

i. Water cascades across opening in the pond, further eroding the opening over time; ii. Existing drainage ditch is further excavated to accommodate surface melt and pond drainage; iii. Designed steel wall behind day building slows down the decay of plateau 1; iv. Wooden tables re-purposed as display for UNIS, when no longer functioning the tops are removed, leaving the oak posts to decay in place; v. Steel wall at entrance guides visitors to the coal conveyor structure while also reduces erosion and meltwater from damaging the Svea Silos below; vi. Svea Silos remain in place until destabilized, they are then moved to Longyearbyen

Country /City Norway, Tromsø University / School UiT The Arctic University of Norway. Academic year 2022-2023 Title of the project A palliative design for the (after)life of mine #7 Authors Caitlin Jakusz Paridy



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Authors	A palliative design for the (after)life of mine #7						
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Title of the course	Diploma						
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-	2022-2023						
Teaching Staff	Mari Bergset (Course Leader): Eimear Tynan (student supervisor)						
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Written statement, short description of the project in English, no more than 250 words

In 2028, Norway's last and longest-operating coal mine is expected to cease operations in Longyearbyen, Svalbard. The context of the mine is quite unique in that most of the mine's coal shafts are situated under Foxfonna glacier, and the remaining areas are set within and on top of a permafrost landscape. These cryogenic conditions, however, are currently undergoing rapid degradation due to an increasingly warmer and wetter climate resulting in glacier melt, ground de-stabilization and geo-hazards. This project proposes a decommissioning strategy and design for the coal mine that considers its cultural and environmental qualities and values. A key question addressed in this project asks how the closure of the coal mine can address cultural and cryo-geological changes impacting the landscape above and below ground, as well as the community's future relationship to this landscape. The project adopts a concept coined by geographer Caitlin de Silvey called palliative curation. This recognises the finite lifespan of structures and artifacts through dignified and sensitive modes of curation. The design interventions take reference from the existing and predicted fluidity and entropy of the site where materials, structures and processes are concealed and revealed over different spans of time. It caters for a gradual transition of the diverse physical states of the site while maintaining social encounters. In doing so, it invites relations to evolve between humans and more-than-humans as the mine and cryogenic conditions slowly fade from this landscape.

For further information

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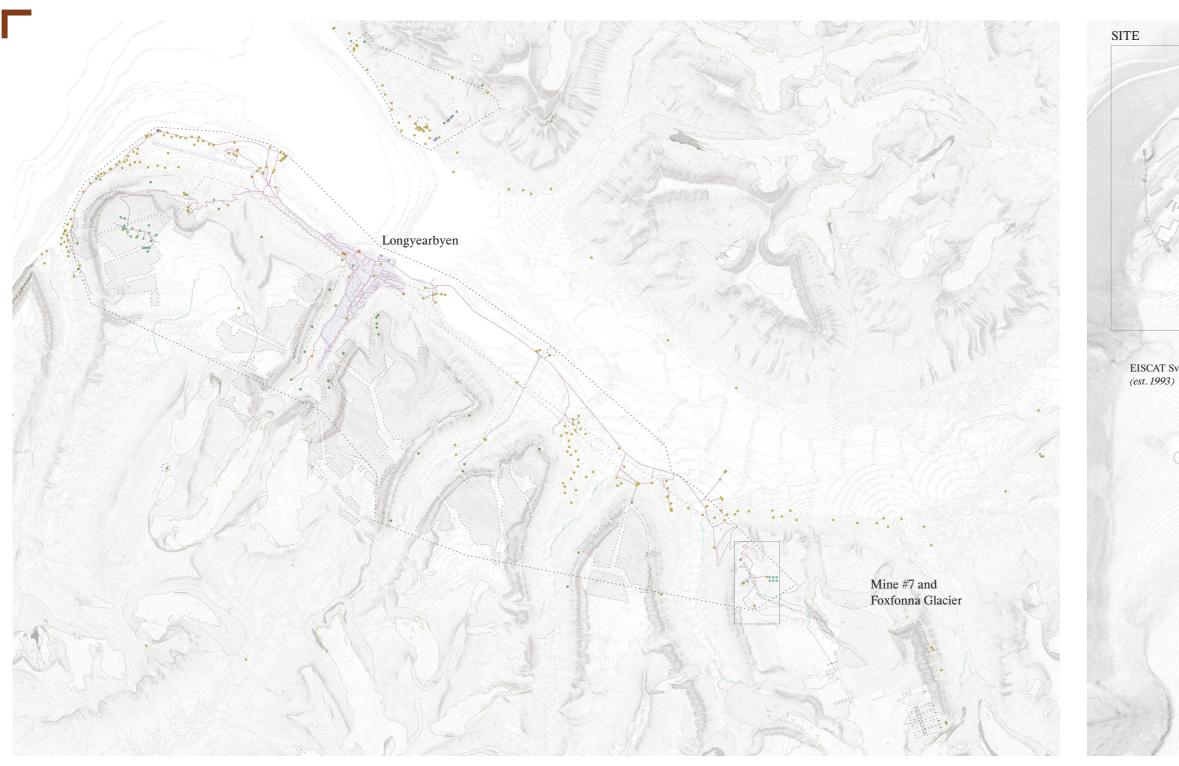
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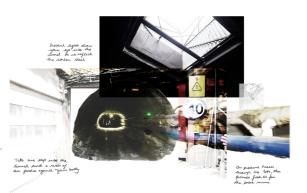
Mine #7 is located to the East of Longyearbyen, accessible via a paved road which follows along the network of mines and mining infrastructure which litters the valley (top). It is the longest running mine in operation and is expected to close in 2028. This coincides with climate change events drastically impacting the cryogenic and cultural landscape of this community.

