 and is known colloquially as the Dram Road because it ran from Nybyen down to the spirits sales outlet in Funken's cellar. Haugen got its water from a tank up in the Vannledningsdalen and waterborne heating from the boiler house in Nybyen. Pipe ducts were installed in 1960. This meant an end to getting water delivered as ice from the ice pool in the winter.

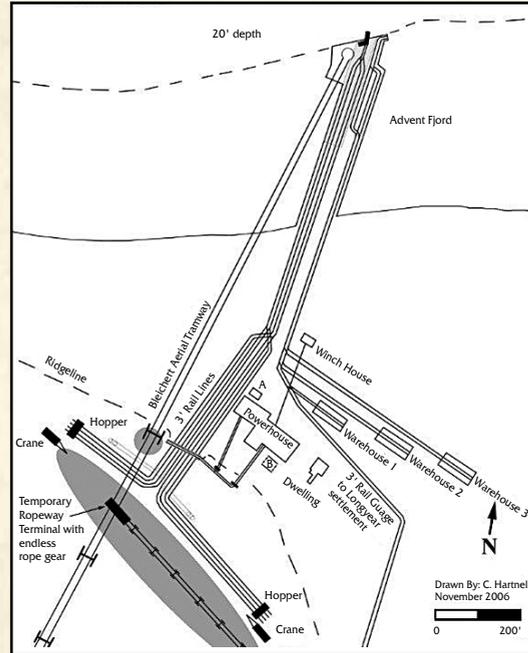
All of the houses from the 1940s and 1950s have undergone renovations and received new windows. Today, the offices and hospital are homes, Funken is a hotel and Haugen is full of many new blocks of flats.



# Sjøområdet H

Sjøområdet is the first thing everyone sees in Longyearbyen, whether they arrive by airport bus or on foot from a cruise ship. This was also true for those who arrived in the town more than 100 years ago. In June 1906, Longyear's workers crossed the ice from Hotellneset with the construction materials and mining equipment that would build Longyear City. The ice had forced them to unload the equipment on Nesset and stay at the empty hotel there.

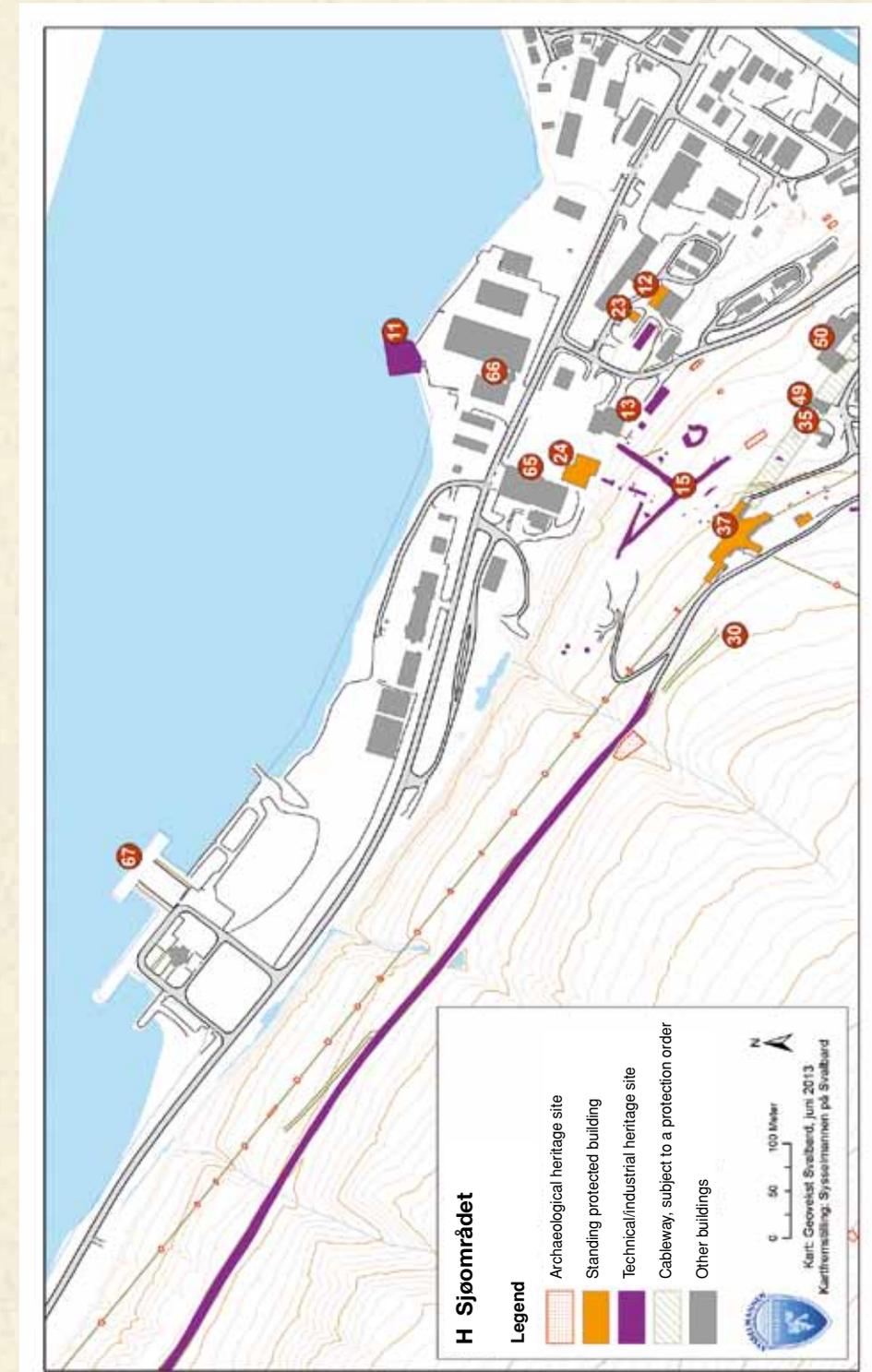
Sjøområdet became Longyearbyen's logistics centre and still is: the docks, power station, warehouses and workshops are located here. The old dock 11 was constructed in summer 1907, the oldest power station 13 in 1910, and three large warehouses in 1915. They had tracks for wagons all the way in and one wagon track outside. Today, one of those warehouses 12 remains; it is clad in corrugated iron. From Sjøområdet, the wagon railway ran up to the settlement and out onto the dock. The wagons were pulled by horses.



Sjøområdet. Drawing of dock and warehouses 1913.  
Drawing: Cameron Hartnell.



