ARHEOLOOGILISED VÄLITÖÖD EESTIS

ARCHAEOLOGICAL FIELDWORK IN ESTONIA

2007

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Esikaas: 13.–14. sajandist pärit ribiline väike klaaspudel Tartu vanalinnast.

Cover: Fragment of a 13.-14 cc small glass bottle (Ribbenflasche) from Old Tartu.

Tagakaas: Tervena säilinud keskaegne nahkjalats Tartu vanalinnast.

Back cover: Well preserved leather shoe from Old Tartu.

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TARTU ÖLIKOOLI RAAMATUKOGU SUNDEKSEMPLAR

ARCHAEOLOGICAL RESEARCH IN VILJANDI

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Several archaeological supervision works and small-scale excavations were carried out by the authors during 2007 in Viljandi (Bernotas 2007a-d; Tvauri 2007a-g). Among them the most important were archaeological supervision in the third bailey of the Order castle carried out by Andres Tvauri, Rivo Bernotas

and Aivar Kriiska (Fig. 1: 1), on the territory of the medieval town south of St. John's Church (Jaani kirik), on the moat between the castle and the town (Fig. 1: 2) and on the site of the medieval town church (Fig. 1: 3) by Andres Tvauri. New data about medieval and modern Viljandi was gained in the course of this work.

In addition, Andres Tvauri carried out archaeological supervision on Trepimäe Street during the installation of an electric cable and water piping (Fig. 1: 4), during the installation of an electric cable between the third bailey and the Viljandi manor building (Fig. 1: 5) and during the installation of heating pipes at Tartu Street 16 (Fig. 1: 6). Rivo Bernotas carried out archaeological supervision at Pikk Street 33 during the sewage

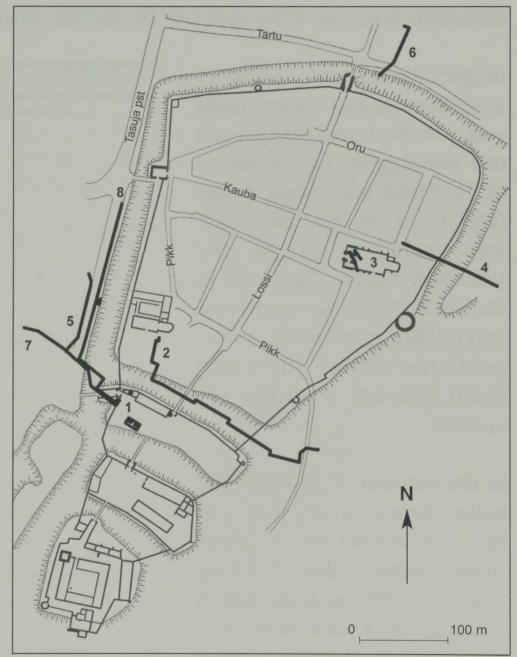


Fig. 1. Areas where archaeological research was carried out in Viljand during 2007. The areas are marked onto a reconstructed map of medieval Viljandi castle and town.

Jn 1. Keskaegse Viljandi linnuse ja linna rekonstrueeritud plaanile märgitud 2007. aasta arheoloogilised uurimisalad.

pipe installation and the construction of a parking lot, at Oru Street 7a and 19 during the installation of an electric cable and at Ranna Ave. 6 during engineering-geological drilling work. During this supervision no archaeologically significant stratifications were discovered. At the heating pipe installation site at Pikk 33 some fragments of medieval wheel-thrown pottery were found, but these originated in a stratum that had been transported there by erosion.

THE THIRD BAILEY OF THE ORDER CASTLE

On the Viljandi Kirsimägi, on the north-western edge of the Order castle there is the 18th century grain dryer of the Viljandi manor. In 2007 renovation work was started to renovate it for new use by the Estonian Traditional Music Centre.

In the winter and spring of 2007 heating and water piping was installed stretching from this building up to the streets of Hariduse and along Tasuja (Fig. 1: 7). An electric cable was installed up to the Vabaduse Square (Fig. 1: 8). In the course of these works several fill dirt layers were discovered, the oldest of which could originate from the 17th century.