Alongside the mining and glacial infrastructure, research facilities from the University Centre of Svalbard, maintain a presence on the site (top).





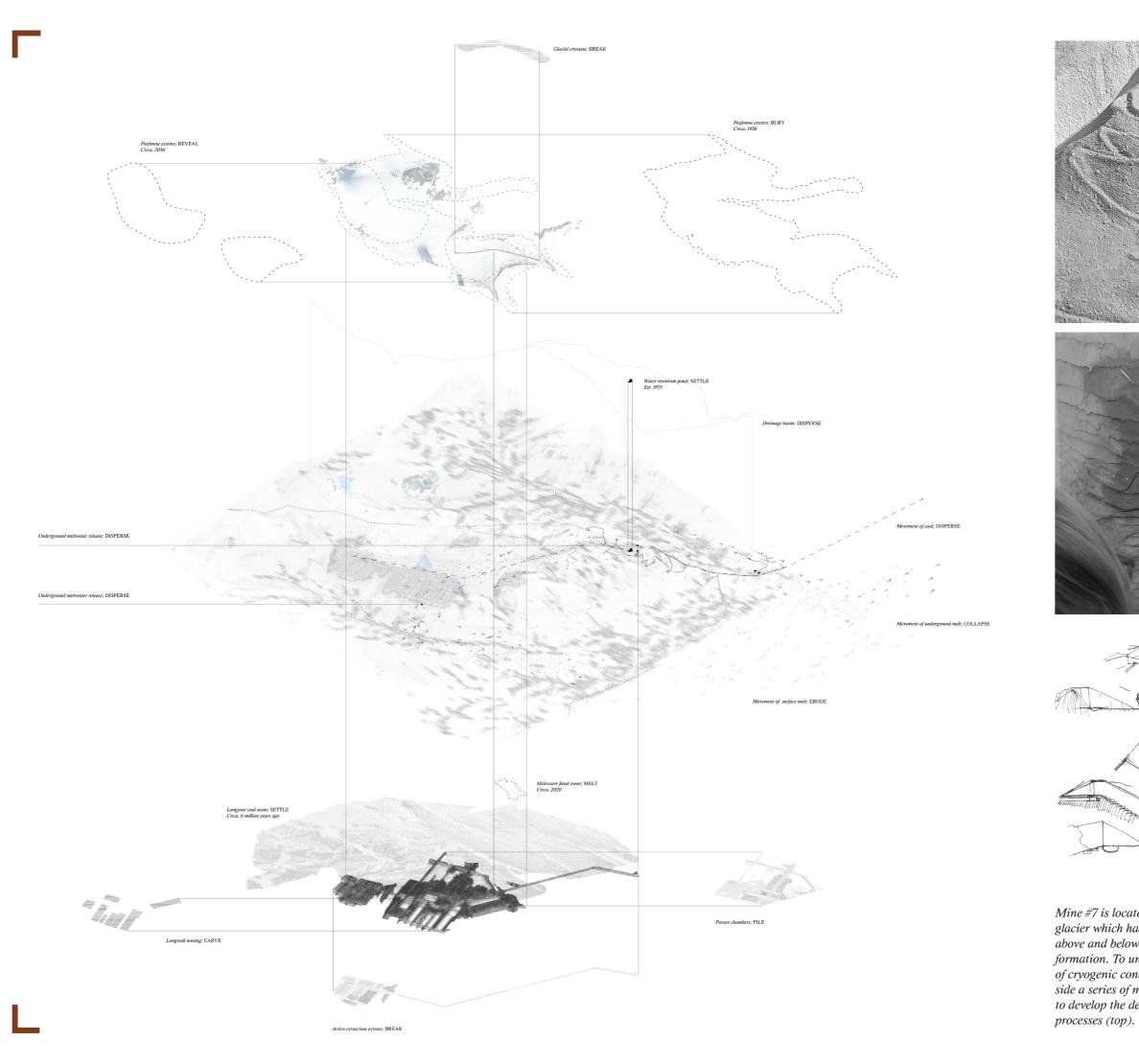






While visiting the site, a series of collages depicting the spatial implications of the mining and cryogenic infrastructure were created (left).