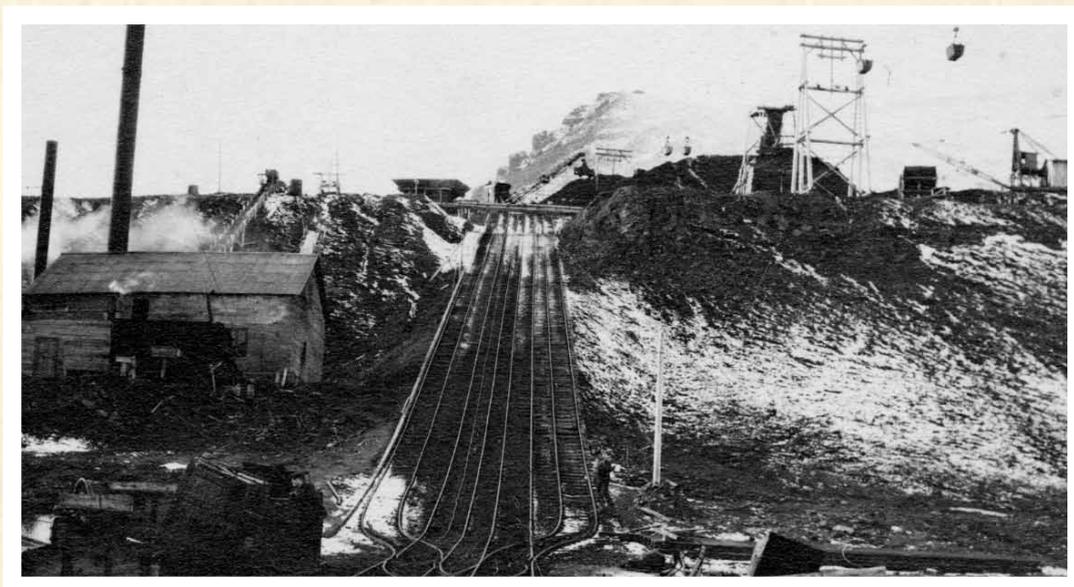
Warehouses in Sjøområdet about 1920. The little building at the top is Transporten 23. This and the warehouse 12 on the right from 1913 remain standing to this day.  
Photo: SNSK.



The coal that was dug out in the winter was stored on the ledge above Sjømrådet. The depot had its own cableway and a broad cutting with a four-track railway down to the dock. Skjæringa and the remains of some sleepers are clearly visible. A large steam crane loaded the wagons. The crane's chassis stands on rails just below Taubanesentralen. The location of the coal depot 15 was convenient for the power stations and power station coal flowed here from Taubanesentralen up until 1988.

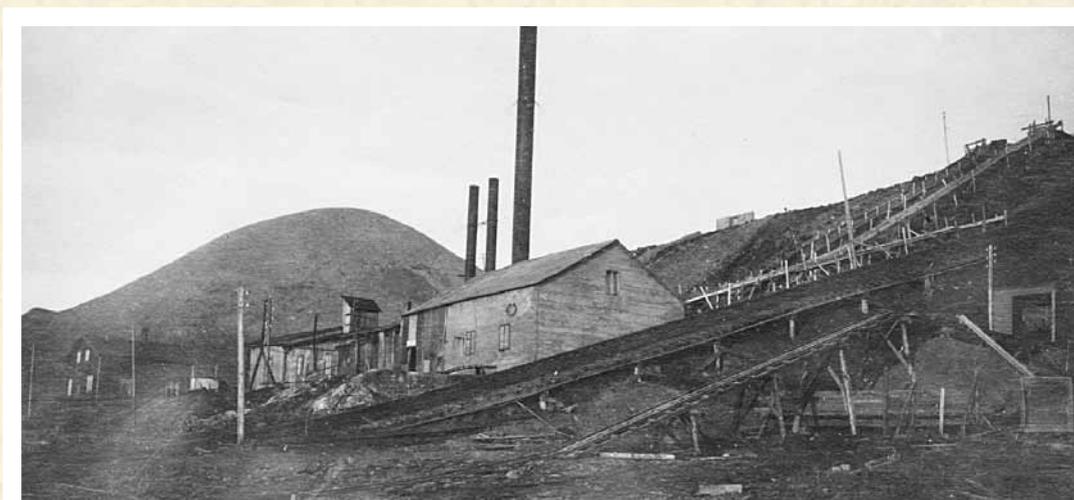
Today's power station, Energiverkets 65 coal depot is indoors and located on the northern edge of the power station.

Over time, the area by the sea became too small and was extended by dumping rock and stone both outwards and on the sides. Large warehouses, tank facilities, petrol pumps, a garage and service companies have been added. SNSK has its offices here 66. Longyearbyen got a new dock in 1994, Bykaia 67.



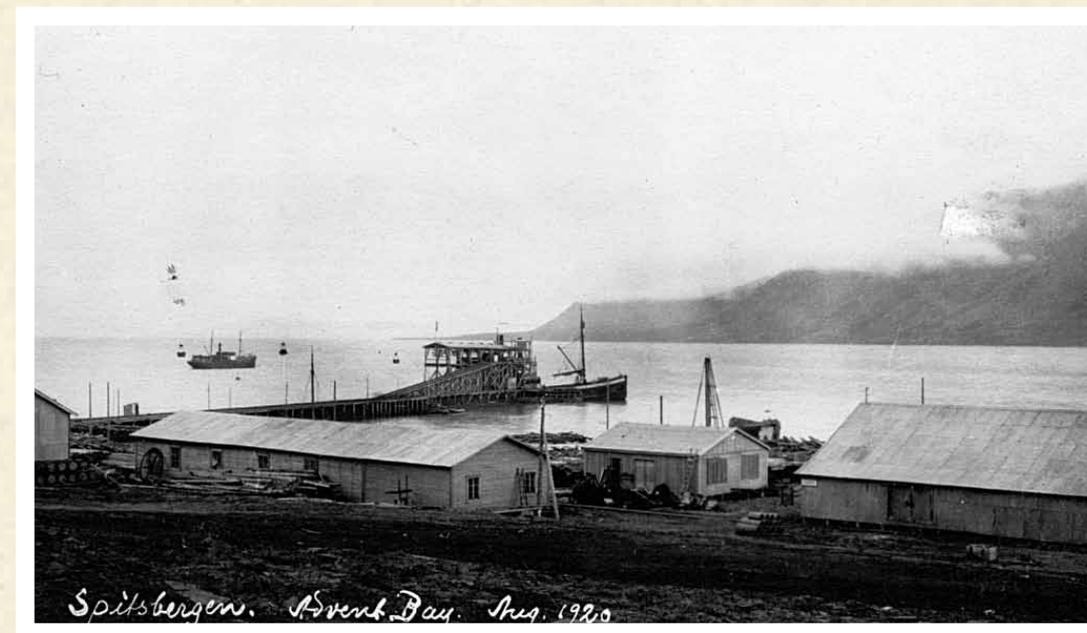
Skjæringa with tracks from the coal depot 15 down to the loading dock in 1916.

Photo: SNSK.



ACC's power station from 1910 13 with extension photographed in 1920. Coal chute down from the slope and further to the left the gate of the cooling water pool. On the left, housing for power station employees.

