Seaward Landward

Investigations on the archaeological source value of the landing site category in the Baltic Sea region

Kristin Ilves
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Abstract

There is a tendency in archaeology dealing with watercraft landing sites in a wider context to assume a direct relationship between sites in coastal and shore-bound areas and the practice of landing, without any deeper practical or theoretical exploration of the reality of any such relationship. This problem has its origins in the poor archaeological and conceptual definitions of watercraft landing sites obstructing any real understanding of the role of these sites in the maritime cultural landscape. Landing sites are taken for granted and they are undervalued as an archaeological source of explanation; notwithstanding, the concept of the landing site is readily used in archaeology in order to underpin archaeological interpretations on the maritime activities of past societies.

In order to break away from the simplified understandings of past water-bound strategies based on the undefined concept of the landing site, this dissertation suggests a definition of watercraft landing sites in a wider social sense as water-bound contact zones; places of social interaction that can be archaeologically identified and investigated. This perspective integrates the understanding of the intentional character of human activity related to watercraft landing with the remaining archaeological traces. Archaeological definitions of landing sites that can be tested against the archaeological data are provided, and thereby, the dissertation contributes with the possibility to archaeologically evaluate and approach the social function of watercraft landing sites. This dissertation demonstrates that there can be an archaeology of landing sites.

Keywords: archaeology, coastal archaeology, maritime archaeology, maritime cultural landscape, landing sites, harbours, critical historiography, sociology of landing sites, model of interaction, methodology, shore displacement, phosphate analysis, Baltic Sea region

Kristin Ilves, Department of Archaeology and Ancient History, Box 626, Uppsala University, SE-751 26 Uppsala, Sweden
This work is dedicated to all my teachers, past and present, with deepest appreciation.
List of Papers

This thesis is based on the following papers, which are referred to in the text by their Roman numerals.


V Ilves, K. manuscript. Identifying Water-bound Strategies in the Archaeological Record. The Multi-Period Case of Garn, an Inland Lacustrine Site in Sweden.

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1. Introduction

I define landing sites for watercraft in the widest social sense as water-bound contact zones; places of social interaction that can be archaeologically identified and investigated. This definition can be seen as a necessary and productive starting-point for the archaeological study of landing sites, because it comprehends procedures for the construction of feasible questions and related methods in order to explore varying maritime aspects of past societies. As my own field data – and that of others – demonstrate, the contact zone definition provides a possibility to archaeologically evaluate and approach the social function of landing sites as one of the most essential aspects in understanding the structure and use of the ancient maritime landscape and, consequently, the relationship between humankind and the sea.

The discussion of the archaeological source value of the landing site category has its origin and cause in the poor definitions of watercraft landing sites in the archaeology of the Baltic Sea region. Poor definitions have obstructed any real understanding of the role of landing sites. Since these sites have been taken for granted in archaeology, they have also been undefined and undervalued when it comes to understanding and explaining past water-bound strategies. I am to show that there can be an archaeology of landing sites and that activities and social relations related to watercraft landing can be explored through the archaeological remains. Thus, what I present here is an archaeological methodology for exploring landing sites.

1.1 Aims of the dissertation

In this dissertation, landing sites for watercraft are not taken for granted. On the contrary, they must be proven to exist and made archaeologically meaningful, since only then can the ultimate aim of this dissertation – namely, scientific discussion of the specific behavioural aspects associated with watercraft landing sites – be justified. I pursue my goal by exploring the archaeological evidence of water-bound strategies in the Baltic Sea region with reference to three different, but closely interrelated, themes.

The first theme provides a critical account of the archaeological research of sites in coastal and shore-bound areas, watercraft landing sites in particular. I relate to the general question concerning the potential of maritime activities in creating archaeologically visible remains and how watercraft landing sites are, and have been studied and understood, within this context. In a way comparable to the procedures used in Grounded Theory research within which the inductive and deductive methods of analysis are used alternatingly (Glaser and Strauss 1967; Corbin and Strauss 1990), the validity, credibility and consequences of the prevailing approaches and inferences in landing site studies are
discussed at some length. The dominating notions of landing sites in archaeology are examined against the archaeological data. I argue that ‘landing’ and the concept of the landing site (and/or harbour, port) is readily used in archaeology when evaluating the maritime activities of past societies. However, the lack of empirical evidence, and sometimes the empirical material itself, has seldom been seen as an obstacle or even as an object worthy of scrutiny. Without defining the setting of archaeological traces left by landing activity, archaeological research dealing with watercraft landing sites will do little more than put ‘dots on the map’ in frame of ascertained pre-understanding. And landing sites as a category will remain meaningless without any explanatory value in archaeological studies.

Not much is known concerning archaeological landing sites in the Baltic Sea region. Yet more importantly, the archaeological source value of the landing site category is undefined and underestimated. For that reason, the second theme pursued in this dissertation is to propose a theoretical, archaeo-sociological model as a tool for explaining the available archaeological data, and supply a plausible framework that can be applied in the archaeology of landing sites. With this approach I argue for a definition of watercraft landing sites from a general social point of view as water-bound contact zones. This perspective comprehends an understanding of landing sites as having a role in the maritime cultural landscape, and implies that these sites can be identified and studied by means of archaeology.

The most compelling argument for adopting the proposed contact zone perspective lies in the possibility to integrate the understanding of the intentional character of the human activity related to watercraft landing with the archaeological remains in coastal and shore-bound areas. The proposed model, therefore, will keep us from generating static scenarios resulting from the undefined notion of landing sites. That, in turn, will be of advantage to archaeological research, since it offers new answers to the questions about the nature of maritime activities of past societies.

The third theme in this dissertation deals with the matter of appropriate methodologies and methods needed in order to convincingly argue for landing sites in terms of archaeology. Although my approach strongly emphasizes the importance of how the conclusions are reached, second-rating the matter of what the conclusions are, the how never overrides the why. Therefore, emphasizing the how as well as the why and based on my own field investigations, I suggest, design and test specific methods and tools furthering the study of sites in coastal and shore-bound areas. These methodological approaches are not advocated or implemented for their own sake, with no other purpose than that of desired objectivity. On the contrary, I wish to move towards more dynamic and interpretative methodologies in the archaeological study of landing sites by means of an explicit and critical concern with archaeological research designs concerning water-bound sites. I argue for the importance and possibilities of archaeologically reliable contributions to the understanding of landing sites. Having deconstructed the traditional concept of the landing site, my ultimate goal is to integrate watercraft landing sites in a new discussion as an archaeologically prolific source material that goes beyond the suppositional analysis of
such sites. We can achieve this goal by viewing archaeological landing sites as the result of actions created by intentions, and as something which can be approached through the empirical material.

1.2 The landing site concept

When introducing new ways of investigating a specific archaeological category, it is perhaps inevitable that terminology becomes an important issue which needs to be clarified. Throughout this dissertation I use the term ‘landing site’ when discussing sites created and used for launching from and/or reaching land with different kinds of watercraft and for activities associated with these seaward–landward activities. My introduction of the landing site concept draws upon the current confusion concerning terminology relating to watercraft landing and associated activities.

