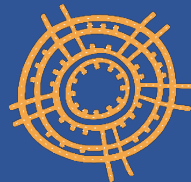


# Archaeological Survey Report

## MEL2013-06 Amitsoq, September 2025



**M. Myrup and H. Harmsen**

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**Cover photo:** Grave seen above Niaqornakasik winter house settlement NKAH3631.

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# Archaeological Survey Report: Amitsoq (MEL 2013-06), September 2025

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Greenroc



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23 January 2026

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## Executive Summary

In compliance with **Inatsisartut Act no. 11 19 May 2010 on the protection of cultural heritage**, this report presents the findings of Nunatta Katersugaasivia Allagaateqarfialu/the National Museum & Archives of Greenland (NKA) on an archaeological survey in mineral exploration license area MEL2013-06 on Amitsoq Island and surroundings near the municipality of Nanortalik, South Greenland.

The license area has been relatively sparsely populated in prehistory as well as in historical times. The archaeological survey revealed few sites containing features protected by legislation. In the license area two inuit settlement areas were identified, both appr. 7 kms from the proposed mine on the southern tip of Amitsoq Island as well as one Norse sheep sorting fold system on the mountain slope above the coast southeast of the original Amitsoq graphite mine.'

## Kalaallisuuata naalisarnera

**Inatsisartutip inatsisaat nr. 11, 19. maj 2010-meersoq kulturikkut kingornussanik illersuineq pillugu, naapertorlugu** nalunaarusiaq una Nunatta Katersugaasivia Allagaateqarfialu (NKA) misissuinermit nassaarineqarsimasut saqqummiussivoq. Misissuineq tassaavoq akuersissuteqarfiup mineralinik misissuiffiusup MEL2013-06-ip iluaniittoq Amitsup qeqertaani aammalu eqqaa.

Akuersissuteqarfiup iluani piffissap siornatigut aammalu oqaluttuarisaanermi innuttaasut ikitsuinnaapput. Arkæologiskimik misissuineq inatsisikkut illersorneqartunik imaqarpoq sumiiffiit ikittuinnaat. Akuersissuteqarfiup iluani inuit najugaqarfiisa sumiiffiit marluk nassaarineqarput, taakku tamarmik Amitsoq Qeqertaani kujataata tungaanut pilersaarutigineqartumi piiaanermiit km-it 7-it missaani ungasissuseqarlutik, kiisalu qallunaatsiap savaatit immikkoortiterinermut atugassanik sananeqarsimasoq ataaseq, kangerlummi sineriaqarfiup qulaani, Amitsoq-imi grafitimik piiaanermut initoqqap kujammut kangianiittumi.

## Dansk resume

I overensstemmelse med Inatsisartutlov nr. 11 af 19. maj 2010 om beskyttelse af kulturarven præsenterer denne rapport resultaterne af Nunatta Katersugaasivia Allagaateqarfialu / Grønlands Nationalmuseum og Arkiv (NKA) vedrørende en arkæologisk forundersøgelse i efterforskningslicensområdet MEL2013-06 på Amitsoq Ø og de omkringliggende områder umiddelbart nord for Nanortalik i Sydgrønland.

Licensområdet har været relativt sparsomt befolket både i forhistorisk tid og i historisk tid. Den arkæologiske undersøgelse afdækkede kun få lokaliteter med anlæg, der er beskyttet af lovgivningen. Inden for licensområdet blev der identificeret to inuitbopladsområder, begge ca. 7 km fra den planlagte mine på den sydlige spids af Amitsoq Ø, samt ét norrønt foldanlæg på fjeldsiden over kysten sydøst for den gamle Amitsoq-grafitmine.

# Contents

<b>Executive Summary</b> .....	<b>iv</b>
<b>Dansk resume</b> .....	<b>iv</b>
<b>Kalaallisuuata naalisarnera</b> .....	<b>iv</b>
<b>List of Figures</b> .....	<b>vi</b>
<b>List of Tables</b> .....	<b>vi</b>
<b>1. Introduction</b> .....	<b>1</b>
Legislative Framework and Compliance .....	2
Survey Rationale and Objectives .....	2
Cultural and Regional Context.....	2
<b>2. Survey Area</b> .....	<b>5</b>
Previously registered archaeological sites.....	5
<b>3. Results of the Survey</b> .....	<b>7</b>
3.1. Norse structures inside the license area (NKAH 5687) .....	7
3.2. Inuit features inside the license area .....	11
Isolated grave or meat cache (NKAH 5990) .....	12
Niaqornakasik (NKAH 3631) .....	12
Amitsoq (NKAH 5986).....	16
Umiviarsuk (NKAH 3614).....	18
<b>4. Conclusion and Recommendations</b> .....	<b>21</b>
<b>Works Cited</b> .....	<b>22</b>

## List of Figures

Figure 1. Nanortalik area, South Greenland. Red circle highlights the general Amitsoq survey area. Basemap: Dataforsyningen   © Asiaq 2025. ....	1
Figure 2. Significant archaeological sites inside the license area MEL2013-06. Map: NKA 2026. ....	4
Figure 3. The sheep sorting fold system is situated above 200 masl and almost 1 km from the coast. Map NKA 2026. ....	8
Figure 4. The fold system consists of two separate parts. The part to the left is a row of cairns following a ridge. Map NKA 2026. ....	9
Figure 5. Close-up of the dry wall sorting fold system. Map: NKA 2026. ....	10
Figure 6. View of fjord from Niaqornakasik (NKAH 3631) facing to the south. The part of South Greenland possesses a rich history of Inuit settlement and land use that continues to the present day. Photo: Harmsen 2025. ....	11
Figure 7. Isolated grave or meat cache identified on a terrace overlooking the fjord to the west. No visible remains identified inside the feature. Photo: Harmsen 2025. ....	12
Figure 8. Winter house on small promontory at Niaqornakasik. Map: NKA 2026. ....	13
Figure 9. Location of the winter house at Niaqornakasik indicated by the yellow arrow. Photo Harmsen 2025. ....	14
Figure 10. Winter house at Niaqornakasik, facing north. Photo: Harmsen 2025. ....	15
Figure 11. Meat cache at Niaqornakasik, facing north. Photo: Harmsen 2025. ....	15
Figure 12. Oblique drone orthomosaic of the Amitsoq mine site, delineating the precise location of the identified stone cairn grave (NKAH 5986) in relation to the historic graphite mine infrastructure and coastal shoreline. ....	16
Figure 13. Topographic map of the southern tip of the Amitsoq peninsula. Location of the grave in the elevated terrain is displayed as a red triangle. Map: NKA 2026. ....	17
Figure 14. Umiivarsuk (NKAH 3614), facing north. Three modern structures are located on the grassy coastal terrace between the two ancient winter house ruins (shown with yellow arrows). The site exhibits a long history of use, with ancient Thule winter houses and stone graves situated in the immediate vicinity of these more modern structures. Photo: Harmsen 2025. Photo: Harmsen 2025. ....	18
Figure 15. Topographic map of Umiivarsuk showing location of graves, wooden debris, turf structures (A-D) and wooden structures (1-4). Map: NKA 2026. ....	19
Figure 16. Two stone cairn graves identified at the Umiivarsuk (NKAH 3614), facing west. The graves contain human remains and are situated on the elevated terrain overlooking the settlement. Photo: Harmsen 2025. ....	20
Figure 17. NKAH 5991, a single, undisturbed cairn grave located approximately 300 meters to the northeast of the main Umiivarsuk (NKAH 3614). Photo: Harmsen 2025. ....	20

## List of Tables

Table 1. Significant heritage sites registered in Nunniffiit inside the MEL2013-06 license area. ....	6
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Figure 1. Nanortalik area, South Greenland. Red circle highlights the general Amitsoq survey area. Basemap: Dataforsyningen | © Asiaq 2025.