Photo: SNSK.



Sjømrådet with the old dock 11 and warehouses 12 in 1920. Transporten 23 is in the middle of the picture.

Photo: SNSK.



Brownhoist crane at the coal depot 15 below Taubanesentralen in 1916. The chassis is still standing.

Photo: SNSK.

## The power stations

Today's power station, Energiverket <sup>65</sup>, is the third generation of coal power stations in Longyearbyen. In the summer of 1909, John M. Longyear came to see his mine in Longyearbyen. The mine had been in operation for three years and now he had to decide the mine's future. The mine and facility was driven by horse and manual power. Longyear brought with him an expert in coal mining, Walter L. Coulson, who believed that the mine had to be operated electrically to be profitable. Longyear followed his advice and the foundations of Longyearbyen's first coal-fired power station were laid in the summer of 1909 <sup>13</sup>. The remains of the foundations can be seen just outside Provianten's car park.

The power station came online in summer 1910, the American Mine, Mine 1a, was mechanised. The buildings got lights and telephones, and the six pit horses could enjoy a quieter life.

The mine eventually needed more power and safe operations required reserve power. In 1920, SNSK built a new, concrete power station with space for a steam boiler, a hall with two turbines, and a seawater intake. This is the green brick building <sup>24</sup> that stands next to the current power station. The power station was expanded many times over the years. The power station's



The old power station <sup>24</sup> and Energiverket <sup>65</sup> in 2013.

Photo: Tone J. Sund, SMS.

key role in the town was illustrated during the evacuation in September 1941; after all civilians had left, a few engineers and foremen stayed behind to keep the steam turbine generator operating because of the radio station. The iron trestles of Mine 2a's cableway were blown up, the livestock slaughtered, and the coal depot at Hotellneset was set on fire. In the power station, some equipment was dismantled and taken away, and some was destroyed. The steam boilers were emptied of water to avoid ice damage. The power station was rendered useless, but in such a way that it could be put into operation again when the company's people returned. During the German attack in September 1943, the power station was set on fire, as were some other buildings in the dock area.

When the mines were going to be reopened in the summer of 1945, the power station was the first priority. A new roof was installed over the summer and the new steam turbine generator came online in October. The mines could then start work and coal be dug out for sale. In 1946, a new boiler, new turbine generator and new cooling water intake system with intake foam were installed. In the period up to the building of the current power station in 1983, a number of innovations and improvements were made, but no major changes to the building.

Approximately one third of the coal produced in Mine 7 in Longyearbyen today goes to the power station (25,000 tons of coal in 2012), which produces hot water, heat and electricity for the town. All the buildings in Longyearbyen are today heated by waterborne heat.

The old power plant was Longyearbyen's source of power for 62 years until the new power station Energiverket, opened in 1982. Both the old power station and the site of the oldest station are protected cultural heritage sites.

## The docks

Before the airport <sup>68</sup> was built in 1975, the dock was the main link with the outside world (aircraft occasionally landed on the airstrip in Adventdalen between 1959 and 1974). Everything went through the dock: coal was shipped out, goods were shipped in and people went both ways. The dock was the site of the year's two most important days. It was here that the first ship arrived and from here that the last ship embarked. From the dock you could see who was arriving and leaving, what new equipment the company had purchased, and check if the potatoes and beer were in place before winter. But the dock's most important function was loading coal. The few docks on Svalbard are all located where it was best to load coal, as close as possible to the coal depot.

Today, the town has three docks. The coal dock at Hotellneset <sup>69</sup> in the north has been loading coal since 1922, Bykaia <sup>67</sup> is where most cruise ships dock, and the old dock <sup>11</sup>.

### The old dock

The Arctic Coal Company had intended to build the first dock in the summer of 1906, but work did not start until early winter 1907. From the beach the shallows extend quite far out and a 180 metre long pier had to be built to get out to deep enough water. The long pier is today covered by the rock and stone dock extensions. The dock where ships tie up today is the same one that was built in 1907. Over the years, the dock has been reinforced with new piling and new surfaces. The dock was completed in summer 1907, and even before the pier was finished there was unloaded cargo lying around the dock. The Arctic Coal Company laid the dock in a direct line with the cableway from Mine 1a, the American Mine. This enabled them to load coal directly from the mine. The coal depot was on the ledge below Taubanesentralen and was equipped with a short cableway.

Two railway tracks ran alongside the coal depot <sup>15</sup>. One was for a steam-driven coal shovel and the other was for coal wagons. The full coal wagons rolled down through the four-track cutting and on two tracks out to the ship. Ships could therefore be loaded via both the cableway and the railway at the same time. It had to be fast because the shipping season was short.

In 1921, the coal depot and loading dock were moved to Hotellneset. The old dock continued to function as the town's dock for people and goods. The dock has welcomed miners and the King, fishermen, hunters and governors, directors and tourists, scientists and other seafarers. Today, the dock welcomes tourists and goods. The old dock no longer satisfied the requirements of a modern dock and was rebuilt in 2013.



Piling for the old dock <sup>11</sup>, spring 1907.  
Photo: SNSK.



Old dock <sup>11</sup> under construction in the summer of 1907. There are goods on the dock even though the pier has not been completed.  
Photo: SNSK.

# Hotellneset I

Hotellneset, or Nettet as it is also known, sticks out into the Advenfjorden and creates a natural harbor. There are few sheltered harbours in Isfjorden and given that the promontory also has a nice, gentle beach with a large flat plain behind it, it has always been a natural place to land. In 1878, a Russian station was observed on Hotellneset. It had been used when Russian hunters and fishermen overwintered on Svalbard in the 1700s and 1800s. The station no longer exists; it is probably beneath the coal depot.

## Tourism

Svalbard has a long history of tourism. Svalbard's first tourists were wealthy Europeans who arrived on their own or leased ships. The common denominators were that they wanted to shoot animals and that they wrote books about their experiences. The first was Bartho von Løwenigh who in 1827 sailed from Hammerfest to Svalbard. He was accompanied on the trip by a geologist, Baltazar Mathias Keilhau, the first Norwegian scientist to arrive on Svalbard.

Many of these sporting gentlemen and nobles wrote journals from Svalbard. Good examples include Sir Martin Conway's *The First Crossing of Spitsbergen* in 1897 and *No Man's Land* from 1906. Their main occupation was hunting. It was a major part of the tourism of the day. A British man, Arnold Pike, was not satisfied with simply sailing to Svalbard; he built himself a house in Virgohamna on North-

west Spitsbergen where he spent the winter in 1888-1889. The knowledge these tourists passed on about Svalbard through books, lectures and newspaper articles laid the foundation for cruise tourism to Svalbard. This started in 1880 and continues to this day.

