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RESIDENCES OF ABBESSES IN ESTONIAN
MONASTIC ARCHITECTURE, BASED ON THE
EXAMPLES OF ST MICHAEL'S CISTERCIAN
CONVENT IN TALLINN AND THE
BRIGITTINE CONVENT IN PIRITA

Although Estonian monastic buildings have been studied for almost 125 years,¹ very little attention has been paid to the living environment of people actually in charge of them – abbots-abbesses or priors. One reason could be due to Bernard of Clairvaux, the compiler of one of the main Cistercian set of rules. In establishing new convents of at least twelve brothers and sisters, he mentions an oratory, a dining hall, a dormitory, a guest-house and a gatehouse in the surrounding wall², but never the residential quarters of the superior of the monastery. Like other high-class individuals of the time, the superiors also had their own official rooms, which were often located in a separate building, or in bigger monasteries even formed a whole quarter. Compared with the rest of Europe, the Estonian medieval monasteries were rather small, both in size and in number (13). Considering the current level of research, we can determine the precise location of the quarters of the superiors only in the Padise Cistercian monastery,

Translated by Tiina Randviir.

¹ See Jaan Tamm, *Eesti keskaegsed kloostrid* (Tallinn: Eesti Enstsüklopeediakirjastus, 2002), 31–35.

² Jean-Francois Leroux-Dhuys, *Cistercian Abbeys. History and Architecture* (Köln: Könemann, 2006), 49.

Tallinn Cistercian nunnery and the Brigittine convent in Pirita. In the latter two, the superior even had a separate building. It makes sense to compare and analyse their respective residential quarters, because the social position of the abbesses of these convents was more or less the same. The abbess of St Michael's was in charge of the convent belonging to the Cistercian Order, which mostly consisted of people from Harju-Viru vassal families³; Pirita had the same function, being home to members of vassal families, as well as townspeople.

The Estonian history of architecture has tackled the houses of abbesses only briefly, within the general framework of the building history of the convents of Pirita⁴ and St Michael's in Tallinn⁵. The aim of the following is therefore to introduce the information so far available only in brief articles or in manuscript reports, in greater detail and for a wider audience.

ST MICHAEL'S CISTERCIAN CONVENT IN TALLINN⁶

There are not many building complexes in Estonia that have been continuously in use for over 750 years. Among them is certainly one of the largest blocks of houses in down-town Tallinn, at the western edge of the Old Town. This complex belonged to the Cistercian St Michael's convent. Today's Tallinners and people from elsewhere, however, know it as one of the oldest continuously operating gymnasiums (secondary schools) in Europe⁷, the Gustav Adolf Gymnasium, along with the Tallinn Old Town Gymnasium for Adults, which is located in the same complex in Suur-Kloostri and Gümnaasiumi streets.

³ Tiina Kala, "Tallinna Mihkli kloostri palved raehärrade eest", *Vana Tallinn*, XX (XXIV) (2009), 174.

⁴ Villem Raam, Jaan Tamm, *Pirita klooster. Ehitus- ja uurimislugu* (Tallinn: Eesti Entsüklopeediakirjastus, 2005), 40–41.

⁵ Jaan Tamm, *Tallinna Püha Miikaeli klooster. Ehitus- ja uurimislugu* (Tallinn: Eesti Entsüklopeediakirjastus, 2009), 47–52.

⁶ The history and buildings of the convent have been thoroughly examined in: Wolfgang Schmidt, *Die Zisterzienser im Baltikum und in Finland*, Finska Kyrkohistoriska Samfundets Årsskrift 29–30 (Helsingfors, 1941), 192–238; Jaan Tamm, *Tallinna Püha Miikaeli klooster*.

⁷ The first general secondary school called a gymnasium was founded in post-Reformation Europe in Strassburg, Germany (present-day France), in 1538, in northern Europe in Västerås, Sweden in 1623, in Turku, Finland in 1630, and in Tartu in 1630. None has operated continuously.

The construction of the convent's prime building, St Wenzel's chapel, began after 1219; the convent was reputedly started in 1249. The buildings belonging jointly to the Town Council and the Knighthood were not used only in one year, when the last *domina*, Kate Kudling, died (1629) and the convent was turned into a young ladies' finishing school and a school for boys, which opened in 1631. The construction and reconstruction work during the subsequent centuries changed the convent's buildings almost beyond recognition; whole wings of buildings were reconstructed. Despite this, something of the original convent, albeit not easily recognisable, is still left, mostly in the basement of the eastern, northern and western wings, and on the level of the ground floor. The buildings standing west of the church, erected during the last construction period of the convent, acquired totally new shapes and dimensions. To be precise, only a few lower wall sections have survived of the former priest's house and parlour (parlatorium) complex foundations. The remains of the former new kitchen constitute the lower part of the eastern wall and a segment of the southern wall. Surprisingly, much has survived of the half-basement of the medieval abbess's residence, and of the ground and first floors, known to today's users as an entresol. The 18th century Apostolic Orthodox church, reconstructed from the previous convent church, has also survived better than expected.

RESIDENCE OF ST MICHAEL'S ABBESS

Ernst Kühnert, an architect and researcher of antiquities, worked here in the 1920s. In connection with the plans to reconstruct the eastern wing, he was the first to try and locate the residence of the local convent's superior. He thought the abbess might have lived in one of the buildings west of the church.⁸ The part of the building indicated by Kühnert was actually erected in the course of reconstruction in the 1840s, when the entire medieval kitchen was demolished. Voldemar Vaga expressed the same opinion in 1965⁹, as did Sulev Mäeväli, the

⁸ Ernst Kühnert, "Das Zisterzienser-Nonnenkloster zu St. Michael", *Beiträge zur Kunde Estlands*, Bd. X, Heft 1 (1924), 3, Abb. 1.

⁹ *Eesti arhitektuuri ajalugu*, koost. Harald Arman (Tallinn: Eesti Raamat, 1965), 164.

author of the booklet issued on the occasion of the 350th anniversary of the Tallinn 1st Secondary School in 1981.¹⁰ In 1997, when preparing the documentation for major repairs of the school, Mäeväli changed his opinion and placed the abbess's quarters in the northern part of the western wing.¹¹

It is not known where the first quarters and the private residence of the abbess were located. She could have lived in the eastern wing of the convent, which housed the nuns' dormitory, or in a separate wooden building. During the convent's early centuries, when the convent's economic situation was quite modest, such wooden buildings were quite common. To strengthen the convent's economy, Margarethe, the mother of the King of Denmark, placed St Olaf's Church under the patronage of St Michael's in 1267¹², and gave the convent a plot of land in Tallinn¹³ and another in Harju County¹⁴. Unfortunately, this did not bring about any rapid improvement in the convent's situation. It was still impossible to accumulate enough funds to quickly complete the planned enclosure according to the regulations of the Order. Of the stone constructions, only the eastern wing adjoining the church (St Wenzel's chapel) and half of the northern wing (refectory and kitchen) were fully completed. A lack of funds even made it necessary to abandon the vaulting of the building at the point where the vault brackets had been completed. It did not help that the King of Denmark had exempted the convent from taxes and other duties, as it was supposed to participate in the expensive construction of the defensive walls of the town, after the whole defence programme of the town was announced in 1310¹⁵.