## 1. Introduction

This report details the results of an archaeological survey of Amitsoq Island and its associated coastal littoral zones, conducted on 16 September 2025 (Figure 1). The investigation was commissioned by Greenroc and carried out by the Nunatta Katersugaasivia Allagaateqarfialu / Greenland National Museum and Archives (hereafter, NKA). The survey was necessitated by proposed exploration and ground-disturbing activities within the mineral exploration license area MEL2013-06.

The primary objective was to perform a comprehensive surface reconnaissance to identify, document, and evaluate any archaeological or historical features in the license area. This assessment provides the baseline knowledge required to mitigate any potential impacts on cultural heritage and ensures that all exploration

activities remain in compliance with the environmental and social responsibility mandates of the Greenlandic government.

## Legislative Framework and Compliance

All archaeological investigations and subsequent management recommendations contained herein are governed by Inatsisartut Act no. 11 of 19 May 2010 on the protection of cultural heritage. Under this legislation, all traces of human activity dating from before 1900 AD—including ruins, burials, middens, and modified landscapes—are automatically protected. This report provides the evidentiary basis for the "Clearance" or "Mitigation" status of the targeted areas within Amitsoq Island.

## Survey Rationale and Objectives

The Nanortalik district is a region with medium-high archaeological sensitivity, characterized by a complex, multi-phase cultural sequence. The specific objectives of the 2025 field program were:

- **Identification:** To locate all surface-visible archaeological features within the designated survey blocks using both traditional "eyes on the ground" and aerial remote sensing with drones.
- **Documentation:** To record the spatial extent, morphology, and preservation status of identified features using high-precision GNSS, UAV-generated orthophotomosaics, and Digital Elevation Models (DEMs).
- **Significance Assessment:** To evaluate the scientific and cultural value of the features within the context of the South Greenlandic cultural history (Paleo-Inuit, Norse, and Thule/Historic).
- **Management Planning:** Establish protective avoidance zones and/or "no-go" areas to ensure the physical integrity of heritage resources during all phases of mineral exploitation and any accompanying infrastructure development.

## Cultural and Regional Context

The survey area lies to the southeast of Kujataa, a landscape recently inscribed as a UNESCO World Heritage areas for its unique integration of Inuit and Norse land-use traditions. While Amitsoq Island and adjacent surroundings are characterized by seasonal and intermittent activity rather than large-scale permanent settlement, its geography provided essential nodes for the mobility systems of successive cultural groups.

Human presence in South Greenland spans over four millennia, defined by successive waves of settlement, abandonment, and reoccupation driven by climatic shifts and resource availability. The earliest documented inhabitants were highly mobile Paleo-Inuit groups, such as the Saqqaq culture belonging to the Arctic Small Tool tradition (ASTt). Radiocarbon dates place the Saqqaq culture in Greenland around 2500 BC; while their sites are more concentrated in the west, material curated by the NKA confirms that these mobile hunter-gatherers also exploited coastal areas in the south (Grønnow and Pind 1996; Appelt and Grønnow 2006).

Following the initial Saqqaq phase, later Paleo-Inuit occupations reflecting the Greenlandic Dorset tradition are generally dated between 800 BC and 0 AD in Greenland. While regional variability is significant, archaeological evidence in South Greenland suggests episodic activity rather than dense settlement, aligning with broader patterns of fluctuating Paleo-Inuit land use typical for the period (Grønnow 1996).

The regional cultural landscape of South Greenland was further transformed around 985 CE by the arrival of Norse colonists from Iceland, who established two settlements (Eystribyggð in South Greenland and Vestribyggð in the Nuuk fjord). Relying heavily on a pastoral farming and hunting economy, evidence suggests the Norse were able to endure in Greenland through adaptation, noting both interaction and temporal overlap with Indigenous populations before the Norse abandonment of Greenland in the 15th century (Gulløv 1997).

By 1250 CE, a new and enduring phase of settlement began with the arrival of Thule culture Inuit groups migrating eastward from Alaska. While their eastward expansion into Greenland began in the late first millennium CE, sustained occupation in the west and south of Greenland is documented from approximately 1300 CE onward (Gulløv 1997). This period emphasizes a deep cultural continuity coupled with highly specialized Arctic technology developed to overcome environmental and social challenges.

Amitsoq Island has historically served as a zone of transient activity rather than long-term settlement. Within the regional context of nearby Nanortalik, the island supported the seasonal rounds of successive cultural groups, from Palaeo-Inuit, Norse and Historic Inuit. Site distribution was primarily influenced by marine exploitation and maritime transport. Documented archaeological features include winter dwellings and graves, with physical evidence primarily representing both Norse (c. 1000–1450 CE) and Thule (c. 1400–1800 CE) traditions.

The cultural landscape of the Nanortalik district was significantly reshaped following the Danish-Norwegian colonization of Greenland in the early 18<sup>th</sup> century. In the Nanortalik area, this period was marked by the establishment of formal trading posts and missions, which gradually consolidated the previously dispersed Inuit populations into more permanent settlements. By the late 18<sup>th</sup> and 19<sup>th</sup> centuries, the traditional Inuit maritime subsistence economy was augmented by the commercial seal oil trade and, eventually, the rise of a specialized cod fishery. This period also saw the experimental reintroduction of livestock to the South Greenland fjords, marking a return to the pastoral traditions first established by the Norse. While early attempts were small-scale, the formal establishment of a sheep-breeding station in nearby Qaqortoq in 1915 acted as a catalyst for a regional economic shift toward sheep farming in South Greenland.

