Archaeological research in Vastseliina

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INTRODUCTION

In 2015 three minor archaeological investigations took place in Vastseliina, located in south-east Estonia. Two of the excavations were actuated by the intention of Vastseliina Piiskopilinnuse SA, a local nongovernmental organization aiming to make the Vastseliina Bishop’s Castle a more attractive destination for both tourists and pilgrims. The overall goal of this project was to partially unearth and exhibit the castle’s chapel and to build a house for pilgrims next to the Piiri tavern close to the castle ruins. Based on the job commissioned by Vastseliina Municipality, a preliminary research was conducted to estimate the condition of the chapel walls and the extent of the possible archaeological excavations and conservation. Since human remains have previously been found near the Piiri tavern (Valk 2009), several trial excavations were conducted on the future areas of the buildings and pipelines. The borders of the cemetery were specified during geophysical studies using ground-penetrating radar.

The third site was located in the Vana-Vastseliina¹ village. There, preliminary research and monitoring was conducted in connection with new electrical lines being installed in the protection area of a settlement and burial site.

This article presents the results of the archaeological research with a focus on the investigations conducted in the castle chapel.

¹ Old Vastseliina in English.
INVESTIGATIONS IN THE VASTSELIINA BISHOP’S CASTLE

Vastseliina Bishop’s Castle² is located in the village of Vana-Vastseliina, Võru County on the right bank of the Piusa River, where the Meeksi stream flows into the Piusa River. In the centre of the castle there was a massive tetragonal main tower with six floors. The tower had a cellar, on top of which was the chapel with an armory on top of that. The tower or at least the lower floors have probably been built between 1342 and 1353. Written historical sources have described the castle chapel and since the chapel was a part of the tower, it allows us to deduce the existence of the tower which was destroyed during the Great Northern War in the first decade of the 18th century (Alttoa 1978).

Two archaeological excavations have taken place in the castle previously. In 1888 Reinhold Guleke conducted excavations in the location of the main tower. The only written document from the excavation is the summary of the presentation held by Guleke that was published in the Neue Dörptsche Zeitung (Aula-Vortrag, 1889), a newspaper published in Tartu, Estonia. According to the summary, the tower’s only entrance was a door 12 feet above the ground on the southern side that could be reached with a ladder. The chapel was described to have been built and decorated in Romanesque style and was rich in ornament. The reconstruction drawings based on the excavation were published by Guleke in 1896. In addition to the castle’s layout and longitudinal section, he published separately the chapel’s floor plan (Guleke 1896). Guleke’s drawings show two almost identical floors on top of each other. The partition wall (directed north–south) divides the floor in two: the western room is two-vaulted and slightly smaller and the eastern room has a square floor plan and a centre column. In the northern and western walls, a staircase that opens to the west on both floors is depicted. It is possible that this led to the door reachable by ladder that was mentioned in the presentation. These drawings indicate entrances on both floors that clearly contradict the information published in the newspaper. A grandiose portal opening to the southern courtyard has been depicted in the drawings of the southern wall of the lower floor. The information on the drawings is very different from that given in the summary of the presentation.

The main written sources for information about the castle and chapel are two revision protocols from the Polish rule from 1588 and 1590 (PAI 1970; Litovskaya Metrika). According to these, the entrance to the tower was from the courtyard of the main castle, from the northern side. A small wooden staircase led to the chapel floor that had a vaulted entrance-room and the chapel. The chapel was also vaulted but there is no mention of a pillar – unlike the reconstruction by Guleke, the room must have had a single vault. The chapel is described to have had four large windows, three altars, and an organ that was destroyed in the war. A tiny room was next to the chapel that the Polacks thought to have been a lock-up for the knights. This was probably the penitential cell (German Bußzelle, Büßerzelle). A similar room that had a peek hole or a hagioscope to the chapel has been found in several castles possessed by the Teutonic Order. It is possible that it was meant for a knight who was being punished and had to be separated during meal times and sermons (Steinbrecht 1888, 69–70; Torbus 1998, 308, 479, 599). There is a cell with a hagioscope also in the wall of the Olavinlinna castle chapel in Finland (Tuulse 1966, 18–19). The one in Vastseliina is the first of its kind found in Old-Livonia.

