

Do old digs matter?

The inspection of past excavations for new information, case Turku

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Abstract: Turku, the oldest town of Finland, is in a key position when the excavations and methodological development of Finnish urban archaeology are discussed. The town has been a target of antiquarian research and archaeological excavations since the late 19th century. This activity has resulted in abundance of material as well as a diversity of documentation, which can be considered either as a problem or a possibility or both – depending on the aspects of the study and the attitude of the researcher. The paper gives an overview to urban archaeology in Turku with the focus on the main junctures of methodological development and practices one has had to settle with in the past and present. It presents a case study, which included material from excavations of different kind, and estimates the value of old excavations for the new information. This study brought along a question, how the existing information could be processed in order to get a more holistic view of the past, and laid foundations for a new on-going project in which archaeological information is inventoried, analyzed, valued and represented. The project offers many challenges, and reservations regarding the amount of work are understandable and justified. However, the profitability of the project cannot be estimated before the work has been accomplished.

Keywords: Turku, Finland, urban archaeology, excavations

Introduction to urban archaeology of Turku

The focus of this study is in Turku, which is the oldest town of Finland founded in the turn of the 13th and 14th centuries. (SEPPÄNEN 2011). It was one of the biggest and most important towns of the Medieval Sweden, since the southwestern part of Finland belonged to Sweden from the early Middle-Ages until 1809 when Finland became an autonomous part of the Russian Empire. Turku was the first capital of Finland under the Russian rule in the early 19th century until 1812 when Helsinki became the capital due to geopolitical reasons. The town experienced a decisive stroke of fate 15 years later when c. 75 % of the inhabited area of Turku was destroyed in a big fire. After the fire, the historical centre of the town was in ruins. The town became a target of intensive reconstruction and it took many years to rebuild the town. The old part of the town got a completely new layout with parks and squares surrounding the medieval cathedral and covering the remains of the past. (E.g. DAHLSTRÖM 1929: 300–405; LAAKSONEN 2007) The town remained the biggest town of Finland until the 1840s when Helsinki surpassed Turku in population. Today there are c. 184 000 inhabitants in the city centre of Turku. The population centre with c. 252 000 inhabitants makes the town together with its area the 3rd biggest urban area of Finland and the 8th biggest urban area in the Nordic countries. However, on the European scale, Turku is a small town with a small historical centre beneath the present layout created since the fire of 1827.

When we study the history and especially the medieval history of Turku, archaeology has a very significant role since the number of written sources is very limited. On the basis of survived old documents, it is impossible to get a picture of the buildings and environment and the physical structure of the town. The written sources are mainly related to ecclesiastical services and legal assignments, and the information about everyday life, ordinary people and living environment comes mainly from archaeological excavations. This was understood quite early among the pioneers of Turku archaeology, who studied the history of Turku and were responsible for the first excavations. This first wave of archaeology can be traced to the 1880s – early 20th c., which is quite late and can be connected to the rise of national romanticism. Archaeological excavations – or rather large earthmoving projects related to construction activities with archeological observations – were carried out in large quantities in the early 20th century. The hidden history attracted the people who started collecting artefacts and delivered them to the newly established Historical Museum of Turku founded in 1881. The primary mission of the museum was to make a comprehensive study of the history of Turku in a form of publications. According to the operational principles, the museum exhibitions were of secondary importance and subordinated for the main purpose mentioned above. In the beginning, the collections were focused on the material related exclusively to the history of Turku, but it did not take longer than a year when the collections were extended to cover other objects too. (DRAKE 1984: 95–96; 1995: 8–51)

Although archaeology attracted and local history was valued of high importance, the urban archaeology was mainly limited to making the observations of ruins and collecting a selection of artefacts. One of the first pioneers of Turku archaeology, Hjalmar Appelgren, pondered on how to distinguish the layers and constructions representing different phases and periods and understood the importance of finds and contexts as a tool for dating different layers. (APPELGREN 1902; TAAVITSAINEN 2003a: 9) However, the documentation of sections and contexts during this first phase of Turku archaeology seems to be subordinated to the observation of ruins and accumulation of museum collections. (Fig.1)



Fig. 1 – In the heyday of Finnish National Romanticism (the end of the 19th c.– early 20th c.) the ruins and remains of the past attracted in many ways. The cellars revealed during the construction of the library were memorialized in popular postcards.

