Archaeological studies of the gatehouse of Virtsu castle

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INTRODUCTION
The castle ruin of Virtsu (Germ. Werder) is situated on the western coast of the mainland, near the Suur Väin Strait, on a former islet with the same name, which was connected with mainland only in the 19th century. Although it has never been an administrative centre, and in spite of its modest size and short duration, the castle of Virtsu has played a rather important part in the feuds inside the medieval prince-bishopric Saare-Lääne (Ösel-Wiek in German). The castle was established by the noble family von Uexküll, the vassals of the prince-bishops probably in the 15th century. Its location on the coast of the Suur Väin¹ Strait enabled the owner of Virtsu castle to effectively control the passing naval trade route between the two coastal centres of the prince-bishopric (Haapsalu and Kuressaare) and the two major trade centres (Tallinn and Riga) of medieval Livonia, as well as travel from mainland to the islands Muhu and Saaremaa.

Virtsu castle was exceptional in several aspects among the medieval castles of Estonia. It was one of the very few castles which were built directly on the seashore or even on a small islet of the sea. Whereas almost all the medieval castles of Estonia were used at least until the start of the Livonian Wars (1558), Virtsu was abandoned during the Middle Ages already, in the 1530s, at least according to the traditional interpretation of written documents.

The field study took place in August 2018 (for a short summary in Estonian, see Kadakas 2018) in connection with the conservation of walls in the area of the ruined gatehouse (Fig. 1). The purpose of the field study was to get information for the conservation work and to salvage all the information which could be obtained about the almost disintegrated gatehouse. A 5–20 cm thick layer of demolition debris was removed and the remains of the walls were recorded. In addition, some new information about the courtyard was obtained.

¹ The Väike Väin Strait between the islands of Muhu and Saaremaa has shallow waters and was thus unsuitable for large ships.

Fig. 1. The ruins of Virtsu castle from the south-east, remains of the gatehouse in the foreground.
Jn 1. Virtsu linnuse varemed kagust, esiplaanil väravaehitiste jäänused.
Photo / Foto: Villu Kadakas
HISTORICAL BACKGROUND
The castle of Virtsu first occurred in documents in 1465, when Wolmar and Heinrich, the sons of Conrad von Uexküll divided their inheritance, during which Heinrich got the castle of Virtsu (dat slot up deme Werder) (Hansen 1900, 133–136; see also: Maasing 2017, 33). After the division between Wolmar’s sons in 1509, Virtsu castle descended to Peter von Uexküll (Maasing 2017, 39–40).

Virtsu castle was actively used during the Feud of Ösel-Wiek (1532–1536). The powerful vassal families, including the von Uexküll, were not content with the attempts of the prince-bishop Reinhold von Buxhoeveden to diminish their influence. In 1532 they set up the Margrave Wilhelm of Brandenburg-Ansbach (brother of duke Albert of Prussia) as a counter-bishop. In the following feud between the two prince-bishops, the castle of Virtsu functioned as one of the few fortifications held by the supporters of Wilhelm and probably operated as the main base of his navy (Maasing 2017, 41–45).

On 15 or 20 July 1533 the troops of prince-bishop Reinhold, which allegedly consisted of 100 German mercenaries and 300 peasants, attacked the castle. The assailers were fended off by cannon fire and were only able to loot the manor and two local villages. After this, in 1534, Peter von Uexküll sold Virtsu to his younger brother Johann, a vassal of the prince-bishop of Tartu. The troops of prince-bishop Reinhold were successful a year later. Allegedly 500 men arrived with one ship in the beginning of September 1534. The details of the siege and the extent of damage to the buildings are not known, but by 13 September the castle was taken. Anyway, this event was crucial to end the feud: the rebelling vassals started to negotiate with prince-bishop Reinhold and counter-bishop Wilhelm withdraw from the bishopric (Maasing 2017, 41–45).

