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### The homecoming of religious practice : an analysis of offering sites in the wet low-lying parts of the landscape in the Oer-IJ area (2500 BC-AD 450)

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THE HOMECOMING OF RELIGIOUS PRACTICE

M.S.M. KOK



## THE HOMECOMING OF RELIGIOUS PRACTICE

An analysis of offering sites in the wet  
low-lying parts of the landscape in the  
Oer-IJ area (2500 BC - AD 450)

M.S.M. KOK

**THE HOMECOMING OF RELIGIOUS PRACTICE: AN ANALYSIS OF OFFERING  
SITES IN THE WET LOW-LYING PARTS OF THE LANDSCAPE IN THE OER-IJ AREA  
(2500 BC-AD 450)**

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At the Amsterdam Archaeological Centre of the University of Amsterdam there has been a long tradition of research into the Oer-IJ area. In 1999 I started working at the excavation at Beverwijk/Heemskerk-Broekpolder as a field administrator. My slight handicap that prevented me from actual digging, was never seen as a problem by my colleagues and they would happily cut of an extra centimeter of soil when I wanted to review a feature. They gave me the opportunity to become a field worker and for this I owe them gratitude.

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## 1. INTRODUCTION AND THEORETICAL FRAMEWORK

### 1.1 BACKGROUND OF THE RESEARCH

In 1999 the governmental 'Belvedere' policy was implemented with the aim to make cultural-historical identity a guiding principal in environmental planning and for which the government will create the right conditions.<sup>1</sup> The context of this policy is the large scale environmental changes in combination with the political and social interest in the cultural identity of everyday surroundings.<sup>2</sup> There is especially concern about the decrease in diversity and quality of the rural areas. A solution to this problem could be the care for existing values through the active development of the rural areas from a cultural-historical perspective.<sup>3</sup> In 2001 the 'Belvedere' policy was embedded within the 'Fifth Policy Document on Town and Country Planning',<sup>4</sup> which provides a stronger base for the actual integration of cultural-historical values into new environmental developments. Within the framework of the above mentioned policies and the policies on science the Netherlands Organisation for Scientific Research (NWO) has initiated the stimulation programme 'Protecting and developing the Dutch archaeological-historical landscape,'<sup>5</sup> better known as BBO.

The aim of BBO is to make a scientific contribution to the present-day policy issue of embedding archaeological-historical values within the environmental planning process.<sup>6</sup> Two key concepts within the BBO-programme are 'the biography of the landscape' and 'thinking and doing.'<sup>7</sup> The concept of the biography of the landscape is chosen for its capacity to form internal integration between the different cultural-historical values as they are studied within different disciplines, such as archaeology, historical-geography and architectural history. The biography of the landscape is also seen as a bridging concept with the environmental planners. The concept of thinking and doing is related to action-research as it tries to bind research into policy making and at the same time contribute to the policies made.

The BBO-programme facilitates three types of research: conceptual, strategic and applied research.<sup>8</sup> Conceptual research is aimed at the development of theoretical frameworks. The goal of strategic research is the integration of different cultural-historical disciplinary views in relation to an interdisciplinary evaluation of cultural-historical values within the environmental policy and planning process. Applied research aims at studying methodological, technical and procedural problems within specific disciplines and the use of their results in the environmental policy and planning process.

Within the strategic research programme four regional projects are initiated that are situated at the cardinal points with distinctive landscapes and typical environmental developments. The here relevant project 'From Oer-IJ estuary to metropolitan coastal landscape: assessing and preserving archaeological-historical resources from 4000 years living between land and water'<sup>9</sup> is one of these regional studies. The Oer-IJ area is situated between the modern towns of Amsterdam, Alkmaar, and Haarlem and the coast (figure 1.1). Within the Oer-IJ project three research strategies are applied: archaeological-historical studies into the developments in the Oer-IJ area from 2000 BC onward and the formulation of habitational/land use models and predictive maps; action research on the application of the concept of the cultural biography of landscape within archaeological heritage management of the region; and an assessment of the physical quality of an archaeological monument and how this physical quality of archaeological monuments can be monitored in the future. The archaeological-historical studies will produce the characteristics for the cultural biography of the Oer-IJ area. It was early on established that the connecting element of the cultural biography of the Oer-IJ area would be water. Water has been an important shaping force behind the developments in the Oer-IJ throughout its (pre)history and the (current) water levels are one of the main reasons for the excellent preservation of archaeological

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1 Feddes 1999, 7.