¹⁰ Sulev Mäeväli, *Mihkli kloostri kujunemine Tallinna I Keskkooli hooneks* (Tallinn: Eesti Raamat, 1981), 12.

¹¹ Tiina Linna, Sulev Mäeväli, *Arhitektuuriajaloolised eritingimused Tallinna Gustav Adolffi Gümnaasiumi hoonetekompleksi kapitaalremondiks* (Tallinn, 1997, Manuscript in the Archives of the Tallinn Cultural Heritage Board [Tallinna Kultuuriväärtuste Ameti arhiiv, TKVA], N. 1/839), 3.

¹² *Liv-, Esth- und Curländisches Urkundenbuch nebst Regesten*, Bd. 1, hrsg. von Friedrich Georg von Bunge (Reval: Kluge und Ströhm, 1853), no. 404.

¹³ *Ibidem*, no. 403.

¹⁴ *Ibidem*, no. 514.

¹⁵ *Liv-, Esth- und Curländisches Urkundenbuch nebst Regesten*, Bd. 2, hrsg. von Friedrich Georg von Bunge (Reval: Kluge und Ströhm, 1855), no. 232.

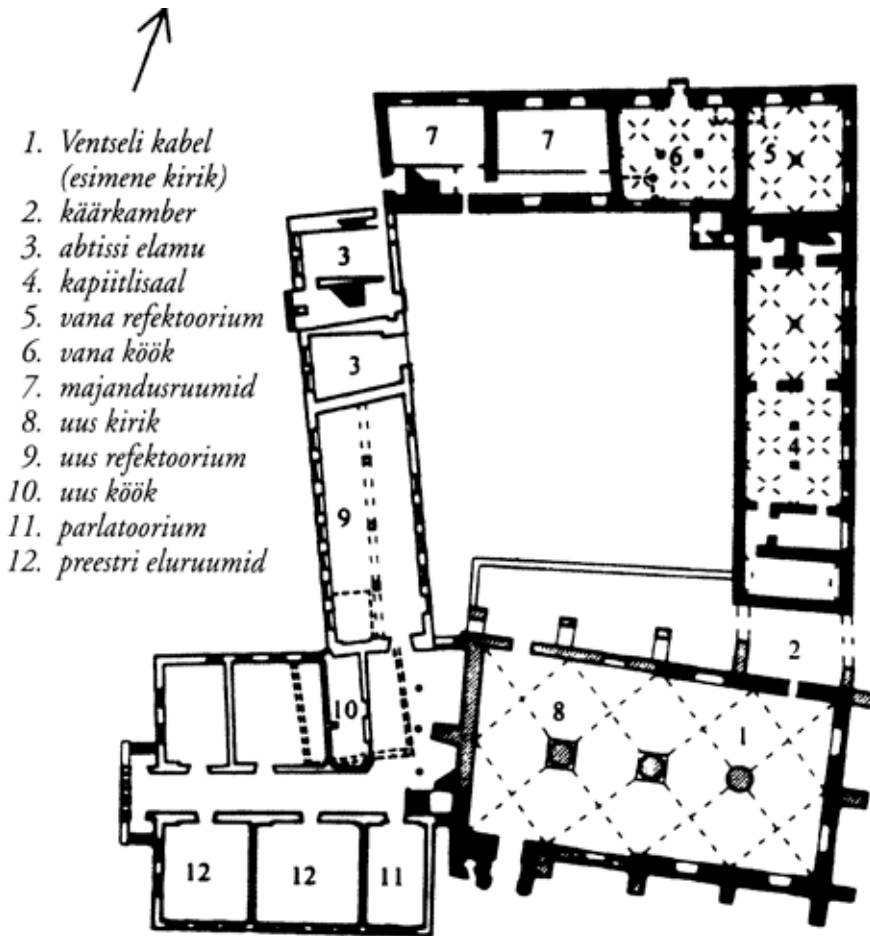


Fig. 1. Ground plan of St Michael's convent. Plan by Tõnu Parmakson.

The situation improved only in the 15th century, when large-scale reconstruction work¹⁶ started on the convent, and on several other sacral and profane buildings in Tallinn¹⁷. The plans included the building of a new residence for the abbess. In the course of construction work lasting almost two hundred years, the last of the existing wings to be completed was the western wing, the history of which was rather

¹⁶ Jaan Tamm, "Tallinna Püha Miikaeli kloostri ehitusloolisest kujunemisest", *Vana Tallinn*, VIII (XII) (1998), 61–62.

¹⁷ Mai Lumiste, Rasmus Kangroop, *Niguliste kirik* (Tallinn: Kunst, 1990), 31.

complicated. As with many buildings used for centuries, following its history is made even more difficult because the main storey has been repeatedly reconstructed, and the building itself closed to research. The wing that totally enclosed the closure functionally consisted of two parts. The northern part can be identified as the quarters of the abbess. This claim is justified by various features analysed below: this part of the building was detached from the rest of the convent and had a separate entrance from outside the closure; it was connected with the closure by just one door; all storeys were linked with wall stairs; all rooms on the residential storey were heated and they had an individual toilet and bathroom (Fig. 1).

Compared with the initial stages of the convent, the 15th century demanded much more, primarily in living conditions. As will be explained below, the special demands mostly concerned heating systems in the partly reconstructed basements, which had largely retained their original division of space. During the construction, they were still half-basements, of which there were two.¹⁸ One was in the northern and the other in the southern room of the basement storey. Considering the size and location of these rooms underneath the residential storey, it is clear that they were used for both heating and storage.

The residential and office rooms on the main storey of the building were heated by hypocausts,¹⁹ typical of medieval Tallinn. Both were situated at the eastern wall of the basement rooms; the air rose to the floor above through special vents from the heated loose stones on the firebox. Unlike the numerous hypocaust furnaces (a total of 13) in the Pirita convent (see below), the internal constructions of the hot

¹⁸ Jaan Tamm, Jaak Mäll, "Building archaeological investigations in the Cistercian St. Michael's Nunnery in Tallinn", *Archaeological Fieldwork in Estonia 1998* (Tallinn: National Heritage Board, 1999), 76.

¹⁹ For a comprehensive article about heat storage hypocausts, see Andres Tvaauri, "Late medieval hypocausts with heat storage in Estonia", *Baltic Journal of Art History* (Autumn 2009), 49–78. For some reason, Tvaauri does not mention a single hypocaust examined in the current article or use the reconstruction drawing based on the heating system of Pirita convent's chapter hall, which has been published (see Jaan Tamm, *Eesti keskaegsed kloostrid*, 70). In addition, there is a misleading error in Tvaauri's article. There are no hypocausts in the northern wing of St Michael's convent in Tallinn (there is, instead, the convent's bread stove). All three hypocausts found during excavations are located in the western wing (see Tamm, Mäll, "Building archaeological investigations in the Cistercian St Michael's Nunnery in Tallinn", 76–79).



Fig. 2. New door of the hypocaust body. Photo by Heidi Tooming.