The troops of prince-bishop Reinhold probably held the castle until the treaty with his rebellious vassals, which was made in March 1535. According to the complaints of the counter-bishop to his brother, duke Albert of Prussia, prince-bishop Reinhold razed the castle to the ground (in grunth zubrechenn) before giving it back to Johann von Uexküll. He enfeoffed the estate to Johann on 29 February 1536 and imposed a ban to build the castle up again (nicht mehr zu pauen).

The counter-bishop demanded restoration of the castle or reparation of the damage to Johann von Uexküll (MLA 1847, no 146; see also: Maasing 2017, 46), but prince-bishop Reinhold denied it, with an argumentation that the castle was a ‘robber house’ (rawb haus) and was demolished based on the law of war (de iure belli) (Hartmann 1999, no 879; see also: Maasing 2017, 47). The Feud was finally settled with a treaty in Valmiera in July 1536. The rebellious vassals had to pay reparations and the reconstruction of Virtsu castle was forbidden, with an argumentation that it was conquered during a rebellion (in das auffror erobriget), from there harm was done to the prince-bishop, and that its restoration might be detrimental for whole Livonia (MLA 1847, no 148; see also: Maasing 2017, 46–47).

Later it has been a general opinion that it was the end of Virtsu castle. Only recently, historian Madis Maasing has expressed doubt in it, supposing that the castle might have been taken into use again, at least after the start of the Livonian Wars in 1558 (Maasing 2017, 52). Obviously the question of possible later usage of the castle should be in the focus of any new field study.
PREVIOUS FIELD RESEARCH
By the time when the castle of Virtsu appeared in the historical images and aroused interest in
the early researchers, it was fully in ruin, with some low walls standing (Fig. 2). In addition
to the alleged demolition, the location on the seashore, the effect of salty water, storms and
ice had been devastating.

Friedrich Karl Hermann Kruse (1790–1866), professor of history of Tartu University (1828–
1853) composed the first known ground plan of the castle in 1839 (Fig. 3). This includes most
of the walls known today, although with several inaccuracies. This plan has been preserved
as a later addition between the manuscript of Rev. Eduard Philipp Körber (1770–1850), one
of the first researchers of the medieval castles of Livonia (Körber 1802, 397). Karl von Löwis
of Menar (1855–1930) presented an overview of written history, published his own ground
plan and a section, made in 1891 (Löwis of Menar 1914; 1922, 124), after his field study with
unknown extent and dates.

In 1975 Uno Hermann wrote an overview of history of the castle and described the ruin as
preserved (Hermann 1975). In 1976–1977 architect Kalvi Aluve organised large scale excava-
tions as the first phase of a project to restore the castle.² In 1976 collapse debris was removed
with spades from top of the walls in order to specify the ground plan. In 1977 in addition,
collapse debris was removed from around the castle, also from some areas of the main castle
and the outer bailey. The round tower on the south-western corner was cleaned of debris
in full extent (Aluve 1976; 1977; see also 1978). After 1977 the project stopped abruptly and

² The location of the artefacts from the 1976–1977 excavations is not known.
the excavated walls were not covered or conserved, open to the damages by the forces of nature.

In 2014 archaeologist Garel Püüa recorded some structures near the south-western round tower, which had been unearthed during the removal of collapse debris (Püüa 2014).

**LAYOUT OF THE CASTLE**

In most aspects the conclusions of the earlier researchers Kruse and Löwis of Menar may be left aside, because of their limited extent of fieldwork and sketchy possibilities to document the ground plan. Based on his extensive fieldwork, Aluve was able to reconstruct the ground plan and make general conclusions. The main castle was a rather small building, with a square shape of ca. 25 × 25 m, with a 2.7–2.8 m thick curtain wall, with two round cannon towers in two opposing corners (Fig. 4). The main castle has been surrounded with an additional curtain wall, up to 2.8 m thick, which was situated only some metres apart, creating a very narrow outer bailey. With such a ‘concentric’ ground plan, the castle of Virtsu is quite unique in medieval Estonia. Aluve concluded that one of the main functions of this outer curtain wall was to protect the main castle not from the enemies, but the effects of the nature: salty sea water, storms and ice. The castle has been built almost into the sea, on top of a small very low limestone plateau.

