



Archaeological investigations on Tõnismägi 11a and Pärnu Road 44 plots in Tallinn

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INTRODUCTION

During the summer and autumn of 2017, archaeological surveillance and rescue excavations by OÜ Arheograator took place on the plots at Tõnismägi 11a and Pärnu Rd. 44¹ (Figs 1, 2). Rescue excavations on the property started already in early summer on the Vana-Kaarli cemetery, on the northern area of the former Tõnismägi 11a plot, and revealed around 500 burials,

¹ Now a joint property at address Tõnismägi 11a.

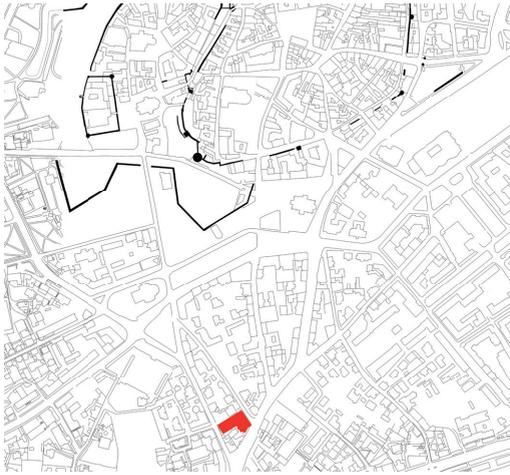


Fig. 1. Location of the Tõnismägi 11a / Pärnu Rd. 44 excavation plot in Tallinn.

Jn 1. Tõnismägi 11a / Pärnu mnt 44 kaevandi asukoht Tallinnas.

Drawing / Joonis: Villu Kadakas, Erki Russow

some with grave goods (Malve 2018). The fieldwork continued on the properties after the excavations of the cemetery and focused on the preserved material culture and constructions. Also, loose human remains from disturbed burials, scattered along the area, were collected (Varul *et al.* 2018). Rescue excavations were carried out on an area ranging over 2000 m².

The majority of the site exhibited homogeneous mixed layers, i.e. the topmost black organic-rich soil included mainly contemporary items along with examples of finds from different periods (Fig. 3). Underneath the black soil was an organic-rich dark brown layer with finds mostly from the 17th to the 19th century and fragmented human remains. Additionally, some buildings and constructions were unearthed (Fig. 2). The

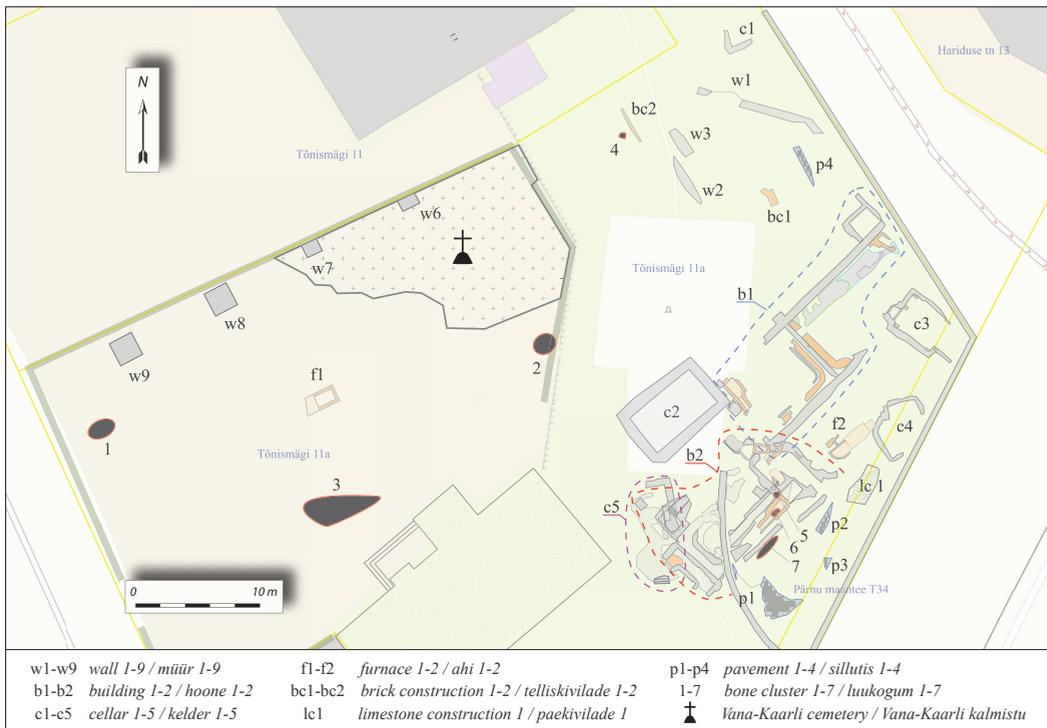


Fig. 2. Tõnismägi 11a / Pärnu Rd. 44 excavation plot in 2017.

Jn 2. Tõnismägi 11a / Pärnu mnt 44 2017. a kaevand.

Base map / Alusplaan: Maa-amet

Mapping / Kaardistus: Janika Viljat, Raido Roog

Drawing / Teostus: Raido Roog

cultural layer was approximately 2–3 metres thick across the excavation plot, only in the areas of cellars it reached up to four metres.

The find material on the site consisted mostly of debris: pieces of bricks, tiles, window glass, pottery, fragments of clay pipes, some coins, animal bones, etc. Noteworthy is the great number of red flowerpots in different sizes found on the site. Most of the artefacts derived from the 18th to the 20th century, but the few oldest finds belong to the Iron Age and one possibly even to the Stone Age. Approximately 4000 pieces of archaeological artefacts are stored in Tallinn University Archaeological Research Collection under number AI 7861.

CONSTRUCTIONS

Altogether 18 different constructions were unearthed, including remains of two larger buildings from different periods, five cellars, five walls, two brick furnaces and four unclear brick and limestone constructions. Little can be said about the majority of the constructions, as they were only partially preserved (Fig. 2). Based on the finds from under the constructions the following can be summarized: all brick furnaces had ‘PALMS’ bricks, dating them to the 19th century; under Wall 1 there was a coin (Swedish 1/6 öre, 1671; AI 7861: 867) and the mixed soil under the majority of the recovered constructions included finds from the 18th century. Therefore, it is likely that most of the constructions were erected during the 18th–19th centuries.