Hardly anyone questions the fact that there are and have been many different places for watercraft landing with many different functions. Bearing this in mind, material diversity and social complexity of some kind or other is implied in different places. Despite this, a careless definition of watercraft landing sites has reduced them to a universal category with little explanatory value. In the literature – with some exceptions – the term ‘harbour’ dominates, designating almost any kind of watercraft landing site in the archaeology of the Baltic Rim. Moreover, the same term is used synonymously for widely different archaeological categories of sites in coastal and shore-bound areas, as well as for just potentially water-bound sites or even beaches. The term is not properly defined, neither in behavioural nor in archaeological terms. As a result, the term ‘harbour’ can be used to mark almost any location with traces of human activity as well as just topographically suitable places for watercraft landing reasonably close to a shoreline. Not surprisingly, it is quite easy to postulate and generate the existence of numerous sites for watercraft landing on these grounds, but their actual function is impossible to verify or reject, let alone date. Thus, ‘harbour’ has become an empirically meaningless term. When it comes to archaeology, this term and its arbitrary content makes it intrinsically pointless to even ask about specific behavioural aspects associated with watercraft landing sites, because it almost always comprises the possibility to construct an irrefutable explanation based on the far from impossible suggestion that people have used coastal and shore-bound areas. Furthermore, the term ‘harbour’ is problematic for the simple reason that it is part and parcel of our modern pre-understandings and lacks stability of signification. ‘Harbour’ is therefore a term so heavily burdened by problematic aspects that I find it to be useless in an academic archaeological discourse aimed at drawing long-term generalizations.

As the term ‘harbour’ has lost its explanatory value in archaeology, I argue that the term ‘landing site’ (or landing place), defined as a site created and used for launching from and/or reaching land with different kinds of watercraft and for activities associated with this, allows an all-inclusive view without losing functional focus on the category itself. This focus has not been maintained by any single previous suggestion of terminological revision, since terms intro-
duced to replace ‘harbour’ have not been sufficiently well-defined and, furthermore, these are put to use in exactly the same sense as ‘harbour’ (cf. Ulriksen 1998: 259-260). In order to define and formalize an archaeology of landing sites, I felt that there was a need for a term which would have to be vague if it was not provided with a definition. However, it would still have to be so loosely defined as to enable different hypotheses to be explored and developed as a functional basis for the archaeo-sociological study of watercraft landing and associated activities.

According to my definition, the term ‘landing site’ can be viewed as a ‘nodal point’ connecting different concepts related to watercraft landing (cf. Torfing 1999: 98-99). If, for instance, we follow the discussion of the concept of ‘freedom’, especially how ‘freedom’ is exemplified to convey a different meaning depending upon the particular groups of signifiers with which it is articulated, such as freedom of speech, freedom from hunger and freedom to choose one’s profession (Solomon 2009: 274), it becomes apparent that ‘landing site’, similar to ‘freedom’, can mean many different things, for example, landing site for fishing, industrial landing site, landing site for overnight stay, naval landing site, landing site for sea-bird fowling, etc. ‘Landing site’ in each of these cases conveys a different meaning and does so through its association with the various other signifiers that it ties together. Since the revised landing site concept is a typical nodal point, it allows research questions such as what landing sites are and what function they perform to reach across time and space. Relationally linking a number of signifiers, its meaning is stable. But at the heart of signification, it is open to alternative, albeit not indiscriminate, interpretations. The landing site concept therefore combines my research objectives while recognising the flexibility of the concept itself.

1.3 Notes on spatial and temporal context

At the outset of my research on maritime cultural landscapes and watercraft landing sites, it was my aspiration to bring landing sites into the forefront of archaeological discussions in order to examine their source value in relation to understanding social change and processes of change during the dynamic Late Iron and Early Middle Ages in the Baltic Sea region. During my PhD project, however, it became increasingly clear to me that the lack of archaeological, as well as behavioural, definitions of landing sites prohibited any understanding of what they were or what role they had to play in the social transformations of the Baltic Sea region during the period of interest. I therefore had to redirect my interest to the understanding of landing sites as an archaeological as well as a social category. Due to this conceptual interest I had to open up my spatial and temporal frame and use illustrative examples from other regions and times as well.

One single realisation concerning the archaeological research of coastal sites in the Baltic Sea region came to play a most important part in the development and outline of this dissertation. Namely that, if a location close to the (former) waterfront was found to show practically any traces of human activity, it was
automatically seen as proof that the place had functioned as a landing site, often irrespective of chronology. This kind of fuzzy landing site definition without any content has continued to create a basis for arbitrary discussions on the nature of maritime activities of past societies. Sites of uncertain character are entering the discussion on par with sites that are well defined archaeologically and conceptually. This has resulted in confusion regarding watercraft landing sites. Furthermore, it became increasingly obvious to me that the notion of ‘watercraft landing site’ more often than not serves merely to illustrate an interpretation which has already been taken for granted. Thus, landing sites are considered to lack interpretative value as archaeological sites when it comes to explanatory significance. Whatever analyses are made and results obtained on Late Iron Age and Early Medieval societies, I believe that as long as they emanate from a dominating empirical basis in landing site studies equating short geographical distance with a high degree of functional correlation between settlement and water, they are speculative and occasionally even misleading. Therefore the aim of my dissertation project moved away from its initial geographical and temporal focus and, although a large number of cases concern the Late Iron and Early Medieval Ages in the Baltic Sea region, other examples will be given too.

Matters concerning the archaeological notion and potential source value of the landing site category, as well as the question of reliable methodology and possible models of interpretation, are of general importance in archaeology. In my opinion, these issues have to be solved before any comprehensive and archaeologically relevant research focusing on watercraft landing sites and concerning specific time periods can be done.
1. Spithami
2. Tornimäe
3. Fribrodre Å
4. Krogen
5. Österby
6. Garn
7. Sutu
8. Aukra
9. Gudsø
10. Nakkebølle
11. Praslin, Dennery
2. Research papers

2.1 Background

Research on maritime cultural landscapes including watercraft landing sites is something I have occasionally been involved in from the beginning of my academic career (e.g. Ilves 2002, 2004, 2006a). A study I conducted in 2005 when working with place names (Ilves 2006b) marks, for me, a turning point in my understanding of landing sites, and came to play an important part in the development of this dissertation. The purpose of the 2005 study was, among other things, to examine the value of place names as indicators of archaeologically interesting maritime locations, landing sites for watercraft in particular. I would like to give a short summary of this particular investigation and explain how it relates to questions in my dissertation.

The starting point of many studies on archaeological landscapes and sites is an expressed aim of identifying and tracing all the possible sites of interest in any chosen area. However, many archaeological sites, including landing sites, lack the exposed monumentality that would allow an a priori construction of a landscape interface from which to start, which is why work is preceded by surveys. A natural approach to archaeological surveys is that sites with low archaeological visibility are searched for by looking at their context, such as the prehistoric landscape. There are a number of different methods of analysis and prospecting to apply in searching for ancient landing sites, starting from considerations of favourable topographical situations to analyses of specific archaeological monuments, such as graves and cemeteries close to the coast. I used place names as a starting point since they are frequently considered to be among the most important tools for analysing maritime cultural landscapes and locating watercraft landing sites.

I selected Estonian-Swedish toponyms from the district of Noarootsi (Sw: Nuckö) in the north-western part of Estonia (Figure 1). I chose this particular area because of the severe lack of knowledge concerning the prehistory of this region, as well as the early history of the Swedish-speaking population once settled along this coast. At the same time, however, place names in this former area of Estonian-Swedish settlement have been systematically and purposefully collected, linguistically studied and also published, thus constituting an important body of available source material. I have to admit I was driven by a rather common archaeological urge to make discoveries, and in that sense the Noarootsi district – which is conspicuously empty of any archaeological findings – was a tempting region, since finding something would be finding something new.

Although the vast majority of place names in the district of Noarootsi are agricultural, there are a considerable number of maritime names, i.e. names denoting something in the maritime milieu, and names which according to the
interpretations have marked or indicated places connected to the maritime sphere. As concerns landing sites, I came across quite a large number of place names which, despite the altered designation, have clearly once marked sites used for watercraft landing activities. There were also names indicative of landing sites due to the fact that they had originally pointed out locations close to landing sites (Ilves 2006b: 91ff).