Inside the main castle Aluve identified buildings erected against the western and northern curtain wall. An almost square (12.4 × 12.6 m) courtyard encompassed the central and south-eastern part of the main castle. The curtain wall of the outer bailey was considerably thinner on the western and northern side and built so close to the main castle, that it was less than 2 m apart from the south-western round tower. Furthermore, the north-eastern round tower was fully integrated into the outer curtain wall. According

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**Fig. 3. Plan of Virtsu castle ruins in 1839.**

**Jn 3. Virtsu linnuse varemete plaan, 1839. a.**

**Drawing / Joonis: Fr. K. H. Kruse (Körber 1802, 397).**

**Fig. 4. Plan of Virtsu castle walls.**

**Jn 4. Virtsu linnuse müüride plaan.**

**Drawing / Joonis: Villu Kadakas**
to Aluve the whole castle complex, both the main castle and the outer curtain wall were built during a single building campaign, except the side walls of the gate passage (Aluve 1978; 1993, 48–49; 1996; Hein 2010).

The gate was identified in the middle of the southern curtain wall by Kruse already. The gate was once accessible from the southern direction on top of a narrow artificial embankment made of rocks, which could still be observed before World War II (Tuulse 1942, 317–319), but has disappeared from the landscape by the 21st century. The castle ruin is even today surrounded by sea water from three sides. Taking into consideration the constant land uplift of Virtsu area, the water level must have been even higher during the Middle Ages. The outer surface of the outer curtain wall has been built of large and thick limestone blocks, often measuring more than 50 × 50 cm and ca. 40 cm thick, which is very rare among the limestone castles of Estonia. According to Tuulse, the huge blocks were meant to resist heavy storms and the pressure of sea ice (Tuulse 1942, 319).

**PREVIOUS KNOWLEDGE ABOUT THE GATE SYSTEM**

The gate area was excavated in the 1970s as well, but unfortunately the documentation is limited only with a schematic ground plan and some vague photos. The gate of the main castle consisted of a ca. 3 m wide niche and an almost exactly 2 m wide gate portal, made of large limestone blocks. Only the two base blocks had been preserved in situ, and the rest were laying nearby as these had scattered during the collapse. After exact measuring of the blocks, architects Kalvi Aluve and Mihkel Koppel were able to reconstruct the size and shape of the gate portal. The gate of the main castle was reassembled in 2016 (Fig. 1). The outer gate inside the outer curtain wall was not documented in the 1970s, because the outer curtain wall was poorly preserved in this area.

According the excavation report of 1976, both side walls of the gate passage were excavated and recorded on the schematic plan. According to the plan drawing of Aluve, both side walls had an exit (Aluve 1976, fig. 2). The base stones of a wide gate portal with almost the same width (ca. 2 m) as the main gate portal were recorded (Aluve 1976, photo 8) and have been still preserved in the western wall. A narrow opening (ca. 90 cm) in the eastern wall was recorded only on the plan. No original contours of it had been preserved by 2018, only a gap with vague decayed contours. None of these two openings have been commented upon, even mentioned in the text of the report. Regarding the whole gate passage, only two remarks can be found in the report of 1976. It has been mentioned (but not recorded on the plan) that the side walls of the passage have been built secondarily against both the curtain wall of the main castle and the outer curtain wall. It was also noted that both side walls ‘rest upon the corbels of the drawbridge’ and that there has been a large pit in between the two gates, between the side walls (Aluve 1976, 9). Next year no new figures or photos about the gate passage were included into the report. In the text of the report Aluve noted that ‘at the level of the threshold large limestone corbels of the drawbridge have been preserved on both sides of the gate’ (Aluve 1977, 23).

