

# ESTONIAN SMALL TOWNS IN THE MIDDLE AGES: ARCHAEOLOGY AND THE HISTORY OF URBAN DEFENSE

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The main period for the construction of urban defenses in Europe was during the thirteenth and fourteenth centuries.<sup>1</sup> The contemporary Estonian area – the northern part of medieval Old Livonia – was conquered during the Livonian Crusades by the Danes and Germans at the beginning of thirteenth century and subsequently divided into feudal principalities by the lands of the Bishopric of Tartu (Dorpat), the Bishopric of Saare-Lääne (Ösel-Wiek), and the lands ruled by the Livonian Order.<sup>2</sup> The northern parts became a Duchy of Estonia (1219–1346) under the Danish reign. There were six stone-walled towns located in this territory. Now the aboveground parts of the walls are preserved only in sporadic fragments. The exception here is Tallinn (Reval), the only town with almost fully-preserved medieval fortifications, and understandably it has attracted the attention of most researchers so far.<sup>3</sup> Recently articles have been published

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<sup>1</sup> Barbara Scholkmann, “The anatomy of medieval towns”, *The archaeology of medieval Europe, 2: twelfth to sixteenth centuries*, ed. by M. Carver and J. Klápště (Aarhus University Press, 2011), 379–403 (382). Although new towns were built with fortifications right down to the late seventeenth century in certain places.

<sup>2</sup> Sulev Vahre, *Muinasaja loojang Eestis: vabadusvõitlus 1208–1227* (Tallinn: Olion, 1990), 171.

<sup>3</sup> E.g. Rein Zobel, *Tallinna keskaegsed kindlustused* (Tallinn: Valgus, 1980); Villu Kadakas, Jaak Mäll, “Märkmeid Tallinna vanemast topograafiast”, *Keskus - tagamaa - ääreala: uurimusi asustushierarhia ja võimukeskuste kujunemisest Eestis = Centre - hinterland - margin: studies in the formation of settlement hierarchy and power centres in Estonia*, ed. by Valter Lang, Muinasaja teadus, 11 (Tallinn-Tartu: Ajaloo Instituut, Tartu Ülikool, 2002), 409–430.

from the archaeological point of view covering the town walls of Tartu and Uus-Pärnu (Neu-Pernau).<sup>4</sup> The walls of small towns – Viljandi (Fellin), Haapsalu (Hapsal), Narva – are preserved only in the ground and written sources are rare, therefore in addition to pictorial and cartographic material they must be studied by archaeologists.<sup>5</sup> The archaeological investigation of the medieval walls of Estonian small towns has unfortunately so far been scarce. The publications cover predominantly specific excavations, although for single cases more detailed reviews have been published.<sup>6</sup> In most cases, the research was conducted as archaeological monitoring, with periodic instances of archaeological excavations.

Town defenses were central elements of townscapes. The defensive purpose of their construction was as important as their significance as a symbol of the town, and providing security for the urban community against the outside world was the communal duty for the townsfolk. Defenses were generally laid out soon after the foundation of the town and, within the limitations of the local topography, as closely as possible to an ideal geometric form. The layout of the late medieval town was formed by its defensive circuit, the network of streets and the plots adjoining them, one or several marketplaces, the densely built fabric of houses, civic structures, and ecclesiastical buildings. But only the well populated, largely autonomous, economically strong, and socially differentiated towns possessed all of these elements. Small towns and minor towns developed only partly along these lines.<sup>7</sup> Stone walls were considered to be the best instrument for urban defense. But, to a certain extent, the desire for stone walls was also driven by considerations of prestige and symbolism. They stood for power, wealth, urban independence, and civic pride.<sup>8</sup>

<sup>4</sup> Rivo Bernotas, “Medieval town wall of Tartu in the light of recent research”, *Estonian Journal of Archaeology*, 15 (2011), 56–72; Rivo Bernotas, “Medieval fortifications of Pärnu: an archaeological approach”, *Zeitschrift für Archäologie des Mittelalters*, Jg. 40 (2012), 185–199.

<sup>5</sup> Similar differences in the research are not uncommon in Western Europe either, e.g. David Palliser, “Period surveys: the medieval period”, *Urban archaeology in Britain*, ed. by J. Schofield and R. Leech (London: Council for British Archaeology, 1987), 54–68 (62).

<sup>6</sup> E.g. Andres Tvauri, “Viljandi linnamüüri arheoloogilised uuringud aastatel 1997–1999”, *Viljandi Muuseumi Aastaraamat 2000* (2001), 92–110.

<sup>7</sup> Scholkmann, “The anatomy of medieval towns”, 382.

<sup>8</sup> Especially when they were provided with a multitude of towers, they could even serve as a reference to the heavenly Jerusalem (Wim Boerefijn, *The foundation, planning and building of new towns in the thirteenth and fourteenth centuries in Europe: an architectural-historical research into urban form and its creation*, PhD thesis (University of Amsterdam, 2010), 83.

This publication is divided into an introduction, a summary of the written sources and the current research, a review of archaeological research, and a discussion with the results. I have, for all three towns, dealt only with the town walls and neglected the castles – after all, sufficiently specialized publications have appeared about all of the castles located in the towns.<sup>9</sup> The purpose of this article is to summarize the current material gathered from the excavations of the medieval town walls from three small towns in Estonia, to discuss when they were erected, and to analyze their place in Old Livonian and Baltic contexts. Comparable material from towns in Scandinavia and Lithuania are used as examples. As some of the archaeological research results<sup>10</sup> are still waiting to be published, the current article also serves the purpose of being the source publication.

### *Historical background and current research*

Viljandi is situated in Southern Estonia (see fig. 1) and its genesis has been greatly influenced by its favorable geographical situation. The town is situated at the crossroads of the three major roads, connecting Southern and Northern Estonia, separated by forested and bog areas.<sup>11</sup> The medieval town and the neighboring Order's castle were separated by a moat. The town actually formed a fourth outer bailey of the castle.<sup>12</sup>

The area of Viljandi was one of the smallest amongst Estonian walled towns in the Middle Ages (see fig. 2).<sup>13</sup> The population was probably between 1000 and 1500.<sup>14</sup> The wall surrounded the 10.2 ha of town which, together with 4.6 ha of the Order's castle, covered 14.8 hectares of protected area.

<sup>9</sup> E.g. Karl von Löwis of Menar, *Burgenlexikon für Alt-Livland* (Riga: Walters und Rapa, 1922); Armin Tuulse, *Die Burgen in Estland und Lettland* (Tartu: Dorpater Estnischer Verlag, 1942); Kaur Alttõa, "Das Konventshaus in Estland", *Castella Maris Baltici I*, ed. by Knut Drake, *Archaeologia Medii Aevi Finlandiae I* (Stockholm: Almqvist & Wiksell, 1993), 11–18 (see also Narva); Arvi Haak, "The castle of Viljandi (Fellin), Estonia: the role of its location on its construction (13th–16th century)", *Burg und ihr Bauplatz*, ed. by Tomáš Durdík, *Castrum Bene 9* (Praha, 2006), 127–138 etc.

<sup>10</sup> For example, the 2008 excavations of the town wall of Viljandi; smaller surveys in Viljandi in 2008 and 2010.

<sup>11</sup> Heiki Valk, "About the role of the German castle at the town-genesis process in Estonia: The example of Viljandi", *Castella Maris Baltici I*, 219–223 (220).

<sup>12</sup> See references in Haak, "The castle of Viljandi", 129.

<sup>13</sup> Tvauri, "Viljandi linnamüüri arheoloogilised uuringud", 92.

<sup>14</sup> Arvi Haak, "Tartu värava eeslinna tekkest, hävingust ning taaskujunemisest: uusi andmeid arheoloogilistelt kaevamistelt 1996–2005", *Viljandi Muuseumi Aastaraamat 2005* (2006), 68–87 (68).



Figure 1. Discussed towns on the map of Baltic: 1. Viljandi; 2. Haapsalu; 3. Narva.

The total length of the town wall was about 1.2 km.<sup>15</sup> The wall surrounded the town on three sides, while the south side was defended by the castle. On the west side of the wall was Riga's Gate,<sup>16</sup> and a quadrangular tower was located on the northwest corner. On the north side of the wall were a half-circular tower and the Tartu Gate. The east side of the wall had the Moscow Tower, the access gate to the lake near Pikk Street, and a smaller, half-circular tower. The gates had no towers<sup>17</sup> and were projected outside of the wall-line. Based on the latter, it has been suggested that they were built after 1350.<sup>18</sup> The town wall was already greatly damaged during the Livonian War, and was subsequently damaged in the seventeenth-century wars between Poland and Sweden. As shown on the oldest map of Viljandi

<sup>15</sup> Tvauri, "Viljandi linnamüüri arheoloogilised uuringud", 92.

<sup>16</sup> The medieval names of the gates and towers are not known, and the names presented here are quoted from the Polish revision from 1599 ("Viljandi linn 1599. aastal", trans. by Katrin Vabamäe, comment. by Kaur Altoa, *Viljandi Muuseumi Aastaraamat 1998* (1999), 114–162).

<sup>17</sup> Kaur Altoa, "Viljandi linnamüür", *Eesti arhitektuur 2: Läänemaa, Saaremaa, Hiiumaa, Pärnumaa, Viljandimaa*, ed. by Villem Raam (Tallinn: Valgus, 1996), 166.

<sup>18</sup> *Eesti arhitektuuri ajalugu*, ed. by Harald Arman (Tallinn: Valgus, 1965), 65–66.

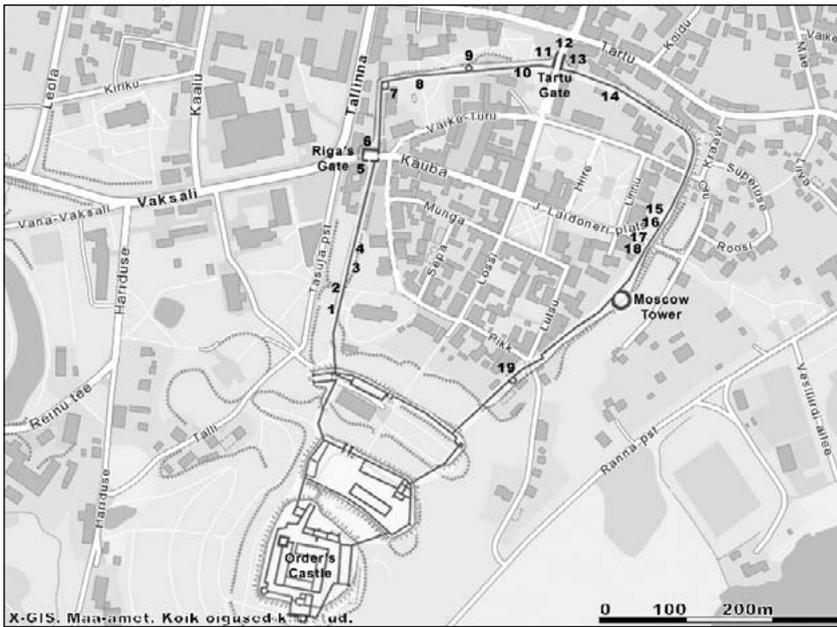


Figure 2. Excavations carried out in the area of the town wall and the approximate location of the town wall of Viljandi (the year marks the publication): 1. Selirand 1982; 2. Valk 1993; 3. Tvauri 1999; 4. Tvauri 1999; 5. Alttoa 1982; 6. Alttoa 1983; 7. Tvauri 1998; 8. Piirits 2008; 9. Tvauri 1998; 10. Tvauri 2010; 11. Freymann 1918; 12. Valk 1994; 13. Alttoa & Moora 1979, Tvauri 1999; 14. Tvauri 2001; 15. Tvauri 2001; 16. Haak & Lätti 2005; 17. Bernotas 2010; 18. Tvauri 2008; 19. Tvauri 2001.

from 1688,<sup>19</sup> the town wall and the castle were still standing at that time. From the eighteenth century most of the town wall, gates, and towers were dismantled and used as construction material.<sup>20</sup> Currently the remains of the wall can be seen above ground level in only a few places.<sup>21</sup>

The oldest known depiction of Viljandi is the engraving by Jacobus Laurus, which shows the conquest of the town by the Poles in 1602 (see fig. 3). The town, castle, and their vicinity are depicted. As this engraving has several errors in the details and size ratio, it has been noted that it was

<sup>19</sup> Original in the Stockholm War Archives (Krigsarkivet); a copy in the Viljandi Muuseum.

