



Excavations at the Great Coastal Gate of Tallinn

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INTRODUCTION

In 2017–2019, archaeological research was undertaken in the premises of the former Great Coastal Gate, during the renovation of the Estonian Maritime Museum, which encompasses the Late Medieval cannon tower known as Fat Margaret and its yard (Fig. 1). In addition to construction work within Fat Margaret, new premises for the museum were built in the yard. This led to the discovery of several medieval and post-medieval structures, related to the medieval defence complex and the Early Modern warehouse, barracks and prison. In this article, an overview of the results is given with a focus on the 14th–18th century.¹

From the Middle Ages until today the Great Coastal Gate has been one of the most important gates of the lower town – the main exit towards the harbour. The gate was built on a sandstone cliff, which is located ca. 5–8 m higher (11–12 m a.s.l.) than the surrounding areas of the historical harbour to the north and east. Today the main town wall survives on the southern side of the museum yard together with a tower (called Stolting tower) on the sharp north-eastern corner of the town wall (Fig. 1: G). Also, the gatehouse of the barbican survives together with two adjoining towers – a slender round tower on its western and a huge cannon tower Fat Margaret on its eastern corner (Fig. 1: E, H). The tower of the main gate and the side walls of the barbican were demolished in ca. 1780 (Fig. 1: B–D; Zobel 2008, 140).

Previous archaeological field studies have been limited. In 1924 the foundation of the main gate tower and another foundation which was interpreted as remains of the ‘second gate’, i.e. the first barbican were partly uncovered in a cable trench (Plaesterer 1925). In the late 1970s several test pits were dug to study the foundations of Fat Margaret (Reppo *et al.* 2019, 24). Then the soil under Fat Margaret, also in some parts of the yard was removed without archaeological survey, so that in these areas in 2017–2019 it was possible to study only the foundations. In 1979 a wall, situated crosswise to the street was discovered, recorded and demolished under the former guardhouse between Pikk Street and the yard of the museum (Tamm 1979, 24). Although no contextual finds were uncovered, it was surmised that the wall was built in the 17th century.

The geophysical survey carried out in 2016 (Tõnnisson & Orviku 2016) showed that the yard is scattered with various structures. A preliminary excavation followed in January 2017 to

¹ A more detailed overview of the fieldwork results was recently published in Estonian (Reppo *et al.* 2019).

study the foundations of the 19th century building in the southern part of the yard and the eastern wall of the yard, the former outwork (Germ. *der Zwinger*) wall (Reppo 2017a). Another preliminary excavation was carried out from February to May 2017 with three trenches to study the foundations of Fat Margaret, the central part of the outwork wall and the Stolting tower inside the yard building (Reppo 2017b). This was followed by archaeological excavations on an area of 175 m² in the yard and the 19th century building from June to July 2017.



Fig. 1. Great Coastal Gate complex: research results (2017–2019). A – town's curtain wall, B – main gate tower, C – gate of the first barbican, D – gate of the second and third barbicans, E – western tower of the second and third barbicans, F – eastern tower of the second barbican, G – Stolting tower, H – Fat Margaret cannon tower, I – gate of the fourth barbican, J – eastern wall of the museum yard, K – cistern from the 1825 plan, L – storeroom on the 1858 plan, M – toilet on the 1858 plan, N – bakery on the 1858 plan, O – kitchen on the 1858 plan, P – guard house, Q – prison house from 1884. Excavated built elements: 1 – water channel, 2 – first outwork wall, 3 – posthole, 4 – fragment of the eastern tower of the second barbican, 5 – second outwork wall, 6 – fragment of an unknown structure, 7 – third outwork wall, 8 – embrasure, 9 – lower pavement, 10 – tunnel, 11 – upper pavement, 12 – foundation of supposed timber house, 13 – cesspit of the prison.

Jn 1. Suure Rannavärava kompleksi: uuringute tulemused (2017–2019). A – linnamüür, B – värava peatorn, C – I eesvärav, D – II ja III eesvärav, E – II ja III eesvärava läinetorn, F – II eesvärava idatorn, G – Stoltingi torn, H – suurtükitorn Paks Margareeta, I – IV eesvärav, J – muuseumi hoovi idamüür, K – 1825. a plaanil kujutatud paak, L – laoruum 1858. a plaanil, M – käimla 1858. a plaanil, N – pagaritöökoda 1858. a plaanil, O – köök 1858. a plaanil, P – vahimaja, Q – 1884. a ehitatud vanglahoone. Välja kaevatud ehituselementid: 1 – veekanal, 2 – Ieeskaitsemüür, 3 – postiauk, 4 – II eesvärava idatorni jäänus, 5 – II eeskaitsemüür, 6 – tundmatu ehitise müür, 7 – III eeskaitsemüür, 8 – laskeava, 9 – alumine sillutis, 10 – tunnel, 11 – ülemine sillutis, 12 – oletatava puithoone vundament, 13 – vangla jäätmekast.