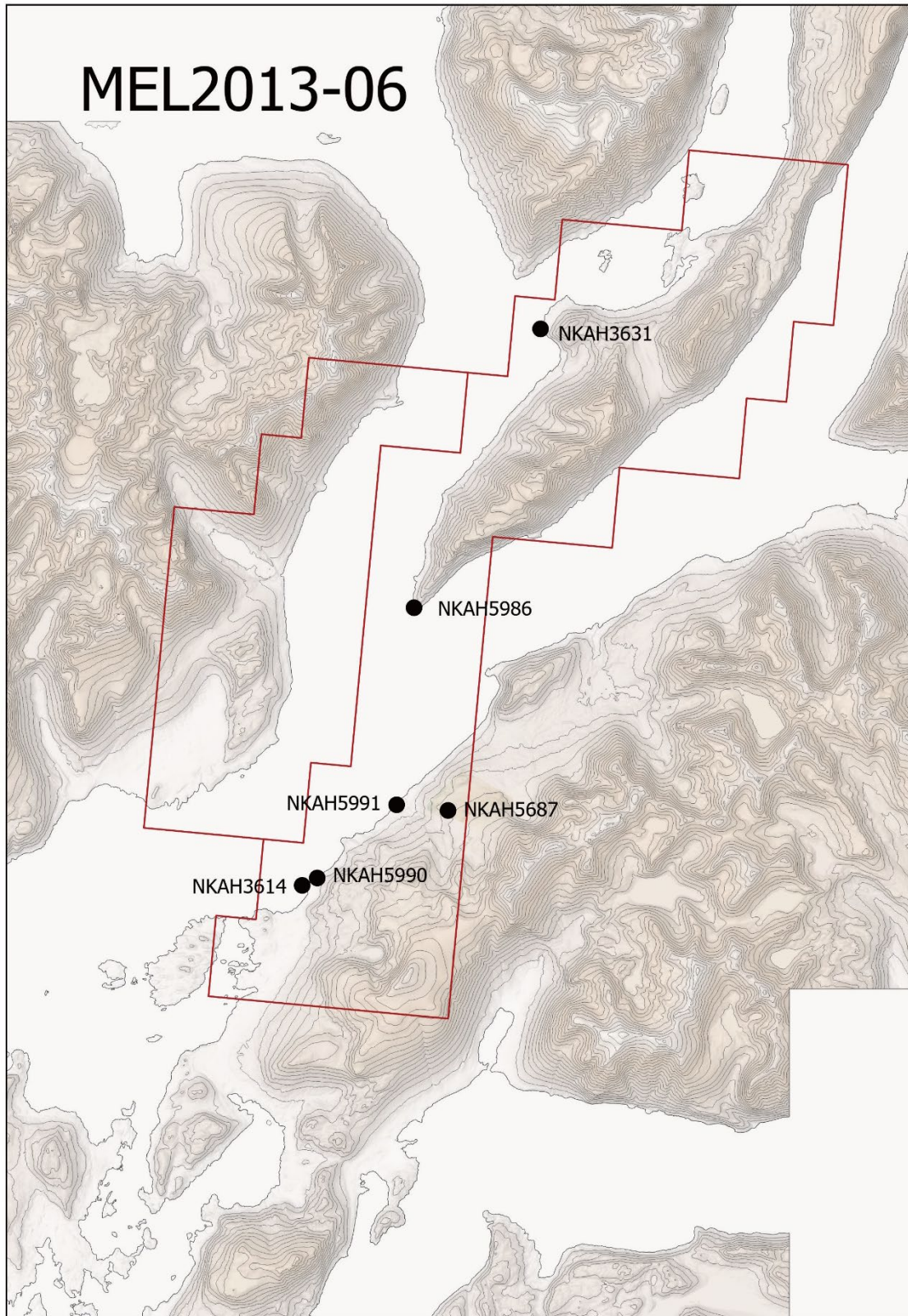


Figure 2. Significant archaeological sites inside the license area MEL2013-06. Map: NKA 2026.

## 2. Survey Area

The survey area encompasses Amitsoq Island and Sermilik and Amitsup Saqqaa fjord coastlines located to the north of the settlement of Nanortalik in South Greenland. This fjord landscape is characterized by rugged bedrock terrain, steep coastal slopes, and limited areas of low-lying terraces suitable for habitation.

Vegetation cover is sparse and dominated by low tundra species, with shallow soils accumulating primarily in sheltered locations.

The survey area belongs to the Gardar Province, a Mid-Proterozoic alkaline igneous province. The bedrock is dominated by Julianehåb granite alongside complex intrusive sequences of syenites and granodiorites. On Amitsoq, this granite basement is frequently bisected by pegmatite veins and localized deposits of graphite-bearing schist, which have historically driven mineral interest in the area.

The Quaternary landscape is defined by thin till veneers and localized glaciomarine deposits. A critical feature for archaeological predictive modeling is the evidence of isostatic rebound; ancient beach ridges, now perched several meters above the current sea level, frequently host the remains of older Palaeo-Inuit and Norse structures, which were originally situated along the active shoreline.

The vegetation is classified as low-arctic/sub-arctic, primarily dominated by resilient dwarf-shrub heaths. However, the fjord's microclimates allow for significant variation:

- Protected Valleys: South-facing, sheltered slopes support relatively lush thickets of *Betula pubescens* (downy birch) and *Salix glauca* (gray willow), which can reach heights of 2–3 meters.
- Exposed Coasts: In areas prone to high winds, the flora transitions to prostrate mats of *Empetrum nigrum* (crowberry) and *Vaccinium uliginosum* (bog bilberry).
- Anthropogenic Indicators: These "verdant oases" were historically vital for Norse pastoralism. Today, they serve as a high-visibility indicator for archaeology, as nitrophilous plants often cluster over former middens and turf ruins, creating distinct patches of bright green vegetation against the darker heath.

It is worth noting that the area is a biological crossroads dictated by the East Greenland Current. The surrounding waters are a high-productivity marine zone, serving as a primary habitat for *Pusa hispida* (ringed seal) and *Pagophilus groenlandicus* (harp seal). These species formed the subsistence backbone for Thule culture and Paleo-Inuit groups. The district also serves as a migratory corridor for hooded seals and various cetaceans.

Terrestrial fauna is sparse but includes the Arctic fox and managed populations of reindeer. Migratory bird species are also a major seasonal component; the coastal cliffs providing important nesting grounds for *Uria lomvia* (thick-billed murre) and *Somateria mollissima* (common eider), both of which are common in the region's zooarchaeological record.

### Previously registered archaeological sites

Prior to the 2025 field investigation, a comprehensive desktop review was conducted using Nunniffiit, the official national GIS database for cultural heritage managed by the NKA. This database serves as the primary repository for all legally protected archaeological sites in Greenland. The records for Amitsoq Island and the surrounding Nanortalik area reflect decades of cumulative research, ranging from early 20th-century ethnographic accounts to modern systematic surveys.

Table 1 lists the most relevant registered sites within the license area MEL2013-06. These records provide the essential cultural-historical baseline against which the results of the 2025 survey are compared, allowing for a longitudinal assessment of site preservation and the identification of previously undocumented features.

Table 2. Significant heritage sites registered in Nunniffiit inside the MEL2013-06 license area.