There is no doubt in my mind that local place names will always represent a kind of linguistic map of the geographical surroundings. In order for place names to become a valid source of interpretation from an archaeological perspective, however, one must take into consideration their exact geographical position and age. Onomastic research has long focused on the study of place names as part of the linguistic environment rather than the physical, cognitive and historical landscape. This is certainly true of the years prior to Second World War in which the Estonian-Swedish toponyms were collected and recorded. As a result, although the origin and composition of the topographical place names of the Noarootsi district have been clarified to some extent, they are not precisely geographically positioned. Furthermore, albeit with some exceptions (Ilves 2006b: 94), the names themselves do not hold any information about their age. Archaeologists do have some means at their disposal in order to tackle these problems. Especially in areas affected by shore displacement resulting in advancing shorelines, such as the northern and central parts of the Baltic Sea region, a valuable starting point is landscape reconstruction based on shore displacement calculations in combination with the study of older carto-

![Figure 1](image1.jpg)

*Figure 1.* The location of the Noarootsi district; the studied area at Spithami is encircled. For reference to the shore displacement in the district, the 3 masl is enhanced and it is roughly indicating the Viking Age shoreline. Photos from top: the studied area with the name of Gamlas-å-hamnen, a thick cultural layer of dark soil detected in the area with the name of Gamlas-å-hamnen (map and photos by author).
graphic material. The use of older cartographic material is often helpful in determining what object in the landscape the name’s designates. Shore displacement calculations in turn have proven promising when determining the name’s approximate age. When it comes to defining landing sites, however, field studies are crucial in order to test the archaeological value of place names.

I conducted a simple archaeological survey with the purpose of testing the archaeological value of the name *Gamlas-å-hamnen*, indicating a landing site by a river. When this name was collected and recorded it designated a dried-up river bed in Spithami (Sw: *Spithamn*), but at some point in history it most likely marked watercraft landing site. Moreover, several other place names referring to maritime activities can be found in the region of Spithami, situated on the very northern end of the mainland of the Noarootsi district. My investigations in the area where the name *Gamlas-å-hamnen* occurred revealed a thick cultural layer of dark soil (Ilves 2006b: 96) (see also Figure 1). Nevertheless, one may wonder if, by that discovery, I had located a former landing site as I implied when I published my research. Had I found the formerly water-bound site used for watercraft landing, which now just needed to be given a more exact dating than shore displacement can provide, in order to be used as a contribution to the discussions on the history of Estonian Swedes in the Noarootsi district?

By examining place name indicators of maritime activities and making use of shore displacement calculations, I had discovered traces of human activity close to the former shoreline. However, it could not thereby be concluded that the place had been used as a landing site. What evidence was there, aside from the unambiguous place name, to prove that this place had functioned as a *de facto* landing site? Was an indication of activities along the former shoreline, combined with some signs of human presence, enough to tag the place as a landing site? And how productive can a discussion on the nature of the maritime activities of past societies be on such grounds? Since these questions were not addressed in the 2005 study, no answers could be given. However, as a consequence, the need to address these questions became apparent. As a result, while all the while keeping the questions concerning archaeological as well as behavioural understanding of landing sites in mind, I became engrossed in watercraft landing sites as an archaeological and social category; a critical and engaging line of inquiry that runs through all the papers presented in this dissertation.

2.2 Synopsis

This dissertation includes five research papers. The main literary and scientific aim of the following overview is to describe the nature and progression of my dissertation work and to disclose the interrelated character of the questions, perspectives and approaches applied.
2.2.1 Paper I

*Discovering Harbours? Reflection on the State and Development of Landing Sites Studies in the Baltic Sea Region*

In this paper I examine and evaluate the archaeological research into watercraft landing sites in the Baltic Sea region. One began to study landing sites in the Baltic Rim at the beginning of the twentieth century, but the field came into its own only in the middle of the 1980s. The extensive research was based on within the archaeological and historical discourses prevailing idea of the sea as an increasingly important means of transportation in the maritime societies of the Late Iron and Early Middle Ages. In order to discover watercraft landing sites, a method based on identifying several material and non-material indicators of maritime presence has been designed and used with minor additions/variations in different geographical regions around the Baltic Sea. In the course of such work, many areas close to former shorelines came to be marked as potential landing sites. When traces of human activity are discovered on indicated areas, if so only in the form of higher phosphate levels and/or dark soil, they are functionally interpreted as landing sites and, as such, become dots on the map.

This means that landing sites are not only searched for, but also *determined*, on the basis of circumstantial and secondary evidence. Since it is difficult to imagine that an strongly indicated area close to a shoreline suitable for watercraft landing would not have some connection to maritime activities, it is quite easy to claim the existence of numerous landing sites around the Baltic Sea on such a basis. But it is not shown archaeologically. In the study of landing sites and maritime aspects of societies in general, the circumstantial approach has been considered satisfactory enough to argue further for the maritime nature of the societies of the Late Iron and Early Middle Ages. Consequently, archaeological interpretations of landing sites are made within an already established pre-understanding.

Therefore, my point of argument in Paper I is that activities surrounding watercraft landing are uncritically, and almost unequivocally, considered to be archaeologically invisible in the Baltic Sea region. It is considered enough to functionally define a landing site on the basis of location and secondary evidence. This circumstantial line of reasoning constitutes the dominating archaeological hypothesis in landing site studies. Thus, I could not help but wonder, what is the reason behind this generally accepted, and seldom questioned opinion, in archaeology dealing with landing sites, that watercraft landing is something which remains archaeologically invisible? What is this opinion based on? In order to examine this, I turned my attention towards the single most dominating cultural aspect of the maritime sphere. This aspect, furthermore, is directly related to maritime landing sites – the watercraft; an issue that is pursued in Paper II.
2.2.2 Paper II

Do Ships Shape the Shore? An Analysis of the Credibility of Ship Archaeological Evidence for Landing Site Morphology in the Baltic Sea

Landing sites are created for people who use watercraft; therefore, shipwreck evidence is frequently used when investigating landing sites. On the basis of the development of prehistoric and historic boat and ship technology, a corresponding line of development is often proposed for landing sites in the respective periods. In this article the interpretative potential of shipwrecks for generalizing statements about landing sites is discussed, and it is demonstrated why the examples emphasizing the interdependence of boat and ship technology and landing sites are inadequate. Furthermore, this part of maritime archaeology, which is still weighed down by “unproblematic” antiquarianism, is thereby accentuated.

Almost all types of prehistoric vessels, which were studied long before any research was done on prehistoric landing sites, had a construction suitable for beaching. As a result, prehistoric landing sites were not considered to have any archaeologically visible or detectable features connected to the practice of landing. This assumption was also supported by other sources, although they were often unsuitable for making any generalizations regarding ancient landing processes. However, in the light of the archaeological material, this simplified, “teleological” interpretation of the development of landing sites becomes problematic. When investigated from that perspective, prehistoric landing structures have been found, not only on ancient shorelines at coastal sites of rather “special” character – such as early urban centres –, but alterations of the shoreline made for landing purposes have also been discovered at “unremarkable” locations. There are also several examples of prehistoric landing structures found to have been built for logboats and other small boat types. Based on the available archaeological data from various landing sites, it becomes apparent that interpretation of prehistoric landing sites should not focus solely on boats and ships without taking into consideration the possibility for landing facilities.