(TAAVITSAINEN 2003a: 10, Fig. 1)

The second phase of development in the urban archaeology of Turku can be dated to the post war period from the end of the 1940s until the 1970s with a few excavations in different parts of the medieval town area. (GARDBERG 1984: 69) The sections and levels were documented with detailed drawings and observations were recorded with notes and measures. (Fig. 2) The progress in excavation methods and accuracy of the documentation can be accredited especially to Niilo Valonen, who conducted a 650 meters long trench excavation along the riverbank in the medieval town area. He was an ethnographer who had specialized in buildings and understood the importance of documentation and archaeology as a source for new information. His main contribution to urban archeology was, however, the decent publication of the excavation and analysis of the material. Unfortunately, the other people responsible for urban excavations at this time failed to follow his example. Because of Valonen's personal interest in buildings, some of the wooden remains were stored at the museum. In the 1990s, the remains were dated with dendrochronological analysis with good results. Despite good work at that time, we are facing some problems today when using this material: First of all, the trench was narrow (c. 1 m wide, Fig. 4. No. 3), which makes it quite difficult to interpret the functions of constructions. Although the finds were collected and stored actively (thanks to Valonen, who paid the workers a reward for finds), the finds are missing more detailed contextual information, which makes the dating of the material quite difficult. (DRAKE 1995: 86–87; VALONEN 1958)

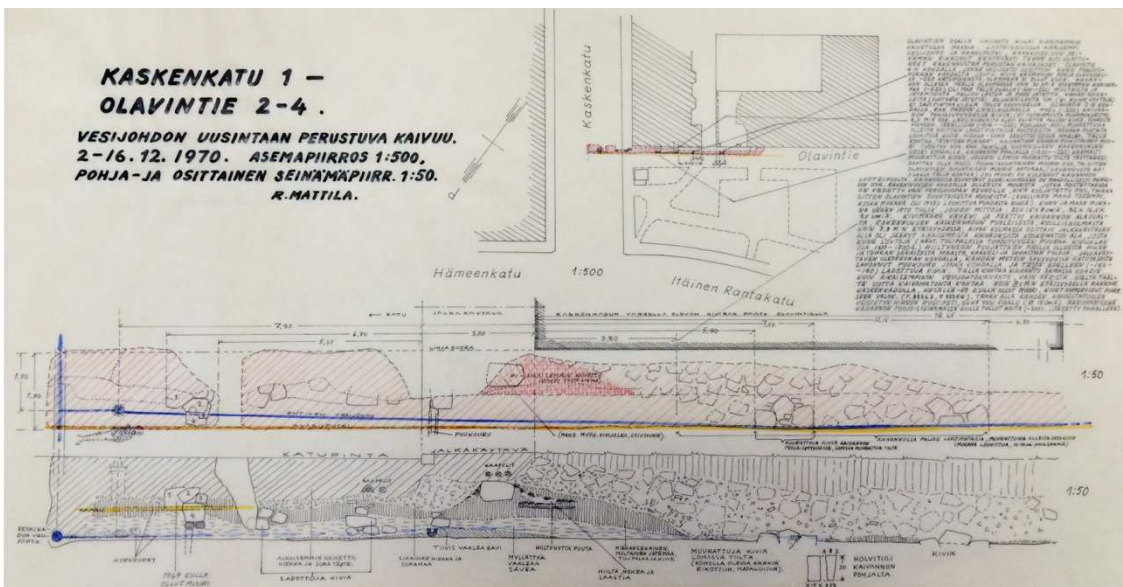


Fig. 2 – During the second phase of urban archaeology in Turku, the layers and constructions were mainly documented with detailed drawings containing notes as well as interpretations. A section drawing of the trench excavation in the area of medieval Dominican Convent includes the description of layers, find and procedures. Although the reports are missing, this kind of documentation gives a general idea about the information the work accomplished and remains and finds detected. (Copyright: Turku Museum Centre.)

The third phase of urban archaeology in Turku started in the early 1980s. This was the time when the principles of stratigraphical excavation methods were introduced in Finland and adapted into practical fieldwork. The excavations of the 1980s were, however, very small in size and the practices of the fieldwork were directed by digging machines and constructors. Consequently, the excavation method was more or less technical and the documentation reflects the combination of different methods. In many cases, stratigraphical thinking was practiced in the post-excavation phase when it was time to interpret the documents drafted during the fieldwork period. Actually, the most important development did not take place in the excavation method, but in the co-operation with scientists from different fields related to environmental analysis and scientific datings. (e.g. KOSTET & PIHLMAN 1989; PIHLMAN 2003b:70)

The fourth phase in Turku archaeology started in the mid 1990s. This phase was characterized by large construction activities resulting in extensive rescue excavations. The areas contained well-preserved constructions and plenty of find material, which catalyzed the development of databases and conservation methods. This was also the time when stratigraphical excavation methods and contextual documentation methods became a standard practise and digital documentation methods were introduced into practical fieldwork. Unfortunately, big excavations brought along new problems. As mentioned before, the excavations were carried out as rescue excavations with limited time and insufficient resources. One of the reasons behind the problems was that the calculations and estimations of the resources were based on the past excavations from the 1980s with a little material and poorly preserved constructions. When the reality struck the archaeologists with the wealth of material, it was far too late to renegotiate with constructors, clients and decision makers about more time and resources. This discrepancy caused by the abundance of the material and the lack of time and resources led to compromises in the fieldwork practices. In spite of developed methods, the level of documentation became sometimes defective and was carried out quite unsystematically meaning that the quality and quantity declined in step with the deterioration of

circumstances and the shortage of time and resources. Today, there is still material waiting for listing and analysis from these excavations.