Drawing / Joonis: Monika Reppo, Villu Kadakas

The final part of the archaeological research, the survey, was carried out from July 2018 to November 2019 (Reppo 2017c).²

HISTORICAL BACKGROUND

The first town wall of Tallinn was built on the order given in the 1260s and 1280s by Margaret Sambiria, queen dowager of Denmark, the ruler of the Duchy of Estonia, and his son Erik V, king of Denmark. It is not clear, if it encompassed the northern end of the lower town. According to the main researcher of Tallinn's medieval defence structures – architect Rein Zobel – the first town wall near the Great Coastal Gate was built in this period already (Zobel 2008, 89–92). According to later researchers, there is no evidence to support this opinion, and it cannot be excluded that the northern part of the lower town was encompassed with a town wall only in the first half of the 14th century (Mäll & Kadakas 2002, 421–424; see also: Russow 2010, 703–704). A low curtain wall with a gate opening existed there by the middle of the 14th century at the latest. According to Zobel, the main gate tower in its initial form was probably built from 1311 to 1340. The Coastal Gate first appears in writing in 1359 (L. Germ. *Strandporte*) (Zobel 1980, 59). A small rectangular tower was built very early at the sharp north-eastern corner of the town wall, on the edge of the sandstone cliff – the location of the later Stolting tower. It probably had an additional function – a guard point for the harbour (Zobel 2008, 92). In about 1400 it was replaced with a high round watchtower Stolting, which survives today (Zobel 2014, 163–165).

Although without material evidence, based on the analysis of historical ground plans and evidence from other gates of Tallinn, Zobel speculated that the gate tower was equipped with an outwork – the first barbican – in the second half of the 14th century. He dismissed the previous interpretation of a foundation as remains of the 'second gate', i. e. the first barbican by Plaesterer as erroneous. Zobel identified the extent of the first barbican, 1/3 shorter than the final one, based on the change of the alignment of the western side wall on historical plans (Fig. 1: C; Zobel 2014, 126–127). Based on the town's account books, Zobel has supposed that the second barbican – the extension of the old one – was built from 1434 to 1448 (Zobel 2014, 215–217).

The second barbican had two towers – only the rectangular base and the lower half of the western tower has been preserved (Fig. 1: D–F). It was later integrated into the third barbican. Whilst carrying out his surveys, Rein Zobel discovered a 4.9 m wide and 60 cm deep ditch in front of the barbican gate and interpreted it as a moat. This led him to conclude that the second barbican had a drawbridge and that its gateway was narrower than the later one (Zobel 2014, 215–217). The latter hypothesis was set under question in 2008 when no remains of a narrower gate were discovered (Nurk 2008, 5).

In 1518–1529, the barbican complex was completely reconstructed. According to Zobel, the two towers of the second barbican were demolished, except the bottom part of the western one, and instead of the small eastern tower, a huge cannon tower was built (Fig. 1: H), called at first 'the new tower', but known since the 19th century as Fat Margaret. The cannon tower was finally completed in 1531 with the installation of windows, weathervanes, gutters and other details (Zobel 1980, 233, 247). Without fieldwork evidence Zobel has supposed that the thin eastern wall of the former outwork was replaced with a much thicker (3 m) wall, and so the third outwork (Germ. *der Zwinger*) was formed (Fig. 1: 7; Zobel 1980, 241–242).

² Some trenchwork was carried out on the northern outer perimeter of Fat Margaret in the spring of 2019 surveyed by archaeologist Gurli Vedru (MTÜ Arheoloogiakeskus). These results are not included in the article.

During the Livonian Wars (1558–1583) the Danish and Lübeck fleet bombed the town in 1569 and the town's cannons in the Great Coastal Gate complex played an important part in the defence (Russow 1584, 67–68). It was followed by an unsuccessful attempt to capture the town in the next year by Russian troops (Russow 1584, 74–76). Both attacks most likely damaged the Great Coastal Gate but the extent of it is not known. In 1602, the town's master mason Arent Passer designed a new gate, drawbridge and moat in front of the Great Coastal Gate by the 'new tower', then referred to as Rosencrantz. With the building of the 4th barbican the complex got a third successive gate. In the 1640–1650s, an earthwork bastion was built on the eastern side of the outwork wall and the Rosencrantz tower (Zobel 1980, 269; Nurk 2019, 52–53).