Fig. 3. The old, walled-up opening of the hypocaust. Photo by Heidi Tooming.

air heating systems have not survived, due to later rebuilding. For example, in addition to losing the heating construction, the hypocaust in the northern basement room acquired a new door. Instead of the earlier opening in the southern wall, which was covered by a single stone plate, another passage with bricks was made in the northern wall of the hypocaust (Fig. 2); the previous opening was walled up (Fig. 3). This was probably a result of changes in the storeys and their interconnecting passages made in the 17th century, when the abbess's residence was turned into the quarters for the rector of the gymnasium and professors. The rooms previously used by only the abbess now had to accommodate at least two different inhabitants.

In addition to changes in the hypocaust, the wide staircase (Fig. 4) leading from the basement to a ground floor room was shut with ashlars, found during demolition work. During the convent period, the staircase served as access to the provisions needed and controlled by the abbess, especially the firewood, which was crucial in our climate. After the gymnasium took over the premises, the main floor



Fig. 4. Old, walled-up basement staircase. Photo by Heidi Tooming.

was still connected with the northern basement space by a narrow staircase in the northern wall, with a small opening for light (Fig. 5). The staircase ended on the ground floor, with a pointed-arch portal cut from four stones and closed by a wooden door (Fig. 6).

The function of the southern basement in the abbess's residence was also primarily to heat the ground floor, by means of the hypocaust at the eastern wall. As the unused basement space was filled with soil during a later reconstruction, and most of the hypocaust mouth remained behind the new, 96-cm-wide staircase, the precise construction of the heating element is unclear. However, the inner measurements of the upper part, not filled with soil, were 157 x 430 cm. The northern wall of the described basement space had two doors, with a lintel (Fig. 7) made of one limestone slab. The 90-cm-wide western opening led to a semi-arched stairway providing access to the southern room on the ground floor. The 96-cm-wide eastern opening, with a similar limestone lintel placed edgewise, led through a small hallway to the hypocaust in the north-eastern corner. As already mentioned, the



Fig. 5. Window opening of a wall staircase in the northern wall of the abbess's residence. Photo by Heidi Tooming.



Fig. 6. Doorways of staircases in the northern wall of the main storey. Photo by Heidi Tooming.



Fig. 7. Stairways in the northern wall of the southern basement. Photo by Heidi Tooming.

unused hypocaust was filled with soil and the small hallway later became the staircase leading to the ground floor interspace. Due to the insufficient thickness of the basement wall, the new stairs had to be rather steep; thus the single-stone lintel was partially cut and the staircase opening on the ground floor was fitted with a new portal that could be closed from the outside (Fig. 8).

Despite some differences in interior division, both basements have a number of similar features, due to being built during the same construction period. For example, in the western wall, i.e. on the external side of the convent, both rooms had small light openings to the ground, with a rather steeply rising base. These could be used for bringing the firewood in. There must have been an underground channel to conduct water, indicated by a lintel vault slightly higher than the existing limestone slab floor, which was located under the opening of the wall staircase in the northern basement. By the time the western wing was built in the 15th century, most of the elements



Fig. 8. Upper part and door of the new staircase. Photo by Heidi Tooming.

Fig. 9. Water channel with lintel and staircase. Photo by Heidi Tooming.

of the convent infrastructure (including sewage and soil water channels) had already been completed. The water channel, which was probably built earlier, was therefore left underneath the new building and covered with a lintel only where it ran through the northern wall (Fig. 9). As the window wall (Fig. 10) of the southern basement also has a lintel vault, this must be the point where the channel proceeded under the abbess's house. It is not possible to say at present whether it belonged to the sewage water channel located in the convent's household yard near the Sauna Tower, which got its name from the nuns' sauna and was often a source of conflict with the town²⁰. The same canal track was also partially used, although in the opposite direction, later when the sewer pipes were installed; this is clearly shown in the technical drawing dating from the 20th century. According to this drawing, the sewage of the water closet in the extension behind the eastern wall of the former residence of the ab-

²⁰ Schmidt, *Die Zisterzienser im Baltikum und in Finland*, 213.



Fig. 10. Inlet of the water channel and a window in the western wall. Photo by Heidi Tooming.

bess was conducted along the same route into the sewage system in Suur-Kloostri Street²¹.

Another common feature of the basements were the ceiling beams, which covered the massive vaulted hypocausts with slabs that reached the ground floor level; the beams also covered all the rooms in the east-west direction. The beams mostly consisted of angular, closely placed 8.5-m-long logs resting on the wall rafter, with the ends running east and west; according to the medieval custom, the logs were covered with irregularly shaped limestone slabs (Figs. 11 and 12). As seen in the ceiling construction in the southern basement, the beams were, if necessary, supported by an additional diagonal beam (Fig.13).

Considering the general dimensions of the abbess's residence (approximately 16.5 x 10.5), the size of the basement still used today,

²¹ Juhan Maiste, *Tallinna Püha Miikaeli kloostri ajalooline lühiülevaade* (Tallinn, 1990, Manuscript in the Archives of the National Heritage Board [Muinsuskaitseameti arhiiv, MKA], A-4811), ill. 78.

and also an opening that was later walled in, it is quite possible that another room existed between the two described basements. This is based on earlier measurements²². As the entrance through the southern wall of the northern room was later closed, we cannot precisely guess the size of the additional room. However, taking into account the dimensions of the other basement rooms, plus the main walls of the upper floor, we can estimate its size as about 2.5 x 4.7 m. The medieval building practice was always careful to economise and never wasted any effort on producing rooms for no specific purpose, and therefore this room must have had a certain function. Considering the strict sanitary requirements in the convent, this 'room' could have been the cesspit connected to the toilet (or latrine) in the bedroom of the abbess on the ground floor. This kind of toilet indeed existed on the ground floor.

Of the rooms on two floors of the abbess's residence, only the northern ones have survived in their original dimensions and partially in details. When the southern part of the building later, for centuries, accommodated the flats of the gymnasium rector and director, all rooms were reconstructed beyond recognition. Among the rooms on the ground floor or the main floor, the most remarkable is the northern room with its murals, where the ceiling beams were later also decorated with paintings. This was connected with the already described basement by a wall staircase. During construction, the room with east-west beams was not decorated in any way. In the western wall (initially probably also in the eastern wall), the beams rested on wall rafters and, in the eastern wall, later on crossbeams. The western wall had two windows (Fig. 14); the eastern part of the southern wall had two niches with shelves. Nearer the windows was a deep wall niche, which reached the floor and even included a seat. The door and the jambs that used to close it have disappeared. Considering the above, and the fact that the niche was situated above the closed basement, it must have been a privy. As the northern part of the room was drastically reconstructed, it is not possible to determine the location of the

²² For example, drawings by E. and Julius Armolik in 1948 or RUPI Eesti Ehitusmälestised in 1989. MKA, Ü-70, Ü-851.



Fig. 11. Ceiling beams in the northern basement. Photo by Heidi Tooming.



Fig. 12. Ceiling beams in the southern basement. Photo by Heidi Tooming.



Fig. 13. Extra beam supporting the beams in the southern basement.
Photo by Heidi Tooming.



Fig. 14. Northern room of the main storey. Photo by Heidi Tooming.