2 Feddes 1999, 77.

3 Feddes 1999, 77.

4 In Dutch: Vijfde Nota over de Ruimtelijke Ordening.

5 In Dutch: NWO Stimuleringsprogramma Bodemarchief in Behoud en Ontwikkeling.

6 Bloemers 2001, 1.

7 Bloemers 2001, 1.

8 Bloemers 2001, 5.

9 Better known as the Oer-IJ project.

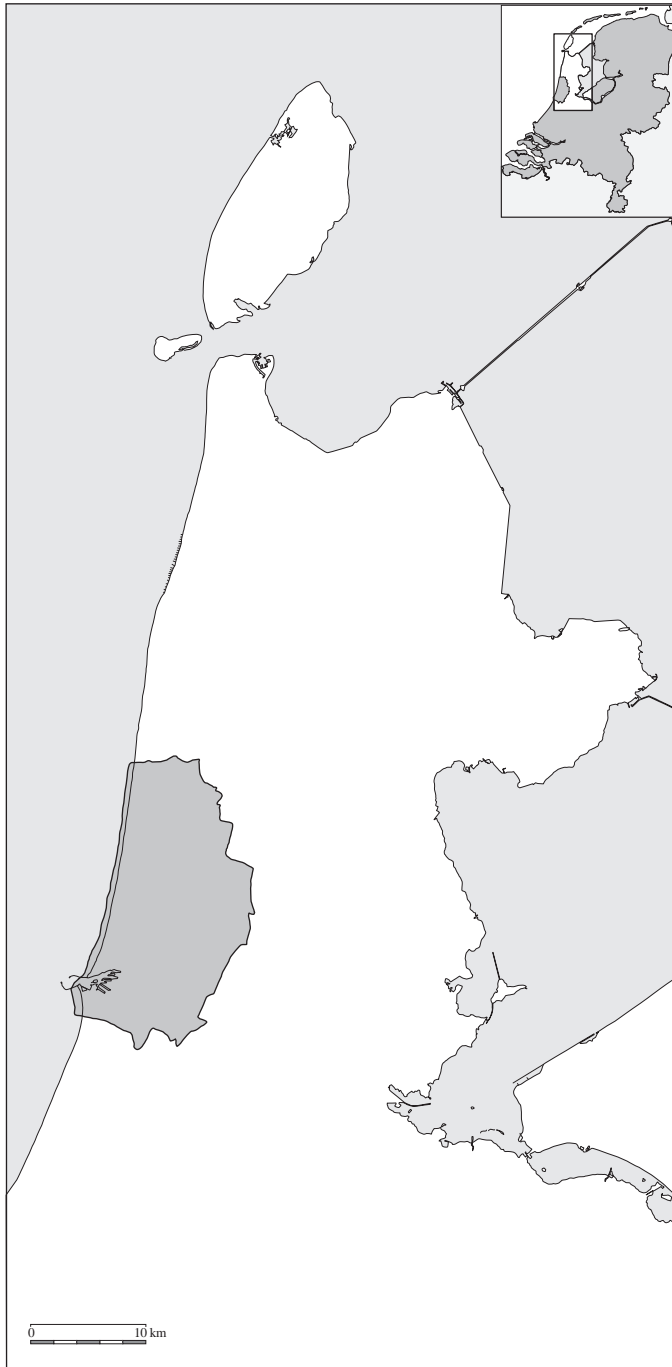


Figure 1.1 The Oer-IJ area situated in the Netherlands.

remains within the Oer-IJ area.

