

Gotland Archaeological Field-school

Paviken research project 2013-2016

Investigation of a Viking Age trading and manufacturing site on
Gotland, Sweden

Project plan



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*Cover picture: The head of a dress
pin in the form of a dragons head.
Found at Stånga, Gotland. Photo
Dan Carlsson*

Harbours and trading in the Baltic Sea during the Viking Age - an introduction

In our interpretation of prehistory we are highly influenced by the material we see in the landscape or by coincidences found during archaeological surveys, and we forget or neglect to take into account the hidden cultural landscape. This is particularly true when it comes to prehistory in Sweden.

As we completely lack written sources before the 12th century (with the exception of runic inscriptions) we have to rely on archaeological field material. An example of this problem is the question of Viking Age trade and its associated port activities. Extensive Viking material from Gotland suggests that the island had a lively exchange with the surrounding regions at that time in its history. This is reflected in the existence of numerous silver hoards; no area in northern Europe has such a concentration of silver from the Viking Age as Gotland. There are clear signs of an extensive and lively trade and exchange (or piracy, as some would argue), which in turn required docking points, ports and commercial centres.

Despite a relatively large amount of good source material from the Viking Age, our knowledge of ports and trading centres as well as of the scope of Viking trade and organisation remains limited to the well-known Viking ports in the Baltic region; these include Birka in mid-Sweden, Hedeby in northern Germany, Grobina in Latvia, Wolin in Poland and Paviken on Gotland. Most of these significant Viking ports and trading centres are mentioned in written sources and have largely informed our interpretation of the scope of trade and its organisation during the Viking Age; one thus easily gets the impression that Viking Age trade around the Baltic Sea was essentially built around a small number of trading centres (*figure 1*).



Figure 1: Any discussion regarding Viking Age harbours and trading practices regularly brings up the same places as being central and focal points in a trading network in the Baltic Sea. Foremost among those sites are Birka in mid-Sweden, Novgorod in Russia, Ribe in Denmark, Kaupang in Norway and Hedeby in northern Germany. These and some other places are known from written sources. The map shows long stretches of coastline without any Viking Age portage; however, it is highly unlikely that the map accurately reflects the true situation around the Baltic Sea. There would certainly have been import harbour/port sites on both the western and eastern coast of the Baltic Sea; the lack of written sources, however, prevents us from confirming their locations. Paviken represents an exception, as it is not known from written sources but was discovered through fieldwork.

The nature of the Swedish coastline suggests that this traditional interpretation of Viking Age ports and trading centres cannot be correct. In all likelihood, there were several ports and trading centres along the coast, ranging from small farm-related fishing villages, through bigger fishing ports consisting of several farms or villages, to central and more or less permanently inhabited sites. Here, ships were built and repaired, jewellery manufactured and trade activities carried out. Previously, only one Viking Age harbour was known on Gotland (Paviken).

Gotlandic ports and trading places during the period 600 -1100 AD

We have many indications that in the Viking Age there were more ports along the Swedish coast than we are currently aware of. The difficulty of identifying them makes our interpretation of Viking Age trade, its development and any changes that occurred over time potentially highly inaccurate. Current knowledge is based on the few known port facilities that were discovered more or less by accident or mentioned in written sources. Presumably, the situation was similar around most of the Baltic Sea; during the period in question there was by all accounts a strong network of contacts between the countries around the Baltic Sea.

In 1987, a project was started with the aim of locating Viking Age /early mediaeval ports by means of a survey of the Gotland coastline. The project was called "Gotlandic harbours and trading centres between 600 and 1100 AD". After some initial studies of old maps, archive material and literature, direct fieldwork was carried out between 1987 and 1995 as well as from 1998 to 2005.

The main hypothesis underpinning the project was that in the Viking Age Gotland had many more ports than are known to us today. It was assumed that Gotland had at least one harbour site in each coastal parish during the late Iron Age. The aim of the project was to highlight the location of ports and coastal trade centres, their distribution, numbers, structure, organisation and development over time during the period from circa 600 to 1100 AD. For the purpose of the project, the term *port* was given the following definition: a place where boats land, regardless of the port's scope, focus or construction or the size of ships.