Buildings

Building 1 (19.5 × 5.8 m; Figs 2, 4) was divided into two rooms. Brick furnaces were discovered at the end of both rooms and brick flues ran along the inner walls. The outer walls and the wall separating the two rooms were built using igneous and metamorphic rock (most probably granite and gneiss) boulders, flat limestone and mortar. In the north-eastern corner next to the outer wall was a small rectangular construction, which could have been a cellar. Numerous finds were recovered from the construction, including various metal items (a ring, buttons, a thimble, etc.), stove-tiles, and potsherds (incl. fragments of flowerpots). Additionally, various coins were found inside the walls and under the building, in disturbed

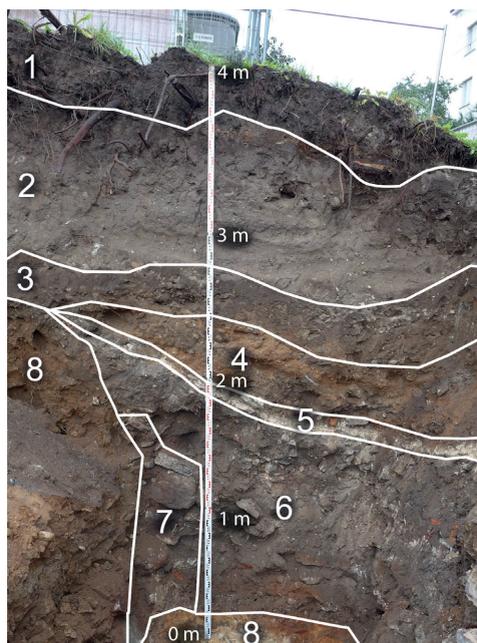


Fig. 3. The stratigraphy of the north-eastern corner of the site: 1 – topsoil, 2 – dark organic-rich layer, 3 – brown layer with loose human remains, 4 – rubble layer, 5 – layer of mortar, the top layer of Cellar 1, 6 – rubble layer, inside the Cellar 1, 7 – wall of the Cellar 1, 8 – natural sand. The top three layers are characteristic to the whole site.

Jn 3. Läbikaevatud ala kagunurgas paiknenud ladestuste läbilõige ülevalt alla: 1 – mätta- ja mättaalune must kiht, 2 – must orgaanikarikas kiht, 3 – pruun kiht, mis sisaldab segatud inimluid, 4 – rusune kiht, 5 – mördiviirg: kelder 1 ülemine säilinud osa, s.t tasandatud keldri pealmine kiht, 6 – rusukiht: kelder 1 sisemus, 7 – kelder 1 seinamiit, 8 – looduslik puutumata pinnas. Pealmised kolm kihti esinevad kogu kaevatud alal.

Photo / Foto: Liivi Varul

Drawing / Teostus: Kristel Roog



Fig. 4. 3D model of Building 1.

Jn 4. Hoone 1 3D mudel.

Model / Mudel: Jaana Ratas



Fig. 5. 3D model of Building 2.

Jn 5. Hoonepõhja 2 kujutav 3D mudel.

Model / Mudel: Jaana Ratas

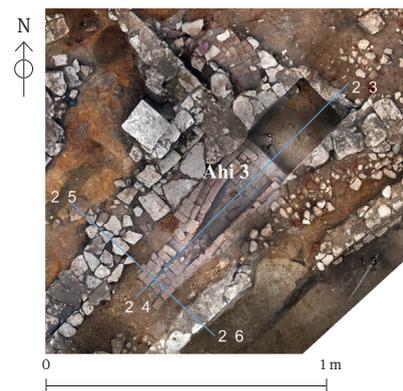


Fig. 6. 3D model of Furnace 3 from Building 2. On the right, longitudinal section (a) and cross section (b) of the Furnace 3.

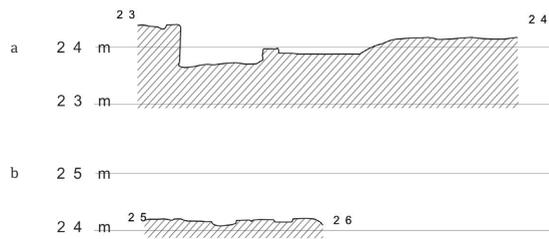
Jn 6. Hoones 2 asunud ahju 3 kujutav 3D mudel. Paremal ahi nr 3 piki- (a) ja ristlõige (b).

Model / Mudel: Jaana Ratas

soil, the youngest from 1811 (Russian two ko-pecks; AI 7861: 998). Therefore, Building 1 must have been erected during the 19th century.

The remains of **Building 2** (14 × 9 m; Figs 2, 5), which was partially under Building 1, consisted of at least five furnaces and a possible heating system. The heating system in the western area of the building included two U-shaped narrow corridors, which were erected using limestone, boulders and bricks. The inside of the corridors had been daubed. In the western corridor remnants of unidentified brick constructions were preserved, while in the eastern corridor a burned layer on top of the floor came to light. Additionally, a small rectangular room was discovered next to the possible heating system.

The best-preserved **furnaces** inside both buildings were built in a similar manner: an outer chamber made of limestone, the main chamber and flue made of red bricks (Fig. 6). Several of the red bricks had markings 'PALMS' surrounded by a rectangular box, which indicates they derive from the brickyard of Palmse manor in northeast Estonia (Fig. 7: 1). The manor started manufacturing bricks on large scale in 1868 (Mõisa ajalugu). Additionally, some firebricks were recovered. In Building 1 the firebricks were marked with



'ROBSON' (Fig. 7: 2) which was an English company, active during 1863–1908 (Gurcke 1987). In Building 2 the fragmented firebricks had markings '227, ÖGANÄS, B', short for 'HÖGANÄS', made by the Swedish firebrick manufacture, which started production in 1825 (Höganäs) (Fig. 7: 3). It is likely that the furnaces were built during the second half of the 19th century.

The recovered artefacts, incl. the great number of red flowerpots, the appearance of the two buildings and the structure of heating systems indicate that both buildings were hot-houses. The gardeners started to heat hothouses already in the early modern period, when they tried to find a way to protect tropical plants, i.e. citrus trees from European winters (Roberts 1991). Earlier heating techniques were simple: plants were covered with bell jars or surrounded with trenches filled with hot water etc. (ibid.). A more complex technique was taken into use in 1684 by John Watts in the Chelsea Physic Gardens, where a heating system was built under the hothouse and the warmth was conveyed through brick tunnels (Roberts 1991; Holland 2016). However, in 1718 Dr Richard Bradley advised against this practice as the mortar between the funnel bricks often cracked and the greenhouse filled with smoke, rather he suggested that *'at either end of the greenhouse there should be a small room with a fireplace in the greenhouse wall and the chimney should have a number of bends in it, so as to provide a heated wall'* (Roberts 1991). Building 1 had furnaces on both ends of the house, much like as Dr Bradley had suggested. And as the furnaces in Building 1 are very similar to the ones in Building 2, it seems highly likely that also Building 2 was used as a heated hothouse, albeit the furnaces seem to be inside (or under) the house, not at its ends.