This thesis is one of the two archaeological-historical studies into the developments of the Oer-IJ area and focuses on the pre- and protohistory of the Oer-IJ area. Gerard Alders has done research on the archaeological-historical developments from the Early Medieval Period onwards for the Oer-IJ area and adjacent areas.<sup>10</sup> Heleen van Londen has studied the concept of the cultural biography of the landscape and its use within the archaeological heritage management process.<sup>11</sup> Liesbeth Theunissen has made an assessment of the physical quality of archaeological monuments and how they can be monitored.<sup>12</sup>

10 Alders, forthcoming.

11 Van Londen 2006.

12 Van Heeringen et al. 2003.

## 1.2 AIM OF THE RESEARCH

During the last two decades several sites that have been excavated in the Oer-IJ area are interpreted as containing offerings in watery places.<sup>13</sup> This kind of site has not yet been made explicitly part of the archaeological heritage management process. The absence of offering sites in the archaeological heritage management process is partly due to the lack of integration of these sites into the habitational/land use models of the Oer-IJ area. As a consequence this type of site is absent in predictive models and predictive maps that are an important tool in archaeological heritage management. Predictive models also have a tendency to focus on the higher parts of the landscape in the Holocene part of the Netherlands as they focus on settlements/houses.<sup>14</sup> In this way other practices in low-lying areas of the landscape have less chance to be discovered. In addition little is known of religion and ritual practices – of which offering sites in watery places are a part – in Dutch archaeology in general<sup>15</sup> and these aspects are therefore not part of mainstream archaeological practice.

The aim of this research is to analyse all the offering sites in wet low-lying areas in the Oer-IJ area from a landscape perspective. In order to integrate offering sites in wet low-lying parts of the landscape into a wider land use model and subsequently place them in a predictive model. It is the hope of the researcher that the result of the analyses and the predictive model will be used in the archaeological management process as building blocks for the characterization of the Oer-IJ area and as a tool for the management of unknown sites.

## 1.3 APPROACH TO THE RESEARCH

The recognition of offering sites in watery parts of the landscape in the Oer-IJ area in the last two decades is the starting point for this research. Therkorn in her thesis<sup>16</sup> studied especially the ritual depositions in pits in the Oer-IJ area, but the wet parts of the landscape were less intensive analysed. The term offering site immediately places the research in a discussion on how to recognise such a phenomenon. This discussion is nearly absent from economic or settlement studies. It has been recognised over the last decade that the recognition and understanding of rituals, like offerings, will not be achieved by a universal checklist of specific archaeological remains.<sup>17</sup> Hill and Fontijn put forward that ritual can mean many things to many different people and refrain from a universal definition of ritual. Both authors see a way forward in studying ritual as a practice and start their research from the archaeological record. The avoidance of the formulation of a definition of ritual has partly to do with the way in which most definitions are formulated. The definitions are very particular on the function and/or on the appearance, which causes problems if applied to different cultures.<sup>18</sup>

In this chapter a theoretical framework is proposed that defines religion, ritual and offerings without making any allusion to their appearance. A cognitive perspective is seen as the most suitable approach in this respect. Although the definitions are universally applicable it has to be stressed that the cultural expression of the practices associated are not seen in a universal or deterministic way. Following Hill and Fontijn, ritual will be viewed as a practice and a social perspective is developed to incorporate this aspect and at the same time place ritual within the social world of people. As all practice takes place in a literal sense, in addition a landscape perspective is given.

In Dutch (prehistoric) archaeology until recently there has been little debate on ritual and religion, partly due to the difficulty or lack of recognition of these phenomenon in the archaeological practice. The exceptions

13 Therkorn and van Londen 1990, 304, Bosman and Therkorn 1993, 304, Therkorn 2004, and Therkorn et al. 2000, 5-6.

14 For example, Soonius et al. 2005.

15 The 'Archeologiebalans 2002' shows that of the 14 Dutch archaeo-regions only one region (Drents sandy area) has reasonable good knowledge of religion and cult practices in one specific period (V). The knowledge on religion and cult practices in all the other regions and relevant periods (IV-VII) is either moderate or little to none (Lauwerier and Lotte eds. 2002).

16 Therkorn 2004.

17 For example, Hill 1995, 96-101 and Fontijn 2003, 15-22.

18 For example, Durkheim's view that religious beliefs and practices are socially integrated (Belier 1995 and Cunningham 1999 44), and Richard and Thomas (1984, 191) put emphasis on formalised repetitive behaviour as characteristic for ritual.

would be mainly Bronze Age metal depositions and research in the province of Drenthe. Especially the latter has become well-known through the work of Van der Sanden, however, his data is rarely from archaeological excavations.<sup>19</sup>

In order to give some insight into the range of offerings in watery places and give some background on discussions taking place within this field of archaeology in chapter 2 an overview is given of 100 offering sites from Denmark, North Germany and South Sweden. This area is chosen as it is part of the Germanic world of which the Oer-IJ area is situated on the western edge.<sup>20</sup> Another important aspect is that in this area from an early date onwards excavations and publications of offering sites have taken place.<sup>21</sup> The 100 offering sites in wet conditions were selected on the basis of the general agreement on the interpretation of these sites as offering sites and their publication in the mainstream archaeological discourse of the area.

