

**ARCHAEOLOGICAL
FIELDWORK
IN ESTONIA**

2009

**ARHEOLOOGILISED
VÄLITÖÖD EESTIS**

*COMPILED and EDITED BY
KOOSTANUD ja TOIMETANUD*

ESTER ORAS and ERKI RUSSOW



ARCHAEOLOGICAL TRIAL EXCAVATIONS AT THE LOCATION OF THE TOWER OF VENUS BASTION IN PÄRNU

ANDRES TVAURI

Tartu Ülikool (University of Tartu), Lossi 3, 51003 Tartu, Estonia; andres.tvauri@ut.ee

In May 2009 the author of the present article conducted archaeological trial excavations in the town of Pärnu, at the plot of Õhtu Street 1 (Fig. 1). The investigations were carried out in the area of the north-western corner of the outer bailey of the Order's Castle in Pärnu. During the Middle Ages an artillery tower stood there which back then remained inside the Venus bastion built in the 17th century.

The investigations at the plot of Õhtu Street 1 were commissioned by the Pärnu municipality. The purpose of the research was to determine the exact location, condition and construction mode of the artillery tower of the outer bailey and the remains of a barbican tower. The research was connected with the plan of the Pärnu municipality to renovate the old smithy located at the plot, renew the plot and mark the location of the tower on the ground.

Smaller-scale archaeological investigations at the same plot had been carried out in 2002 under the direction of the archaeologist Villu Kadakas (Kadakas 2003). In the course of these studies old walls were detected, however, due to the small capacity of the excavation plots the exact location of the tower remained unclear.

THE LOCATION AND APPEARANCE OF THE TOWER ON OLD PLANS

There are no written sources regarding the building of the tower. In professional literature it has been suggested that the tower was established together with the circular wall of the outer bailey of the Pärnu castle before 1420 (Aluve 1993, 17). In connection with the erecting of the Venus bastion the artillery tower was re-built as a gunpowder tower. The latter appearance of the tower can be seen on the 17th century plans as well.

On the maps of Pärnu from the end of the 17th century the flanking artillery tower has been marked at the north-western corner of the outer bailey of the castle (Fig. 2). The measurement drawing of the gunpowder tower on the Venus bastion, completed by Chr. A. v. Essen in 1698 is preserved in the Swedish War Archives in Stockholm (Kaljundi & Raie 1981). On the ground plan of the tower's ground floor four embrasures and an entrance from the inner side closest to the outer bailey can be seen (Fig. 2).

On the ground plan of the tower's ground floor and its cross section (Figs. 3–4) a 1.2–1.5 m thick wall can be detected running in a 5 m distance around the tower. In the caption of the drawing this wall has been named 'old circular wall around the gunpowder tower'. Apparently this was an outer low curtain wall erected in defence of the foot of the tower.

THE COURSE OF INVESTIGATIONS

The part of the plot south-west of the foot trail that runs from Õhtu street to the smithy was chosen as the location for the excavation. An old bored well and the connected water pipelines are situated on the plot north-east from the foot trail.

The upper debris and filling layers were removed mechanically. The excavation was started from the north-west, in front of the smithy, and proceeded towards south-east. In the depth of 1.2 m on the average the upper surface of the demolished wall of the tower was exposed. The walls and the inside of the tower were unearthed manually. The length of the excavation plot shaped as an irregular rectangle was 13 m, the width 2–4 m. The discovered walls and the contour of the excavation were marked down and attached with the ground plan of Pärnu (see Fig. 1) by the geodesist Peeter Kangur. After the end of the excavation the walls were immediately covered up in order to avoid further crumbling of the walls.

THE REMAINS OF THE TOWER

According to the 17th century plan there are four embrasures on the ground floor of the tower which are located more or less in line with the cardinal points. In the course of the investigations the northern and eastern embrasures as well as the wall next to the entrance were partly exposed (Fig. 5). The old ground plan also shows the entrance to the tower from the outer bailey. Also the northern wall of the entrance could be unearthed and documented in the course of the current research.

