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# ARHEOLOOGILISED VÄLITÖÖD EESTIS

## ARCHAEOLOGICAL FIELDWORK IN ESTONIA

2002

Koostanud ja toimetanud  
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## ARCHAEOLOGICAL INVESTIGATIONS OF THE LAIUSE CASTLE

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Non-profit organisation AEG carried out archaeological investigations and excavations in the medieval Order's castle of Laiuse. The investigations consisted of the excavation of the area of the cable track, uncovering the walls of a gate building on the western side of the castle, and partial uncovering of the walls of the building in the northwest corner of the yard of the castle (Figs. 1 and 2). While the excavations of the track area were rescue excavations, the excavation of the front gate formed a significant part of the investigation of one of the most important constructional elements of the fortress complex for its future exposition. The partial excavation of the walls in the courtyard was aimed at further identification of the earlier construction phases of the castle and the possible exposition of the walls.

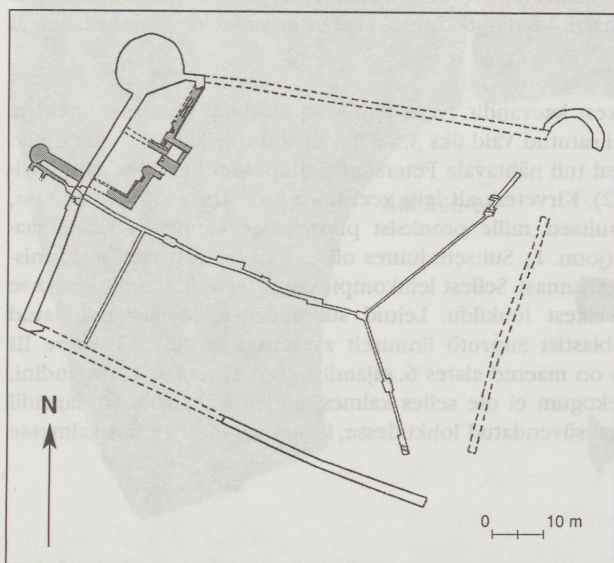


Fig. 1. The castle of Laiuse, the cable track and the excavated part of the wall.

Joon. 1. Laiuse linnus, kaablitrass ja väljakaevatud müürid.

The cable track ran into the territory of the castle through the gateway in the western wall, traversed the courtyard along its E-W axis and branched off into the four corners of the courtyard. The length of the track in the yard was 180 m and it was excavated by hand, beginning with the topmost layer beneath the sod. In the first stage trial pits were dug in the track, to establish the presence, thickness and nature of the cultural layer, its main deposits and the density of finds. It appeared that beneath the sod layer and the thin soil under it lay a darker brown layer, with a

thickness of 20 cm or more, containing medieval finds and small fragments of brick and lime mortar. Therefore it was decided to excavate the plot by hand start-