Finding ports

The Gotland coast is about 800 km long in total. Field walking the entire length of the coast would be impractical, all the more so as due to natural conditions it is doubtful whether all stretches of the coast were used during the Viking Age.

It is probably more helpful to make assumptions regarding Viking Age ports on the basis of current knowledge about ports, their general location and spatial organisation as well as certain features that are common to well-known Viking Age ports. Birka, Hedeby and Wolin could be good starting points; all of them are located adjacent to creeks or bays or situated on main rivers. Graves are often found near these sites, and in some cases early mediaeval churches were built near the sea rather than in the centre of the parish.

Conceptual results of the project

During the first phase of the project, about sixty sites with indications of Viking activity were found along the coast (*figure 2*). Obviously, these places have different characteristics and range from small fishing villages to larger centres. However they are all possibly ports or trading centres.

Some places will not have had anything to do with Viking maritime facilities at all, while on the other hand a number of places were probably overlooked due to the method chosen. For example, it seems remarkable that no large port was found on the eastern coast; this is probably partly attributable to the difficulty in identifying sites. The east coast of Gotland is shallower than the western side of the island, making it much more difficult to find the exact location of any port. Excavations of some of the sites have confirmed Viking Age activities¹.

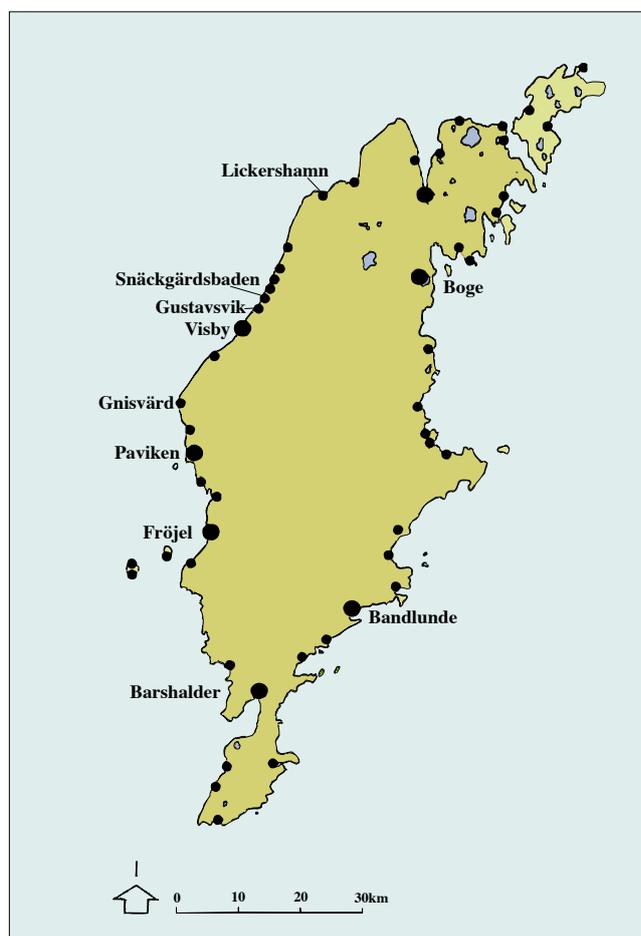


Figure 2: This shows the distribution of confirmed and probable harbours/ports around the Gotland coast. Field work has been carried out at around twenty of the sites; many of them are small fishing harbours with a couple of farms, while others are much larger and appear to have had a more centralised function. Foremost in the latter group are Visby, Paviken/Västergarn, Fröjel and Slite/Boge. Note Paviken on the western coast.

