



Archaeological investigations in the heart of the medieval Keila borough

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INTRODUCTION

Keila is a small town in the northwestern part of Estonia on the banks of the Keila River. Traces of an early settlement have been found mainly on the right bank of the river, particularly in the vicinity of the railway bridge and embankment. Based on recent archaeological research, it is evident that an Iron Age settlement existed there as early as the 7th–8th century (Tammet & Tamla 2022). Traces of Late Iron Age habitation have also been identified on the slope just north of the Keila churchyard. According to the 13th-century Danish Census Book (*Liber Censu Danicæ*), the Danish priests baptized the village of Keikæl, then fief to a vassal named Taemma (also *Tæmma*), in 1219 or 1220 AD (Johansen 1933, 422). The construction of the first stone church, dedicated to St Michael was started in the late 13th century and finished in a redesigned form sometime in the second quarter of the 14th century (Raam 1997, 21). During the 15th–16th centuries, a small borough with citizens, burgomaster, and a craftsmen guild emerged in Keila (Johansen 1951, 202–203). A medieval fortified manor house (Pauts 1998) and a nearby village, with nearly 20 dwellings with outbuildings and five taverns in the heart of the small rural town, are mentioned in the chronicles (Nurger 2003). There were two taverns by the Church Square (present-day Keskväljak Square) in the second half of the 17th century (Fig. 1), yet the borough in the vicinity of the church had vanished completely during the 16th-century military conflicts and later famines. Towards the end of the 19th century, there were no households in the area (Fig. 2).



Fig. 1. Keila church marked on a 17th-century map. Two taverns (marked with flags) can be seen west of the church alongside the road to Haapsalu.

Jn 1. Keila kirik 17. sajandi kaardil. Kirikust läänes võib Haapsallu viiva tee ääres eristada kahte kõrtsi (tähistatud lipukestega).

Map / Kaart: RA, EAA.1.2.C-II-4



Fig. 2. *St Michael's Church and its vicinity around the mid-19th century.*

Jn 2. *Keila Mihkli kirik ja tema ümbrus u 19. sajandi keskpaigas.*

Drawing / Joonistus: TLM F 8477: 2



Fig. 3. *Keskväljak Sq. 4 property with the study area inside the red line.*

Jn 3. *Keskväljak 4 kinnistu, uuringuala tähistatud punase joonega.*

Map / Kaart: Estonian Land Board / Maa-amet

stone walls seemingly older than the previous 20th-century building ruins were recorded in the northeastern part of the construction area (Area 1). In early December, the water pipe for the new building was installed (Area 2), revealing even more surprising traces of past human activities.

ARCHAEOLOGICAL FIELDWORK

Area 1 – recorded walls at the construction site

Based on documentary sources, the property at Keskväljak Sq. 4 has overcome several stages of building activities in the last century, thus it was unlikely that earlier strata could be preserved at the construction site. Neither was the steep slope characterizing this area favourable for prehistoric settlement needs. Yet, during the early stages of the fieldwork, a corner of a stone structure made of boulders and limestone was spotted at the northeast part of the construction site (Fig. 4, P1). Closer examination revealed that it has no connection with the 20th-century construction remains and that the main body of the found structure is located in the small area between the Keskväljak Sq. 4 and Keskväljak Sq. 2 properties.

After the construction of the railway hub in 1870, the settlement started to flourish again, as Keila soon turned into a strong industrial satellite to Tallinn. At the beginning of the 20th century, rebuilding of urban Keila started around Keskväljak Square and Tallinn Road. The very first building was probably a sausage factory, right next to Keskväljak Square (see photo from the early 1930s at Harjumaa Museum, HMK F 94: 1).