Aluve concluded that the inner gate was equipped with a drawbridge, which covered the large pit between the two gates when in lowered position. He also noted that the recesses for the hinges of another drawbridge were preserved in the outer curtain wall. In the report he concluded that the pit between the two gates was covered with a peculiar system of two drawbridges facing each other: one closed the gate in the curtain wall of the main castle, the other closed the gate in the outer curtain wall. Both were lowered to cover the pit in between
RESULTS OF THE FIELDWORK

Chutes for a portcullis

Regarding the limited documentation and controversial conclusions of Aluve, as well as the deteriorated condition of the remains of the gate passage, the research questions about the evidence of the drawbridges were in the main focus of the field study of 2018. In the inner sides of the side walls, right next to the gate of the main castle, two vertical channels or chutes were recorded (Fig. 5: 6; 6: 6; 7–8). These were identified as remains of a portcullis system by architect Mihkel Koppel in 2016 (Koppel 2016, plan 1). These chutes have been made of roughly worked limestone, although most of similar elements in the castles of Estonia have been made of nicely dressed masonry details, which enable smoother operation of the portcullis. However, regarding the size, form and context, chutes of a portcullis is the most likely interpretation (Fig. 5: 5; 6: 5). It is difficult to explain, why Aluve has not even described these elements, as these can even be clearly observed on some of his photos (Aluve 1977, photos 9–10).
Corbels next to the inner gate

Inside these chutes, on both sides of the passage, two large rectangular limestone blocks can be observed (Fig. 5: 2; 6: 2, 7–8). The masonry of both side walls of the passage is separated with a vertical joint from the curtain wall of the main castle (Fig. 4; 5: 12; 8), just as Aluve has described. Only these two rectangular blocks reach into the curtain wall, protruding from it like corbels. It seems likely that Aluve interpreted these two blocks as the corbels of the inner drawbridge. However, these corbels lack any cavities for hinges, so that would be difficult to explain how these corbels could have supported a drawbridge. Furthermore, the corbels have been walled up when the side walls of the gate passage had been built against the curtain wall, so that only one surface of a corbel could be observed inside the chute. Obviously, these corbels could have functioned only before building the side walls, in the period of the original gate (see below).
Evidence of an outer drawbridge

From the outer end of the gate passage, from the side walls, two identical small cavities or recesses were found (Fig. 5: 8; 6: 8), which could be interpreted as remains of a hinge system for turning a drawbridge. The small round cavities still have some rust from the iron hinges in them (Fig. 9). These are probably the same cavities which Aluve has described in this area. Usually such hinge cavities are located inside protruding corbels, but in this case there are no corbels – the cavities have been made just into two opposing stones in the side walls of the gate passage. While studying the surrounding masonry, it became clear why Aluve excluded the possibility that this drawbridge could have been lowered outwards. Just ca. 20 cm south of the line of the drawbridge, the surviving masonry of the outer curtain wall (Fig. 6: 9) rises 12 cm above the level of the cavities, so that the drawbridge could have theoretically lowered only halfway, into a slanting position. This obviously forced Aluve to a preliminary conclusion that the drawbridge could have been lowered only towards the inside of the castle, into the gate passage. However, such a solution would have been illogical considering the logic of castle defence, because naturally, such a drawbridge could have been operated only from the outside, by the attackers, not the defenders of the castle. Realising it, Aluve dropped his initial hypothesis, but taking into consideration all the known circumstances, was not able to present a better one.

Yet, the cavities are there, and needed some kind of reasonable interpretation. Therefore a detailed study of masonry was undertaken in 2018. It appeared that this disturbing masonry is in fact a secondary addition, a later filling which has been inserted into a large rectangular cavity which had been located inside the curtain wall, under the gate passage (Fig. 5: 9; 6: 9). With the bottom located ca. 1.4 m deeper than the hinges, this cavity was obviously a rectangular pit with a function to obstruct the enemies to get inside. Therefore, originally there was no problem with lowering the drawbridge outwards – the drawbridge covered the pit in a lowered position, which is a normal
solution. It is not possible to learn, if the pit was open or closed with a thin wall in the façade of the gatehouse, because the masonry in this area has not been preserved.