In order to move beyond a research characterized by pre-understandings, it is important that archaeological landing site studies test the hypothesis that watercraft landing does leave archaeologically detectable traces. At the same time, however, it is apparent that a better empirical understanding is not in itself enough to explain the relationship between humankind and the sea. Although structures/alterations made in order to facilitate landing are important, and often constitute the only archaeologically visible evidence of landing activities, they do not tell us much about the importance of landing sites in a wider social context. Why are landing sites important for societies? Why are they located where they are, and what decides whether a landing site becomes a success or not? What can we find out about societies by studying such sites? The posing of these questions was an important stepping stone in my dissertation work as regards to examining the general source value of landing sites as a research category and discussing the potential of watercraft landing sites in the study of societies; a line of reasoning pursued in Paper III.
2.2.3 Paper III

*Is there an Archaeological Potential for a Sociology of Landing Sites?*

In archaeology, the maritime landing site category has become a banality due to a pre-understanding which equates geographical distance with human behaviour. This situation is made all the worse by the addition of a reasoning which focuses solely on function and technology, as well as a lack of theoretical awareness based on empirical material. In many cases, the landing site is nothing more than an illustration without any significance in its own right. This article argues that landing sites are not merely thresholds between land and water; they are distinctive areas with properties and significance of their own. Therefore, they also have an archaeological source value as regards interpretation of past societies. A general theoretical model is suggested as a tool for the archaeological study, and for achieving a better archaeo-sociological understanding, of watercraft landing sites.

The role different landing sites have had in connection to trade and its organization has often been emphasized as one of the most essential aspects in understanding their societal importance. Admittedly, good maritime landing sites are a prerequisite for economic growth and regional development in societies dependent on water-bound trade. However, that sort of economic perspective does not apply to every kind of landing site; and, not surprisingly, this affects the interpretations of the maritime aspects of past societies. Therefore, from a general social standpoint, I stress the importance of landing sites as contact zones in a cultural, as well as a topographical, sense. Landing sites, having been created for people using watercraft, constitute areas for interaction between humans and one special kind of place – the waterfront. Only on the waterfront is social interaction both on land and by watercraft made possible within one and the same zone. Therefore, I suggest that landing sites should be looked upon as contact zones – sites where movements and meetings are facilitated by the location. Based on this definition, which takes into account a diversity of cultural processes involved in landing, a model is presented as a tool for explaining the available archaeological data, as well as a framework to apply when studying watercraft landing sites. Although there are differences among sites, the conceptual similarities override any differences in my opinion. For that reason, the discussion on landing sites as contact zones is empirically illustrated through the analyses of archaeological material from three different landing sites in the Baltic Sea region: a seasonal Viking Age fishing village at Tornimäe, in Estonia; a dockyard from the latter part of the 11th century at Fra bridre Å, in Denmark; and a post-medieval meeting place at the anchorage of Krogen, in Sweden.

The framework proposed in Paper III was discussed using already available archaeological material and demonstrated the range of themes available for investigation. However, the aim was to test and evaluate the proposed framework in connection to my own case study as well. Yet before this could be done, the issue of establishing the exact position of the shoreline in areas with advancing shorelines had to be discussed in order to create a frame of reference for the archaeological data. This is an issue which is pursued in Paper IV.
2.2.4 Paper IV

*Some Critical and Methodological Aspects of Shoreline Determination: Examples from the Baltic Sea Region*

Most watercraft landing sites must have been situated right by the shore, extending both into water and onto land. The landscape around the Baltic Sea region, however, has undergone dramatic changes due to shore displacement. Therefore, the spatial relation between archaeological sites and the site-contemporary waterfront needs to be reconstructed in every case. One can obtain a rough estimation of what the landscape would have looked like by means of shore displacement calculations based on isobases for recent movements in the earth’s crust. Knowledge obtained in this way can be very productive in archaeological surveys indeed. As concerns methodology, rough estimations of shoreline displacement are also always used as a basis when defining potential sites of ancient maritime activity in areas with advancing shorelines. However, this does not provide any precise information regarding the shoreline at any certain point in time. Without any precise information, it is difficult to discuss the position of a specific archaeological site in relation to the site-contemporary shoreline, since the reasoning remains hypothetical. Methods based on phosphate analysis for establishing the exact position of the waterfront at the time of a site’s occupation are proposed, discussed and tested in this article.

The discussion of phosphate distribution patterns was originally inspired by empirical observations made at Stone Age sites in Fennoscandia. However, the validity of using phosphate degrees in order to determine ancient shorelines remained uncertain regarding Stone Age sites now situated far inland with no connection to the waterfront. The methods dealt with in this article were tested on a modern-day abandoned landing site in Österby, in northwest Estonia. This location provided greater certainty since more was known regarding the position of the shoreline during the period the site was used. The study showed that there were increased and oscillating phosphate values where the shoreline would have been at the time the landing site was used, which seems to correspond with observations made at the Fennoscandian Stone Age sites. A phosphate distribution method suggesting increased and oscillating phosphate values at the former shore zone was therefore found to be potentially useful as an archaeological tool in order to reach a more precise estimation of where the former waterfront may have been situated when the site was used, regardless of its chronological position.

Phosphate mapping needs additional information in order for it to be used at its full potential in the archaeological study of coastal and shore-bound sites. Nevertheless, phosphate mapping does have the substantial scientific value of being a tool to strengthen or challenge a researcher’s arguments concerning the spatial relation between a site and its shoreline. Therefore, this method was also included in the case study aimed at combining the different aspects brought up in my dissertational work. This was achieved by focusing on appropriate tools and methodologies for the study of landing sites as prolific source material within archaeology.
2.2.5 Paper V
*Identifying Water-bound Strategies in the Archaeological Record. The Multi-Period Case of Garn, an Inland Lacustrine Site in Sweden*

In archaeological research on landing sites, the action of landing is taken for granted merely on the basis that a site has a suitable proximity to water. Furthermore, the hasty definition of a landing site does not allow any understanding of the activities that took place there. Consequently, there is an urgent need to strive towards and discuss the development of appropriate methodologies in the archaeological debate on landing sites. The final research paper in this dissertation outlines the relationship between: 1) the theoretical model suggested for the study of landing sites, 2) a research design concerning the archaeological investigation of water-bound sites and 3) results obtained during various fieldwork engagements at a site called Garn in east central Sweden. Although, the site at Garn was initially of unknown character and date, there were remains of a still monumental artificial earthen wall close to what was hypothesized to be the former shore zone.

The methods applied in order to interpret past human activity in the archaeological study of water-bound strategies at Garn were mutually independent. Furthermore, they were not progressively invasive, but chosen because they emanated from hypotheses and research questions, closely related to the theoretical model presented in Paper III. As a result, it was revealed that the same area at Garn had functioned as a landing site during all of the archaeologically documented and discontinuous phases in which the site had been used. Furthermore, the results showed that constructions connected to watercraft landing and related activities were not always situated immediately at the waterfront. Alterations due to landing activities could be found tens of meters from where the shoreline would have been at the time. It was thereby verified that, not only are landing sites intentionally constructed zones of their own, but they are also specifically maintained as such. Consequently, they should indeed be considered sites in their own right.

The studies executed highlighted the fact that a combination of several independent and interdependent methods, in a recursive relation to the theoretical model, contributes to the identification of behavioural aspects related to water-bound activities, and help make these features more legible. The functionality of this approach has proven extremely successful, as it has enabled a greater understanding of the interrelationships between the intentional character of landing activity and the resultant archaeological traces. Therefore, I believe that such an approach could help the archaeological study of coastal sites to progress from an interpretation of the empirical pattern to an examination carried out in a methodologically correct manner. This would also result in an archaeological basis for the interpretation of varying maritime aspects of past societies.
2.3 Conclusion

Throughout my research papers, I have argued that an appropriate methodology is necessary in order to interpret and understand past human behaviour. The use of an appropriate methodology is the only way to access and archaeologically define the specific behavioural aspects associated with watercraft landing sites, thereby providing an archaeologically legitimate basis for the study of ancient maritime cultural landscapes and varying maritime aspects of past societies. The critical observations on methodology have also highlighted the fact that there are significant archaeological imprints left by watercraft landing activity to reveal – if we look for them. At the same time, however, it is clear that the construction of the space is based on more abstract theoretical factors which also enable us to understand why archaeological traces are of the nature they are and why they are found where they are. The methodological and theoretical approaches proposed and exemplified in my dissertational work form an archaeological benchmark as regards to the wider analysis of the behavioural and social aspects of watercraft landing sites that would reach across time and space.
3. Discussion

3.1 Account of criticism

Landing sites for watercraft have to an ever increasing degree been used as source material for archaeological interpretations regarding the use of ancient maritime landscapes. It is therefore necessary to define landing sites as archaeological contexts if we want to make inferences about past societies. Bearing this in mind, it becomes important to critically reflect on the definition of the landing site category, as well as on the framework of archaeological interpretation and the overall potential of watercraft landing sites in the study of past societies. Not only is this important in the interpretation of sources, it is also crucial for archaeology as a legitimate academic and scientific endeavour which has the potential for producing general explanatory models and the responsibility for empirically anchored inferences.