Fig. 3 – The 1990s and early 2000s were characterized by large excavations with plenty of material and well preserved constructions. Despite developed excavation methods, there were situations when the documentation suffered from unfavourable circumstances and lack of resources. A photo presents documentation circumstances on excavations in November 1998.

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The fifth phase of development started at the beginning of the 2000s. There have been new excavations of different size nearly every year, but the level of preservation and the number of finds and remains has not hit the records from the previous phase. All excavations have been carried out by the local museum, more or less with the same fieldwork personnel. Consequently, the documentation has been carried out in the same way and thus the excavations are comparable with each other.

All in all, c. 580 registered excavations, archaeological observations and individual discoveries have been made in the town area of Turku since the end of the 19th century. In 1984, before the time of big excavations and methodological development of the third phase, the number was 446. Unfortunately, there are excavations, which are still unreported and waiting for analysis. Today the number of excavation reports exceeds the limit of 160. (KL 2014; PIHLMAN & KOSTET 1986: 68–117) When we think about the number of excavations and studies, Turku is the town number one in the Finnish urban archaeology. The information has been gathered mainly at the local museum, The Museum Centre of Turku, and the material in archives and storages is accessible to students and researchers. Dozens of studies have been made of the material from the recently excavated sites. (E.g. HALONEN 2007; HARJULA 2005, 2008; 2009; KIRJAVAINEN 2004; MAJANTIE 2002; 2007; MARTISKAINEN 2008; PELTONEN 2002; PIHLMAN 2003a; SEPPÄNEN 2000; 2002; SIPILÄINEN 2002; TAAVITSAINEN 2003b; TAMMINEN 1995; TOURUNEN 2002; 2008; UOTILA

2003; 2007; 2009) However, the lack of a comprehensive survey and processed data seems to rule out comprehensive studies about the history of the town based on archaeological material.

Dialogues between recent excavations and old digs result in new interpretations

A couple of years ago I finished a large study about the construction and development of Turku from the time of town foundation until c. 1500. (SEPPÄNEN 2012) The starting point for my study was one excavation carried out in 1998, which revealed plenty of find material and well preserved constructions. This excavation launched many studies related to medieval material and still comprises a major repository of information for the archaeology of Turku. (Fig. 4, No. 4)

After I had analyzed the constructions and historical sequence of events in this excavation area, I wanted to compare the material of this area with the other excavated sites. Consequently, I went through all excavations and observations from the town area in order to get an idea what was done with what kind of documentation, results and material. Since my aim was to study the buildings and constructions as well as the development of the town and changes in the townscape, I had to value the importance of each excavation in relation to my topic at that time. After having got an overview about the whole material, I was able to focus on a limited number of excavations, digs and pits, which revealed relevant information for my study. Since my aim was to study the development and changes in buildings, constructions and infrastructure of the town, the main criterion for the use of information from old excavations was the possibility to date the material. Consequently, I needed to confine myself with the material I was able to date or which had been dated during previous studies.