The drawbridge inside a gatehouse

Normally, drawbridges were built so that in a lowered position it would cover the moat. For this the hinges had to be located on the outer edge of the curtain wall. In Virtsu the hinges of the drawbridge are not located in the usual position, but on the line of the inner surface of the outer curtain wall, ca. 3 m away from the outer edge (Fig. 5). The inner gate has been ca. 3 m high. Therefore, there was probably no need for a longer drawbridge than 3 m (Fig. 6). Had this drawbridge also covered the moat, it should have been at least 5 m long. Such an extremely oblong (2 m wide) bridge would have been difficult to operate and to fit into the gatehouse.

It seems that building a drawbridge inside the gate building, not on top of the moat, has been a very rare solution in medieval Europe. So far, I have managed to find a reference only in one case: Otto Piper has laconically described a drawbridge inside a gatehouse, without a moat in the Naturno castle (Germ. Hochnaturns) in Northern Italy, former South Tirol. Piper has given neither a detailed description nor an explanation to such a solution in this case (Piper 1912, 314).

The rationale behind such a peculiar design of a drawbridge is not immediately obvious. It is possible that reasons could have been different in different castles in different time. In the case of Virtsu it is very tempting to connect the unusual location of the drawbridge with the ban of the prince-bishop to build this castle up again. This way, the unusual location of the drawbridge could be interpreted as a solution to circumvent this legal act.

In the Holy Roman Empire the Sachsenspiegel was the most important law book which was referred to in case of questions about the right to fortify (Frey 2015). Besides the height of the curtain wall, the number of floors, existence of towers and crenellation, the depth of the moat was an important criterion. According to Sachsenspiegel one had to get a licence to fortify, if the moat was to be dug deeper than a man could throw the earth out of it with a spade, without using a bench (Frey 2015, 89). In Medieval Livonia, based on Sachsenspiegel, a local law book, Livländische Rechtsspiegel was used. However, it seems that the chapter about the right to fortify was not adopted from Sachsenspiegel (Bunge 1827, 109–114; see also: Leesment 1938).

Therefore, there is no information about a legal act to regulate the licence to fortify in medieval Livonia. Nevertheless, it is likely that the prince-bishops of medieval Livonia and their vassals were in principle aware of the simple rules about the right to fortify, which were common knowledge in the Empire, and were probably able to interpret and refer to these when necessary. One of the criterions of a castle in the case of Virtsu might have been the existence of the moat in front of the gate. In such a case, the original embankment of boulders might have been extended to the gatehouse, filling the former moat in front of it.

In conclusion, the location of the drawbridge inside the gatehouse, not on top of the moat in Virtsu castle, could be the attempt of Johann von Uexküll to circumvent the ban to build up the castle ruin as a castle. In this period, the building did not have a moat in front of the gate, but still had a drawbridge with a pit, hidden inside the gatehouse. There was obviously a wide variety of technical solutions for designing a drawbridge, solutions which were made in a particular place and time, by particular people. Some solutions probably were not as functional as the others, some made sense only in specific circumstances.
Architecture of the gatehouse

Aluve concluded that a pit existed under the gate passage, between the two gates (Aluve 1993, 50). In 2018 two test pits were dug next to the hinges of the drawbridge to study this presumption. It was concluded that there probably was no pit under the passage. Therefore, the drawbridge of Virtsu gatehouse could not have been a turnbridge, which inner half pivoted into the pit below the passage. It was probably a simple drawbridge which was operated by a windlass situated in the upper room. The existence of a portcullis and a drawbridge inside the gate passage indicates that at least one floor on top of the passage must have existed, which had to include the windlasses for these devices. Therefore, the gate complex of Virtsu castle cannot be interpreted as an open passage, as depicted on the reconstruction drawing by Aluve, but as a covered gatehouse (ca. 4.8 × 10.5 m), which had at least one storey on top of the passage. There is no information which would enable us to reconstruct the height of the gatehouse, but it cannot be excluded that it had three or four floors, built as a gate tower. Anyway, such a gatehouse, with an oblong plan and the location between two curtain walls, was without a known parallel among the medieval castles of Estonia. At first glance there are some similarities with the barbicans of the lower town of Tallinn, but these were built as long and open barbicans in front of the main gate tower, which was situated on top of the town wall. There has been no separate gate tower on top of the gate in the curtain wall of the main castle in Virtsu.