In the autumn of 2007 ground maintenance work was carried out around the building. In the course of this 37 m long and up to 55 cm high trench remains of a defensive wall belonging to the third bailey of the Order castle (Fig. 2) were cleared out. The thickness of the wall was 1.45 m, as measured from wall fragments

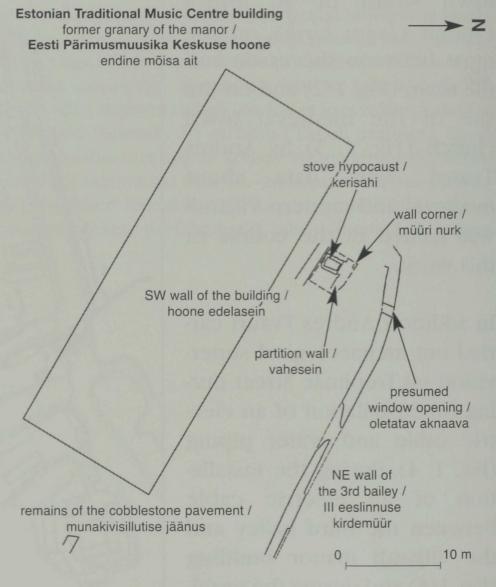


Fig. 2. Northern defense tower of the third bailey of the Order castle, remains of the gate tower and the stove-hypocaust at the location of the present-day Estonian Traditional Music Centre.

Jn 2. Pärimusmuusika keskuse juures kaevamistega avatud ordulinnuse kolmanda eeslinnuse põhjapoolne kaitsemüür, väravatorni jäänused ja kerishüpokaustahi.

that were preserved in their complete thickness. The wall was laid in horizontal rows of granite stones. The gaps had been filled with lime mortar, smaller pieces of granite, bricks and brick fragments, and fragments of barrel roof tiles. The bricks measured $30.5 \times 15 \times 10$ cm and $28 \times 13 \times 9$ cm.

On several locations east of the granary remains of a cobblestone pavement were discovered. The same area also contained gate tower remains of the third bailey of the Order castle (Fig. 2). The pavement and gate tower remains were documented and then covered with soil again.

In September 2007 a hole with a diameter of about twenty centimeters formed in front of the Kirsimägi granary, with sooty cobblestones at the bottom. Workers of Ltd Silindia acted in a responsible manner and called for the archaeologist who

had performed supervision there earlier. It turned out that this was the location of a hypocaust of the Order castle. The arch-shaped ceiling of its fireplace had collapsed under the pressure and vibration by caused construction machinery. During the excavations that followed a 20 cm thick layer was removed from a 4 x 3.5 m area on top of the allowed hypocaust. This researchers to see the contour lines of the hypocaust and a wall of a dwelling house from the Order castle period (Fig. 3). Next, the stove of the hypocaust was excavated and a 2 x 1.4 m test pit was dug in front of the hypocaust. The test pit reached the floor of the stoking room. After documenting, the hypocaust was buried under sand.