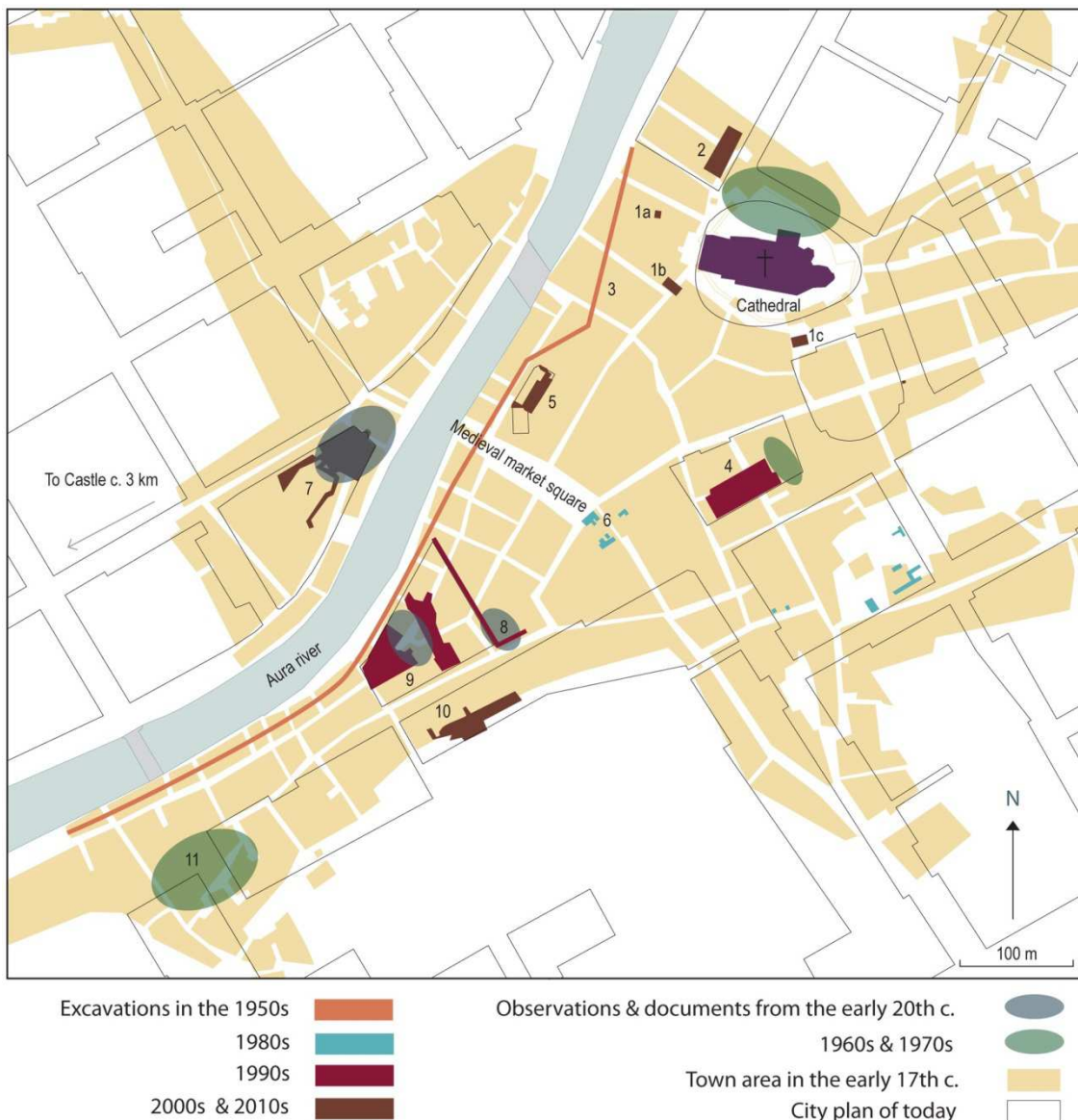


Fig. 4 – The map presents the most meaningful excavations and archaeological observations, which contributed to my studies concerning the construction activities during the first two centuries in Turku (c. 1300–1500). The number of excavations is less than 20. However, they cover the whole medieval town area. The yellow area marks the town as it was presented in the oldest map from the 1630s. The grey lines depict the present layout of the town. (Copyright: L. Seppänen)

In my study about constructions and changes in the townscape of the medieval Turku, I noticed that also the material from older excavations reveals useful information. I was able to reinterpret some of the old remains with the help of the new material and on the other hand, the old material fulfilled the picture I was able to create with the help of new datings and material. I give you just two examples as a proof of usefulness of the old material for my own study. The first example represents information on a small scale:

I was able to reinterpret a construction that was found nearby the river running across the town during a trench excavation in the early 1950s. (Fig. 5 & Fig. 4, No. 3) Based on the comparative material from the excavations in 1998, I interpreted the construction as a part of a watermill. The watermill belonged probably to the Dominican convent, which situated in the vicinity up the hill. The watermill might have been built for the brewing activities of the convent in the early 14th century.

The dating of the construction is problematic and so is the dating of the convent as well. The oldest finds from this area are from the 14th century. According to the written sources, the Dominican order came to Finland in 1249 but probably the base for the order did not situate in this area before the early 14th century. The same kind of a watermill was found in Lübeck and it was dated to the 1290s. It is very unlikely that the watermill in Turku would be of the earlier date and on the basis of other evidence it is possible that the construction can be dated to the 14th century. (SEPPÄNEN 2012: 858–861)