The walls of the tower had been dismantled until the even absolute height of 2.19–2.44 m a.s.l., in other words the upper surface of the wall was exposed 1.1–1.2 m below the ground level before excavation. The walls of the tower had been preserved

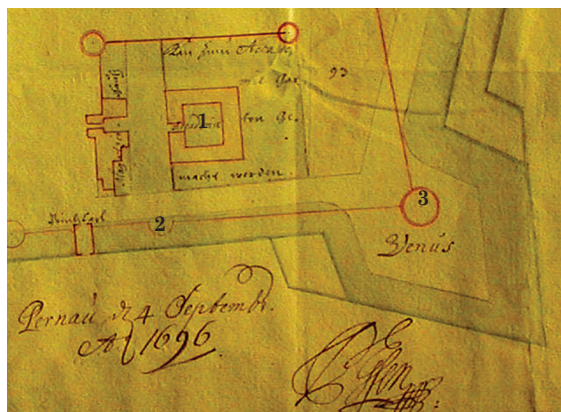


Fig. 2. The plan of Pärnu from 1696. 1 – castle; 2 – outer bailey; 3 – tower on Venus bastion.

Jn 2. Pärnu plaan aastast 1696. 1 – linnus; 2 – eeslinnus; 3 – Veenuse bastioni torn. (RKA 0406: 28: 039: 014.)

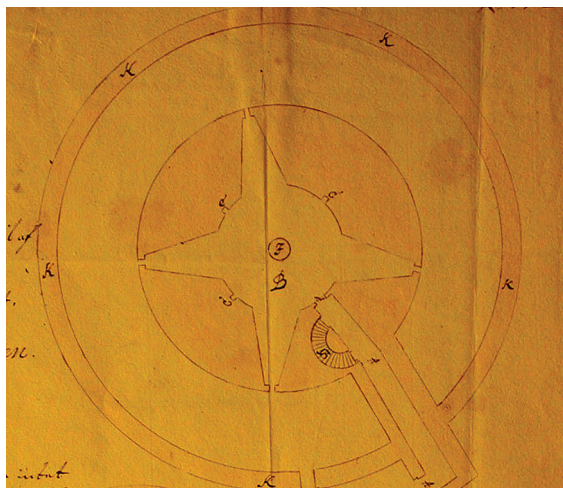


Fig. 3. The plan of the ground floor of the tower situated on the Venus bastion.

Jn 3. Veenuse bastionil paiknenud torni alumise korruse plaan. (RKA 0406: 28: 039: 036.)

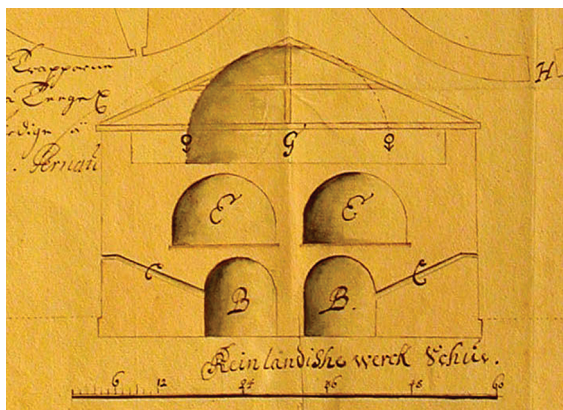


Fig. 4. The cross-section of the tower situated on the Venus bastion.

Jn 4. Veenuse bastionil paiknenud torni läbilõige.
(RKA 0406: 28: 039: 036.)



Fig. 5. Remains of the tower on the Venus bastion and a test pit. View from south-west.

Jn 5. Veenuse bastioni torni jäänused ja šurf.
Vaade edelast.

Photo / Foto: Andres Tvauri

entrance could be observed with the eastern embrasure partly exposed north of it. Its width, measured in straight line, from one corner of the wall to another, was 2.8 m. A protruding strip of mortar could be followed by the southern wall of the embrasure at the height of 1.83 m. The mortar apparently shows the height of the floor during the building time of the embrasure.

Only the eastern wall of the northern embrasure could be unearthed, the westernmost remained outside the excavation. A massive limestone slab covered the eastern wall which left the impression that the roof of the embrasure started at the height of the upper edge of the preserved wall.

approximately 70–80 cm high above the former floor space of the ground floor. The tower had been laid of limestone and boulders and, characteristically to the Middle Ages, as horizontal rows of boulders. No bricks were detected in the wall. The inner wall and the walls of embrasures were covered by a thin layer of lime plaster.