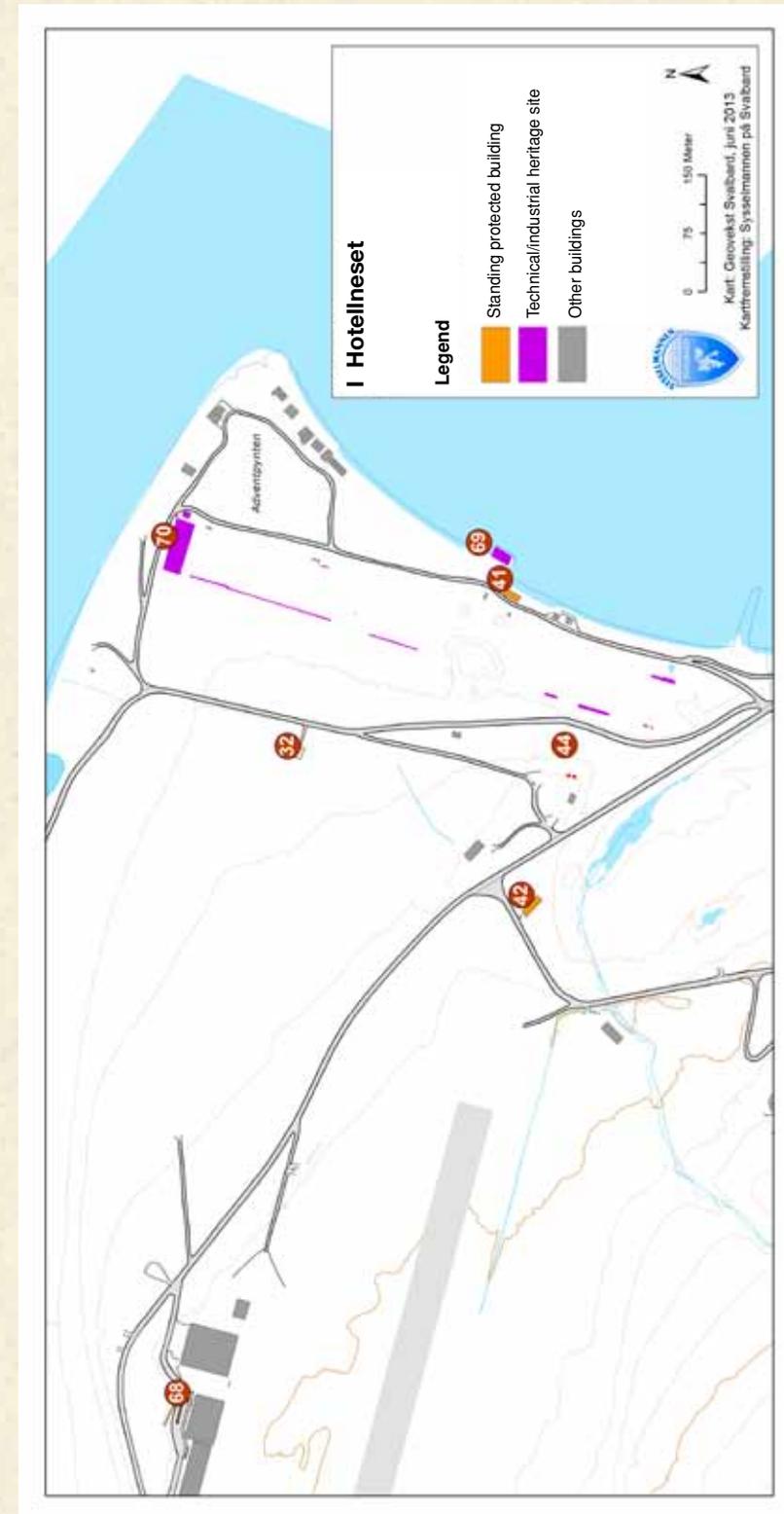
Big cruise ships have been visiting Svalbard since the 1890s. They all anchored past Hotellneset and put tourists ashore so they could enjoy long hikes. It was easy to put the tourists ashore via the beach and it was here that hunters sold souvenirs. Slightly further up off the beach was Flagghaugen. Tourists hiked here with flags. Cairns and iron signs bearing the names of the shipowners and ships were set up. Several of these are preserved in Svalbard Museum. John Munro Longyear's first trip to the Advent Fjord was on a cruise in 1901, and it was here at Hotellneset that he came ashore.

In 1896, Vesteraalens Dampskibsselskab built a tourist cabin at Advent Point. It was a prefab designed for summer use and sat directly on the ground. It had space for 30 guests and provided a great view over the Adventfjorden from the veranda. This is how the promontory got its name, Hotellneset, which means the hotel promontory. Vesteraalens Dampskibsselskab's SS Lofoten ran a regular service carrying tourists to Svalbard and guests to the hotel. They could enjoy the local newspaper, *The Spitsbergen Gazette*, which came out in 1897 in Norwegian, English and German.



*The tourist hotel at Hotellneset in 1901. It was built in 1896 by Vesteraalens Dampskibsselskab. Bought by ACC and moved to Old Longyearbyen as a warehouse and shop in 1908.*

*Photo: N.H. Dole.*



The hotel went poorly and was closed down after two seasons. The Arctic Coal Company used the building as a base for their people when they were going to start building the mining town in 1905. In 1908, the building was moved to Longyearbyen as a warehouse and shop. It was burned down by German soldiers in 1943.

The tourists who came to Svalbard before the 1950s came by ship. Very few spent long ashore. But all the ships came to Longyearbyen. It was a good port and the mining town was an attraction. Longyearbyen was a mining town, a place of work, and nothing more. SNSK did not build hotels and had no restaurants or shops open to tourists. Its own guests were put up in the office staff's canteen. Those who wanted to come here had to buy a ticket on the company's coal ships.

### Hurtigruten - the coastal express

Today, Hurtigruten is a regular annual guest in Longyearbyen. Troms Fylkes Dampskipselskap, now Hurtigruten, began sailing to Svalbard in 1934. The route was supported by public funds and the ship was a coal-fired steamship, the SS Lyngen, built as a coastal steamer. The round trip to Svalbard embarked from Tromsø. It took ten days and ran five to six times each summer. The Lyngen called at Longyearbyen and Ny-Ålesund, and then went north to the Magdalenefjorden and as far as the ice and time allowed. The passengers were tourists, scientists, and hunters.

In the best seasons there were about 80 passengers per trip. After World War II, the Lyngen started sailing to Svalbard again and did so from 1952 to 1965. These round trips were popular with tourists and journalists, and everyone came ashore in Longyearbyen. Here the Lyngen delivered the mail and took on coal. The Svalbard route continued with the Hurtigruten ships, first as weekly trips from Tromsø and today as trips from Longyearbyen. The Lyngen and coastal express ships were the only regular links with the mainland that brought tourists to Svalbard before Longyearbyen got an airport.

