



Archaeological excavations at the courtyard of Lutsu Street 12, Tartu

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INTRODUCTION

Construction of a drain field necessitated archaeological rescue excavations at the courtyard of Lutsu Street 12 (Fig. 1) in June and July 2016. Excavations were carried out by Arheox OÜ, under the supervision of Andres Tvauri and Rivo Bernotas (Bernotas & Tvauri 2016). Approximately 72 m² of medieval occupation layers were explored. The floors of two medieval buildings were unearthed, remains of posts, walls and a cesspit built of timber along with another simple waste pit cut through the wall and floor remains were discovered. According to dendrochronological studies, wooden constructions date from the 14th century.

Excavation of the foundation trench for the building of Lutsu 12 was archaeologically monitored earlier in 2016. Those excavations revealed no older than early modern occupation layers (Tvauri 2016). Black glazed stove tiles with plant ornaments from the second half of the 17th century, all from the same stove destroyed probably during the Great Northern War in either 1704 or in 1708 served as the most interesting find¹ from that excavation area.

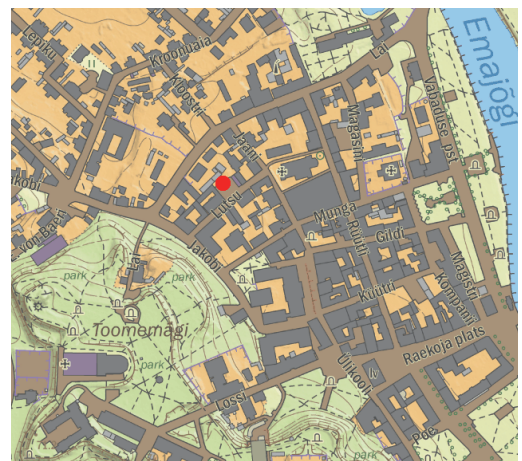


Fig. 1. Location of excavation plot at the courtyard of Lutsu Street 12.

Jn 1. Lutsu 12 kaevandi asukoht.

Map / Kaart: Estonian Land Board / Maa-amet, Andres Tvauri

¹ Finds: TM A 240.

OCCUPATION LAYERS AND REMAINS OF BUILDINGS

Natural subsoil in the bottom of the excavation trench consisted of travertine. A 25 cm thick layer of dark brown soil covered the travertine layer. The abrupt transition from travertine to dark soil indicates that the dark layer is not of natural origin but has formed due to human activities in the area or redeposition of soil. The dark brown layer contained finds² from the 11th to 13th centuries.

Log flooring, timber posts, remains of southwestern outer wall and ruins of a stove or a fireplace represented the oldest building in the research area (Fig. 2). The type of the stove remained unclear as only the lowermost layer of stones was preserved. It is possible that the building was used both as a dwelling house and as a shelter for livestock. The northeastern two thirds of the building, where the floor logs lay in the northeast to southwest direction contained a layer of peat (Fig. 3: 6) which could have been used as bedding for animals. Walls probably divided the barn from the stove, indicating a dwelling function. A 55 cm thick organic-rich layer in the northeasternmost one third of the building has most likely been deposited while the building was still standing – an interpretation supported by the fact that a rectangular post in the northeastern corner of the excavation area (Fig. 2) has been cut at the height of approximately 55 cm above the wooden floor pavement.

After demolishing the oldest timber building, a cobblestone pavement has been laid to the area (Fig. 3: 4). A layer of burnt cereals (Fig. 3: 3) covered the cobblestone pavement and reached further southwest from the paved area. Samples taken from the cereals are yet to be investigated. The burnt cereals were covered with a layer of rubble bearing traces of being in fire (Fig. 3: 2). The rubble is a redeposited fill obtained from a burnt brick building or buildings located outside the research area.

On top of the burnt rubble another log floor was unearthed (Fig. 4) belonging to the younger building. The building itself has been destroyed in fire. Pavement logs showed marks of burning and there was a layer of burnt seeds on top of those logs as well. The species are unclear because the investigation is currently underway.