¹ Carlsson 1989, 2000, 2013

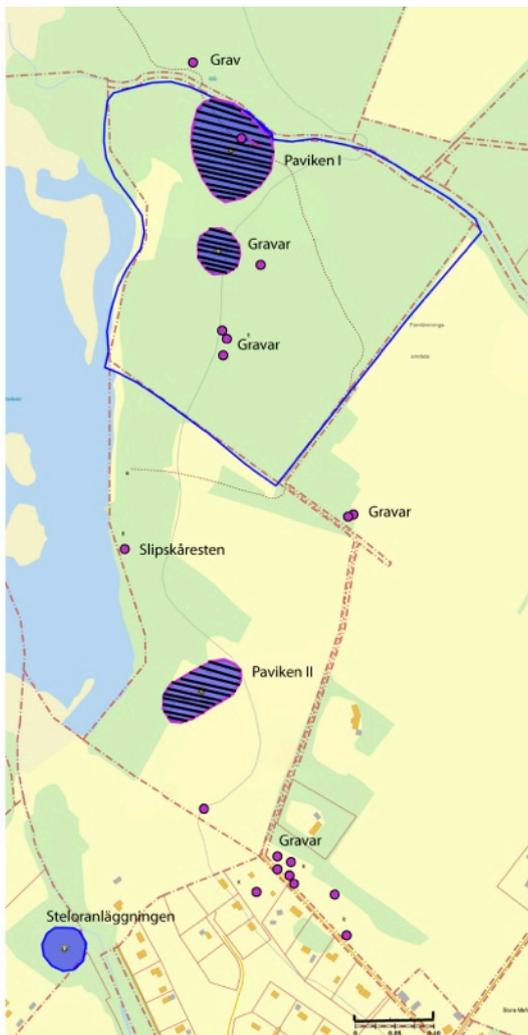


Figure 3: Traces of prehistory east of Paviken. To the north is Paviken I, situated close to the small Idån river. North of Idån and south of Paviken I are Viking Age graves. Paviken II is in the southern part of the area, and southwest of this several graves forming part of a huge cemetery are located.

were collected. The three datable objects (a silver arm ring, a bronze pendant, a Thor's hammer) date from the later Viking period of 900-1000" (translation by the author).

Other findings suggest the existence of house foundations and workshops; Hansson notes that "in any case, these occupation layers from the Viking period belong to a ship building facility and a landing place at the natural harbour of Paviken"⁴. Regarding Paviken I, Hansson concluded that a closer examination of the area would be desirable.

Following on from Hansson, Per Lundström and Jan Peder Lamm arrived at Paviken in the 1960s to carry out further investigation of Paviken I (so far, no further investigation of Paviken II has taken place). Lundström and Lamm performed condensed phosphate mapping in order to better define the

An overall evaluation of the project's results suggests that a number of sites may have been major ports, and this assumption is backed up by the rich and varied find material from those sites. Among these ports/harbours is Paviken in Västergarn.

Paviken - a port/trading centre

Nerman and Floderus were the first to raise, in a more serious way², the issue of a Viking harbour at Paviken in 1934, but it was Hans Hansson who in the 1960s began more direct field studies. His aim was to trace port locations, not just at Paviken but around the entire island. In his search for areas with Viking activities, he relied heavily on phosphate mapping as a method of finding harbour sites³. In total, Hansson took some 700 samples from 28 locations. In his report he notes that he initially obtained low values, which was due to having taken samples from low-lying areas. Eventually he obtained relatively high values (50-100 degrees) in nine locations.

One of the areas that Hansson came to be interested in was Västergarn and Paviken where he obtained high values, especially in two areas, which were named Paviken I and II. Hansson dug small trial trenches in both areas and found cultural layers with an abundance of iron rivets etc. In particular, he noted a cultural layer at Paviken I (close to the small river Idån) that he found remarkable: "The site is located in wooded pastures in a narrow trench, samples containing remarkable numbers of rivets belonging to clinker built vessels