After this excursion into the wider context of offering sites in chapter 3 the local context will be examined. The Oer-IJ area is relatively small and well researched. A short overview of the preceding archaeological research into the Oer-IJ area will be given in order to place the present research in its research tradition. The context in which the offerings have taken place will be outlined through the geological, ecological and archaeological developments of the Oer-IJ. Peter Vos<sup>22</sup> has updated the geological development of the Oer-IJ area, especially for this research. The geological maps created will also form the basis of the predictive maps in chapter 5. As the amount of research in all three fields is considerable, especially the aspects relevant for the embedding of the offering sites are given.

With the background or context of the offering sites outlined, in chapter 4 the offering sites themselves will be analysed. All nearly 500 known archaeological sites in the Oer-IJ area have been reviewed in order to see if they contain offerings in wet low-lying areas of the landscape. Of these 22 sites are interpreted as (probable) offering sites in wet low-lying parts of the landscape by the author. The 22 sites are analysed from the perspectives given in chapter one and an archaeological model for the offering sites is formed. The results of the analyses can be used as building blocks for the characterization of the Oer-IJ area.

On the basis of the archaeological model in chapter 5 predictions are put forward. The baseline report of van Leusen et al.<sup>23</sup> is used as a guideline for the formulation of predictions. The predictive model can be used as a tool in archaeological heritage management. Due to the dynamic nature of the landscape a geogenetic and five palaeogeographical maps made by Peter Vos are used as the basis for the predictive maps. The geogenetic map will be used for predictions that start from known archaeological sites and the palaeogeographical maps will be used to predict the use of specific zones of the landscape. Finally, the hope is that the predictions will be used in local policies and two examples are giving to show how offering sites can be important for the characterization of the Oer-IJ area.

#### 1.4 RELIGION

The aim of this thesis is to understand offering sites in relation to the landscape.<sup>24</sup> Both the physical and immaterial qualities of the landscape are analysed.<sup>25</sup> People's perception of the landscape is seen as an important element of landscape research.<sup>26</sup> Here I will first explore a specific type of perception or worldview, namely religion. The focus will be on people's religious worldview as offerings are a religious practice. And in order to understand offering sites as part of a religious worldview, it is important to define what is meant by religion and religious ritual practice.

The study of religion has a centuries long history and over the years many theories and definitions of religion

19 Van der Sanden 1990, 1992, 1996, 1997, 1998 and 2002.

20 See § 2.1.

21 Data acquired through archaeological excavation is lacking in the province of Drenthe which lies between the Oer-IJ area and North Germany and would because of its location seem a more logical choice.

22 Peter Vos is a geologist working at TNO-Bouw en ondergrond.

23 Van Leusen et al. 2005.

24 See § 1.2.

25 For the physical description of the Oer-IJ landscape see chapter 3 § 3.4 and § 3.5.

26 Barrett, Bradley and Green 1991, Bender 1998, Hirsch and O'Hanlon eds. 1995, Tilley 1994 and 2004, Van de Noort and O'Sullivan 2006.

have been created. There have been various overviews and here is not the place to repeat them.<sup>27</sup> Many of the anthropological studies into religion work from a specific culture and theorize within that specific situation.<sup>28</sup> Although these studies can be very illuminating when considering the variety of ritual and religion, they are less well translatable to other cultures and times. This seems especially to be the case for the area under study as it consists of a society with single farmsteads in a fairly egalitarian society<sup>29</sup>, which to my knowledge has not been dealt with in anthropology.