<b>NKAH nr.</b>	<b>Name</b>	<b>Coordinates <sup>1</sup></b>	<b>Description</b>
3631	Niaqornakasik	60.343614°, -45.087753°	Located on a small promontory on the western shore of Amitsoq Island, the site represents a significant Thule culture/Historic Inuit winter settlement. Originally documented by Therkel Mathiassen in 1934 and later mapped by Ove Bak, the locality is situated near the graphite mine on the island's southeastern tip. The site consists of a cache, two cairn graves and a single, well-preserved winter dwelling strategically positioned to facilitate seasonal marine exploitation.
5986	Amitsoq	60,2851098°, -45,1284119°	Southern tip of island; registration of a single grave with the remains of at least one individual.
5687	Niaqornakasik	60.250000°, -45.100000°	Site is identified as a dry-stone sheep sorting fold system and a series of associated fences. The primary feature is a monumental dike constructed of large stones—stacked up to three courses high—extending over 400 meters down the mountain slope. This infrastructure is augmented by more than 150 interspersed cairns positioned atop the fences and several off-branching sections. Based on analysis by Raahauge and Gulløv (2005) the system is interpreted as a communal driving facility, or <i>rétt</i> , used for the large-scale management and sorting of livestock during seasonal transhumance between upland pastures and fjord-side farmsteads.
3614	Umiivarsuk	60.224415°, -45.164035°	The site represents a multi-component coastal locality showing a long continuity of use from the Thule period into the modern era. Originally documented by Ove Bak in 1968, the site contains four Thule-phase winter houses in moderate condition; at the time of registration, one dwelling showed active erosion of the entrance passage, while the others were obscured by heavy vegetation.  The archaeological remains are interspersed with several modern wooden structures, reflecting the site's ongoing importance for traditional subsistence. These recent structures exist in varying degrees of upkeep, ranging from active use to advanced stages of decay, and serve as a contemporary layer to the historical seasonal camps typical of the Nanortalik area.
5990	Isolated grave/ cache	60.243148°, -45.129615°	An isolated grave or cache measuring 1.8 x 2 m. No visible remains identified inside the grave.
5991	Isolated grave	60.226373°, -45.160667°	An isolated grave measuring 1,6 x 2.5 m. Good preservation, no signs of disturbance.

<sup>1</sup> Approximate location in Decimal Degree based on map plot.

## 3. Results of the Survey

### 3.1. Norse structures inside the license area (NKAH 5687)

Norse sheep farming in medieval South Greenland formed part of a highly structured pastoral economy adapted to a marginal subarctic environment. Zooarchaeological and landscape studies show that sheep and goats constituted the backbone of livestock husbandry for the Greenland Norse, reflecting their lower winter fodder requirements and suitability for extensive grazing compared to cattle (Arneborg 2005; Raahauge and Gulløv 2005). Hay production in the inner fjords was therefore carefully protected and supplemented by seasonal use of upland grazing zones.

Norse pastoralism was precisely calibrated to the constraints of a marginal sub-arctic environment. A central feature of this system was seasonal transhumance to mountain pastures, commonly interpreted as the use of *sæters* (summer farms). Zooarchaeological assemblages and landscape analyses demonstrate that ovicaprines (sheep and goats) formed the core of the livestock hierarchy. These species were prioritized over cattle due to their higher resilience and lower winter fodder requirements, making them better suited for the extensive grazing available in the region (Arneborg 2005). Archaeological surveys in the Eastern Settlement document small stone-built structures and associated enclosures in upland and valley-margin contexts, indicating temporary summer occupation linked to herding activities (Arneborg 2005; Madsen 2014). By moving sheep to higher elevations during summer, Norse farmers reduced grazing pressure on infield meadows needed for winter hay.

The Norse herding infrastructure also included extensive sorting fold systems located along movement routes between the inner fjords and highland pastures. Constructed as multi-roomed stone enclosures in natural bottlenecks or mountain passes, these features were essential for the seasonal aggregation, counting, and sorting of communal flocks. As highlighted by (Madsen 2008; Raahauge and Gulløv 2005) these folds supported efficient labor organization at a regional scale, rather than just an individual farm level. Together with *sæters* (summer farms), these structures illustrate a highly adapted land-use strategy that mitigated the risks of a sub-arctic environment and ensured the continuity of Norse livestock husbandry (Arneborg 2005; Madsen 2014).

Site NKAH 5687 represents a highly sophisticated example of Norse sorting fold system, designed to manage large-scale livestock movement. Located between 200 and 250 msl, this feature consists of a monumental stone fence that descends over 400 meters along a natural mountain corridor (Figure 3). Constructed of large, locally sourced granitic blocks stacked up to three courses high, the fence leverages the vertical relief of the terrain to create a permanent boundary for communal sheep drives.

A defining characteristic of this complex is the integration of over 150 stacked stone cairns positioned at regular intervals along the wall crest, likely intended to increase the visual height and effectiveness of the barrier during drives (Figure 4). Several off-branching sections and smaller enclosures—interpreted as sorting folds or *réttir*—are situated at topographically constrained bottlenecks where the main fence intersects the littoral fringe. These multi-compartment structures allowed for the simultaneous gathering and individual sorting of animals belonging to different farmsteads (Figure 5). The sheer scale of this fence suggests a high degree of collective labor and regional coordination between farms which would have been essential for maintaining the farming economy in the marginal environments of South Greenland.