<sup>20</sup> Tvauri, "Viljandi linnamüüri arheoloogilised uuringud", 92; Andres Tvauri, "The archaeological investigations in Viljandi, Tartu, and Kärkna", *Arheoloogilised välitööd Eestis = Archaeological fieldwork in Estonia 1999* (Tallinn: Muinsuskaitseamet, 2000), 54–62, (55); Alttoa, "Viljandi linnamüür", 166.

<sup>21</sup> Tvauri, "The archaeological investigations in Viljandi, Tartu and Kärkna", 55.

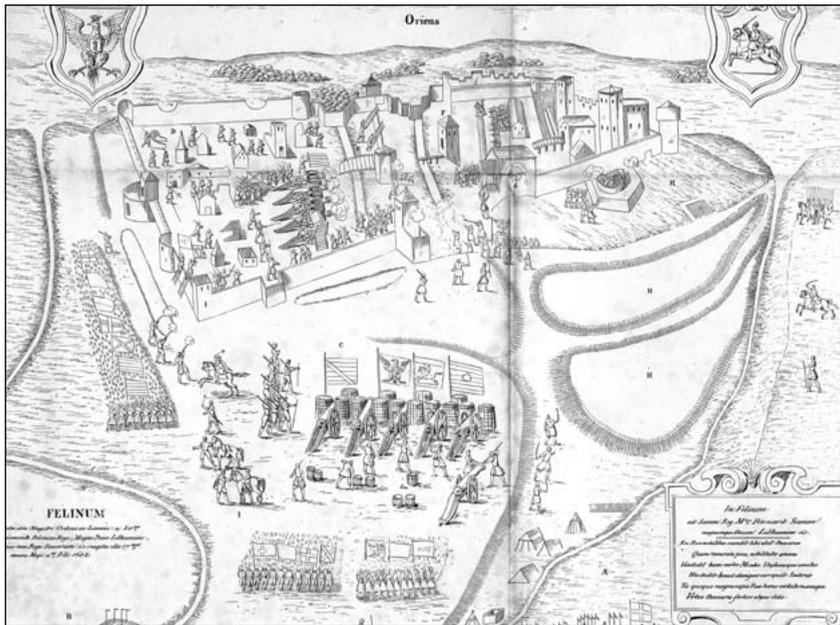


Figure 3. The Poles conquering Viljandi, Jacobus Laurus' engraving from 1602 (*Collectanea vitam resque gestas Joannis Zamoyscii magni cancelarii reipublicae polonae illustrantia*, edidit Adamus Titus comes de Koscidec Działyński (Posnaniae: [s.n.], 1861).

probably not drawn on the spot but from a cursory sketch or even from memory.<sup>22</sup> The town wall and towers are also mentioned in the documents of the Polish officials from 1599, although it doesn't say anything about the constructional details.<sup>23</sup>

The town of Haapsalu is located on the south coast of Haapsalu Bay (see fig. 1). The geological characteristics of Western Estonia have had significant impacts on the development of the town. The rise of the ground of 2–3 mm per year has resulted in a substantial increase of the town area over the centuries.<sup>24</sup> The establishment of the Haapsalu castle can be dated to the 1260s, when the town-creation attempts of the bishop of Saare-Lääne had failed both in Lihula and Old-Pärnu.<sup>25</sup>

<sup>22</sup> Tvauri, "Viljandi linnamüüri arheoloogilised uuringud", 93.

<sup>23</sup> "Viljandi linn 1599. aastal".

<sup>24</sup> Tõnis Padu, "Haapsalu", *Eesti arhitektuur* 2, 8–10 (8).

<sup>25</sup> Ervin Sedman, *Haapsalu vanalinna detailplaneerimine. Uurimistööd I osa. Lühiülevaade Haapsalu linna tekkest, kujunemisest ning arengust XIII sajandist käesoleva ajani* (1974, manuscript in the archive of the National Heritage Board), 22.

The first phase of the town occurred at the same time as the construction of the castle. During the initial period of construction, the authority figures, members of their defense, and the builders lived outside of the building site, i.e. in the future urban territory<sup>26</sup> on the north side of the castle district. In 1294, Haapsalu received town rights. In 1323, the boundaries of the town area were marked and the harbor locations determined. The regular town structure was oriented from the castle and a central marketplace. The continuous withdrawal of the sea caused a change in the location of the harbor. As the town expanded westward, the building of a wall with five gates started on the seaward side of Haapsalu. The location of the structure was determined by natural features, the position of the castle, and the earlier urban settlement.<sup>27</sup>

According to previous research Haapsalu was an unfortified town,<sup>28</sup> until in 1965 excavations revealed massive wall remnants.<sup>29</sup> Additionally, the most famous chronicler of the sixteenth century, Balthasar Rüssow, does not mention Haapsalu in the list of Old Livonian fortified towns.<sup>30</sup> On the oldest known map from the end of the seventeenth century, the town wall is not depicted.<sup>31</sup> The existence of the wall found confirmation in the town documents from 1551 to 1689.<sup>32</sup> The earliest description of the town wall comes from 1761. It has been noted, that the wall encircled the town on the seaward side and was 1.2 km long.<sup>33</sup> It has also been suggested that the length of the wall was 850 m.<sup>34</sup> The wall (see fig. 4) had five gates, which protected against the dangerous directions.<sup>35</sup> Villem Raam has noted<sup>36</sup> that Haapsalu was initially fortified with a wooden stockade and the town wall was erected during the reign of bishop Winrich von Kniprode (1385–1419).

<sup>26</sup> Sedman, *Haapsalu vanalinna detailplaneerimine*, 23.

<sup>27</sup> Padu, "Haapsalu", 8–9.

<sup>28</sup> *Eesti arhitektuuri ajalugu*, 31.

<sup>29</sup> Villem Raam, "Haapsalus leiti keskaegne linnamüür", *Sirp ja Vasar*, 10.9.1965, 5.

<sup>30</sup> Balthasar Rüssow, *Balthasar Rüssow's Livländische Chronik, aus dem Plattdeutschen übertragen und mit kurzen Anmerkungen versehen durch Eduard Pabst* (Reval: F. J. Koppelson, 1845), 1b.

<sup>31</sup> Anton Pärn, "Die Wehrbauten von Haapsalu", *Castella Maris Baltici I*, 177–182 (181–182).

<sup>32</sup> Kalev Jaago, *Haapsalu arhitektuuri ajalugu XIII–XIX sajandil* (1989, manuscript in the Department of History of the University of Tartu), 17.

<sup>33</sup> Pärn, "Die Wehrbauten von Haapsalu", 182

<sup>34</sup> Sedman, *Haapsalu vanalinna detailplaneerimine*, 34.

<sup>35</sup> Pärn, "Die Wehrbauten von Haapsalu", 182.

<sup>36</sup> Villem Raam, *Haapsalu piiskopilinnus. Ajalooline õiend* (1969, manuscript in the archive of the National Heritage Board), 14.

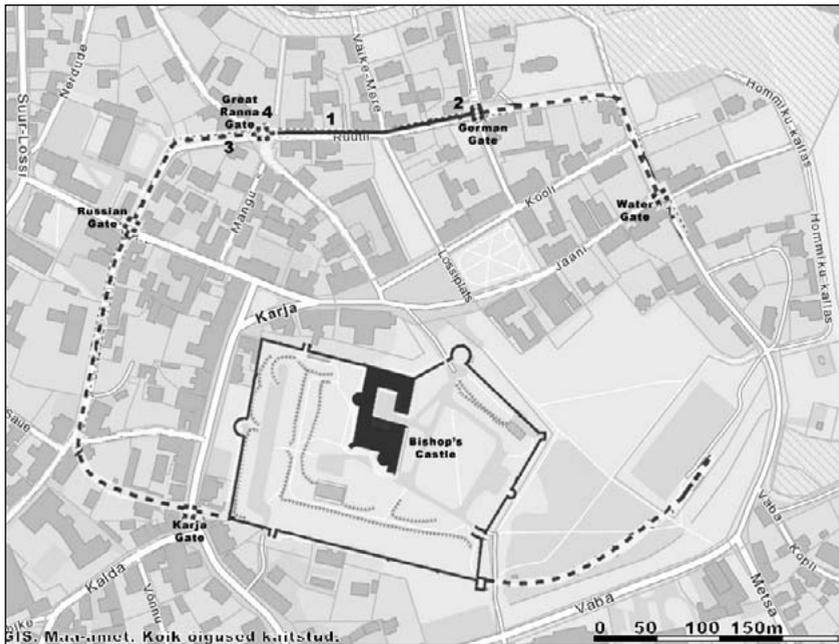


Figure 4. The excavations conducted and approximate location of the town wall on the contemporary map of Haapsalu (according to Russow, “Kaks aastakümnet linnaarheoloogiat Haapsalus”): 1. Raam 1965; 2. Pärn 1996; 3. Russow 2005; 4. Russow 2003.

The existence of the earthen rampart, palisade, and moat surrounding the initial town core have been suggested by other scholars as well.<sup>37</sup>

The bishop's castle in Haapsalu played a large role in the development of the town. The development of the town was only due to the founding of the bishop's residence there, as it mainly served the economic and military needs of the castle. After the disappearance of the important trade routes, the independent development of the town ceased.<sup>38</sup> In the late Middle Ages, the area of the bishop's castle was 2.9 ha and the town was about 5.5 ha.<sup>39</sup>

In the Livonian War in 1560, the Muscovians invaded Läänemaa and looted Haapsalu. The raid was so thorough that only three houses remained intact in the town. Apparently the town wall was also destroyed, as it is

<sup>37</sup> Sedman, *Haapsalu vanalinna detailplaneerimine*, 24.

<sup>38</sup> Raam, *Haapsalu piiskopilinnus*, 9.

<sup>39</sup> Sedman, *Haapsalu vanalinna detailplaneerimine*, 34; Pärn, “Die Wehrbauten von Haapsalu”, 182.

rarely mentioned in later written sources.<sup>40</sup> After the war, the demolished town with the castle was in Swedish possession for more than a century (1581–1710). The defenses of the castle were improved and repaired. The destroyed town wall, however, was not restored.<sup>41</sup> The course of the town wall is characterized by a radial road, which represents the outline of Haapsalu in the period before the Livonian War.<sup>42</sup>

Narva is situated in the northern part of Estonia (see fig. 1), i.e. in the area that belonged to Denmark. There were three major fortified administrative footholds in this territory: Tallinn, Rakvere, and Narva. For centuries the position of Narva was the boundary between the two cultural worlds, or at least between the Western and Eastern Churches, separated by the Narva River.<sup>43</sup> From the end of the thirteenth century, merchants began to travel to Russia via Narva. The first reliable notice of the existence of an urban settlement next to Narva Castle comes from 1342. The birth of the town of Narva can be dated to 1345.<sup>44</sup> The total population of Narva in 1530 can be estimated to ca. 600–750. Narva's almost constant complaints of poverty and insecurity have been well documented. These were particularly in times of threats of war, trade embargoes, or the plagues when the citizens left the town.<sup>45</sup>

It has been suggested that around the downtown, the establishment of limestone walls had already begun during the 1370s (see fig. 5). The builders were the townspeople in support of the Order and Tallinn. The wall was completed probably in 1385–90. In 1415–19, the walls were reinforced. Despite the repeated reinforcements, the walls were weak, which was also noted at the Livonian Diet (*Landtag*) in 1518. The total length of the fortification perimeter was 1.58 km. The length of the town wall was 1 km. The

<sup>40</sup> Sedman, *Haapsalu vanalinna detailplaneerimine*, 29.