Fig. 15. Niche in the northern wall of the main storey. Photo by Heidi Tooming.

door that connected with other convent rooms. It might have been in the south-eastern part of the room and originally provided access to the interspace in the middle of the ground floor, from there on to the southern room, which shared a wall with the refectory (chapel?), and probably on to the western cloister, which provided entrance to the rest of the convent. The same interspace served as a passage from the abbess's rooms to the front courtyard of the convent. It was thus a passage controlled by the abbess, leading from the front courtyard outside the closure into the closure, the inner courtyard being closed to the outside world. The western section of the room's northern or outer wall has a 2.8-m-wide niche that almost reaches the ceiling; there is a wooden lintel resting on two corner supports (Fig. 15). This kind of niche would be perfect for a bed. East of the niche is a door opening that has lost its original appearance; a staircase starting from it leads to the first floor, or the entresol. Still further to the east is a stairway with a pointed-vault portal made of four stones and a door opening



Fig. 16. Ceiling beams of the first floor in the abbess's residence. Photo by Heidi Tooming.

outwards. This staircase provided access to the northern hypocaust basement examined in detail above.

The northern room of the first floor, or the entresol, in the abbess's residence is covered with a beam ceiling but, unlike the basement and the ground floor, the beams here are placed on a north-south axis (Fig. 16); they were also never painted afterwards. Some of the timber in the ceiling had earlier been used in other constructions (Fig. 17). The entrance of the wall staircase leading to the lower storey is located in the northern wall of the room. Next to the entrance is a deep, 150-cm-wide niche, going through almost the entire wall thickness, which was later turned into a window (Fig. 18). Research has not established the function of the first floor rooms in the abbess's residence. No traces of any heating system have been found either (there might have been stoves), so the rooms could have been used temporarily and seasonally for work.

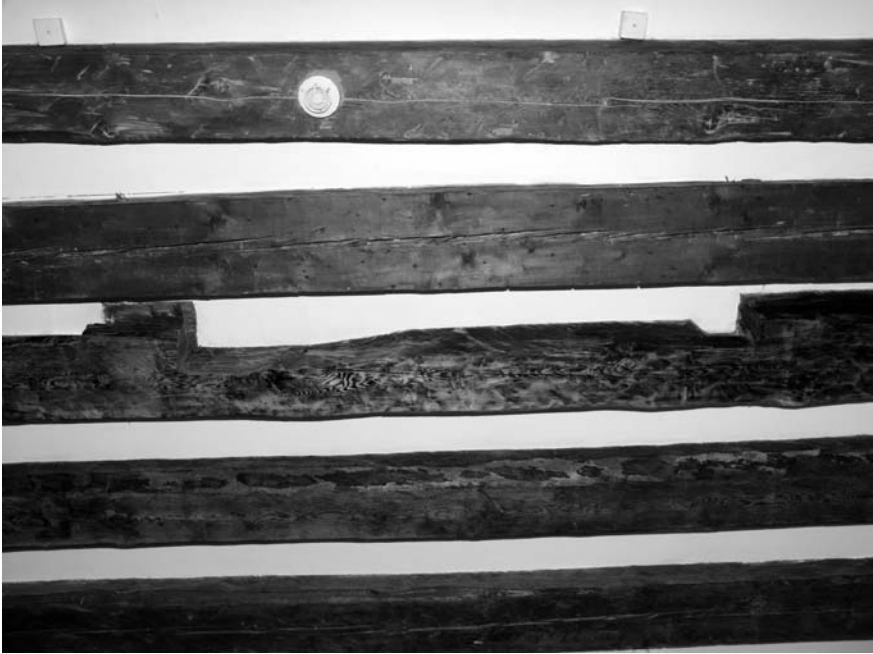


Fig. 17. Reused beams on the first storey. Photo by Heidi Tooming.

THE AGE OF THE ABBESS'S RESIDENCE

Earlier researchers have dated the western wing of the convent to the 14th-15th centuries. According to Villem Raam, the refectory wing was completed in the early 15th century.²³ Sulev Mäeväli dates the western wing and the adjoining abbess's residence back to the second half of the 14th century.²⁴ The scientific answer, however, lies in the building itself, or rather in its ceiling beams. The abbess's residence is the only three-storey (together with the half-basement or the socle floor) house in St Michael's convent, completed in the course of one construction period, where all storeys were covered with ceiling beams. In 1998, Alar Läänelaid, a researcher at the Institute of Ecology and Earth Sciences of Tartu University, carried out dendro-chronological analy-

²³ Villem Raam, "Mihkli (Miikaeli) naistsistertslaste klooster Suur-Kloostri t. 14–16", *Eesti arhitektuur 1* (Tallinn: Valgus, 1993), 230.

²⁴ Linna, Mäeväli, *Arhitektuuriajaloolised eritingimused Tallinna Gustav Adolphi Gümnaasiumi hoonetekompleksi kapitaalremondiks*, 4.



Fig. 18. Niche in the northern wall, later turned into a window. Photo by Heidi Tooming.

sis of the wood of the beams (seven from the southern basement, six from the northern, and 16 from the entresol; a total of 29). The analysis determined the year when the house was built.²⁵ It turned out that 37- to 181-year-old pine and spruce logs were used in the ceilings; the trees were cut in 1448. As this was construction timber that did not need to be dried (unlike timber for furniture), the construction probably started in the summer following the year when the trees were felled (usually from autumn to spring), i.e. in 1449.

The abbess's residence of St Michael's convent thus represents a small urban house with an established space solution and technical elements (not the *diele-dörnse* type²⁶ common in Tallinn), where all storeys had a fixed function – heating systems and storage space in

²⁵ Alar Läänelaid, *Tallinna Mihkli naistsistertslaste kloostri (Gustav Adolfi Gümnaasium) lae- ja põrandatalade dendrokronoloogiline dateerimine* (Tartu, 2001, Manuscript in TKVA, N. 9/861).

²⁶ Helmi Üprus, "Das Wohnhaus in Tallinn vor 1500", *Häuser und Höfe der handeltreibenden Bevölkerung im Ostseegebiet und im Norden vor 1500. Beiträge zur Geschichte und Soziologie des Wohnens*, Acta Visbyensia, V (Visby: Museum Gotlands Forsnal, 1976), 145.

the half-basement, residential quarters and chapel (?), together with an entrance hall in between on the ground floor; and seasonally used workrooms on the first floor. Although medieval residential architecture in Tallinn has not been sufficiently researched, the available information allows us to claim that the abbess's residence, with its two-room division through all storeys, resembles the type of building where artisans usually lived²⁷. Such houses (e.g. at Pühavaimu 15) had their entrance and windows in the side walls. Compared with similar Western European Cistercian monasteries, the abbess's residence of St Michael's convent resembles the house of the abbot at Ter Duinen's²⁸ monastery in Flanders, or the abbess's house at Herkenrode in Limburg²⁹.

BRIGITTINE CONVENT IN PIRITA

Unlike St Michael's convent, which has survived, although its functions are now totally different, the Pirita convent has reached us in ruins. To be precise, it has been in ruins for the past 430 years. As its construction history has been repeatedly tackled, this article will not examine it in great detail.³⁰

The convent, with a north-south width of 133.5 m and east-west width of 75 m, consists of three functionally independent parts. The northern part held the nuns' closure, the southern contained the buildings for the clergy, and the church stood between the two, and still dominates the ruins. The residence of the abbess (Figs. 19 and 20) was situated in the inner courtyard of the nuns' closure, on the eastern side of the unevenly wide western cloister. This position of the abbess's house was caused by a radical change in the planning of

²⁷ Üprus, "Das Wohnhaus in Tallinn vor 1500", 156, Abb. 14.