The entrance-room on the chapel floor was a kind of crossroads. There was a door leading to the courtyard, into the room above the gate of the courtyard’s west wing. There was also a staircase leading to the armoury (Zeughaus) above the chapel and to the cellar below the chapel. We have only one written note concerning the cellar which says it was vaulted.

² National monument (Reg. No. 14081) together with occupation layer of the castle (Reg. No. 13603).
This means that Guleke’s reconstruction drawing of the lower floor has nothing in common with what was described in the 16th century. It is possible that the architect actually never excavated the cellar. Once learning about the existence of the cellar floor, he might have drawn the layout according to the chapel floor that he reconstructed, and added a grandiose portal to the south side.

In 2005 and 2006, archaeological excavations led by Heiki Valk took place in the castle. The goal of the excavations was to determine the time of the formation and type of the older strata of the occupation layer and to learn if an Iron Age hill fort could have preceded the bishop’s castle (Valk 2006; 2007). The architectural nuances of the castle were not examined during the course of these excavations with the exception of the lower forewall that was unearthed in 2006 in the north-eastern profile of the trench.

In 2015 two trial pits were excavated. The locations of the pits were chosen with the goal to observe both the inner and outer side of the chapel’s corner and to determine its condition. The chapel’s eastern corner has not been depicted on any of the drawings and floor plans.

A trial pit measuring 1.5 × 1.5 m was located inside the chapel’s southeastern corner (Fig. 1), just next to the chapel walls. On the northern side, only construction debris was found. The debris that comprised of broken bricks and fragments of mortar partially filled the chapel. The floor measured to be 140.02 m above sea level was also unearthed. The ceiling vault of the cellar below the chapel was not reached, but taking the level of the concavity in the centre of the chapel (138.91 m a.s.l.) into account, it is possible that the vaulted ceiling of the cellar was destroyed at least in the centre of the chapel. The inner sides of the chapel walls have preserved intact up to the height of approx. 2.15 m, both fieldstones and whole bricks were used as building material (Figs 2, 3).
The stones were either unprocessed or bevelled straight on the outer side. In the Estonian Medieval Period construction, this kind of wall building is quite rare. During the Late Medieval Period it was rather common to use broken bricks in fieldstone walls, but not whole bricks. The stones were up to 50 cm in diameter, the bricks measured 26–29 cm in length, 15 cm in width, and 10 cm in height. Greyish lime mortar was used as binding material. The walls of the room have been whitewashed and the final layer was noticeably uneven. This indicates negligent work: the whitewash that comprised probably of lime putty and water was poorly drained and clumps of lime were left in the mixture.

The floor has become dilapidated and it is only observable in the southern part of the trial pit i.e. right in front of the chapel's inner walls (Figs 2, 3). The extant floor was 33–88 cm in width and narrowed towards west. Below the levelled floor of lime mortar was a homogenous layer of both whole and broken bricks and a copious amount of lime mortar. The bricks in the monolith formed no lay pattern.

The monolithic layer below the floor was a fill laid on top of the cellar's vaulted ceiling and on top of the mass, the chapel's floor was built. This kind of solution is uncommon. The vault is a fairly delicate construction and usually, adding extra weight on it was avoided. During the Medieval Period, floors were quite often built on beams that did not rest directly on the vault beneath them. The solution used in Vastseliina might seem illogical at first, but the mixture of lime mortar and bricks holds the vault stones in place, making even the slightest movement of the stones impossible.

A construction fragment consisting of two rows of bricks laid flat was found on the floor of the chapel (Fig. 4). At first, it seemed to have been a floor pavement, but there are several arguments against this hypothesis. A floor of bricks laid flat was frequent during...
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the Medieval Period but an example of a floor consisting of two layers of bricks is not known in Estonia. There is no need for such construction and this only adds extra weight to the ceiling vault. It is possible that the second row was added later to fix the eroded floor, but since the surfaces of the lower bricks show no signs of abrasion, it is highly unlikely. The hypothesis of this being a floor is also opposed by the fact that the final whitewashed layer of the chapel walls was also found behind the bricks and this means that the bricks were placed there after the walls had been completed. In addition, the area where the brick wall is built is only a 67 cm wide strip next to the eastern chapel wall. West of the brick wall, only the even floor of lime mortar could be found. The possibility that some floor bricks have been removed from there can be ruled out since there are no signs of bricks having been laid there. This leads to the hypothesis that these bricks do not originate from the chapel floor, but are the remnants of the corpus of one of the side altars (stipes). In the end of the 16th century, there were three altars in the chapel (PAI 1970). Between the aforementioned low brick wall and the eastern wall of the chapel there is a 4–5 cm wide gap. In case of the floor hypothesis, this would not make any sense, but in connection to the side altar hypothesis it becomes understandable. The altar was built adjacent to the south wall, so it is natural that no attempt was made to connect the altar to the wall.