Three events provided the basis for today's tourism on Svalbard. The first was the opening of the airport <sup>68</sup> in 1975. The second was the reorganisation of SNSK in 1989 with the establishment Spitsbergen Travel that ran Longyearbyen Camping, Funken and Nybyen's guest house. The third was the opening of the Svalbard Polar Hotel in 1995. Parts of the building consist of dismantled parts of the Olympic Village from the 1994 Winter Olympics in Lillehammer. Longyearbyen had thus gained an all-year airport and hotel, and organised tourism was fully underway.

Today, the tourism industry is well-developed. It means a lot for the maintenance of the modern town and provides the basis for a wide range of hotels, shops, cultural experiences, activities and restaurants. Tourists arrive in Longyearbyen by plane or on board cruise ships. Here they can buy guided tours with snowmobiles, skis, dog sledges, boats and horses, or hike in the mountains and on glaciers. Cruise tourists arrive in the summer and live on their ships while they experience Longyearbyen by foot or tour bus.

Boats of various sizes take tourists on expedition cruises. There are shorter and longer trips around Svalbard with Longyearbyen as the starting point. Day trips by boat to the Russian mining town of Barentsburg and the abandoned Pyramiden are also popular with Longyearbyen's residents. Longyearbyen's hotels have 85,000 overnight stays a year, while cruise ships bring about 26,000 tourists to the town (2012).



*The SS Lyngen at the edge of the ice outside Longyearbyen in the 1960s. The ship belonged to Troms Fylkes Dampskipselskap, now Hurtigruten, and provided a regular service between Tromsø and Svalbard from 1934-1939 and 1952-1965.*

Photo: NP.

## Coal depot and loading dock

In Longyearbyen, the majority of activities were concentrated in the valley and Sjøområdet. But there were some activities for which there was no room here. It was these that required a large amount of space and a good harbour. The coal that was dug out in the winter had to be stored until the summer shipping season. When Mine Za opened in 1920, the depot in Sjøområdet became too small. A larger depot had to be found and Hotellneset was a close by and excellent place. The promontory was large and flat, and it was also a good harbour for cargo facilities and a coal loading dock <sup>69</sup>.

### A small community

Hotellneset was more than three kilometres from Longyearbyen and there was no road, just a path up on the cliff edge. The solution was a cableway with trestles to transport the coal. People used small boats and walked along the shore, and in the winter they used horse-drawn sleighs on the sea ice. If it was something urgent, it could be sent by cableway. However, these links were not reliable enough to allow the workers to live in Longyearbyen. The solution was for those who worked on Nesset to live there too.



*The coal depot and loading dock <sup>69</sup> on Hotellneset under construction in 1920.*

Photo: SNSK.

In 1946, horse stables were built and this improved transport to the town. The company's major commitment demanded new loading facilities, and in 1953 the Titan crane was ready for use. It was in operation until 1979, and SNSK has preserved it. The Titan crane stands out on the promontory as a visible monument to the history of Nesset and coal mining, and is protected as a cultural monument in the land-use plan for the area.

From 1945 to 1967, Nesset had 30 permanent residents, including families. In the summer, the shipping season, there were more. They lived in barracks and ate in a communal canteen. In 1959-1960, new barracks were built with baths, a canteen, sitting room, kiosk and beer sales outlet. Living conditions were the same as in town, but the food was better than in the big canteen in town. The road into Longyearbyen, known colloquially as the Burma Road, was completed in 1967 and then everyone moved from Nesset into town.

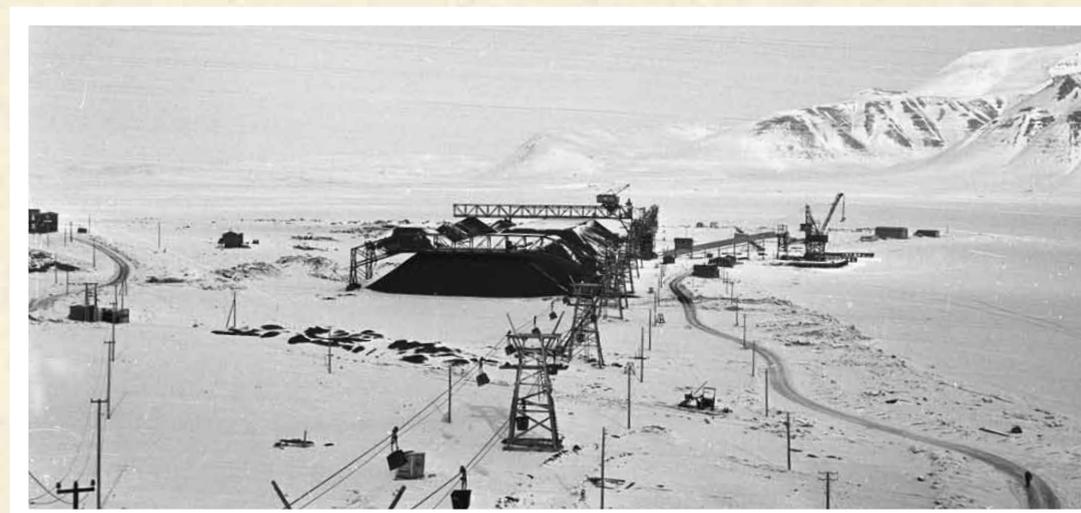
### Coal is not just coal

There may be stones among the coal and these must be removed before the coal can be shipped. This is called cleaning the coal.

For the first few years, the coal was cleaned by hand by men standing either side of a conveyor belt. With larger amounts of coal and demands for cleaner coal, manual cleaning was no longer a good enough method. In 1954, an automatic cleaning plant was set up in the bay at Nesset; it was called the cleaning and sorting plant. The cleaning plant was supplied with coal via the cableway, cleaned it and forwarded it via the cableway to the depot. The cleaning plant was closed in 2008 and demolished in 2010.

The cableway was stopped at the end of 1987-1988, but Nesset is still the depot for coal. Large trucks now drive the coal from Mine 7. The old loading facilities on the coal pier were destroyed by a storm in 2011 and have been demolished. A new dock and new loading facilities were built in 2013.

Hotellneset has been SNSK's coal depot for 90 years and still is. A large number of boathouses have been built on the shore near Nesset and boats are stored here in the winter.



Coal depot and loading facilities <sup>69</sup> on Hotellneset in the 1950s-1960s. Right in the background you can see the titan crane <sup>70</sup> from 1953. It is still standing today. Photo: SNSK

## The old cemetery

The town's first cemetery <sup>44</sup>, the American's cemetery, lies on the cliff edge in front of the horse centre on Hotellneset. It was established sometime in the early 1900s and was in use until 1917. There is a photograph from 1916 showing four grave crosses. One cross is inscribed as follows: *Sivert Solberg 1873-1909. The Arctic Coal Company, 1906-1909.* The latter probably indicates the years he was employed by Longyear's company.

Today, only one of the graves is visible and marked with a cross. There are three depressions in the cemetery that may be the remnants of the other graves. The cemetery is fenced in by chains and posts made of mine drills.