²⁸ Matthias Untermann, *Forma Ordinis. Die Mittelalterliche Baukunst der Zisterzienser* (München: Deutscher Kunstverlag, 2001), 70, Abb. 8.

²⁹ Thomas Coomans, "Cistercian Nunneries in the Low Countries", *Studies in Cistercian Art and Architecture*, Vol. 6 (Kalamazoo: Cistercian Publications, 2006), 113. The author is grateful to Anneli Randla for pointing out these parallels.

³⁰ Mention should be made of: Eugen von Nottbeck, Wilhelm Neumann, *Geschichte und Kunstdenkmäler der Stadt Reval* (Reval: Franz Kluge, 1904), Bd. 2, 130–133; Villem Raam, *Pirita klooster* (Tallinn: Eesti Raamat, 1984). The following reference relies on: Villem Raam, Jaan Tamm, *Pirita Convent. The History of the Construction and Research* (Tallinn: Eesti Entsüklopeediakirjastus, 2006), 26–56.

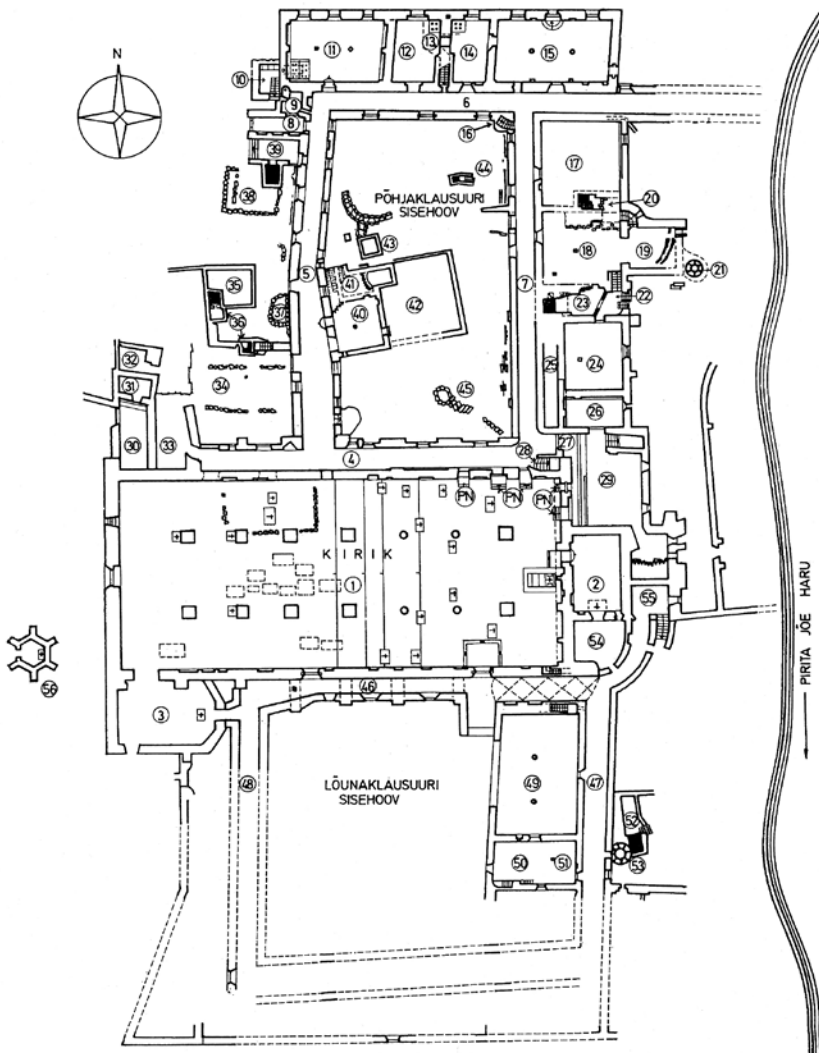


Fig. 19. Ground plan of the Pirita convent. Plan by Tõnu Parmakson.

the convent. The result was that the whole planned western wing was not built, but was replaced by buildings outside the closure, which were separated from the inner courtyard by a two-storey cloister. The uneven width was the result of the above-mentioned radical change during the construction work. The abbess's residence was one of the

front buildings erected between 1407 and 1417, which were not demolished later when the Brigittines' regulations stipulated another planning. It is, therefore, one of the oldest parts of the convent, which initially stood apart from the other buildings. Compared with the above-described Cistercians, the Brigittines did not yet have an established Order hierarchy (the constitution of their Order, 'Mare Magnum', was confirmed only on 1 May 1413³¹). For that reason, the convent had to prove the necessity of its existence not only to the Tallinn city authorities, but also to the papal curia.³²

In the end, thanks to donations, legacies, lands given to the convent for free and the profit coming from various manors, the Brigittines managed to establish in Pirita one of the most monumental convents in the Baltic countries. However, their economic situation throughout their existence was rather modest. This was evident in the reduced closures and poor materials sometimes used in construction, evident in the general plans even today. The situation was especially poor during the initial years of the convent, when they began to construct low-density buildings (the wooden church/chapel in the eastern bays of the present church, Bridget's chapel in the northern nave, houses for the first inhabitants on the grounds of the northern closure, workshops etc.). The abbess's residence, built in the early decades of the 15th century, was among them.

PIRITA ABBESS'S RESIDENCE

Relying on the analysis of the storeys and the peculiarities of planning designs, the abbess's residence at St Michael's convent simply had to be tracked down among all the building documentation that had been available for centuries, and then dated by scientific methods. The similar building at Pirita first had to be excavated. During the excavations at the Pirita convent ruins from 1975 to the 1980s, Villem Raam compiled reports of its architectural history. In these papers covering the first two years, he called the building excavated on the

³¹ Ruth Rajamaa, "Pirita kloostri asutamine ja ülesehitamine 1407–1436 Rootsi allikate valguses", *Kunstiteaduslikke Uurimusi*, 16 (4) (2007), 79, fn. 24.

³² *Ibidem*, 82.



Fig. 20. Excavated and conserved foundations of the abbess's residence.
Photo by Heidi Tooming.

eastern side of the western cloister a courtyard house.³³ However, due to its singular position, the construction analysis regarded it as the abbess's house from the start³⁴.

Although part of the building, the northern part of the basement floor, was used to store potatoes until the 1950s, it required archaeological excavations to uncover all of it. The main research work in the abbess's residence took place in 1975, and only details (external sides of walls, vaults, hypocausts and wall niches) were not thoroughly explored. This particular task was completed in 1976.

The basement walls revealed during excavations were not particularly strong, especially in the western wall, which partially collapsed

³³ Villem Raam, *Arhitektuuriajalooline aruanne Pirita kloostri väljakaevamistöödest 1975. a. suvel. I Nunnade klausuuri ehitused* (Tallinn, 1976, Manuscript in MKA, P-3201) 31–38; Villem Raam, *Hoovimaja IIa: 1,2. Pirita kloostri väljakaevamiste arhitektuuriajalooline aruanne. Tööd 1976. a. suvel. Nunnade klausuuri loodenurk, läänepoolne, sisehoov ja kiriku kaks idatraveed* (Tallinn, 1977, Manuscript in MKA, P-3614), 22–34.