Probably in about 1730 a guardhouse which survives today, was built for the military personnel on the western side of the yard, next to the side wall of the barbican. In 1757, the main gate tower was damaged in a fire. It collapsed in 1782 and was demolished soon after together with the side walls of the barbican, in order to enable traffic and easier access to the storehouses built into the yard of the former outwork. This signifies the end of using the complex as a fortification – it was turned into a warehouse for ammunition and later for provisions of the admiralty. The storage of provisions is perhaps the reason why the tower became known as Fat Margaret. From the 1830s, the cannon tower and the new auxiliary buildings started to be used as a prison. In 1857, the fortifications of Tallinn were removed from the list of military objects. In the 1870s, the fourth barbican with a drawbridge was demolished. From 1877 to 1899, parts of the complex functioned as military barracks. In 1884, a multi-storey prison building was built on the south-western corner of Fat Margaret for the barracks (Zobel 1988, 40).

The prisoners were liberated during the March Revolution in 1917 and the buildings set on fire. The complex fell into disuse for years until Tallinn Town Museum was opened here in 1940. In 1954 it was given to the Estonian Maritime Museum. Extensive reconstruction work was undertaken in the late 1970s (Zobel 1988, 42–44). After the new reconstruction project (2017–2019) the museum opened doors to the public in November 2019.

THE RESULTS OF THE RECENT FIELDWORK

The 13th–14th centuries: the first town wall, gate and barbican

The oldest structure discovered during the excavations was an underground channel, covered and lined with limestone slabs. It ran into the yard from the direction of the first moat which surrounded the main curtain wall of the town. This channel was probably built under the first barbican and the yard of the first outwork in order to let the water of the moat run through under these. The channel exited the yard aslant under the eastern wall (Figs 1: 1; 2). funnelled into the channel, the excess rainwater was carried from the moat and the outwork towards the sea. The 73–81 cm wide and 85–110 cm high channel was built into a ditch dug into sandstone (Fig. 3). The ca. 60 × 80 cm limestone slabs covering the channel were originally probably part of the pavement of the yard, so that rainwater could drain into the channel through the gaps between the slabs.

A 1 m high fragment of a 125 cm thick limestone wall was discovered on top of the channel, positioned crossways to the channel and Pikk Street (Figs 1: 2; 2). This wall has the same direction and is very similar to the wall which was discovered and demolished in 1979 (Tamm 1979, 24). These were probably parts of the same wall. Soil stratification and artefacts do not enable to date it. However, based on the stratigraphic sequence of the walls and the general

context of the gate complex, this wall may be connected with the hypothetical first barbican (Zobel 2014, 126; see above). It is aligned with the spot where the western side wall of the barbican changed its direction, which according to Zobel marks the extent of the first barbican (Fig. 1: C). The discovered wall was probably the northern curtain wall of the first outwork (Germ. *Zwinger*) which was built on the eastern side of the first barbican. The discovery of this wall is the first material evidence which supports the hypothesis of the first barbican. Furthermore, based on this discovery, it can be concluded that this first barbican was probably equipped with an outwork, a walled enclosure on its eastern side, like the second barbican had later. The new field study did not give any information which could help to interpret the foundation discovered by Plaesterer and interpreted as remains of the ‘second gate’, i.e. the first barbican in 1924. It could have been e.g. part of a bridge structure above the moat.

The eastern end of the discovered wall disappears into the yard’s eastern wall, so that its continuation cannot be followed (Figs 1–2). Based on general context, it can be supposed that the curtain wall of the first outwork turned abruptly south here and followed the course of the current wall southwards, but is hidden within it as its earliest building stage. Unfortunately, no information about the building time of the first barbican and the first outwork could be obtained. Also, no information was discovered about the demolition time of the wall – if it was demolished right after the construction of the second barbican with the second, larger outwork, or if the wall remained in use for much longer, dividing the outwork into two areas. However, based on general context, some conclusions about the end of use of the water channel can be made. It was probably in use until the moat on the western side of the barbican was filled. Based on the historical plans, it can be supposed that the moat was probably not filled before the building of the Skåne bastion. It took place in 1685–1706 (Nurk 2019, 58–60). Only clean silty sand had deposited on the bottom of the channel (Fig. 3, lowest layer). A sherd of yellow-glazed whiteware and a sherd of unglazed redware (AI 7738: 174, 175) which could be collected from it, are not in contradiction with the proposed end of its use.



Fig. 2. Medieval water channel, first and third outwork.

Jn 2. Keskaegne kanal, I ja III eeskaitsemüür.

Photo / Foto: Paul Ööbik



Fig. 3. Internal view of the drainage channel towards the harbour.