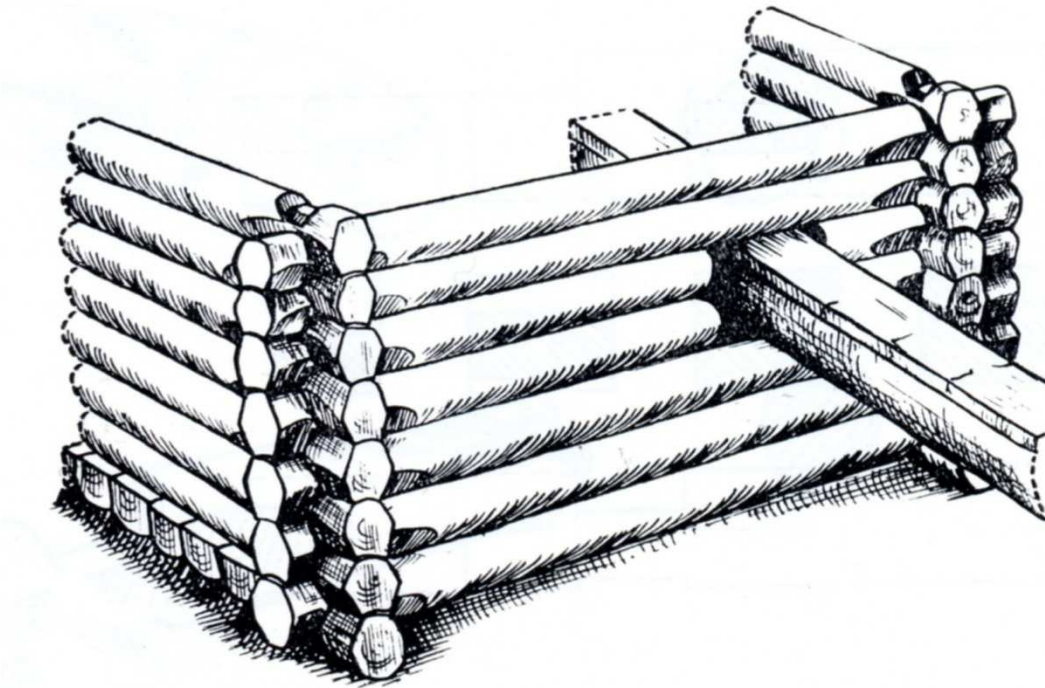


Fig. 5 – A timber frame found in 1953 between the River Aura and medieval Dominican Convent could have been a part of a water-mill. (Copyright: Turku Museum Centre. Drawing: R. Mattila)

The other example represents information on a larger scale. During my study, I ended up with an idea that the town was planned and created systematically at the beginning of the 14th century. The planning of the town included the planning of the street network as well. The starting point for the street network would have been the medieval market square from where the main roads and first streets of the town would have departed. Four main roads led to the north (Satakunta), north-east (Häme), south-east (Uusimaa and the town of Vyborg) and the castle situating on the estuary of River Aura at the distance of c. 3 km from the market square. The first streets would have reached the most important buildings of the town: the cathedral, the convent, one big building (possibly a church or some sort of an assembly building for German merchants) and St. Nicolas Guild hall. (Fig. 6) The evidence of these last two buildings derives from excavations carried out in the early 20th century and from the 1950s. They support my idea, according to which the central point for planning the town would have been the market square and not the cathedral as stated by previous researches. (SEPPÄNEN 2012: 911–912)

Only these two examples demonstrate that it was worth looking at the older material and place them in a wider context provided by new excavations and ideas. However, in order to get new information from old

excavations I needed evidence and material from more recent excavations and fresh approaches based on detailed analysis of the datable material and comprehensive study of new material.