³⁴ *Ibidem*, 32.

soon after excavation. Other engineering and technical details emerged as well. The external surface of the walls was extremely uneven; the thickness of the walls varied from 45 cm to 90 cm. The average thickness was thus 60-75 cm (2-2.5 feet). The walls were probably laid so that the stones in the external wall freely reached the wall of the hollow dug into sandy soil. The thinness of the walls was probably intentional and did not need to be strengthened. In order to balance the tension on the sides of the vaults, it was enough to use a dense wall of sand, against which the stones rested. The same method of constructing walls was used in the hospital building outside the closure, dug into the steep banks of the Mudajõgi River.³⁵ Only one conclusion about the house can be drawn from the thickness of the basement walls: it must have been built of wood and not of stone.

However, the basement floor was built according to higher standards. The opening in the eastern wall, initially regarded as a door, turned out to be an exceptionally narrow and high furnace. The width between its walls was 75–78 cm, the inside depth was 110–120 cm, and the height of the furnace itself to the lower vault was about 50 cm. The height of the upper vaulted ceiling from the floor was about 185 cm, and from the floor where the heat accumulation stones were kept, about 110 cm. The back wall of the firebox was built of limestone slabs placed edgewise against the sandy soil. The lower part of the firebox was almost intact, with one brick marking the ceiling vault of the upper, 'heat storage' room. The furnace itself consisted of two limestone ceiling vaults; a few bricks were found there as well, typically measured after the foot size. A layer of bricks covered the vaults, and was again used to line the back wall of the firebox. Some stones had survived between the vaults. Considering its narrowness, the height of the space with heat accumulation stones was remarkable, and the warmth emanating from it must have been considerable. The walls of the furnace could have been lined with bricks as well, because the limestone side and back walls have survived rather well. At the same time, it is unclear how the smoke flue of such a narrow

³⁵ Jaan Tamm, "Archaeological monitoring on the construction site of St. Bridget's centre", *Archaeological Fieldworks in Estonia 2000* (Tallinn: National Heritage Board, 2001), 86–88.

furnace was constructed. It is quite likely that a separate chimney was built in the south-eastern corner of the basement, because the foundation wall was thicker there. The described hypocaust, with its vaulted room for heat accumulation stones, is of an older type than those at Pirita (a total of 13), and is especially remarkable due to its size, which contrasts with the narrow format.

In his report of 1976, Villem Raam wondered why such a hypocaust was actually needed, as the northern part of the same building already had one of the largest furnaces in the whole convent; the latter could easily heat the room above the basement, i.e. the main storey.³⁶ He also provided the answer: the hypocaust was set up together with the basement in order to heat it. Installing a heating system in the basement of the courtyard house indicates that the room was constantly used as semi-dark living quarters. The only known small opening, of which the lower part of the window niche with its slanted floor has survived, was located in the upper part of the southern wall. The same room was used as living quarters after the convent was destroyed, which is evident in the foundation of a firebox found in the north-eastern corner.

Other elements in the room, primarily the wall niches, also indicate that it initially served as a residence. Three of the niches were located in the western wall, due to the later western cloister, and they lacked traces of interior segmentation. The niche found in the northern wall, about 90 cm from the floor, was 102–104 cm wide and about 90 cm high. The niche was lined with 5–6-cm-thick boards split off from a log by means of wedges. Their traces in the wall plaster were clearly visible, which made it possible to measure their width: 27–30 cm. The edges of the boards facing the wall were rounded off, probably so that the plaster covering the niche walls into which the planks were pressed would help to keep the planks tightly together. The distance between the shelves was 30 cm, and we can assume that the local master used a 30-cm foot as the measurement unit. The niche in the eastern wall of the basement did not much differ from the previous one, located 120 cm from the floor. The width was 80

³⁶ Raam, *Hoovimaja IIa:1,2*, 24.

cm, the height 50–51 cm and the depth also 30 cm. Considering the traces in the plaster layer, it is clear that the split logs lining the niche were rounded off at the back.

In order to better preserve and display the vault of the abbess's residence, initially known as the courtyard house, the fragments of the surviving vault spandrels were examined especially carefully. We can say, as a result, that the initial four bays of the vault had a ground plan resembling a square, and rested on a central pillar; they covered the room, the ground plan of which resembled a square of 587 x 584–610 cm. Or, in other words, the ground plan of the basement resembled four groin vaults, the result of crossing two barrel vaults, which did not have transverse ribs, because the construction based on cylinder vaults did not need them. Analogously with a cylinder vault, the crown line turned out to be close to the horizontal (ascent per 1 m was 0–9.5 cm). As already mentioned, the bays of the vault rested on a central six-facet pillar, which was cut (facets: 24, 25, 22, 27, 22 and 25 cm) out of monolith sandstone and placed on a small base consisting of a single boulder. The basement also had a 2-m platform in the north-western corner, forming a small hallway; from there, a limestone staircase with nine steps and 1.8 m high led outside.

As mentioned above, the building had another hypocaust that heated the main storey. Its entrance was next to the door of the residential basement in the northern wall of the abbess's house. The current article will not thoroughly examine the two-part heating complex (a heated basement with a window and heat storage furnace at the back), established during the reconstruction and extensions, which was much bigger than the previously described hypocaust (2.3 x 6.7 m) and was traditionally used elsewhere in Tallinn (and Pirita). Most of its interior construction had been demolished during its later usage before the 1950s. Only three vaults supporting the heat storage space have survived. However, the described hypocaust differs from the analogous heating system at Pirita, as it was located outside the main building. This was probably a result of a lack of space because, had the furnace been built in the smaller basement, there would have been room for nothing else. The same solution was applied upstairs,

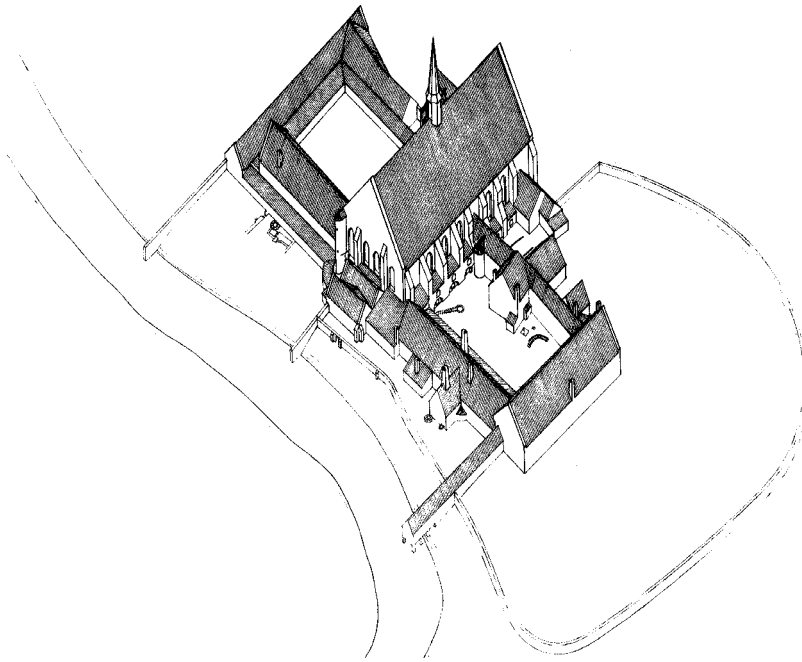


Fig. 21. Reconstruction of the first abbess's residence at Pirita. North-eastern view. Reconstruction by Villem Raam and Kalle Põllu.