Archaeological excavations (Fig. 3) introduced in this article took place at a new construction site in Keskväljak Sq. 4, almost at the same spot where the above-mentioned sausage factory once stood. The fieldwork was carried out in the heritage protection area of Keila Churchyard (no. 2749 in the National Registry of Cultural Monuments) at the planned water duct installation and construction area. The excavated trench was relatively small, covering only the relatively short pipeline trench at the construction site. The archaeological research which was commissioned by the construction company BauEst OÜ was carried out from 31 October to 15 December, 2022, under the supervision of Mihkel Tammet (OÜ Muinasprojekt) with the help of technicians Aare Vaida and Kadi Kuuseoja (Tammet 2023).

Two areas were studied (Fig. 4). During the construction work in late November,



Fig. 4. Location plan of the areas I and II.

Jn 4. Uuringualad I ja II.

Map / Kaart: Mihkel Tammet

Not much can be said of the building remains as the archaeologically studied trench was rather small. Still, it is clear that the found structure was dug into the moraine slope. The stones of both walls were bound with grey clay, one of the walls being of boulders (visible length ca. 3 m) and another of limestone. Below the walls was a layer of burnt clay, lying on top of the layer of charcoal situated just above sandy virgin soil. It could also be noted that both walls bore strong indications of being in extreme heat. Unfortunately, the dating of the structure remains open as there were no finds, but the fact that only clay was used as binder seems to support the hypothesis that the unearthed construction was earlier than the 20th century. At the same time, it might be a part of a fireplace or stove related to a modern-era building, built before the property development along the Keskväljak Sq. in the early 1920s.

Area 2 – traces of habitation in the trench for the water pipe

More can be said about the second area where an intensive (30–50 cm) habitation layer with possible hearth remains (Fig. 5, R0–R1) and finds from the Late Iron Age (10th–13th cc.) were discovered right at the beginning of the earthwork. This unexpected outcome led at first to the determination of the thickness of the cultural layers with test trenches T1 and T2, and, as the soil in the T1 included also a Samanid dynasty (819–999 CE) dirham¹ minted in the 10th century, the study method was changed from watching brief to excavation. Due to extreme weather conditions (snow, with temperatures below -13°C), the digging was done in three 10 cm technical layers from Level I to Level III, but all found structures and deposits were carefully documented. In all, the established length of the excavation pit where the

¹ AI 8660: 3, pers. comm. Ivar Leimus (AM).

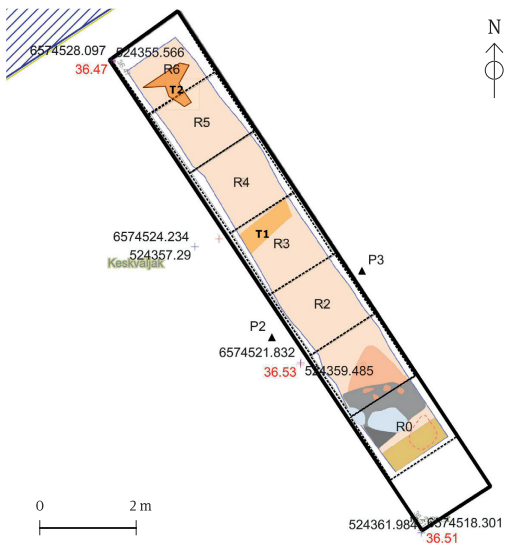


Fig. 5. Overview of area II during the excavation of Level I.
R – squares, T – test trench.

Jn 5. II uuringuala ülevaade I korrise tasandil. R – ruut, T – tranšee.

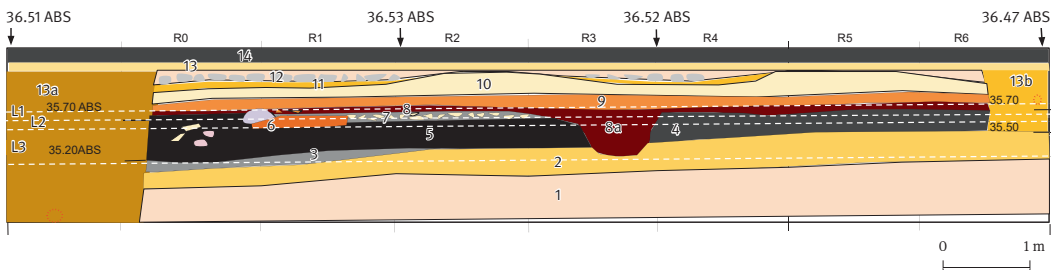
Drawing / Joonis: Mihkel Tammet

glazed redware (AI 8660: 20–21, Russow 2006, fig. 75) and a window came (AI 8660: 25). The deposit covering the pit should thus hypothetically be either contemporary with the filling of the pit or a bit later (up to 17th century?).

