



# **Estonian EU External Borders Programme (ER3) Research Results**

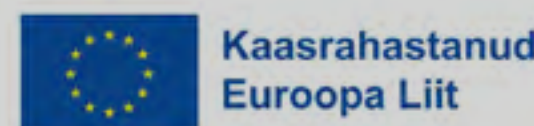
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**Narva  
Muuseum**

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# Project ER3

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During the period from 2016 to 2023, a large-scale restoration project was carried out on the site of Narva Castle supported by the European Regional Development Fund with co-financing from the Estonian Ministry of Culture.

Narva Museum had proceeded with planning this project as early as in 2007 when the program was developed for the complete restoration of Narva Castle. The main goal of the program was defined as follows: „to create an integral, completely restored, multifunctional castle complex“.

The history of Narva knights' castle spans more than 700 years and keeps traces of many epochs and events. Each historic period introduced something new not only in the way of the castle dwellers' life, but also in the architecture or sometimes into the landscape around the castle. Throughout the centuries, the owners of the castle were warriors – at the beginning, those were knights who were inconsiderate in number, then followed by entire garrisons. They did not leave behind any memoirs, did not haste to share the details of their lives with their descendants; however, they were constantly building and rebuilding something on the castle grounds. (Image 1)

For this very reason, the restoration project launched in 2016 was a large-scale, ambitious, inspiring and uneasy one from its very beginning. It demanded an analytical view on the experience of previous restorations and aimed not only at restoration of what had been lost, but also at approaching the representation of the historic heritage at a new quality level.

Until February 2022, the project was international,



1 Hermann Castle in winter.  
2021. Narva Museum



being carried out in the framework of the Cross-Border Cooperation Programme 2014-2020 and it co-financed not only the works in Narva Castle but in Ivangorod Fortress as well.

Throughout the centuries, Narva Castle and Ivangorod Fortress formed a unique architectural ensemble. During several historical periods, Ivangorod was a part of Narva. It was so from 612 to 1918, and then from 1920 to 1944. (Image 2)

At the very beginning, one of the fundamental assignments of the project, which was also reflected in its full name, was „the development of a unique cross-border ensemble of Narva and Ivangorod fortresses as a single cultural and tourist spot“. In Ivangorod fortress, a concept of the Museum of Fortresses was developed, which had to become one of the meaningful stages of the long-term European Cross Border Cooperation Program.

In February 2022 since the beginning of Russian invasion of Ukraine, cooperation with Russia was

completely terminated. The Project received a new name – the Estonian EU External Borders Programme 2014-2020, whereas the financing intended for the Russian side was reallocated into the Estonian program.<sup>1</sup>

It is important to emphasize that the restoration works, which the project envisaged among other things, implied the correction of the tragic destruction and damage caused to the two-fortress complex during World War II. That is why it is particularly painful to see the dreadful history repeating nowadays and to understand that it is Russia that has become the military aggressor now.

It was because of the war that the unique complex of fortresses suffered 80 years ago. By the end of World War II, the remains of the majority of buildings in Narva Castle were only ruins and outer walls. During the first postwar years, these ruined structures kept decaying due to the lack of activities aimed at fixing those. (Images 3, 4)

<sup>1</sup> From 2012 to 2015 with the support from the EU Cross Border Cooperation Program, the first stage of the Project was completed. It resulted in the restoration of the Small Gun-Powder Storage Building and opening an exhibition there, and in the restoration of the oldest building dated back to 1492.



2 Narva and Ivangorod fortresses. Johanna Triefeldt. 1939. Narva Museum



3 Narva Castle after World War II. 1944–1947. Narva Museum



4 Narva Castle after World War II. 1950–1960. Narva Museum



Preparation for the restoration of Narva Castle started in the 1950s, but the start of the systematic restoration works dates back to 1968. By the end of the 1980s, the restored structures were Tall Hermann tower, the southern and the western outbuildings of the Convent house, the Rondell tower and the stone hall (Image 5). At the same time, an important stage of the western courtyard restoration was implemented that involved the construction of the western wall and the defensive passage, fortification of the Kristervall half-bastion with casemates. Inside the earthfill of Kristervall, a middle age tower was found, that was further cleared out and conserved. It was left in the state it was as a tourist attraction.

Despite the buildings were not reconstructed to the state they had had entering 1944, and many structures were not reconstructed at all, the bulk of the restoration works on the castle complex site was considered completed by 1986. Architects of that time held the view that restored Narva Castle must, in the first turn, remind of the knighthood period of its history and to recreate the atmosphere of

the Livonian times. Simple, spacious without extra frills.

Along with basic ideas of functional use of these or those closed spaces, nevertheless, simulation of knights' good old days took the form of loose artistic fancy ideas and interpretations.

However, at the end of the 1980s such an approach to the re-creation of the past was widely employed. Since 1987, the castle has been open for everyone interested. It reached a new milestone in its history – it has become a museum.

Prior to World War II, the City Museum was located in the downtown occupying two neighbouring buildings – the Lavretsovs' house and house of Peter the Great. Both buildings shared the tragic fate of old Narva, first in 1944, when after the Soviet air raid all that left of the houses were just basements and walls, and later at the end of the 1950s, when the authorities laid everything that left and could be restored to the ground. (Image 6)



5 Restoration of the Hermann Tower. 1980. Narva Museum



6 The building of Narva Lavretsovs' Museum. 1944–1945. Estonian History Museum



7 View of the Hermann Castle from Vahe street. Erik Laid. 1942. Estonian National Museum



In 1949, the evacuated museum exhibits began to return to Narva, and in 1950, the City Museum started to work again. It took its place among the ruins – in the garrison bathhouse built on the castle site in the 19th century. That building located just at the wall of the northern courtyard was the only one to escape destruction during the war. It housed the City Museum from 1950 to 1986, whereas the holdings of the Museum were stored there up to 1990. (Image 7)

In 1995, the building of the garrison bathhouse was demolished for it did not match the general ‘medieval’ style of the knights’ castle. Nowadays it would have been impossible to have such an approach to an architectural object of the 19th century. However, during the transitional period of 1990s, reviewing of approaches to preservation of historic objects was just beginning. At the same time, in the 1990s the museum continued the work on the restoration of the building of the Convent house, and in 1996, the northern wing was opened.

In 2006, the Museum made a significant

step towards the historic re-enactment and interaction. The Northern courtyard of the castle was restored and opened as an experimental centre, where various craft shops were located. Authentic crafts of 17th century came back to life in hands of artisans, and visitors seemed to be carried in time into the Swedish period.

From 2007, when new opportunities for participation in the projects of regional development opened up with the support of European programs, the Museum repeatedly filed applications and set new challenges. A whole number of the castle locations and rooms were waiting for restoration. Permanent exhibition of Narva Museum worked out at the end of the 1980s needed full renewal as well. By the 2000s, it had already become very outdated both content wise and technically.

The transformation of Narva Museum into the foundation in 2012 with the participation of the city and the state considerably increased the chances for holding architectural contests at the state level and for the participation in large-scale European projects. The financial

support then was rendered not only by the city, but by the state as well, for which the development of the cross-border region was strategically important.



8—12  
The Convent House display. 2020.  
Narva Museum

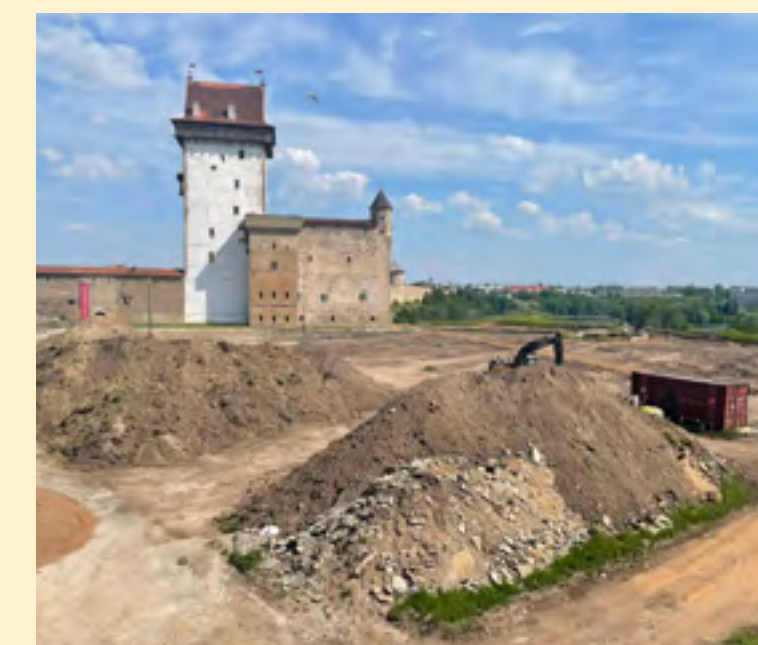


In 2015, the winner in the contest of projects for completing the restoration and developing the holistic solution for the closed spaces and the site of Narva Castle was the project The Two Friends developed by the JVR architectural bureau (architects Kalle Vellevoog, Tiiu Truus, Lidia Zarudnaja, Martin Proomik). In 2016, when the project was supported by the European Regional Development Fund, the Museum came very close to attaining the longstanding dream. The project implied full restoration of the Convent house, creation of a new permanent exhibition, as well as the complex restoration of the Western courtyard and Kristervall half-bastion.

Construction activities in the Convent house were commenced in 2019, and the new exhibition was opened in summer 2020. It draws a fine distinction between restoration and reconstruction and highlights the sounding of each historic period. The exhibition enters an emotional dialog with a museum visitor, in the form of an expressive visual narrative offering an alternative to traditional texts. The texts can be read and listened to with

an audio-guide; however, they are not found in the display. The exhibits and visual solutions help the visitor feel fully immersed into the history. (Images 8, 9, 10, 11, 12)

In autumn 2020, the Museum started restoration activities in the Western courtyard. By spring 2021, the northern wall, which prior to that had been in a dangerous condition, was restored. At the end of 2021, preparation to complex restoration of the western courtyard started, and in summer of the following year, the area and scale of work were enormous. (Images 13, 14) Archaeological excavations were in progress, complicated drainage works were carried out in the casemates and on the surface of the Kristervall half-bastion. Specialized machines were sieving the soil to separate and sort out stones, because in different places throughout all the site only the soil and cobblestones were used that had already been there. At the same time, suddenly the smell of horse manure could be felt in the Western courtyard. According to the archaeologists, it related to the exposed layer of ground of the 17th century.



13—14  
Reconstruction of the Western  
Courtyard. 2023. Narva Museum



15 Conservation of the cellars  
discovered in the Western  
Courtyard. 2023. Photo:  
Maria Smorzevskihh-Smirnova



16 Restoration of the roof of  
the Western wall. 2023. Photo:  
Maria Smorzevskihh-Smirnova



The western courtyard sprung a whole number of unexpected findings, the most significant of which was a structure with vaulted undercrofts found under a thin layer of ground. (Image 15). The structure was cleared out and various options for its further history. Anyway, in autumn 2023, the decision was made regarding to its conservation, for the initial designation of the structure was unclear. By a fortunate coincidence, these undercrofts did not collapse, and nobody was injured during the time when large-scale events, including those when heavy-duty transport means were used, were held in the western courtyard. Thorough conservation of the structure found will give the possibility to preserve that for studying, and, presumably, for exhibiting that in the future.

A whole number of large-scale tasks, which were not envisaged in the initial project, related to the reconstruction of the western wall, namely to the part above which there is a tiled roof (the defensive passage of the western wall). Not only the tiles, but the wooden structures of the whole roof turned out to be in a very poor state. In autumn 2021, the Museum ordered

the expert evaluation paid by the Ministry of Culture. It was found out that in the 1970s, the wooden bars were installed with serious breaches, which resulted not only in the emergency condition of the tiled roof but in the danger of wooden structure collapse. The decision was made to carry out extra works and to replace not only the tiles but the wooden structures along the full length of the summer gallery. (Image 16)

It is evident that each of unexpected additional tasks and the studies and examinations preceded affected the time-schedule of the overall construction project. However, every time there was a choice at stake: time and deadlines or quality, safety and caring attitude to the historic heritage.