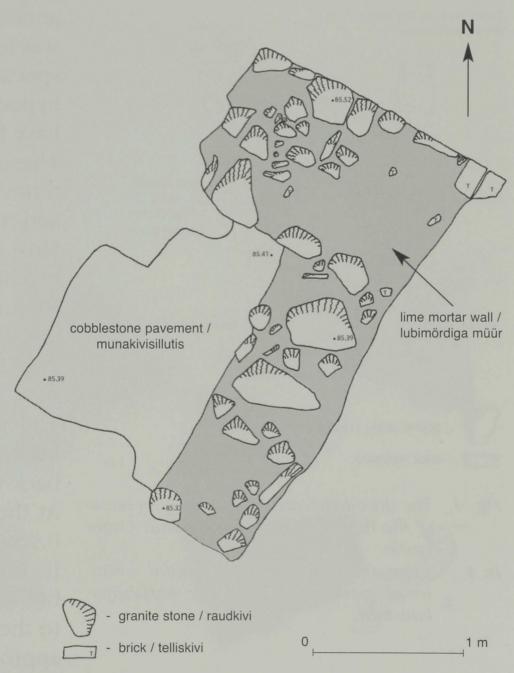
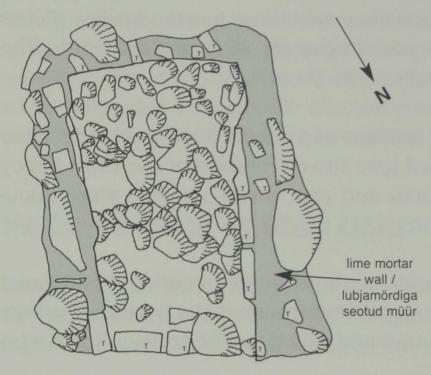
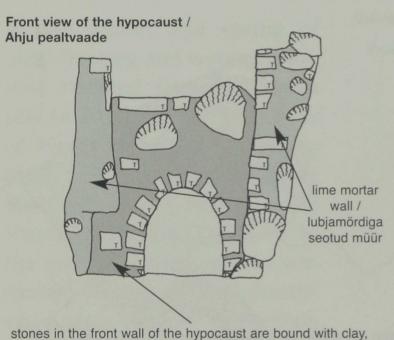


Fig. 3. Wall remains of the gate tower of the third bailey of the Viljandi Order castle.

Jn 3. Viljandi ordulinnuse kolmanda eeslinnuse väravatorni müürijäänused.

Top view of the hypocaust / Ahju pealtvaade





- granite stone / raudkivi
- brick / telliskivi
0 1 m

front wall is covered with clay / ahju esiseina kivid on seotud saviga,

esisein on kaetud saviga

Fig. 4. The stove-hypocaust of the dwelling house of the third bailey of the Viljandi Order castle.

Jn 4. Viljandi ordulinnuse kolmandal eeslinnusel paiknenud elumaja kerishüpokaustahi. This hypocaust (Fig. 4) is the fourth such hearth known in Viljandi. Two have been excavated in the Franciscan monastery on the north side of St. John's church, one in a medieval town dwelling on the yard of Viljandi Museum. The hypocaust with heat storage stove was a common heating system in parts of Europe north of the Alps and around the Baltic Sea during the 14th-16th centuries. Its central element was a big stove. Hotstones on this stove stored the heat and later, when the fire had gone out, they heated the air, which was led into the heated room through special vents. In Estonia, at least 84 hypocausts from the 14th-15th century have been preserved or documented. These are located in castles, monasteries, leprosariums, the Town Hall and the Great Guildhall of Tallinn. Most of these are located in medieval dwellings in Tallinn. The one found on Kirsimägi is among the best preserved hypocausts in Estonia (Tvauri 2008).

The hypocaust of Kirsimägi was of an irregular shape. Its length from the back wall to the front wall was 1.9 m. At the front wall, its inner width was 0.9 m, at the back wall it was 1.1 m. Its body was laid of granite stones of big size and large bricks as are typical to the Middle Ages (average measures approximately 30 x 15 x 10 cm) and

bound with lime mortar. The front wall of the hearth had been built of bricks and smaller granite stones, bound with clay. Clay had also been smeared over the front wall. The opening to the fireplace had a maximum width of 50 cm and height of

57 cm. The vaulted ceiling of the fireplace consisted of three arches made of bricks laid edgewise, the backmost of these arches had collapsed. The floor of the fireplace was made of burnt clay, with a few centimeters of ashes and charcoal on it. On top of the vault of the fireplace were stove stones, about twenty centimeters in diameter and burnt black. The topmost bricks of the side walls of the hearth were laid diagonally – this indicates that there was a brick vault on top of the hearth. The vault was not preserved, but by the remains it was possible to estimate the inner height of the hearth to be 1.6–1.7 m. The stone plate with air-vents that supposedly was on top of the hypocaust was not preserved either. The rubble in front of the hearth, however, contained a small blackened sandstone probably originating from the edge of a vent in the plate. Excavations in front of the hearth reached a clay floor hardened by fire, with a thin charcoal layer on it. Digging was stopped there. Immediately to the right of the hearth opening were a few brick steps, originating from a stair leading to the stoking room. The size and shape of the stoking room were impossible to determine.