Another trial pit measuring 2.4 × 1.8–2.3 m was made to clarify the outer contour of the northern wall of the tower (Fig. 1). This goal was not achieved, as the northeastern corner of the tower had mostly been destroyed. This explains why on the Reinhold Guleke' reconstruction drawing, the tower’s north-eastern corner is cut diagonally.

The outer face of the chapel’s eastern wall was also the western profile of the trench. In the northern, eastern, and southern profiles, only construction debris consisting of brick and mortar fragments was visible (Fig. 5); this debris covered the inside of the chapel, its walls, and most likely, also the outer surfaces of the walls. The wall was excavated in the length of 2.3 m, it measured at least 1.3 m in width and 1.8 m in height. It was laid of fieldstones and both halved and whole bricks. The infill building technique has been used to erect the wall. The fieldstones used on the outer side of the wall are up to 50 cm in diameter, the width of the bricks was 15 cm and the height 10 cm. Smaller fieldstones measuring 15 to 25 cm in diameter have been inside the wall. Stronger grey mortar has been used as binding material for the inner layer, and yellowish and crumbly lime plaster on the outer side.

The second pit provided information about the gate between the main castle and the southern outer bailey. According to the plan from 1683, the main castle and the outer bailey were separated only by a gated wall on the eastern side of the tower. But according to the Polacks, there was a room above the gate which indicates the existence of not only a wall but an entire wing of a building (PAI 1970, 41). The straight and plastered outer surface of the wall

³ There are no indications to whether the altars are from the bishop’s period. In the 1588 revision documents the Polacks emphasize that they have repaired the chapel that was plundered by Russians during the war.
was intact only in the northern part of the trial pit. The height of the plastered surface was 38 cm in the southern part (Fig. 6) and 25 cm in the northern part. There were two distinguishable plaster layers on the northern surface. The lower one was white, and this was covered with a layer of plaster painted with ochre. On the southern part of the wall, the remains of a springing of the vaulted arch consisting of two brick rows (Fig. 5) were found intact and remains of the springing were also found in the northern part of the wall. Both springings were added later.

There is no doubt that they are the remains of the vaulted arch of the gate that connected the main castle and the outer bailey.

Both the investigated walls were in a poor condition. The bricks were very brittle and crumbled even when cleaned with a brush. After documenting, both of the chapel floor with the remains of the side altar, and the plastered surfaces of the gate were covered with sand and the pits were filled with construction debris.

ARCHAEOLOGICAL INVESTIGATIONS NEAR THE PIIRI TAVERN

The Piiri tavern\(^4\) is a typical road tavern building with two stables. It was built in the first half of the 19th century (Suuder 1991, 16). Archaeological investigations in this location have taken place in 2007 and 2008 and both times they were led by Heiki Valk. In 2007 the construction of a pipeline west of the tavern and in the western part of the yard behind the tavern was monitored. During this, it became clear that the occupation layer around the tavern has been preserved in a very small area: the layer from the 16th – 17th century was found next to the Meremäe–Kliima road and another deposit possibly from the Late Medieval Period was found in a limited area north of the western part of the tavern (Valk 2008). The excavations of 2008 were located in the eastern part of the yard behind the Piiri tavern. The existence of an intensively used cemetery behind the tavern was established. The depth of the burials started from about 0.5 m (Valk 2009).

In the summer of 2015, eight trial pits were dug in order to specify the borders of the burials in the eastern part of the cemetery (Fig. 7). Six trial pits out of eight gave us in situ burials and

\(^4\) National monument (Reg. No. 14083) together with a smithy.
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commingled human remains. The burials were in either the natural moraine or sand layer. The in situ burials were not removed but the commingled remains were collected for further examination and later buried in the same location. Since grave goods were not found, it is not yet possible to determine the time period when the eastern part of the cemetery was in use.