To exemplify, at this point it is possible to mention a decision on displaying gravestones of the 16th century on the wall of the summer gallery as well. Over the decades, these gravestones were displayed in the western courtyard at the foot of Hermann tower. Limestone, of which they were manufactured many hundred years ago, at this

form of displaying all-year round was subject to the effect of most unfavourable weather conditions (rain, snow, icing, and improper placement without any fastenings). When the works came close to this section, the stones were to be relocated. Their condition made it impossible to continue their displaying in the state they were. In cooperation with the construction contractor and architects, the best option was found: to relocate the gravestones under the roof of the defensive passage and to fix them in the position recommended by the restorers. As a result, the visitors would have the possibility to view them in the best possible way. Even in such partially preserved state, these gravestones keep the memory of the ritual culture in Narva of the 16th and 17th centuries.

Initially, the project of the western courtyard reconstruction envisaged a relocation of the statue of Lenin that stood there since 1993. During the Soviet occupation years, monuments to Vladimir Lenin as the “leader of the proletarian revolution” and the founder of the Soviet Union had been erected all over Estonia. There were



the most ponderous Lenin sculptures standing in city central squares and after the regaining independence in 1991, they were dismantled one of the first. Lenin monument in Narva (by sculptor O. Männi) was erected in Peter Square in November 1957.

On December 21, 1993, the monument was dismantled from its high pedestal and relocated to the site of Narva Castle. There it was located at the northern wall of the western courtyard. Despite Lenin statue absolutely did not fit into the concept of the Livonian castle and was not accepted into the principal collection of the Museum, Lenin statue had been standing on the site of the fortress for 29 years. Surely, all this time it attracted the attention of photographers and tourists, often turning into the main character of curious photos. Some city dwellers intentionally visited the fortress to bring flowers to the monument. Flowers appeared twice a year: on Lenin's birthday and on the revolution anniversary. There were also city residents, who were wondering why the issue with Lenin statue had not been solved during all those years and who offered "to drown the despot in the river Narva".

At the beginning of 2000s, the plans were considered in the Museum on setting up a park of Soviet sculptures in the close vicinity to the Art Gallery, however, they were not put into life. On December 21, 2022, exactly in 29 years, Lenin finally left the site of the western courtyard of Narva Castle. The page of history, that should have been turned long ago, was finally turned. Together with their Tallinn colleagues, the Museum arranged to hand this massive sculpture over to the Estonian History Museum, whose collection involves the sculptures of Soviet leaders brought from various corners of Estonia.

The completion of the project started in 2016 and meant as a significant investment into the development of cross-border cooperation along with development of the unique ensemble of two fortresses fell to a very difficult period. First, it was the COVID pandemic, followed by the full-scale war raged by Russia in Ukraine. That has resulted in cutting all ties and cooperation with the Russian side, full disruption of transit tourist flow, closing the border for Russian tourists and eventual full closure of the Estonia-Russia border.

This challenging and very nice project was meant to heal the dramatic wounds inflicted to the cultural and historic heritage by World War II.

In 2024, Narva will be commemorating a tragic date – the 80th anniversary of the bombing of Narva. In 1944, the Soviet Army destroyed one of the most beautiful baroque cities of Northern Europe. In contrast to the castle, Old Narva has never been restored.

We are finishing the project during the time when the border between Narva and Ivangorod has become well-marked once again, and the two fortresses appeared to stay on the sides of the two different worlds.

Narva Museum is assured that that very important project will undoubtedly draw attention to history, which is to be a wise teacher, as well as to Narva – the Estonian city that is the first to greet the rising sun and the city from where Europe begins.



# Archaeological research of building remains in the Western Courtyard of Narva Castle between 2020–2023

Villu Kadakas

The archaeological excavations in the Western Courtyard consisted largely of nothing more than soil scraping, as growth soil was stripped away and reinstalled for the purpose of paving and laying new turf. It exposed the foundations of several larger buildings that were destroyed in the war and of which there had hitherto been only a superficial knowledge through historical layout plans and a few monochrome photos. The surface of the walls was cleaned, the walls were mapped and as much information as possible was collected about the history of the buildings.

Cable trenches and recesses for benches and lighting fixtures extended to a depth of half a metre to one metre, while pipe trenches were about two metres deep. Smaller and larger test pits were also excavated on top of the Kristerval (lit: Christian's wall) bastion to be able to better plan the future exhibition, find historic retaining walls and artillery gun platforms. One of the largest and deepest test pits was excavated near the southern tower to construct a staircase facing Joaorg, another was excavated to create a drainage system for surface water circulating in the backfill of the moat buried along the northern wall. As part of the preliminary survey, a ground-penetrating radar

was used to survey the Western Courtyard, on top of the Kristerval bastion and south of the Western Courtyard, on the other side of the curtain wall<sup>1</sup>.

During the survey, the foundations of several major buildings destroyed in 1944 and not restored were cleaned (Stone Hall, Arsenal, Old West Gate). Remains of buildings from different periods were discovered in trenches and test pits (moat side walls, mediaeval buildings, garrison sauna).

As the excavations were not deep, no mediaeval items were recovered. On the other hand, the ground revealed remnants of life in the garrison, mainly dating back to the 17th-19th centuries: fragments of ceramic eating and drinking utensils, as well as pieces of clay pipes. Fragments of 17th-18th-century glazed stove tiles also form a worthwhile collection, giving some idea of the stoves that were used in the buildings. However, in most cases, it is not possible to link stove-tile findings to a specific stove foundation, room or even building.

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<sup>1</sup> Hannes Tõnisson (Tallinn University School of Natural Sciences) and Olavi Harjo (Elermo OÜ).



# Kristerval

For the purpose of upgrading hydro-insulation, the vaulted ceiling of the underground chamber or casemate of Kristerval, one of the oldest preserved neo-Italian bastions in Estonia built in the second half of the 16th century, was excavated from above following decades of water seepage. The historic ceiling, consisting of four arches supported on a square pillar, had collapsed and was reconstructed in 1973. Only the edges of the arches remain authentic while the pillar in the centre of the room and a large part of the arches have been renovated. In 2022, excavation uncovered a vaulted ceiling with layers of concrete and bitumen cast on top of it which failed to retain water. To install hydro-insulation, the highest upper part of the walls and the vaulted ceiling of the exit passage extending in front of the Old West Gate were also excavated. During the preliminary survey, a test pit was also excavated in front of the front door of the extended exit passage, half of which is buried under rubble. Unfortunately, the test pit quickly filled with surface water, which could not be drained. As a result, plans to restore the doorway were abandoned.

In addition to opening up the ceiling of the casemate, some test pits were excavated on top of the bastion to locate and display the historic artillery gun platforms, rampart retaining walls and stone parapet. A round-penetrating radar was also used to search for them. The radar image shows the ends of the buttresses on the inside the bastion's scarp walls. These thin buttresses of 4 m in length were designed instead of a thick wall to conserve construction material. They were immediately buried in the ground, not meant to be exposed. At the Southwest Tower, one of these buttresses of the southern wall of the bastion was displayed in the early 1970s, after the upper part of the Southwest tower was excavated and displayed.

A stone parapet with two embrasures was searched for on top of the casemate, above its two embrasures, as depicted in the drawings dating from 1728. Unfortunately, the remains of the parapet were completely removed when the exterior of the casemate arch and wall were reconstructed in 1973. Small test pits were excavated on the rounded end of the bastion – the orillon – as part of the preliminary survey to locate the remains of artillery gun platforms.

The layout plan of 1728 depicts one of the artillery gun platforms on the orillon with a ramp extending southwards along the casemate's exit passage, while the layout plan of 1782 shows an elongated platform with a perpendicular ramp at the western edge of the bastion. Since the artillery gun platform consisted of beams supported by low and thin stone walls, it did not last long and was soon replaced by a new one in a location that better suited the evolving defence preferences. While only two surviving layout plans show Kristerval's artillery gun platforms, more may have been present over the centuries.

For the most part, only the remnants of the lower part of the retaining wall – a row of limestones without mortar – remain of the artillery gun platforms. These were found 80-90 cm underground on top of Kristerval. It is likely that they were not initially so deep and that the ground has subsequently been raised. Test pits excavated on top of the orillon revealed two rows of rough limestone slabs, probably from platforms dating to different periods, parallel to the side of the bastion and laying 70 cm apart



along the same line. Neither align with the edges of the platforms shown on the layout plans, or with the edges of their ramps. Designed to support heavy artillery guns, these platforms also needed support in the middle. However, these may also belong to platforms not shown on historical maps. The remains of a coarse log or beam – probably displaced from any one of the foundations – were found between the two rows of limestone slabs, placed at about the same height and in the same direction.

A 3.3 m long row of limestone slabs was found placed in the same direction just a few centimetres west of the exit passage of the casemate. Considering the location, it may have been positioned on the western edge of the ramp of the platform shown on the 1728 layout plan. The location is not a perfect match because according to the historical plan, the ramp was located a few metres to the east of the extended exit passage. The drawing may have been inaccurate, as it was probably very difficult to match the dimensions of the top of the bastion and the inside of the casemate.



Hermann castle and Ivangorod fortress. Beginning of the 20th century.  
Estonian War Museum – General Laidoner Museum



## Arsenal

Stripping away 15-20 cm of growth soil exposed the foundations of buildings destroyed by the 1944 bombing and subsequently demolished. The largest of these was the Arsenal building, a building complex of four one- or two-storey wings and a courtyard (about 3,500 m<sup>2</sup>) that filled the entire southeastern section of the Western Courtyard and was originally built during the Swedish period, presumably at the beginning of the 17th century, and served as a military armoury and workshop until 1944. In places, its foundations had been preserved above the historic floor level, making it possible to even document the floors and walls as distinguished by a few rows of stones. The walls of the north part of the west wing and the west part of the north wing had been demolished to a greater depth than the others, but enough survived to identify the layout and the main construction phases.

It turns out that the oldest layout plans from the middle of the 17th century give a fairly accurate representation of the Arsenal at that

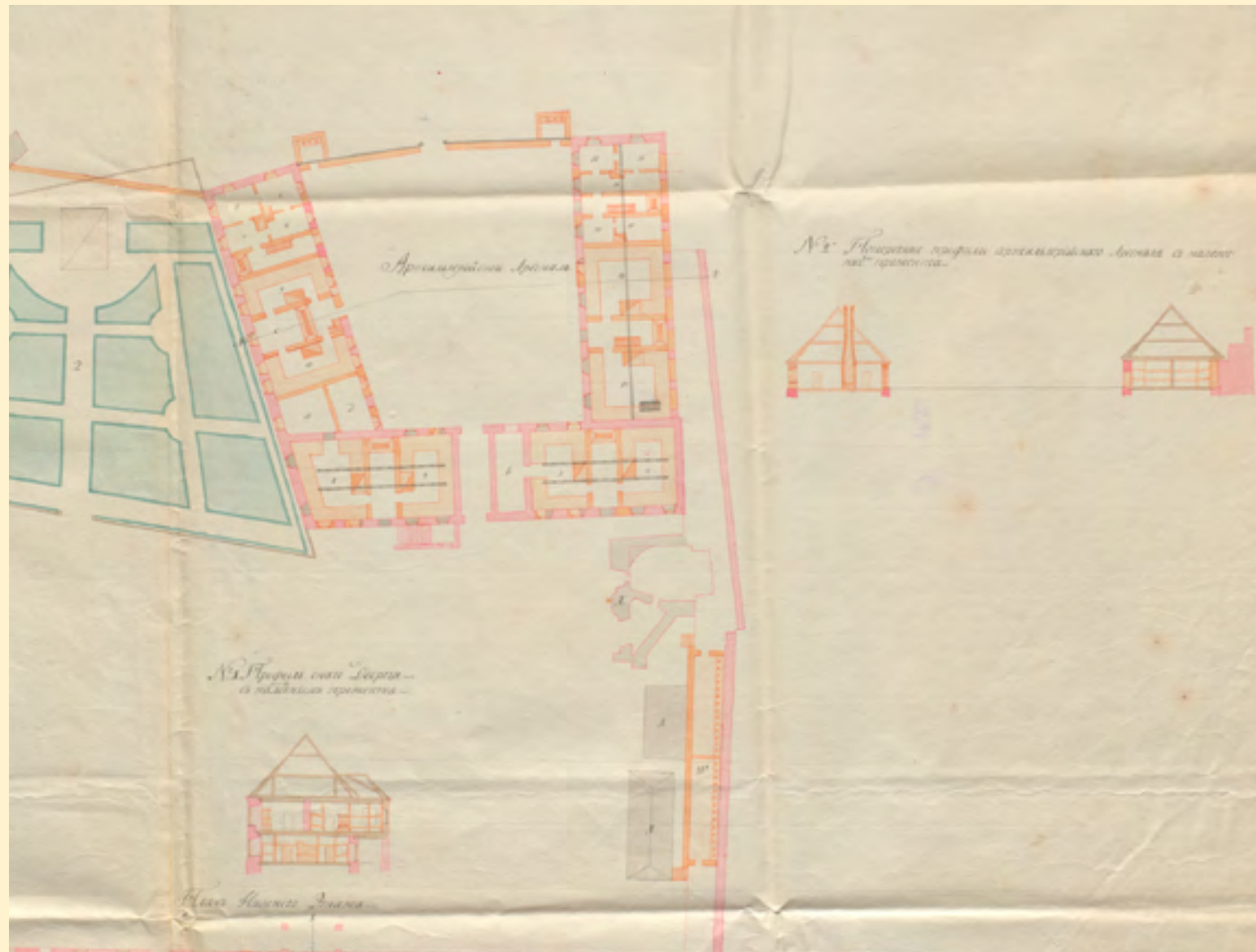
time: the walls depicted on these plans represent the oldest construction phase. It turned out that the exterior and courtyard walls of the most important building – the north wing and the two flanking wings – were built at that time while almost all the partitions and the south wing were missing. The only partitions were in the centre of the north wing, on either side of the gateways, and one in each wing in line with what was later the southern edge of the courtyard. Surprisingly, the two adjacent gateways shown in the centre of the north wing on 17th century layout plans turned out to be real. On subsequent layout plans, even those from the second half of the 17th century, there is no longer any clear indication of the gateways of the two passages, although several plans show the side walls of both aisles. It turns out that in no later than the 18th century the gateways to the west side of the passageway were walled up, forming an enclosed space between them. It is hard to say why two were originally built or why a second was no longer needed. We were also surprised to learn that unlike the walls that were added later, the interior and exterior surfaces of the original walls of the Arsenal were made of