A 1599 revision by Polish authorities describes the area in question as follows: "...when entering [from the direction of the town by the gate of the third bailey] there is a stable for 60 horses built of stone on the right, next to it a stone lodge. Both of these are empty, without a roof." (Viljandi ordulinnus, 152). A 17th century plan of the Viljandi fortress and town depicts the walls of this stable. Immediately

west of the stable, between its western wall and the northern wall of the bailey there is a small building with a triangular ground plan. During the excavations in the autumn of 2007 the front wall of this building was excavated south of the hearth. It had been built of granite stones and bricks. Considering the location of this

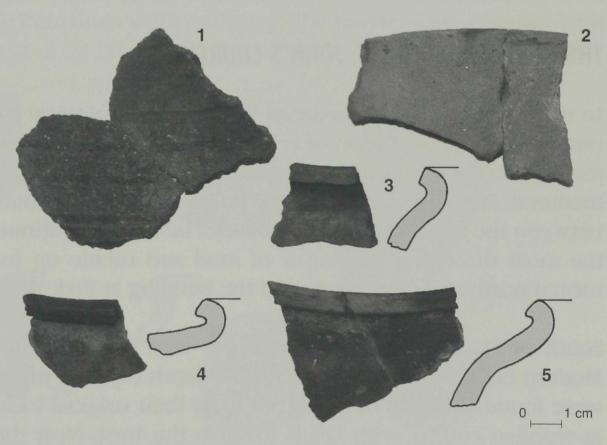


Fig. 5. Wheel-thrown pottery fragments found at the site of the stovehypocaust.

Jn 5. Kerishüpokausteahju väljapuhastamisel leitud kedrakeraamika killud. (VM 11180: 2, 19, 12, 14, 11.)



Fig. 6. Russian iron arrowhead found at the site of the stove-hypocaust.

Jn 6. Kerishüpokaustahju väljapuhastamisel leitud Vene päritolu rauast nooleots.

(VM 11180: 7.)

building, away from the main fortress, next to the stable, it probably housed servant staff, most likely stable boys.

Archaeological research showed that the dwelling described above had been in use even after the hypocaust was no longer in use. A thin layer of charcoal was detected

above the hearth, most probably referring to a wooden floor. On top of the floor remains, immediately under the later pavement there was a layer of soil a few dozen centimeters thick, rich in building waste, animal bones, ceramic fragments (Fig. 5: 1-5) and other finds. A Russian iron arrowhead (Fig. 6) and Pskovian ceramic fragments date this layer to the Livonian War, more precisely to the period 1560-1582, when Viljandi was occupied by the army of the Grand Duke of Moscow. A chunk of molten lead is probably also connected to the soldiers who casted musket bullets out of lead. Thus, the hypocaust of the stable boys' dwelling was no longer in use in the second half of the 16th century. The hearth and the stoking room in front of it were filled with building rubble and covered with a wooden floor.

THE WESTERN SIDE OF ST. JOHN'S CHURCH

In the northern part of medieval Viljandi archaeological supervision was carried out during the installation of central heating piping. A trench approximately 305 meters long started on the south side of St. John's Church (the church of the medieval Franciscan monastery). From there it continued south to the moat between the town and the third bailey. The trench continued along the bottom of the moat through a later layer of mud and rubble up to Pikk Street, where it turned north and continued until the building at Pikk 33 (Fig. 1: 2).