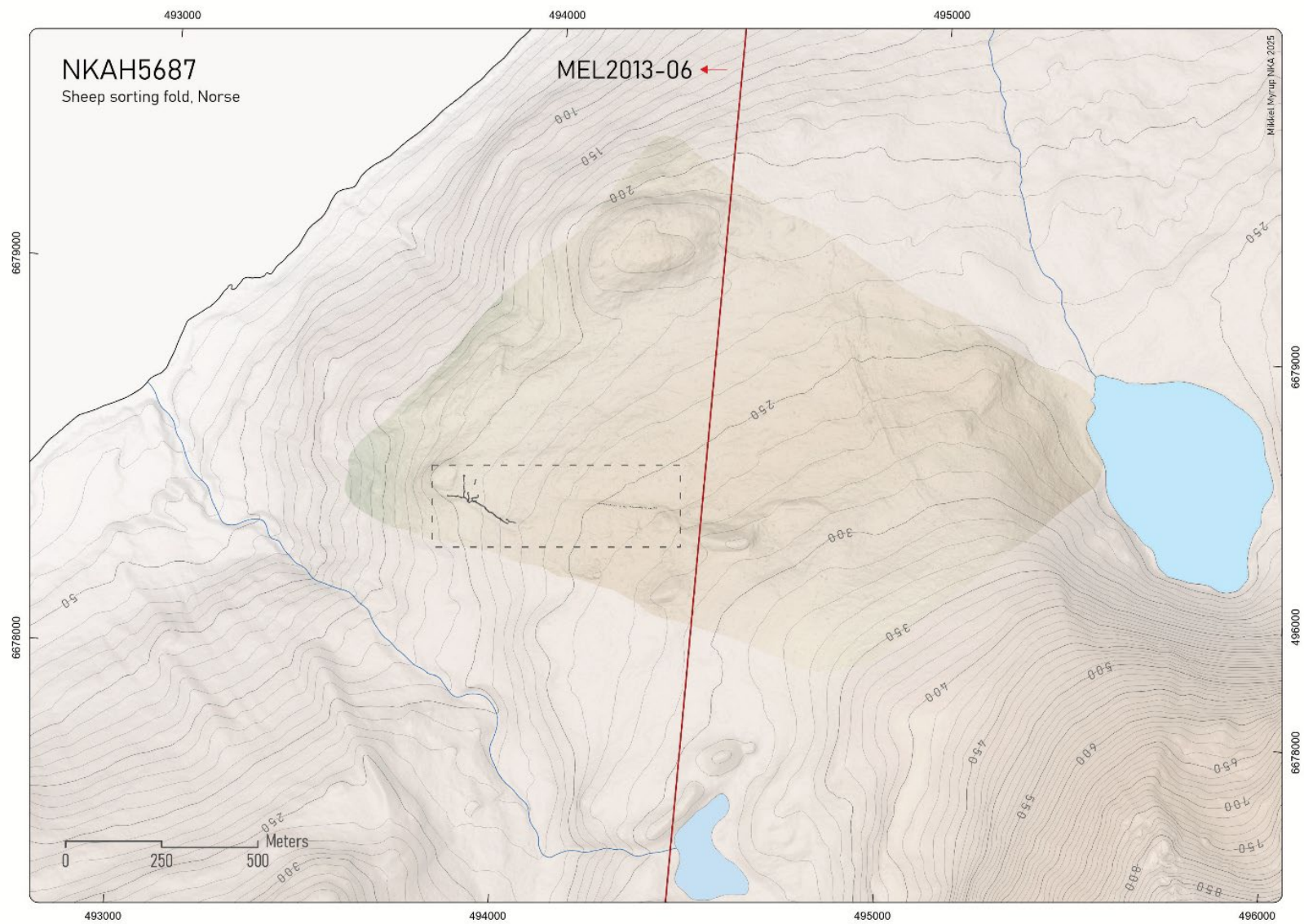


Figure 3. The sheep sorting fold system is situated above 200 masl and almost 1 km from the coast. Map NKA 2026.

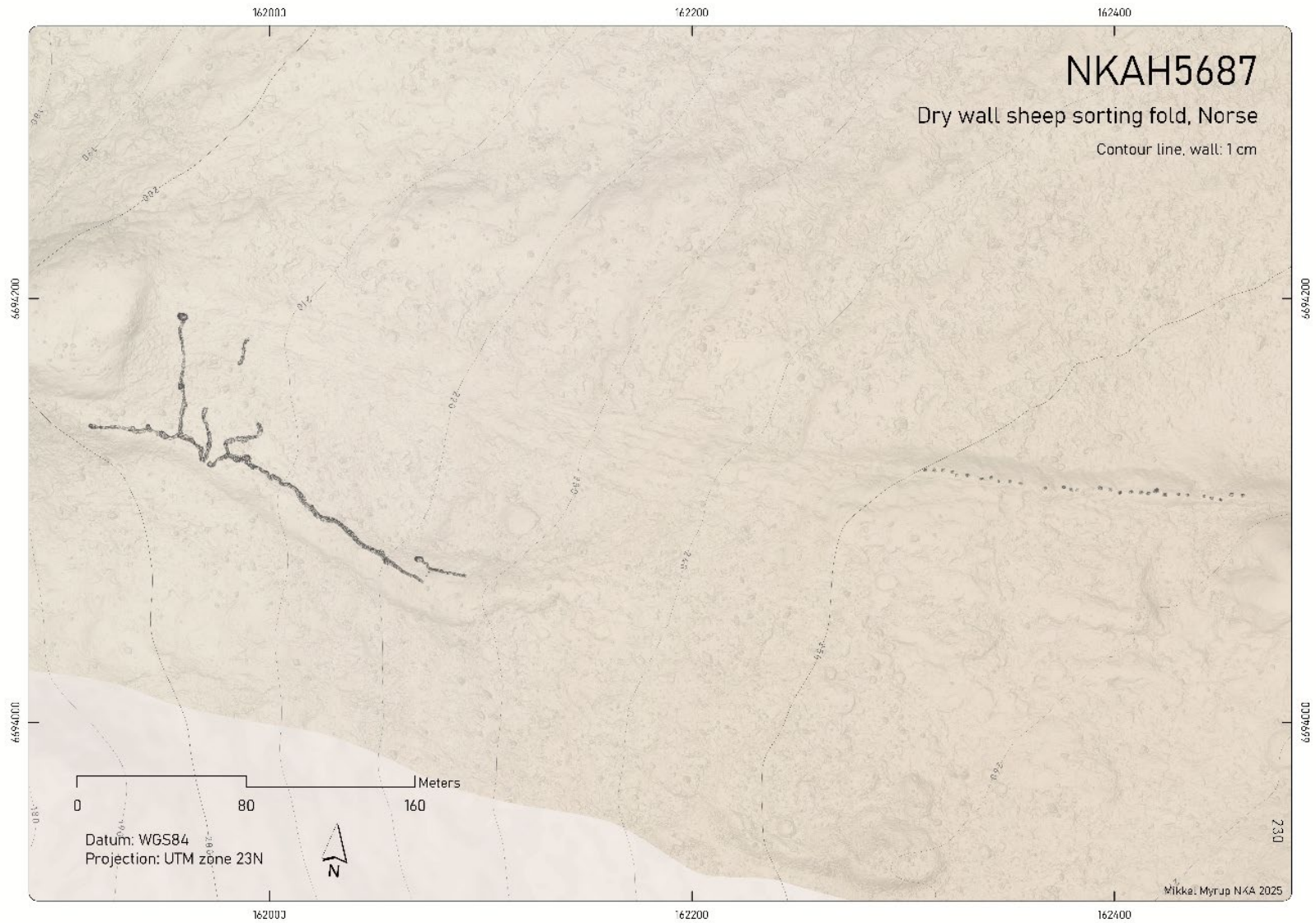


Figure 4. The fold system consists of two separate parts. The part to the left is a row of cairns following a ridge. Map NKA 2026.