Fig. 7. Selection of firebricks and flowerpots from Tõnismägi 11a/Pärnu Rd. 44. 1 – Red bricks with mark 'PALMS', 2–3 – firebricks with marks 'ROBSON' and 'HÖGANÄS', 4–5 – redware flowerpots, 6 – fragment of a flowerpot with production mark 'Kuckulin'.

Jn 7. Valik telliskive ja lillepote Tõnismägi 11a/Pärnu mnt 44 krundilt. 1 – punased tellised kirjaga 'PALMS', 2–3 – šamott-tellised kirjadega 'ROBSON' ja 'HÖGANÄS', 4–5 – lillepotid, 6 – lillepoti fragment kirjaga 'Kuckulin'. (AI 7861: 1880, 1289, 1380, 1388, 1870, 1395.)

Photo / Foto: Aivar Kriiska



Fig. 8. 3D model of Cellar 3.
 Jn 8. Keldrist 3 tehtud 3D mudel.
 Model / Mudel: Jaana Ratas

Cellars

The excavation area revealed five cellars (Fig. 2). Only a small 2.4×2.8 m corner of **Cellar 1** extended to the excavation plot. It could have been used as an ice-cellar since it had a vaulted ceiling, similarly to the ice cellar in Sagadi (Reg. No. 15940). Additionally, in 1854 von Landesén had bought a property in the area with an ice cellar (TLA.230.7-II,8, fol. 79), which could be Cellar 1.

Cellar 2 was a sturdy 6.4×3.6 m room built of limestone. The floor was covered with a layer of silty sand. **Cellar 3** had a smaller entrance room and a main room (Fig. 8). The 3.5×3 m main room's two sidewalls were supported by brick arches and there were two niches in the end of the room. The inside of the cellar was daubed, containing numerous sherds of flowerpots, glass, various ornamented tiles and glass domes belonging to the second half of the 18th – end of the 19th century. In the lower layer, near the niches numerous fragments of glass bottles were found.

The partially preserved **Cellar 4** had at least one room, 5×2.5 m in size (Fig. 2), built of limestone. The inner sides of the walls were covered with lampblack and the lower

part of the walls had turned red due to excessive heat. Interestingly the stones on the floor showed no heat damage, thus they must have been covered with a layer of soil. The burned layer contained burned bones and artefacts, also numerous burned clay daubs. Possibly the walls were partially furnished with clay. After the fire, the debris was covered with red sand and on top rubble was scattered. Inside the cellar, a glass fragment from the late 17th-century vessel was found. All the coins recovered from the cellar were öre from the 1660s (AI 7861: 1522, 1651, 1652, 1666), which were found inside the walls and either on or under the floor. As those Swedish öre were used up to mid-18th century (Leimus *et al.* 2018, 128), it is likely that the cellar was built during the 17th–18th century.

Cellar 5, built of limestone, was under Building 2 (Fig. 2). A staircase leading to the partially preserved room, 5×2 m in size, and a smaller rectangular construction were unearthed. The floor was made of limestone, under which there was a layer of non-local sand. The staircase had had at least three steps, made of natural and worked limestone blocks. Under the floor was a late 17th-century Swedish öre (AI 7861: 1976).

ARCHAEOLOGICAL FINDS

Throughout the excavation approximately 4000 archaeological finds were recovered and catalogued. Numerous artefacts were recovered from inside and under constructions. Most of the finds were ceramics, glazed and roofing tiles, also glass (vessels and window glass),

animal bones, fragments of clay pipes, coins and other various household items. Most of the artefacts collected date back to the 18th–19th centuries, the oldest to the Stone and Iron Age.

Pottery

The pottery collection consists of approximately 2400 fragments of kitchen- and tableware, smoking pipes, stove tiles and bricks as well as some special domestic items made of clay. Here, only a very broad generalization of the assemblage will be offered.

Less than ten handmade pottery sherds (e.g. AI 7861: 674, 675a; 675b, 1969a, 1969b, 1969c, 1969d) were recovered in mixed soil of the former Pärnu Rd. 44 part of the excavation plot. All but one are wall fragments (Fig. 9: 2). The vessels were made of clay tempered with rock debris. Surfaces of the pots were smoothed on both sides and without any decoration. One handmade pottery sherd is a wall fragment of a small carinated vessel (Fig. 9: 1). The vessel was made of clay tempered with fine-grained rock debris. The inner surface of the vessel was smoothed and its outer surface lightly burnished. The described pottery sherds are unfortunately too fragmented to be accurately dated. Carinated vessels were common in northern Estonia from the Late Bronze Age to the Late Iron Age, however, the sherd from Pärnu Rd. 44 appears to be an Iron Age vessel (maybe even from the latter part of the period) rather than an earlier carinated vessel (Lang 1991). The other handmade pottery sherds are likely from the Iron Age as well.

The majority of the pottery belongs to the modern period, with the earliest finds dated to the 17th and the youngest to the 20th century (Fig. 9: 3–5, 8). This pottery is more or less typical for Tallinn suburban areas. As elsewhere, also here the amount of stoneware finds is almost nonexistent, consisting of a handful of fragments of stoneware mineral water bottles, a sherd of a storage vessel of 18th-century Westerwald stoneware, and one or two pieces of Frechen and Duingen stoneware. The latter is represented with a bottom fragment of an apothecary jar. The lion's share of the assemblage is represented by several categories of glazed redware, of what the earliest are 1–2 examples of 17th-century slipwares from northern German (?) and Dutch areas. However, most of the respective finds are from the 18th and 19th centuries. The majority of these belong to traditional cookware in the form of tripod pots or flat-bottomed storage vessels. To a lesser extent, also some amount of redware tableware (dishes, plates, bowls with monochrome and polychrome slip decoration) is recognizable, but not so much as faience or other higher quality ceramic artefacts such as late 18th-century transferware and 19th-century plain industrial wares. Of these, perhaps one Delftware sherd can be highlighted here (Fig. 9: 4).