<sup>41</sup> Padu, "Haapsalu", 8–9.

<sup>42</sup> Anton Pärn, "Die Lage der Wehrbauten in der topographischen Situation und der Stadtplanung von Haapsalu", *Castella Maris Baltici II*, ed. by M. Josephson and M. Mogren, Lund Studies in Medieval Archaeology, 18 (Stockholm: Almqvist & Wiksell International, 1996), 151–156 (156).

<sup>43</sup> Kaur Altoa, "Narva Castle – an outpost of the Occident", *Castella Maris Baltici II*, 13–18 (14); see also Anti Selart, *Eesti idapiir keskajal* (Tartu Ülikooli Kirjastus, 1998), 95.

<sup>44</sup> Enn Küng, "Narva kesk- ja varauusaegne linnaõigis ja seda mõjutanud tegurid", *Linna asutamise, esmamainimise, inimtegevuse jäljed*, ed. by Merike Ivask, Narva Muuseumi toimetised, 5 (Narva: Narva muuseum, 2005), 51–64 (52).

<sup>45</sup> Jüri Kivimäe, "Medieval Narva: featuring a small town between East and West", *Narva and the Baltic Sea region*, *Studia humaniora et paedagogica collegii Narovensis* (Narva, 2004), 17–27 (21).

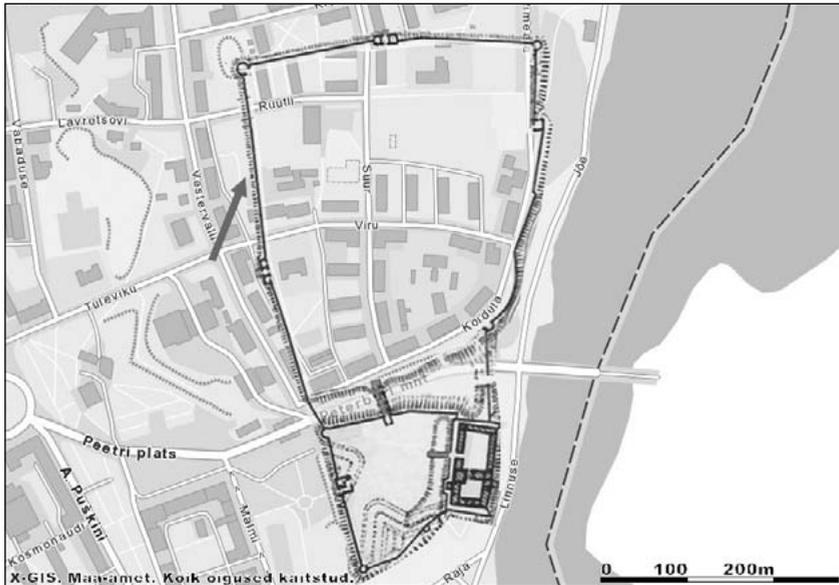


Figure 5. The excavations conducted and the approximate location of the town wall on the contemporary map of Narva (medieval map of Narva according to John Leighly, “The towns of medieval Livonia”, University of California Publications in Geography, 6:7 (1939), 280). The line marks the excavations conducted in 2008.

defensive boundary<sup>46</sup> and the moat<sup>47</sup> between the castle and the town have also been mentioned.

The wall had at least seven towers, three of them with gates.<sup>48</sup> As the eastern wall was located high on the edge of the escarpment, there were no towers on this side. The distance between the towers on the western side of the town was about 200 m. The Karja Gate on the north side had two half-circular flanking towers, and Viru Gate on the west side had a circular gate tower. The latter was exceptional in the medieval defensive architecture. Besides the gate towers, there were rounded cannon towers on the northwest and northeast corners of the wall. The fortifications were reconstructed in the sixteenth century. The oldest depiction of the fortifications of Narva is the relief of the siege of Narva on the sarcophagus of

<sup>46</sup> Jevgeni Kaljundi, “Narva keskaegsed kindlustused”, *Ehitus ja arhitektuur 3: Harjumaal, Järvamaal, Raplomaal, Lääne-Virumaal, Ida-Virumaal*, ed. by Villem Raam (Tallinn: Valgus, 1997), 181.

<sup>47</sup> *Eesti arhitektuuri ajalugu*, 63.

<sup>48</sup> Kaljundi, “Narva keskaegsed kindlustused”, 181.

Pontus de la Gardie in the Dome Church of Tallinn. The relief was made by Arent Passer in 1595.<sup>49</sup>

Regarding previous research, the monograph by S. Karling should be mentioned.<sup>50</sup> Based on the archival data, he also discusses the fortifications. The author mentions the town wall in the old town area of Narva.<sup>51</sup> Kaur Altoa has published the most recent research on Narva's town wall.<sup>52</sup> Based on the written sources, the author discusses the date of the construction of the wall. Altoa assumes that by the 1390s, the wall on the west and north side of the town was marked on the ground and the work had begun. He assumes that the wall was mostly already erected in its initial form by 1418.<sup>53</sup>

### *Archaeological research*

The town wall of Viljandi is the most archaeologically excavated construction discussed in this publication (see fig. 2). Several archaeological surveys, funded by the city council of Viljandi, were conducted in 1999. The aim of the surveys was to determine the exact location of the remains of the wall. The most thorough publication so far relied on the material gathered from nine test pits excavated in the course of the aforementioned surveys on the different sections of the wall.<sup>54</sup>

The thickness of the fragment from the foundation of the wall near the Franciscan Monastery on the west side of the town was 2.2 meters.<sup>55</sup> The foundation near the St. John's Church was laid on the natural intact sand.<sup>56</sup> In the courtyard of Pikk Street 4, the foundation of the wall measured 2.2–2.35 meters. The two lowermost layers of stones were bound with yellowish clayish sand and the uppermost layer with lime mortar.<sup>57</sup> In the

<sup>49</sup> *Eesti arhitektuuri ajalugu*, 63.

<sup>50</sup> Sten Karling, *Narva: Eine baugeschichtliche Untersuchung* (Tartu: K. Mattiesen, 1936).

<sup>51</sup> Karling, *Narva*, 78.

<sup>52</sup> Kaur Altoa, "Kaks ekskurssi keskaegse Narva ehituslukku: linnamüür ja linnakirik", *Maakonnas, linnas ja muuseumis: uurimusi Narva ajaloost*, ed. by Merike Ivask, Narva Muuseumi toimetised, 11 (Narva: Narva muuseum, 2011), 39–57.

<sup>53</sup> Altoa, "Kaks ekskurssi keskaegse Narva ehituslukku", 41.

<sup>54</sup> Tauri, "Viljandi linnamüüri arheoloogilised uuringud".

<sup>55</sup> Urmas Selirand, "Über die Untersuchungen des Franziskanerklosters in Viljandi", *Eesti NSV TA Toimetised*, 31:4 (1982), 398–401 (400–401).

<sup>56</sup> Valk, "About the role of the German castle", 223, fig. 5.

<sup>57</sup> Andres Tauri, *Aruanne Viljandi linnamüüri arheoloogilistest uuringutest Tasuja, Kauba ja Pika tänava vahelise kvartali nr 172. alal 1999. aastal* (1999, manuscript in the archives of the National Heritage Board), 2 ff.

courtyard of Kauba Street 12, the thickness of the wall was 2.13 meters.<sup>58</sup> Near Riga's Gate, the wall was constructed mostly of fieldstones, without the horizontal step between the foundation and the wall.<sup>59</sup> The wall of Riga's Gate was laid secondarily against the town wall and built mostly of fieldstones with an abundant use of mortar. The corners of niches were sometimes plastered with limestone. Pieces of bricks and flat roof tiles (the so-called *Biberschwanz* stone) were used as a filling.<sup>60</sup> A quadrangular tower was situated on the northwest corner of the town wall. The thickness of the eastern wall of the tower was 1.3 meters. The eastern wall of the tower was built separately from the town wall, while the southern wall seemed to be built together with it.<sup>61</sup> The walls of the tower were laid onto the original soil. The two lowermost rows of stones were stacked as dry stone.<sup>62</sup> The dimensions of the bottom of the tower were 7.5 × 8.6 meters.<sup>63</sup>

The tower located on the north side of the town wall, between the northwest corner and Tartu Gate, was projected outside of the wall. The outside diameter of the tower was 8–10 meters, and the thickness of the walls reached 1.6–1.7 meters.<sup>64</sup> The walls were built of granite and plastered with the pieces of bricks. The joints of the inner wall of the tower were thoroughly filled with lime mortar. Also, pieces of brick were compressed between the wall stones.<sup>65</sup> The thickness of the town wall, in the section between the northwest corner tower and Tartu Gate, was 2.2–2.3 meters. The lower part of the wall consisted of large granite stones with brick rubble and yellowish mortar between them.<sup>66</sup> Prior to the erection of the wall, the yellowish sandy loam was piled on the inner slope of the moat. A similar layer of sandy loam leaned against the lowermost stones of the wall on both sides and extended partly below them. The lowermost stones of the wall were bound with sandy clay. The higher stones were connected with

<sup>58</sup> Kaur Alttoa, *Viljandi linnamüüri konserveerimise ettepanek* (1983, manuscript in the archive of the National Heritage Board).

<sup>59</sup> Kaur Alttoa, *Viljandi Kauba tn 12 Riia värava 1981. aasta väliuurimiste aruanne*, 3: *ehitusarheoloogiline ülevaade* (1982, manuscript in the archive of the National Heritage Board), 5.

<sup>60</sup> Alttoa, *Viljandi Kauba tn 12*, 6.

<sup>61</sup> Andres Tvauri, "Archaeological investigations in the old part of Viljandi", *Arheoloogilised välitööd Eestis = Archaeological fieldwork in Estonia 1997* (Tallinn: Muinsuskaitseamet, 1998), 81–86 (82).

<sup>62</sup> Building technique where the stones are stacked without any mortar to bind them together.

<sup>63</sup> Tvauri, "Viljandi linnamüüri arheoloogilised uuringud", 102.

<sup>64</sup> Tvauri, "Archaeological investigations in the old part of Viljandi", 82–83.

<sup>65</sup> Tvauri, "Viljandi linnamüüri arheoloogilised uuringud", 103.

<sup>66</sup> Tvauri, "Archaeological investigations in the old part of Viljandi", 81–82.

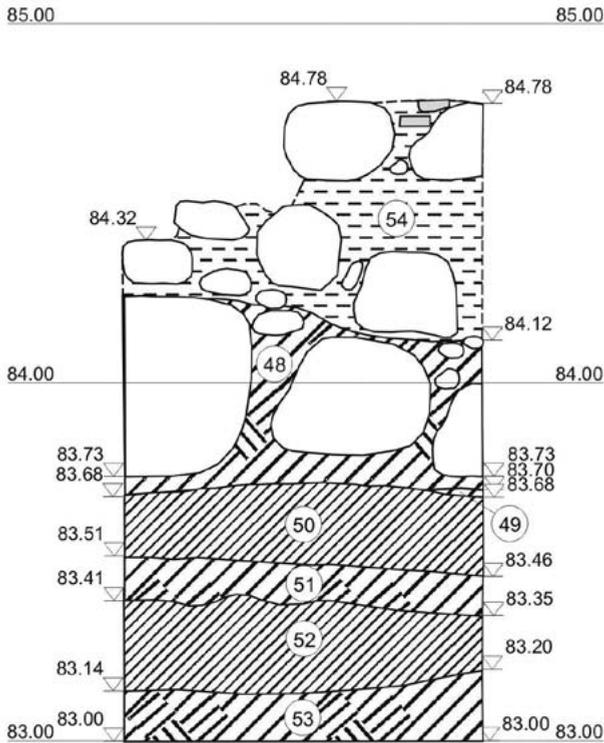


Figure 6. Surface layers under the town wall of Viljandi (according to Piirits, *Arheoloogilised uuringud Viljandis*): 48. beige layer of sandy clay (contained pebbles); 49. beige layer of sandy clay (contained patches of surface); 50. brown layer of clayish sand (contained abundant patches of beige surface, charcoal, pebbles, burned clay, and bones); 51. light brown clayish sand mixed with beige clayish sand (contained burned clay, charcoal, and pebbles); 52. brown clayish sand (contained charcoal and pebbles); 53. beige layer of sandy clay; 54. white lime mortar.

lime mortar. An extensive layer of sandy loam probably emerged from the digging of the moat.<sup>67</sup>

In the area between Tallinn Street and Lossi Street, a test pit was excavated east of the preserved fragment of wall. The research revealed a ca. 50 cm high foundation, part of which was packed with soil and projected from the wall ca. 70 cm. The beige sandy clay layer containing small pebbles was

<sup>67</sup> Tvauri, "Archaeological investigations in the old part of Viljandi", 82.