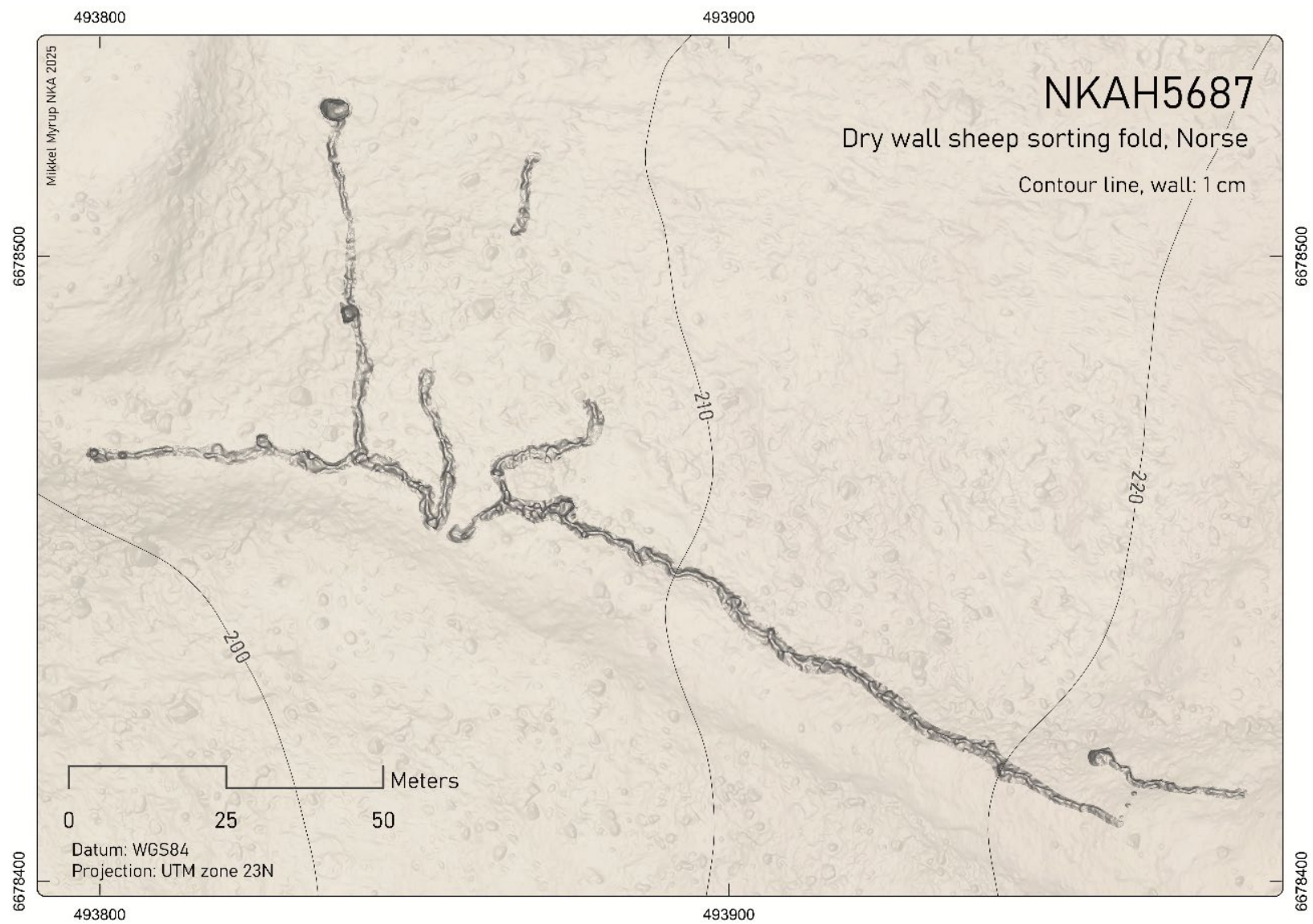


Figure 5. Close-up of the dry wall sorting fold system. Map: NKA 2026.



Figure 6. View of fjord from Niaqornakasik (NKAH 3631) facing to the south. The part of South Greenland possesses a rich history of Inuit settlement and land use that continues to the present day. Photo: Harmsen 2025.

### 3.2. Inuit features inside the license area

Inuit settlement systems in the fjords of South Greenland were seasonally differentiated, with clear architectural distinctions between winter and summer occupations. Winter houses were substantial, semi-subterranean turf structures constructed with stone walls faced by thick turf insulation and long, narrow “cold-trap” entrance passages designed to minimize heat loss. Interior features typically included raised sleeping platforms and storage areas, as these types of houses were occupied for extended periods during the winter months. Archaeological studies emphasize that winter house locations were often reused over generations, forming clusters of durable ruins at sheltered fjord sites close to predictable marine resources (Appelt and Grønnow 2006).

By contrast, summer camps were lighter and more ephemeral, commonly consisting of skin tents or lightly built turf-and-stone shelters associated with short-term occupations near fishing grounds, bird cliffs, or inland hunting areas. These sites generally display limited structural investment and thin cultural deposits (Gulløv 1997).

The 2025 survey identified three distinct areas of Inuit activity—NKAH 3631, 5986, and 3614. The most ubiquitous features documented across these locations are stone-built cairn graves, however substantial winter houses were also identified at Niaqornakasik (NKAH 3631) and Umiivarsuk (NKAH 3614). These dwellings are defined by their thick turf-and-stone walls and sunken entrance passages, marking the sites as preferable locations for long-term winter habitation.



Figure 7. Isolated grave or meat cache identified on a terrace overlooking the fjord to the west. No visible remains identified inside the feature. Photo: Harmsen 2025.

### **Isolated grave or meat cache (NKAH 5990)**

An isolated stone cairn, measuring approximately 1.8 x 2 meters, was identified at the site. The structure is constructed of dry-stacked local stone and likely functioned as a grave or cache. Upon survey, no visible skeletal remains or artifacts were identified within the feature. Its size and robust construction are consistent with other funerary or storage features documented in the Amitsoq survey area.

### **Niaqornakasik (NKAH 3631)**

Niaqornakasik (NKAH 3631) is an important Thule culture/Historic Inuit winter settlement located on a promontory on the eastern shore Amitsoq Island (Figure 8 and Figure 9). The site's primary feature is a single, well-preserved winter house with a high degree of preservation (Figure 10). The site also possesses a single stone cache (Figure 11), which would have been used for storage of meat, as well as two cairn grave situated on the higher ground overlooking the winter house (indicated by red triangles shown in Figure 8).

Originally identified by Therkel Mathiassen in 1934 and later visited by by Ove Bak, Niaqornakasik is located in a general proximity to the Amitsoq graphite mine. The combination of habitation, storage, and funerary structures makes this site an important representative example of the traditional Inuit settlement patterns in South Greenland.