Jn 3. Kanali sisevaade sadama suunas.

Photo / Foto: Monika Reppo

A small embrasure-like splayed window was discovered in the eastern part of the wall directly on ground level on the southern side on its eastern end (Figs 1: 8; 2). The 18 cm wide loop faced outside, the north, but curiously only ca. 20 cm above the cover slabs of the channel. It seems as if there was a deep shooting position or a basement room in the north-eastern corner of the first outwork. However, the area directly south of the loophole could not be studied, in order to preserve and expose the walls and pavements within the museum exhibition. This sharp corner of the town defence system was a vulnerable spot and therefore an extra fortification would be expectable. It is possible that this corner of the first outwork was fortified with a similar non-flanking small tower as there was on the north-eastern corner of the main curtain wall, on the spot of the later round tower Stolting. However, the small window is the only indication of such a hypothetical building and the exact function of the window remains unclear.

The 15th century: the second barbican and outwork

Only one of the discovered wall fragments could be brought into connection with the hypothetical outwork of the second barbican. A 1.6 m long fragment of a ca. 1 m thick wall was discovered inside the western foundation of Fat Margaret (Fig. 1: 5). Based on this fragment it can be estimated that the wall was positioned perpendicular to Pikk Street, i.e. the gate passage. The wall has lost its extent towards east. However, a vivid robber trench of this wall could be recorded in the natural sand, quite on the line where Zobel had supposed. Nothing was discovered of the eastern wall of the second barbican. It is probably running hidden within the eastern wall of the yard and the tower of Fat Margaret (Fig. 1: J).

Another, but very small fragment of an older wall was recorded on the inner side of the western foundation of Fat Margaret. It has a straight edge preserved on its eastern side but shows marks of demolition on its northern side. Based on Zobel's reconstruction of the second barbican, it can be supposed that this fragment belongs to the quadrangular bottom part of the demolished eastern tower of this second barbican (Fig. 1: F, 4; see above). The third wall fragment was recorded within the western foundation of Fat Margaret, running in parallel to the gate passage (Fig. 1: 6). We have been unable to identify the function of this third fragment. This must have belonged to an unknown structure which existed in front of the second barbican before building Fat Margaret, but nothing else can be said about it. After the excavations the foundations of Fat Margaret were reinforced with concrete, but the fragment of the northern wall of the second outwork was exposed in the museum exposition.

At the foot of Stolting tower, a very large posthole (Fig. 1: 3) with the diameter of 64 cm and depth of 120 cm was uncovered. The hole was about 60 cm away from the tower foundation and 80 cm from the tower wall. It had been dug into sandstone. According to Zobel Stolting was built at the very end of the 14th century (2014, 163–165). This posthole could then relate to construction techniques, i.e. belong to the original scaffolding of the tower. It was also established that the footing of Stolting stands very high (+12.55 m) on the very edge of a crumbling sandstone cliff. The upper edge of the sandstone cliff was later covered with additional supportive cladding in order to avoid further erosion of the cliff.

The 16th century: the third barbican and outwork with Fat Margaret

In order to add a new basement floor to the complex, soil from under the Fat Margaret was removed. It consisted mostly of various debris, in part deposited during the construction work in the Soviet period. This gave a unique opportunity to observe the side surface of the

foundations all around the interior of Fat Margaret. In test pits Zobel had noticed a big difference in the depth of different parts of the tower's foundations (1988, 18). It appears that the foundation of the northern part is founded 3 metres deeper than on the western side. It is further 4.5 m deeper on the southern side, but gradually rises on the eastern side again. The difference of the bottom level of foundations is more than 6 meters, probably caused by the sandstone cliff with very uneven surface. A broken oval-eyed bone needle (AI 7738: 76), 15th–16th century glazed redware, stoneware and unglazed brick fragments (AI 7738: 68–75; Fig. 4) found inside Fat Margaret all came from the filling layers which were deposited after building the foundations of the tower. From the greyish sandy fill of the foundation ditch of Fat Margaret, fragments of a late medieval wooden bowl (AI 7738: 98–100) and a wooden utensil, potentially the remains of a spoon (AI 7738: 101–106; Fig. 4) were found. The edge of the foundation ditch of both the outwork wall and inside Fat Margaret was fringed with horizontal wooden planks which were partially preserved. These appear to have aided the process of laying the foundation, keeping the soil of the steep side of the ditch from caving in. A 30 cm thick soot layer was deposited on top of the planks which is difficult to connect to any historical event. As it was situated underground during the use of the complex, it is possible that it indicates a fire which occurred during the building work.