cultural layers were preserved was 9.7 m; the digging started from a height of 35.80 m a.s.l. The habitation layer was significantly thicker in the southeastern part, reaching almost 50 cm occasionally, and much shallower at 25 cm in the northwestern part.

Level I (35.80–35.70)

After removing the presumable 19th-century gravel fill (Layer 9) that might be associated with the open space in front of the St Michael's Church (see Fig. 2), older deposits appeared (Fig. 6). Firstly, at about 35.75 m a.s.l., the majority of the opened area was covered with deposits from the late medieval – early modern period (Layer 8) that included also a filled (Layer 8a) trash pit in square R3. This trash pit, much better visible during the next excavation stages, gives the approximate temporal borders to Layer 8: as the scarce collection of finds included also rim sherds of the late 15th–early 16th century



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| <p>1 – Layers of limestone pebbles on coastal sand formation / Veeriste viirge sisaldav looduslik liiv</p> <p>2 – Dark humic substances in sand / Leetunud (huumuslik leede) looduslik liiv</p> <p>3 – Dark humic substances with tar in sand / Pigilaukudega leetunud looduslik liiv</p> <p>4 – Dark 10th–13th centuries organic rich layer / Must tihenend kultuurikiht 10.–13. saj</p> <p>5 – 11th–13th c deposit with hearth / Arvatava hilisrauaaegse hoone kultuurikiht, mille lõunaosas osaliselt säilinud arvatav koldease</p> <p>6 – Hearth floor made of clay, 13th–14th c / 13.–14. saj kamina(kolde) aseme savist põhi</p> <p>7 – Dense soil floor with limestone fragments and gravel. Probably related to the 13th–14th c household / Tihedaks tambitud arvatav põrandasillutis, mis koosneb erineva suurusega paekivikildudest ja kruusast. Ilmselt on seostatav 13.–14. saj hoonega</p> | <p>8 – Probable 15th–17th c layer / Hilisem arvatavasti varauusaegne kultuurikiht 15.–17. saj</p> <p>8a – Cut, probable trash pit / Varauusaegne sissekaeve, ilmselt jäätmeauk. Kaeve profiilil jälgiv kihistu.</p> <p>9 – Levelled gravel layer probably related to 19th c Church Square / Ühtlaselt tasane kruusa kiht (võib olla seotud kirikuplatsi tasandamisega 19. saj)</p> <p>10 – Gray clayey gravel layer (probable 19th-c levelling) / Hall savine kruusakiht (ilmselt platsi/tee kattepinnas)</p> <p>11 – Sand filling under the stone pavement / Kivisillutise alune liiva padi</p> <p>12 – Cobblestone pavement / Munakivisillutis</p> <p>13 – Gravel filling below asphalt / Asfaldi alune täiteliiv/kruus</p> <p>13a – Water duct trench / Veetrassi sissekaeve</p> <p>13b – Cable trench / Kaablitrassi sissekaeve</p> <p>14 – Asphalt / Asfalt</p> |
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Fig. 6. SW profile of the water duct excavation area.

Jn 6. Veetorukraavi edelaprofiil.