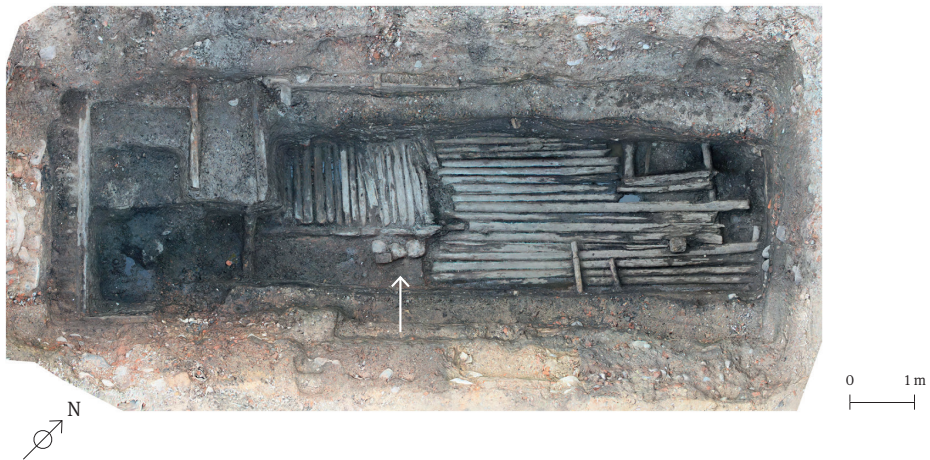


Fig. 2. The undermost layer of medieval wooden constructions. An arrow pointing to base of a stove below in the centre.
Jn 2. Keskaegsete puitkonstruktsioonide alumine kiht. All keskel on noolega näidatud ahju põhi.
 Orthophoto / Ortofoto: Ragnar Saage

² Finds: TM A 244.

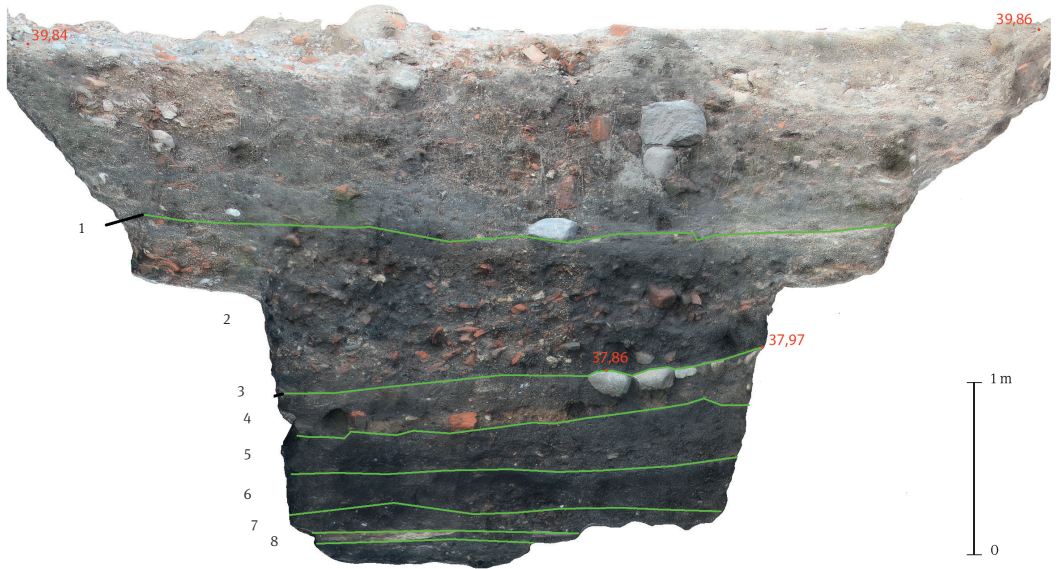


Fig. 3. Cross-section of the northeastern end of the excavation trench. 1 – remains of log pavement of AD 1349, 2 – brick debris, 3 – layer of burnt cereals, 4 – cobblestone pavement, 5 – brown soil, 6 – layer of peat, 7 – brown soil, 8 – log pavement of 1302 AD.

Jn 3. Kaevandi kirdeprofiil. 1 – ülemise puitsillutise jäänuused aastast 1349, 2 – telliserusu, 3 – põlenud vili, 4 – muna-kivisillutis, 5 – pruun kiht, 6 – turvas, 7 – pruun kiht, 8 – puitsillutis 1302. aastast.