thus saving a lot of floor space. Above the hypocaust's cover plate, the smaller room had to protrude as an alcove.³⁷

As was already mentioned, the main floor of the abbess's house was wooden, and thus there is no data about its original external shape. The first reconstruction often presented in various publications³⁸ is no more than an architectural drawing as conjectured by the researchers of the convent (Fig. 21). After all, the building meant for the abbess and provided with a live-in basement was originally supposed to be only a temporary residence. According to the general plan, the first house had to be demolished after the abbess's quarters were established in the western wing of the nuns' closure. The reason

³⁷ Raam, *Hoovimaja IIa*: 1, 2, 27.

³⁸ Villem Raam. *Bibliograafia*, koost. Kaur Altoo ja Eve Palginõmm (Tallinn: Eesti Muinsuskaitse Selts, 1991), illustrations; Villem Raam, "Pirita klooster Merivälja teel", *Eesti arhitektuur 1* (Tallinn: Valgus, 1993), 168; Jaan Tamm, "Om utforskningen av den materiella kulturen i Estland kloster", *Hikuin*, 20, (1993), 205, fig.4, 5.

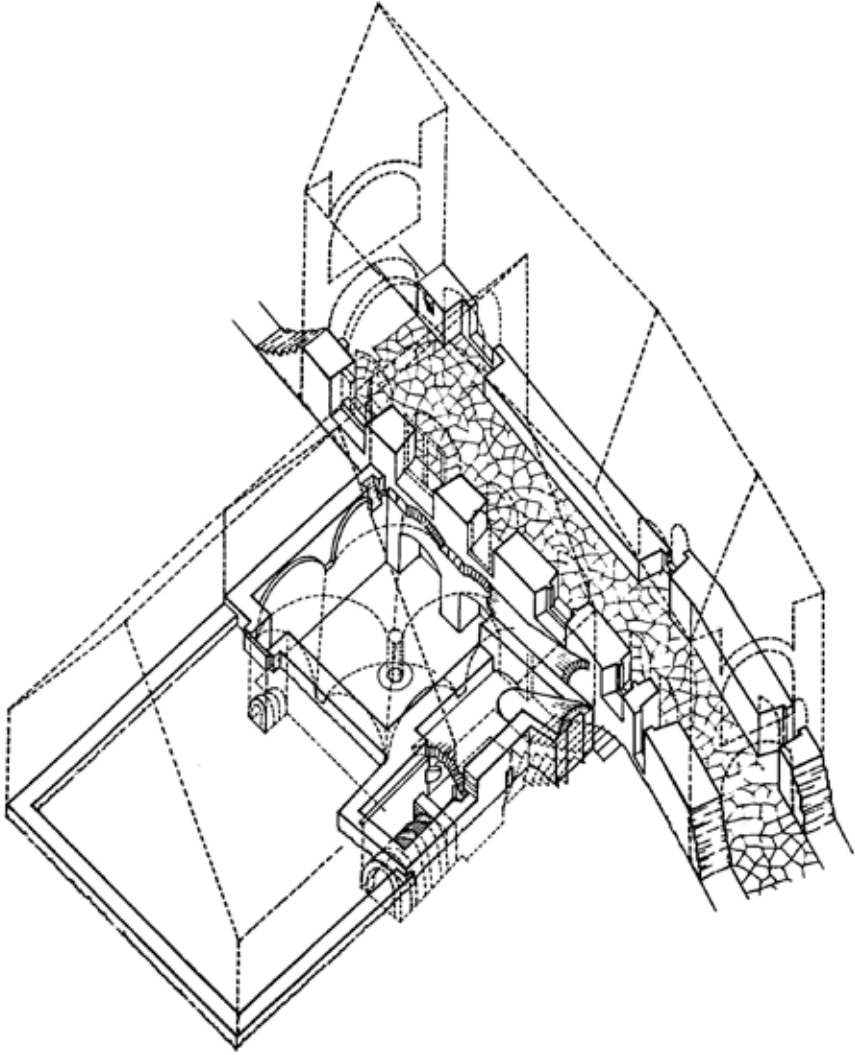


Fig. 22. Reconstruction of the second abbess's residence at Pirita. North-eastern view. Reconstruction by Villem Raam, Jaan Tamm and Kalle Põllu.

the abbess's house was not demolished, but instead reconstructed, could have been its favourable location in the northern part of the western cloister of the nuns' closure, only a few steps from the main entrance. At Vadstena, the mother convent of Pirita, all rooms needed

by the abbess for living and communicating with others were also in the eastern wing, i.e. close to the main entrance, as stipulated in the spatial programme of St Bridget.³⁹

As a compact western wing was never completed, the house with a stone basement and wooden main storey used by the abbess was included in the general plan. The eastern wall of the cloister partially replaced the western wall of the old abbess's house, so that it rested on the new foundation established on the inner side of the western wall of the live-in basement. The foundation produced niches 187 cm wide, consistent with the measurement units used in construction – the Rijnland foot (31.4 cm).⁴⁰

The connection between the old abbess's house and the new western cloister was provided by a new door with a semi-circular stone step in the eastern wall of the western cloister. As the new western cloister closed the windows that lit the earlier building, new windows were built in the eastern wall of the cloister, opening into the cloister. On the basis of the surviving lower part of the window frame north of the door, these were 109-cm-wide biforum windows with imposts, typical of Pirita. Quite understandably, such a small building was unable to meet the needs of the head of a prestigious convent; therefore, an extension of 9.8 x 11.0 m (ill. 22) was set up in the spare space on the eastern side. By 1975, nothing had survived of the latter except an 80-cm-long foundation fragment of a few rows of stones, which were a part of the eastern wall. As a result of the lightness of the wooden building on top of it, and the good load-bearing capacity of the soil, the foundation was only about 10 cm deep. The northern wall of the wooden building was marked by an approximately 1.6-m-long foundation segment, sealed with a weak mixture of lime and consisting of three stone layers. This touched the northern wall of the already described big hypocaust, although it was 29 cm forward. Nothing survived of the southern wall. The lack of any stone processing and lime remains in the foundation zone of the building is proof that it was a wooden house.

³⁹ Ruth Rajamaa, *Systrarnas verksamhet, undervisning och uppfostran i Vadstena kloster 1384–1595* (Stockholms Universitet, 1992), 70, fig. 1.

⁴⁰ Raam, *Hoovimaja IIa:1,2*, 26.