Drawing / Joonis: Mihkel Tammet

Below Layer 8, massive, clay-lined boulders appeared in squares R0 and R1 (Fig. 5); these formed the border construction of the supposed hearth or oven, and charcoal-mixed soil was recorded inside the fireplace. The charcoal-rich content of the fireplace included a few finds (AI 8660: 1–2): a heavily burnt sherd of an early 13th-century coarseware and two copper alloy spiral tubes, possibly originating from a native Estonian dress (Rammo & Ratas 2019). Further excavation of the construction in the R1 area revealed additional fragments of the burnt clay lining, which contained burned plant fragments and imprints of straw, but also pieces of intensely sooty clay fragments as well as a burnt lump of dung (Fig. 7). The microscopic study of the dung revealed fungal spores and plant fragments from cereals. It supports the idea that the found dung belongs to herbivore faeces probably used to repair the clay-lined oven.

Charred clay lining started from the wall of what is believed to be a remnant of an oven made of large stones and expanded from there forming an oven mouth/ash pit – an area in front of the fireplace used for cooking as known from other settlements (Pärn 2004). Two legs (AI 8660: 12–13) of heavily burned locally made 13th-century earthenware tripod (e.g., Mäll & Russow 2004, fig. 5) found at the spot supported this conclusion.



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Fig. 7. *Dung used as sealing, found together with burnt clay lining of the oven.*

Jn 7. *Ahju savivooderduse kõrval tihendina kasutatud sõnnikutükk.*

(AI 8660: 11.)

Photo / Foto: Jaana Ratas

Level II (35.70–35.60)

The above-mentioned oven remains were visible also at Level II. In addition to the previous situation (base stones, clay plaster), fragments of two parallel charred wooden logs (spruce) were found under the fragments of burnt clay lining in squares R0–R1. Based on examples unearthed elsewhere (see Korkeakoski-Väisänen 2002, 67–68 for a 16th-century parallel from eastern Finland), these logs or boards might be part of an oven or ledge construction. While the exact counterparts for ledge logs are missing in the Estonian archaeological record, similarly constructed clay-lined ovens were occasionally in use in Estonia – the nearest counterparts (dated to the 14th–16th cc) coming from former Nissi village, about 30 km south of Keila (Lavi 1997, 93).

Next to the oven remains, a trampled floor layer (Layer 7) at 35.70 m a.s.l. was cleaned out in front of the heating area. Apparently, this is another detail of the 13th–14th-century building. Not much can be said about it as the floor was cut in square R3 with the above-mentioned late medieval trash pit, and no other structural features besides the oven were recorded. Also, the artefactual evidence is rather meagre, consisting of a possible iron candle holder (AI 8660: 26) found during the removal of the oven construction and some finds from the floor layer: local coarseware (AI 8660: 17–18) and a well-preserved chisel (AI 8660: 15). Whether the northwestern area of the trench – the one on the other side of the later trash pit – relate to the 13th–14th-century building is unclear, but it was very likely an open space (yard?) surrounding the household. This is supported by the collected animal bones, preliminarily determined as mostly belonging to cattle or sheep/goats. The Level II finds collected from here do not contradict this assumption, and fit by and large with the objects from inside

the house. A fragment of the Late Iron Age silver bracelet (AI 8660: 4) from square R5, a glass bead (AI 8660: 5) and handmade coarseware (AI 8660: 7–9) could also appear in the 13th-century context.

Level III (35.60–35.20)

Level III started at the height of 35.60 m a.s.l. and continued down to the height of 35.20 m. Here, two visually distinctive layers were observed: below the above-described trampled floor layer, dark dense soil (Layer 5) was unearthed in squares R0–R3; this probably formed the earthen floor level(s) of a preceding building. The same layer, documented as Layer 4, although visually similar, was less homogeneous in squares R4–R6, and can thus be related to the area outside the building. From here (R4) one post hole, interpreted as a support post for a possible animal(?) shelter was documented. No other structural evidence could be collected.



Fig. 8. Partially reconstructed coarseware vessel with a zig-zag ornament.

Jn 8. *Sik-sakmustriga lihtkedrakraamilise nõu serv.*
(AI 8660: 27–28.)