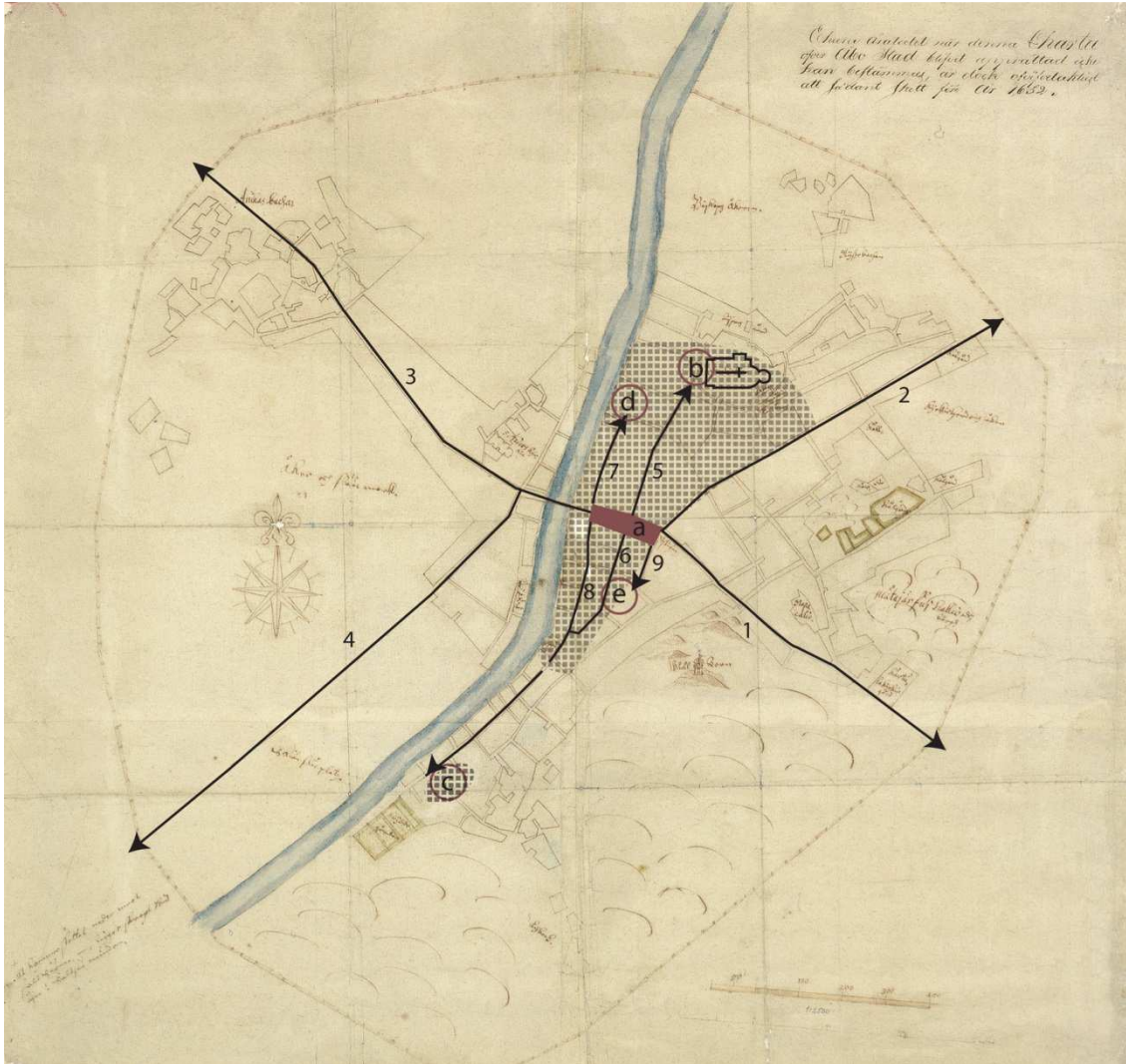


Fig. 6 – The oldest map of Turku from the 1630s. The checked area depicts the inhabited area in the early 14th century. The main roads to the north, south-east and north-east (1–3) and to Turku Castel (4) departed from the market square (a). The market square was also a starting point for the first streets (5–9) leading to the cathedral (b), Dominican convent (c), a big building discovered in the 1950s (d) and St. Nicholas Guild hall (e). (Copyright: L. Seppänen)

Heading for a wider survey

My study, which I concluded two years ago, contained obvious selectivity since the focus of my study was in the buildings, constructions, changes and development of the town. During my study, I got an idea of composing a wider survey of all excavations of Turku. The survey is based on a more objective basis and not only for specific questions within a particular study. A comprehensive survey of this kind gives a more holistic understanding about the existing material and lays foundations for future studies of many kinds. The survey provides us with the basic information about the existence, quantity and quality of different kind of evidence. This kind of information serves researchers with different interests in many ways offering a practical tool for city planners and developers too.

The survey is based on a database including all archaeological excavations, the main information given by the material and data and links to material studies, reports, articles and so on. The database enables inquiries of different kind related to constructions, artefacts, samples and documentation as well as preservation, availability and research of the material. The aim of the project is ambitious and the amount of work it entails has understandably raised the question whether the output will be worth input and all that effort.

Archaeologists who have worked on the material from old excavations are all aware of the problems and challenges what this kind of survey brings along. In my case, the biggest problem is the dating of the data, creating chronology and relations between different excavations. Dating the remains of constructions can be very problematic since there is no possibility to make scientific datings of the remains at this phase. Awareness of all the problems related to the representativeness and dating of the find material gives a realistic perspective and approach to the material but does not, however, minimize the actual work of going through the material which this kind of survey includes. At the moment, the project is at the preliminary stage still raising resources and collecting the available data. Despite the enormous work ahead and possible problems related to the resources and the administrative setting of the project including the control of the data, the aim is still the same: to increase the knowledge about the archaeological and cultural heritage of the town on a larger scale and catalyze collaboration between different parties engaged in urban research and town planning.