The north-eastern and eastern part of the inside of the tower were exposed in the excavation. The thickness of the wall of the tower in the eastern part was 4.66 m and a 20 cm wide base could be followed at the height of 2.31 m on its outer side. Inside the tower the floor was formed by a brownish clay layer the absolute height of which upper surface was approximately 1.40 m. The purpose of the clay layer was apparently to work as hydro-isolation. In order to discover how deep the foundation of the tower reaches and which layers remain under the floor, a 75 × 75 cm test pit (Fig. 5) was dug. It appeared that the clay layer was approximately 20 cm thick followed by a layer consisting of mortar, sand and brick debris and pieces of wood. Water seeped into the test pit at the absolute height of 0.85 m, therefore it was not possible to dig deeper than 0.73 m. Both the lime layer as well as the wall of the tower continued deeper.

On the eastern side of the excavation plot the northern wall of the entrance

CULTURAL LAYER ON AND AROUND THE WALLS

The walls of the tower were covered by a 1.1–1.2 m thick cultural layer. For example, a layer of black soil rich in humus reached the depth of 40 cm from the ground in the north-eastern profile of the excavation, between the two embrasures. Under the black soil a 40–75 cm deep layer consisting plenty of iron slag, charcoal and iron pieces was exposed which probably derives from the smithy situated on the plot. From the depth of 75 cm until the walls and the floor of the tower a debris layer of uniform composition continued consisting of predominantly lime mortar rubble with pieces of limestone. Bricks with the measurements of $28.5 \times ? \times ?$, $26.5 \times 13.5 \times 7$ and $? \times 13.5 \times 8$ cm were found from the debris layer. In addition single pieces of roof tiles with an S-shaped profile were detected.

SUMMARY

As a result of the investigations the exact location of the north-western corner tower of the outer bailey of the former Order Castle situated on the Venus bastion was determined. The discovered walls were exposed to the extent that the contour of the tower and the position of the northern and eastern embrasures as well as the entrance of the ground floor can be reconstructed. The walls of the tower are situated in the depth of 1.1–1.2 m from the present ground. On the basis of the unearthed parts of the walls the geodesist Peeter Kangur calculated the outer diameter of the tower to be 16.48 m. The inner diameter of the tower is estimated 7.22 m. At the same time it became clear that the preserved walls of the tower of the Venus bastion exactly comply with the walls depicted on the measurement drawing from 1698.

REFERENCES

Aluve, K. 1993. Eesti keskaegsed linnused. Tallinn.

Kadakas, V. 2003. Arheoloogilised eeluuringud Pärnus Öhtu tn 1. Pärnu. (*Manuscript in MA.*)

Kaljundi, J. & Raie, R. 1981. Pärnu plaanid Rootsi sõjaarhiivis. – Pärnu linnas ja rajoonis. Kodu-uurijate seminar-kokkutulek 20.–23. augustini 1981. Artiklite kogumik. Tallinn, 109–118.

Riksarkivet Krigsarkivet 0406: 28: 039: 014. Grundt-Riss von der Stat Pernau mit deren Platzen, 1696. (*Map in Riksarkivet Krigsarkivet, Sweden.*)

Riksarkivet Krigsarkivet 0406: 28: 039: 036. Grund Rytningen Med Profil af Kruht tohrnet uti Pernau, 1696. (*Map in Riksarkivet Krigsarkivet, Sweden.*)

ARHEOLOOGILISED PROOVIKAEVAMISED PÄRNU VEENUSE BASTIONI Torni ASUKOHAL

Andres Tvauri

2009. a mais toimusid arheoloogilised proovikaevamised Pärnu linnas, Õhtu 1 krundil (jn 1). Uuringud tehti Pärnu ordulinnuse eeslinnuse loodenurga piirkonnas, kus keskajal paiknes suurtükitor, mis 17. sajandil jäi bastioni Veenus sisse. Uuringute eesmärgiks oli eeslinnuse nurgatorni ja seda ümbritsenud parhammüüri jäänuste täpse asukohta, seisukorra ja ehitusviisi väljaselgitamine. Uuringud olid seotud krundil paikneva vana sepikoja renoveerimisega ning torni asukohta maapinnal markeerimisega.

Torni rajamisajast kirjalikke allikaid pole. Erialakirjanduses oletatakse, et torn rajati koos Pärnu linnuse eeslinnuse ringmüüriga enne 1420. aastat. Veenuse bastioni ehitamisega kohandati senine suurtükitor ümber püssirohutorniks. Ümberehitatud kujul on torn näha ka 17. sajandi plaanidel.