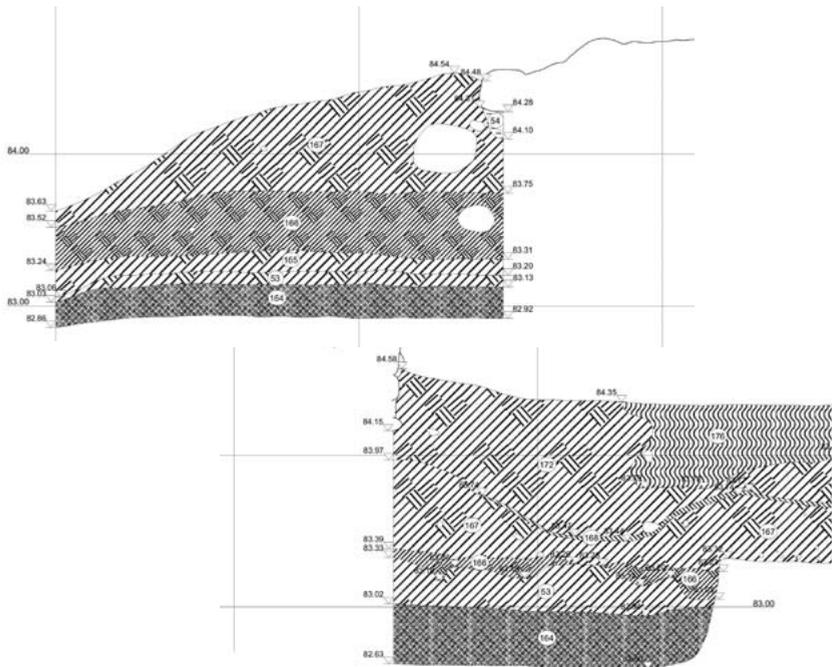


Figure 7. Town wall of Viljandi and the surface layers surrounding it (according to Pii-rits, *Arheoloogilised uuringud Viljandis*): 53. beige sandy clay; 54. white lime mortar; 164. layer of clay (contained patches of beige sand and pebbles); 165. beige sandy clay (contained patches of surface, rotten wood, and pebbles); 166. brown sandy clay layer (contained patches of beige sand, pebbles, brick dust, bones, and charcoal); 167. beige sandy clay layer (contained rocks, branches, and brick dust); 168. line of gray clayish sand (contained brick dust, charcoal, pebbles, rotten wood, patches of beige clayish sand, and surface); 169. light gray layer of clayish sand (contained rocks, beige sandy clay, charcoal, and brick rubble); 170. beige layer of sandy clay (contained rocks, patches of gray clayish sand, brick rubble, and charcoal); 171. gray layer of clayish sand (contained rocks, charcoal, brick rubble, roots, and patches of brown soil); 172. beige layer of sandy clay (contained rocks, pieces of bricks, charcoal, and patches of surface); 173. light brown layer of sandy clay (contained pebbles, roots, brick rubble, patches of surface, and charcoal); 174. gray layer of clayish sand (contained rocks, brick rubble, beige lime mortar, charcoal, and bones); 175. line of charcoal; 176. black-brown layer of soil (contained rocks, pieces of bricks and roof-tiles, roots, charcoal, lime mortar, and modern glass); 177. line of charcoal (contained brick rubble); 178. dark gray layer of clayish sand (contained abundant charcoal, bones, pebbles, brick rubble, slag, and rotten wood); 179. brown line of clayish sand (contained abundantly pieces of bricks, slag, and pebbles); 180. gray layer of clayish sand (contained charcoal; pebbles and pieces of bricks); 181. beige layer of sandy clay (contained rocks, pieces of bricks, charcoal, and patches of surface); 182. dark gray line of clayish sand (contained pebbles, pieces of bricks, and charcoal); 183. layer of mixed red clay (contained pebbles and patches of surface).



Figure 8. View of the niche in the town wall of Viljandi, view from the southeast. Photo by Peeter Piirits.

found between two rows of stones. A similar layer of clay extended directly under the foundation (fig. 6 and 7).<sup>68</sup>

The length of the preserved part of the wall was approximately 40 meters and the height was 0.6–0.7 meters. The thickness of the wall was up to 2.3 meters. The wall was made of stacked fieldstones and bound with lime mortar (see fig. 8). The stones of the masonry foundation were packed and on both sides stacked with a natural beige sandy clay layer. This layer likely originated from the natural trench of the moat. The wall was made of fieldstones up to 80 cm that were bound with a solid white lime mortar. The part of the foundation of stones packed with soil projected up to 0.7 meters outside of the wall. Inside of the wall, a niche was discovered (see fig. 8). The width of the niche in the outer part reached 1.4 meters and the inner part was 1.5 meters. The depth of the niche was 1.7 meters. Therefore the scope of the outside of the town wall was only 0.6 meters. The insides of the niche were plastered with bricks and bound with beige lime mortar. The niche is assumed to have been established simultaneously with the rest

<sup>68</sup> Peeter Piirits, *Arheoloogilised uuringud Viljandis Tallinna mnt. – Lossi tn. 21 trasside rajamisel ja linnamüüri väljapuhastamisel* (2008, manuscript in the archive of the National Heritage Board), 12.

of that part of the wall. The foundation stones packed with grained gravel started directly under the filling layers of the niche. The similar layer of gravel was also between the foundation stones outside of the niche.<sup>69</sup>

The thickness of the town wall in Lossi Street was 2.25 meters. Three layers of big boulders had been laid on the initial ground in horizontal rows. The gaps between the boulders had been filled with silt and smaller stones. The town wall was bound with lime mortar and laid on top of the foundation of boulders. Smaller boulders and pieces of limestone had been wedged between big stones.<sup>70</sup>

On the eastern side of the town, the remains of the wall and Tartu Gate were first discovered in 1911.<sup>71</sup> Archaeological research was conducted in the adjacent area in 1979.<sup>72</sup> The thickness of the wall was 1.6–1.7 meters.<sup>73</sup> The thickness of the foundations of the western and northern walls of the foregate of Tartu Gate were 1 and 1.1–1.3 meters.<sup>74</sup> The excavations also yielded information on the construction of the town wall near Tartu Gate: its foundation with an average thickness of 1.7 meters consisted of granite stones with a diameter of 30–40 cm. The stones were packed with a mixture of yellow sandy clay and natural brown soil. Most of the intact brown soil had been removed underneath the foundation. The bottom of the wall, made of loose stones, was supported from both sides by mixed yellow subsoil. The foundation was made of loose stones and supported by mixed ground. The higher lying stones were bound with lime mortar.<sup>75</sup> From Tartu Gate up to the northeast corner of the town, the foundation of the wall is preserved in the ground.<sup>76</sup>

The thickness of wall on the east side at Linnu Street was 2 meters. The outer side of the original wall revealed a narrower granite stone wall.<sup>77</sup> The

<sup>69</sup> Piirits, *Arheoloogilised uuringud Viljandis*, 14.

<sup>70</sup> Andres Tvauri, "Archaeological excavations at Lossi 21, Viljandi", *Arheoloogilised välitööd Eestis = Archaeological fieldwork in Estonia 2009* (Tallinn: Muinsuskaitseamet, 2010), 157–163 (158).

<sup>71</sup> Georg von Freymann, "Überreste der mittelalterlichen Fellin", *Jahresbericht der Felliner litterarischen Gesellschaft 1912–1917* (Fellin, 1918), VI–IX.

<sup>72</sup> Kaur Altkoa, Henn Moora, *Viljandi linnamüüri arheoloogilised kaevamised V. Kingissepa t 22 hoovis* (1979, manuscript in the archive of the National Heritage Board).

<sup>73</sup> Altkoa, Moora, *Viljandi linnamüüri arheoloogilised kaevamised*, 3.

<sup>74</sup> Heiki Valk, "Excavations at the medieval town gates of Viljandi", *Eesti Teaduste Akadeemia Toimetised. Humanitaar- ja sotsiaalteadused*, 43:1 (1994), 90–96 (91).

<sup>75</sup> Valk, "Excavations at the medieval town gates of Viljandi", 93.

<sup>76</sup> Tvauri, "Viljandi linnamüüri arheoloogilised uuringud", 98.

<sup>77</sup> Arvi Haak, Priit Lätti, "Archaeological investigations at the town wall of Viljandi and the construction site at Tartu Street 8a", *Arheoloogilised välitööd Eestis = Archaeological fieldwork in Estonia 2005* (Tallinn: Muinsuskaitseamet, 2006), 177–188 (178).

height of the preserved foundation of the wall behind the town hall of Viljandi is 1.4 meters.<sup>78</sup> The latter wall consists of large granite stones, 20–50 cm in diameter and is about 70–80 cm wide. The stones were bound with lime mortar and the most recent addition to the wall consisted of larger stones loosely placed on top of the wall.<sup>79</sup> In the southern part, both edges of the wall were built of larger fieldstones with a diameter of 30–50 cm. The smaller, generally less than 30 cm diameter stones bound with lime mortar were used as filling. The thickness of the wall was 2 meters.<sup>80</sup> The recent archaeological surveys conducted at Trepimägi Street revealed that the section of town wall was built from stones up



Figure 9. Town wall of Haapsalu at the cross-road of Wiedemanni, Rütli, Suur, and Mere Streets. Photo by Erki Russow.

to 60 cm in diameter. The stones were bound with lime mortar. The lime mortar had smaller rocks and pieces of bricks inside it. The width of the wall was from 2–2.1 meters.<sup>81</sup> The lower part of the wall is preserved on the southwest side of the Pikk Street, east from the last mentioned section.<sup>82</sup> In the test pit near Pikk Street 22, the thickness of the wall was 2.1 meters. The supposed first floor of the small half-circular tower was documented. The date of the building of the mentioned tower is dated to 1560–82.<sup>83</sup>

The town wall of Haapsalu has been archaeologically excavated so far only on the north side of the town (see fig. 4). Erki Russow has summarized the archaeological research in a review article. He notes that the

<sup>78</sup> Tvauri, “Viljandi linnamüüri arheoloogilised uuringud”, 99.

<sup>79</sup> Haak, Lätti, “Archaeological investigations at the town wall of Viljandi”, 179.

<sup>80</sup> Haak, Lätti, “Archaeological investigations at the town wall of Viljandi”, 187.

<sup>81</sup> Andres Tvauri, *Aruanne Viljandi keskaegse linnamüüri arheoloogilisest uuringust Trepimäe tänava lõunaküljel 2007. aastal* (2008, manuscript in the Department of Archaeology of the University of Tartu), 2; Rivo Bernotas, *Aruanne arheoloogilisest järelvalvest Viljandis Trepimäe tänaval toimunud Viljandi linnamüüri markeerimistöodel* (2010, manuscript in the archive of the National Heritage Board), 2.