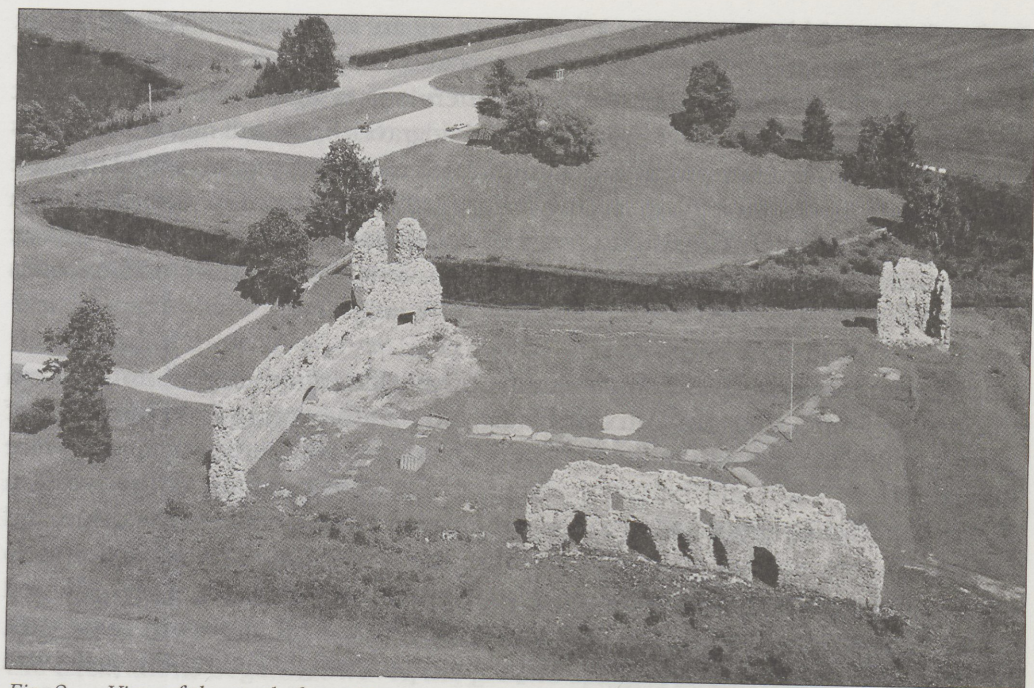


Fig. 2. View of the castle from W.  
Joon. 2. Vaade linnusele läänest.

ing from the topmost layers already. The nature and stratigraphic position of the mentioned topmost layer, and the medieval finds including a brooch typical to the 16<sup>th</sup> century, a silver coin of Ivan IV and several arbalest arrowheads contained in it indicated that this was a fill layer originating from levelling the ground. The soil was not located in its original position, it could have come from the slope of the hillock outside the castle wall. It had been brought to the courtyard to level the ground at an altitude of 83.60–83.40 m in the Baltic system. Beneath this so-called secondary layer, a 10–15 cm thick layer of sandy soil of a lighter brownish colour came to light, containing a lot of mortar rubble, fragments of bricks and limestone pebbles; apparently this layer was formed in a period when the castle was not used, the walls were already in ruins and were deteriorated further by weather. In places it might also be a demolition layer from supplying building material.

One of the most significant earlier layers, located deeper than the one described previously, was darker brown, compact and contained a small quantity of admixture. It was spread upon the large pavement stones, which came to light in the gateway, ran eastwards (at an altitude of 83.25–83.20 m) and at a distance of 10 m from the gate covered also the granite pavement of the medieval courtyard,



uncovered in the western part of the yard at an altitude of 83.14–82.98 m. Pavement was observed only at the gateway and in the track area SE of the NW building of the castle. Further eastwards there was a light yellowish compact ground-levelling layer of clayey sand containing gravel, brick and mortar rubble as well as fragments of limestone and granite. After removing the levelling layer, the upper horizon of the paved layer was unearthed in the E-W-oriented main branch of the track. It consisted mostly of small limestone fragments and some granite stones, with a few brick fragments. The worn upper surface of the stones indicated that it was used as a yard surface for a long time.

Upon the pavement several larger lumps of petrified lime mortar, up to 2 cm thick, were found. Their smooth sides indicated that they came from the joints of a brick or limestone wall. On the same level, hardened and burnt clay lumps were discovered, which might be clay packings of log constructions. In the western part of the track, it was decided to leave the paved ground beneath the cable, and the trench was not dug deeper. To establish the level of the original soil, and to study older and deeper layers, deeper trial pits were dug in the E-W oriented

track at 30, 50 and 60 metres. In these pits, deposits came to light below the yellowish levelling layer and the pavement layer. It is practical to divide these into deposits earlier and later than the 5–10 cm thick layer with burning traces discovered on the level of 82.70–82.45 m (Fig. 3).



Fig. 3. Layer with burnt traces in the area of the cable track.

Joon. 3. Põlengujälgedega kiht kaabli-trassi alal.

At the 40<sup>th</sup>–55<sup>th</sup> metres of the track a 20–25 cm thick deposit of mixed brownish soil and yellowish sand lay upon the burnt layer. It contained limestone slabs measuring up to 50 x 30 x 10 cm, larger granite stones and a few brick fragments. This layer is most likely connected with extensive construction activities in the castle, the stones being a part of unused building material.