South of St. John's Church up to the edge of the moat the trench crossed a Modern Era graveyard. At the trench's depth (up to 1 m) a lot of human remains were found, that had been moved from their original locations, and four burials in wooden coffins, with heads towards the west. Near the northern end of the trench there were three burials side by side. The northernmost of these contained a 92 cm long coffin. The height of the deceased could not be measured since the leg bones had been moved. Considering the measurements of the coffin and the

bones left at their original location, the height of the deceased could be estimated to be about 75 cm. The deceased had a band fibula made of bronze (Fig. 7: 1) on his chest and two Russian copper dengas dated 1746 and 1754 (Fig. 7: 3) on the outer side of the left humeral bone. The coffin immediately to the south measured 1 m long and 25 cm wide at the footboard. The deceased child was 73 cm in height. On the outer side of the right thighbone there was a Russian copper denga of an

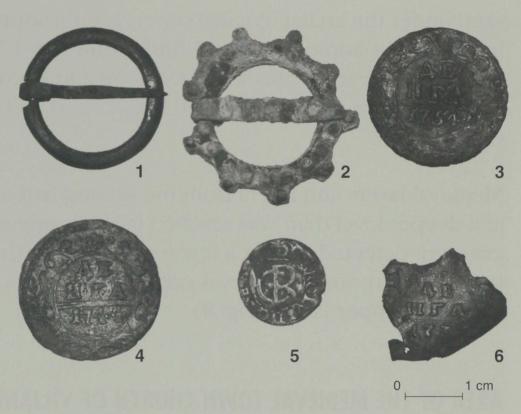


Fig. 7. Finds from the west side of St. John's Church. Jn 7. Leide Jaani kiriku lääneküljelt. (VM 11175: 1, 74, 3, 5, 75, 43.)

illegible date. Of the southernmost burial of the three, only the north-eastern corner of the coffin was excavated. A fourth burial was located a few dozen meters south of the three burials. Only the legs of the deceased were located on the excavated area, no dateable finds were obtained. Since the burials were located deeper than was necessary for the installation of the central heating pipes, they were left in the ground, only item-finds were collected. The burials were covered with

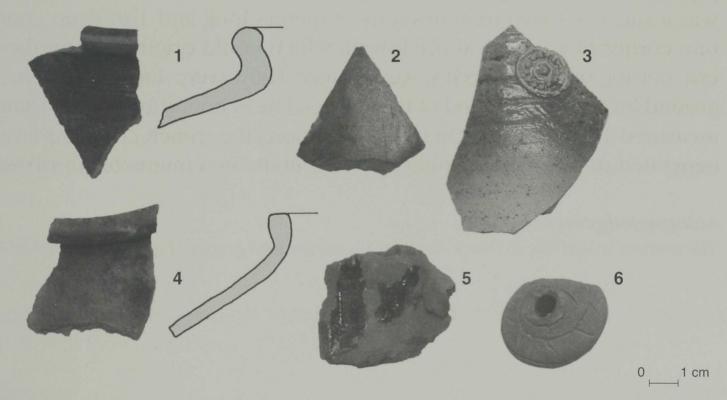


Fig. 8. Finds from the west side of St. John's Church. 1–5 - wheel-trown pottery, 6 - spinning wheel. Jn 8. Leide Jaani kiriku lääneküljelt. 1–5 - kedrakeraamika, 6 - savist värtnakeder. (VM 11175: 10, 28, 64, 32, 8, 23.)

sand under the archaeological supervision prior to the installation of central heating pipes. In addition, several finds from the 17th-18th centuries were obtained during these earthworks: a bronze hoop and a bronze star fibula (Fig. 7: 2), Russian copper dengas from 1730-1740 (Fig. 7: 4, 6) and a Riga solidus dating from 1664 (Fig. 7: 5).