hewn limestone blocks with a smooth exterior. It is unclear whether this was just for the plinth or for the full height of the wall – photos taken before the war show a plastered building without a plinth.

For unknown reasons, the exterior wall of the west wing was constructed in a peculiar way, directly facing the mediaeval western wall of the Western Courtyard. As seen on 18th-century drawings, this long stretch did not have a wall, but a row of square pillars with a total of nine niches of varying width (3.0-3.5 m) in between. Remains of the former pillars were found between the niches that were later filled in. The 1798 intersection drawing shows that these niches were between tall segmental arches. They may have served the purpose of conserving building materials and gaining floor space. It is possible that they may have had shelves or cupboards built into them. The southernmost niche was never filled in, because it also served as the entrance to the Kristerval casemate.

Until this time, researchers of the castle's construction history had overlooked the fact that





Plan of the Arsenal, that used to be located in the western courtyard of the castle. Russian State Archive of Military History. 1798. RGVIA

the layout plan of 1728 shows a gateway through the Western Wall in the third niche from the north. The passageway was probably completely sealed off by the 18th century. Attempts to find it in the excavated pipe trench along the western wall failed, because all of the historic masonry had been covered up in the 1980s when reconstructing the interior of the western wall. In theory, this gate could be approached at some point from outside

the western wall by excavating a carefully planned test pit in front of the Kristerval orillon. It is unclear whether this gate existed in the mediaeval period, or whether it was built during the construction of the Kristerval bastion or the Arsenal. It probably functioned as an additional exit passage from the west wing of the Arsenal. The exit gate lost its importance after the Fortuna bastion was built and it was walled up at an unknown time. It is also possible that it served as an adjacent chamber to the Arsenal until 1944.

After the Great Northern War, probably in the 1730s, the southern rooms of the Arsenal's flanking wings were demolished due to the construction of the scarp wall and curtain wall on the southern side of Fortuna bastion, replacing the old mediaeval southern wall of the Western Courtyard. In particular, construction was prevented by the southern end of the east wing, where a new curtain wall was constructed a little inwards compared to the old southern wall. The 1798 layout plan gives a good overview of the changes made to the Arsenal throughout the 18th century. The south wing is

still missing on the plan, but there is a perimeter wall roughly aligned with the courtyard wall of what would later be the south wing, with a gate in the middle and two projecting rectangular cabins on the south side of the wall. The remains of these have never been found and they were probably completely demolished when the south wing was built in the 19th century. The excavations revealed that many of the partitions found, as well as the south wing, are missing from the 1798 layout plan. The plan shows a number of thin partitions, probably made of wood, and stoves, but these had probably long since been demolished by 1944.

The 1798 layout plan also depicts some of the proposed additions to the west wing, specifically three new exterior walls and the filling masonry of the exterior wall arcade. These three partitions were found in roughly the same place and are indeed the oldest partitions in the west wing. They were presumably built relatively soon after the 1798 layout plan was drawn up. Conversely, it seemed that closing the arcade of the western wall was still some time away, as the lime mixture



used in the few surviving fragments of the filling masonry of most of the niches resemble later construction elements added in the 19th century. The need to close the arcade likely arose when the second storey of the flanking wings was completed, for fear that it would not be able to support the increased weight of the wall.

It transpired that unlike the design, 90×90 cm square foundations for some type of ceiling supports were also built in the west wing along with new partitions, and these foundations are arranged in a row in the centre axis of the longer rooms. Apparently, in contrast to the 1798 design, a similar system of partitions and ceiling supports was also built in the east wing, where its remains have been better preserved. The two, being close to each other, formed a corridor in both of the flanking wings, positioned more or less in the middle, with a wide doorway at the end of the courtyard wall. A long hallway with ceiling supports ran along either side of the corridor.

Pilaster-like foundations, projecting half as much (45 cm), have also been built on the end walls of

the rooms, in line with the row of pillars. These indicate that the ceiling was not supported by simple square stone pillars, but rather by an arcade. The need to provide the ceiling with such firm support probably arose in connection with the construction of the second storey – the barracks – of the flanking wings. Heavy stoves, essential for living quarters, had to be built on the central axis of the building in line with the chimneys. The arcades on the lower storey may have been built at the same time as the wooden walls of the flanking wings when the second storey was completed.

Since the north wing already had two storeys, perhaps dating back to the Swedish period, the rooms here probably did not have this type of ceiling support system added at the turn of the 18th and 19th centuries. Everything in the north wing, west of the gate, has been demolished to a considerable depth, but the foundations for two completely different and thinner (about 40 cm thick) wooden posts or circular stone pillars were found in the hall east of the gate.

The archaeological excavations showed that the Arsenal has undergone a number of alterations and several partitions have been added since the 1798 layout plan was drawn up. Since there are no surviving plans of the Arsenal's interior from later periods, it is difficult to determine when these additions were made. Some of the most recent partitions may date back to the interwar period.

The largest 19th-century annex was the south wing, which finally enclosed the southern side of the Arsenal courtyard. It was likely built at the end of the 19th century, because it does not show up on the layout plan of the 1886 Opriz album, but can be seen in the oldest photos from the early 20th century. The south wing was lower than the others until the very end, consisting of a single-storey building with stone walls. Excavations revealed that there were only four rooms in it: two equal-sized long halls in the middle and two smaller, irregularly shaped rooms at the ends of the flanking wings. The new partitions did not rest on the foundations of the courtyard walls of the flanking wings dating from the Swedish



period, but were slightly skewed in relation to them. In the two central halls, extensive segments of the remaining concrete flooring were cleaned out which were permeated with oil in some areas. Given the size of the rooms and the type of flooring, these halls were probably used as workshops for repairing military vehicles and heavy machinery until 1944. The floor surface in both end rooms was largely occupied by a massive rectangular foundation. Particularly thick chimneys protrude from the roof in the same place in photos taken in the 20th century. These may have been some kind of industrial furnaces for a workshop. A concrete box, a few metres wide, was built in the middle of the courtyard wall of the south wing, facing the courtyard. This likely served as a tank for the south wing latrine. It is absent from the oldest photos, but appears in later ones. It was likely built in the 1930s. New partitions were also built in the flanking wings in the 19th century, perhaps in conjunction with the construction of the south wing. The arcade on the central axis of the wing in each of the two southern halls is filled in, and the hall is further divided into four small rooms by transversal partitions.



The western courtyard of Narva Castle after the demolition of the Stone Hall ruins. 1957-1965. Narva Museum

The long annex projecting from the middle of the east wing towards the main castle, built as an extension of the corridor running through the east wing, seems to originate from the last decades of the 19th century. The annex does not appear on the 1886 layout plan, however its thick chimney is visible in the oldest photos. During the excavation, the foundations of the south and east walls of what is thought to



View of the western courtyard of Narva Castle. Beginning of the 20th century. Narva Museum

have been a single room building were found, together with an underground arched chamber that was probably built even later. It is a 5.5×7.5 m chamber under a segmental brick arch. There are two symmetrically spaced square openings of about 1 m in the arch, with a third, slightly narrower, vertical shaft in the ceiling of the corridor built into the end wall of the annex. This may have been a latrine tank from then the site served as a barracks. It remains unclear whether this arched chamber was topped by a building or whether it was solely an underground

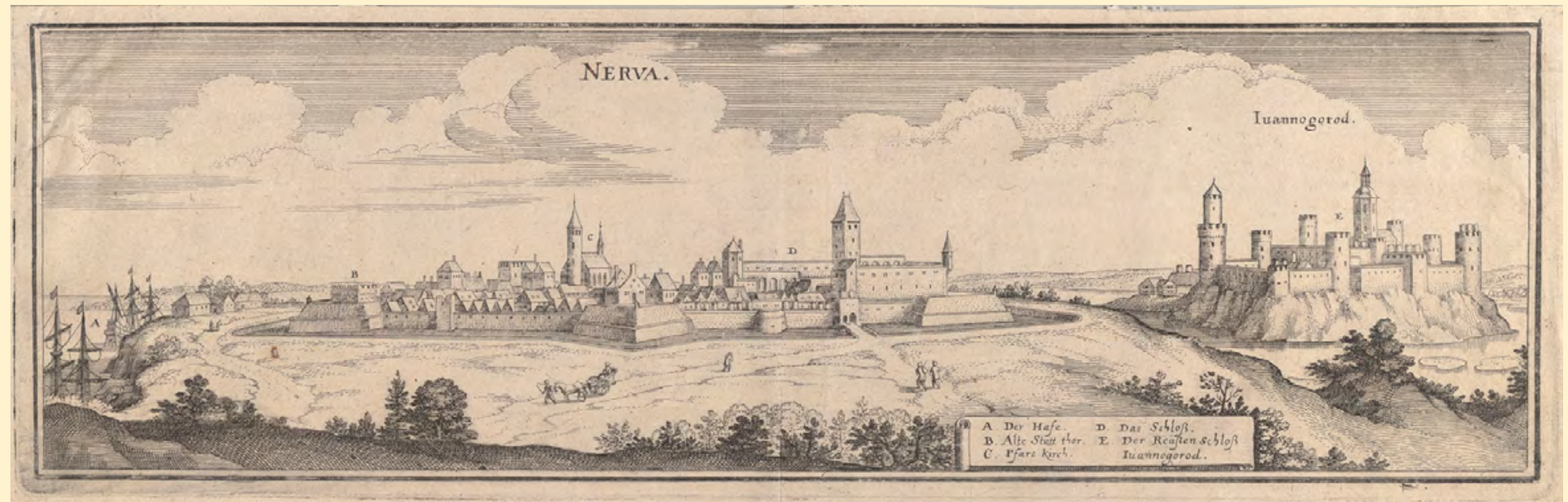


structure. The cellar was in good condition and conserved under the courtyard.

The excavation also uncovered a few fragments of pre-war cobblestone paving in the courtyard of the Arsenal and on the outside of the east wing. The paving was largely destroyed by post-war excavations. Only patches of it remain. Since it is constructed of the very small cheaper kind of stones, and it has sunk very unevenly in places, and is located deeper than the current courtyard surface, the original plan to display a few patches of the cobblestones in the courtyard area of the Arsenal was abandoned during the work.