Below the burnt layer, sandy deposits and layers containing humus came to light, which could be ground levels of the earlier construction phases of the castle. Between the burnt layer and the earlier ground levels,



two layers of limestone and granite stones, sand and mortar rubble as well as fragments of roof tiles and clay patches could be observed. These apparently relate to earlier construction phases of the castle, as does a local layer of pure white lime upon the original clayey soil, which seems to indicate lime-burning inside the courtyard. The average thickness of the cultural layer in the trial pits was over 1 m, while mixed moraine had been piled and spread upon the original soil. This confirms that the courtyard of the castle is located partly on an artificial knoll. The cable track in the central part of the courtyard did not cross the area of buildings. Walls came to light only at the NE end of the NE-SW-branch of the track and at the SE end of the NW-SE branch, in the NE and SE corners of the courtyard. The first of these were the foundations of two post-medieval wooden buildings; the latter could be associated with a medieval house with a cellar.

### THE AREA OF GATE BUILDINGS

The constructions of the medieval front gate between the gateway in the western side of the enclosing wall and the moat were not visible on the ground before the excavations began. However, the ground at the sides of the lane leading from the gateway to the courtyard was somewhat higher than the lane itself, so it could be presumed that the overground part of the projecting walls of the medieval fortified gate might be partly preserved, located somewhat higher than the present lane.

The upper soil layers were removed from an area of 55 m<sup>2</sup> by the outer fortifications of the gate on the northern side of the lane leading into the castle. The eastern end (preserved to an altitude of 83.55 m) of the northern wall of the projecting gate building was located at approximately right angles to the western part of the enclosing wall and began immediately at the outer side of it. The wall of granite stones had not been erected at the same time as the western wall of the castle, since a joint could be seen between the two walls, and thus we may say that the projecting outer fortification of the gate was later than the wall enclosing the castle. The wall of the front gate building was 1.9–2 m thick, 8.2 m long, and it terminated in the western part with a base of a small circular tower of 3 m diameter (Fig. 1). On the outer side of the wall and the tower, the foundation and stones of the bottom layer of the wall were preserved to the level of the medieval ground. The upper stones were bound with lime mortar, the bottom ones were packed with soil and gravel. In the core of the wall one more layer of mortar-bound stones was preserved in places. The inner and outer sides of the wall were laid quite closely of granite stones, in the core of the wall the size of





Fig. 4. Walls of the NW building. View from NW.  
Joon. 4. Loodepoolse hoone müürid. Vaade loodest.

stones. However, no constructional, laid connection of the two walls could be observed. The southern east-west oriented wall was approximately 1 m thick. It consisted of granite and limestones and was bound with lime mortar in the upper part. The construction of this wall differed from the parallel one, with more limestone used here. The walls were at approximately the same altitude, though the

the stones varied more (larger ones with a diameter of 0.5–0.7 m).

1–1.2 m south of the northern wall, the remains of another granite wall, parallel to the previous one, came to light in the western part of the track at the altitude of 83.20 m. The area between these two walls was in the upper part filled with granite stones bound with lime mortar. In the lower part there was soil and gravel between the

southern one was preserved in a 4.3 m long section and was about 20 cm lower. It ended in the western part in two parallel north-south oriented transverse walls with a 2.2 m wide space between them (Fig. 1). The western transverse wall was 0.9 m thick; the eastern one, only 0.5 m thick. Since the western wall was the outer one and the thinner eastern wall was protected by side walls, such a difference in thickness is easily accounted for. The inner sides of

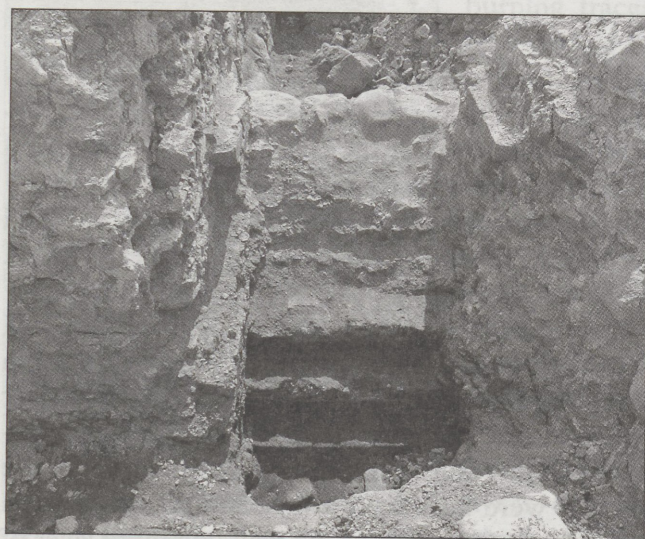


Fig. 5. Stairway with four steps in the W-wall of the protruding part of the building.  
Joon. 5. Nelja astmega trepp eenduva hoone lääneseinas.



these two walls and the east-west oriented wall connected with them were smoothed with mortar. The wall ran straight into the gateway (as it has survived in its width from the end of the Middle Ages up to the present) but had been demolished before reaching it. Thus it seems likely that this gate was extended in the Middle Ages simultaneously with the demolition of the former front gate fortification and the erection of a new fortification with circular towers.