17. sajandi lõpu Pärnu plaanidel on märgitud suurtükitor linnuse eeslinnuse loodenurgale (jn 2). Rootsli Sõjaarhiivis Stockholmis säilitatakse Chr. A. v. Esseni Veenuse bastioni püssirohutorni ülesmõõtmisjoonist aastast 1698. Torni esimese korruse põhiplaanel on näha neli laskeava ning sissepääs eeslinnusepoolsest siseküljelt (jn 2). Torni esimese korruse põhiplaanel ja lõikel (jn 3–4) võib näha umbes 5 m kaugusel ümber torni kulgenud 1,2–1,5 m paksust tõenäolist parhammüüri.

Kaevand paiknes Õhtu tänavalt sepikoja hooneni viivast jalgrajast edelas. Pealmised rusu- ja täitekihid eemaldati ekskavaatoriga. Kaevati keskmiselt 1,2 m sügavuseni, kus paljandus torni lammutatud müüri ülapind. Müürid ja torni sisemus puhastati välja käsitsi. Ebakorrapärase ristküliku kujulise kaevandi pikkuseks kujunes 13 m, laiuseks 2–4 m.

17. sajandi plaanil on torni alumisel korrusel neli laskeava, mis paiknevad üldjoontes põhiilmakaarte suunaliselt. Uuringute käigus paljastusid osaliselt põhja- ja idapoolne laskeava ning sissepääsukäigupoolne sein (jn 5). Õnnestus avada ja dokumenteerida ka sissekäigu põhjapoolne sein.

Torni müürid olid lammutatud ühtlase absoluutkõrguseni 2,19–2,44 m, müüri ülapind paljastus 1,1–1,2 m sügavusel. Müürid olid säilinud umbes 70–80 cm kõrgusena ülalpool torni esimese korruse

kunagist põrandapinda. Torn oli laotud keskajale omaselt horisontaalsete pae- ja maakiviridadena, telliseid polnud. Torni sisesein ja laskeavade seinad olid kaetud õhukese lubikrohvikihiga.

Välja puhastati torni sisekülje kirde- ja idapoolne osa. Viimases õnnestus mõõta ka torni müüri paksus – 4,66 m ning selle välisküljel oli jälgitav ka 20 cm laiune sokkel. Torni sisemuses moodustas põranda pruunikas savikiht, mille ülesandeks oli arvatavasti toimida hüdroisolatsioonina. Määratakse torni vundamenti sügavust ja põrandaaluse kihte, kaevati torni sisešina äärde 75 × 75 cm suurune šurf (jn 5). Kõrgusel 0,85 m valgus šurfi vesi, seetõttu ei saanud kaevata sügavamale kui kõrguseni 0,73 m. Nii lubjakiht kui ka torni müür jätkus sellest sügavamale.

Kaevandi idaküljel oli jälgitav sissekäigu põhjapoolne sein, millest põhja pool paljastus osaliselt idapoolne laskeava. Põhjapoolsest laskeavast õnnestus välja puhastada vaid selle idapoolne sein. Idaseina peale ulatus massiivne paeplaat, mis jättis mulje, et säilinud müüri ülaserava kõrguselt algas laskeava lagi.

Torni müüride peal oli 1,1–1,2 m paksune kultuurkiht. Kaevandi kirdeprofiilis, kahe laskeava vahelisel alal näiteks oli kuni 40 cm sügavuseni maapinnast must ja huumusrikas haljastusmulle kiht. Selle all oli 40–75 cm sügavusel rohkesti rauašlakki, sütt ja rauatükke sisaldanud kiht, mis pärineb tõenäoliselt krundil paikneva sepikoja tegutsemise ajast. 75 cm sügavusel jätkus ühtlase koostisega rusukiht, mis koosnes peamiselt lubimördipurust, milles oli paekivitükke.

Uuringutega tehti kindlaks Veenuse bastionil paikneva kunagise Pärnu ordulinnuse eeslinnuse loodepoolse nurgatorni täpne asukoht. Leitud müürid avati sedavõrd, et on võimalik rekonstrueerida torni kontuur ning alumise korruse põhja- ja idapoolse laskeava ja sissepääsu asend. Väljapuhastatud müüriosade põhjal arvutas geodeet Peeter Kangur välja ka torni välise läbimõõdu, milleks on 16,48 m. Torni siseläbimõõt on arvestuslikult 7,22 m. Ühtlasi selgus, et Veenuse bastioni torni säilinud müürid vastavad üpris täpselt 1698. aasta ülesmõõtmisjoonisele.