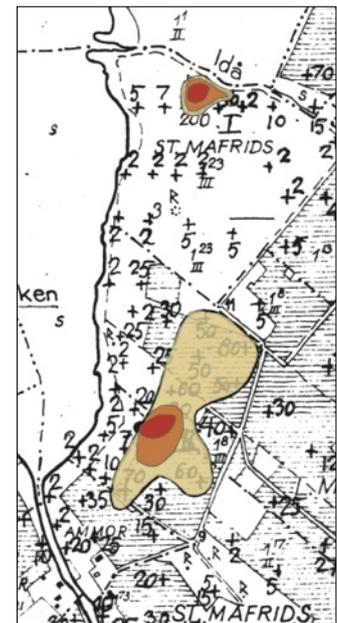


Figure 4: Results of the phosphate mapping carried out by Hansson, showing two distinct areas of high phosphate concentration. Hansson called them Paviken I and Paviken II respectively.

² Floderus 1934, and Nerman 1934.

³ Hans Hansson, report 1963, ATA.

⁴ Hans Hansson, report 1963, ATA.

settlement⁵. Between 1967-73, they came to investigate an area of about 1,000 m² of an estimated total of 15,000 m² of settlement. “In this part, more than 10,000 objects were registered. These finds illustrate what people were doing in this location a thousand years ago. Three main areas can be identified: ship building, trade and crafts (translated by the author)⁶.”

Since these studies at Paviken were carried out, more recent studies have dealt with several other harbour sites on the Gotland coast, giving a more complex picture of trade and manufacturing practices. The investigations at Fröjel harbour site between 1987 and 1990 as well as from 1998 to 2005 have contributed largely to the totally new picture we have today of activities at these sites⁷.

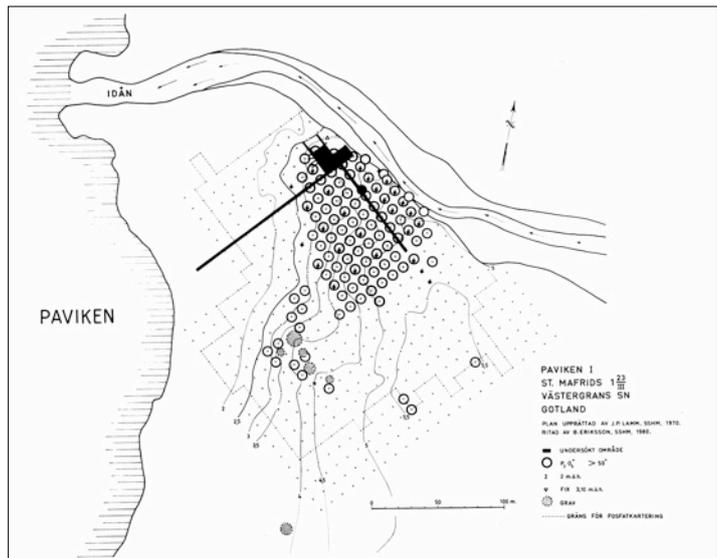


Figure 5: The area of high phosphate concentration and the parts excavated by Lundström and Lamm between 1967 and 1973.

A significant conclusion was that *manufacturing* was of utmost importance and concerned not only the domestic market, but clearly produced objects for a wider market. Items previously thought to have been imported were in reality manufactured at Fröjel, e.g. rock crystal beads and lenses made from rock crystal. There is clear evidence that smelting and the refining of silver took place at the site, including the manufacturing of arm rings, so common in Viking Age silver hoards from Gotland⁸.

More recent research that has followed on from the earlier Paviken investigations suggests that there are many more harbour sites along the coast, forming a rather complicated network of ports. It is not yet fully understood when and how this network was established and how it changed over time.

Some of the sites were established early and disappeared towards the end of the Viking Age while others, such as Visby, have a continuous history from the Viking Age to the present. On the west coast of Gotland, south of Visby, there are several sites dating back to the same era. A fundamental question is how the three main sites, i.e. Visby, Paviken/Västergarn and Fröjel, balanced each other in terms of trade and manufacture over time.

There is a real need to understand this process in more detail, as it has a bearing on the general settlement pattern, the distribution of silver hoards and, not least, the manufacturing of objects. Visby and Klintehamn are both busy commercial ports today, making further investigations difficult. Present day Fröjel is used mostly for agricultural purposes, and ploughing has turned over the cultural layer.