Orthophoto / Ortofoto: Ragnar Saage



Fig. 4. The uppermost layer of medieval timber constructions. Wooden floor along with the 14th century waste pit cut through it on the left. Cesspit made of timber in the centre.

Jn 4. Pealmine kiht keskaegseid puitkonstruktsioone. Vasakul puitpõrand ühes 14. sajandil sellest läbi lõigatud jäätmeauguga. Puidust jäätmekast asub pildi keskosas.

Orthophoto / Ortofoto: Ragnar Saage



Fig. 5. Excavation area. View from the east. Cesspit from the end of 14th century in the foreground, uppermost log floor with a pit cut through it in the background.

Jn 5. Vaade kaevandile ida poolt. Esiplaanil on näha 14. sajandi lõpust pärinev jäätmekast, tagaplaanil ülemine palkpõrand ja sellest läbi kaevatud keskaegne jäätmeauk.

Photo / Foto: Andres Tauri

Depressions for the waste pit and timber cesspit had been cut through the upper floor pavement (Figs 4–5). The cesspit made of horizontal unpeeled pine logs was measured 3×2 m. Seven layers of logs with the height of 115 cm were preserved. A saddle notch attached the logs to each other. The axe stripe assembly marks on the southwestern side of the pit indicate that the initial construction of the pit was performed somewhere else and the logs were reassembled at the site. Excrements together with finds typical to medieval cesspits in Tartu filled the pit.

West from the timber cesspit there was a simple pit cut through the floor also containing excrements and typical cesspit finds. The finds are quite similar to the ones in the timber cesspit dating from the 14th century.

DENDRODATES

In the course of the excavations, also a large number of dendro-samples were collected for further dating. The most interesting and comprehensive objects by the number of samples were the remains of the wooden house, log floor and wooden cesspit.

The analysis of the dendro-samples taken from the floor logs showed that the oldest wooden house was built in 1302 (Fig. 6). In the course of laying the floor second-hand logs were also used. Some of the logs used in the floor construction were dated to the years 1288 and 1291. Some of the logs could be identified as ash. In 1328 a dividing wall was built inside the house, directly southwest from the stove. The wall was later severely damaged in fire. After the aforementioned fire, a rubble layer had deposited on top of the remnants of the wooden house. The second (?) log floor was laid on top of the rubble layer and several samples dated the floor level to the year 1349 (Fig. 7). Dendrochronological research showed that the cesspit, built through the floor dates from 1385 (Fig. 8).

FINDS

The occupation layers situated on top and in between wooden floors discovered during the excavations revealed plenty of artefacts characteristic to the 14th century occupation layers in Tartu. Most numerous were fragments of leather shoes, pieces of small dishes made of staves, sherds of earthenware pots and stoneware jugs. On top of the lower log floor, two ceramic lids were discovered that were probably used to cover the hot plate with air vent of heat storage hypocaust furnace, possibly from the nearby brick house mentioned above.

There were excellent conditions for preserving of organic material in the cesspit. Excavations revealed abundant fragments of wool cloth, numerous fragments of leather shoes, pieces of small stave dishes and bases of wooden barrels. In addition, a few fragments of German stoneware jugs, earthenware pots, and glass beakers and one brassy rumble bell were discovered. A probable board-shaped distaff is a rather uncommon find. In all, artefacts obtained from the cesspit from the courtyard of Lutsu St. 12 were very similar to the ones