The inner side of the third outwork wall revealed further evidence of construction techniques in the 16th century. Firstly, putlog holes (30×30 cm) to support scaffolding were identified both at foundation level but also higher up on the southern end of the wall (Fig. 5). Secondly, it appeared that the inner half of the width of the wall was demolished down to the 18th–19th century yard level (Figs 1: 7; 2) in order to accommodate the auxiliary buildings next to the eastern wall of the yard. This had badly damaged the embrasures in the wall with only the bottom part of their niches surviving (Fig. 1: 8). In one of them, the traces of a supporting beam (30 cm thick) for a breach-loading swivel gun



Fig. 4. Finds from Fat Margaret.
Jn 4. Leiumaterjal Paksust Margareetast.
 (AI 7738: 88–94, 76, 68–75, 3, 98–106.)
 Photo / Foto: Jaana Ratas



Fig. 5. Upper pavement and third outwork wall with putlog holes and embrasures.
Jn 5. Ülemine sillutis tellinguaukude ja laskeavadega eeskaitsemüüri ees.
 Photo / Foto: Monika Reppo

were visible. It is a clear indicator that by the 16th century, the Great Coastal complex had been redesigned to counter significant attacks.

There was a manure-rich layer slightly south of the outwork wall which yielded the only find complex near the wall. A small collection of orange-glazed and unglazed redware fragments (AI 7738: 88–93; Fig. 4) were found with a fragment of window glass. The layer is dated to the late 15th–16th century. It is probable that the window glass fragment (AI 7738: 94) relates to the glazing of the windows during this time. Most of the few archaeological finds from the 16th century come from building elements. During the excavations, a worn wooden pulley fragment (5.7 × 30 cm, groove 4 cm wide; AI 7738: 176) was discovered in the debris of the 20th century near the doorway of Fat Margaret leading to Pikk Street. Based on the find's location next to the medieval portcullis, it might have been a part of the portcullis mechanism which had survived since the early 16th century until it was destroyed in the fire of 1917 (Zobel 1988, 18).

The 16th–17th century: pavements and water channel in the yard

After the construction of the third barbican, a cobblestone pavement was installed in the gate court. Only a small part of it was uncovered and studied, because it was superimposed by a later, 17th century pavement which was also preserved and exposed. The pavement was laid from small uneven cobblestones which formed a gutter with some inclination southwards (Figs 1: 9; 6). It led the rainwater into a curved ca. 0.9 m wide channel which exited the yard in its south-eastern corner as a passage running under the wall (Fig. 1: 10) tapering off to a height of 90 cm under the outer side of the wall.

Based on stratigraphy, the lower pavement was probably built in the second half of the 16th century. Although this pavement continues into the tunnel, the latter is clearly a secondary solution regarding the thick eastern wall of the third outwork. The eastern wall of the tunnel is built only ca. 1 m away from the curved part of the outwork's eastern wall. This made using some of the embrasures in that wall impossible. The tunnel under the wall is not covered with a vault but just runs under the flat lower layer of limestone slabs of the foundation of the outwork wall. The outmost part of the tunnel, to the east of the outwork wall, is covered with reused dressed masonry jambs of barred windows, made of limestone. We have no indication what the structure above this tunnel was like in the 17th or 18th century. On a plan from 1825 (RGVIA.349.36.2791), an underground cistern is shown directly east of the tunnel. Originally the rainwater may have continued its way towards the eastern moat of the town in an open channel. The same plan of 1825 depicts a 9-seated lavatory above the tunnel. Obviously, this tunnel functioned then as a latrine box. It cannot be excluded that there had been some kind of a lavatory structure on top of it from the beginning. In such a case rain and meltwater may have been used to flush the lavatory. The fill included two shovels, several 19th century shoes and many rags, further alluding to the end of use of the structure. The 10–20 cm thick layer of demolition debris and roof tiles between the two pavements can be connected with the renovation work of 1599, known from the written sources, or may have accumulated even later (Zobel 1980, 265). The pavement laid on top of it permanently blocked access to the tunnel.

The upper pavement (Figs 1: 11; 5; 7) is of larger cobblestones than the lower one, laid on the debris layer with the help of some patches of sand to level the area. This pavement was likely laid after the renovations of 1599. In this period, access of the water into the channel described above was blocked. The new pavement also has a gutter running in the middle

(Fig. 5), but it is unknown how the rainwater exited the yard. This pavement was also kept clean – only a few artefacts were found. From a sand patch just below the pavement three tobacco pipe fragments (AI 7738: 9–11) were found. Three further fragments were found from the thin organic-rich layer on top of the pavement (AI 7738: 18, 25–26) with glazed redware, pipkin and glazed and painted redware fragments (AI 7738: 24, 27–30, 33). Based on the finds, the pavement was certainly used in the second quarter of the 17th century. Both pavements and the tunnel are preserved largely *in situ* and are on display in the new museum.