In current pre- and protohistoric archaeology there has been a lot of research into ritual, but relatively little attention is paid to religion.<sup>30</sup> Ritual is viewed as more accessible due to its practical and material nature and has become somewhat separate from religion. Through losing its connection to religion, ritual has become separated from other non-religious practices. In recent years the connections between ritual and other practices has become part of archaeological studies,<sup>31</sup> but the link with religion remains weak. The cause for the near absence of religion is probably the difficulty in forming an image of the specificities, such as the names and uses of gods, of the religious worldviews of the distant past.

In this thesis no attempt is made at constructing a full picture of the religion of the people living in the Oer-IJ area. But it is important to construct a theoretical framework in which ritual and religion are connected in order not to forget what rituals are about. Here first a cognitive and then a social perspective are chosen to study religion. The main reasons for the use of a cognitive perspective are the definitions and explanations of why and how religion exists without a specific cultural infill. Although cognitive scientists have universalistic affinities, here their work is seen as analytically helpful and a non-deterministic approach will be put forward. The social perspective will look at religion as a social phenomenon and will approach religious practice as action and embed it in the broader social world. This perspective will place religious practice in relation to other practices. As all practices take place, and offerings are studied in relation to the landscape, finally a landscape approach is used to integrate both other perspectives and this will guide the archaeological interpretations and subsequent predictive maps.

#### 1.4.1 A COGNITIVE PERSPECTIVE

Within cognitive science mental processes are studied such as how knowledge is obtained, organised and used.<sup>32</sup> There are different fields of interest within cognitive science of which religion is one. And within the subject of religion there are again different emphases. Three themes will be examined here: symbolic thought; the nature of religious thought and their persistence; and why CPS-agents<sup>33</sup> appear as they do. Before these themes are approached a definition of religion will be given. The definition proposed by the cognitive scientists Lawson and McCauley is chosen as it encompasses aspects that are relevant for both the cognitive and social perspectives that form the theoretical framework of this thesis. Lawson and McCauley define religion as “a symbolic-cultural system of ritual acts accompanied by an extensive and largely shared conceptual scheme that includes culturally postulated superhuman agents. The former is a set of actions (including speech acts) of a relatively standard form which manipulate entities (and situations) in the world entertained within the conceptual scheme.”<sup>34</sup>

The inclusion of culturally postulated superhuman agents (CPS-agents) is the important element of their definition. CPS-agents are what separates religion from all other cultural domains.<sup>35</sup> An advantage of this approach is that not all symbolic or formal action is automatically seen as religious, delineating the subject

27 For example, Bell 1997, Childe and Childe 1993, and Cunningham 1999.

28 For example, Geertz 1973, Gregory 1980, and Turner 1997 [1969].

29 See chapter three for a description of the area.

30 For an example of the exception, Cunliffe 1992. In German and Danish archaeology there has been more interest in the religious aspect of ritual but these studies took place some decades ago (see chapter 2) and these studies have found little response in Dutch archaeology.

31 For example, Bradley 2005, Brück 1999, and Hill 1995.

32 Cunningham, 1999, 96.

33 See §1.4.1.2.

34 Lawson and McCauley 1996, 5.

35 CPS-agent is a broad concept as it includes gods and goddesses, ancestors, spirits, but also a sentient earth and every other agent that transgresses or transcends ontological categories as explained in §1.4.1.2.

in a more manageable form, without being too constraining for different cultural expressions of religion. Furthermore, their definition contains two elements – ‘actions’ and ‘conceptual scheme’ – which will guide the two perspectives chosen here to study religion. A cognitive perspective will give insight in how religious thoughts can be explained. The social perspective will give insight in how individuals act and fit into their larger social context. In this way religion will be dealt with at different levels of analysis. The aim is to ensure a degree of coherence between different aspects of the social world, ranging from individuals to institutions like religion.

#### 1.4.1.1 SYMBOLIC THOUGHT

Although there are many theories about the nature of religion, most of the researchers agree that religion and symbolic behaviour are closely related.<sup>36</sup> Studies range from how symbols function in ordering society to the decoding of specific symbols.<sup>37</sup> Here symbolic thought is used in a specific way. Although it can be argued that all thought or language has symbolic qualities, a more narrow approach is taken in which symbolic thought relates to the meaning attached to words and objects that surpasses their basic description.