In this dissertation, it is demonstrated that the archaeological study of watercraft landing sites in the Baltic Sea region has hitherto been characterised by two interrelated ideas: 1) Ancient as well as small-scale landing activity has left no direct evidence in the archaeological record, because 2) waterfront constructions and modifications for landing were designed primarily to satisfy the needs of developed systems of trade and exchange.

As a consequence of this pre-conception, the lack of visible evidence of landing sites has been taken for granted and landing sites “by proxy” have become the norm. As soon as any archaeological remains have been found close to a shoreline, the shoreline itself has often been regarded to equal a landing site. Landing activity has also recurrently been inferred based on the coastal geomorphology that is suitable for watercraft landing. Since landing activity itself is considered to be archaeologically invisible, many locations have, as a result, been attributed this very specific function on the basis of purely circumstantial and/or secondary evidence. Such evidence includes, for example, maritime place-names, oral tradition, suitable topography, the size of historical watercraft, good connections between the coast and, for instance, a nearby political, economic, religious, cultic or other centre, as well as hinterland in general. To this can be added written sources, cartographic material, the presence of cultural findings and the projection of historical events. Despite being based on such circumstantial and/or secondary evidence, the hypothetical sites are often discussed on par with more firmly established archaeological sites (e.g. Rasch 1988; Rindel 2002; Ulriksen 2004; Hodges 2008).

Thus, past landing sites are determined on the basis of a multitude of cultural elements indicating maritime presence. Moreover, they are often discussed and dealt with without any further archaeological investigation. This problem is closely related to the problem of terminology, as discussed in Paper I (see also Chapter 1.2). In the study of landing sites in the Baltic Sea region, the term
‘harbour’ has often been used. ‘Harbour’, however, is an anachronistic notion which is clearly coloured by modern pre-understandings and filled with inconsistencies. Therefore, if the term is to be applied in archaeology, it needs to be precisely and rigorously defined. Yet, in the archaeology of the Baltic Sea region, the term ‘harbour’ has been used to designate watercraft landing sites in an all-embracing sense. Furthermore, the term has included categories of a different nature than that of watercraft landing sites, such as any location topographically suitable for watercraft landing. Other, more neutral designations have occasionally been introduced instead of ‘harbour’. Nevertheless, these terms have only been arbitrarily defined substitutes, used in exactly the same sense as ‘harbour’. Using these concepts in that way implies that all sites were of one and the same kind, which is why this terminology contributes to the production, reproduction and eventual legitimisation of contingent standpoints. Since the terms used in the archaeology of watercraft landing sites have, until now, been characterized by an inherent arbitrariness, it comes as no great surprise that there is considerable confusion in the literature. The inaccurate definition of ‘harbour’, or any equivalently used term, has made it practically impossible not to get confused in respect to the distinction between, and separation of, various sites and archaeological categories.

With the archaeologically undefined notion of watercraft landing and an unspecific terminology, it becomes equally problematic to emphasize the role of different landing sites solely in connection to trade and its organization. Trade is often considered to be almost the only aspect essential to understanding the establishment of watercraft landing sites; their situation, innovations and societal importance. As a consequence, a number of sites and aspects not linked to trade and its organization are overlooked. Not surprisingly, this has effects on the interpretations of past societies.

Having studied historiographical material, I am fairly confident in concluding that the landing site category has up until now more often than not been turned into a banality in archaeological studies.

In the Baltic Sea region, excavations have already yielded archaeological results which make it obvious that landing sites can, in fact, be archaeologically traced; as exemplified in Papers I (pp 154-156 with references) and II (pp 98-101 with references). It has become apparent that man-made settings, including different structures, modifications, and shoreline alterations providing shelter for watercraft and/or facilitating processes associated with embarkation and disembarkation, are often physical characteristics at watercraft landing sites. At the same time, however, not every coastal site with traces of a human presence is a landing site, a point raised in Papers III (pp 4-5) and IV (pp 150-151). Yet, despite these facts, the landing site category is still defined mainly by means of hypothesized location and an often very approximate proximity to water. Nothing illustrates the extent to which watercraft landing sites are considered trivial within the archaeological field more than the fact that archaeologists prefer to rely on circumstantial and/or secondary evidence, even though there is a constant increase in documented and published empirical data. Coastal and shore-bound areas are presumed to contain watercraft landing sites which are then determined haphazardly on the basis of material, as well as non-material,
indicators of maritime presence. As strongly implied by the articles in this dissertation, the current research tradition stems from a desire to quantify the maritime aspects of past societies.

Such studies have led to the marginalization of landing sites as a meaningful area of research. Watercraft landing sites have come to exist in the mind of the archaeologist and are thereby taken for granted without any discussion on the empirical material related to the practice of landing itself (e.g. Cassel 1998: 135ff; Coles 2000: 104-105; Hoppe et al 2002; Widerström and Holm 2004; Lundqvist 2006; Wikell and Pettersson 2009: 28-29; 2012: 205; Karagianni 2011; Vedru 2011: 102-108; Broström and Ihrestam 2012). Furthermore, this assumption often falls back on the attraction of implicit meaning, showing signs of trade, exchange and water-bound communication, but the existence and location of landing sites in general are derived and postulated from an already established pre-understanding.

I venture to state that a sort of antiquarian mentality permeates the archaeological study of watercraft landing sites. Generally speaking, this mentality is characterized by an overarching perspective in which the dominant understanding is simply presumed to be the correct understanding. Furthermore, since secondary or circumstantial evidence is valued higher than archaeological material in this view, archaeological research becomes restricted to collection and description, preservation and display (cf. Sundström 2007).

This process is illustrated not least by the dramatic growth of the number of dots on the different maps marking landing sites in the Baltic Sea region (e.g. Carlsson 1991: 148, fig.3; Ulriksen 1998: 24-25, figs. 5-6; d’Agnan 2010: 237, fig. 1; Mägi 2010: 169, fig. 1; see also the discussion in Paper I). In principle, there is nothing wrong with putting ‘dots on the map’. After all, this is how results are usually shared within the archaeological community and opened up for further use and inferences. Such maps can have a great effect on the interpretations of past societies and they often contribute to markedly changing the whole ‘story’. This is also why it is so important that these dots must not represent anything but the categories, functions and time periods studied. I argue that this is often the case with dots meant to represent watercraft landing sites in the Baltic Sea region. I, myself, had the opportunity to excavate one such location, highlighted both by circumstantial and secondary evidence, on the southern coast of Saaremaa, the second largest island in the Baltic Sea. Despite thorough excavations, the archaeological material collected at this site, called Sutu, did not by any means confirm that the site would have had any practical connection to the sea and watercraft landing activities (see Ilves 2006a). On many dotted distribution maps, I am certain that it would be quite easy to pinpoint sites in coastal and shore-bound areas with a similar outcome in terms of archaeological investigation. Such sites may still, however, indiscriminately be labelled watercraft landing sites, despite the fact that they could have fulfilled any in a series of functions not necessarily related to water. As long as it is considered enough to define this kind of site according to location and proximity
to water, rather than in terms of archaeological traces, the hypothesis that certain places have (also) functioned as landing sites remains impossible to verify or reject. Putting ‘dots on the map’ in order to represent a certain archaeological category, in this case watercraft landing sites, based on geographical position and circumstantial and/or secondary evidence, generates knowledge of no real value other than just attributing the potential for some maritime connection to a coordinate point. In this context, one easily runs the risk of stating the obvious, as, for example, in the case of densely inhabited islands with rich archaeological evidence of maritime subsistence and communication. Here the dots may do little but highlight the fact that the island has a shoreline which is suitable for watercraft landing in almost its entire length (cf. Figure 2).