In its final form the pavement of the gate passage was inclining towards the courtyard of the castle (Fig. 6). Aluve supposed that the threshold of the outer gate was intentionally located higher than the inner one in order to avoid the sea water to get into the castle (Aluve 1993, 50). The western part of the outer bailey could be accessed from a 2 m wide gate in the western wall of the gate passage, still partly preserved (Figs 5–7). The eastern part of the outer bailey was probably accessed from a narrower opening, a doorway in the eastern side wall (Figs 5, 7). Because of limited recording in the 1970s and poor preservation, the existence of the eastern doorway is not sure, but it seems probable, because the eastern part of the outer bailey probably had to be accessed somehow.

Structural development of the gatehouse

The conclusion of Aluve, that the side walls of the gate passage were a secondary addition towards the two curtain walls, could be confirmed in 2018 only regarding the curtain wall of the main castle. Vertical joints could be observed there (Fig. 4; 5: 12) (see above), but not next to the outer curtain wall. The side walls seem to be built together with the neighbouring sections of the outer curtain wall. Based on these results, it seems that the gate passage has been added to the main castle secondarily, together with the outer curtain wall, the portcullis and the drawbridge. This conclusion is in contradiction with Aluve’s previous conclusion, that both curtain walls have been built at the same time. He was able to specify it near the north-eastern round tower (Aluve 1993, 49).

New data about the structural development of the castle

This apparent contradiction got an explanation during the fieldwork of 2018. Based on some new data it can be concluded that the outer curtain wall has not been built during one period. As a surprise, a vertical joint was discovered inside the southern outer curtain wall, located one metre towards east from the eastern side wall of the gate passage (Fig. 4; 5: 12). This joint runs in parallel to the curtain wall, in the middle of it, but turns sharply southwards in its
western end, under a square angle. In east the joint seems to end ca. 5 m from the south-eastern corner of outer bailey. This section of the outer curtain wall has originally been thinner. The southern, the outer part of the wall has been later attached to the inner part as a lining wall. It is difficult to interpret this joint in regard to the overall structural development of the castle, but it is probably somehow connected to the rebuilding of the gatehouse. It seems that the gatehouse originally protruded from the eastern part of the outer curtain wall by ca. 1.5 m.

No other vertical joints can be observed elsewhere in the outer curtain wall, which could help to interpret the development. However, while measuring the plan of the ruin, it appeared that the southern outer curtain wall does not run straight, but makes two slight turns (Fig. 4). One turn is located ca. 11 m from the south-western corner, but the other on the line of the eastern side wall of the gatehouse. The existence of these slight turns supports the conclusion that the southern outer curtain wall has not been built during one building campaign.

Based on the results of the fieldwork of 2018 three building stages could be identified near the ruins of the gatehouse: 1. curtain wall (with two corbels) of the main castle; 2. building of the gatehouse and the outer curtain wall in its initial form; 3a. attaching a lining wall on the outer side of the eastern section of the southern outer curtain wall; 3b. filling the pit under the drawbridge. Based on stratification, it is not possible to distinguish the building sequence between the last two works.