Paviken, on the other hand, has been untouched since the site was abandoned around 1000 AD. Earlier investigations at the site give a very good starting point for a new research project dealing with trade and manufacture in Viking Age Gotland.

⁵ Lundström, P. 1968.

⁶ Lundström, P. 179, s 143.

⁷ Carlsson, D. 1991, 2000

⁸ Gustafsson, N-B. 2005. The tidy metalworkers of Fröjel. In, *Viking Heritage Magazine* 3/05.

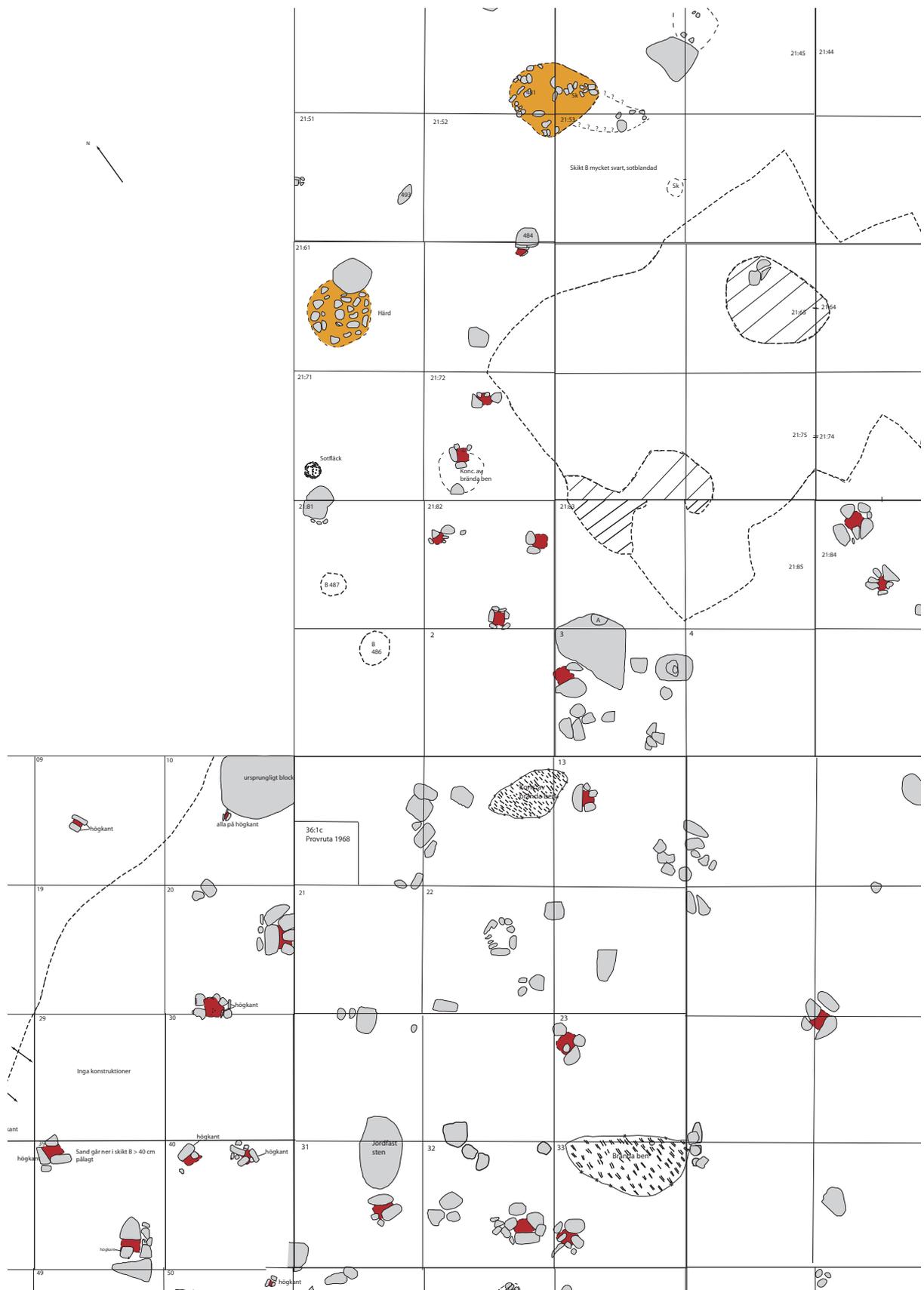


Figure 6: The main excavated area at Paviken I (1967-1973), showing a complicated pattern of postholes (red), hearths and other constructions. Although the cultural layer is rather thin, it was not fully investigated to the bottom; only the topsoil was examined.

The Paviken Project 2013-2016

It is clear that the harbour and manufacturing site at Paviken was crucial in the older history of Västergarn. However, the full and exact nature of the role that Paviken played in history remains unclear. Gotland Archaeological Field School will carry out complimentary investigations at Paviken during a three-year field project between 2013 and 2015, followed by results analysis and interpretation in 2016. The aim of the project is to better understand the function and development of the site and how it fitted into the surrounding landscape, not least the site's connection to what later became Västergarn.

It is necessary to understand the functional correlation between the different settlement areas as well as the different groups of graves on the eastern shore of Paviken, spread out over an area of approximately 400 x 1,000 metres.

A further aim is to understand the earliest as well as the latest occupation at the site and thus to understand the time frame and connection to archaeological evidence in Västergarn and the Västergarn waterway.

In addition to these issues of time and space, we also need to understand the role Paviken played in terms of manufacture and long distance trade.



Figure 7: Aerial photograph showing the northern part of the Paviken area, which is bordered to the north by the small river Idån and to the west by Paviken bay. Close to Idån is the main harbour and trading site, Paviken I, north and south of which lie two small cemeteries and some single graves (marked as red dots and R). Further south there are some unidentified house foundations (Husgrund), one of which has been excavated earlier and dated to the middle of the Viking Age (10th century). The black dots show stone piles or stone walls recorded on older maps of the area.