Medieval layers and layers from the second half of the 16th century were located at a deeper level than was reached in the scope of current excavations. These layers were detected only at a few locations near the edge of the moat. During later burial activity some medieval ceramic fragments and a spinning wheel had been moved to upper layers (Fig. 8)

AREA OF THE MEDIEVAL TOWN CHURCH OF VILJANDI

Archaeological supervision was carried out in the Old Town of Viljandi at Laidoner Square 5a during water and sewage installation. The area under supervision – a yard to the east of the building at Laidoner Square 5 – is located on the area of the longitudinal building of the medieval St. John's and St. Clare's church (Viljandi Town Church) (Fig. 1: 3). The walls of the church were demolished in the 18th century. A 17th century map of Viljandi and wall remains found and documented in 1996 allowed to locate the walls of the church (Stöör 1996; Valk & Stöör 1996). Relying on this information the trenches for the water and sewage piping were planned so that they would not interfere with the wall remains. This was a success – two trenches tens of meters long and 1 m deep contained only one corner of a medieval brick wall, which could originate from the north-east-ern corner of the church's west tower. They were located 70 cm below the ground level and consisted of three brick layers bound by lime mortar. The bricks measured 13.5 x 9.5 cm. On several locations the trench crossed a layer of rubble generated during the demolition, which contained fragments of rib vault bricks.

Acknowledgements

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ARHEOLOOGILISED UURINGUD VILJANDIS

Andres TVAURI, Aivar KRIISKA ja Rivo BERNOTAS

2007. aastal tegid artikli autorid Viljandis mitmeid arheoloogilisi järelevalveid ja väikesemahulisi väljakaevamisi (jn 1). Uut teavet kesk- ja uusaegse Viljandi kohta saadi ordulinnuse kolmandal eeslinnusel (jn 1:1), keskaegse linna territooriumil Jaani kiriku lõunaküljel ja linna ning linnust eraldava vallikraavi alal (jn 1:2) ning keskaegse linnakiriku asukohas (jn 1:3) toimunud uuringutelt.

Kunagise ordulinnuse kolmanda eeslinnuse loodeserval paikneb 18. sajandil rajatud Viljandi mõisa ait-kuivati, mida hakati 2007. aastal renoveerima Eesti Pärimusmuusika Keskuse hooneks. Välja puhastati kolmanda eeslinnuse põhjapoolsest kaitsemüürist 37 m pikkune lõik (jn 2). Maakividest lubimördiga seotud müür oli säilinud osas kuni 1,45 m paks. Aidahoonetest ida pool puhastati välja kolmanda eeslinnuse väravatorni müüride ja põhja pool kerishüpokaustahju jäänused (jn 2, 3). Viimase puhul on tegemist neljanda analoogse leiuga Viljandis ning see on üks paremini säilinud kerishüpokaust kogu Eestis. Kirsimäe ahi oli ebakorrapärase kujuga (jn 4). Selle pikkus esiseinast tagaseinani oli 1,9 m, esiseina juurest mõõdeti ahju siselaiuseks 0,9 m ja tagaseinast 1,1 m. Ahjukere oli laotud lubimördiga seotud maakividest ja keskajale tüüpilistest suurtest tellistest. Ahju esisein oli ehitatud savimördiga seotud tellistest ja väiksematest maakividest. Koldeava suurim laius oli 50 cm ja kõrgus 57 cm; ahju võlvi moodustasid serviti asetatud tellistest kolm kaart, millest tagumine oli sisse langenud. Kolde põhjaks oli põlenud savi. Võlvi peal asetsesid u paarikümne sentimeetrise läbimõõduga kerisekivid. Ahjukere külgseinte pealmised säilinud tellised olid poolviltuses asendis, andes aluse arvata, et ahjul oli olnud tellistest võlvitud lagi. Ahjuesiselt puhastati välja põlenud savipõrand, millel oli õhuke söekiht. Põrandapinnast sügavamale ei kaevatud. Ahjusuust paremal pool paljandusid paar tellistest trepiastet, mis pärinesid kütteruumi viinud trepist.