Photo / Foto: Jaana Ratas

Also, the artefactual evidence might validate the idea of the southern section of the trench as an area of a former house, as the majority of the finds were collected from squares R1–R3. More than 100 fragments of coarseware were found that formed a few clearly defined sets of sherds. These are from 3 or 4 pots (Fig. 8), likely left untouched after they were broken. Typologically similar kinds of pottery have been found in western Estonian Late Iron Age sites (12th–13th cc), among others from Soontagana hillfort (Tvauri 2005, fig. 28: 7). The same layer (Layer 5) also contained fragments of charred wood scattered around. Microscopic analyses of the wood remains showed that the majority of it belonged to alder (*Alnus glutinosa* L.), common firewood.

CONCLUDING THOUGHTS

The archaeological investigations at Keskväljak Sq. 4 in late 2022 were done in a rather unfavourable research environment. In addition to the relatively small opened surface that made it difficult to generalise the unearthed evidence, the meteorological conditions with snow and low temperatures did not offer ideal study conditions. Nonetheless, highly interesting results were obtained. It is the very first time when physical evidence of the medieval Keila borough has been archaeologically documented, as previously more or less only the St Michael's Church and the neighbouring petty vassal's castle (about 800 m at bird's-eye-view) have been studied. The recent outcome shows that even if the property development needs only a small section of land to be opened, it still deserves archaeological attention even in the minor urban settlements.

Even though the collected data is in some cases difficult to interpret, it seems that we can make a few generalisations. First of all, the area surrounding the St Michael's Church was likely in use before the medieval period. This is substantiated both with artefactual evidence

(10th-century dirham, Late Iron Age pottery) as well as possible structural remains (habitation layer/building below the medieval deposits). Second, the fragments of an oven, dated by the found sherds to the 13th century, are the first material proof of contemporary housing during the earliest phase of the church building. It is also interesting to note that despite the size of the excavation pit, it is possible to interpret the found oven following the native (and not Western European) building tradition, which might be also supported by the finds (a piece of silver bracelet, bead) that were in use also in Late Iron Age Estonia. When exactly the building was demolished and the area cleared as an open space is complicated to establish, but the trash pit that cut through the prehistoric and 13th-century layers offers some indications that it might have taken place sometime in the 15th century. Afterwards, the second study area remained unbuilt, likely as a publicly accessible region up to the present day. The first study area, on the other hand, had a different development scheme, probably covered with house(s) also in later times.

It is also important to stress that considering the overall good preservation rate of the older deposits, it can be predicted that layers related to the Late Iron Age and the Medieval period can be found intact in a much wider area. It is especially important to highlight that the main body of the above-mentioned oven seems still to be intact and can be investigated sometime in the future. Therefore, the future development of this section of Keila should always embrace the idea that archaeological monitoring as well as excavations should be included in the planning when further construction works are considered.

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ARHEOLOOGILISED UURINGUD KESKAEGSE KEILA SÜDAMES, KESKVÄLJAK 4

Mihkel Tammet ja Erki Russow

Keila asustuslugu ulatub kaugemale minevikku: esimesed jäljed tänase linna territooriumil pärinevad arheoloogia andmetel hiljemalt 7.–8. sajandist. Kirjalike allikate järgi ristiusustati Keikaeli nimeline küla 1219. või 1220. aastal. Linnalist asulat on mainitud 15.–16. sajandil, mil linnakesel oli linnapea ja käsitöölisi koondav gild. Naabruses asus keskaegne väikelinnus. Varauusaja hakul oli Keila viie kõrtsi ja paarikümne hoonega asula, kus asus 13. sajandi lõpus rajatud Mihkli kirik. Linnake kuhtus 16. sajandi teise poole sõjategevuse ja hilisemate haiguspuhangute tõttu ning kiriku ümbruses paiknenud asustusest jäid alles vaid riismed (jn 1–2). Alles 19. sajandi lõpus, mil valmis Keilat ja Tallinnat ühendav raudtee, sai asula uue hingamise ja 20. sajandi alguses püstitati kirikuesisele Keskväljakule esimesed uued hooned.