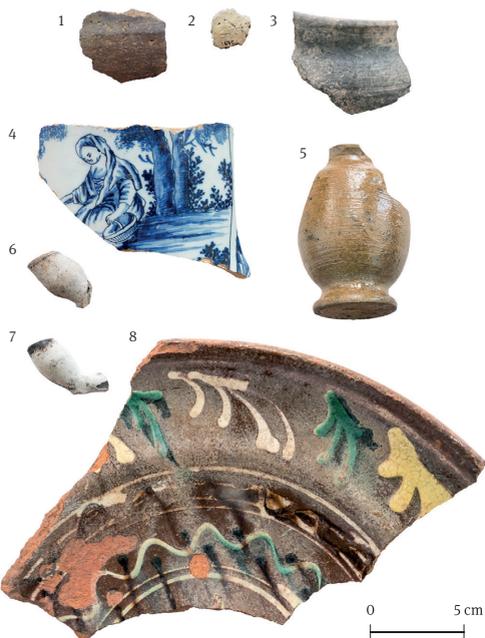


Fig. 9. Ceramic finds from the excavations. 1–5, 8 – fragments of pottery, 6–7 – clay pipes bowls.

Jn 10. Kaevamistel kogutud keraamikaleide. 1–5, 8 – savinõude katked, 6–7 – savist piipude kahad.

(AI 7861: 674, 675, 911, 1335, 1314, 342, 342, 1283.)

Photo / Foto: Aivar Kriiska

Tõnismägi 11a / Pärnu Rd. 44 excavation brought into light also a significant collection of modern period stove tiles. In most occasions it is hard to affirm whether the finds are from one certain tiled stove or was the excavated area used as a dump site for heating ceramics. Here at least three categories of 17th–19th century stove tiles can be distinguished: the earliest are black glazed tiles with floral ornamentation, followed by white tiles with blue decoration, typical to stoves in Tallinn from the late 17th until the late 18th century. As the last phase of stove tiles, white and black glazed tiles with no or modest decoration can be pointed out (Fig. 10).



Fig. 10. Stove tiles.

Jn 10. Ahjukahlid.

(AI 7861: 1408, 1402, 1411, 756a–b, 1403a–b, 1661.)

Photo / Foto: Aivar Kriiska

Another category of pottery that deserves attention is the abundant assemblage of red-ware flowerpots (Fig. 7: 4–6). These can be dated to the second half of the 19th century. The assortment of the pots is by and large quite homogeneous, but includes also a few exceptions, among others just one pot wearing the production mark ‘Kuckulin’ (Fig. 7: 6), suggesting its place of origin to be Kukulinna, a manor in south Estonia. Since we do not have presently a very good understanding of the material culture of the modern period gardening in Estonia, it is an important addition to our knowledge on this topic.

Clay pipes

Approximately 600 fragments of clay pipes were collected. They represent generally a typical spectrum of respective finds from Tallinn suburban context (see Russow 2005 for details), dating broadly from the middle of the 17th century (Fig. 9: 6–7) to the 19th century. Next to the plenty of undecorated but polished pipe stems, a few decorated examples stand out. Of these the earliest are one or two fragments with stamp decoration of *fleur de lys* in a diamond-shaped frame (such as AI 7861: 343), dating the pieces to the second and third quarter of the 17th century. Yet, the majority of the samples belong to the 18th century, bearing

occasionally the name of the production place (IN GOUDA) with different kind of rolled ornamentation. Also, the surviving pipe bowls seem to indicate towards Gouda in the Netherlands as the collection do not contain bowls distinctive to other Dutch or foreign production sites. This can be affirmed likewise through the surviving maker's marks and initials on the heel of the bowls. Of these, mid-17th to late-17th century initials AIH, DD as well as images of a rose, a snake and a jumping horse used in Gouda (van der Meulen 2003) were recorded. As an interesting attempt for a secondary use of the pipe stems, a fragment (AI 7861: 345) with drilling traces for making a whistle should be also mentioned here – there are 4–5 examples from other excavated sites in Tallinn, but generally the number of similar finds is quite modest.

Glass

The total of 234 glass fragments were identified among the finds. The glass was mostly dated to the 18th and 19th century and was of utilitarian, everyday nature predominantly represented by window glass and glass bottle fragments. Just a tenth of the finds were from other find groups such as beakers, bowls and tumblers.

Window glass is generally of the rolled plate glass and polished plate glass type dating from the 18th and 19th century (Davidson 2003, 61–63). The fragments that still bear the uneven edges (e.g. AI 7861: 1217, 1680) left untrimmed after production could be of an earlier date (late 17th century). Others show a chipped or grozed edge (AI 7861: 1013). Almost all the window glass fragments were directly associated with buildings and structures. There was also at least one example of thicker flat glass with a beveled edge cut at a 45 to 60-degree angle characteristic for mirrors (AI 7861: 801).

Glass bottles were represented by various types and sizes from the late 17th to the 20th century ranging from minuscule apothecary phials (AI 7861: 874) to massive demijohn fragments (AI 7861: 583). The demijohns or carboys are used as containers or fermentation vessels. Other bottles were mostly of an earlier onion-shaped or a later cylindrical type with only three fragments from quadrilateral bottles found from the site. Two bottle seals from Lelle (1813–1853) and one from Laashoone (1764–1775) – glass production sites in central and southern Estonia – were also identified (Fig. 11: 2). Previously only four from Lelle and one from Laashoone had been found archaeologically from Tallinn (Reppo 2016, 90). Consumption of mineral water could be shown by two engraved tumbler fragments (AI 7861: 863, 1920) dated from the mid-18th to the mid-19th century usually associated with this drink. There were only five other drinking glass fragments, one of them from an 18th-century amethyst glass vessel (AI 7861: 893), which is rare for Tallinn.

The rarest items, however, were round knob handles from the top of five glass domes – cloches (AI 7861: 1415, 1418; Fig. 11: 1). A glass cloche or bell-glass was used to shelter young plants from frost and help newly planted seedlings grow roots faster acting as an incubator. Glass cloches were invented in 1623 in Italy, yet the applied solid-glass knob handles were a later addition. These made lifting and handling the heavy cloches easier. Unfortunately, the handles



Fig. 11. Handle from the top of glass dome – cloche and seal of Laashoone bottle. Drawing of the glass dome after Loudon 1835, 547.

Jn 11. Klaaskupli nupp ja Laashoone pudeli pudelimärk. Klaaskupli joonis Loudon 1835, 547 järgi. (AI 7861: 1415, 1462.)

Photo / Foto: Aivar Kriiska

acted like a magnifying glass, focusing sunbeams on the plant and consequently burning them. Gardeners went for the easy solution – they sheared the handles off (Voyle 2011). It appears that three of the knob handles may have been indeed cut off, but two handles have broken together with the cloche indicating they remained attached. Glass cloches with knob handles can be dated from the 18th to the late 19th century (Noël Hume 1974, 62).