## Stone Hall

The foundations of the deputy governor's palace, the Stone Hall, built at the beginning of the Swedish period and located along the northern wall of the Western Courtyard until 1944, were excavated from the top, as it proved necessary to obtain source data to mark the foundation and excavations were also needed to lay the base courses of the pavement. The foundations of



View of Narva and Ivangorod. 17th century. Matthäus Merian. Estonian History Museum Foundation

the partitions inside the Stone Hall were also exposed in the cable trench for the chain of light fixtures along the northern wall. Unfortunately, it turned out that the foundations of the Stone Hall were demolished to a much greater depth than those of the Arsenal building during post-war renovations, resulting in only fragmentary exposure in the sections that survived higher up. The foundation of the façade of the Stone Hall was preserved a little higher only at the western end, near the corner of the museum building, but even there only the foundation below the ground floor

or the first floor of the building was preserved. The contours of the above-ground part of the building were not readily identifiable, as only the foundation has survived, which is much wider than the walls.

Nevertheless, some observations could be made about the history of the building. The most interesting discovery was made in the centre of the destroyed section of the Stone Hall, with evidence of a gateway leading to a bridge across the valley heading towards the historic city



centre. We know from historical layout plans that during the Swedish period the Stone Hall originally extended only as far as the gateway, enclosing it. The extension to the east of the Stone Hall gateway is missing on the 1752 layout plan, but first shown on the 1789 plan. Sadly, the junction between the corner of the old Stone Hall and the façade of the extension was so profoundly damaged that investigation proved impossible. At the same time, it was a surprise to discover that the gateway itself, or more precisely its side walls, were built in several stages. The gateway, which was originally about 6 m wide, was later narrowed to 4.5 m for an unknown reason, by adding lining walls about a metre thick to the inside of the original gateway walls. Judging by the mortar used for this purpose, the narrowing probably happened as late as the 19th century, but the reason for this remains unclear.

It was suggested during the fieldwork that the remains of an older mediaeval building may have been used in the construction of the Stone Hall during the Swedish period, but no evidence

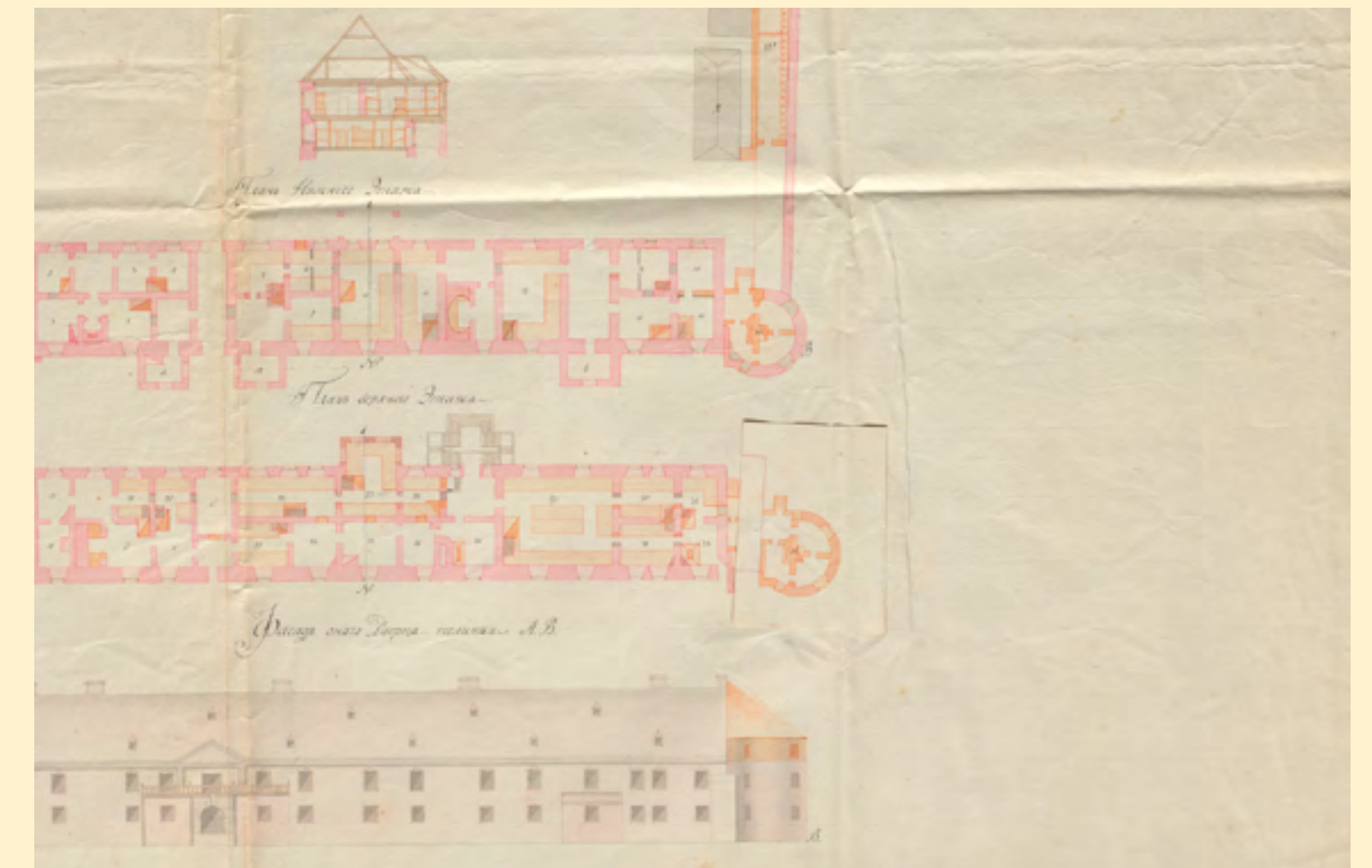
was found to support this theory due to the poor condition of the walls and the limited scope of the excavations. The earliest structures here may have been the side walls of the gateway, which may have already been a gatehouse in the mediaeval period.

The foundations of the façade of an earlier stone building, probably built during the Swedish period, 3 m narrower than the Stone Hall, were found under the extension of the Stone Hall. This long building is depicted on several maps dating from the second half of the 17th century, and was probably demolished during the construction of the Stone Hall extension.

## Old West Gate

There is a rectangular roofless gate structure reconstructed in the 1980s by the western wall of the Western Courtyard, just north of the Arsenal. It is not known if the foundations of the historic gate structure were found on the same site before the construction, or if the reconstructed building was built based on what was found,

as no documentation has been retained. In any case, the new excavation revealed that the gateway building that still stands is a completely new structure, right down to the natural limestone. Maps from the 17th-18th centuries do in fact feature a gateway building on the same site, but the gateway building of the time was elongated and twice the size of the present one (about 9×18 m), extending



The city-facing facade of the north gate as it last existed. 1798. RGVIA (Russian State Archive of Military History).



northwards by a similar distance. Stripping away the growth soil revealed the foundations of the north part of the gateway structure. Evidently, the findings are quite consistent with the historical layout plans. The gateway through the building was not straight, but S-shaped, meaning that the inner and outer gates were not aligned. This was probably necessary to prevent the enemy from breaking through two successive gates with a single shot. The north side of the gateway used to have a small L-shaped adjoining chamber, presumably for the guards. It was not possible to determine the age of the gate structure. It may have been erected only during the construction of the Kristerval bastion, but it is also possible that it dates back to the mediaeval period.

## Buildings from the mediaeval period

Even though our only knowledge of buildings in the Western Courtyard is based on historical plans dating from the Swedish period, there were probably several stone buildings erected

here already in the mediaeval period, which ended up being destroyed in the wars and skirmishes of the second half of the 16th century. Archaeological excavations in the 1980s found the remains of only two mediaeval buildings. It was possible to open up both of these a little more in the recent excavations to gain some new information. Due to the limited scope of excavations, no unknown mediaeval buildings were discovered.

On the south side of the new gate on the north side of the western wall, a cellar measuring *ca.* 5×9 m was cleaned out again when excavating cable and pipe trenches, specifically the fragments of three of its walls. In the 1980s, the remains of a spiral staircase were found in the chamber in the east wall by the courtyard. A few steps of the staircase were cleaned. It was still unclear whether the building was confined to a single room or whether it was a single room in a larger building. Luckily, we were able to pinpoint the location of the building.

The second mediaeval building was discovered in the 1980s at the southern edge of the Western



The collapse of the northern wall of the western courtyard. 2015

Courtyard, near the Southwest Tower. The long building between the Southwest Tower and the South Tower, opposite the southern wall is already depicted on the earliest layout plans dating from the middle of the 17th century. The façade wall of the mediaeval building was also the south wall of the Arsenal courtyard. The building was demolished along with the southern wall in the 1730s during the construction of the curtain wall. During the excavations of the Southwest Tower in the 1980s, the western side of the building was



emptied, making it evident that the building predates the west wing of the Arsenal, thus originating from the mediaeval period. Due to its mediaeval origins, the façade wall of the building was displayed and then marked, unlike the walls of the Arsenal building that came later. In 2022, stripping away the soil succeeded in clearing the northern corner of the building at the eastern end of the south wing of the Arsenal. It turned out that the building did not extend to the South Tower, but ended at the line of the courtyard wall of the east wing of the Arsenal, which was built at a later date against the northern corner of the mediaeval building.

## Northern gate and moat

Excavation of the edge of the northern wall began in 2020 at the northern edge of the Western Courtyard, east of the Stone Hall, in the area of the moat that was filled in during the 17th century. The aim was to build a drainage system that would divert moisture from the backfill of the moat underneath the wall to keep it from further damaging the mediaeval

northern wall. This moisture had probably caused the exterior of the north wall to deteriorate already by the 19th century, when the entire exterior had to be renewed with lining masonry.

Unexpectedly, a 1.8 m wide segmental arch was discovered just a few metres above the bottom of the moat. It was revealed to be a small closed-off gate, 2.3 m high. The lower half of the sides of the gate is not a man-made wall, but is carved into natural limestone. The gateway was showcased as part of the museum's exhibition by surrounding it with a hole, where the viewer can also get a sense of the depth of the former moat. The gate may have been used to allow horse-drawn wagons to access the moat when it was still used as a quarry for building stone. It also provided a shortcut for taking stones out of the castle to build its external walls, or even the city's defensive walls. It is not clear when the gate was walled up, but it was certainly before the moat was filled in. Given that the valley between the castle and the city was integrated into a common defence system in the late Middle Ages, this gate

was not a weak point in the castle's defences. In the event of a siege, it would have been possible to quickly wall up such a small gate. This may have been the case in 1558, after Russian troops captured the city at the beginning of the siege and began attacking the castle from there. The troops of the Teutonic Order defending the castle agreed to negotiate after the collapse of the northern wall.

A narrow north-south wall, about 1.2 m thick, was uncovered as early as 2020 on the western edge of the gateway pit at the bottom of the moat, and later in the cable trenches. This is the retaining wall of the western edge of the moat that covered the east part of the Western Courtyard until the middle of the 17th century. This wall was first discovered in 1982 while digging a pipe trench. Two pillars supporting the bridgehead were identified and it was assumed to have been built as late as the 17th century. In 2020, it was possible to study the junction of this wall with the northern wall of the Western Courtyard, in the northwest corner of the former moat. It turned out that both walls were built together, and not with



the wall on the west side of the moat facing against the northern wall, as would have been the case if the wall had been added in the 17th century. A similar wall on the east side of the moat, near the main castle and the northern wall, was discovered in the 1980s. It can now be concluded that both side walls of the moat were built in the mediaeval period.

A small fragment of plastered wall, which disintegrated during the excavation, was unexpectedly discovered at the bottom of

the moat, a few metres southwest of the gate. It was parallel to the western wall of the moat and clearly predated the buildings built higher up on the backfill of the moat. This suggests that the moat was not completely empty at the end of the mediaeval period, but that there were buildings of some kind along the western edge, with cellars at the bottom of the moat. The building perfectly exposed the gate in the northern wall. The wall fragment discovered may belong to the façade of a building that stood next to the small gate. The 1650 map shows a small building in the middle of the moat and another in its northeast corner, both made of wood. As no buildings were depicted in the west part of the moat, the discovered building must have been completely gone by the 17th century.