## THE AREA OF NW BUILDINGS OF THE CASTLE

In the NW part of the courtyard, near the gate some wall fragments, presumably medieval, were discernible on the ground before the levelling of the ground and the beginning of archaeological investigations. Since the grassy surface was quite rugged it seems likely that soil had been piled upon older construction remains. The excavations revealed that the fragments discernible on the ground and those lying immediately beneath the sod were heavily damaged core parts of walls, where stones and lime mortar did not hold together any more. Therefore it was decided to excavate the wall remains to the depth where the first stone layers of the inner and outer sides were preserved. Thus the original thickness of the walls would be known in case the walls would be marked or reconstructed (to the extent of a few layers, which would not noticeably exceed the height of the preserved core parts). The archaeological investigation started at the SE corner of a building which presumably had been located in this area. Here the highest preserved stones of the wall were unearthed at an altitude of 84.60 m. The thickness of the eastern and southern walls at the SE corner were 2 and 1.7 m respectively. At the outer side of the unearthed SE corner two trial pits were dug, right by the sides of the walls. In the pit by the outer side of the southern wall the depth of the foundation was established at 81.18 m and the shape of the foundation trench could be observed in the profile.

In the lay of stones of the outer sides a characteristic feature was the layers of granite stones located at the same height, with 5–6 cm thick limestone slabs placed between, beneath and on top of them. Every layer of uneven granite stones (diameter 20–25 cm) was covered with limestones to level the surface for the bottom horizon of the next layer of granite stones. Subsequently, the eastern wall of the building was unearthed for a length of 29 m northwards, up to the inside of the enclosing wall of the castle. At 10.4 m from the SE corner of the building, a 6–6.5 m wide part protruded by 3.5 m from the straight eastern wall (Fig. 4). In the lower part of the protrusion of the eastern wall (at an altitude of 83.30 m) remains of a heavily decayed plank, 2–2.5 cm thick, were unearthed, suggesting a



threshold and doorway located in this part of the wall. This altitude, being 15–20 cm higher than the stone pavement discovered southwards, is well suited for a threshold. Unlike other parts of the building unearthed in the NW part of the castle, the protruding part of a building was built without a cellar.

The protruding part of the building was directly joined with the eastern wall extending northwards. The outer side of that wall was almost (but not quite) in line with the outside of the eastern wall extending southwards of the protruding part. The noteworthy difference between the outsides of the northern and the southern parts of the wall was that the northern part had a socle at an altitude of 82.70 m, projecting from the wall by 10 cm, which was missing both at the southern part and the protruding part of the building.

At the northern end of the eastern wall of the building, immediately at the enclosing wall of the castle, four granite stones came to light at an altitude of 85.01 m. These were bound with the eastern wall but protruded from it by half of their size or more, apparently to connect the wall with another one directed westwards. The constructional connection between the investigated north-south oriented wall and the adjacent enclosing wall of the castle was missing. Thus we may conclude that the eastern wall of the investigated building was earlier than the northern enclosing wall of the castle. Anticipating the construction of the latter, the granite stones were left protruding from the NE corner of the building. Later, these stones were not utilized and the enclosing wall was built slightly northwards. If the stones mentioned had been used for the building of the enclosing wall, then the northern wall of the NW building of the castle would have served as a part of the outer wall of the castle, just as it happened at the western side of the building. In the western wall of the protruding part of the building a 1.15–1.3 m wide stairway, widening downwards, came to light, with four brick steps descending from the landing in front of the stairs (at an altitude of 82.55 m) to the bricks and granite stones at the floor level of the cellar (81.50 m) (Fig. 5). The steps were 25 cm wide and 21 cm high. Upon the bricks and granite stones of the ground floor there was a thin layer of charcoal.