Points to be investigated

- Follow-up excavations from earlier investigations at Paviken I in order to fully examine the constructions, i.e. postholes, hearths etc., to get a better understanding of the earliest phase of the site in relation to the settlement structure.
- Follow-up excavations of a house foundation further south (close to another building dating from the Viking Age that was excavated in 1990). There are indications of other anomalies in the landscape, suggesting further possible structures that require investigation as far as functionality, dating, and possible connections with Paviken I are concerned.
- Paviken II has cultural layers from which Hansson recovered bones and rivets; this area needs follow-up investigations to confirm the role and dating of activities and any connection to Paviken I.

- New grave sites that have been located in the surrounding landscape need to be investigated to compare the dating with known graves at the site and to obtain a better understanding of historical and spatial context.

Paviken Viking Age settlement and the surrounding landscape

In addition to the above-mentioned four points, some areas in the landscape surrounding Paviken should be investigated in order to get a clearer picture of Paviken in a wider context. Just northwest of Paviken Viking settlement, there is a small *cemetery* consisting of a few graves that form part of a larger cemetery that has been destroyed over time by ploughing. Using metal detectors across the fields should help determine the extent of the cemetery and also if there was any kind of settlement directly connected with the cemetery.

It is also important to gain a better understanding of activities along the banks of the *Västergarn river*, which was the link between Paviken bay and the open sea. Earlier excavations here have yielded evidence of Viking Age jetties along the western bank of the river. There are some indications of activities along the eastern bank of the river, but to date these have not been investigated.

As Paviken was an important trading and manufacturing site, there might still be wooden constructions or Viking ship remains in the *waters of the bay*. No investigations have been carried out to pursue this further, although local legend claims that remains of ships have been found in the bay. Ground penetration radar or similar equipment could be used to detect any anomalies under water.