2022. aasta novembri lõpus ja detsembri esimesel poolel toimusid Keskväljak 4 kinnistul ja selle vahetus läheduses asuval tänaval arheoloogilised kaevamised, sest antud ala jääb keskaegse Mihkli kirikuaias kaitsevööndisse. Tööd toimusid keerulistes oludes, sest lisaks lumesajule langes temperatuur kuni 13 külmakraadini. Lähemalt pöörati tähelepanu kahele alale (jn 3–4): Keskväljak 4 ja 2 kinnistu vahelisele piirkonnale (ala 1) ning uue veetrassi süvendile, mis jäi Keskväljak 4 ees oleva kõnni- ja sõidutee alla (ala 2).

Ala 1 kaevamisel eeldati, et looduslikult pigem ebasobivast kohast ei tohiks vanemaid asustusjälgi tulla. Seda enam üllatas, et loodusliku kallaku sisse süvendatud vundamendiaugust leiti saviga seotud struktuuri jäänused. Dateerivate leidude puudumisel on keeruline hinnata ehitise vanust. Sideaine alusel võib see olla varauusaegne, teisalt võib see viidata ka 20. sajandi eelse kamina/ahju konstruktsioonile.

Seevastu pakkus **Ala 2** veelgi põnevamaid üllatusi. 19. sajandil kiriku ees asunud platsi kruusakihi alt (jn 5–6) paljandusid kolde või ahju jäänused ning

prooviaugust leiti 10. sajandisse dateeritud Samaniidide dünastia dirhem. Nende leidude tõttu alustati jälgimise asemel arheoloogiliste kaevamistega, kus 12 m pikkune uuringusüvend kaevati ilmastikukolusid arvestades läbi 10 cm paksuste tehniliste korrastega. *I korris*e puhastamiselt tuvastati kruusakihi all 15.–17. sajandisse dateeritud elutegevuskiht, sealhulgas üks prügiauk, mille täitest leiti 15. sajandi lõppu – 16. sajandi algusesse dateeritud punase glasuurkeraamika katkeid, samuti klaasakna tinaraami tükk. Täpsustus ka eelnevalt leitud ahju olemus. See kuulus saviga tihendatud küttekehale, millega liitus leease. Nendega seotud leiud – mõned keraamikakatked ja pronksspiraalid – dateerivad konstruktsiooni 13. sajandisse. Huvitava faktina selgus, et ahjuseina on parandatud rohusööja (veise?) sõnnikuga (jn 7). *II korris*e puhastamisel avastati, et ahjuesisel leekohal on kasutatud kuusepuidust laudist, millele väga täpseid vasteid lähikonnast ei ole. Dokumenteeriti ka kruusane põrandatasand, mis kuulub ahjuga samale hoonetele. Lisaks võib eeldada, et kaevandi põhjaosa paiknes mainitud hoonet ümbritsenud õuealal, mille pinnasesse sattus ka loomaluid. Sealt saadi muuhulgas ka hilisrauaaegse käevõru katke ning klaashelmes, mis võivad siiski seostuda ka 13. sajandi elutegevusega. Viimane ehk *III korris* paljastas 13. sajandi hoone eelse situatsiooni. Näib, et keskaegse maja all asus varasem elamu, sest ülalkirjeldatud ahju alust pinnast saab seostada eelneva hoone põrandatasandiga, kuhu on muuseas purunenud mitu savipotti. Need, Lääne-Eestile tüüpilised savinõud (jn 8) näivad ajastavat eelneva ehitise 12.–(13.) sajandisse.

Kokkuvõttes kinnitavad Keila Mihkli kiriku läheduses tehtud uuringud, et antud piirkonda tuleb ka edaspidi detailselt uurida: esmakordselt saadi ainelisi jälgi keskaegsest alevikust ning avastatud struktuurid on suure tõenäosusega päris hästi säilinud ka väljaspool 2022. aasta uuringualasid.