The excavations of the inside of the eastern wall of the building revealed two window recesses, widened on the inside and lined with bricks. One of these was located north and the other south of the protruding part of the building. The brick walls were rather heavily demolished. Since the wall was demolished so low at each of the windows that the lower edge of the opening through the wall was not preserved, it is possible to estimate their width only approximately, on the basis of the minimum width of the recess tapering outwards. Thus the width of



each window on the outer side can be assumed to be 80–50 cm, depending on the framing of the aperture. Besides the apertures, the cleaning of the top of the northern part of the eastern wall of the building also revealed a staircase and a stairway inside the eastern wall, leading to the NW tower of the castle. The possible existence of these stairs was also suggested by a short curved section of a wall, running to the doorway of the preserved part of the tower. The excavated staircase was 90 cm wide, the steps were 23 cm wide and 21 cm high. At this staircase the outer wall was 49–50 cm thick, the walls of the staircase were lined with bricks. At the inner side of the SE corner of the NW building a small pit was dug, revealing a constructional connection of the enclosing wall to the investigated building. Thus the walls seem to be contemporaneous.

## ARHEOLOOGILISED UURINGUD LAIUSE LINNUSEL

Rünno VISSAK

2002. aasta arheoloogilised uuringud ja kaevamised Laiuse keskaegsel ordulinnusel hõlmasid valguskaabli paigaldamiseks rajatava trassiala ja väravaehitise müüride väljakaevamist linnuse läänepoolsele ning linnuse sees paiknenud hoone müüride osalist väljapuhastamist õueala loodenurgas (joon. 1 ja 2). Kaablitrass kulges linnusesse läbi läänemüüris asuva väravaava, läbis linnusehoovi ligikaudu selle O–W teljel ja hargnes nelja haruna õueala nurkadesse. Trassi pikkus linnusehoovis oli 180 m. Trassi kaevamisel selgus, et kaasaegse mättakihi ja selle aluse õhukese kasvumulla all paikneb u. 20 cm paksune keskaegset leiuainest sisaldav tumepruun, väheste lisanditega kiht. Seetõttu kaevati kogu trassiala lahti üksnes käsitati.

Väravaavas ja linnuse loodehoonest kagupoole jääval trassialal fikseeriti kõrgusel 83.16–82.98 m keskaegne maakividest sillutis. Seal edasi ida poole asus helekollase värvusega ja tugevalt kokku pressitud savilisanditega liivast ning kruusast, tellise- ja mördipuru, pae- ja maakivikildudega pinna-paneerimise kiht, mille eemaldamisel puhastati ida-lääne suunalise trassi põhiharul välja sillutisest varasema prügitatud kihi ülemine horisont (keskmisel kõrgusel 82.90–82.75 m). Trassi O–W suunalisele sirgele kaevatud sügavamates šurfides paljandusid kollaka planeerimiskihi ja prügitatud kihi all ladestused, mis jagati kõrgushorisondis 82.70–82.45 m fikseeritud keskmiselt 5–10 cm paksuse põlengujälgedega kihist (joon. 3) varasemateks ja hilisemateks ladestusteks. Kohati oli näha põlengukihi peal lamedaid paetükke, suuremaid maakive ning telliseid, mis tõenäoliselt on sinna sattunud seoses linnuses toimunud suuremate ehitustöödega. Põlengujälgedega kihist sügavamal asusid liivased ladestused ja kasvupinnast sisaldavad kihid, mis võisid olla maapinnatasanditeks linnuse varasemate ehitusperioodide ajal. Põlengukihi ja varasematest maapinnatasanditest jäänud kihtide vahel fikseeriti pae- ja maakividega, liivaga ning mörditükkidega, samuti katusekivitükkide ja savilaikudega kaks kihti, mis osutavad ilmselt linnuse varasemate ehitusperioodide vähemulatuslikele ehitustöödele.