Cleaning and sorting plant, ORV in 2009 <sup>71</sup>. Built in 1954 and rebuilt several times. Separates out stones and sorts coal by size. Also called the preparing plant and the cleaning plant. It was also the site of SNSK's laboratory for analysing coal quality. Demolished in 2010. Photo: Per Kyrre Reymert



The cemetery <sup>44</sup> on Hotellneset in 1968. The photograph shows three white grave crosses. From the left: a Russian Orthodox one, one with a single crossbar, and one with clover leaf-shaped ends. In the background is the cableway that ran to the coal depot. Photo: Freia Hutzchenreuter

## Scientific research

Research is Svalbard's third economical pillar, in addition to coal mining and tourism. Today, Svalbard Science Park <sup>62</sup> is the centre for research and teaching in Longyearbyen and on Svalbard. The science park is home to institutions such as the University Centre in Svalbard, the Norwegian Polar Institute and the Svalbard Science Forum. Offices are also available for rent to research institutions. The combination of research, airport, harbour and other logistics services has turned Longyearbyen into a large and important base for Norwegian and international research in the Arctic.

Svalbard has a long history of scientific research. The discovery of the archipelago, the early surveys and descriptions of the area was not scientific research, but rather geographical exploration. In 1878, a major Norwegian North Sea expedition drew a chart of Adventfjorden. This can be regarded as the first known scientific research in Longyearbyen. The chart shows the surrounding fjord and the seabed was mapped with detailed depth measurements. Official Norwegian scientific research began on Svalbard in 1906, and the area around Longyearbyen was topographically surveyed starting in 1913.

The first research station in Longyearbyen was built in 1911-1912. This was: Die Deutsche Geophysikalische Station Adventbai. Two German scientists leased part of some barracks from the Arctic Coal Company to measure winter wind and weather conditions. This was part of the preparations in a plan to use a Zeppelin airship for research in the Arctic and perhaps to reach the North Pole. Self-recording weather stations were set up on Nordenskiöldfjellet, Platåberget and Skjæringa. They built a balloon shed on Hotellneset from where they put up balloons and kites. Balloons with measuring instruments that were attached to their lines were sent up to an altitude of 1,800 metres. Free balloons with self-releasing instrument packs rose up to 5 and 8 kilometres. After one year, the station moved as planned to Ebeltofthamna in Krossfjorden. It remained

here until it was abandoned at the outbreak of World War I in 1914.

The summit of Nordenskiöldtoppen (1,053 m.a.s.l.) lies to the south of Longyearbyen. It is the highest mountain near the town and a popular hiking destination. At the summit stands a cabin built of galvanised iron plates on the inside and outside with insulation in between <sup>72</sup>. The cabin was built by three Swedes in the second International Polar Year, 1932-1933. They lived here for 15 months making meteorological observations. The cabin still stands and is worth a visit.

After World War II, Longyearbyen became a base for scientists working on Svalbard. They came here with their equipment and supplies and then went out to their research sites. They needed overnight accommodation and could find it at Vitenskapens Hus, the 'house of science'. This was the impressive name given to the barracks that had originally been used by the workers who built the governor's residence in 1949. The Norwegian Polar Institute was allowed to use for its own and other scientists. The building was located on the plain just north of the governor's residence. It was demolished in 1981 and scientists have, since 1992, stayed in the old barracks used by the workers who built the airport in 1974-1975.

In 1978, the Auroral Observatory at the University of Tromsø and the University of Fairbanks, Alaska established the Auroral Observatory near the angle station in the Endalen valley. In 1983, it was moved to the old airstrip and expanded. The building is still there <sup>73</sup>, but, in 2006, the observatory's activities moved to the new Kjell Henriksen Observatory <sup>74</sup> on Breinosa, above Mine 7 and EISCAT <sup>75</sup>.

The University Centre in Svalbard (UNIS) <sup>62</sup> was established in 1993. UNIS has four departments for education and research: Arctic Biology, Arctic Geology, Arctic Geophysics and Arctic Technology. UNIS is

one of Norway's most international institutions, with around 50 per cent international students and scholars. The publishing and teaching is in English.

In 1994, the first antenna of the European Incoherent Scatter Radar (EISCAT) <sup>75</sup> came online. EISCAT is studying the processes in the aurora borealis (northern lights) in the upper polar atmosphere. The second antenna came online in 2000.

The Svalbard Global Seed Vault <sup>77</sup> was opened in 2008 in the mountains alongside the road to the SvalSat, not far from the airport. The facility consists of three caverns, each with the capacity to store 1.5 million seed samples. Today, more than 750,000 seed samples are stored here.

## Space industry

The Svalbard Satellite Station (SvalSat) on Platåberget <sup>76</sup> was established in 1996 and is in 2012, with its 31 antennae, the world's largest commercial download station for satellite data. Its location at 78° north means SvalSat covers all 14 of the orbits that a polar satellite flies during a 24 hour period. The activities here are civilian, in line with the Svalbard Treaty.

It was the establishment of SvalSat that made a fibre cable from the mainland to Svalbard necessary. The fibre cable was Longyearbyen's most important communications initiative since the airport was built in 1975. The cable ensures Longyearbyen has a fast data connection to the entire world.



Svalbard Science Park <sup>62</sup> in 2012.

Photo: Tone J. Sund.

# Memorials



The memorial in Skjæringa <sup>78</sup> commemorates those who gave their lives in defence of Svalbard in World War II. Crown Prince Olav unveiled the memorial on 8 August 1949. This was the first visit to Svalbard by a member of the Norwegian Royal Family. The memorial was created by sculptor Ørnulf Bjarne Bast. It lists the names of 23 Norwegians, two Brits and a Swede. 15 people lost their lives when the Selis and Isbjørn were sunk in Barentsburg on 14 May 1942 and nine in the German attack on Longyearbyen and Barentsburg on 8 September 1943. One person was killed in a skirmish at the German weather station in Signehamna on 23 June 1943 and one in combat with a German submarine in Van Mijenfjorden on 18 August 1944. Only Captain Trond Astrup Vigtel is buried in Longyearbyen cemetery. The others were buried at home.



The 22 July memorial <sup>79</sup> that stands outside Svalbard Church remembers the victims of the attack on the government offices in Oslo and on the island of Utøya. 14 year old Johannes Buo from Longyearbyen was one of the 69 who were shot and killed on Utøya. Many other youngsters from the town were there and several were injured. The memorial stands outside Svalbard Church and was a gift from an anonymous donor. It was created by Nicolaus Widerberg and unveiled on 20 October 2012.