The 18th–20th centuries: yard and buildings of warehouse, prison and barracks

In connection with the 18th century building activities – construction of low auxiliary buildings (see above) – the ground level of the yard was raised. An organic-rich soil was laid on top of the cobblestone pavement probably in the beginning of the 18th century, but no remains of a new pavement of the yard were discovered. A 0.5 m high fragment of a 45 cm thick foundation (Figs 1: 12; 7), discovered in the middle of the yard, could be connected with a narrow north-south oriented thin line that exists on a plan from 1738 already (RGAVMF.3.26.226). The nature of this line on the plan of 1738 is not clear, but on various later 18th- and 19th-century plans (LVVA.6828.4.562; RA, EAA.79.2.281) it coincides with the façade of a stone house, built against the eastern wall of the yard. Probably the discovered thin foundation belongs to its timber predecessor. The 17th–18th-century finds from the wall's foundation ditch confirm its building date. It was replaced with a stone one only in the 19th century. Remains of the wall which divided the yard into the southern and northern part on the plan of 1738 and various later plans, could not be discovered, because this area had been disturbed.

Although both auxiliary buildings – one in the southern part of the yard and the other near the eastern wall – first appear on the town plan from 1793 (LVVA.6828.4.562), it is not clear if these were of stone or timber. Both are depicted as stone structures on the plan of 1825

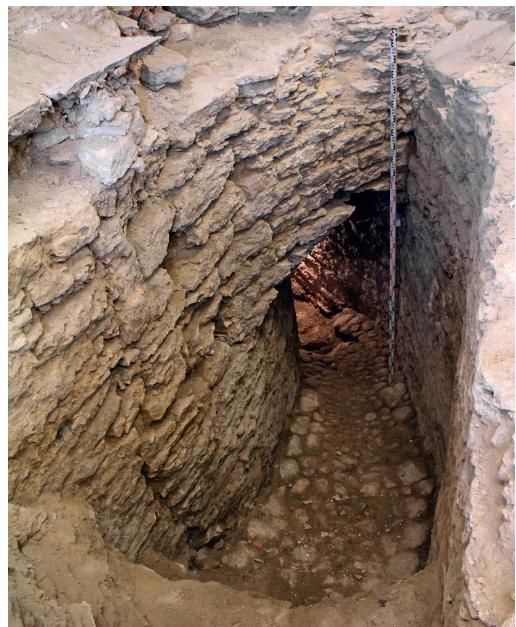


Fig. 6. View of the tunnel towards its southern end.

Jn 6. Tunneli vaade selle lõunaotsa suunas.

Photo / Foto: Monika Reppo



Fig. 7. View of the upper pavement, the southern building and the foundations of the eastern building.

Jn 7. Vaade ülemisele sillutisele, lõunapoolsele hoonele ja idapoolse hoone vundamentidele.

Photo / Foto: Monika Reppo

(RGVIA.349.36.2791). According to a plan from 1858 the southern building was divided with a timber partition wall into a storeroom (Rus. *кладовая*) and a toilet (Rus. *отхожее место*) and the eastern building with a stone partition wall into a kitchen (Rus. *кухня*) and a bakery (Rus. *пекарня*) (RA, EAA.79.2.281; see also Fig. 1: L–O). During the excavations, the southern part of the western wall of the eastern building was one of the first structures discovered (Figs 1; 7). The 90 cm thick wall was preserved up to 100 cm high. Nothing was preserved of the northern part of the eastern building (kitchen), except the L-shaped base of a large chimney with a fragment with its floor. As it is not depicted on the 1856 plan, it had probably been demolished by this time. Among the debris a cast iron cooking stove ring and a smoke chute damper, probably from this kitchen were found. A fragment of a worn limestone floor from 70 × 70 cm and 70 × 90 cm slabs was discovered inside the former bakery. The limestone floor may come from its original warehouse period but the chimneys and oven remains may be secondary additions from the prison period.

Several brick-lined flues were added for the stoves, some built partly into the embrasures in the outwork wall. It cannot be excluded that some of these changes were made even earlier, in the period of the admiralty. As we know, the 9-person lavatory is already in use by 1825 and the layout of the kitchen building is also the same. The multi-storey auxiliary building of the prison from 1884 still stands today but it also appears to have had a latrine, situated on its eastern side (Fig. 1: 13), demolished during later reconstructions. The latrine (internal measurements 320 × 320 cm) was filled with organic material, kitchen waste and numerous everyday items such as glass bottles, ceramic mugs, cups, lamp shades, animal bones with cut marks. Two iron shovels were recovered, indicating this cesspit was also emptied manually. More than half of the 176 archaeological finds from the excavation are related to the barracks and prison period, illuminating the everyday life of two institutions within the complex which have thus far been understudied.