Restauration of Narva Castle. Museum building in the western courtyard. Photo: Yevgeni Krivosheev.



View of the western courtyard. Beginning of the 20th century. Virumaa Museums



Ruins of Narva Castle and garrison sauna.



It was found that the material used to fill in the moat consists of alternating layers of demolition debris, natural gravel, limestone aggregate and manure. The latter stands out as it contains many 17th-century finds, including organic material.

## Barracks built on the backfill of the moat

The 1 m thick foundations of a large building were discovered in the north part of the moat, on the inner side of the northern wall, already in 2018 when excavating a hole for installing a water tank for the sprinkler system. More of the foundations of the same building came to light in 2020-2022 when excavating a hole for the drainage of the northern wall, as well as in 2023 in a trench for the cable of the chain of lighting fixtures along the northern wall. It turned out that the façade of the long building, built against the northern wall, on top of the backfill of the moat, was located 12-14 m south of the northern wall. The foundations of several partition walls were found in the central part of the building. One of the partitions had survived

well enough to retain the outline of a 1 m wide doorway and the threshold, while only the underground foundations of the building without a cellar survived in the remaining part. The foundations of the building have wide, flat arches built into them, a peculiar engineering solution that was probably designed to prevent any deformation of walls built on loose backfill. The building was probably built shortly after the moat was filled in, between 1682 and 1685. It does not appear on the 1682 map, but its contour can be seen on maps from 1685 onwards. On the 1697 map, it is marked in the legend as *Müüradt Baracq* (“stone barracks” in Swedish). The east part of this building, which was located outside the current northern wall of the Western Courtyard, may predate the filling of the moat. Some maps from the middle of the 17th century show a small rectangular stone building in the northeast corner of the moat, but this part has not been explored. This barracks can still be seen on the 1728 map, but disappear on the 1750 map.

The 1750 map also loses the east section of the northern wall of the Western Courtyard in

its mediaeval location, and it shows a new wall built on top of the backfill of the moat, running directly to the northwest corner of the Northern Courtyard. There must have been a good reason for such extensive reconstruction. It is likely that the old wall collapsed, leading to the destruction of the barracks built on unstable backfill.

Maps from 1757 and 1798 show a building in the same area, which at first glance appears very similar in layout and proportions, but stands a few metres away from the new northern wall and has a slightly different orientation. Based on the view plan of 1757 and the layout plan and carving of 1798, it was a single-storey building with thin wooden walls and a pitched roof. No remains were found, probably because the shallow foundations of the wooden house have been destroyed.

## Garrison sauna and manege

Until its destruction in 1944, there was a long manege with hewn limestone plinth and wooden walls in the centre of the Western Courtyard,



with an Orthodox chapel at the eastern end of the building. It was probably built in the second half of the century, before the 1886 map was drawn up. The foundations of its eastern end were documented during the installation of water tanks in 2018. Stripping away the growth soil in 2022 uncovered the west part of the plinth walls with hewn limestone facing, which enabled the location of the building to be pinpointed. Wooden structures placed in the same direction have been depicted in the same location as this building on plans dating as far back as the 17th century, but there is no reason to believe that the exposed wall plinth base belonged to a building constructed earlier than the 19th century.

Fragments of the hewn limestone plinth of the garrison sauna were discovered in the northeast part of the Western Courtyard in the selected test pits excavated as part of the preliminary survey. These fragment findings were subsequently also recorded in the cable trench. This made it possible to pinpoint the size and location of the building, which was used as a museum during the Soviet era and only demolished in 1995. This stone building was

probably built in the closing decades of the 19th century, as it appears in the oldest photos, but is still missing on the 1886 map.

## Summary

During the archaeological excavations carried out in the Western Courtyard of Narva Castle in 2020–2023, new information was obtained about several buildings that stood there at different times. The walls and vaulted ceiling of the casemate of Kristerval, one of the oldest preserved bastions in Estonia, located on the west side of the Western Courtyard, were opened up. Excavations also revealed the remains of the foundations of several artillery gun platforms from different periods. The walls of the Arsenal, a large building complex that stood in the southwest part of the courtyard until 1944, were almost completely cleaned, giving an idea of the building's layout and structural formation. The foundations of the east part of the Stone Hall, built in the 17th century as the palace of the deputy Swedish governor, which stood here

until the war, were opened along the northern wall. The foundation walls of the north part of the Old West Gate – the inside of the gateway – were opened along the western wall. Limited new information was obtained on two mediaeval buildings already discovered in the 1980s. A small walled up gateway was unexpectedly discovered in the north wall, at the bottom of the moat that covered the east part of the Western courtyard until the 17th century. The gate was subsequently put on display together with the bottom of the moat. Next to it were the remains of a building that was already built in the bottom of the moat in the mediaeval period. However, when opening up the wall on the western edge of the moat, it was found to have been built already during the medieval period. At the same site, the walls of a stone barracks built in the late 17th century on top of the filling masonry of the moat were found and extensively documented. It was also possible to document, to a limited extent, the remains of the hewn limestone plinth of the garrison manege and sauna, which were built at the end of the rule of the Russian Empire, in the second half of the 19th century, and destroyed in 1944.



# Bastions of Narva Castle

Ragnar Nurk, Jaak Mäll

There are three bastions belonging to various historical eras located on the site of Narva Castle: Half-bastion Kristervall, Bastion Fortuna and Half-bastion Spes. Under the project mutually financed by the European Union and Estonia, it has become possible to reconstruct both the interior and exterior of Kristervall, as well as to create therein an impressive space open for visitors all year round. On the sites atop all the bastions comfort zones have been created for people to spend their leisure time there as well as for arranging various events. On the



Plan of Narva and Ivangorod fortifications. 1797. RGIA

interpretive signs, one can find the brief history of all bastions.

Half-bastion Kristervall – is the only one in Estonia and one of a few Italian-type bastions extant in the territory of the Baltic States. It belongs to the old bastion circle of Narva. Narva was one of the first cities of the then Kingdom of Sweden, which was systematically surrounded with fortifications of new types. The works started after the conquest of the city from the Russians in 1581 and lasted with varying



Hermann castle. 1797. RGIA

degrees of success for about 30 years. Kristervall was erected in the southwestern corner of the fortress in front of the corner tower, making it possible to defend the western gates of the fortress. The cannons in the receding part of the half-bastion flank were hidden with a round orillon, or an “ear”. Two cannons were located in a vaulted casemate, through which it was possible to get from the inside of the orillon to the moat. On top of the half-bastion, above the casemate embrasures, there was a defensive stonework with two more embrasures. Atop the half-bastion, cannons were placed on wooden platforms (mortars were located there as well),

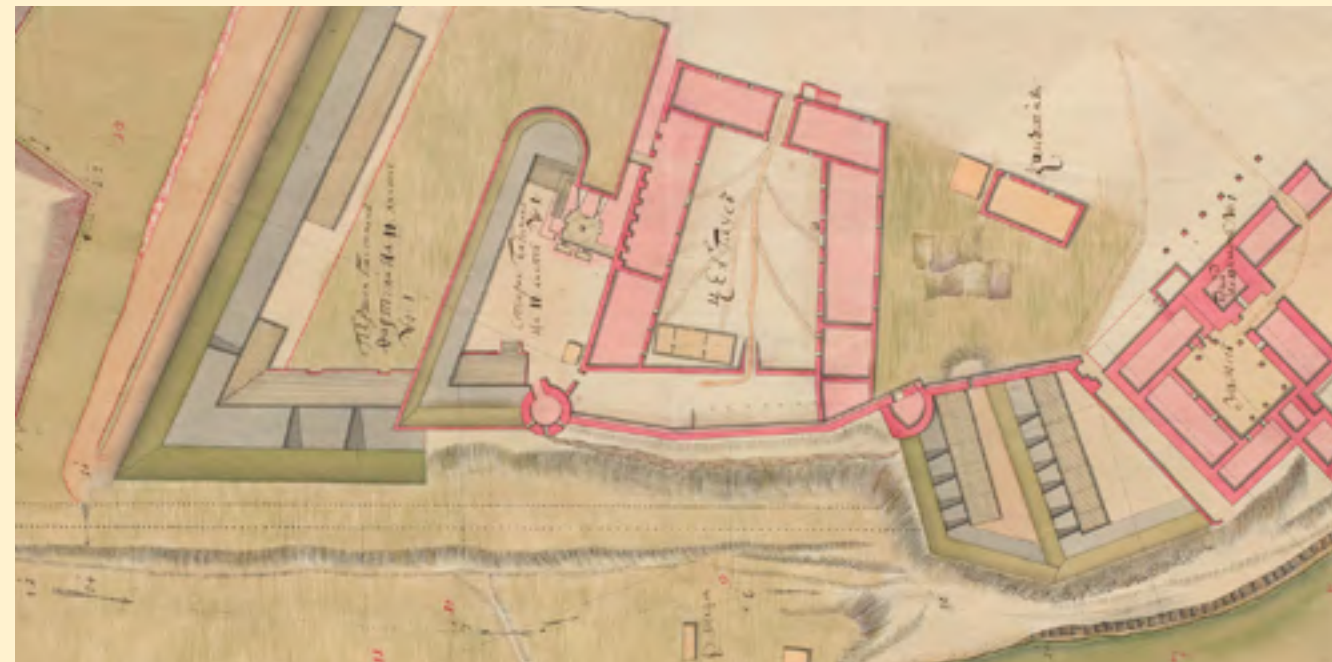


View of the Hermann castle and half-bastion Spes. 2015



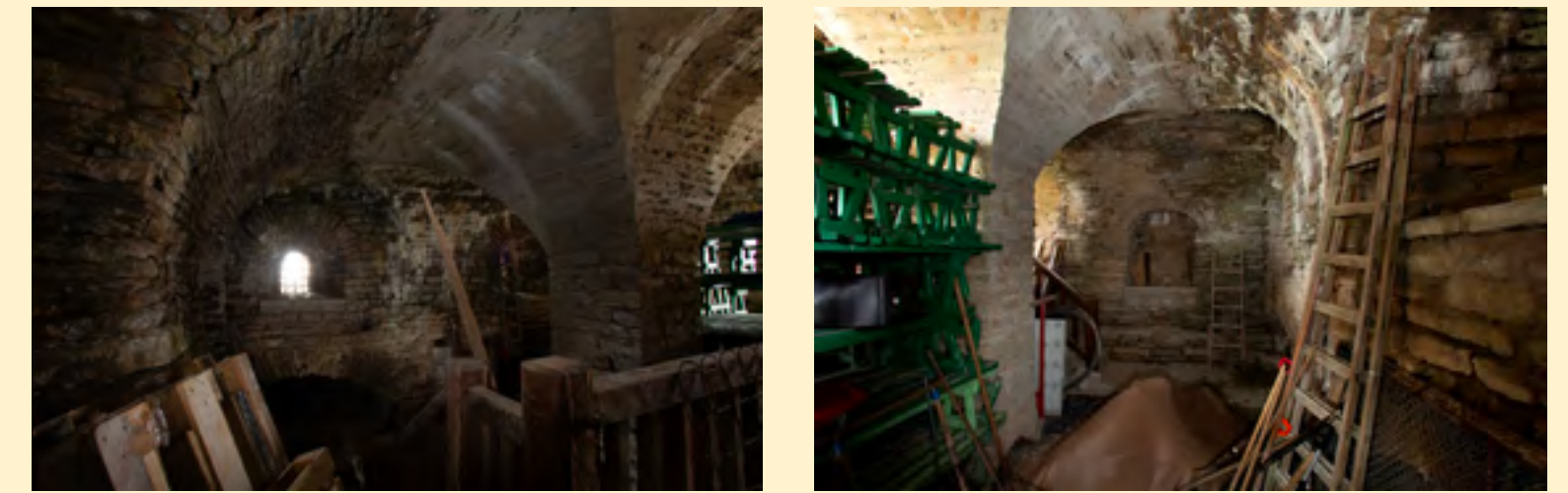
some of them were provided with low stone foundations. In the 17th century, Kristervall was built as a higher defensive position, which resembled a cavalier, atop the larger Fortuna Bastion or the First Bastion, wherein the remains of the medieval tower were completely buried under the ground.