The memorial to Einar Sverdrup <sup>81</sup> stands outside Huset. Einar Sverdrup was a qualified mining engineer and got a job with SNSK in 1922. He became the technical director in 1931 and was the winter manager for several years before he became the company's managing director in London in 1941. He had attended the Norwegian Army Academy and was, as a lieutenant colonel, in command of the force that would establish a Norwegian garrison on Svalbard in May 1942. Sverdrup was among those who fell on 14 May 1942 when the ships Selis and Isbjørn were sunk off Barentsburg. The soldiers who came ashore established a garrison that remained on Svalbard until after the end of the war. The memorial was created by sculptor Ørnulf Bjarne Bast. It was unveiled on 13 July 1952.

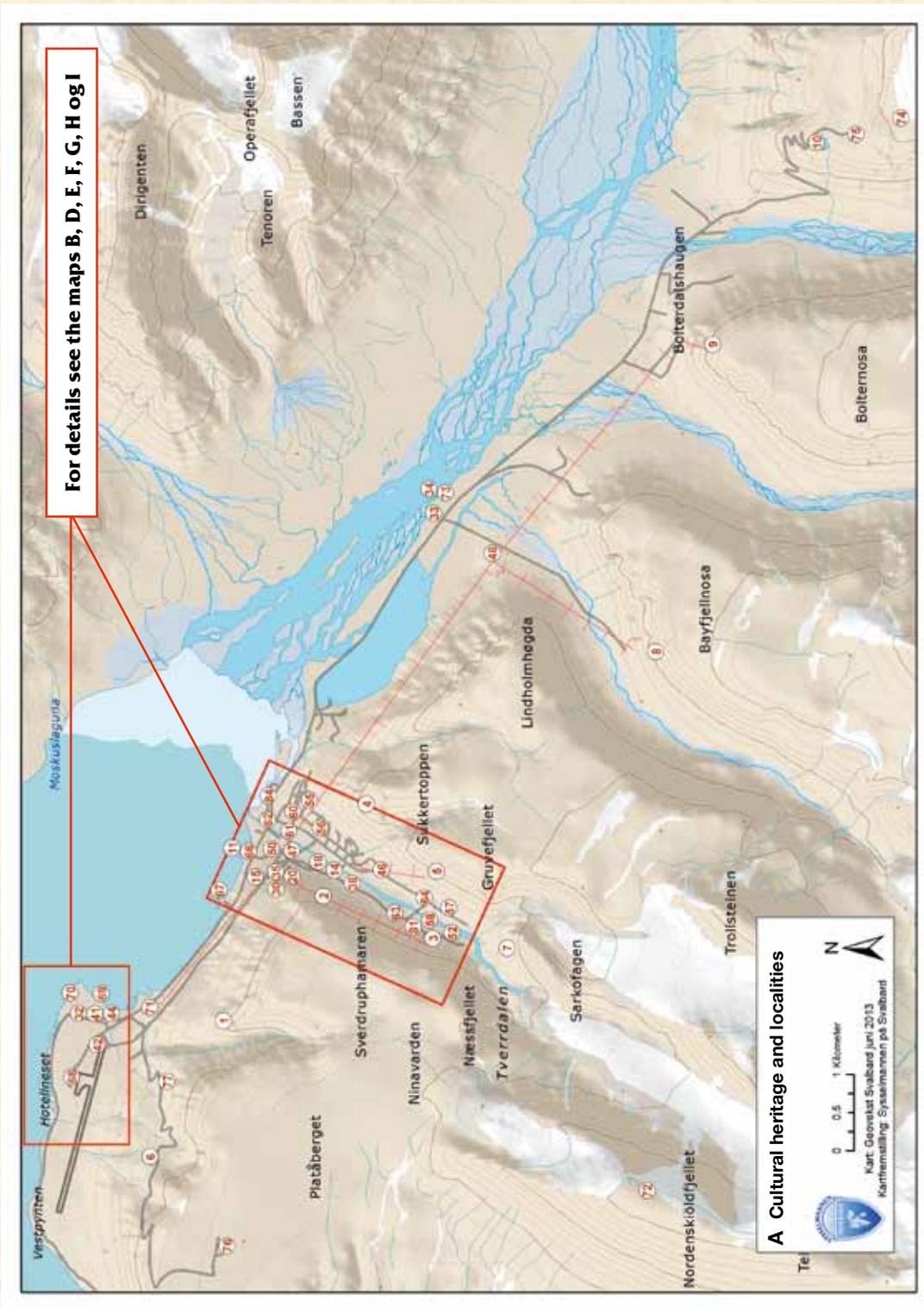


The miners' memorial <sup>82</sup> stands in the square between Lompentret and the Svalbard shop. It is a bronze statue depicting a miner in 'lomp' as the miners' work clothes were called. The memorial honours the miners whose work created Longyearbyen. Miner Olav Theodorsen (who worked in the mines from 1960 to 1996) unveiled the statue on 12 September 1998. The artist was sculptor Bjørn Tore Skjølsvik

*Alle fotos: Tone J. Sund, 2013*



The Longyear memorial <sup>80</sup> stands in the Old Longyearbyen in memory of John Munro Longyear, the town's founder. The memorial plate with Longyear's portrait stands on a foundation from one of the trestles of Longyear's first mine, Mine 1a, the American Mine. The foundation rolled down from its site on the mountainside many years ago. The memorial plate was made by Tor Schmedling and paid for by the Norwegian government. Janetta M. Longyear, John Munro Longyear's grandchild, unveiled the monument on Longyearbyen's 100th birthday, 10 June 2006.



## Map, cultural monuments and heritage sites

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# Museums, collections and tourism

## Svalbard Museum

Svalbard Museum <sup>89</sup> is a natural and cultural history museum located in Svalbard Science Park. The museum presents fragments of Svalbard's more than 400 year long cultural history, from the first whalers in the 1600s, through Russian and Norwegian fishing and hunting, to polar expeditions and mining. Svalbard Museum offers wide-ranging, comprehensive information about the natural environment and cultural history, and is an active communications platform for new research and knowledge about the Arctic. The museum has a new, modern cultural history depository with around 40,000 artefacts from Svalbard. The museum's shop offers a rich selection of polar literature and gifts.

## Spitsbergen Airship Museum

The Spitsbergen Airship Museum <sup>90</sup> is located on the sea cliff in Longyearbyen, just north of Svalbard Science Park. The museum tells the story of three of the airship expeditions in the Arctic. These are: the 'American expedition' (Wellman Chicago Record Herald Polar Expedition) in 1906-1909; the 'Norwegian expedition'

(Amundsen-Ellsworth-Nobile, Transpolar Flight) in 1926; and the 'Italian expedition' (Nobile) in 1928, and also tells the stories of the rescue missions on and around Nordaustlandet on Svalbard. The famous Norwegian polar explorer Roald Amundsen lost his life in one of the rescue missions.