During the excavation, 23 human bones or bone fragments and four teeth were found; these had been removed from their original location. Most of the collected bones belonged to adults, with a few also to juveniles. Due to the level of fragmentation it was not possible to determine the age or sex of the skeletons. More outstanding pathologies were recorded. Slight dental calculus was observed on the teeth. The first lumbar vertebra of one of the adults demonstrated a depression due to intervertebral hernia (a.k.a. spinal disc herniation). Preliminary investigations showed that the area where the cemetery is located was re-planned during the end of the 19th and the beginning of the 20th century and the edge of the plateau was covered with soil mixed with trash. Since there were no burials in the soil fill, the border between soil and sand marks also the eastern border of the cemetery.

Ground-penetrating radar studies were used to specify the location of the eastern border of the cemetery. Differences in dielectric properties between the mixture of soil and trash, and natural soil, were a precondition for the radar studies. Zond 12e by Radar Systems Inc. was used at frequency 500 MHz moving the antenna at walking speed. The reflected signal was measured at every 1 cm during 100 ns. To convert time-scale to depth-scale, relative dielectric permittivity value 9 was used as based on the hyperbolic fitting method.

A part (eastern part of the courtyard from modern shelters until the steep slope) of the researched area was studied with ground-penetrating radar, and a scheme of soil fill thickness was composed (Fig. 8).

Radar images bring out differences in the amplitude and chaotic pattern of the soil fill. The chaotic pattern originates from components within the soil fill whose dielectric properties differ from each other, and soil of natural origin. Natural soil that is composed of glacial till and sand, produces long elongated, often tilted, reflections (Fig. 9). The thickness of the soil fill increases towards the slope reaching 1.5 m at the eastern edge of the courtyard.
ARCHAEOLOGICAL INVESTIGATIONS IN THE PROTECTION AREA OF THE VANA-VASTELIINA I SETTLEMENT SITE AND BURIAL GROUND

In connection with the reconstruction of electricity cables, archaeological preliminary research was commissioned by OÜ Firstel Group on the Vana-Vasteliina settlement site and the protection area of the nearby cemetery to determine the presence of the occupation layer of the settlement site and/or graves on the area of the planned underground electricity cable. Several test pits were dug covering the entire area, surface finds from mole mounds and the nearby field were collected (Ervin et al. 2015) (Fig. 10).

No graves were discovered on the site. The occupation layer of the settlement site was darker in colour and contained pieces of charcoal, burnt stones, animal bones, and brick crumbs. Sherds of ceramic vessels, some slag, fragments of glass, daub, a fragment of a brooch pin, and a heel plate dated to the Livonian War Period (1558–1583) were found (Fig. 11). The collection of ceramics consisted of both hand-made and wheel-thrown pottery including fragments of tripod vessels that indicates that the site was inhabited from the end of the Iron Age to the Early Modern Period. The cultural layer of the settlement site extends further than the current protection area.

Based on the results of the preliminary research, it was proposed to either bury the electrical lines using the drilling method or conduct extensive archaeological excavations prior to installing the electrical lines. Surprisingly, a second excavation permit was issued by the National Heritage Board for the same site and the electrical line was set in place. The construction and the open pit were monitored by OÜ Muinasprojekt (Unt 2015). This resulted in partial destruction of the settlement site.

Notes:
5 National monument (Reg. No. 13601), earlier finds AI 5454 and AI 5489.
6 National monument (Reg. No. 13602). The discovery of human skeletal remains has been documented in 1925 during the removal of gravel (Postimees 1926) and in 1950s during the construction of an electrical substation (Valk 1984; Laul 1987; oral communication by Heli Niidu (born 1930) to Alo Ervin, 9 June 2015).

Fig. 9. Example of radar image along the profile vliina_150722m. The interpretative orange line indicates the lower surface of filling soil.
Jn 9. Näide georadari kujutisest piki profili vliina_150722m. Oranž joon on interpretatsioon, mille abil on antud täitepinnase alumine pind.
Mapping / Objektide kaardistus: Jüri Plado
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Fig. 10. Research area in the protection zone of the Vana-Vastseliina I settlement site and the nearby cemetery. 1 – protection area of the settlement site, 2 – cemetery, 3 – trial pit with finds, 4 – trial pit without finds, 5 – surface finds, 6 – area that would require archaeological excavations, 7 – earthwork area where archaeological monitoring would not be necessary, 8 – area where earthwork should be archaeologically monitored due to previous discovery of human skeletal remains.