With the clear majority of material representing the 18th and 19th century, the glass artefacts form a relatively good complex for studying a suburban site from the mid modern period. The dominance of window glass and glass bottles is not uncommon for other similarly dated sites from Tallinn, however the scarcity of glass drinking vessels is notable. The glass cloche fragments are also unique as they have not been recognized or published in Estonia thus far.

Coins

During the archaeological rescue work approximately 154 coins older than the 20th century were found, including two prehistoric coins and 12 coins from the historic period until the end of Old Livonia in 1558 (pre-cemetery period, Malve 2018). Most of the coins originate from disturbed layers. Additionally, coins were recovered from the Vana-Kaarli cemetery area in Tõnismägi 11a. The preliminary information about those coins (n=78) has been incorporated and presented alongside with the results from the coins gathered during the rescue excavation. Altogether at least 29 coins from the pre-cemetery period have been recovered in the excavated area.



Fig. 12. Deliberately fragmented Arabic dirhems.

Jn 12. Tahtlikult katki tehtud Araabia dirhemid.

(AI 7861: 586, 1107.)

Photo / Foto: Mauri Kiudsoo

Two of the prehistoric coins are Arabic dirhems and three European deniers. Both Oriental coins (Tab. 1: 1–2), struck in the 10th century, are deliberately fragmented and therefore difficult to attribute (Fig. 12). Only the bigger coin (0.87 g) can be identified² more accurately as a late Samanid dirhem from the 940s–970s. Two of the three European deniers are well preserved German coins from the 1080s and one 11th-century specimen is in a poor state. Possibly the West-European deniers represent remains of a hoard hidden around 1100 AD (Kiudsoo, in prep.). Additionally, the bigger fragment of the 10th-century Arabic dirhem could have derived from the same hoard, as single coins of earlier dirhems were represented in finds until the 12th century (see Molvõgin 1994).

The medieval coins (Tab. 1: 3–7, 9–14) found in Tõnismägi were minted by the local rulers, the Livonian Order in Tallinn (11) and Riga (1), bishops of Tartu (10) and archbishop of Riga (1). Four Livonian coins date from the period before the monetary reform of 1422/26, and 21 are later than this event. There is only one foreign specimen struck in Sweden during the reign of Sten Sture (jun.) (1512–1520; Tab. 1: 8). The last-mentioned coin played an important role in the money circulation of Livonia only in the 1520/1530s (Leimus *et al.* 2018, 174).

The interpretation of the coins discovered from settlement sites, cemeteries or sacrificial sites is not dependent on the year of minting, but indicate rather the duration of their circulation and the period when the coins which were not minted in Livonia, appeared in Livonia (Kiudsoo 2007, 24). The oldest Livonian coins unearthed in Tõnismägi are four *lübische* struck

² The Arabic coins were identified by Ivar Leimus (AM).

between 1398–1420 (Tab. 1: 3–4), the latest date of circulation of those coins was established by the monetary reform of 1422–1426 (Kiudsoo 2007, 40). Estonian medieval hoards do not contain such kind of small nominals characteristic to sacrificial sites. Based on the known coin finds from the churches of northern and western Estonia, we can assert that frequent sacrifices of coins in churches started around the turn of the 14th and 15th centuries (Kiudsoo 2012, 170). Thus, it is plausible that those *lübische* were also sacrificed in the chapel of St Anthony on Tõnismägi.

The 15th-century and early 16th-century coins are only low value *pfennigs* and *scherfs* of Livonia (Tab. 1: 5–7, 9–11). The *schillings* and *pfennings* that were minted of silver of considerably lower quality occur primarily among the finds from cemeteries or offering sites. Since the 15th century, *scherfs* hardly ever occur in the composition of hoards, thus we cannot establish the duration of their circulation. However, *pfennings* from the second quarter of the 15th century also occur among the hoards, deposited in the 1530s (Kiudsoo 2007, 26). Coin finds included numerous medieval coins of low nominal values, dated before the cemetery period. The composition suggests prolonged accumulation from the beginning of the 15th century until the 1530s (i.e. it is unlikely that the coins derive from one medieval hoard or purse) and thus they indicate that the chapel of St Anthony was somewhere nearby.

Intriguingly, the *schillings* of Livonian Order and the dioceses of Riga and Tartu struck in the second quarter of the 16th century (Tab. 1: 12–14) were also in circulation during the Livonian War. They clearly prevailed in hoards in the 1560s and the first half of the 1570s. Although in subsequent years their share declined considerably, Livonian *schillings* still occurred (0.1–3.8% of the total of coins) in the coin hoards deposited in the first period (1600–1611) of the Polish-Swedish War (Kiudsoo 2007, 26). Therefore, their presence in the find material can be also connected with the cemetery period.

Table 1. Prehistoric and medieval coins from Tõnismägi 11a / Pärnu Rd. 44.³

Tabel 1. Muinas- ja keskaegsed müündid Tõnismägi 11a / Pärnu mnt 44 kaevamistelt.

No. / Nr	Collection No. / Inventar number	Coin / Münt	Reference / Viide
1	AI 7861: 586	Samanids dirhem, 3rd quarter of 10th century	
2	AI 7861: 1107	dirhem, 10th(?) century	
3	AI 7861: 362	Livonian Order, Tallinn, <i>lübische</i> , s.d. (1406/07–1415)	Hal: T 2
4	AI 7861: 165	Livonian Order, Tallinn, <i>lübische</i> , s.d. (1415–20)	Hal. 57
5	AI 7861: 1016	Tartu BR, Dietrich IV Resler (1413–41), <i>scherf</i> , s.d. (after 1426)	Hal. 54
6	AI 7861: 1264	Tartu BR, Bartholomäus Sawijerwe (1441–59), <i>pfennig</i> , s.d.	Hal. 551
7	AI 7861: 1017	Tartu BR, Dietrich V Hake (1485–98), <i>scherf</i> , s.d.	Hal. 575/6
8	AI 7861: 363	Sweden, Stockholm, Sten Sture jun. (1512–20), 1/2 <i>örtug</i> , s.d.	Lag. 8b
9	AI 7861: 163	Livonian Order, Tallinn, <i>pfennig</i> , s.d. (1515–22)	Hal. 107/8
10	AI 7861: 1263	Tartu BR, Johannes Blankenfeld (1518–27), <i>pfennig</i> , s.d.	Hal. 604
11	AI 7861: 587	Tartu BR, Johannes Blankenfeld (1518–27), <i>pfennig</i> , s.d.	Hal. 602/7
12	AI 7861: 167	Livonian Order, Riga, Wolter von Plettenberg (1494–1535), <i>schilling</i> , 1533	Hal. 267
13	AI 7861: 1019	Riga ABR, Wilhelm Markgraf von Brandenburg (1539–63), <i>schilling</i> , 1541	Hal. 827
14	AI 7861: 306	Tartu BR, Jodokus von der Recke (1543–51), <i>schilling</i> , 1547	Hal. 653

³ During the rescue excavation of the Vana-Kaarli cemetery numerous coins were recovered. The majority of them have been analysed and the results have been incorporated to the article. However, since the coins from the cemetery area are not catalogued, only prehistoric and medieval coins from the Tõnismägi 11a / Pärnu Rd. 44 rescue excavations have been presented in the table.