Eenduva väravaehitise põhjaseina idaots paiknes ligikaudu täisnurga all ringmüüri lääneseinaga ja algas vahetult ringmüüri välisküljelt. Maakividest müür ei olnud laotud üheaegselt linnuse lääneseinaga, kuna kahe seina vahel oli vuuk. Eesvärava müüri paksus oli 1,9–2 m, pikkus 8,2 m ja see



lõppes lääneosas 3 m läbimõõduga väikese ümartorni alusega. Alates kõrgusest 83.20 m tulid müürist lõuna pool päevavalgele teise, eelmisega paralleelse maakividest müüri jäänused. Ehituslik side kahe paralleelse O-W-suunalise müüri vahel puudus. Lõunapoolse O-W-suunalise lubimördiga seotud maakividest ja paekividest müüri paksus oli keskmiselt 1 m. Selle ladu erines paralleelsest müürist, kuna kasutatud oli rohkem paekive. Müür oli eelmisega ligilähedaselt samas kõrgushorisondis, kuid 4,3 m pikkusel lõigul säilinud keskmiselt paarkümmend sentimeetrit madalamalt. See müür lõppes lääneosas kahe paralleelse N-S-suunalise müüriga, mille vahele jäi 2,2 m laiune ruum. Läänepoolse ristiseina paksus oli 0,9 m ja idapoolset 0,5 m. Et kirjeldatud müür (ühesuguse laiusega keskaja lõpust kuni praeguseni) suundus väravaavasse, kuid oli enne väravaava lõhutud, siis on tõenäoline, et väravaava laiendati keskajal samaaegselt varasema eesvärava kindlustuse likvideerimisega ja ümartornidega uue kindlustuse rajamisega.

Linnuse õueala loodeosas puhastati välja keskaegse hoone idamüür 29 meetri pikkuses lõigus kagunurgast kuni linnuse põhjapoolse ringmüüri siseküljeni. Hoone lõunaseinast 10,4 m kaugusel eendus 3,5 m võrra 6–6,5 m laiune hooneosa (joon. 4), mille idaseinas oli paiknenud ukseava. Eenduv hooneosa oli keldrita, kuid selle lääneseinas oli uksava, mis viis hoone keldritesse suunduvale trepile. Allapoole laienev trepikäik oli 1,15–1,3 m laiune, trepil oli neli tellistest trepiastet, mis laskusid poolkeldrikorruse tellistest ja maakividest põrandatasapinnani (joon. 5). Silmatorkavaks erinevuseks eenduvast hooneosast lõuna ja põhja poole paiknevate müüride juures oli see, et põhjapoolsel müüril oli 10 cm laiune sokkel. Lõunapoolsel müüril sokkel puudus.

Hoone idaseina sisekülje väljakaevamisel paljandusid kahe tellistega vooderdatud aknaava seestpoolt küllalt avarad aknaorvad, millest üks asus lõuna ja teine põhja pool eenduvat hooneosa. Tellisseinad olid üsna tugevalt lagunened, kuna tellised olid maapinna niiskuse ja temperatuuride kõikumise tulemusena muutunud pudedaks. Lisaks aknaorvadele tuli hoone idamüüri pealt puhastamisel välja trepp ja trepikäik, mis viis idamüüri sees linnuse kirdepoolsesse (suurtükkide) torni. Trepil võimalikust olemasolust andis märku ka torni ukseava juurde lõuna poolt viiv lühike kaarduv müürikatke. Väljakaevatud trepi laius oli 90 cm, trepiastme laius 23 cm ja kõrgus 21 cm. Müüris paikneva trepi kohal mõõdeti välisseina paksuseks 49–50 cm, trepikäigu seinad olid tellisvoodriga.

Hoone idaseina põhjapoolses otsas, vahetult enne linnuse ringmüüri põhjaseina, paljandusid neli maakivi, mis ulatusid seinast pooles või enam kui pooles ulatuses välja ning olid ilmselt jäetud sinna selleks, et sellelt kohalt võiks seinaga siduda teise, O-W-suunalise ja ida poole kulgeva seina. Samas puudus ehituslik side uuritud N-S-suunalise müürilao ja sellega vahetult külgneva linnuse põhjapoolse ringmüüri vahel. Eelõeldust võib järeldada, et uuritud hoone idamüür oli varasem linnuse põhjapoolsest ringmüürist. Selle ehitamist ette nähes oli loodepoolse hoone idamüüri kirdenurka jäetud ida poole etteulatuvad sidekivid, kuid hiljem jäeti need ringmüüri põhjapoolse seina ehitamisel kasutamata, kuna ringmüür ehitati varem kavandatud pisut põhja poole.