References

- APPELGREN, H. (1902) "Det underjordiska Åbo," *Finskt Museum* 1901: 49–65.
- DAHLSTRÖM, S. (1929) *Åbo brandk 1827. Studier i Åbo stads byggnadshistoria intill 1843 I*. Åbo: Bidrag till Åbo stads historia utgivna av styrelsen för Åbo stads historiska museum, andra serien.
- DRAKE, K (1984) "Stadsarkeologisk forskning i Åbo – Kaupunkiarkeologista tutkimusta Turussa" *Historiallisen ajan arkeologia Suomessa – Den historiska tidens arkeologi i Finland*, Raportteja / rapport 6. Toim. H. Brusila, K. Drake & E. Mikola. Turun maakuntamuseo: 92–101.
- DRAKE, K (1995) *Menneisyys, nykyisyys, tulevaisuus. Turun kaupungin Historiallinen museo – Turun maakuntamuseo 1881–1981*. Turun maakuntamuseo.
- GARDBERG, C.J (1984) "Medeltids arkeologi i Finland – Keskiajan arkeologiaa Suomessa", *Historiallisen ajan arkeologia Suomessa – Den historiska tidens arkeologi i Finland*, Raportteja / rapport 6. Toim. H. Brusila, K. Drake & E. Mikola. Turun maakuntamuseo: 65–70.
- HALONEN, A.-M. (2007) *Luu- ja sarviesineitä historiallisen ajan Turussa. Åbo Akademin tontin kaivauksen esineistöä esineen elämänteorian kautta tarkasteltuna*. Turku University: Unpublished MA-thesis, Archives of the department of Archaeology.
- HARJULA, J. (2005) *Sheats, Scrabbards and Grip Coverings. The use of leather for portable personal objects in the 14th –16th century Turku*. Turku: Archaeologia Medii Aevii Finlandiae X. Suomen keskiajan arkeologian seura – Sällskapet för medeltidsarkeologi i Finland. (Licenciate thesis, Turku University)
- HARJULA, J. (2008) *Before the Heels. Footwear and Shoemaking in Turku in the Middle Ages and at the Beginning of the Early Modern Period*. Turku: Archaeologia Medii Aevii Finlandiae XV. Suomen keskiajan arkeologian seura – Sällskapet för medeltidsarkeologi i Finland. (PhD-thesis, Turku University)
- HARJULA, J. (2009) "Valoa ja varjoa. Keskiaikainen soihtu Åbo Akademin päärakennuksen tontin kaivauksista" *Maasta, kivistä ja hengestä. Earth, Stone and Spirit. Markus Hiekkänen Festschrift*. Toim. / Ed. H.-M. Pellinen. Kulttuurien tutkimuksen laitos, arkeologia,

Turun yliopisto, Taiteiden tutkimuksen laitos, taidehistoria, Helsingin yliopisto, Suomen kirkkohistoriallinen seura, Suomen keskiajan arkeologinen seura: 314–320.

KIRJAVAINEN, H. (2004) *Kudo sarkaa, osta verkaa... Menetelmällinen näkökulma Åbo Akademin tontin keskiaikaisiin tekstiililöytöihin*. Turku University: Unpublished MA-thesis, Archives of the department of Archaeology.

KL (2014) = KAUPUNKIARKEOLOGINEN LUETTELO (KL) TURKU 1.1.1985–17.7.1985. Turun Museokeskus / The Museum Centre of Turku.

LAAKSONEN, H (2007) *Turun historiaa kahdeksalta vuosisadalta*. Turku: Turun Historiallinen Arkisto 59.

KOSTET, J. & PIHLMAN, A. (Eds) (1989) *Turun Mätäjärvi / Mätäjärvi i Åbo*. Turun maakuntamuseo / Åbo landskapsmuseum: Raportteja / Rapport 10.

MAJANTIE, K. (2002) "Kaakeleita keskiajan Turusta. Kaakeliuunin varhaisvaiheista / Kakel i det medeltida Åbo. Om kakelugnens tidiga skeden", *ABOA 2001, vuosikirja 65/2001*. Toim. M. Willner-Rönholm. Turun maakuntamuseo, Åbo Landskapsmuseum, årsbok, Turku provincial museum: 39–52.

MAJANTIE, K. (2007) "Kaakeliuunin käyttöönotto – savutonta lämpöä ja kanta-aottavia kuvia / The introduction of the ceramic tile stove: smokeless heating and politico-religious imagery", *Ruukkuja ja Ruhtinaita. Saviastioita ja uunikaakeleita ajalta 1400–1700 / Pots and Princes. Ceramic vessels and stone tiles from 1400–1700. Fat och Furstar. Lerkärl och ugnskakel från 1400–1700*. Ed. K. Majantie. *Archaeologia Medii Aevi Finlandiae XII*. Aboa Vetus & Ars Nova, Suomen keskiajan arkeologian seura, Turku: 36–45.

MARTISKAINEN, H. (2008) *Turun kaupunkikaivausten värtinänkehrät 1300–1700-luvuilla*. Turku University: Unpublished MA-thesis, Archives of the department of Archaeology.

PIHLMAN, A. (2003a) "Kaupunki, maaseutu ja keskiaikaiset saviastiat", *Kaupunkia pintaa syvemmältä – Arkeologisia näkökulmia Turun historiaan*, *Archaeologia Medii Aevi Finlandiae IX*. Toim. L. Seppänen. Turku: TS-Yhtymä & Suomen keskiajan arkeologian seura – Sällskapet för medeltidsarkeologi i Finland: 195–206.