Reconstruction of the initial gate and the drawbridge

It is in principle possible to reconstruct the system of the initial gate of the main castle. The two limestone corbels, which are located inside the curtain wall of the main castle, on both sides of the inner gate portal (see above) may be connected with it (Fig. 5: 2; 6: 2; 7–8). These presumably carried the initial drawbridge, which probably was slightly wider than the later one. However, the corbels apparently lack the recesses for the hinges. This can be explained. Usually, a drawbridge of a medieval castle in its upright position was hidden inside a rectangular niche, located in the façade around the gate portal. At first glance there seems to be nothing like this in the inner gate of Virtsu.

Taking into consideration that the threshold of the present inner gate is located ca. 45 cm lower than the corbels (Fig. 6, 8), it is obvious that the gate portal in its present height is not original. Probably during the building of the gatehouse and demolition of the initial drawbridge, the portal was also taken into pieces and reassembled in its present height and place. Originally the gate portal was presumably located within the drawbridge niche, closer to the courtyard. If so, then the recesses for the hinges, which once were exposed in the drawbridge niche, are now probably hidden inside the curtain wall, behind the base blocks of the gate portal.

New data about the inner courtyard

While measuring the ruin, another vertical joint was discovered inside the main castle, between the courtyard walls of the western and northern wings (Fig. 4). Based on the joint it can be concluded that the western wing was built first in its full length, and the northern wing was attached later. Based on this discovery, in contrast with the results of Aluve, it can be concluded that also the main castle was not built as one stage.
As another surprise, it appeared that a foundation of one more wall can be observed in the eastern part of the courtyard\(^3\), which does not appear on the plans of Aluve. This foundation is running in parallel to the eastern wall of the castle, some metres apart.\(^4\) It looks like there has been a stone building attached to the eastern curtain wall as well. However, there are no signs of attaching this wall neither to the southern curtain wall nor the inner wall of the northern wing. Therefore, it is likely that this eastern wing was the latest addition to the territorial development of the main castle. It is probable that Aluve saw this wall, although he has not even mentioned it in the texts of the excavation reports. It can be guessed that he identified it as a secondary addition, and therefore ignored it, believing that it comes from an Early Modern period of secondary use of the ruins. Such a late date cannot be excluded, but the foundation has to be studied and recorded, in order to be certain about it.

In the western part of the courtyard the historical cobblestone pavement is well preserved. It was probably partly unearthed during the fieldwork of 1976 or 1977, although neither the pavement nor the excavation in the courtyard has been mentioned in the reports or publications. After a brief inspection in 2018 it can be noted that the cultural layer between the pavement stones is also well preserved and includes a lot of small animal bone fragments. Even its minimal study could give abundant results regarding the social and economic aspects of the castle.

Remains of one doorway and two windows were recorded in the courtyard wall of the western wing before conservation of this wall in late summer 2018.

**Dating problems**

During the fieldwork of 2018 no artefacts could be gathered. Therefore, no new data about the building time of the castle in its initial form, the rebuilding campaigns or the end of the castle could be obtained. However, as regards the end of the castle, it can be noted that during the fieldwork of 1976 and 1977 some structures and possibly also artefacts were found, which were dated into the Early Modern period: remains of ovens and open fireplaces. It was concluded laconically, that someone ‘tried to customize the ruin with economic purposes’, without specifying the period or nature of the activities (Aluve 1976, 25, 31–32; 1993, 51).

Based on the hypothesis of Maasing about the reuse of the castle (Maasing 2017, 52), the fieldwork results of the 1970s and 2018, it seems probable that the castle ruin was restored in some extent and reused for some time, soon after the alleged demolition, or during the Early Modern period. It is possible that the medieval castle building was used as the residence of the owners of Virtsu manor. It could have stayed in use for a long time, possibly even until the Great Northern War. The manor centre was located in its final place, 1 km to the south-east of the castle on the oldest map of Virtsu manor already, dated to the beginning of the 18th century (RA, EAA.1.2.C-IV-191). Even after this, part of the old castle buildings might have stayed in use with some economic functions.