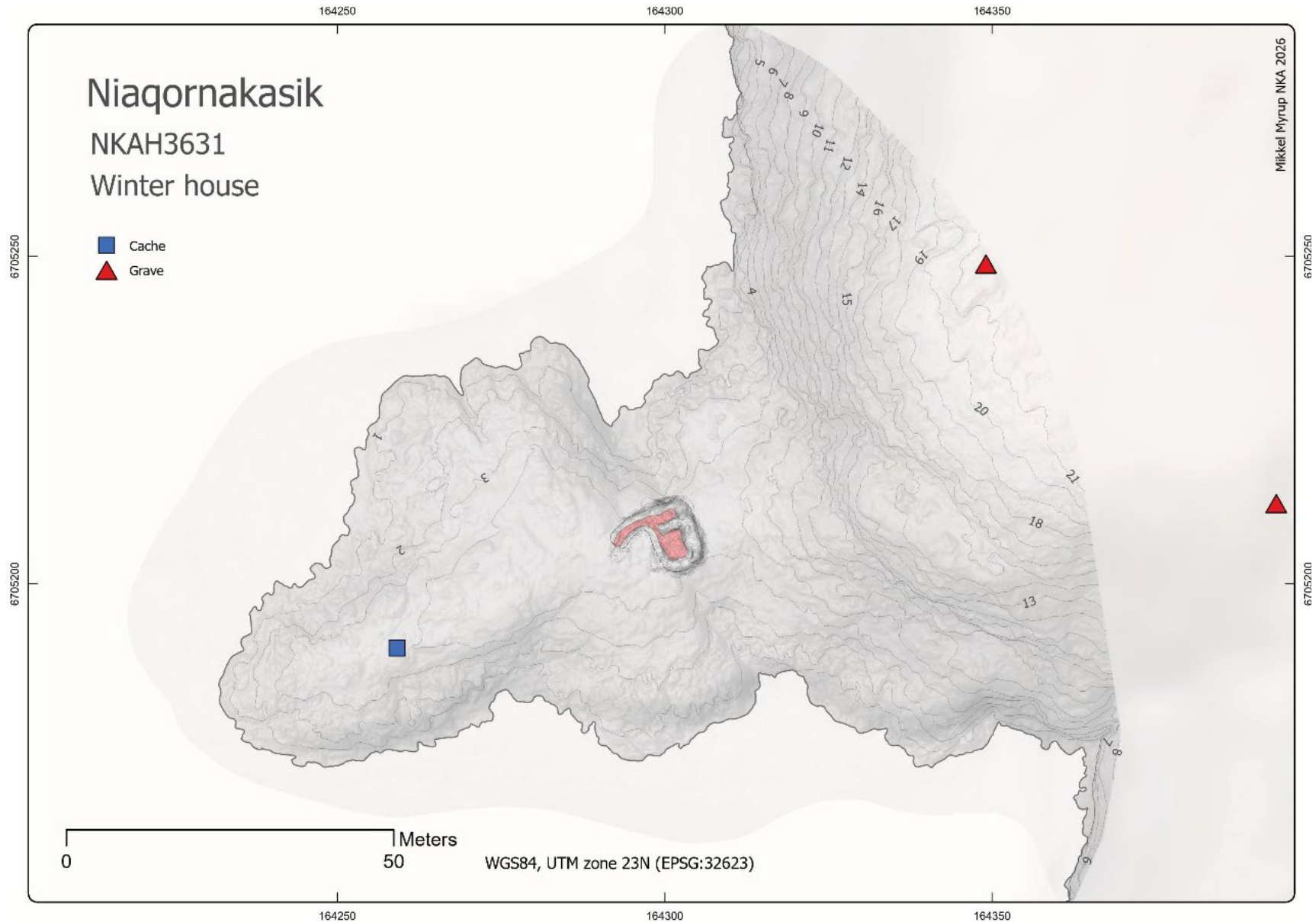


Figure 8. Winter house on small promontory at Niaqornakasik. Map: NKA 2026.



Figure 9. Location of the winter house at Niaqornakasik indicated by the yellow arrow. Photo Harmsen 2025.



Figure 10. Winter house at Niaqornakasik, facing north. Photo: Harmsen 2025.



Figure 11. Meat cache at Niaqornakasik, facing north. Photo: Harmsen 2025.



Figure 12. Oblique of drone data generated 3D mesh (seen from the east) of the Amitsoq mine site, delineating the precise location of the identified stone cairn grave (NKAH 5986) in relation to the historic graphite mine infrastructure and coastal shoreline. 3D mesh: Myrup 2026.

### **Amitsoq (NKAH 5986)**

The survey at the Amitsoq site identified a single, well-preserved stone cairn grave (Figure 12 and Figure 13) as the only ancient remains in the immediate vicinity of the mine. Constructed from locally sourced cobbles, the burial is situated on a prominent rocky outcrop overlooking the fjord to ensure visibility and a wide western viewshed of the fjord. This feature represents a typical Thule culture period grave and is the only archaeological ancient remains currently identified near the Amitsoq graphite mine.

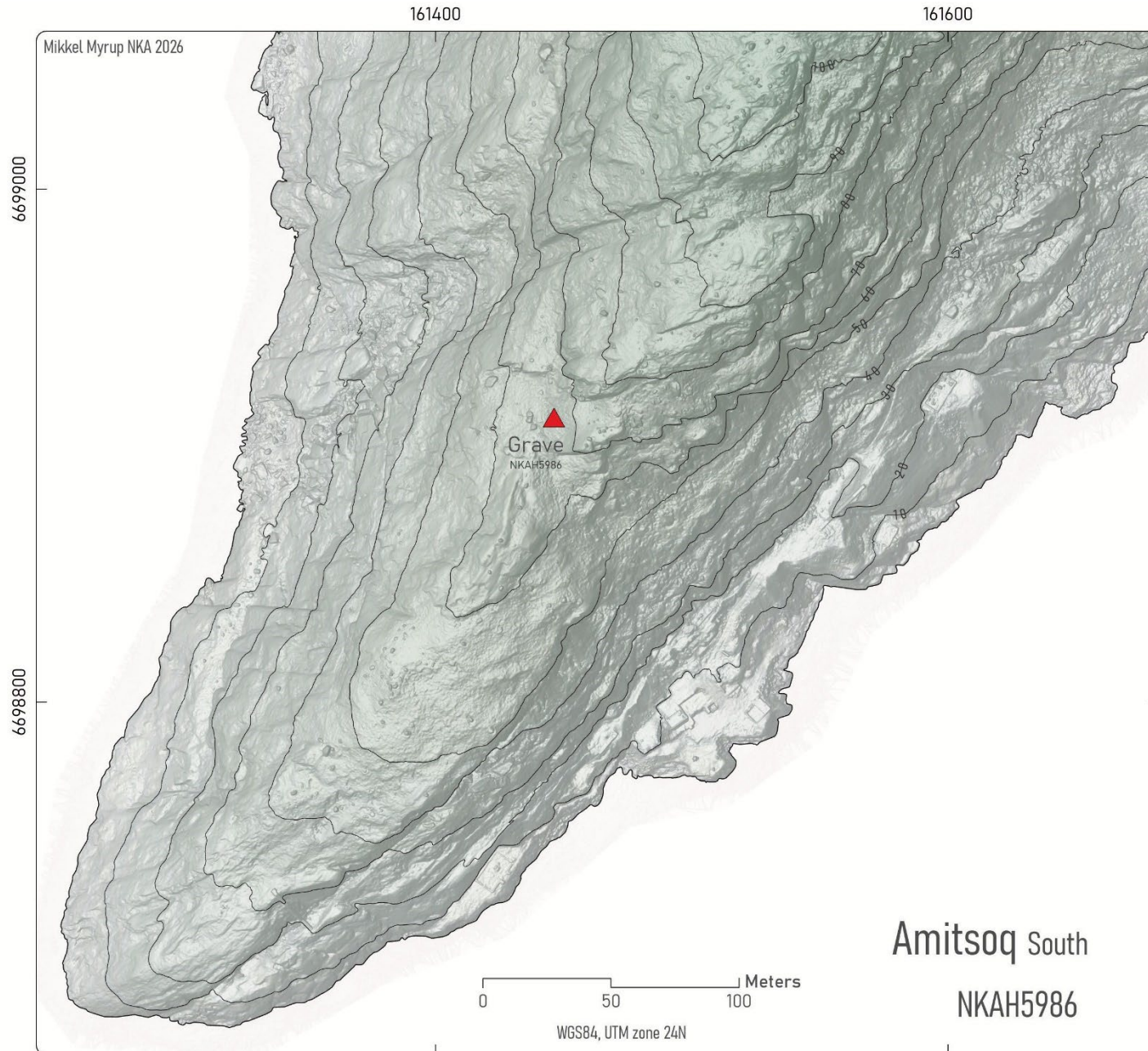


Figure 13. Topographic map of the southern tip of the Amitsoq peninsula. Location of the grave in the elevated terrain is displayed as a red triangle. Map: NKA 2026.



Figure 14. Umiivarsuk (NKAH 3614), facing north. Three modern structures are located on the grassy coastal terrace between the two ancient winter house ruins (shown with yellow arrows). The site exhibits a long history of use, with ancient Thule winter houses and stone graves situated in the immediate vicinity of these more modern structures. Photo: Harmsen 2025.