In order to examine the potential geographical connections between and spatial distribution of places, dots indicating some kind of human presence in coastal and shore-bound areas are probably enough from a source critical point of view. However, such dots are useless for the purpose of archaeologically investigating the various maritime strategies connected to watercraft landing and associated activities. I argue that dots labelled ‘landing site’ hold no comprehensive value for the research on, and understanding of, the dynamic relationship between humankind and the sea throughout history. Similarly to ‘freedom’ (see Chapter 1.2), the term ‘landing site’ must carry some sort of specific meaning. In my opinion, therefore, archaeology dealing with landing sites has not yet fully achieved the status of a scientific endeavour.

3.2 Analytical and theoretical contribution

As discussed in this dissertation, in archaeology we have a simplistic and almost deterministic understanding of watercraft landing sites. This kind of understanding transforms landing sites to little more than illustrations of already established histories. As a result, ‘landing sites’ are not considered a category in their own right, but one formed to fit preconceived ideas. In order to argue for a positive source value of landing sites, i.e., a contextual basis for inferences on
past societies, I have found it necessary to deconstruct the established pre-
understanding of landing sites. The immediate aim of this deconstruction was
to uncover the basis of the pre-understanding by criticizing the hypothesis that
landing sites are archaeologically invisible. The ultimate objective, for which
the account of criticism was a prerequisite, was to clarify and come to terms
with a landing site category which is much more complex.

Having examined the field of landing site studies, it became increasingly
clear that the assessment of landing activities as archaeologically invisible and
untraceable was not something one should consider self-evident. On the con-
trary, the hypothesis that landing facilities were unnecessary and landing left no
traces had to be revised. This was necessary not least in order to break away
from the circle of repeatedly generating distribution maps based on circum-
stantial and secondary evidence, since these maps brought about misleading, or
at best insignificant, stories related to watercraft landing sites. The solution to
the predicament of landing site archaeology lies in shifting the underlying em-
phasis in landing site studies away from the question of whether people prac-
ticed landing to why people practiced landing.

As an outcrop of the general pre-understanding conceptions of the sea and
other bodies of water, as well as things related to these – such as landing sites
for watercraft – are defined and explained primarily in relation to land (cf.
Flatman 2003: 151). This in turn has resulted in a rather simple and naïve ap-
proach to the maritime part of human history. Our understanding is governed
by a single overarching variable: when it comes to the notion of a watercraft
landing sites, they are almost implicitly considered to have been established with
a focus on maritime activities. However, in this context, I would like to draw atten-
tion to a discussion by the Norwegian archaeologist Hein Bjerck. Basing his
argument on the strikingly uniform character of small early Mesolithic (9500-
8000 BC) dwelling sites at Aukra in the outer Atlantic archipelago of Western
Norway, Bjerck suggests that the focus for a given social unit was the water-
craft itself, rather than the small uniform places on land. Of course, this does
not exclude other alternative perceptions of early Mesolithic life patterns.
Drawing ethnoarchaeological parallels to maritime societies in Patagonia, the
watercraft is suggested as a focal point of human life in the society of the early
Mesolithic Aukra. This society was based on small units which were highly
mobile and with the boat as a stable focus point. Landing was also important,
but not in the sense of where exactly. Sites on land were chosen according to
certain temporary needs, in other words they functioned as layovers necessitat-
ed by life in the watercraft. It is possible that these sites were repeatedly re-
turned to, but this was not necessarily the case. People landed first and fore-
most because of the boats: all prehistoric watercraft were in need of frequent
and regular maintenance which was impossible to perform while afloat. Fur-
thermore, it was difficult to carry out the production of tools and equipment,
as well as other precision work, on board. Prehistoric boats and ships were too
narrow for preparation of skins or for catch slaughter, etc. Consequently, early
Mesolithic landing sites at Aukra were established in connection to various
preparative and follow-up acts (Bjerck 2008: 565-570; 2009). Such landing sites
were therefore not oriented towards maritime activities, but terrestrial ones.
The discussion of the archaeological traces interpreted as landing sites at early Mesolithic Aukra includes a good deal of narration – a number of arguments are presented, introducing activities for which little physical evidence survives in the archaeological material, although there is good reason to induce their existence. Thus, instead of working with data that is actually preserved in the archaeological record, the fragmentary nature of archaeological source material for revealing the diversity of life is inevitably being highlighted (cf. Darmark et al. 2009: 182). Nevertheless, the case serves as a useful reminder of the nature of the watercraft landing site itself, in the sense that it requires a combined land–sea perspective. More importantly, however, such a case draws attention to the idea that it is possible for social units to be water-based, in addition to occupying either permanent or temporary locations on land.

For a society to live on water and choose landing sites to satisfy particular demands is not a phenomenon restricted to the early Mesolithic period, nor to Western Norway. For example, Frands Herschend has argued that ‘Vikings’ originally referred to bands of maritime warriors who, already during the Roman Iron Age (0-375 AD), lived in the sheltered bays of Southern Denmark during the so-called boat season. In building up his argument, Herschend discusses different kinds of water barrages and their location in Southern Denmark. Special attention is given to cases such Gudso or Nakkebolle, where barrages were blocking the inlets to bays that could give protection and a strategic advantage to a fleet hiding in the cove. Analysing the situation of such barrages, Herschend concludes that there was not much to attack on the land around the bays in question and, consequently, no one to attack those who would have established themselves in the bays. It has been shown that such bays and fjords were sealed-off in order to prevent people dwelling on the water making use of them. Herschend also draws parallels to similar practices in early medieval times (Herschend 2009: 354-360). Furthermore, one could claim that the classical pirates of the 16th-18th centuries, as well as the modern-day pirates off the Somali coast, lead a similar, albeit not identical, lifestyle of mobile living on the water. The list of people living on the water could be expanded to include less violent social units as well, such as the so-called boat people of South China – fishermen, traders, pearl-divers, transporters of goods and people among others, with a long history of living permanently on boats (Anderson 1970).

Acknowledging the fact that people have always had, and utilized, the possibility to live on water in much the same way they do on land, I have put watercraft landing sites into a general long-term framework of land–water interfaces focusing both on maritime and/or terrestrial activities. In Paper III (pp 6-9, 23) I argue that, although human life primarily took place either on board watercraft or on land, it is only at the land–water interface that social interaction is made possible on land as well as on watercraft. My hypothesis is that landing sites leave archaeological evidence of structures and alterations meant to facilitate landing and associated activities, but are archaeologically empty in the sense of any usual traces of habitation. Since the intentional character of the activity of landing is at the core of the argument, however, the aim here is not to reduce landing sites to passive settings meant for facilitating nothing but
landing. I state that watercraft landing sites are zones with their own significance. They are social constructions created in order to serve the needs of both land-based individuals and groups and social units on-board boats and ships. The existence of landing sites depends on human factors. Based on this, I suggest a general, theoretical framework in which landing sites are defined in a social sense as water-bound contact zones where movements and meetings of various kind of character, both on land and by watercraft, are facilitated by the location itself (Paper III, p. 8, fig. 1). My objective is to suggest a model simple enough to be used in many different ways. Moreover, this model should enable us to explore landing sites in a long-term perspective.