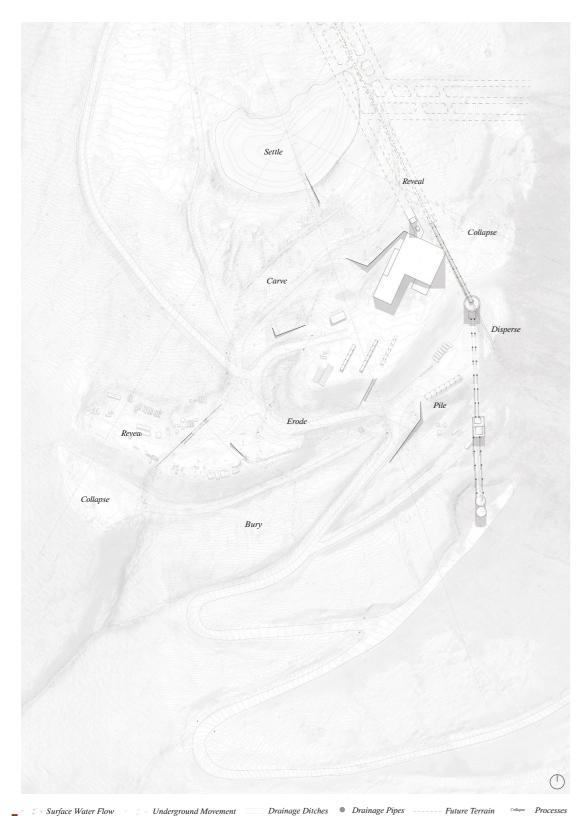




Mine #7 is located directly below the Foxfonna glacier which has resulted in severe flooding events above and below ground, influencing the landscapes formation. To understand these processes, a lexicon of cryogenic conditions (left) was created alongside a series of model experiments which worked to develop the design in ways which reveal these processes (ton).



Г		E1; Coal Conveyor Diassembled to Frame Channel; Posts remain to decay	E2; Carving of Ponel Walls to Release Water	E3; Release of Tachon Medwater from Underground Char Underground Char	Clucier n mbras	E Wood Tables ; Leaving Po	4: Disassembled sits to Decoy		T
	Design Begins		+1 y	yr		5 yrs	+10	10 yrs	+50 yrs
Pond									Sucession species take over pond habitat
Underground Passage									Sediments fill in and plateau destabilizes
Corten Steel Walls									Sediments replace walls in directing meltwater
Water Channels									🗴 🕷 🕸 🕸 🕸 🕸 🗴 🗰 Water channels continue to be activated with increased rainfall and permafrost thaw
Exposed Passage									Access to UNIS continues to be maintained
Wooden Tables									Repurposed for UNIS display until sufficient decay; oak posts left in place
Corrogated Steel Water Channels									🗴 🕷 🕸 🕸 🕸 🕸 🗴 🗰 Water channels continue to be activated with increased rainfall and permafrost thaw
Underground Meltwater Channel									Disapperance of Foxfonna glacier reduces underground meltwater output
UNIS Geological Storage and Display									Access to UNIS continues to be maintained





The palliative design for the decommissioning of Mine #7 is done over time in three parts(timeline; top); the reprogramming of the site's facilities to accommodate the storage, and display of geological samples by UNIS (section; right), an incremental land art intervention which integrates existing materials into the axis and contours of the site (site plan; left), and a series of events designed to draw the community to the site to witness and grieve its melting processes; the gradual draining of the site's pond and the annual release of glacial meltwater from the underground chambers (perspectives).

Through these works, visitors may witness the fluidity of Longyearbyen's landscape and come to develop a new understanding of this site and relationship to the cryogenic processes which shape the island.

Perspectives (above; left to right)

04.09.2029; Approaching the site from the road below, water channel releases meltwater across the cliff side

23.03.2035; Walking up the road to the newly established UNIS facility, steel walls from the intervention create sight lines across the way

02.11.2036; Walking through the underground pathway as meltwater trickles beside before releasing out the cliff side

04.06.2030; Group gathers as the underground meltwater is dispersed along the coal conveyor path 08.08.2060; Pond has drained, establishing a mossy, marshy, bird habitat

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Scan QR code to listen to the designed soundscapes which accompany each of the perspectives (above).

• • Remaining Columns and Posts Removed Coal Conveyor Steel Wall - - - Underground Mine Chamber Water Channels