1599. aastal Poola võimuesindajate poolt tehtud Viljandi revisjonis on uurimisalal kirjeldatud talli ja selle juures olevat kiviehitist. Mõlemad on tähistatud ka 17. sajandil tehtud Viljandi linna ja linnuse plaanil. Arvestades hoone asukohta pealinnusest eemal, otse talli kõrval, elasid siin ilmselt teenijad ja tallipoisid. Nagu näitasid arheoloogilised kaevamised, on seda eluhoonet kasutatud ka pärast uuritud ahju kasutamisest loobumist. Ahjust kõrgemal paljandus kultuurkihis õhuke söestunud puiduviir, mis pärines arvatavasti kunagisest puitpõrandast. Põrandajäänuste peal, vahetult hiliste silutisekihtide all, oli säilinud kuni paarikümne sentimeetri paksune ehitusrusudega kiht, mis sisaldas loomaluid, savinõukilde (jn 5) ja muid leide. Saadud leidude (sh Vene päritolu rauast nooleots (jn 6) ja pihkvapärased savipottide killud) põhjal võib selle kihi dateerida Liivi sõja perioodi, täpsemalt ajavahemikku 1560–1582, mil Viljandi oli Moskva suurvürsti sõjaväe käes.

Keskaegse Viljandi linna põhjaosas tehti järelevalvet u 305 m pikkuse küttetorustiku paigaldamisel. Kraav algas Viljandi Jaani kiriku lõunaküljelt ja suundus lõuna poole Viljandi linnuse kolmandat eeslinnust linnast eraldavasse vallikraavi. Piki vallikraavi põhja läbis trass hilise tekkega muda- ja varingukihi kuni Pika tänavani ning keeras põhja poole kuni Pikk 33 hooneni (jn 1:2). Jaani kirikust lõuna pool läbis kaevis uusaegset kalmistut. Kuni 1 m sügavuselt leiti oma algselt kohalt liigutatud inimluid ning neli puitkirstudes matust, kus surnud olid asetatud peaga läänekaarde. Trassi põhjaotsas kaevati välja kõrvuti asetsenud kolm puukirstu. Neist põhjapoolsem oli 92 cm pikkune kirst, millega sängitatud u 75 pikkuse lapse rinnapiirkonnast leiti pronksist vitssõlg (jn 7:1) ja vasaku õlavarreluu välisküljelt kaks Vene vaskdengat aastatest 1746 ja 1754 (jn 7:3). Sellest lõuna pool oli teise lapse 1 m pikkune ja jalutsipoolsest otsast 25 cm laine kirst, kus hauapanuseks oli Vene vaskdenga, mille vermimisaeg ei olnud loetav. Kõrvuti paiknenud kolmest matusest lõunapoolemast puhastati välja vaid kirstu kirdenurk. Veel üks matus paiknes eelmistest mõnikümmend meetrit lõuna pool,

kuid sellest jäid kaevandisse vaid maetu sääreluud. Kuna matused paiknesid küttetorude paigaldamiseks vajalikust kaevisest sügavamal, jäeti kõik luustikud omale kohale ning kaeti liivaga. Leidudena võeti kaasa vaid hauapanused. Trassialalt leiti veel mitmeid 17.–18. sajandi matustest pärit esemeid, sh Riia solidus aastast 1664 (jn 7: 5), Vene vaskdengad 1730.–1740. aastatest (jn 7: 4, 6), pronksist vöösirk ja tähtsõlg (jn 7: 2). Keskaegne ja 16. sajandi teise poole kiht jäi 2007. aasta kaevisest sügavamale, mistõttu selleaegsete ladestusteni jõuti üksnes vallikraavi serva läheduses. Haudade kaevamisega oli sattunud hilisematesse kihtidesse ka keskaegseid esemeid, sh savinõude killud (jn 8: 1–5) ja savist värtnakeder (jn 8: 6).

Viljandi vanalinnas tehti arheoloogilist järelevalvet ka vee- ja kanalisatsioonitorustiku paigaldamiseks kaevatud kraavis Laidoneri plats 5a kinnistul, mis jäi keskaegse Püha Johannese ja Püha Klaara kiriku (Viljandi linnakirik) pikihoone alale (jn 1:3). Kiriku müürid lammutati 18. sajandil. Trassi kaevamisel paljandus tellistest keskaegse hoone üks nurk, mis võis olla kiriku läänetorni kirdenurk. Mitmes kohas läbiti kraavi kaevamisega kiriku rusukihti, millest leiti ka võlviroide ehitamiseks kasutatud telliseid.