## Galleri Svalbard

Galleri Svalbard <sup>83</sup> is run by the Longyearbyen Community Council. The gallery is located in the premises of the old shop, Sundt, at the bottom of Nybyen. The gallery houses a permanent exhibition of works by the painter Kåre Tveter. Henrik Varming was an office manager with SNSK and collected old maps and books from the Arctic and Svalbard. These collections are owned by a trust and on display at the gallery. So is Ingvar Johansen's collection of Svalbard money and lithographs from the La Recherche expeditions to Svalbard in 1838 and 1839.

## Svalbard Reiselivsråd AS

Svalbard Reiselivsråd <sup>89</sup> organises about 65 companies on Svalbard and owns the destination company Svalbard Reiseliv AS. The company's duties include marketing and environmental and tourism information ([www.svalbard.net](http://www.svalbard.net)) and it is located in Svalbardporten where it shares a home with Svalbard Museum and the governor's environmental information department.



ACC's coal dock <sup>11</sup> in Longyearbyen in 1916.

Photo: SNSK.

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Published by the Governor of Svalbard, Environmental Protection Department.

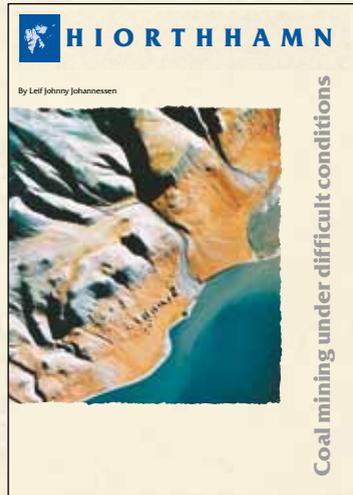
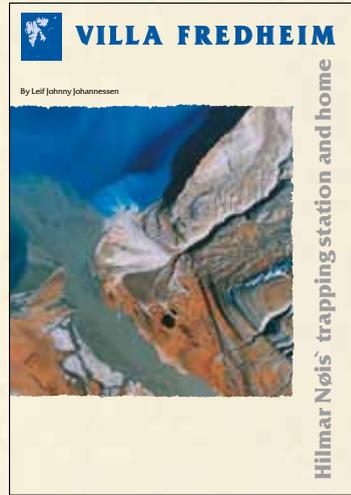
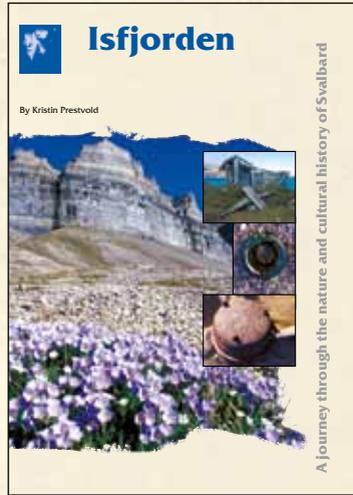
Editors: Irene Skauen Sandodden, Snorre Haukalid  
Copy: Per Kyrre Reymert  
Historical consultant: Thor Bjørn Arlov  
Photo Editor: Per Kyrre Reymert  
Maps: Irene Skauen Sandodden, Sveinung Bertnes Råheim  
Design and graphic design: Norbye & Konsept AS  
Printer: Norbye & Konsept AS  
Front page photo: Longyear City 1908, photo: A.B. Wilse  
Print run: 5000, pages 58  
ISBN: 978-82-91850-40-5 (printed version)  
ISBN: 978-82-91850-42-9 (digital version)

We are grateful to Store Norske Spitsbergen Kulkompani AS, the Norwegian Polar Institute, Herta Grønndal, Freia Hutzchenreuter, Tone J. Sund and the National Archives of Norway in Tromsø for the loaned photos. We are also grateful to Peter Brugmans, Viggo Bj. Kristiansen, Svalbard Reiseliv AS, Svalbard Museum, Spitsbergen Airship Museum and Store Norske Spitsbergen Kulkompani AS for their professional input. We would also like to thank Anne-Lise Sandvik and Tormod Jensen for their assistance.

Abbreviations: ACC: The Arctic Coal Company, SNSK: Store Norske Spitsbergen Kulkompani AS, NPI: The Norwegian Polar Institute, SM: Svalbard Museum.

Longyearbyen 2013

# More from the Governor of Svalbard

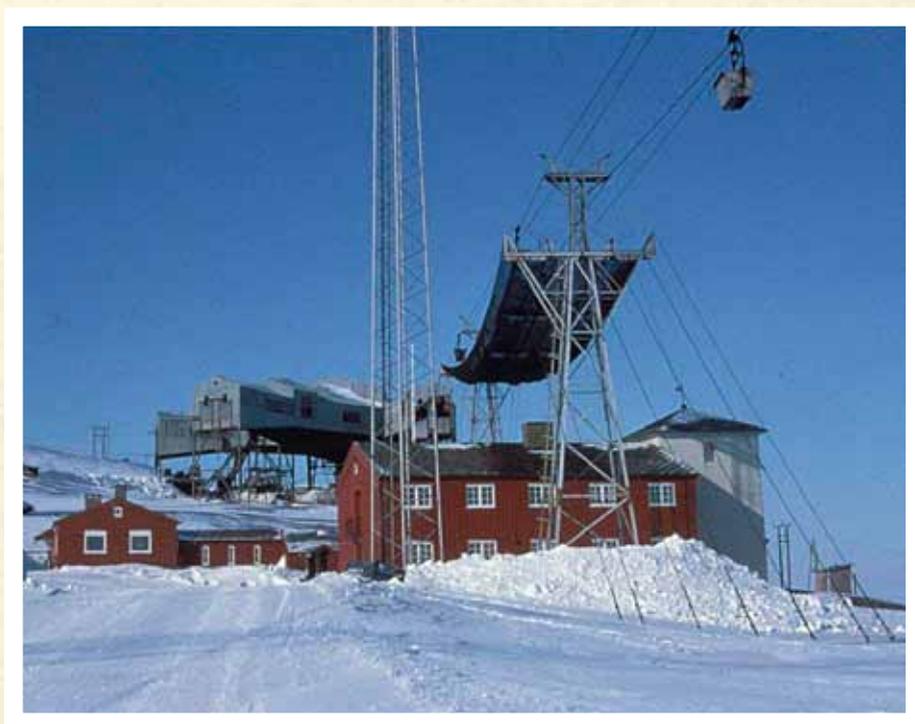




## **SYSSELMANNEN PÅ SVALBARD**

**MILJØVERNAVDDELINGEN**

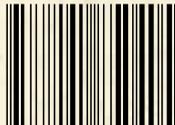
**N-9171 LONGYEARBYEN**



*'The Hammock'. SNSK opened Mine 5 in the Endalen valley in 1959. The cableway had to be strung across the governor's residence in order to reach Taubanesentralen. After several coal buckets had fallen onto the roof, a steel net was hung up. 'The Hammock', as it was known colloquially, was taken down in 1988. So was the telecommunications mast from 1952, which is standing to the left of 'The Hammock'.*

*Photo: SNSK*

ISBN 978-82-91850-40-5



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