Animal bones

Both burned and unburned animal bones and bone fragments were selectively collected from the site (Tab. 2). The collected bones were either inside or under constructions (mainly from Buildings 1 and 2, and Cellars 3 and 4), archaeozoological remains in the disturbed soil were not gathered. Interesting finds are two fragments of worked elk antler, which were under Building 2 (AI 7861: 1783, 1850). The majority of the bones derived from domestic animals, e.g. cattle, pig, and sheep/goat (some of them with cut marks), thus the material appears to be typical food waste which is usual for cultural layers in bigger settlement sites, e.g. towns.

Table 2. The taxonomy and anatomical representation of the animal bones collected from the Tõnismägi 11a / Pärnu Rd. 44 site (after Maldre & Tomek 2018).

Tabel 2. Määratud luude taksonoomiline ja anatoomiline koostis (Maldre & Tomek 2018 järgi).

	Cornua	Ossa cranii	Mandibula	Dentes	Vertebrae	Costae	Sternum	Scapula	Coracoideum	Humerus	Ossa antebrachii	Carpometacarpus	Metacarpale	Ossa coxae	Femur	Ossa cruris	Tibiotarsus	Ossa tarsi	Phalanges	Total / kokku
Cattle / veis (<i>Bos taurus</i>)		2			4	5		1		2	2			1	3	2		2		24
Sheep / lammas (<i>Ovis aries</i>)																			3	3
Sheep/goat / lammas/kits (<i>Ovis aries</i> / <i>Capra hircus</i>)			1		3	1		1			2			1	1			1		11
Pig / siga (<i>Sus domesticus</i>)		1	2	2	2	8							1		1	1				18
Elk / põder (<i>Alces alces</i>)	2																			2
Goose / hani (<i>Anser anser</i>)						1	1		1											3
Red-breasted merganser / rohukoskel (<i>Mergus serrator</i>)										1										1
Black grouse / teder (<i>Tetrao tetrix</i>)									1			1								2
Chicken / kana (<i>Gallus gallus dom.</i>)										1							2			3
Bird / lind (<i>Aves</i>)						2	2													4
Frog / konn (<i>Anura</i>)																1				1
Fish / kala (<i>Pisces</i>)		1																		1
Total / kokku	2	4	3	2	9	17	3	2	2	4	4	1	1	2	5	4	2	3	3	73

HUMAN REMAINS

The Vana-Kaarli cemetery was on the southern side of Tõnismägi hill, however, the exact extent of the area where the deceased were inhumed is unknown. Loose human remains were collected from the brown layer (Fig. 3) from the entire property, both from Tõnismägi 11a and Pärnu Rd. 44. Additionally, six smaller and one larger cluster of commingled human remains were unearthed in the excavation plot (Fig. 2).

Bone clusters 1, 2 and 3 were located in the area close to the extant part of the Vana-Kaarli cemetery. **Bone cluster 1** was 2.2 × 1.5 m wide and 20–80 cm deep, **Bone cluster 2** measured 70 × 70 cm and **Bone cluster 3** was a 5.4 × 2.20 m wide and around 50 cm deep area (Fig. 13). These clusters also included coffin nails, grave goods, and in Bone cluster 3, also textile along with human hair had preserved (e.g. AI 7861: 839). A fragment of a mirror was found in Bone cluster 1 (AI 7861: 801). It is likely that in the 20th century, when piping works were undertaken in the cemetery area, the workers disturbed the burials and decided to rebury the human

remains nearby. The exact time of the reburials remains unknown, but the relatively big size of Bone cluster 3 suggests that it was made by backhoe.

Bone clusters 4–7 were situated in the property previously known as Pärnu Rd. 44. **Bone cluster 4** was in the north-western area and its diameter was 50 cm. **Bone cluster 5** was underneath Building 2, right next to Furnace 3. The human remains were placed there before building the furnace, since the bones were covered with grey sand that was also used to bind the bricks together. **Bone cluster 6** was underneath Furnace 3. Between the furnace and human remains were 1–2 cm of soil. Since the tubular bones in the cluster were neatly together, it can be suggested that the human remains were carefully placed into the hole, instead of careless tossing which is evident in the other bone clusters in the excavation plot. **Bone cluster 7** was located on the southern side of Wall 5 (Fig. 2). The commingled human remains were placed there most likely when the wall was built.

The Early Modern cemetery has been partially destroyed several times. Since the loose human bones and Bone clusters 5–6 were collected underneath the constructions, it is possible that at least some earthwork was undertaken before they were built in the 18th or 19th century. Additionally, as loose human remains were both on top and inside the buildings, the nearby earth must have been moved after the use of the constructions. Possibly some destruction of the cemetery occurred as well. The size of Bone cluster 3 suggests that it was dug in the 20th century, as backhoe must have been used. Most likely these bones were gathered when a trench for a pipe was dug which halved the preserved Vana-Kaarli cemetery in Tõnismägi 11a. Also, during the construction of the modern limestone wall between Tõnismägi 11a and Pärnu Rd. 44, some of the western area of the cemetery was destroyed.

THE TIMELINE OF THE SITE

Based on the former research and written records, we can establish the timeline of the excavated area from prehistoric times to the 20th century.

The previous archaeological excavations on Vabaduse Square and Pärnu Rd. 33/35 plot, located close to Tõnismägi, revealed human settlements from the Stone Age (e.g. Kadakas *et al.* 2010; Bernotas *et al.* 2017, 155, 158). The elevation of the natural soil in the research area is about 23–28 m a.s.l. According to the shore displacement in and around Tallinn, Tõnismägi hill emerged in the time of Ancylus Lake regression after 7800 cal BC. After that, the area has not been under water anymore; during the Litorina Sea transgression, the sea level maximum (about 6100–5200 cal BC) was about 20–22 m a.s.l. (Muru *et al.* 2017, 922). Tõnismägi was suitable for coastal habitation: a common practice in northern Estonia from the second half of Mesolithic period. Possibly the bipolar quartz blade (AI 7861: 1330), which was recovered at the Pärnu Rd. 44 site, was made during that time. This artefact indicates the presence of Stone Age human activity, but of course is not enough to argue for a settlement site.