PIHLMAN, A. (2003b) "Åbo Akademin päärakennuksen tontin kaivaukset osana Turun kaupunki-arkeologiaa", *Kaupunkia pintaa syvemmältä – Arkeologisia näkökulmia Turun historiaan*, *Archaeologia Medii Aevi Finlandiae IX*. Toim. L. Seppänen. Turku: TS-Yhtymä & Suomen keskiajan arkeologian seura – Sällskapet för medeltidsarkeologi i Finland: 69–76.

PELTONEN, N. (2002) *Karjaeläinten hyödyntäminen kaupunkikulttuurissa – esimerkkiaineistona Åbo Akademin tontin luulöydöt*. Turku University: Unpublished MA-thesis, Archives of the department of Archaeology.

SIPILÄINEN, K. (2002) *Turun keskiaikaiset lelulöydöt*. Turku University: Unpublished MA-thesis, Archives of the department of Archaeology.

TAAVITSAINEN, J.-P. (2003a) "Piiiteitä Turun arkeologian historiasta", *Kaupunkia pintaa syvemmältä – Arkeologisia näkökulmia Turun historiaan*, *Archaeologia Medii Aevi Finlandiae IX*. Toim. L. Seppänen. Turku: TS-Yhtymä & Suomen keskiajan arkeologian seura – Sällskapet för medeltidsarkeologi i Finland: 9–24.

TAAVITSAINEN, J.-P. (2003b) "Pyhiinvaellusmerkkejä hiippakunnan pääkaupungista", *Kaupunkia pintaa syvemmältä – Arkeologisia näkökulmia Turun historiaan*, *Archaeologia Medii Aevi Finlandiae IX*. Toim. L. Seppänen. Turku: TS-Yhtymä & Suomen keskiajan arkeologian seura – Sällskapet för medeltidsarkeologi i Finland: 307–320.

TAMMINEN, M (1995) *Ikkunalasi Aboa Vetus –kaivausten valossa*. Turku University: Unpublished BA-thesis, Archives of the department of Archaeology.

TOURUNEN, A. (2002) *Karjanhoito keskiajan Turussa. Arkeo-osteologinen analyysi Åbo Akademin tontin eläinluuaineistosta*. Turku University: Unpublished MA-thesis, Archives of the department of Archaeology.

TOURUNEN, A. (2008) *Animals in an Urban Context. A Zooarchaeological Study of the Medieval and Post-Medieval town of Turku*. Turun yliopisto: Turun yliopiston julkaisuja, Annales Universitatii Turkuensis, sarja – ser B osa –tom. 308. Humaniora. (PhD-thesis, Department of Archaeology)

- SEPPÄNEN, L. (2000) "Pelaamisen merkit keskeltä keskiaikaista Turku / Spår efter spel i det medeltida Åbo", *ABOA 1997–1998. vuosikirja / årsbok / yearbook 61–62*. Turun maakuntamuseo, Åbo Landskapsmuseum, Turku provincial museum: 26–32.
- SEPPÄNEN, L. (2002) "Todisteita Turun tuomiokirkon keskiaikaisesta lasimaalauksista? Finns det belägg för att Åbo domkyrka har haft medeltida glasmålningar?", *ABOA 1997–1998. vuosikirja / årsbok / yearbook 65 / 2001*. Turun maakuntamuseo, Åbo Landskapsmuseum, Turku provincial museum: 23–38.
- SEPPÄNEN, L. (2011) "Stadskulturens djuprotare rötter ligger vid Aura ås stränder", *Finskt Tidskrift 10 / 2011*: 475–489.
- SEPPÄNEN, L. (2012) *Rakentaminen ja kaupunkikuvan muutokset keskiajan Turussa. Erytistarkastelussa Åbo Akademin päärakennuksen tontin arkeologinen aineisto*. Turku University: School of History, Culture and Arts, Department of Archaeology. <http://urn.fi/URN:ISBN:978-951-29-5231-1>.
- UOTILA, K. (2003) "Kivitaloja keskiajan Turussa" *Kaupunkia pintaa syvemmältä – Arkeologisia näkökulmia Turun historiaan*. Toim. L. Seppänen. Turku: TS-Yhtymä & Suomen keskiajan arkeologian seura – Sällskapet för medeltidsarkeologi i Finland: 121–134.
- UOTILA, K. (2007) "Aboa Vetus -museon kivirakennuksen tutkimukset v. 2002–2006", *SKAS 2/2007*: 18–26.
- UOTILA, K. (2009) "Aboa Vetus. Rauniokohde ja sen tutkimus", *Ikuinen raunio*. Toim. T. Muhonen & J. Lehto-Vahtera. Turku: Aboa Vetus & Ars Nova –museot, Matti Koivurinnan säätiö: 42–63.
- VALONEN, N. (1958) "Grävningfynden i det gamla Åbo 1952–1953", *Åbo stads historiska museum, årskrift 20–21, 1956–1957*: 9–107.

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