The optional nature of watercraft landing sites has not been studied to any greater extent in the archaeology of the Baltic Sea region. This is understandable given the dominating research tradition which accepts and treats the category as being void of significance. Watercraft landing sites, constituting thresholds between one clearly defined area (the land) and another (the water), are often considered to be placeless. The absence of social relations is implied, since people are thought to be more concerned with watercraft, goods and natural elements than with one another. The contact zone definition that I propose, on the other hand, suggests landing sites are of a rather more complex nature, in that it emphasizes both the archaeological/historical and sociological aspect. I argue that landing sites, in general terms, could be considered places of contact. Many different people in a variety of combinations – sailors, fishermen, their partners and children, ship owners and brokers, whalers, shipwrights, maritime architects, riggers, pilots, traders, buyers, loaders, watermen, refugees, smugglers, pirates, prostitutes and tourists, to name but a few – encounter and occupy these places. They are all likely to have very different experiences of movement, dwelling, security, familiarity and belonging (cf. Bender 2001; see also the discussion on airports as places of contact, Gottdiener 2001; Merriman 2004: 151-152). Furthermore, landing sites are not only places associated with travel and passing through. They are also destinations for cultural tourism, scenes of dining experiences and the practise of art or sites for maritime exhibitions among other things.

I would like to visualize this argument by presenting two landing sites on the volcanic island of Saint Lucia in the Caribbean which I happened to visit, more or less by chance, in 2011. Figure 3 shows the traditional canoe building site at the fringe of the tiny village of Praslin, by the Atlantic coast. At the time of our visit, this location – categorized on the maps as a ‘tourist site’ – had only one possibly operational, traditional canoe among a number of fibre glass boats, and there were no signs of any boatbuilding activities. At the same time, a couple of men working on their boats when we arrived instantly offered to give us a boat-ride to the nearby Praslin Island. It was instantly assumed that this crossing was the purpose of our visit to this landing site. Figure 4 shows the fishing village of Dennery a few kilometres north of Praslin. This place is appreciated by tourists and locals alike for weekly Saturday night seafood fiestas. However, we visited Dennery on a Monday afternoon in order to watch the fishermen return from the sea and to buy some fresh fish. We experienced
Figure 3. The traditional canoe building site of Praslin on the island of Saint Lucia in the Caribbean. From top left: The traditional canoe, the seaward view from the landing site, the landward view to the site, the village of Praslin and the traditional canoe building site at its fringe on the satellite image (photos by author and © Google Earth. 13°52’26.10” N and 60°53’53.92” V, image 8-2-2010, accessed 13-02-2012).
Figure 4. The fishing village of Dennery on the island of Saint Lucia in the Caribbean. From top left: Fish trade on land by a middleman, fish trade from boat by fisherman as well as cutting of fish done on-board watercraft, the wharf and boats crowded by people, the village of Dennery on the satellite image (photos by author and © Google Earth. 13°54'41.30” N and 60°53'12.79” V, image 8-2-2010, accessed 13-02-2012).
how, for a few intense hours, the wharf and boats of Dennery were crowded by men, women and children; lots of people were coming and going by car as well as on foot, from both near and far. In addition to the trading of fish, many had come to the wharf for the simple purpose of just hanging around. Fish was sold from boats and on land by returning fishermen along with middlemen. Fish was also cleaned and cut both on-board the boats and on land. The main part of the catch was transported to nearby hotels and restaurants. Furthermore, the fact that we were offered to purchase hashish throughout our stay at the wharf in Dennery is not irrelevant for the present discussion.

Praslin and Dennery illustrate the landing site model put forward in this dissertation: all kinds of social interaction are performed at watercraft landing sites. However, the situations, encounters and even communities forming at such sites are temporary – in the end, people always move on, go back to where they came from or are replaced. Due to the transitory character of the social interaction performed there, watercraft landing sites cannot be considered as ‘societies’. Instead they must be seen in the frame of contact zones and meeting places. A wider social definition of landing sites would allow for the development of theories concerning the diversity of cultural processes involved in landing, such as mobility, displacement and connectivity, safety, accessibility, diversity, insecurity, selectivity as well as dynamic and temporal tolerance. If landing sites are viewed as contact zones, all of these elements can come into play.

Obviously, a small-scale dockyard is probably not subject to the same complex social forces as a landing site connected to specialised fishing, and both are simple in comparison to international ports of trade of long standing. But the contact zone perspective suggested covers the existing range of variability. However, it is relatively difficult to argue for social interaction on the basis of archaeological sources unless we are aware that this is precisely what we need to do in our field practice. Therefore, it is somewhat problematic to apply the ‘contact zone model’ on the already available archaeological material and to depend on the existing publications. There is a danger of making abstract interpretations or piling up facts which then become meaningless. In relation to this consideration, in Paper III (p. 11ff), the ‘contact zone model’ was checked against the available archaeological material from three different sites: a seasonal Viking Age fishing village at Tornimäe, in Estonia; a dockyard from the latter part of the 11th century at Fribrødre Å, in Denmark; and a post-medieval meeting place at the anchorage of Krogen, in Sweden. Results showed that the data from the analysed sites fitted with the suggested model – Fribrødre Å and Krogen well (pp 16-22), Tornimäe to a somewhat lesser degree (pp 11-16). However, this analysis does not stand securely on its own, since the archaeological cases studied do not properly articulate the evidence of social interaction. It is important to keep in mind, though, that this study was based on the archaeological material available. Regardless of its limitations, my approach succeeded, not only in arguing for landing sites as a separate category but in demonstrating the archaeological potential of understanding such locations as social phenomena.
3.3 The theoretical approach in the methodological application

As pointed out, landing sites for watercraft are not only about technology and trade; there are also social (as well as political and religious) aspects, which may be crucial for the location and development of these places. Many previous archaeological studies, however, have tended to view landing sites from rather limited and reductive functional perspectives. The contact zone model presented under the previous heading facilitates a richer archaeological understanding of landing sites, not least because it acknowledges the capacity for these places to harbour varied social relations. Furthermore, this model recognizes the fact that landing sites are sites with significance of their own, which in turn allows for research on a broader spatial and temporal scale. It can be noted that the necessity, as well as the possibility, of studying watercraft landing sites in a wider context is being increasingly advocated in archaeology. This has started to result in a number of theoretically informed archaeological investigations of waterfronts, considerably broadening the scope of maritime studies. A case in point is a study conducted by Adam Rogers, who examined the cultural attitudes to waterfront installations through the archaeological evidence from the port of Roman London (2011). He examines the construction of this port in its local context, highlighting its religious significance, and argues that the concentration of religious monuments on the waterfront of Roman London reflects the continuous religious significance of the zone and the power relating to its transformation and mastery. Rogers’ analysis of Roman London is a well-informed case study drawing upon the rich and site-specific archaeological evidence available. While Rogers’ analysis is inspiring, it also implicitly highlights the fact that, although there is a growing agreement on the wider social context of such sites, when it comes to the study of watercraft landing sites in general, there remains an urgent need to discuss appropriate methodologies and methods needed to investigate these matters in terms of archaeology.