CONCLUSION

The excavations in the yard of the Estonian Maritime Museum, the former Great Coastal Gate complex have revealed significant new knowledge about the development of the medieval fortifications of this part of the town's defence system. The discovery of an early outwork wall is the first material evidence about the existence of the supposed first barbican, which was probably built in the 14th century. Also, it proves that a rectangular outwork with a stone curtain wall was situated next to the barbican, in front of the sharp north-eastern corner of the town wall already during the first barbican period, greatly expanding our knowledge of early pre-defence areas and gate systems of Tallinn. The discovery of wall fragments which were interpreted as remains of the second barbican and outwork offer important evidence, which has been very limited. The discovery of a medieval drainage channel and an Early Modern paved drainage and sewage tunnel expand our knowledge about the drainage systems of both medieval and Early Modern periods in a military building complex. The fragments and outwork walls, parts of the channels, and cobblestone pavements have been preserved *in situ* as part of the museum exhibition. Although not much was preserved of the Early Modern and Modern structures – warehouse, prison and barracks buildings, this first attempt in Estonia to study material remains of such institutions with archaeological methods was successful. Discovered structures could be linked with elements depicted on historical plans. The 19th and early 20th century household artefacts could be brought into connection with the particular institutions and can be used to study the history of these institutions in the future.

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ARHEOOGILISED KAEVAMISED PAKSUS MARGAREETAS

Monika Reppo ja Villu Kadakas

Eesti Meremuuseumi rekonstruktsioonis- ja ümber-
ehitustööde raames toimusid 2017. aasta jaanuarist
2019. aasta novembrini Paksus Margareetas, selle sise-
hoovis ja hoovihoones arheoloogilised uuringud, kus
avastati mitmeid kesk- ja uusaegseid rajatisi. Artiklis
on leitud struktuure kirjeldatud nende ajalises järjes-
tuses ja vaadeldakse nende rolli Suure Rannavärava

kompleksi ajaloos, keskendudes eelkõige 14.–18.
sajandile.

2016. aastal läbi viidud geofüüsikaliste uuringute
põhjal oli teada, et hooviala on täis eriaegseid, ris-
tuvauid müüre ja muid rajatisi. Eeluuringute, arheo-
loogiliste kaevamiste ja jälgimise ajal selgus, et 13.
sajandisse dateeritavate rajatiste jäänused Paksu

Margareeta alal puuduvad. Vimateeks fikseeritud rajatisteks osutusid kirde-edelasuunaline paemüürisega ja paeplaatidega kaetud 73–81 cm laiune ja 83–110 cm kõrgune kanal (jn 1: 1; 3) ning selle peale rajatud O–W-suunaline müür (jn 1: 2; 2). 125 cm paksune müür oli säilinud 80–100 cm kõrgusena. Selle lõunaküljel fikseeriti laske- või valgusava (jn 1: 8; 2 vasakul). Omaaegselt maapinnast vaid u 20 cm kõrgemal paiknenud ava täpne roll ei selgunud. Müür ja kanal on tõenäoliselt samaaegsed. Tegemist on **esimese eesvärava** eeskaitsemüüriga ning sadeveekanaliga, mis on tõenäoliselt ehitatud 14. sajandi II poolel.

Esimese eeskaitsemüüri avastamine näitas, et Suure Rannavärava juures asus ristikülikukujuline müüridega suletud eeskaitseala juba ammu enne Paksu Margareeta rajamist. Lisaks eeskaitseala hoovi vihmaveele on võimalik, et kanali kaudu juhititi linnast välja ka tänase Tornide väljakku kandis paiknenud madalasse vallikraavi kogunenud vesi. Stoltingi tornist u 80 cm kaugusele leitud väga suur, 63 cm läbimõõduga ning 120 cm sügavune postiauk (jn 1: 3) kuulus tõenäoliselt torni ehitamisel kasutatud tellingupostile. Selgus, et liivakivist nõlv on torni kõrval murenenise vältimiseks kaetud paekivist vooderdusega.

Paksu Margareeta sees, selle läänepoolse vundamendi siseküljel avastati kolm varasemat müürifragmenti, mida kaudsete andmete alusel võib oletamisi seostada eesvärava varasemate ehitistega. Üks neist kujutab enesest tõenäoliselt **teise eesvärava** ümmarguse idatorni ristikülikukujulist vundamenti (jn 1: 4), teine II eeskaitseala põhjapoolse piirdemüüri vundamenti (jn 1: 5) ning kolmas seni tundmatut, eesvärava ees paiknenud rajatist (jn 1: 6). Müürid kaeti betooniga, kuid osa eeskaitsemüürist on uues muuseumis jälgitav.