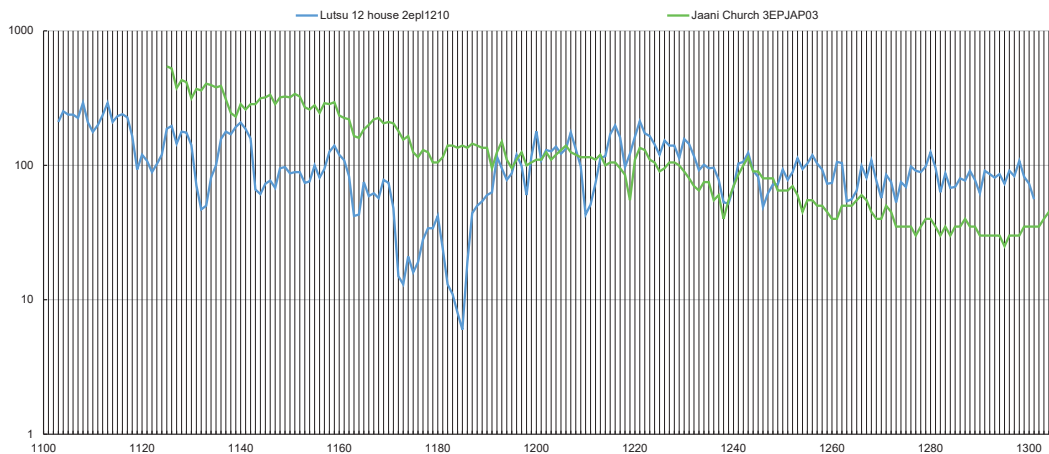


Fig. 6. The average of samples of the undermost layer of medieval wooden constructions (blue line) in comparison with the average tree ring row of samples from Tartu St. John's church (green line; Läänelaid 2002).

Jn 6. Vanima ehitusjärgu palkide aastarõngaste rida (sinine joon) kõrvutatuna Tartu Jaani kiriku puiduproovide aastarõngaste reaga (roheline joon; Läänelaid 2002).

Figure / Joonis: Rivo Bernotas

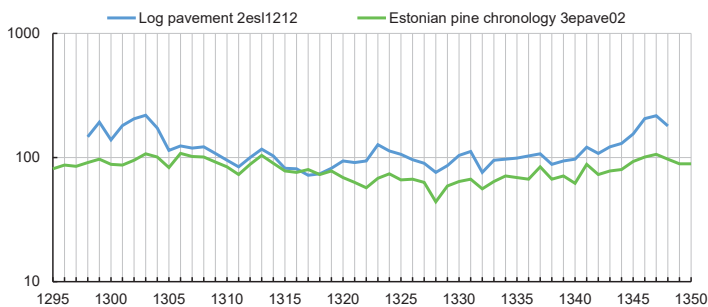


Fig. 7. The average of samples of the younger wooden floor (green line) in comparison with Estonian pine chronology (blue line; Läänelaid & Eckstein 2003).

Jn 7. Noorema puitsillutise aastarõngaste rida (roheline joon) kõrvutatuna Eesti männikronoloogia aastarõngaste reaga (sinine joon; Läänelaid & Eckstein 2003).

Figure / Joonis: Rivo Bernotas

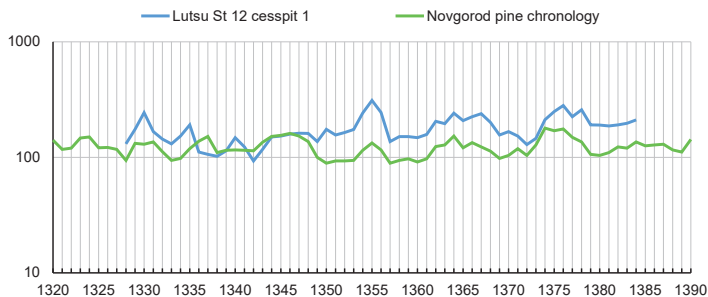


Fig. 8. The average of samples of the cesspit (blue line) in comparison with Novgorod pine chronology (green line; Kolchin 1967).

Jn 8. Jäätmekasti aastarõngaste rida (sinine joon) kõrvutatuna Novgorodi männikronoloogia aastarõngaste reaga (roheline joon; Kolchin 1967).

Figure / Joonis: Rivo Bernotas

obtained from other medieval latrines in Tartu; up to date more than 40 relevant structures from the 14th to the 16th centuries have been archaeologically investigated here (Bernotas 2012, Table 2).

A wastepit dug next to the cesspit also contained similar finds as mentioned above, characteristic to the 14th century. In addition, some rarer finds were encountered. A fragment of tin foil ornament is unique in Estonia (Fig. 9). Historian Anu Mänd (TLU) transcribed the text as *ave maria ecce anc(il)la d(omi)ni...* This is a passage from a common sacred text and a prayer, Hail Mary (Latin *Ave Maria*). The foil possibly adorned some religious painting or statuette. Lathe-turned wooden prayer beads (Fig. 10) from the same pit are also rather exclusive finds.