<sup>82</sup> Tvauri, “Viljandi linnamüüri arheoloogilised uuringud”, 99.

<sup>83</sup> *Ibid.*, 103–104.

oldest traces of urban settlement of housing in Haapsalu date to the mid-thirteenth century.<sup>84</sup> The first stone houses date to the end of fourteenth century. Based on the intensity of the cultural layer, it can be stated that the decisive enlargement of urban settlement happened at the end of the thirteenth century or at the turn of the thirteenth and fourteenth centuries.<sup>85</sup>

In the area of the town wall at Viieristi Square, the earliest finds date to the end of the thirteenth or the first half of the fourteenth century. The exposed town wall was approximately 1 meter high and 2.2 meters thick (see fig. 9). Granite stones with a diameter up to 80 cm on the outer side and limestone with a diameter up to 30–40 cm on the inner side of the wall were used.<sup>86</sup> The course of medieval town wall in the courtyard of Wiedemanni Street 2 was up to 3 meters from the contemporary street line.<sup>87</sup> The thickness of the section of wall on the north side of the town under Rüütli Street<sup>88</sup> was 2.8 meters. The limestone wall rested on top of a heavy granite stone foundation. Additionally, remnants of German Gate with a square layout (4.2 × 8.5 m) were discovered.<sup>89</sup> The wall at Rüütli Street was built of limestone about 300 meters in length.<sup>90</sup> The thickness of the wall at Rüütli

<sup>84</sup> Erki Russow, “Kaks aastakümnet linnaarheoloogiat Haapsalus – mitte ainult potikildudest ja müürikatkeist. Ühe väikelinna mineviku uurimise olevikust ja tulevikust”, *Läänemaa Muuseumi toimetised*, XI (Haapsalu, 2008), 7–41 (18); see also Anton Pärn, “Külaehitiste jäljed Haapsalu varases linnaehituses”, *Linnusest ja linnast: uurimusi Vilma Trummali auks = About hillfort and town: studies in honour of Vilma Trummali*, ed. by Arvi Haak, Erki Russow, Andres Tvaari, Muinasaja teadus, 14 (Tallinn, Tartu: Teaduste Akadeemia Kirjastus, 2004), 269–289 (280).

<sup>85</sup> Erki Russow, Heiki Valk, Arvi Haak, Anton Pärn, Ain Mäesalu, “Medieval archaeology of the European context: towns, churches, monasteries and castles”, *Archaeological Research in Estonia 1865–2005*, ed. by Valter Lang, Margot Laneman, Estonian Archaeology 1 (Tartu: Tartu University Press, 2006), 159–192 (173–174).

<sup>86</sup> Erki Russow, “Weitere Forschungen in der Stadt und Burg Haapsalu”, *Arheoloogilised välitööd Eestis = Archaeological fieldwork in Estonia 2003* (Tallinn: Muinsuskaitseamet, 2004), 148–159 (152); see also Erki Russow, “Linn linna all II: arheoloogilised kaevamised Haapsalus 2003. aastal”, *Läänemaa Muuseumi toimetised*, VIII (Haapsalu, 2004), 99–110 (101).

<sup>87</sup> Erki Russow, “Verschiedene Dokumentationsarbeiten in Haapsalu”, *Arheoloogilised välitööd Eestis = Archaeological fieldwork in Estonia 2005* (Tallinn: Muinsuskaitseamet, 2006) 207–218 (216); see also Russow, “Linn linna all”, 102.

<sup>88</sup> Raam, “Haapsalus leiti keskaegne linnamüür”, 5; Pärn, “Die Wehrbauten von Haapsalu”, 180–182.

<sup>89</sup> Urmas Arike, *Haapsalu Rüütli ja Linda tn. ristmik. Haapsalu linnamüüri Saksa värvatorni konserveerimine* (1997, manuscript in the archive of the National Heritage Board).

<sup>90</sup> Russow, “Weitere Forschungen in der Stadt und Burg Haapsalu”, 151.

Street was more than 2 meters and was made of  $20 \times 40$  cm stones. In comparison, the thickness of the wall of German Gate nearby was 2.5 meters.<sup>91</sup>

Archaeological investigation of the town wall of Narva has been scarce. Traces of urban settlement originate from the end of the thirteenth century or the first half of the fourteenth century, as the limestone foundation of the probable two-sectioned half-cellar house can (according to the analogies from Estonia, Germany, and Latvia) be dated to the same period.<sup>92</sup> The excavated foundation of the medieval town wall of Narva at Vestervalli Street dates to the fourteenth century. The wall was demolished during post-war construction work on the territory of the old town and until the present day it was not known that its foundation had been preserved. Part of the wall was traced for more than 30 m, with the upper part of the quarry stones being almost at the level of the modern-day surface. The depth of the wall was more than 3 meters.<sup>93</sup> The area of the medieval moat was investigated in the course of research at Vestervalli Street. The find material consists of abundant artefacts from the eighteenth and nineteenth centuries, therefore it might be suggested that after the end of the seventeenth century, when the new line of bastions was built, the old moat was no longer cleaned and quickly filled with garbage.<sup>94</sup>

### *Discussion and results*

The beginning of construction of the fortification perimeter of Viljandi has so far been dated to the second half of the thirteenth century<sup>95</sup> and to the

<sup>91</sup> Erki Russow, "Archäologische Rettungsgrabungen in Haapsalu", *Arheoloogilised välitööd Eestis = Archaeological fieldwork in Estonia 2002* (Tallinn: Muinsuskaitseamet, 2003), 210–220 (211, Fig. 1; 216).

<sup>92</sup> Aivar Kriiska, Mari Lõhmus, "Archaeological excavations on Suur-Street, Narva town", *Arheoloogilised välitööd Eestis = Archaeological fieldwork in Estonia* (Tallinn: Muinsuskaitseamet, 2006), 189–206 (192).

<sup>93</sup> Aleksandr Nikitjuk, "Archaeological excavations in Narva in 2008–2009", *Arheoloogilised välitööd Eestis = Archaeological fieldwork in Estonia 2009* (Tallinn: Muinsuskaitseamet, 2010), 177–183 (181–182).

<sup>94</sup> Aleksandr Nikitjuk, "Archäologische Aufsichtsarbeiten in Narva auf dem Territorium der Bastei "Triumph", *Arheoloogilised välitööd Eestis = Archaeological fieldwork in Estonia 1997* (Tallinn: Muinsuskaitseamet, 1998), 165–175 (166).

<sup>95</sup> Arvi Haak, "Viljandi linna kujunemisest peamiselt arheoloogiliste allikate põhjal", *Linna asutamise, esmamainimise, inimtegevuse jäljed*, Narva Muuseumi toimetised, 5 (Narva: Narva muuseum, 2005). 17–28 (25). Also more specifically mid-century / in the third quarter of the thirteenth century has been suggested (Valk, "Excavations at the medieval town gates of Viljandi", 94).

fourteenth century<sup>96</sup> and also related to the construction of the castle.<sup>97</sup> The erection of the masonry wall reinforced with towers is suggested to date to the second half of fourteenth century.<sup>98</sup> The inhabitation of the urban space of Viljandi likely developed gradually over several generations of settlement during the thirteenth century. The area enclosed by the town wall has been suggested to have been populated after the conquest of Viljandi in 1223. As evidenced by the current archaeological research results, as well as by radiocarbon dating, it has been suggested that the whole territory of the old town was inhabited during the thirteenth century.<sup>99</sup> As for Tartu and Pärnu, it has been suggested, that the development from the first traces of urban settlement to complete medieval towns took around a century, and it seems probable that in Viljandi those processes took more rather than less time.

Based on the absence of traces of earlier cultural layers, it has been suggested that the earlier cultural layers and natural humus soil were removed prior to building the wall.<sup>100</sup> Also, it has been suggested that the construction of the wall took place before the beginning of intensive urban occupation.<sup>101</sup> As discovered during recent excavations, the earliest cultural layer and natural soil were removed in the northeastern part of town as well.<sup>102</sup> Similar examples of ground leveling have also occurred in Tallinn.<sup>103</sup> Thus, it seems more probable that before the construction works began, the humus-containing soil was dug. This is not uncommon in the rest of Europe either, for example the excavations at Shrewsbury in England provided evidence that before the construction of defenses the area was cleared down to the natural clay, which was then partially scarped. The waste clay was then

<sup>96</sup> Kaur Alftoa, "Viljandi linna kujunemisest", *Ehitus ja arhitektuur*, 2 (1978), 48–54 (50).

<sup>97</sup> *Eesti arhitektuuri ajalugu*, 65–66.

<sup>98</sup> Elmo Raadik, *Viljandi arhitektuuri ajalugu feodalismi perioodil XIII–XIX sajandi keskpaigani*, diplomitöö (1960, manuscript in the archive of the Department of History of the University of Tartu), 67.

<sup>99</sup> Haak, "Viljandi linna kujunemisest", 25.

<sup>100</sup> Valk, "About the role of the German castle", 223; see also Tvauri, "The archaeological investigations in Viljandi", 55.

<sup>101</sup> Valk, "Excavations at the medieval town gates of Viljandi", 94.

<sup>102</sup> Rivo Bernotas, *Aruanne arheoloogilistest eeluuringutest Viljandis Linnu tn 4, Uue Kunsti Muuseumi ehitatava juurdeehituse territooriumil* (2008, manuscript in the archive of the National Heritage Board), 3. The earlier surface was probably peeled before the new stage of settlement.

<sup>103</sup> Jaak Mäll, "Arheoloogilise kultuurikihi spetsiifikast Tallinna vanalinna territooriumil", *Linnusest ja linnast*, 249–268 (259 ff.).

used to form a low bank that was fronted by a stone wall, the foundations of which were set deep in a trench.<sup>104</sup>

The creation of the moat around Viljandi has been dated to the second half of the thirteenth century or the fourteenth century.<sup>105</sup> The oldest human settlements in the territory north of the town can be dated based on the find material to the second half of the thirteenth century.<sup>106</sup> Similarly, for example, the origins of settlement in the northern part of Uus-Pärnu, have also been dated to the second half of the thirteenth century.<sup>107</sup> The erection of the town wall did not start there until approximately a century later.<sup>108</sup> The excavation results enable us to suggest dating settlement genesis in the northern suburban area of medieval Viljandi to the fourteenth century.<sup>109</sup> The usage period of the drainage ditch discovered near the town wall has been dated to the fourteenth century.<sup>110</sup> For example, the drainage ditches in the Riga suburb of Tartu have been dated to the second half or to the end of the fourteenth century.<sup>111</sup> This date is associated with the completion of the town wall of Tartu and filling the moat with water.<sup>112</sup> As the building of the wall was a costly and manpower-consuming undertaking,<sup>113</sup> it seems

<sup>104</sup> John R. Kenyon, "Medieval fortifications", *The archaeology of medieval Britain* (Leicester, London: Leicester University Press, 1990), 187.

<sup>105</sup> Altoa, "Viljandi linna kujunemisest", 53; Tvaari, "Viljandi linnamüüri arheoloogilised uuringud", 107; Aivar Kriiska, Arvi Haak, Mari Lõhmus, "Arheoloogilised välitööd Viljandi linnas Tallinna ja Oru tänava vahele rajatud kaugküttetorustiku kraavi alal", *Viljandi Muuseumi Aastaraamat 2006* (2006), 101–129 (124).

<sup>106</sup> Kriiska *et al.*, "Arheoloogilised välitööd Viljandi linnas", 124; Near St. John's Church on the western side of the town, the earliest traces of human settlement have suggested to the second quarter of the thirteenth century, and the end of the formation of cultural layer related with the establishment of urban settlement to the end of the thirteenth or beginning of the fourteenth century (Heiki Valk, "Viljandi Jaani kiriku kalmistu", *Linnusest ja linnast*, 421–450 (424)).

<sup>107</sup> Bernotas, "Medieval fortifications of Pärnu", 16.

<sup>108</sup> *Ibid.*, 21.