### **Umiivarsuk (NKAH 3614)**

Umiivarsuk is a multi-component coastal site defined by a high degree of continued use from ancient times to the present. The primary archaeological features consist of four winter houses situated on a stable coastal terrace along the southern side of the peninsula (Figure 15, A-D). The contemporary landscape of Umiivarsuk further includes three modern wood structures in varying states of repair, situated in close proximity to the ancient dwellings. This spatial overlap demonstrates a persistent land-use pattern, where the same sheltered bay and maritime access points that served Thule-period hunters continue to support modern activities. Integrated into this settlement footprint are also at least three funerary features, including two paired cairn graves (Figure 16) on the immediate rising ground above the winter houses and a single isolated grave approximately 300 meters to the northeast (Figure 17).

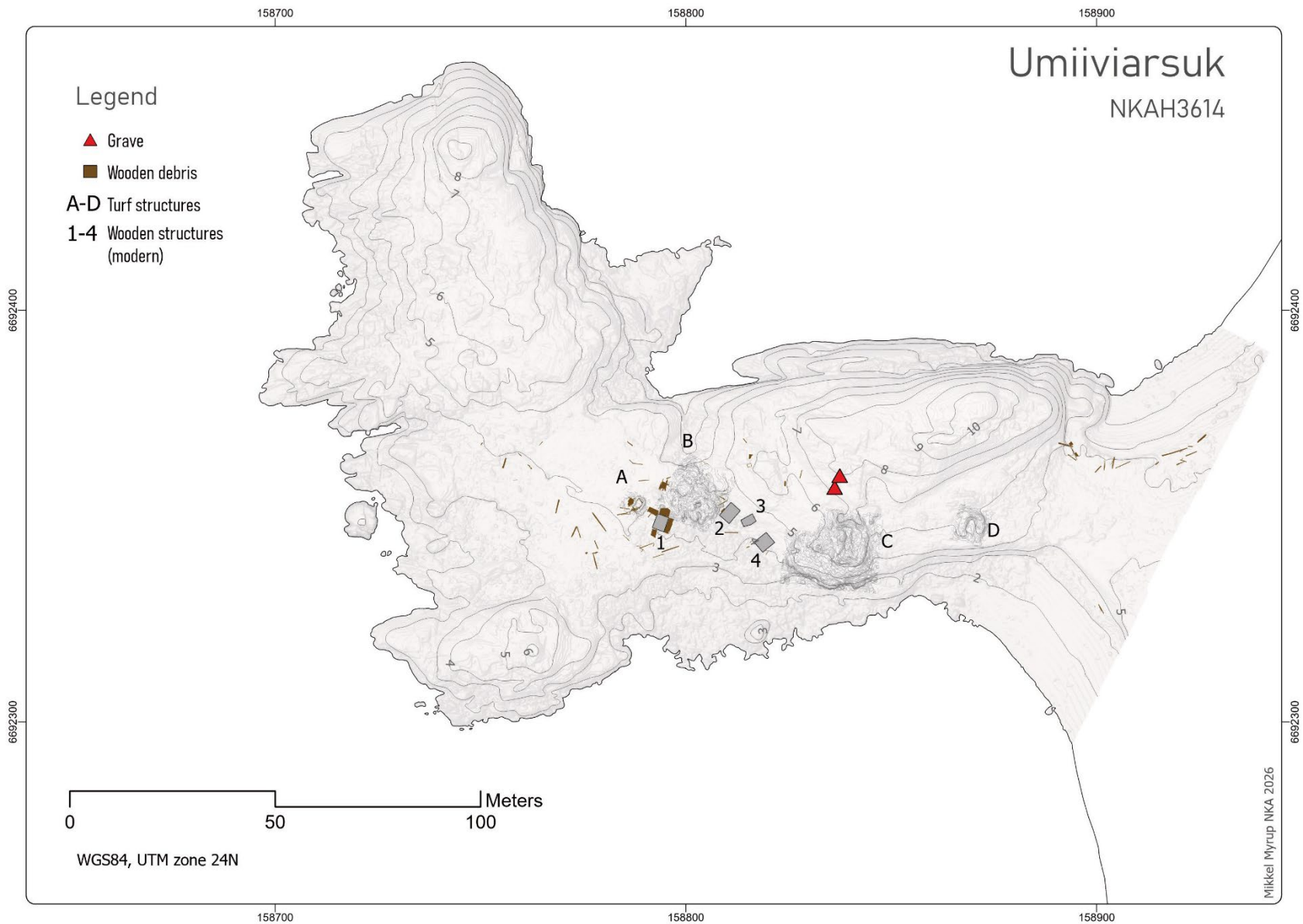


Figure 15. Topographic map of Umiivarsuk showing location of graves, wooden debris, turf structures (A-D) and wooden structures (1-4). Map: NKA 2026.



Figure 16. Two stone cairn graves identified at the Umiivarsuk (NKAH 3614), facing west. The graves contain human remains and are situated on the elevated terrain overlooking the settlement. Photo: Harmsen 2025.



Figure 17. NKAH 5991, a single, undisturbed cairn grave located approximately 300 meters to the northeast of the main Umiivarsuk (NKAH 3614). Photo: Harmsen 2025.

## 4. Conclusion and Recommendations

The archaeological survey of Amitsoq Island and its surrounding area, conducted on 16 September 2025, has successfully established a baseline of cultural heritage resources within the **MEL2013-06** license area. The survey identified a multi-component cultural landscape characterized by intermittent and seasonal land use representative of both Norse and Inuit land use. Significant features documented include **semi-subterranean Inuit winter houses, graves, and transhumance-related infrastructure** (*sætters* and sorting folds) associated with both the Norse (c. 1000–1450 CE) and Thule/Historic Inuit (c. 1250 CE–present) periods.

- **Heritage Assessment and Significance:** The identified ancient features represent high-integrity examples of South Greenland’s unique heritage resources—a landscape defined by the sub-arctic farming of the Norse and the maritime adaptations of the Inuit. Under **Inatsisartut Act no. 11 of 19 May 2010**, all archaeological traces and ruins dating from before 1900 AD are automatically protected. The winter houses and grave sites identified during this survey possess high scientific and cultural value, offering significant potential for furthering our understanding of long-term human adaptation to climatic shifts in South Greenland.

**Legislative Compliance and Recommendations** To ensure compliance with Greenlandic heritage legislation and to mitigate potential impacts from planned mineral exploration activities, the following recommendations are proposed:

- **Buffer Zones and Avoidance:** All documented features must be treated as "no-go" zones. A physical buffer of at least **20 meters** should be maintained around the visible extent of all ruins and burial sites to prevent accidental damage from heavy machinery or foot traffic.
- **Infrastructure Siting:** Future ground-disturbing activities, including ATV roads, drilling pads, helipads, or temporary camp installments, must be sited away from the identified high-sensitivity areas identified in this report.
- **Chance Find Protocol:** In accordance with **Section 13** of the Heritage Act, should any previously unknown archaeological remains (e.g., bone deposits, stone tools, or structural remains) be discovered during exploration, all work in the immediate vicinity must cease, and the **Greenland National Museum and Archives (NKA)** must be notified immediately.
- **Monitoring:** If intensive ground disturbance is required in high-potential areas a qualified archaeologist should be present to monitor the activities.

Provided that the recommended mitigation measures and buffer zones are strictly adhered to, the planned activities associated with **MEL2013-06** are deemed to have a low risk of impacting the primary cultural heritage of Amitsoq Island. However, any deviation from the current activity plan that infringes upon protected areas will require further consultation with the NKA.

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