Inside Kristervall, there is a casemate: a vaulted chamber or passage built into the defensive earthwork that was used as a shelter, a ration supply depot or a firing position, as well as for moving between the various parts of the fortification. The casemate flanked on the right side of Kristervall half-bastion was built to defend the main gates of Narva fortress. Upon the construction of Kristervall, it was not the artillery fire that posed the major threat for the gates of the fortress but petards – explosive charges of a couple tens of kilograms in weight – that were used by enemy sappers to try to blow up the reinforcement of the gates. Kristervall casemate aimed at the repulse of such attacks. For that purpose, two fast-firing cannons were placed in the main chamber of the casemate near the embrasures and could be used to shoot down



Fortuna Bastion with Kristervall and Arsenal adapted for its part. 1841. RGVIA

with flanking fire an enemy assault group that reached the moat. Moreover, there was also an escape passage out of the casemate – a sortia, via which, screened by the shellfire of the fast-firing cannons, it was possible to send their own assault group to destroy enemy sappers and to deactivate the petards they had planted. It was in 1590, when Kristervall, more likely being just partially built then, first took part in defensive battles, when the Russians tried to win Narva back. During the sieges in 1700 and 1704 in the course of the Great Northern War, the use of Kristervall continued, and it was transformed in the part of Bastion Fortuna.



Casemate in Kristervall before restoration. 2015

Upon the construction of Bastion Fortuna carried out during the years of the Great Northern War, the main line of defence was moved farther on and the gates were not placed there any longer, and as a result, the casemate lost its defensive and technical importance. At first, the spaces were likely used for other purposes, e.g. as store houses, but at the end of 19th or in 20th century (the exact time is not known) unattended chambers deteriorated, whereas the vaults of the largest ones collapsed. The major restoration activities in Kristervall took part from 1970 to 1975: among other things reconstructed were the outer facing of the slope of fortification earthwork and the casemate vaults.



Owing to Project ER3 implemented in 2020-2023, the territory on top of historical Kristervall half-bastion has been landscaped and become a place for pleasant pastime that offers a spectacular view over the surrounding areas. Upon that, all necessary arrangements have been put in place for making it possible to hold private events there such as a wedding ceremony or birthday celebration. There is still a possibility for reconstruction of an open artillery gun position as an additional sightseeing attraction (e.g. on the round portion of the orillon).

In the course of works under the Project, the vaulted internal spaces were cleaned and appropriate conditions were provided for visiting those round the year. In the half-bastion casemates, a unique historical environment was recreated. The design and content of the display are rather moderate, with the emphasis on the unique atmosphere. To maximum possible extent, brickwork was retained to be displayed, whereas the attitude to the creation of new elements of the interior was rather moderate. Thus, the focus is on the unique architecture of the defensive

structure of the Early New Time; for the time being there are very few analogues of the kind that have survived. The author of the architectural design is Stuudio Truus OÜ (Tiiu Truus and Annika Liivo), whereas archaeologists and historians Ragnar Nurk and Jaak Mäll have helped to arrange the content of the display.

To give the prominence to the military function and to create the relevant atmosphere, in one of the embrasures in the interior part of the bastion a Swedish cast iron cannon dating back to the beginning of the 17th century is displayed, which is placed on a new gun carriage specially manufactured for that purpose.



The 17th century Swedish cast iron cannon before conservation.  
Photo by Jelizaveta Pratkunas. 2023





After the Livonian War, Northern Estonia belonged to the Kingdom of Sweden, and to protect their new domain in the Baltic Sea region ancillary armament for the Estonian fortresses was needed. In the middle of the 16th century, at the order of Karl IX (Charles IX) the copies of copper cannons were manufactured of cast iron in quick time and at a cheap price. They could be used during a siege both for defence and attack, as well as for setting fire to enemy's fortresses.

Although the cannon was likely and primarily used outdoors, its display in the Kristervall casemates makes prominent the military function of the space and creates the relevant atmosphere. Creation of a fast-firing cannon duplicate of the 17th century was also considered, of the kind that could be placed in the half-bastion casemates; however, we opted for the museum exhibit.

Thus, the further decay of the valuable cultural artefact has been stopped and new conditions have been created for its introduction to public, and the integrity of the heritage has been provided. For the first time ever, Narva citizens will have an opportunity to see the cannon of



The 17th century Swedish cast iron cannon before conservation.  
Photo by Vadim Bulatnikov. 2017

the beginning of the 17th century in the museum in practically authentic environment.

The cannon came into Narva Museum collection in 1990 being in rather poor condition and desperately needing preservation. You can find more about the cannon in the Museum



Medieval south-west tower in half-bastion Kristervall. 2015

Public Portal (NLM 1789:4 R 57:4). Owing to the Project, a chance occurred to carry out necessary work and to give the cannon a decent look. Restoration work was carried out by a Narva Master's student of the Estonian Academy of Arts, an alumna of Pallas University of Applied Sciences, lecturer Elizaveta Pratkunas. In the course of work, the cannon was cleaned both inside and outside and coated with a protective layer, which will help in the future to remove corrosion more easily and to ease the cannon servicing. That way, the cannon can be safely displayed in





Fortuna Bastion with Kristervall and Arsenal adapted for its part.  
1841. RGVIA

the authentic space of Kristervall half-bastion all year round. For the cannon display, Saaremaa artisans manufactured a gun carriage.

Impressions from visiting the display are supplemented by both the copies of tools used in servicing the cannon, and the copies of the assault weapons, which are displayed in the secret passage of the bastion. One of a few multimedia solutions in the interior space is an outdoor screen. It helps the visitors to understand the changes that took place in the vaulted spaces and to see their pre-Project condition.

## Fortuna Bastion

Fortuna Bastion (from Latin – “fortune”) belongs to a new, wider circle of bastions erected at the end of the Sweden era in 1680s. For the siege in 1704, the Swedes hastily finished the construction of the half-bastion only, and even then as an earthwork. It was only after the Great Northern War, by the end of the 18th century, when the Russian military authorities completed the construction of Fortuna Bastion (including its Joaorg portion with the left

flank), as well as the sloping stall. If the earlier project had envisaged liquidation of all existing structures in the southwestern corner of the fortress (including the munition depot), the final solution was more moderate. The old Kristervall half-bastion was redesigned to provide a higher level of defence (turning factually into a cavalier) for the new bastion, having added a new flank at its riverside. Upon that, the remains of the mediaeval southwestern tower of the fortress were completely buried under the ground.



View of the Hermann castle and half-bastion Spes. 2015



With the construction of the Fortuna and Spes bastions as well as of the curtain wall between them, a perfect bastion frontline was created. In the course of the restoration works at the end of the Soviet era, a part of the scarp wall of the Fortuna Bastion was excavated and displayed next to the structural parts of the southwestern tower and Kristervall, whereas the two-level shape of the bastion riverside flank was lost.

## Spes Half-bastion

Spes half-bastion (from Latin – “he hope”), as well as the Fortuna, belongs to the new circle of the bastions designed at the end of the Swedish period. In the course of the Great Northern War, the Swedes, and then the Russians had erected emergency earthworks without stalls in the southeastern corner of the fortress site, but further on returned to the earlier project of the 1680s. A major part of the Spes half-bastion was built circa in the mid-18th century along with the Fortuna Bastion and the curtain wall between them; however, the completion of the riverside part was postponed for a long time.

It was planned to be of the same height as the other part of the bastion, but in the end turned out to be considerably lower. At the end of the 18th century, when Sweden was again at war, Spes quickly took a defensive position. At the same time, the riverside part of Spes was designed as a two-level structure so that the lower defensive crenelated wall ran opposite the large dansker of the fortress. Moreover, at the bottom of the earthwork from the Joaorg side, an additional defensive position was built that included a hidden road and a glasis for the defenders to be able to move unnoticed and to put up resistance. Currently, the shape of the riverside part of Spes half-bastion has been made plainer. The exterior facing of the sloping walls of that and other earthworks was renovated in the course of restoration work that took part at the end of the Soviet era.

Bastions along with the older parts of Narva fortress make it possible to take a look at the densely packed site and get an insight into the development of defensive works in 18th and 19th centuries. Owing to ER3 Project a very important part of the architectural heritage of



Restoration of the half-bastion Spes.  
Photo by Jevgeni Krivošev. 1973. Narva Museum

Estonian fortresses has been restored, preserved and open to the public to have a look at that both from both inside and outside.





Hermanni linnuse ja lagunev poolbastion Spes. Foto Osvald Haidak. 1939. Narva Muuseum



# Gravestone fragments in Narva Museum



Narva old town. St. John's Church and the Cathedral of the Transfiguration of Our Lord, 1930. Narva Museum

Gravestone fragments in Narva Museum  
Gravestones are an important part of mediaeval and early modern heritage, holding unique information about the past of Narva. Not to mention that the fragments of gravestones in Narva Museum are one of the few pieces of physical evidence we have of the destroyed interiors of Narva's older churches, the St. John's Church and Cathedral of the Transfiguration of Our Lord.

The history of the construction of the **Narva Cathedral of the Transfiguration of Our Lord** dates back to the mediaeval period. Originally dedicated to the Virgin Mary, the Catholic city church was likely built in the first half of the 15th century. In 1460, the city of Narva was struck by a fire, burning down the entire city including the church. The new city church, also dedicated



Narva Cathedral of the Transfiguration of Our Lord. Julius Krick. *Ca.* 1890. Estonian History Museum Foundation

to the Virgin Mary, was probably completed by the early 1470s. The church belonged to the city hall, which used it to hold meetings and court



hearings in addition to church services until the end of the Teutonic Order's rule in the middle of the 16th century. Two church trustees were also appointed from members of the city hall to handle church affairs.

During the Reformation in the first half of the 16th century, the city church became a Lutheran church operated by the local German congregation. Previous furnishings were removed and the rooms were adapted for Lutheran services. The church itself was rededicated to Saint John of Jerusalem. After Narva was conquered by Russian troops in 1704, the church was closed and no services were held there for four years. In 1708 the church was passed to the Russian Orthodox community and consecrated as the Cathedral of the Transfiguration of Our Lord. It operated until its obliteration in World War II.

**Narva's St. John's Church** was built during the Swedish rule in the middle of the 17th century and dedicated to John the Baptist. In 1645, the burgomaster of Narva, Diedrich Warnecken, bequeathed Päite Manor to support

the church, and the government of the Kingdom of Sweden certified the church as Narva Cathedral. It was used by the local Swedish congregation until the beginning of the 18th century. The Russian army conquered the city of Narva in 1704 during the Great Northern War. The cathedral was then rededicated as an Orthodox church in the name of Prince Alexander Nevsky. It served as a Russian military church until 1708.

Peter the Great ordered most of the population of Narva to be deported to Russia in 1708. The small German congregation that had lost its own historic church held services in the city hall between 1704 and 1727, and thereafter in the stock exchange building until it received its own church. Those deported from Narva were allowed to return from 1712. Unfortunately, many had already died or made a living in Russia and did not return. After the end of the Great Northern War in 1721, the German community and congregation in Narva started to rebuild, and the rooms allocated to them in the stock

Narva's St. John's Church. Photo by Osvald Haidak. 1930-1940. Narva Museum





exchange building proved to be too small for holding services. In 1733, the former Swedish cathedral, which had been vacant since 1708, was handed over to the German congregation. It was rededicated to Saint John of Jerusalem similar to the previous church used by the German congregation. The German congregation in Narva existed until 1939, while the church was destroyed in World War II.

Gravestones with inscriptions are an important source of history and genealogy – they can be used to determine the time of birth and death, and sometimes family links. A gravestone may also belong to someone on whom no written records have survived, making it the only record of them. Images on gravestones reveal changes in style and stone carving techniques, they can be used to study iconography and heraldry. The gravestones also reflect the zeitgeist, language and burial and commemoration practices.

Burial and commemoration traditions formed in the Latin Church by the end of the mediaeval period. It was considered important to mark the

grave, as this could decide the fate of the deceased. Estonia was Christianised in the 13th century, introducing the traditions of the Latin Church. These included the practice of burials in churches and the practice of covering the grave with a stone slab inserted into the floor. Not many could afford a lavish decorative stone gravestone. Those who could were representatives of the upper classes – nobles, clergy, wealthy merchants and city councillors. For example, Narva Museum houses fragments of the gravestones of burgomasters Laurens von Numens, Heinrich Morian and Christoff von Kochen. Peasants and common folk were buried in the churchyard. Burial under the church floor was also considered highly prestigious. The most coveted spots were in the altar section of the church.