Buildings in daily use needed sanitary facilities. The abbess's house at St Michael's had a privy. Due to the large number of inhabitants (the full convent may have had up to 60 sisters), the toilet in the nuns' closure at Pirita, as at Vadstena, was ingeniously established. It was located in the eastern end of the northern cloister, above the steep banks of the Mudajõgi River, a branch of the Pirita River. This, however, was not good enough for the abbess. First, the toilet was built much later than the abbess's house and, secondly, it was too far away. The problem was solved by building a new little house of stone and wood at the northern side of the abbess's residence, just 140 cm from its northern wall. The only stone part had the width of only one stone, the measurements were 173–194 x 190–195 cm, and it was 3 m underground. As the stone wall was rather thin, the storey above ground was wooden. The entrance of the lavatory was probably in the western side, thus providing direct access through a door, with a stone portal in the eastern wall of the cloister, into the western cloister.

Sometimes it takes decades to establish the function of a building or a part of it, as happened with the lavatory of the Pirita abbess's residence. As the supervisors of the research, the architectural historian Villem Raam and the current author, had never encountered anything analogous in their previous work, we turned to the ethnographers of the Institute of History. Relying on some parallels east of Estonia, they suggested that the building might have been a cold storage space in the soil, where goods were kept over the summer. For that purpose, the wooden lid of the hollow had to have been covered with straw or something similar.⁴¹ However, the notion of a small basement with an unknown purpose survived for a long time.⁴² A few decades later, I happened to read a collection of articles about Braunschweig urban archaeology,⁴³ which, among other things, tackled analogous brick

⁴¹ Jaan Tamm, *Pirita kloostri varemete 1976. a. arheoloogiliste kaevamiste vahearuanne* (Tallinn, 1977, Manuscript in MKA, P-3246), 36.

⁴² Raam, *Pirita klooster*, 9, no 43 on the plan; Raam, "Pirita klooster Merivälja teel", 170, no 43 on the plan.

⁴³ Hartmut Rötting, *Stadtarchäologie in Braunschweig*, *Forschungen der Denkmalpflege in Niedersachsen*, 3 (Hameln: Niemeyer, 1997), 54, Abb. 25, 26.

and rubble constructions. This collection finally made it possible to determine the real function of the Pirita 'basement'⁴⁴.

The abbess's residence differs from the other 15th century buildings at Pirita not only in its material (local poor-quality limestone, sandstone and boulders), but also in its type (residential basement, together with a wooden ground floor built in two stages above the basement). It rather resembles a *caminata* (*Kemenate*) type of building, which was widely used in the previous century (from the 13th century in Western Europe)⁴⁵. In Tallinn, too, the tradition of residential basements was quite brisk beginning in the 14th century.⁴⁶ The *caminata* type is characterised by basements in one part of the building, an above-ground section divided into two rooms, and wood as the material.

It can only be guessed whether such a modest house was built because of insufficient resources or whether there simply was not enough knowledge for something grander in the initial decade of the convent. In 1412, together with the first abbess Christina Tocke, the mother convent in Vadstena also despatched to Pirita the experienced builder Stephan Liangason-Lapidica,⁴⁷ but the abbess's residence was probably already completed by that time. Besides, the best builders could not work at Pirita, because Tallinn wouldn't allow them to.⁴⁸ Therefore, the abbess's house was probably constructed by fairly inexperienced local masters. The reason why the abbess's house was not demolished, but instead reconstructed, could have been its favourable location in the northern part of the western cloister of the nuns' closure, only a few steps from the main entrance. At Vadstena, all the rooms needed by the abbess for living and communicating with others were also in the eastern wing, i.e. close to the main entrance, as stipulated in the spatial programme of St Bridget.⁴⁹

⁴⁴ Jaan Tamm, *Eesti keskaegsed kloostrid*, 66, no 43 on the plan; Raam, Tamm, *Pirita Convent. The History of the Construction and Research*, 27, ill. 34, no 43 on the plan.

⁴⁵ Rötting, *Stadtarchäologie in Braunschweig*, 319.

⁴⁶ Üprus, "Das Wohnhaus in Tallinn vor 1500", 160.

⁴⁷ Raam, *Pirita klooster*, 6; Raam, Tamm, *Pirita Convent. The History of the Construction and Research*, 19.

⁴⁸ In 1413, the Tallinn town council banned stonemasons and other masters from working in Pirita (Rasmus Kangroo, Mai Lumiste, "Mõningatest Tallinna 15. sajandi arhitektuuri dateerimise küsimustest", *Töid kunstiteaduse ja -kriitika alalt 2* (Tallinn: Kunst, 1978), 274).

⁴⁹ Rajamaa, *Systrarnas verksamhet*, 70, fig.1.

SUMMARY

This article has examined two similar convent buildings with residential function. The people using the buildings – abbesses – were similar in their social positions as well. To summarise the above, we could say that, although only 30–40 years stood between the dates of these two buildings, which had analogous functions, they are architecturally and technically totally different.

The abbess's residence at Pirita is considerably more archaic, and its vaulted basement with a shaft hypocaust and sandstone central pillar was used as living quarters. The above-ground one-storey wooden building could be heated by the hypocaust on the northern side of the basement. A separate lavatory was set up on the northern side, with a limestone cesspit and wooden above-ground part. A wooden eastwards extension was later added to the abbess's residence.

The abbess's residence at St Michael's convent was similar to a type of small house quite common in Tallinn, mostly used by artisans. It was characterised by a two-part half-basement with heating systems, and a similar set of rooms in the main part on upper floors, which were connected by wall stairs. Instead of the usual gabled end façade, its main façade was instead a side wall with windows and a door, partially forming a side wall of the closure's external perimeter.

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KOKKUVÕTE: Abtissimajadest Eesti kloostriarhitektuuris Tallinna tsistertslaste Püha Miikaeli ja Pirita birgitiinide kloostri näitel

Artiklis on vaatluse all kaks ühelaadilist elamisfunktsiooniga hoonet Eesti keskaegsetes naiskloostrites. Ka hooneid kasutanud isikud – abtissid – olid oma sotsiaalselt positsioonilt võrreldavad. Kokku võt-

tes võib öelda, et kuigi kahe, ühesugust funktsiooni kandnud hoone rajamisaja vahele jäi vaid napid 30–40 aastat, on arhitektuurselt ja tehniliselt tegemist kahe täiesti eriilmelise rajatisega.

Pirita abtissimaja on oluliselt arhailisem ning selle šahthüpokaustiga varustatud võlvid ja liivakivist kesksambaga keldriruumi kasutati elukeldrina. Ka maapealne, puidust ühekordne pealisehitus oli köetav keldri põhjaküljel asetseva hüpokausti abil. Hoone põhjaküljele rajati eraldiasetsev, lubjakivist lampkastiga ja puidust maapealse osaga käimla. Hiljem on abtissimaja laiendatud ida suunas puidust maapealse juurdeehituse võrra.

Püha Miikaeli kloostri abtissielamu esindas Tallinnas mujalgi esinevat, põhiliselt käsitöölise poolt kasutatavat väikeelamu tüüpi. Seda iseloomustab kaheosaline küttesüsteemidega poolkelder ning põhiosas samalaadne ruumijaotus ka ülemistel, omavahel müüritrepidega ühendatud korrustel. Tavapärase viiluga otsafassaadi asemel on sellel akende ja välisuksega varustatud peafassaadiks hoopiski osaliselt klausuuri välisperimeetri moodustav külgein.