<sup>109</sup> Arvi Haak, Heiki Valk, "Archaeological investigations of medieval and post-medieval Viljandi", *Arheoloogilised välitööd Eestis = Archaeological fieldwork in Estonia 2001* (Tallinn: Muinsuskaitseamet, 2002), 91–104 (99).

<sup>110</sup> Kriiska *et al.*, "Arheoloogilised välitööd Viljandi linnas", 115.

<sup>111</sup> Eero Heinloo, "Keskaegne Tartu Riia-eeslinn ehitusjäänuste põhjal", *Tartu Linnamuuseumi aastaraamat* (2007), 65–76 (70).

<sup>112</sup> Bernotas, "Medieval town wall of Tartu", 66.

<sup>113</sup> For example, during the construction of the tower Kiek in die Kök in Tallinn, from June to October 1475, there were approximately 570 men working every day (Külllike Kaplinski, "Uusi andmeid Tallinna linnamüüri Tõnismäe-poolse osa kindlustamisest 15. sajandi viimasel veerandil ja 16. sajandi I poolel", *Eesti NSV Teaduste Akadeemia Toimetised*, 24 (1975), 330–344 (334)); in the reconstruction works of White Tower of Pärnu, 12 masons and 24 workers worked every day (Inna Põltsam-Jürjo, *Liivimaa väikelinn Uus-Pärnu 16. sajandi I poolel* (Tallinn: Argo, 2009), 291). Even in wealthier

questionable that it started simultaneously with the establishment of the oldest human settlement in Viljandi. Based on the previous information, it seems more probable that the construction of the town wall started also during the fourteenth century.

So far, it has been suggested that the whole town wall of Viljandi was erected similarly and that the same kind of construction was used. The thickness of the wall was supposedly the same everywhere. The lowest one or two layers of stones were situated on natural ground without the foundation and grouted with clayish sand between the stones. The thickness of the lowest part of the wall was 2 meters. The highest layer of stones was grouted with lime mortar containing a lot of clayish sand.<sup>114</sup> Other authors also have suggested the hypothesis that the wall was built at the same time.<sup>115</sup> The fieldwork done in 2008 showed that the thickness of the wall on the northern side of the town extends up to 2.3 meters, although the niche found during the excavation slims this measurement at places to 60 centimeters. In comparison, the thickness of the town wall of Tallinn in the presumed location of an arched niche near Karja Gate was 1.4 meters.<sup>116</sup>

It might be assumed that the town wall, towers, and gates evolved during the whole medieval period in accordance with the development of weaponry. The Moscow Tower on the east side of the town wall was built by the Muscovites in 1560–82. The tower directly resembles the Moscow Tower of Tartu, which was built at the same time.<sup>117</sup> Riga's Gate has characteristic features distinctive to the defensive architecture of the beginning of sixteenth century. The outlets in the lower zone of the town wall correspond with the horizontal defense principle, which began to spread in the late fifteenth century and especially at the beginning of the sixteenth century.<sup>118</sup> Comparable examples would be Fat Margaret tower in Tallinn (built from 1510–30<sup>119</sup>) and White Tower in Pärnu.<sup>120</sup> The excavation results also

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areas of Europe (e.g. Florence), it usually took some decades before stone fortifications were actually finished, due to a lack of finances or professional manpower (Boerefijn, *The foundation, planning and building*, 207).

<sup>114</sup> Tvauri, "The archaeological investigations of Viljandi", 55.

<sup>115</sup> Valk, "About the role of the German castle", 223.

<sup>116</sup> Ragnar Nurk, Villu Kadakas, Garel Püüa, Guido Toos, Peeter Talvar, "Investigation of the medieval and early post-medieval Karja Gate and the suburb in front of it in Tallinn", *Arheoloogilised välitööd Eestis = Archaeological fieldwork in Estonia 2010* (Tallinn: Muinsuskaitseamet, 2011), 115–126 (120).

<sup>117</sup> *Eesti arhitektuuri ajalugu*, 65–66.

<sup>118</sup> Alttoa, *Viljandi Kauba tn 12*, 15.

<sup>119</sup> Zobel, *Tallinna keskaegsed kindlustused*, 223 ff.

<sup>120</sup> Kaur Alttoa, *Pärnu keskaegsed linnakindlustused*, ajalooline õiend (1979, manuscript in the archive of the National Heritage Board), 19.

suggest that Tartu Gate was constructed in at least three different stages.<sup>121</sup> The thickening of this foregate wall is similar to the thickening of the foregate wall of Russian Gate in Tartu.<sup>122</sup> Thus it may be suggested that it was built in the same period.

Although the dating of the wall of Viljandi to the second half of the thirteenth century seems disputable, the building of it still seems to have begun rather shortly after the establishment of the town. The opposite example is Haapsalu, where the network of streets and buildings evolved first and subsequently the town wall was erected.<sup>123</sup> Therefore, within Estonian territory, the approximate time of development from the first traces of urban settlement to a complete walled medieval town was likely from 50 (Viljandi) to close to 100 years (Haapsalu, but also Narva).<sup>124</sup>

*Table 1.* Comparing the development from urban settlement to medieval town within the Estonian territory

Town	Town rights	Feudal lord	First finds of urban settlement	Completely developed medieval town
Viljandi	1283	Teutonic Order	Second half of 13th century	First half of 14th century
Haapsalu	1294	Bishop of Saare-Lääne	Second half of 13th century	End of 14th century
Narva	1345	Before 1346 the Danish king, afterwards the Teutonic Order	First half of 14th century	End of 14th century

<sup>121</sup> Before the foregate was built, part of the moat had been filled with soil. As foregates, intended to protect the main gate from artillery fire, were not introduced into the fortification traditions before the mid-fifteenth century, an earlier dating is evidently out of the question. During the third stage of works, the gate was strongly fortified. The wall on its western side was made thicker so that the width of its foundation stretched to 4.5 meters. On the northern side, the old outer wall was demolished and replaced by a new one with tooled surfaces and a thickness of about 4 meters (Valk, "Excavations at the medieval town gates of Viljandi", 90–91).

<sup>122</sup> Bernotas, "Medieval town wall of Tartu", 64. The thickness of the forewall of the front gate of Russian Gate in Tartu extends up to 4.5 meters.

<sup>123</sup> For example in Europe, the development of the settlement Brno ended with the construction of walls around the town (Dana Cejnková, Irene Loskotová, "Brno", *Medieval archaeology: an encyclopedia*, ed. by P. J. Crabtree (New York & London: Garland Publishing, 2001), 30–32 (32)).

<sup>124</sup> See Table 1.

Town	Town rights	Feudal lord	First finds of urban settlement	Completely developed medieval town
Uus-Pärnu	1318	Teutonic Order	Second half of 13th century	Second half of 14th century
Tartu	1262	Bishop of Tartu	First half of 13th century	First half of 14th century
Tallinn	1248	Before 1346 the Danish king, afterwards the Teutonic Order	First half of 13th century	First half of 14th century

The construction of the town wall of Haapsalu resembles the town wall of Pskov's Middle Town district. The building of the latter began in 1309 and its foundation was also stacked fieldstones that were supporting the limestone wall bound with lime mortar.<sup>125</sup> The town of Haapsalu and the castle were located on favorable terrain and distinguished from the mainland with water obstacles. Thus the medieval defense system of Haapsalu is mentioned as strong in written records. The town was also defended by the powerful castle.<sup>126</sup> According to the archaeological material, the average thickness in the excavated sections of the town wall of Haapsalu is over 2.3 meters and in the thickest part 2.8 meters. The average thickness of the town wall of Tartu based on the excavated sections is 2.16 meters.<sup>127</sup> The average thickness of the town wall of Pärnu according to excavated sections is 1.54 meters.<sup>128</sup> Therefore, Haapsalu's town wall appears to be rather comparable with the strongest walls in the Estonian territory. The reason for building on the western side of the town was to avoid the lowland, which was covered with water during flooding and thus not suitable for construction.<sup>129</sup> Although the existence of a wall on the western and northeastern sides of town is awaiting archaeological confirmation, it seems that the town wall was at least planned to be built as strong as the strongest walls in other towns in the contemporary Estonian area.

<sup>125</sup> Inga Konstantinovna Labutina, "Arkheologicheskie ostatki ukrepleniï 1309 goda na territorii Srednego goroda Pskova", *Linnusest ja linnast*, 97–112 (111).

<sup>126</sup> Sedman, *Haapsalu vanalinna detailplaneerimine*, 30.

<sup>127</sup> Bernotas, "Medieval town wall of Tartu", 64.

<sup>128</sup> Bernotas, "Medieval fortifications of Pärnu".

<sup>129</sup> Sedman, *Haapsalu vanalinna detailplaneerimine*, 32.

How high were the walls of Estonian small towns? The height of Haapsalu's town wall has been stated to be 6 meters on the basis of analogies.<sup>130</sup> For example, the so-called Kanne wall in Tallinn near Nunnatorn Tower, erected at the beginning of the fourteenth century, was 6.2 meters high. The height of the arched-niched section of the town wall of Tallinn, between Hellemanni Tower and Viru Gate, was 6.5 meters.<sup>131</sup> The suggested height of the town wall of Uus-Pärnu was also 6.5 meters.<sup>132</sup> This seems to have been quite common in the German areas, as well. Similar heights were characteristic even with cities, and the height of the wall does not correlate with the number of towers. For example, the height of the town wall of Wismar (36 towers in total) was between 6 and 8 meters.<sup>133</sup> The height of the town wall of Zürich was 7 meters.<sup>134</sup> The height of the city wall of Cologne was 7.5 meters.<sup>135</sup> Based on the thickness of the town wall of Viljandi, Elmo Raadik has estimated its height in the Middle Ages to have been about 10 meters.<sup>136</sup> According to the previous data, however, this must be considered far too high. Similarly in Western Europe, the town walls have been assumed to be around 6 meters high and 1.8 meters thick.<sup>137</sup>

Although Tartu and Pärnu throughout the Middle Ages were the towns of peacetime, and where acts of wars after the second half of the thirteenth century took place only during the Livonian War,<sup>138</sup> the history of Haapsalu was anything but quiet. In the thirteenth to fourteenth centuries, the town was a whirlpool of internal disputes and was sacked several times. In 1383, militant vassals raided Haapsalu castle and burned the fence of the stronghold and the houses of the clergy.<sup>139</sup> After 1419 (the end of bishop Winrich von Kniprode's government), there was a period of intense building of urban

<sup>130</sup> Sedman, *Haapsalu vanalinna detailplaneerimine*, 31.

<sup>131</sup> Ervin Sedman, *Pärnu Punase torni väliuurimistööde aruanne. Tekstiline osa, I* (1977, manuscript in the archive of the National Heritage Board), 27.

<sup>132</sup> Bernotas, "Medieval fortifications of Pärnu".

<sup>133</sup> Gerd Baier, "Das Stadtbild als Spiegel der Geschichte: die großen Küstenstädte und ihre Baudenkmale", *Denkmale in Mecklenburg. Ihre Erhaltung und Pflege in den Bezirken Rostock, Schwerin und Neubrandenburg* (Weimar, 1977), 53–136 (106).

<sup>134</sup> Jürg E. Schneider, "Zürich", *Stadtluft, Hirsebrei und Bettelmönch: die Stadt um 1300* (Stuttgart: Konrad Theiss, 1992), 69–92 (83).

<sup>135</sup> Klaus Militzer, "Die Stadtmauer im Laufe der Zeiten: das Kölner Beispiel", *Fasciculi Archaeologiae Historicae: Architecture et guerre. Fasciculus XVI–XVII* (2005), 87–92 (90).

<sup>136</sup> Raadik, "Viljandi arhitektuuri ajalugu", 67.

<sup>137</sup> Boerefijn, *The foundation, planning and building*, 83.

<sup>138</sup> Bernotas, "Medieval town wall of Tartu", 67; Bernotas, "Medieval fortifications of Pärnu", 18.