The gravestones in Narva Cathedral of the Transfiguration of Our Lord and St. John's Church were made to order and measured up to 3 x 2 metres. Thanks to pre-war photos, descriptions and surviving gravestone details, we know that the gravestones had German and Swedish epitaphs, Christian symbols, heraldic



Gravestones at Narva's St. John's Church. Photo by Carl Sarap. 1939. Virumaa Museums Foundation

designs and decorations. The lettering on the gravestones helps to distinguish between churches. For example, the lettering on the gravestones in St John's Church was carved into the stone, while those in the Cathedral of



the Transfiguration of Our Lord had a relief inscription. These churches were used as burial sites mainly in the 16th and 17th centuries. There is only one known burial case under Russian rule in the 18th century. Burial in and near churches was allowed in Estonia up until the second half of the 18th century.

Gravestones were the most widespread type of commemorative art of the 16th and 17th centuries of which only a fraction survives in Estonia. Unfortunately, we do not know how many gravestones were in Narva Cathedral of the Transfiguration of Our Lord and in St. John's Church before the 19th century. There was no heritage protection in the modern sense before the 20th century, and there was little appreciation of the cultural significance of gravestones. Gravestones were installed in the floor of the church and became part of the flooring, which also exposed them to wear over time. In addition to foot traffic, the gravestones were also damaged during the various repair and reconstruction works carried out in the churches in the 18th and 19th centuries. The gravestones were made of



View of the interior of Narva's St. John's Church. Carl Sarap. *Ca.* 1938. Tallinn City Museum



View of the interior of Narva Cathedral of the Transfiguration of Our Lord Photo by Carl Sarap. *Ca.* 1938. Tallinn City Museum



limestone, a highly important building material in northern Estonia. As a result, it was not uncommon to see gravestones reused in the construction of new buildings, staircases or streets, for example. For example, the floor of St John's Church was decked with wooden boards in the 19th century, with some of the old gravestones extracted from the floor and given to the master to reuse for subsequent building work. Eleven gravestones from the 17th century alone survived at the main entrance to the church. Their original location, however, was in the immediate vicinity of the altar, making their surface the least worn by the early 19th century. A significant number of gravestones also remained in the Cathedral of the Transfiguration of Our Lord. The floor of the church was also decked with boards in 1873, but the new floor was laid on top of the old gravestones, hiding them from the view of church visitors. Unfortunately, researchers also lacked access to these gravestones before World War II.

The gravestones that were left in the churches before World War II were damaged or permanently destroyed in the war as a result of

the air raids and artillery fire of the Red Army. When work started to demolish the ruined buildings in the 1950s after World War II, parts of the gravestones found under the church rubble were brought to Narva Castle. A total of 20 fragments arrived at the museum. Unfortunately, not a single intact gravestone has survived.



Carved stone slabs along the wall of Hermann Castle in Narva. Teetlaus, Hans. 1995. Estonian National Museum



Ruins of Narva's St. John's Church. 1944. Estonian History Museum Foundation



During the Soviet occupation, the church and religion were ostracised, which generally also determined the subsequent fate of any related items of cultural value. Once they arrived at Narva Museum, the surviving gravestone fragments were left standing in the western courtyard of Narva Castle for decades, exposed to the elements and people visiting the museum. Sadly, after regaining its independence, Estonia also lacked suitable solutions and means to stop the further deterioration of gravestone details.

It was not until 2022 that the stones were successfully rescued from further decay as part of the restoration project (ER3) of the Western Courtyard of Narva Castle, supported by the Estonian EU External Borders programme (former Estonian-Russian programme). The gravestones of Narva's churches were given a place of honour along the wall-walk gallery of the castle where everyone can admire the skills of the masters of the 16th and 17th centuries and see a snapshot of Narva's history.



# Narva Gloria Bastion archaeological research 2023

Villu Kadakas, Ragnar Nurk

The fortifications of the city of Narva from the 14th century to 1863 are an important cultural monument. The most massive part of the complex is the unique Swedish bastion belt, which is also one of the main attractions of Narva. Thanks to it, the boundaries of the Narva Old Town, which was destroyed in the Second World War, are still marked and visible, as the city was protected by a belt of defensive buildings.

After the city of Narva was excluded from the list of fortifications of the Russian Empire in 1863, little attention was paid to the preservation and restoration of the bastions. It was not until the 21st century that their restoration, consolidation and conservation began to be tackled in depth. As restoring and maintaining the entire bastion belt is a huge undertaking, the work is carried out in several phases, as part of different projects. In today's context, the preservation of the historic bastions depends primarily on financial support from the Estonian state and the European Union.

In October 2023, preliminary archaeological investigations of the Narva Gloria bastion, commissioned by SA Narva Muuseum, took place within the framework of the ER3 project supported by the Estonian EU External Borders Programme (former Estonia-Russia Programme).

The study was carried out by archaeologists-historians Villu Kadakas and Ragnar Nurk. Small-scale archaeological excavations have already been carried out at the Gloria Bastion in the past. For example, in 2007, a couple of small shafts were excavated on the outside of the Gloria Bastion to determine the technical condition of the bastion wall, the depth of the foundation and the presence of cultural layers, but the scope of the work was limited by excess water. Two years later, preliminary studies mapped and studied the structural elements of the Gloria bastion. The 2023 archaeological survey was part of a complex study of the Gloria Bastion as a preparatory phase for the conservation of the bastion's escarpment. The surveys were carried out on the property of the Gloria Bastion, on top of the bastion's escarpment rampart, on the outside of the bastion in the moat and in the immediate vicinity of the bastion wall. All surveys were related to the escarpment and its parts.

For Narva's bastions, ordinary people are reminded mainly of the earth fortifications built in the last quarter of the Swedish period, which





1. Erik Dahlberg, 1625-1703.  
David Klöcker Ehrenstrahl. Nationalmuseum

still dominate the cityscape today. They were based on a project by the general-quartermaster Erik Dahlberg for the new bastion fortifications and the expansion of Narva, which was completed in parts between 1681 and 1686.

In the early stages of the project to fortify the city of Narva, Erik Dahlberg undertook a major tour, starting in Finland and including Ingria. The tour ended in Narva, where he stayed for nearly two weeks. The preparatory work was very thorough, documenting and surveying Narva's old fortifications and preparing a new design.

The project was reviewed several times by various committees before it was finally approved by King Charles XI of Sweden. The bastions in the project were named after virtues: Fortuna (fortune), Triumph (triumph), Fama (fame), Gloria (glory), Honor (honour), Victoria (victory), Pax (peace), Justitia (justice) and Spes (hope). Construction work took place between 1693 and 1704. During the Swedish period, none of the bastions were completed in their fully planned form. The construction work for the Victoria, Honor and Gloria bastions reached the furthest.



2. Plan of the Narva bastions.



Gloria was the last bastion built during the Swedish era to be completed with an outer wall. Plans preserved in the Swedish War Archives show the progress of the construction in its various parts as early as 1687. Half of the Gloria bastion is carved into a natural rock cliff, as it was a natural high ground that could have been used by the enemy to attack Narva fortress. The Gloria Bastion was built between 1687 and 1704. Construction started with earthworks and piling the ramparts. In the second phase, a wall was built in front of the rampart, starting from the Kuningavärv (king's gate) and moving towards the castle. The outer wall was completed between 1692 and 1698. The right side of Gloria<sup>1</sup> has buttresses supporting the inside of the escarpment, the left side does not. The height of both completed face-side escarpment walls is approximately 9 m.

Unlike the earlier Victoria and Honor bastion, where the galleries of the wall were two storeys high, the Gloria bastion was only one storey high. However, the galleries were not made in the lower part of the wall, as is customary, but in the lower third of the wall. The exterior wall of the

casemate also contains a series of shafts, as well as ventilation holes at floor level, which are now buried in rubble both in the interior and exterior. There were staircases up to the flanks of the bastion at either end of the gallery, the eastern one of which has been preserved. The western one has been closed due to reconstruction work. The staircase on the right was built in 1697. The one on the left was completed sometime between 1699 and 1703.

In front of the bastions, a two-level moat was planned. From the gallery of the Gloria bastion, enemy attacks could have been hit in the course of the battle if they had attempted to penetrate from the upper level of the moat to the lower level in front of the wall. The wall on the right side of the bastion, when viewed from the castle side, facing the rock cliff, is built with internal buttresses. On the left side, where the cliff was higher, a moat was cut into the cliff and an escarpment was built directly against the cliff. Because no space was left for surface water to flow down the cliff edge, water seeping into the wall, especially during freezing temperatures, has caused the inner wall of the gallery to disintegrate and partially collapse.

A total of nine shafts were dug during the preliminary archaeological excavations in October 2023. Of these, seven were dug on the Gloria bastion, one in the gallery and one in the moat. The aim was to obtain basic information for the design of the conservation works for the decaying escarpment. In the shafts, the upper end of the stairway of the left flank, which was closed at an unknown time, was opened. The entrance building of the stairway on the right, the inside of the rampart at the top of the bastion and the walls supporting the artillery platforms on the right flank were examined. The connection points between the bastion and the adjoining escarpments of the curtain wall were opened, and the limestone base was excavated at the bottom of the moat and on the left flank. In the buried part of the moat, a preserved ashlar stone surface of an escarpment wall was discovered.

Shaft 1, excavated near the junction of the left flank and the curtain wall, revealed a lime-mortar masonry on the left flank stairway 120 cm deep in the ground: the remains of two side walls and a segmental arch covering the stairway.

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<sup>1</sup> The “right” and “left” parts of bastions are traditionally named from the point of view of the defender inside the fortress.





3. Shaft 1. Staircase on the left flank of the bastion.  
Photo by Villu Kadakas. 2023

The arch survived up to the middle of the shaft, but further to the south-east, where it rose to near the current ground level, it was shown to have been demolished at an unknown time. However, its walls continue to stand a few metres high. A row of steps along the south-west wall of the staircase was cleaned out as a narrow trench above the hole in the arch. It turned out that, immediately to the northwest of the opening in the vault, instead of narrow steps, there is a wider platform, about 1 m wide, the exact extent of which could not be measured due to a pile of



4. Shaft 1. Staircase on the left flank of the bastion. Cleaned out stair treads on the south-west side of the corridor.  
Photo by Villu Kadakas. 2023