Compiling earlier excavation reports and materials – an important mission

A very important step linked to the new Paviken harbour site research project is the analysis and incorporation of earlier excavations at the site of Paviken I. This will be done in collaboration with students and lecturers from Uppsala University and participants from the field courses.

The first year of field research will mainly be devoted to complementing earlier excavations at the site and investigating the newly discovered graves north of Paviken I.

After each field season and as part of the field course, a basic excavation report will be compiled and linked, as far as possible, to earlier excavation results.

As already stated, the project will be running over three excavation seasons; the fourth year will be devoted to analysis and interpretation of the results that will be combined into a monograph, to be published the following year.

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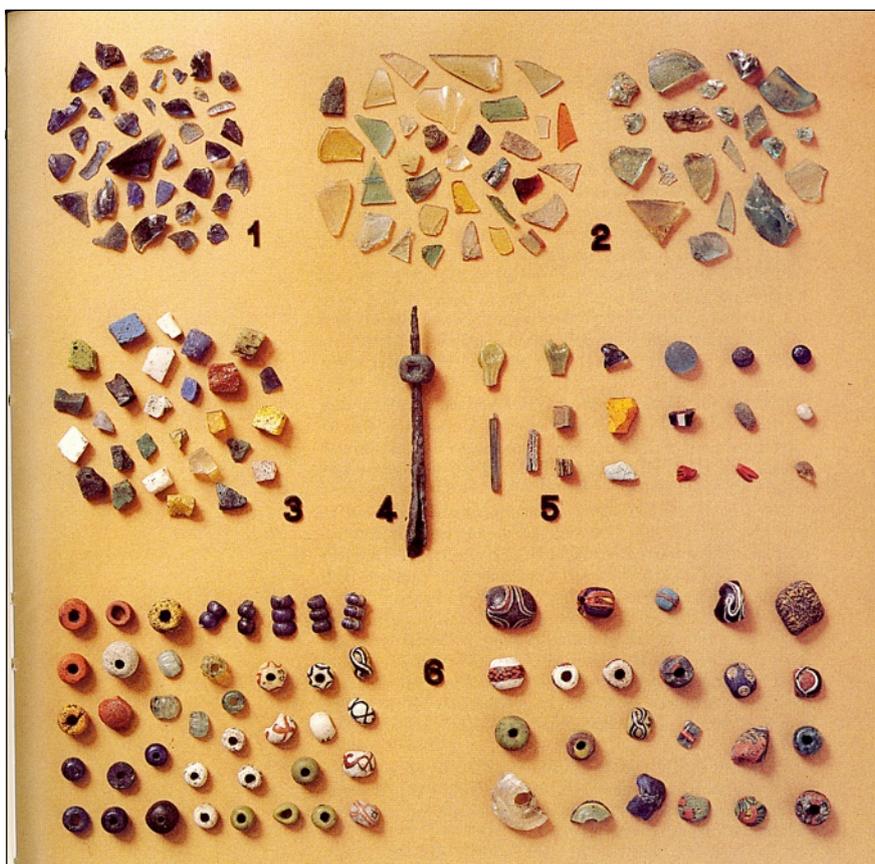
Appendix

Some illustrations of material found at Paviken 1, during the excavations between 1967-1973 (Lundström, P. 1981. *De kommo Vida... Vikingars hamn vid Paviken på Gotland*).

A very large amount of vestige and half finished bone and antler products has been found at Paviken I. Antler and pieces of antler (1), different forms of bone needles and dress pins (4), pieces of combs (3), and a gaming piece and a dice (5). Antler was imported from outside Gotland.



Bead making appears to have been an important activity at the site, using imported glass material of different types and varieties. Large numbers of beads and half finished beads as well as raw material were found during the excavation of part of Paviken I.



Many artefacts made from bronze and lead were discovered during excavations, confirming the presence of metal working on the site (1, 2, and 3). Silver coins, mainly Arabic (5), were often cut into smaller pieces to be used as raw material for melting or silver decoration of objects.



Iron tools, rivets and nails give a clear indication of ship building at the site.