<sup>139</sup> Sedman, *Haapsalu vanalinna detailplaneerimine*, 26.

fortifications.<sup>140</sup> In 1427, the Vitalic Brothers looted and burned the town.<sup>141</sup> The peacebuilding and normalizing attempts by bishop Johannes Orgas (1492–1515) were also without any particular results.<sup>142</sup> The latter information shows that in proportion with the troubled atmosphere of Haapsalu, the scheme of building a more heavily fortified wall made perfect sense. On the other hand, we should consider that building the wall, as stated earlier, was costly and manpower-consuming – and during the restless times, there were definitely more obstacles than during the times of peace.

The village buildings typical to the thirteenth century were no longer present in fourteenth-century Haapsalu.<sup>143</sup> The state of today's research is connected to the barn-dwellings from Haapsalu and Lihula, similar to buildings from North West Germany. The Baltic Crusades, started at the beginning of the thirteenth century, led the Crusaders to Estonia mainly from this area.<sup>144</sup> Also, the close connection to the city of Riga had a decisive importance in the construction history of Läänemaa, as master builders from Riga brought their building traditions with them.<sup>145</sup> Might this be the key to the connection in similarities of the town plans of Cēsis (Wenden) (in modern-day Latvia) and Haapsalu? The Cēsis castle was one of the earliest strongholds built by the Livonian Order in its process of conquering the country.<sup>146</sup> Haapsalu seems to spread out in the same ways as the town around the castle at Cēsis.

<sup>140</sup> Sedman, *Haapsalu vanalinna detailplaneerimine*, 28.

<sup>141</sup> Padu, "Haapsalu", 8.

<sup>142</sup> Sedman, *Haapsalu vanalinna detailplaneerimine*, 28.

<sup>143</sup> Anton Pärn, "Linnalise asustuse algusest arheoloogilise allikmaterjali taustal", *Linna asutamine, esmamainimine, inimtegevuse jäljed*, 7–15 (9).

<sup>144</sup> Pärn, "Linnalise asustuse algusest arheoloogilise allikmaterjali taustal", 14. The new people brought with them century-old building traditions, as for example around 1120/25 a wall of stone was built on top of the earlier Duisburg fortification. In the thirteenth century the fortification was strengthened and numerous towers were added (Günter Krause, "Duisburg and its environs at the confluence of Rhine and Ruhr from the late Antiquity to the Industrial Age – essential aspects of its development according to archaeological and historical sources", *Medieval Europe Basel 2002: centre, region, periphery, 2: sections 4 and 5*, ed. by G. Helmig, B. Scholkmann, M. Untermann, 3rd International Conference of Medieval and Later Archaeology (Hertingen, 2002), 155–165 (159)).

<sup>145</sup> Sedman, *Haapsalu vanalinna detailplaneerimine*, 20.

<sup>146</sup> John Leighly, "The towns of medieval Livonia", *University of California Publications in Geography*, 6:7 (Berkeley, California: University of California Press, 1939), 235–314 (264 ff). The town Cēsis occupied a position with respect to the castle that is repeated elsewhere by the small towns that grew under the protection of castles – a position not very different from that occupied by the foreburgs of the castle. But even a small town needed more room than a spacious foreburg required, and so could not be laid out simply as an enclosure, one dimension of which was provided by a dimension of the castle (the pattern followed by most of the foreburgs). Several solutions to the problem of articulat-

The towns with similar plans to Viljandi in the Estonian area were Narva and Uus-Pärnu, and in the Latvian territory there were Koknese (Kokenhusen) and Valmiera (Wolmar). Tartu, Haapsalu, Tallinn,<sup>147</sup> and also Riga<sup>148</sup> were fortress towns with a combined defense system type of layout and a rather round ground plan. Viljandi, Narva, and Uus-Pärnu on the other hand were based on a quadrangular plan. In this layout, the town wall functions as the outer bailey of the castle.<sup>149</sup> The system of baileys, where the large areas protected by stone walls were established directly in front of the castle, has been stated to be the typical feature of the fortification sites of the Order.<sup>150</sup> However, this is not completely accurate, as Valmiera was a town of the Teutonic Order, and Koknese on the contrary was one of the strongholds of the Archbishop of Riga.<sup>151</sup> Thus, even though it seems tempting to divide the town plans into groups according to the feudal lord (Bishop/Order) we cannot jump to any conclusions on this subject.

It has been also suggested that Scandinavia and Eastern Europe can be treated together with the northern parts of Germany. The peak of urbanization was reached at the end of the thirteenth century. By this time, an urban network had been established that did not change radically until the

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ing town and castle were found: it was one of the primary form problems of the smaller Livonian towns. At Cēsis, the solution was to enclose a sector of an irregular ring about the castle on the gentle slope southward from the eminence on which the castle stood.<sup>147</sup> Jaan Tamm, "Combination of the castle and town in Tallinn", *Castella Maris Baltici* 3/4, ed. by K. Altoa, K. Drake, K. Pospieszny, K. Uotila, *Archeologia Medii Aevii Finlandiae*, V (Turku [u.a.]: Society for Medieval Archeology in Finland [u.a.], 2000), 179–184 (181).

<sup>148</sup> Andris Caune, "Bischofshöfe in Riga im 13. Jahrhundert", *Castella Maris Baltici* 3/4, 27–34 (28).

<sup>149</sup> For Koknese (Heinz Sauer, "Vir Nobilis Bernhardus de Lippia (1140–1224), Spurensuche im Balticum", *Castella Maris Baltici* VI, ed. by A. Kuncevičius (Vilnius: Savastis, 2004), 185–196 (189)), Valmiera, Viljandi, Narva, and Pärnu also a term "auf dem Schilde" has been used to refer to the type of town, a distinctive feature of which is the second fortification in front of the castle – an urban settlement, separated from the castle with moat and functioning as an outer bailey (Paul Johansen, *Lippstadt, Freckenhorst und Fellin in Livland: Werk und Wirkung Bernhards II. zur Lippe im Ostseeraum* (Münster Westf.: Aschendorffsche Verlagsbuchhandlung, 1955), 154)). Although it has been referred to as a distinctive type of town in Old Livonia (*ibid.*, 119), similar examples can be found from Europe, e.g. Friedberg in Germany (Rainer Zuch, "Burg und Stadt Friedberg: von der Reichsstadt zur Kreisstadt, von der Reichsburg zum Stadtteil, Stationen eines schwierigen Verhältnisses", *Burg und Stadt, Forschungen zu Burgen und Schlössern*, 11 (München: Deutscher Kunstverlag, 2008), 75–90 (80)).

<sup>150</sup> *Eesti arhitektuuri ajalugu*, 63.

<sup>151</sup> Ieva Ose, "Burg und Stadt im mittelalterlichen Lettland während des 13.–15. Jahrhunderts", *Burg und Stadt*, ed. by Tomáš Durdík, *Castrum Bene*, 6 (Praha, 1999), 213–231 (229).

industrial revolution.<sup>152</sup> However, it should be taken into account that Old Livonia, particularly in the thirteenth to fourteenth centuries, was still an area of peripheral countries in the colonization phase. So it may be suggested that all tendencies arrived there with delays.

There have also been suggestions that the characteristic castles of the German Knight Order in the Baltic could have been inspired by the Bohemian castles of the period of King Premysl Otakar II, as he was the one who founded Königsberg during the Prussian campaign in 1255. Though this hypothesis is noted to be very probable, the rise of a new type of order castle is a complicated process, modified by many influences and demands.<sup>153</sup> Therefore it seems that using the material from more distant areas in the historical-comparative method is justified. Although fortifying the towns seemed to be quite widespread in Old Livonia, the similar trend is not followed in adjacent areas such as in Scandinavia. Scandinavian towns, although small, had an important economic role as centers in which craftsmen produced tools, equipment, and clothing; in the regular town markets, imports were distributed and surplus produce gathered, and some were the sites of major seasonal fairs that attracted large numbers of people from wide regions. Even small towns were key parts of complex networks through which the larger cities and the households of rulers, magnates, and bishops as well as religious communities were supplied with their needs.<sup>154</sup> Though Sweden and Denmark, like Western Europe, saw a broader wave of urbanization from about 1200,<sup>155</sup> in general the medieval Scandinavian towns appear not to have been fortified.

However, simple fortifications in the form of earthen walls with palisades and ditches were not uncommon in Denmark. They were rarer

<sup>152</sup> Hans Andersson, "The development of medieval towns", *The archaeology of medieval Europe*, 2, 370–375 (373–374).

<sup>153</sup> Tomáš Durdík, "Mitteleuropäische Kastelle – ein mögliches Vorbild der Ordensburgenarchitektur im Baltikum", *Castella Maris Baltici I*, 45–50 (43).

<sup>154</sup> See Birgit Sawyer and Peter Sawyer, "Medieval Scandinavia. From conversion to reformation circa 800–1500", *The Nordic Series*, 17 (Minneapolis: University of Minnesota Press, 1993), 159–160.

<sup>155</sup> Hans Andersson, "Urbanisation", *The Cambridge history of Scandinavia, I: prehistory to 1520*, ed. by Knut Helle (Cambridge: Cambridge University Press, 2003), 312–342 (329); see also Göran Dahlbäck, "The towns", *ibid*, 611–634 (615): Scandinavian towns were small by contemporary European standards. Stockholm and København, the largest towns in Sweden and Denmark, may each have had some 5000–6000 permanent residents, followed by Danish Malmö with about 4500. The modest number of other Scandinavian towns probably counted their inhabitants in the low thousands such as Viborg, Ribe, Roskilde, and Lund in Denmark, and Kalmar, Turku, Linköping, and Uppsala in Sweden.

in Sweden and almost non-existent in Norway. More advanced stone walls with towers protected only a few towns, such as Visby, Stockholm, Kalmar,<sup>156</sup> and Viipuri (Vyborg) in Sweden, and Kalundborg, Vordingborg, and København in Denmark,<sup>157</sup> although it was only in the late Middle Ages that the Danish capital was entirely surrounded by walls and towers. Based on the large-scale *Ziegelummauerung* from the middle of the fourteenth century, it is unclear whether Vordingborg can be considered as a town or a castle.<sup>158</sup> The walls around the Kalundborg castle were closely connected to the large wall around the town, which during excavations has been dated to 1356.<sup>159</sup> It was from the thirteenth century in particular that new stone walls with mural towers and gatehouses were built to enclose the larger towns.<sup>160</sup> However, from the Swedish territory, a number of towns flourished without the need for an enclosing wall, for example Malmö. Getting its most important economical resources from herring fishing, the herring market was probably the reason for Malmö's good trade connections, especially with the Hanseatic cities on the southern shores of the Baltic.<sup>161</sup> When the second castle was built in 1434, it was seen both by the king and the citizens as a privilege for the inhabitants. The king needed the citizens of Malmö

<sup>156</sup> Nils Blomkvist, "När hanseaterna kom: En stadshistorisk jämförelse mellan Visby och Kalmar", *Meddelanden från Föreningen Gotlands fornvänner*, Årgång 69, ed. by B. Radhe (Gotländskt Arkiv, 1997), 47–70 (69): Kalmar, on the east coast of the Swedish mainland, opposite Öland, was a typical colonial town of its period with a church on the market square, a couple of other ecclesiastical institutions, and a large castle. German traders may have founded Kalmar at the end of the twelfth century, as a joint venture with the Swedish central power. See also J. E. Kaufmann, H. W. Kaufmann, *The medieval fortress: castles, forts and walled Cities of the Middle Ages* (Da Capo Press, 2001), 245: Kalmar castle initially served to check the activities of Swedish pirates. Kalmar stood near a walled town, whose fortifications were built at the beginning of the fourteenth century. Turrets, open on the sides that faced the castle, flanked the town's curtain wall.

<sup>157</sup> Andersson, "Urbanisation", 339.