Fig. 9. Tin foil ornament obtained from the waste pit.
Jn 9. Jäätmeaugust saadud õhukesest tinaplekist kaunistus.
 (TM A 244: 131, 132.)
 Photo / Foto: Andres Tvauri



Fig. 10. Lathe turned wooden prayer beads from the waste pit.
Jn 10. Puidust treitud palvehelmed jäätmeaugust.
 (TM A 244: 43.)
 Photo / Foto: Kristel Kajak

CONCLUDING REMARKS

Although the scale of the excavations in the plot of Lutsu St. 12 remained somewhat modest, the research provided interesting results nevertheless. The most interesting finds were a wooden house, log floors, a wooden cesspit and a wastepit. In the course of earlier archaeological investigations in Tartu single features of buildings have been dendrodated (timber grillage foundations of stone buildings, cesspits), but for the first time a series of dendro-dates were obtained from one spot that enable to reconstruct building activities in the research area throughout the 14th century.

Excavations revealed that the first building at the estate of Lutsu St. 12 was erected in 1302 when the first wooden log house was built on the plot. The house was then repaired in 1308 and 1310. In 1328, an inner wall was built in the house. The building along with the inner wall was damaged in fire. It is known from the written sources that there were large fires in Tartu in 1329 and 1335 (Freymuth 1927, 19). Dendrochronological dates correspond well with historic data. The fire of 1329 probably destroyed the building of the first occupation stage. A cobblestone pavement was laid to the area after the fire. The layer of burnt cereals on top of the pavement may have been the result of the fire of 1335. After that fire a rubble layer consisting of the remains of some brick building has been deposited to the research area. In 1349, a log floor was built on top of the rubble layer and in 1385, cesspit was built through the log pavement. There are indications of fire and charred cereals on top of the upper pavement. There has been another fire in the research area sometime between the years 1349–1385.

The research conducted in the plot of Lutsu St. 12 proves even more that the town area of Tartu surrounded with the wall was inhabited and filled with houses only in the first half of the 14th century (Bernotas 2012, 164), to the contrary to the hypothesis that it happened in the second half of the 13th century, which has been suggested in the earlier research (Mäesalu & Vissak 2002, 155 ff; Alttoa 1999, 17; Freymuth 1927, 4; Prints 1967, 18). The latter date has also found some confirmation from the research results from the excavations at Lutsu St. 2 plot in 2008–2009, where the remnants of the earliest wooden building date from the beginning of the 14th century (Kriiska *et al.* 2011, 35).

The artefacts recovered from the medieval pavement, fill layers, and the cesspits point to typical medieval households from the 14th century Tartu. The most interesting artefacts were fragments of a tin foil ornament and wooden prayer beads.

ACKNOWLEDGEMENTS

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ARHEOLOOGILISED KAEVAMISED TARTUS LUTSU 12 KRUNDIL

Andres Tvauri, Rivo Bernotas ja Alar Läänelaid

Arheoloogilised päästekaevamised Tartus Lutsu 12 krundil (jn 1) toimusid 2016. aasta juunis ja augustis seoses kortermaja parkla sadevee imbväljaku ehitamisega. Tööd viis läbi OÜ Arheox, kaevamisi juhendasid Andres Tvauri ja Rivo Bernotas. Keskaegset kultuurikihti uuriti u 72 m² suurusel alal. Leiti kahe keskaegse puithoone põrandad, postide ja vaheseinade jäänused ning põrandatasanditest läbi kaevatud jäätmekast ja -auk.

Looduslik pinnas kaevandi alal oli allikalubi, mille peal oli 25 cm paksune tumepruun mullakiht. Kuna üleminek lubjalt mullale on järsk, siis pole see looduslik kiht, vaid tekkinud inimtegevuse tulemusel. Selles kihis oli 11.–13. sajandi leide.

Esimesest hoonest alal oli säilinud palkidest põrand, puitpostid, ühe seinaga jäänus ja ahju põhi (jn 2). Maja kirdepoolisel alal leidis turbakiht (jn 3), mis võib olla kohale toodud loomadele allapanuks.