16. sajandil toimunud suurtest ehitustöödest, mille käigus rajati **kolmas eesvärav**, hiljem Paksuks Margareetaks ristitud suurtükitorning ning kolmas eeskaitsemüür, leiti vähem jälgi. Hoovi sõnnikusesest täitepinnasest ja Paksu Margareeta seest, selle vundamendikraavi täitepinnasest leiti üksikuid savinõude katkeid, aknakaasi kild ja luunõel (jn 4). Ka III eeskaitsemüür vundamendikraavist saadi hiliskeskaegse puitkausi ja võimaliku -lusika katked. Vundamentide küljelt lahti kaevamise abil oli võimalik kindlaks teha Paksu Margareeta vundamendi sügavus, mis kõikus loodusliku pinnamoe föttu enam kui 6 meetrit. Lisaks leiti ehitist toetanud tellingute talipesasid (jn 5). Selgus, et hoovi idamüür, st III eeskaitsemüüri sisekülj on vähemalt 1,5 meetri laiuses lõhutud, millega on suures osas hävinud ka laskeavad. Paksu müüri

alaosa on maapinnas säilinud siiski algses laiuses ning see eksponenteeri muuseumis (jn 1: 7; 5).

16. sajandisse dateeriti vastu III eeskaitsemüüri ehitatud väikestest munakividest laotud, lõunasse kalduva renniga sillutis (jn 1: 9; 5). Hoovi kagunurgas asunud renn laskus hoovihoone all 90 cm laiusesse tunnelisse (jn 1: 10; 6). Antud tunnel keeras eeskaitsemüüri all kagusse ja suubus arvatavasti 19. sajandi joonistelt tuntud paaki (jn 1: K; 6). Hoovi pool inimestest kõrgem tunnel madaldub müüri all vaid 90 cm kõrguseks. Kanal juhtis Paksu Margareeta hoovist ära sade- ja sulavee. Sillutisele oli arvatavasti 16. sajandi lõpul ladestunud leiuvaene lammatusrusu kiht. Sellel paiknes suurtest munakividest sillutis (jn 1: 11; 5; 7), mille vahelt ja alt saadi mõni üksil piibukatke. Arvatavasti sai hoov uue sillutise 17. sajandi I poolel. Ka leidis piibukatkeid hiljem sillutisele ladestunud kihis, kuid valdavalt iseloomustas sõjalise funktsiooniga hoovi puhtus ja kord. Mõlemad sillutised ja tunnel on säilitatud *in situ*.

Arvatavasti 17. sajandi II poolel või 18. sajandi alguses kaeti pealmine sillutis täitepinnasega. Algas hoonete ehitamine hoovi servadesse, keskaegsete kaitsemüüride vastu. Kaevamistel avastati 18. sajandi lõpus või 19. sajandi alguses vastu hoovi idamüüri ehitatud satelliithoone 90 cm paksune läänesein ja korstna põhi (jn 1: N–O; 7). 18.–19. sajandil hoovi lõunaossa ehitatud ja seni säilinud hoone idaossa rajati varasema tunneli kohale 9-kohaline käimla (jn 1: M), mida on kujutatud 1825. aasta plaanil. 1830. aastaks oli kogu kompleks vangla kasutuses, toimides 1877–1899 osaliselt kasarmuna. 1884. aastal Paksu Margareeta lõunaküljele püstitatud mitmekorruseiline vanglahoone (jn 1: Q) kõrval avastati koos sellega ehitatud jäätmelest (jn 1: 13). Valdag osa kaevamistelt saadud leide on seotud vangla ja kasarmuga, mis lõpetasid tegevuse 1917. aasta märtsis, kui revolutsionäärid pärast vangide vabastamist hoonekompleksi maha põletasid.

Arheoloogiliste uuringutega saadi esimest korda materiaalseid töendeid Rein Zobeli oletatud I eesvärava ning selle idaküljele, hilisema hoovi kohale rajatud eeskaitseala kahe etapi kohta. Lisaks saadi informatsiooni hilisemate eesväravate, Stoltingi ja Paksu Margareeta tornide ehitustehnika, hoovi heakorra, samuti 18.–19. sajandil hoovi rajatud hoonete ja sanitäärsüsteemide kohta, mis on oluline täiendus ja täpsustus meie teadmistele Tallinna linna ühe tunnituima kindlustusratatisse – Suure Rannavärava kompleksi – ajaloo kohta.