<sup>158</sup> Ingolf Ericsson, "Stadtbevestigungen im mittelalterlichen Dänemark", *Schriften des Kulturhistorischen Museums in Rostock: Archäologie des Mittelalters und Bauforschung im Hanseraum* (Rostock: Konrad Reich, 1993), 143–148 (146).

<sup>159</sup> Vivian Etting, "The royal castles of Denmark as centres of regional administration, tax collection and mobilization in the late Middle Ages", *Castella Maris Baltici V*, ed. by J. Skaarup, N. Engberg, K. Borch Vesth, *Archaeologia Medii Aevii Finlandiae VI* (Rudkøbing, 2001), 43–50 (48); see also Anders Ödman, "Feudal iron production and castle-building in the marginal zone of medieval Denmark", *Castella Maris Baltici II*, 125–133 (130): Kalundborg was enclosed with a town wall by Esbern Snare (King Valdemar's brother), who also built the castle and most likely planned the building of the town's church before his death in 1204.

<sup>160</sup> Sawyer and Sawyer, "Medieval Scandinavia", 183.

<sup>161</sup> Anders Reisnert, "The city of Malmö and the castle Malmöhus", *Castella Maris Baltici 3/4*, 159–166 (160).

to maintain trade in this area and to protect the coast; the inhabitants of the town needed the castle for the defense of their property.<sup>162</sup>

Several important Scandinavian urban communities never had a castle (e.g. Århus and Lund) or only had it at a distance from the town.<sup>163</sup> Therefore, it may be suggested that the building of urban fortifications was not always directly related to military necessity, but was also due to the specificity of cultural space, which arrived to Old Livonia simultaneously with the German settlers. For example, in the south of Old Livonia the main rival of the Order in the region was the pagan Grand Duchy of Lithuania, crusades against which were launched with the blessing of the Pope. The battles of Duchy were both offensive in the eastern direction and defensive in the west. In its present territory, Lithuania was the scene of defensive battles against the Teutonic Order in the thirteenth to early fifteenth centuries, and its castles played an important role. Despite this, due to different reasons, the technique of building with stone was far behind in Lithuania compared with Western Europe. According to the most recent data, the first stone castles appeared in Lithuania during the first half of the fourteenth century. The majority of the old Lithuanian castles are represented by wooden constructions.<sup>164</sup>

In summary, the situation in Old Livonia seems to clearly indicate an ordinary colonization policy, which is not something unique in Europe. For example, even the English strategy in Ireland was to defend a fortified zone 50 miles around Dublin and to control the rest of the island by using the great lords and walled towns as largely autonomous authorities.<sup>165</sup> As has been noted, the locations in border areas were due to the fact that boundaries between the various lordly territories were often not clearly determined. A newly created settlement in an area where lordly rights were not yet clearly fixed could serve as an anchor point for dominion.

<sup>162</sup> Reisnert, "The city of Malmö", 166.

<sup>163</sup> Anne Nissen Jaubert, "The royal castles during the reign of Erik Menved (1286–1319)", *Journal of Danish Archaeology*, 7 (Odense University Press, 1988), 216–224 (216).

<sup>164</sup> Gintautas Zabiela, "The interior of the Lithuanian wooden castles", *Castella Maris Baltici V*, 161–168 (162); see also Gintautas Zabiela, "Castle warfare between Lithuania and the Order in Lower Panemunė in the late Middle Ages", *Castella Maris Baltici VI*, 211–218 (212).

<sup>165</sup> Eric Klingelhofer, *Castles and colonists: an archaeology of Elizabethan Ireland* (Manchester & London: Manchester University Press, 2010), 35. Similarly the first burst of building activity in France was in the last half of the thirteenth century after the Albigensian crusade when confiscated lands seized from the Cathar heretics were absorbed into the kingdom of France. The second burst of building started after the beginning of the Hundred Years' War (1340–1450) (John M. Steane, *The archaeology of power* (Charleston: Tempus Publishing, 2001), 195).

In this way, territories were enlarged by colonization and the creation of new legal structures, rather than by military conquest. It is also relevant that frontier regions were relatively uncultivated and under-populated due to less favorable geographical conditions, as is usually the case with border areas. Because of the growing population pressure and the increasing knowledge of agrarian technology, it became profitable to cultivate these marginal lands.<sup>166</sup>

According to the discussed information, it might be concluded that the average development from rudimentary urban settlement to walled medieval town in the Estonian territory took around 50–100 years. The town walls were erected in the Estonian territory probably in the fourteenth century. When a military threat was present, the fortifications were at least planned to be built stronger than in the peaceful areas, while at the same time the process of development from urban settlement to medieval town took longer in areas made vulnerable by internal disputes. The tendency to dispense the towns into typologies on the basis of the landlord does not seem to find much support. It might be suggested, that walling the towns in Old Livonia was a phenomenon of Western European culture represented by German settlers, rather than a wide-spread tendency around the Baltic.

## ABSTRACT

Town defenses are central elements of townscapes. The defensive purpose of their construction was as important as their significance as a town symbol. The purpose of the current article is to summarize the material gathered from the excavations of the medieval town walls from the Estonian towns of Viljandi, Haapsalu, and Narva, to discuss when they were erected, and to analyze what their place was in Old Livonian and Baltic contexts. Although fortifying the towns seemed to have been quite widespread in Old Livonia, the similar trend was not followed in adjacent areas such as in Scandinavia. According to the information discussed in this article, it might be concluded that the average development from rudimentary urban

<sup>166</sup> Boerefijn, *The foundation, planning and building*, 107–108.

settlement to walled medieval town in the Estonian territory took around 50–100 years. The town walls were erected in the Estonian territory probably in the fourteenth century. The tendency to dispense the towns into typologies on the basis of the landlord does not seem to find much support. It might be suggested, that walling the towns in the Old Livonian area was a phenomenon of Western European culture represented by German settlers, rather than a widespread tendency around the Baltic.

KEYWORDS: urban archaeology, town walls, medieval fortifications, medieval Estonia.

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*KOKKUVÕTE: Eesti väikelinnad keskajal: linnakindlustuste arheoloogia ja ajalugu*

Keskaegse Eesti alal paiknenud kuuest kivimüüridega kindlustatud linnast on tänapäeval müüride maapealsed osad säilinud vaid üksikute fragmentidena. Ainsaks erandiks on siin Tallinn kui ainus pea täielikult säilinud keskaegsete kindlustustega linn, mis on arusaadavalt siiani ka enim uuri- jate tähelepanu pälvinud. Viimastel aastatel on avaldatud arheoloogilisest vaatepunktist lähtuvaid publikatsioone ka Tartu ja Pärnu linnamüüride kohta. Mis puudutab väikelinna Viljandit, Haapsalu ja Narvat, siis sealsed müürid on säilinud vaid maapõues ning ka kirjalikke allikaid napib, seega tuleb neist tervikliku pildi saamiseks võtta appi arheoloogia. Arheoloogilised uuringud on seni olnud napid, piirdudes publikatsioonides enamasti vaid konkreetsete kaevanditega, üksikutel juhtudel ka kaevamisi juhatanud arheoloogi pikema kokkuvõttega. Käesoleva artikli eesmärgiks on võtta kokku seniste arheoloogiliste kaevamiste käigus saadud materjal kolme Eesti väikelinna – Viljandi, Haapsalu ja Narva – keskaegsete linnamüüride kohta; leida vastus, millal need rajati, ning võrdlevatele näidetele naabermaadest tuginedes analüüsida, milline oli Eesti ala väikelinnade koht

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Vana-Liivimaa ja Läänemere-äärsete linnade kontekstis. Kuna mõningate käsitletavate uuringute tulemused on siiani teaduskäibesse toomata, on käesoleva publikatsiooni näol tegu ka allikapublikatsiooniga.

Seni põhjalikumalt on arheoloogiliste uuringute käigus uuritud Viljandi linnamüüri. Avatud lõikudest ilmneb, et müür on rajatud maakividest, mis alaosas on laotud nii kuivmüürina kui ka seotud pinnase ja saviga ning ülaosas lubimördiga. Tornide ja niši vooderdamisel on kasutatud nii telliseid kui ka lubjakivi, telliste ja katusekivide tükke. Müüri paksus ulatub 1,6 kuni 2,35 meetrini. Haapsalu linnamüüri on seni arheoloogiliselt uuritud vaid linna põhjaküljel. Müüri paksus varieerub 2,2 kuni 2,8 meetrini. Müüri ehitusel on kasutatud nii lubja- kui ka maakive.

Seni napimalt on arheoloogiliselt uuritud Narva linnamüüri. Vestervalli tänaval uuritud müürilõik on dateeritud 14. sajandisse. Samuti Vestervalli tänaval keskaegse vallikraavi alal teostatud uuringute käigus dokumenteeriti, et pärast 17. sajandi lõppu, mil rajati uus bastionideliin, on vana vallikraavi kasutamisest loobutud.

Viljandi kindlustusvööndi ehituse algust on oletatud alates 13. sajandi keskpaigast kuni 14. sajandini. Arheoloogilistele uuringutele tuginedes on märgitud, et 13. sajandi jooksul võeti kogu keskaegse linna territoorium eluruumina kasutusele. Tuginedes võrdlevatele näidetele Tartust ja Pärnust, kus keskaegse linna areng esimestest märkidest linnalisest asutusest täielikult välja arenenud keskaegse linnani võttis aega kuni sajandi, näib tõenäoline, et ka Viljandis toimus see protsess aeglaselt. Kuna linnamüüri ehitamine oli kulukas ja inimtööjõudu nõudev ettevõtmine, siis on samuti küsitav, kas see võis alata samaaegselt varaseima linnaarengu etapiga. Võrreldes Haapsaluga, kus kõigepealt arenes välja tänavatevõrk ja hooned ning seejärel alustati linnamüüri püstitamist, näib Viljandis müüri ehitamine olevat siiski toimunud võrdlemisi lühikese aja jooksul pärast linna rajamist. Eelnevale tuginedes võib väita, et areng linnalise asustuse esmastest jälgedest kuni müüri ümbritsetud keskaegsete linnadeni võttis Eesti alal ligikaudu 50–100 aastat.

Kuigi linnade kindlustamine kivimüüridega oli keskaegsel Liivimaal laialt levinud, ei järgitud seda alati naabermaades, nagu Skandinaavias ja Leedus. Skandinaavia linnad, kuigi väikesed, olid olulised majanduskeskused, kus toimus tootmine ja kaubavahetus. Lihtsamaid kindlustusi, mis koosnesid muldvallidest kraavide ja palissaadidega, esines Taanis ning mõnevõra vähem Rootsis. Tornide ja kivimüüridega kindlustatud linnadeks olid vaid Visby, Stockholm, Kalmar ja Viiburi Rootsi alal ning Kalundborg, Vordingborg ja Kopenhaagen Taanis. Mitmed linnad õitsesid

ilma kaitsva müürita, nagu näiteks Malmö. Mitmetel olulistel linnalistel keskustel puudus ka linnus või asus see linnast eemal. Leedu alad oli kivi-ehitiste püstitamise tehnoloogialt Lääne-Euroopast kaugel maas ning isegi enamik sealseid linnuseid oli ehitatud puust. Seega tuleb arvata, et linnakindlustuste rajamine polnud mitte alati seotud sõjaliste vajadustega, vaid esindas pigem kultuuriruumi eripära, mis saabus Vana-Liivimaa aladele koos Saksa kolonistidega.

Tuginedes käesolevas artiklis vaadeldud andmetele, võib väita, et kesk-aegse Eesti alal alustati linnamüüride püstitamist 14. sajandil. Rahutustest ümbritsetud piirkondades näivad kindlustused olevat planeeritud tugevamad, samas on müüride püstitamine toimunud aeglasemalt kui piirkondades, kus sisetülisid ei olnud. Varasemate autorite poolt soovitatud linnade tüpologiseerimist maaisanda järgi ei saa vaadeldud informatsioonile tuginedes lugeda alati korrektseks.