Jn 10. Uuringuala Vana-Vastseliina I asulakoha ja selle läheduses paikneva kalmistu kaitsetsoonis. 1 – asulakoha kaitseala, 2 – kalmistu, 3 – leidudega prooviauk, 4 – leidudeta prooviauk, 5 – pinnakorje leiid, 6 – ala, mille puhul on kaevetöödel vajalikud väljakaevamised, 7 – ala, kus võib teostada kaevetöid ilma arheoloogilise järelevalveta, 8 – ala, kust on varem leiutud inimluid, mistõttu peavad kaevetööd toimuma arheoloogilise järelevalve all.

Base map / Alusplaan: Maa-amet
Mapping / Objektide kaardistus: Alo Ervin

Fig. 11. Finds from the Vana-Vastseliina settlement site. 1–3 – sherds of hand-made pottery, 4–5 – sherds of wheel-thrown pottery, 6 – sherd of tripod vessel, 7 – stove tile fragment, 8 – heel plate, 9 – fragment of bronze brooch pin.


(TÜ 2511: 9, 30, 38, 26, 21, 11, 15, 25, 31.)
Photos / Fotod: Aivar Kriiska
Processing / Töötlus: Kristel Roog
SUMMARY

In 2015, minor archaeological investigations took place in three locations: 1) the chapel of the Vastseliina Bishop’s Castle, 2) the cemetery near the Piiri tavern, and 3) the protection area of the Vana-Vastseliina settlement site and burial ground.

The chapel of the Vastseliina castle was located in the tetragonal massive six floors high main tower in the middle of the castle. Underneath the chapel, there was a cellar and above it, an armoury. The tower or at least its lower floors were built between 1342 and 1353 and it was destroyed during the Great Northern War in the beginning of the 18th century. During the 2015 excavations, trial pits were dug on the chapel’s location in both the inner and outer corners. In addition to natural fieldstones, whole bricks were used in building the chapel walls and the inner surfaces of the room had been whitewashed. The walls were in a very bad condition. Inside the chapel, parts of the mortar floor and possibly the base of one of the side altars have been preserved. Outside the chapel, a part of the gate building connecting the main castle and the outer bailey was excavated. The gate building has been depicted on the plan from 1683. The walls of the building were covered with plaster and the springings of the arch were also observable. This wall was also in a very bad condition and began to fall apart after being excavated.

The excavations near the Piiri tavern, founded in the first half of the 19th century, took place on the area of the cemetery surrounding the tavern building. Several trial pits revealed both in situ skeletons and also commingled human remains. The in situ skeletons were not studied during the preliminary research, the commingled bones were collected for later and more detailed examination. These belong mostly to adults, but some also to juveniles. Slight dental calculus was found, and on an adult’s first lumbar vertebra, a depression caused by spinal disc herniation was discovered. Since no grave goods were discovered, the period when the eastern part of the cemetery was in use could not be determined. Preliminary research indicated that the area of the cemetery was re-planned in the end of the 19th and the beginning of the 20th century and the plateau has been covered with natural soil mixed with trash. The precise location of the eastern border of the cemetery was found using ground-penetrating radar. The thickness of the soil fill increases up to max 1.5 m in the eastern border of the yard.

The excavations conducted in the area of the Vana-Vastseliina I settlement site and the nearby cemetery revealed no burials. However, the occupation layer of the settlement site was documented on a larger scale. Based on the findings, the area was settled during the end of the Iron Age and the Medieval and Early Modern Period.

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Hammastel leiti kerget hambakivi ning ühe täiskasvanu I nimmelüli keha alumisel pillal oli lülivahkekettasongast tekkinud lohk. Eeluuringud näitasid, et 19. sajandi lõpus või 20. sajandil on ala, millel paikneb kalmistu, ümber planeeritud ning platoo serva on kuhjatud prahiga segatud mulda. Kalmistu idapiiri täpsustati georadari-uuringutega (jn 8–9).

Vana-Vastseliina I asulakoha ja selle läheduses paikneva kalmistu kaitsetsoonist ei leitud haudu, küll aga dokumenteeriti ulatuslikul alal asulakoha kultuurkihti (jn 10). Leidude järgi (jn 11) otsustades on seal nii rauaaja lõpu kui kesk- ja varauusaegne asustusjärk. Asula kultuurkiht lasub oluliselt ulatuslikumal alal kui see on praegu riikliku kaitse all.