Fig. 13. Bone cluster 3.

Jn 13. Luukogum 3.

Photo / Foto: Silvia-Kristiin Kask

It is likely that the area was also inhabited during the Iron Age, but little evidence has survived – only a few sherds of pottery and some coins. However, since considerable earthworks have been undertaken in the area (Nerman 2004, 278–279; Nerman 2013, 103), straightforward evidence of earliest human activity has been destroyed.

The first written information about Tõnismägi hill derives from the 14th century (Nerman 2013, 104). By that time, a chapel had been built on Tõnismägi. Most likely it was located somewhere between the current Hariduse and Tõnismägi streets, on the area that is now the parking space for Ministry of Education. It appears that during that time coins were also sacrificed in the area. On the 1690s map (Sokolovski & Jaanits 2003, fig. 4) the chapel on Tõnismägi is named Finnish church (*Finnische Kirche*). Around the chapel was a cemetery, which was in use until 1748 (TLA.237.1.23). The exact size of the original cemetery is unknown; however, burials have been found in the plots at Tõnismägi 9, Tõnismägi 11 and Tõnismägi 11a (Sokolovski & Jaanits 2003; Malve 2018).

The area has been burned down at least twice. The first known fire occurred during the Russian-Livonian war in the second half of the 16th century destroying the medieval suburban area of Tõnismägi (Nerman 2013, 105). Under the Swedish rule, during the 17th century, the area was re-inhabited by numerous craftsmen and it also became the abode for Swedish military men (Nerman 2013, 105). Housing records from Toompea suburban area exist from 1705 (TLA.230.1.Aa100). The records name 15 properties, a Swedish church and Toompea suburban marketplace.

The second fire happened in 1710, during the Tallinn beleaguer in the Great Northern War (Nerman 1994, 54). It is possible that numerous fusil bullets recovered from the north-eastern area nearby Wall 1 (Fig. 2) were connected with this beleaguer. The area was rebuilt during the 18th century and multiple summer manors had been erected (Nerman 1994, 55; Nerman 2013, 105). The first known map of the area is from 1744 (RA, EAA.854.4.82), where three properties in the place of the excavation plot are shown. Right on the corner of Pärnu road and now Hariduse street was the estate L7 with a building. West of it, towards Tõnismägi street were properties 8 and 9 with buildings on them. The next known documented information regarding the properties and/or their owners of the Toompea suburb derives from 1782 when a house with a garden on the property on the current address Pärnu Rd. 44 and partly on Tõnismägi 11a was bought on 5th November 1782 at public auction by gardener Johann Ratje Wulffgen (or Wulffken, Wüllfgen) (TLA.230.7-II.7, fol. 73).

In 1816 gardener Johann Raimund Siemon bought a property between the former P. Keres park and Pärnu Rd. 46. By 1834, after multiple purchases, he owned the majority of the southern hillside of Tõnismägi, including the area at Tõnismägi 11a / Pärnu Rd. 44. In 1841 another gardener Conrad Steffens bought the properties previously owned by Siemon (TLA.230.7-II.8, fol. 78). Over a short time period he acquired most part of the quarter between Hariduse and Tõnismägi streets. In 1854 Steffens sold one part of his property to Elisabeth von Landesén, probably the northern part of Pärnu Rd. 44 area with Cellar 1⁴ (TLA.230.7-II,8, fol. 79).

In the second half of the 19th century Amalie Brand started to purchase the lands beside Pärnu road (i.e. Pärnu Rd. 46 and Pärnu Rd. 44) (TLA.230.7-II.8, fol. 78 verso, fol. 79 recto). It is stated on the purchase act that a house and a garden were located on the property (Verzeichniss 1881). As most likely both hothouses (i.e. Buildings 1 and 2) were erected during the second half of the 19th century (judging by the coins under the walls and the bricks and firebricks inside the furnaces), they both may have belonged to Amalie Brand.

⁴ The documents indicate that von Landesén purchased a part of property with an ice cellar on it.

After Amalie Brand's death in 1901, the property was inherited by her daughter who sold it the same year to a German citizen Emil Brenner (RA, EAA.2840.1.2006). The land belonged to Brenners' family until 1941, when it was nationalized (TLA.R-I.6-I.88). It is stated that during that time a wooden house with two floors (one was mansard floor), built around the 1750s⁵ and a larger two-floored stone building with six apartments, built in 1850 (or 1901) was on the property. The wooden house was demolished due to the expansion of the Pärnu Rd. in the 1940s (TLA.R-413.1.757), and the stone building was destroyed in 2017, in conjunction with archaeological rescue excavations in the area.

CONCLUSION

The fieldwork exposed a rich and interesting history of Tõnismägi hill. Human activity in the area can be traced back to the Iron Age, possibly even to the Stone Age. The complex site shows evidence for religious activities (i.e. the known presence of a chapel, cemetery and a sacrificial ground), but also for more mundane life. Most of the revealed constructions were probably built during the 18th–19th century. Evidence for earlier buildings derived from Cellars 4 and 5, which might have been built around 17th–18th century, judging by the coins found under and inside the walls. However, the most noteworthy were Buildings 1 and 2. Given the abundance of red flowerpots, and the number of furnaces in the buildings it seems likely that they were heated hothouses which were erected during the second half of the 19th century, most likely when the properties were owned by Amalie Brand.

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⁵ Previously another building was in the place, erected in the 1660s.

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ARHEOLOOGILISED UURINGUD TALLINNAS TÖNISMÄGI 11A JA PÄRNU MNT 44 KRUNTIDEL

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2017. aasta suvel ja sügisel toimusid Tõnismägi 11a ja endise Pärnu mnt 44 kruntidel arheoloogilised välitööd, mille käigus kaevati välja 2 hoonepõhja, 5 keldrit, 5 müüri, 3 telliskiviladet, 1 paekivilade ja 2 telliskividest ahju, mis ei olnud seotud hoonepõhjadega (jn 1–2). Enamikul alast eristus kaks peamist kihistust – orgaanikarikas must kiht, mis sisaldas erinevate perioodide, sh kaasaegseid leide ja selle all orgaanikarikas tumepruun kiht, mille noorimad leiud pärinesid 19. sajandist (jn 3). Kogutud leiuainesest pärineb suurem osa 17.–19. sajandist, ehkki leitud ka üksikuid rauaaegse keraamika kilde, üks arvatavasti kiviaegne kvartslaast ning muinas- ja keskaegseid münte.