**CONCLUSION**

The field study in the gate area of Virtsu castle gave new information about several important details and the development of the gatehouse. Before building the outer curtain wall and the side walls of the gate passage, *i.e.* the gatehouse, the gate of the main castle was equipped with a drawbridge. Two limestone corbels of the initial drawbridge survive, built later into

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\(^3\) I am grateful to Mihkel Koppel for noticing and bringing my attention to it.

\(^4\) This wall could not be measured and depicted on plan because almost all of it is covered with stone debris.
the side walls of the gatehouse. In the second building stage the outer curtain wall together
with the side walls of the gate passage were built. The initial drawbridge was removed and
replaced with a portcullis, of which vertical chutes survive on both sides of the main portal.
A new drawbridge was built into the outer part of the gatehouse. Two round recesses for the
hinges of this drawbridge survive in the side walls of the gate passage. The new drawbridge
was lowered on top of a rectangular pit, which was located in between the ends of the outer
curtain wall. Such drawbridges, which were located not on top of the moat but inside the
gatehouse, were rare in medieval Europe. It cannot be excluded that the peculiar location
of the drawbridge is connected with the ban to rebuild the castle of Virtsu up again after the
demolition in 1535. The pit under the drawbridge has been filled with masonry during the
third building period. The field study of 2018 indicated that the castle of Virtsu has not been
built during one building period as thought previously, but in at least three. This conclusion
supports the hypothesis of Madis Maasing, that the building of Virtsu castle was taken into
use again after the demolition in 1535.

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Kalvi Aluve uuringu järgi kujutas linnus enesest ruudukujulist, u × 25 × 25 m suurust kastelli, mille ringmüüri oli 2,7–2,8 m paksune. Kahes vastastikuses nurgas paiknes ümmargune ees- ja kaitsealade: lääne poolt kahel pool tõenäoliselt kitsam ukseava.

Linnuse lõunakülje sees paljandusid kaks Aluve kirjeldatud müürid (jn 6; 7). 8:; ilmselt langevõre id kujutavad enesest lahtist käiku, vaid tegemist pigem väravakäikust kõrgemal. Seetõttu ei saanud väärtuslikut tõstesilla, mille kaudu pääses kahe ringmüüri vahelisele ees seinti, kuid seal on müüritis osutus lähemal uurimisel sekundaarseks täiteloaaks, millega on täs müüritest eeskaitsemüüril otste vahel asunud nn hundiaug. Järelikult oli algsest tegemist pigem väravakoopade, väärpolepoole langetatava tõstesilla.

Selgus, et nn hundiaug ei kaitsenud mitte kahe ringmüüri vahel, vaid väravakäiku väljale puhul ootuspärane. Tõstesild ei paiknenud mitte vallikraavi kohal, nagu linnustes puhul vallikraavi, vaid tõenäoliselringmüüri kohal kohal paiknev tõstesild on kogu Euroopa keskaegesel linnusearhitektuuril haruldane. Vallikraavi olemasolu, mida tuli ületada väära ees paiknenud tõstesilla abil, oli keskaalal kindlusehitise üks peaamisega, mis olevat alati märkimisväärsed.

Aluve käiku väljale oli islamiinise vääraavaa varustatud tõstesilla, mis alla kaitses kahe müüri vahel olnud nn hundiaug. Väravakäiku küljest kujunes hiljem hiljem hääle, sest väärapool on saanud käigutada ees pealinnuse ja linnuse lõunaküljel paiknes kahe ringmüüri vahelisele ees pealinnuse poolse väravakaare ees.

Selus, et ee on määrsust võimaluse, et esinevast ringmüürist algusest 10 m paksune, kuid hiljem on ees pealinnuse ja linnuse lõunaküljel paiknes kahe ringmüüri vahelisele ees pealinnuse poolse väravakaare ees. Selgus, et esinevast ringmüürist algusest 10 m paksune, kuid hiljem on ees pealinnuse ja linnuse lõunaküljel paiknes kahe ringmüüri vahelisele ees pealinnuse poolse väravakaare ees.