Ehitises olnud ahi viitab sellele, et ühtlasi oli see hoone elamu. Hoone kirdepoolse kolmandiku alale oli kogunenud 55 cm paksune orgaanikarohke kiht. Selle ajani on hoone veel püsti olnud. Nimelt on hoone lage või katust kandnud post umbes 55 cm sillutisest kõrgemal läbi raiutud.

Pärast varaseima hoone kõrgemate osade lammutamist on alale laotud munakivisillutis. Munakivisillutise pealt leiti söestunud vilja kiht, sellest võetud proovid ootavad alles uurimist. Söestunud viljale on kuhjatud täiteks mingi põlenud tellishoone rusu. Ilmselt pärines see hoonest või hoonetest, mis paiknesid väljaspool kaevandi ala.

Põlengurusu peale on rajatud teine palktasand (jn 4). Kuigi hoone seinasid ei leitud, pärineb ka see tõenäoliselt majast. Ülemise puitpõrandaga hoone hävis samuti tulekahjus – palkidel oli põlengujälgi, samuti leiti palkide pealt söestunud seemnete kiht.

Läbi ülemise palkpõranda kaevati süvendid jäätmekasti ja jäätmeaugu jaoks (jn 4–5). Jäätmekast oli koorimata männipalkidest ristpalkkonstruktsioonis mõõtmetega 3 × 2 m. Kast oli säilinud kuni seitsme palgikihi ehk 115 cm kõrguselt. Kasti edelaküljel asunud märgid osutavad, et tarind valmistati mujal ja kohapeal toimus konstruktsiooni kokku seadmine. Väljaheidetega kast sisaldas Tartu keskaegsetele jäätmekastidele tüüpilisi leide: puit-, tekstiil- ja nahkesemete tükke, savinõukilde, loomaluid, kirsikive, kreeka pähklite koori jm.

Jäätmekastist lääne pool oli läbi põranda kaevatud auk, mis samuti sisaldas väljaheiteid ja jäätmekastidele tüüpilisi leide. Kuna tegemist oli tugikonstruktsioonideta auguga maa sees, siis dendrokronoloogili-

selt seda dateerida ei saa. Leiuaines sarnaneb eelpool mainitud jäätmekasti omale ja pärineb ilmselt 14. sajandist. Seni Eestis unikaalseks leiuks on tinast ehispleki katke (jn 9), mis võis kaunistada Neitsi Maarja pühapilti või -kuju. Erandlikuks leiuks on ka puidust treitud palvehelmed (jn 10).

Kaevandist võeti arvukalt dendroproove, millest suur osa õnnestus dateerida. Varasemate arheoloogiliste uuringute käigus Tartus on dendrodateeritud küll üksikuid ehituskonstruksioone (kivihoonete alusparved, jäätmekastid), kuid seekord õnnestus esmakordselt saada ühest kohast seeria dendrodateeringuid, mis võimaldavad rekonstrueerida uuringuala hoonestamist peaaegu terve 14. sajandi vältel. Tuvastati, et 1302. aastal (jn 6) ehitati puithoone, mille ehitusel kasutati põranda ladumisel kättesaadavat puitu, sealhulgas taaskasutatud palke 1288. ja 1291. aastast ja lisaks saarepuust latte. 1328. aastal püstitati hoonesse ahjust vahetult edela poole vahesein, mis on ühes hoonega hävinud põlengus. Suure tõenäosusega vastab see kirjalikest allikatest teadaolevale Tartu linna 1329. aastal hävitanud tulekahjule. Pärast põlengut laoti hoone alale munakivisillutis. Sillutisel paiknes põlenud vilja kiht, mis on tõenäoliselt jäänus kirjalikest allikatest teada 1335. aasta suurpõlengust. Pärast põlengut tasandati kaevandi ala ehitusrusuga, millele rajati 1349. aastal (jn 7) puitpõrand. Viimane pärineb tõenäoliselt samuti hoonest. Seegi hoone hävis tules, mida näitavad puittasandi söestunud palgid ja sellel asunud söestunud seemned. 1385. aastal rajatud (jn 8) palkidest jäätmekasti ja selle kõrval paiknenud jäätmeaugu süvendid kaevati läbi 1349. aasta palkpõranda.