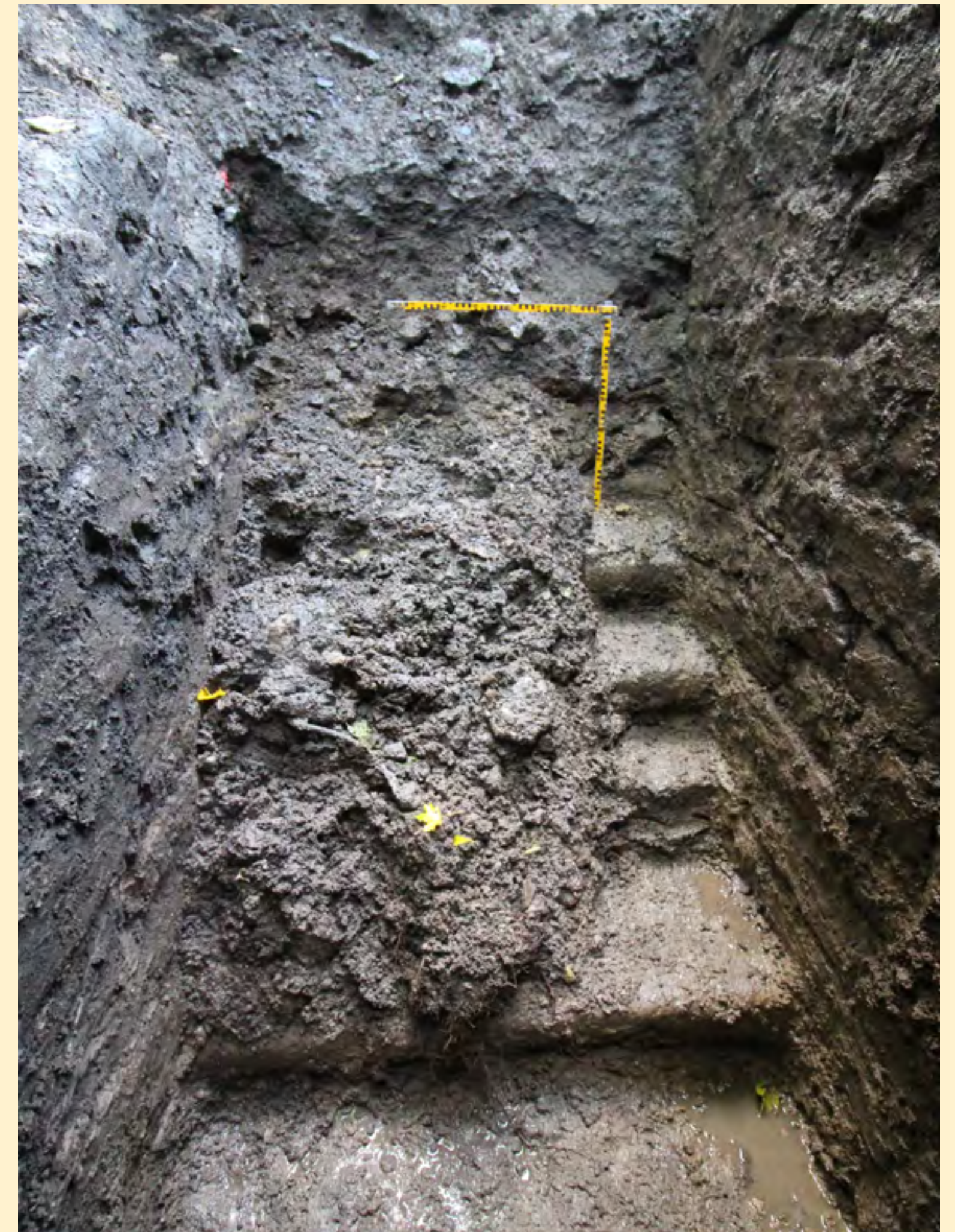


5. Shaft 1. Staircase on the left flank of the bastion. Cleaned out stair treads on the south-western side of the corridor, wider stair landing in the foreground.  
Photo by Villu Kadakas. 2023

fill soil. When comparing it with the section of the stairway accessible from below, it was clear that what was found was the top end of the same stairway. The staircases are also depicted on survey drawings from 1753, 1774 and 1963.

In general, the stairway is very well preserved up to the cut-off in the shafts and could be used in the creation of a new entrance. The walls, floor and treads at the top of the staircase are probably also well preserved in their lower parts at Vestervalli 17.

As it was not possible to excavate trench 2 to find the junction of the left flank and



6. Shaft 1. Staircase on the left flank of the bastion, photographed from the bottom up towards the shaft. Photo by Villu Kadakas. 2023



the curtain wall in the exact planned location on the neighbouring plot Vestervalli 17 due to demolition works and the soil on top of the curtain wall turning out to be very thick (3-4 m), the escarpment had to be opened up from the top a few metres north of the planned location. After recording the excavated shaft on a map, it was clear that only the top of the left flank of the Gloria Bastion's escarpment was opened up and the curtain wall was not reached. The top of the curtain wall is likely to be the same height. The surface is well preserved at the north-eastern end of the shaft, but as it decays, it slopes down gradually, layer by layer, towards the south-west, i.e. towards the outer face of the wall. According to the reconstruction drawing, there should be a stairway above the shaft. In the exposed masonry, the stones were laid horizontally and were not constructed as a sloping vault.

In the western part of Shaft 3, excavated on the edge of the left flank, the escarpment wall was exposed at a depth of about 3.2 m below the current ground level, where its undamaged structural surface was well preserved.

The thickness of the fortification wall at this location was measured at around 4 m; an accurate measurement of the original thickness was not possible due to the degraded outer edge of the wall. The top of the wall lacked any waterproofing or traces of it. In many Tallinn bastions, a thick layer of clay was used.

In the eastern part of Shaft 3, a natural, almost slope-less, limestone plateau was exposed at a depth of only a few dozen centimetres from the current surface of the flank. At its western edge is a steep, vertical step, where the height drops by almost two metres. Between the escarpment and the vertical slope, there is a steeply sloping step of about 1.5 m in the lower part of the limestone massif. It can be assumed that along this vertical slope and inclined surface, moisture moves from the top of the flank to between the escarpment and the limestone cliff, causing the inner gallery wall and the vault to collapse.

On the left flank, the top of the limestone plateau, the cultural layer and historic structures have been mostly destroyed by earlier



7. Shaft 4. On the left, remnants of the retaining wall of the inner side of the right face; on the right, remnants of the retaining wall of the inner side of the left face. View to the south-east. Photo by Ragnar Nurk. 2013

excavations. At the edge of the slope, there was probably an earthwork parapet, on the inner side of which was a stone wall – a breastwork.

The location of the stones found did not match the edge of the rampart depicted on the bastion's historical plans. According to the reconstruction based on the historical plans, the retaining wall of the breastwork should have been only 2 m from the edge of the embankment, but most of the limestones were found east of this line. However, it should be noted that the historic



plans do not show the left flank of the retaining wall in quite the right position.

In trench 4, excavated at the top of the bastion, a retaining wall was found on the inner edge of both the left and right faces, but as found they do not meet at the top of the bastion – there is a gap of about 2.8 m between them. Both walls have a broken end, which suggests that the ends have been split. Surprisingly, the limestone walls were different from each other. The eastern side is only about 45 cm thick, while the western side is about 80 cm thick. The eastern face of the western wall is stacked in a disorderly, below-ground masonry pattern, while the eastern face has a distinct step where the below-ground foundation transitions abruptly to a straight, above-ground wall surface.

This difference in location is also consistent with the historical plans. The different proposed ground levels for the two retaining walls, as well as the different distances from the edge of the face, suggest that the walls do not date from the same period. One of the face-side walls of the Gloria Bastion, with its retaining wall, was



8. Shaft 5. The top of the stairway of the right hand flank.  
Photo by Villu Kadakas. 2023

probably built earlier, and the other later. This does not imply that one of the faces was without a wall for a long time, but rather that the wall of one of the faces was reconstructed later, probably during the tsarist period, while the other was not reconstructed. Based only on the information from the excavations – the stratigraphy of the soil layers and the walls – it is not possible to determine which wall is older, as the point of contact had been broken up.

In trench 5, dug on the edge of the right flank, the south-west retaining wall of the artillery platform was found. According to the historical plans, there was a unique, polygonal-shaped shooting platform here because of the angle of the face, and the direction of the found wall more or less matches the direction of the flank part of the platform. Close to the section of found wall, immediately south of the shaft, there is likely the turning point of the retaining wall, where it turns, in line with the angle of twist between the face and the flank, at the same angle towards the northwest-southeast direction.

At the top of the south-eastern end of the retaining wall of the artillery platform found in trench 5, in the south-eastern profile of the trench, a step was found built on the inner or north-eastern side of the wall. It has a straight, horizontal top surface, and the vertical surface of the wall above the step is also straight. It is probably a step on which the wooden structure of the gun platform rested, or more precisely, probably a horizontal beam with straight sides.



In trench 6, dug on the junction of the right flange and the curtain, remnants of an entrance structure with a complex construction history of the right flank staircase was revealed. The staircase is still in use today, but only the lining walls of its cement-bonded interior were visible at ground level. The two lateral walls of the entrance building, their outer sides and the outer corners on either side of the entrance opening were exposed, as well as the secondary extension built against its original facade.



9. Shaft 6. North-western side wall of the stairway of the right flank, original brickwork on the left. Photo by Villu Kadakas. 2023



10. Shaft 6. The southeast side wall of the right flange staircase, in the foreground, the obtuse-angled outer side of the staircase side wall. Photo by Villu Kadakas. 2023



11. Shaft 6. Piece of a Swedish-era cornice. Photo by Villu Kadakas. 2023

As previously suggested, the extension of the staircase is probably related to the raising of the ground level, which led to the construction of additional steps in a later period of the bastion.

The original construction of the staircase entrance building includes two cut limestone corners found on either side, between which the original facade of the entrance building was probably located, now largely obscured by the construction of a later extension of the staircase. On the right, i.e. the south-east side of the staircase, the entrance building in its final form did not have a right angle, but an acute angle of about 60°. Closer examination revealed that originally there had probably been a rectangular corner, but later a new, obtuse-angled part was added to it, partly by demolishing the old corner, which was built of different, uncut stones. While the trench did not extend to the lower edge of the original entrance wall on the southeast side of the staircase, the foundation for the obtuse-angled extension is considerably higher. The lime mixture used in the two different parts of the wall also differs, judging by eye alone: the older part was light





12. Trench 8 on the outside of the right-hand flank in the moat.  
Photo by Villu Kadakas. 2023

yellow, the newer dark yellow. It was not possible to identify a clear vertical joint or seam between the two construction parts – the joining of the new part has been done skilfully, so that the junction remained concealed.

A piece of a profiled cornice, hewn from local Narva limestone, was found in the rubble next to the rectangular west corner of the original entrance building. Although the detail is

elongated, it is designed as a corner detail, i.e. the profile is on two sides. Given its location and shape, it is likely that it was dropped here from the corner of the same staircase. It is probably a piece of Swedish-era cornice.

One of the most important shafts, shaft 8, was dug on the outer side of the right flank of the moat, with the aim of finding out the depth of the foundation of the rampart and the condition of the lower part of the wall buried under the fill of the moat. The foundation wall rests on a limestone base. As expected, it turned out that the part of the wall made of hewn blocks that remained underground is well preserved, as it was located in a zone inaccessible to the cold cycles. According to the historical drawings, drainage or water channels should have been cut into the masonry in the shaft area, perpendicular to the wall surface, deeper than the gallery floor. Their ends were not exposed. It cannot be ruled out that the drawings are inaccurate. It is also possible that the original Swedish wall surface had already decayed so much by the 18th century that it was renewed in the 18th or 19th century by laying a new lining wall against the core of the curtain wall. Indirect evidence

of this is provided by the wall fragments found, which may not have been necessary in the original construction. In any case, these anchors were not punched into the wall later, after the completion of the wall, but were placed at the latest together with the carved stones that have survived to this day.

Trench 9, dug into the floor of the right-hand flank's gallery near trench 8, should have revealed the drainage or water channel shown above on the historic plans, if it reached the floor or was in any way connected to it. No water channel was found in the searched area. It is possible that the drainage channels perpendicular to the wall actually extended from the outer surface of the bastion to the cliff behind the curtain wall, with the aim of draining the water that collected between the cliff and the wall. However, the 1728 sectional drawing shows the canal extending only a few metres from the outside of the curtain wall, so that it did not even reach under the gallery. The short length of the canal is impossible to understand, as it would have made sense to start collecting water between the cliff and the wall, rather than from a random point inside the wall. It is possible that the back ends of the canals were



so rough in 1728 that they were only documented to a limited extent, without understanding their actual function and length.

Objects were collected at random from the fill of the shafts during the excavation, which are preserved in the Narva Museum. The earliest find is a Swedish silver coin, broken in half, probably from the second half of the 16th century. There are also a couple of red ceramic glaze shards, probably dating from before the bastion, a grapen pot and a bowl, and maybe also a few stove tile shards with plant ornamentation. It is likely that the pre-bastion finds are related to a suburban settlement that was previously located in the same area. The 6 round tin rifle bullets reflect early modern warfare in the region. A couple of round copper buttons with a rounded surface were also found, presumably dropped from a coat. Reflecting the everyday life of the 18th to 19th century city are a porcelain hand-painted plate and two faience plates with printed patterns. A couple of 17th-century Swedish and 18th-century Russian copper coins were found, including a five kopek coin from 1727. In the fill soil of the trench,

the upper part of which is composed of sparser debris deposited in the 20th century, almost an entire concrete vase from the 1950s was found. Additionally, a welded drill set was found and documented at the top of the moat fill, which may originate from the 1930s among the opening fillings placed in front of the bastion gun shafts.

In October 2023, during the archaeological field survey related to Gloria Bastion's escarpment, various pieces of information were obtained concerning both the construction history of the bastion and the development of better conservation and exhibition solutions for the escarpment wall. Despite its rapidly decaying ramparts, Gloria Bastion is one of the best preserved bastions in Narva.