There is no reliable methodology in archaeological research designs oriented towards sites in coastal and shore-bound areas, landing sites in particular. When it comes to watercraft landing sites, the action of landing is detached from the intentional character of this practise inasmuch as short geographical distances are equated with high degrees of functional correlation between settlements and water. Naturally, this assumption has also consequences for archaeological research designs aimed at examining water-bound sites beyond the scope of academic and scientific archaeology. Contract/rescue archaeology is one of the most common forms of archaeology performed today. Its practice is a standard based on approaches developed within archaeology, and, in frames of the current discussion, it serves as a consequential case in point. Globally speaking, contract archaeology is diverse to say the least. But even in the Swedish case where contract archaeology is part of research-based systems (see Kristiansen 2009), there is a tendency towards an administrative unwillingness and/or inability to make any decisions regarding excavations at sites of ambiguous character. This means that despite the opportunities to study major regions intensively and to excavate large areas, shore zones do not have a given place in archaeological research designs as long as there is no archaeological awareness of watercraft landing sites as a valid source material. Consequently,
Today, as 50 years ago, “archaeologists want representative and reliable data within the bounds of their restricted time and monetary resources” (Binford 1964: 427). In relation to the subject matter of this dissertation, therefore, the problem is straightforward: How can we efficiently reach reliable conclusions about past water-bound strategies from watercraft landing sites? While hypothesizing about the archaeological visibility of landing activity, I have here provided a theoretical, sociological model in which landing sites are understood as water-bound contact zones facilitating human interaction on land as well as by watercraft. Having explored what landing sites are and what role they have, I will now shift my attention to how landing sites may be proven to have existed. Already initiated in the methodological discussion presented in Paper IV, a research design on past water-bound strategies has been outlined in detail in Paper V. The developed research design, combining several independent and interdependent methods in close recursive relationship to the theoretical model, was used in a case study of a site at Garn in Sweden. This site was initially of unknown character and date, but there were remains of an earthen wall hypothesized to have been near-shore.

The investigations had a multi-stage focus on the shoreline. At first, a specific study was undertaken aimed at showing a possible shoreline relation at this particular site. Based on the fact that not every near-shore location is necessarily a landing site, it was not considered an efficient and cost-effective option to begin with an archaeological excavation in the hopes of “bringing a landing site to light”. However, the determination of the accurate spatial relationship between a site and the site-contemporary shoreline has been suggested as a potentially useful starting point in the study of water-bound strategies (Paper I, p. 160). Paper IV, therefore, discusses methods based on phosphate distribution which have been applied and tested in areas with raised shorelines. It is argued that the analysis of the phosphate distribution could be promising as regards more precise estimations of where the shore zone may have been situated when the site was used. Paper V further verified the applicability of the phosphate distribution model as the results of the phosphate analysis were tested in comparison to and correlated with other, methodologically independent results of geological and pollen studies concurrently dealing with the landscape transformation of the same area.

The investigation of the site-contemporary shoreline indicated that the location with the remains of an earthen wall must at some stage of its use have been water-bound. Following the determination of the shoreline, a hypothesis was raised regarding the matter of watercraft landing activity at this site. Owing to the results obtained through phosphate analysis, the next steps involved archaeological excavation and a metal detector survey. These investigations focused both on the suggested shore zone as well as on the areas above and below the (former) shoreline, as identified by phosphate values. Consequently, investigation and excavation trenches were aimed, not only at the indicated shore zone, but also at areas which would at one point have been situated both on land and under water. This excavation strategy was specifically chosen in
order to continuously test the contact zone model suggested for the study of landing sites. The excavation strategy was determined, on the one hand, by the successively documented void of archaeological finds in the area of study – something explicitly theorised in terms of the model (Paper III, p. 8) – and on the other hand, by the discovery of some artificial structures possibly intended to facilitate different processes connected to watercraft landing, as well as transportation to and from the landing area. In order to verify the suggested model, which argues for findings of mainly that character at landing sites, it was important to make certain the nature of these remains, and to clarify their extent, structure and relationship to each other.

The systematic application of excavations targeting the shoreline provided data that turned out to fit the contact zone model perfectly (Paper V, pp 7-11). Nevertheless, emanating from the stratigraphy of the documented structures revealed by the excavations, the understanding of the deliberate character of the human activity at this particular shoreline crossing was followed up by the use of a geophysical survey. In contrast to how geophysics is generally used in archaeology, i.e. in advance of and separate from archaeological excavations, archaeological and geophysical methods interacted all through this investigation (cf. Paper V, pp 9-11). Excavations enabled the generation of hypotheses which guided the targeted and complementary use of geophysics. And the combination of geophysics in relation to the particular research questions turned out to play a crucial part for the interpretation. It was possible to prove that the place studied constituted an intentionally constructed zone that was first enhanced and then built in order to facilitate activities related to watercraft landing. Furthermore, it was revealed that this place had been specifically maintained as a landing site over a long, and partly discontinuous, time period. The use of geophysical surveys, therefore, was a productive and timesaving way to further the shoreline investigations.

The use of geophysics in connection with archaeological excavations at waterfronts is starting to gain targeted application in archaeological research designs (cf. Loveluck and Salmon 2011). And the methodology combining different, but interacting, methods seems, indeed, timely for the archaeological investigations of waterfronts. In this context, I would particularly like to draw attention to the Mediterranean region where, by tradition, there is a long history of research related to watercraft landing sites (see Blackman 1982a, 1982b). Although not yet integrated with interpretative archaeology, there are a number of high-quality geoarchaeological studies combining various field and laboratory techniques to draw from (Marriner and Morhange 2007 with references; Marriner et al. 2010 with references). These studies, thus, have already provided a methodologically well-established and well-defined empirical foundation for broader archaeo-sociological analyses based on watercraft landing sites. There are also some inspiring, broader socio-theoretical considerations, especially on the matter of the Mediterranean ports of trade (Reger forthcoming).

In research strategies concerning the use of ancient maritime landscapes, it is paramount to recognise the benefits of an approach emphasizing the use of different, interacting methods in combination with an understanding of the intentionality of human activity.
From the beginning, therefore, my own research strategy was aimed at testing hypotheses rather than discovery by means of removing top soil. Through systematic focus on the shore zone, evidence in favour of the contact zone model and predictions based on the model were methodologically achieved. This argues for the fact that determination of the shoreline is of the utmost importance in investigations on watercraft landing sites. Defining the shoreline must be considered a prime focus when it comes to this kind of archaeological research designs. Only in this way can the relationship between the intentionality of landing activities and the resulting archaeological traces be legibly accessed and understood in archaeology.
In recent years we have seen a growing number of theoretically informed, evidence based archaeological studies connected to the dynamic relationship between people and their surrounding environment, both as concerns land and different bodies of water. One powerful source of inspiration for this development is the work of Christer Westerdahl, advancing the term ‘maritime cultural landscape’ (Westerdahl 1989; 1992; see also Ford (ed.) 2011). This concept was created with the purpose of emphasizing the unity between terrestrial and underwater archaeological sites, and was later modified to explicitly include cognitive, cultural and social aspects of past societies (Westerdahl 1994: 266). The concept was introduced within the framework of maritime archaeology in order to handle the marginalization of the field. However, in my opinion, its most intrinsic value is having triggered a process that will eventually lead us to accept the redundancy of defining ‘Maritime Archaeology’ as a distinct branch of Archaeology (cf. Firth 1995; Adams 2006; Flatman 2008; 2011). Archaeology is archaeology and it has little to gain from being subdivided as maritime.

This research commenced from my specialisation in maritime archaeology and I have been strongly stimulated by the notion of maritime cultural landscape. However, the dissertation took its point of departure in the problem of ‘common-sense’, taken-for-granted perspectives on archaeological concepts and categories, and the fact that these problematic perspectives are not characteristic only of maritime studies, but of archaeology in general. Although I use the landing site category as a basis, my aim has been to demonstrate how dangerous it is for any scientific Archaeology to be carried away when concepts once introduced with a distinct definition emanating from a certain state of knowledge, become popular. The fact that a concept is popular is in and of itself not a problem, but in the process of becoming popular concepts tend to lose their original meaning. Instead they become filled with connotations which make them unreliable when it comes to making inferences on past societies. Although they therefore become empirically meaningless, they are nevertheless continuously used to support archaeological interpretations. In addressing issues relevant to archaeological interpretation and discourse in general, this dissertation on watercraft landing sites is a contribution to the self-critical and analytical process of integrating maritime studies into the wider sphere of archaeology.
References