Väljakaevatud hoonepõhjad 1 ja 2 (jn 2, 4–5) on arvatavasti 19. sajandi II poolel ehitatud köetavate kasvuhoonete jäänused. Hoone 1 oli ehitatud osaliselt hoone 2 peale. Hoonete funktsioonile viitavad nii ruumides paiknenud telliskiviahjud ja -lõõrid, kui ka arvukad lillepottide katked uuringualal. Dateeringud tuginevad ennekõike ahjudes kasutatud „PALMS“, „ROBSON“ ja „HÖGANÄS“ tähistusega telliskividele (jn 7: 1–3), mida hakati tootma alles 19. sajandi esimesel veerandil või keskel. Nii hoones 1 kui ka 2 kasutatud ahjud on ehitatud sarnaselt: neil oli paekividest eeskamber, telliskividest põhikamber (milles oli jälgi tule tegemisest) ja telliskividest lõõr.

Muud avastatud müürijäänused ja lademed pakuvad vähe tõlgendusvõimalusi, kuid ulatuslikumalt säilinud keldrite varemetes (jn 2) on võimalik näha nii ehituslikke kui ka ajalisi erinevusi. Kelder 1 paekividest kaarjalt laotud sein viitab võimalusele, et tegu oli jääkeldriga. Seda tõlgendust toetavad ka kirjalikud allikad, millest on teada, et selles piirkonnas oli 19. sajandil või veelgi varem jääkelder. Kelder 2 oli tugeva mõrdiga seotud paekividest ruum, mille ehitusaeg ei ole selge. Kelder 3 oli kahe ruumiline võlvlagedega rajatis (jn 8), mille tagaseinas olevates niššides oli säilinud 18.–19. sajandi pudelite katkeid. Kelder 4 oli üheruumiline paekividest ehitus, mille põhjas oli jälgi tugevast põlengust. Põlengukihis leitud arvukalt suuri savitihendite tükke, mistõttu võib oletada, et seinad olid kaetud või tihendatud saviga. Paekividest ehitatud kelder 5 oli sissekäigu trepiga ja paekividest põrandaga. Kelder 5 jäi hoone 2 alla, neid eraldas paks rusukihit. Leitud müntide põhjal paistab, et keldrid 4 ja 5 olid ühed vanemad säilinud rajatised kaevandi alal, pärinedes 17.–18. sajandist.

Välitööde tulemusena talletati u 4000 leidu (AI 7861). Leidude seas on erinevaid, peamiselt 18.–

19. sajandist pärinevaid klaasesemeid: aknaklaasi ja klaaspudelite kilde, peeglikatke ning fragmente viiest klaaskuplist, mida aednikud kasutasid taimede katmiseks (jn 11). Välitöödel koguti ka arvukalt münte, millest 154 olid 20. sajandist vanemad. Samuti leiti münte Vana-Kaarli kalmistu päästekaevamistel Tõnismägi 11a krundilt, mistõttu on kogu alalt korjatud vähemalt 232 muinas-, kesk- või uusajast pärinevat münti. Muinasaegete müntide hulgas oli lisaks kahele 10. saj araabia dirhemi katkele (jn 12) ka kolm 11. saj saksa denaari, mis pärinevad tõenäoliselt millalgi 11./12. saj vahetusel maetud aardest. Ajavahemikus 15. saj algus – 1530. aastad vermitud mündid seostuvad aga ohverdamisega, osutades kusagil lähedal paiknenud Antoniuse kabelile. Kõige arvukamalt leiti keraamikat: peamiselt köögi- ja lauanõude katkeid, samuti ahjukahlite, lillepotide ja savipiipude tükke. Vanimad savinõukillud pärinevad rauaaegast, enamik 17.–20. sajandist. Uusaegsed köögi- ja lauanõud Tallinna eeslinnast seni leituga sama tüüpi (jn 9: 3–5, 8). Ahjukahlite juures sai eristada kolmest eri perioodist pärinevaid kahleid (jn 10): vanimad musta glasuuri ja lilleornamendiga, seejärel valged kahlid sinise ornamendiga ja kõige nooremad – lihtsad mustad või valged kahlid. Lillepotid (jn 7: 4–5) on valmistatud kõik ilmselt 19. sajandi teisel poolel. Savipiipude katked (jn 9: 6–7) jäid vahemiku 17.–19. sajand, valdav enamik oli kaunistamata või lihtsa ornamendiga, mõnel juhul oli peal lilliaõie kaunistus või märgitud valmistamise kohaks Gouda linn Hollandis.

Päästekaevamiste käigus selgus, et Vana-Kaarli kalmistu ala on korduvalt lõhutatud ja leitud inimluud maetud ümber kalmistu piirkonnast veidi kaugemale. Kokku leiti seitse luukogumit (jn 2, 13), seejuures kaks asusid hoone 2 konstruktsioonide all, mis tähendab, et kalmistu äärealade lõhkumine pidi toimuma juba 19. sajandil. Kalmistut on lõhutatud ka 20. sajandi torustikutöödega. Võimalik, et luukogum 3, mis eristus teistest oluliselt suuremate mõõtmete poolest, on seotud eelnimetatud kaevetöödega.

Alalt, peamiselt hoonete seest või alt, koguti valikuliselt ka põlenud ja põlemata loomaluud. Kõige huvitavamateks leidudeks oli kaks töödeldud põdrasarve katket, ülejäänud leiumaterjal kuulus valdavalt koduloomadele (veis, siga, kits, lammas; mõnel luul olid peal ka lõikejäljed), mis viitab tüüpiliste toidujäänustele.

Kirjalikud allikad näitavad, et Vana-Kaarli kalmistu keskmeks oli nn Soome kirik, mis 17. sajandi

kaardi järgi asus Tõnismägi 11 krundil. Vana-Kaarli kalmistu kasutamine lõpetati 1748. aastal, seejärel on see piirkond olnud eelkõige elamumaa. Alates 18. sajandist on võimalik arhiivimaterjalide abil jälgida krundi omanike vahetumist. Esimene säilinud ostumüügi tehing pärineb aastast 1782, mil Tõnismägi 11a / Pärnu mnt 44 alale jäänud krundi ostis aednik Johann Ratje Wulffgen. Teadaolevalt vahetas krunt omanikke

veel neljal korral: 1834. aastal ostis ala aednik Johann Raimund Siemon, seejärel omandas 1854. aastal osa krundist Elisabeth von Landesén ja 19. sajandi teisel poolel ülejäänud alad Amelie Brand, kelle eluperioodi jäävad ka köetavate kasvuhoonete (hooned 1 ja 2) rajamine. 1901. aastal müüdi krundid Brennerite perekonnale, kellele need jäid kuni 1941. aastani, mil hooned natsionaliseeriti.