Dan Sperber in the early seventies proposed a new approach as he was not satisfied with the way research on religion was developing. In ‘Rethinking Symbolism’ Sperber tries to deal with the symbolic component of religion in a more fundamental way. Instead of focusing on symbols in a specific cultural context, he wanted to understand if symbols have meaning and what symbolic thinking is. In Sperber’s view the best way to approach this problem was to use a cognitive perspective. At that time, the cognitive approach had made progress in the linguistic sciences, especially through the work of Chomsky. And in anthropology structuralist Lévi-Strauss had made the link between linguistics and symbolic studies. Lévi-Strauss, however, treated a symbolic system as language and although this gave many insights into the relations between symbols, it did not resolve the differences between language and symbolic systems.

Sperber’s main point and critique of the structuralists, was that symbols cannot be decoded in the same way as words: “the semiological axis of signifiant-signifié or message-interpretation is absent; since symbolic elements enter not into one pairing alone but into a set of associations; since the interpretation bears not on the elements but on their configuration, it is the very notion of the symbol that must be brought into question.”<sup>38</sup> Sperber proposes that symbols have no meaning – a much-quoted outcome.<sup>39</sup> This seemingly bold statement is a little misleading. Nancy Frankenberry comments “For *semantic* theory, there is nothing at all interesting about metaphors beyond the literal meaning of the utterance or proposition. For a theory of language *use*, on the other hand, the interesting feature of metaphor is its ability to make us see things in a new light.”<sup>40</sup> From this comment it follows that it would be more just to say that symbols have no *semantic* meaning. But symbols can be used in a meaningful way as Sperber himself acknowledges.

In ‘Rethinking Symbolism’ Sperber explains that there are three kinds of knowledge: semantic knowledge about categories, encyclopaedic knowledge about the world, and symbolic knowledge about the encyclopaedic entries of categories. He states: “What matters, symbolically speaking, is neither how foxes are semantically defined nor what foxes actually are, but what is known of them, what is said of them, what is believed about them. ... In other words, symbolic knowledge is ... about the encyclopaedic entries of categories. ... It is a knowledge about knowledge...”<sup>41</sup>

Symbolic knowledge shapes the way we think about our world. It makes connections that are not inherent to the objects themselves – in this way symbols do not have *a* meaning. But symbolic knowledge shows how the order of things is and where the links between different domains are – symbols are meaningful in the way people deal with their world.

Only because Sperber is unable to come free from a tacit linguistic (or decoding) perspective when talking about meaning, he appears to propose that exactly because there is a diversity of interpretation, symbols have

36 Lawson and McCauley 1996, Ch 2.

37 Bell 1997 a.o. 61, for different approaches to the analyses of symbols.

38 Sperber 1991 [1974], 48.

39 For example, Lawson and McCauley 1996, 40 and 140, Penner 2002, 158, and Frankenberry 2002, 176.

40 Frankenberry 2002, 177-178.

41 Sperber 1991, 108.

no meaning. He states "... cultural symbolism focuses the attention of the members of a single society in the same directions, determines parallel evocational fields that are structured in the same way, but leaves the individual free to effect an evocation in them as he likes. Cultural symbolism creates a community of interest but not of opinions..."<sup>42</sup> In other words, diversity within a community which uses symbols is inherent to the ways symbols work.

There may not be agreement about certain symbols and some symbols may be used without explicit knowledge of their meaning, they do, however, get their meaning through use in a cultural context. This use in a cultural context will have effect on the cultural identity of the people involved.<sup>43</sup> If symbols did not have meaning during their use there would be very little reason to use them at all.<sup>44</sup> In addition, without meaning anything could be replaced by the symbol. That is, however, not the case for there may be changes in symbols but these changes are limited by the culture's symbolic system.<sup>45</sup>

What is important about Sperber's work on symbols is that he made it clear that the analogy with language is not satisfying. Although I think Sperber adhered more to the linguistic turn than he would like us to believe, he opened up the way for a cognitive approach. He emphasised that in the future there should be a focus on the way people order and recall all the different kinds of information they receive. Many researchers were inspired by Sperber and they took his ideas further, which has led to three main questions in cognitive studies on religion: is religious thought different from ordinary thought, how can we explain the continuity in religious thought in its sometimes bizarre form, and, why do the gods/CPS-agents look like they do? These problems will be dealt with in the next sections and as the first two questions are closely connected, they will be dealt with in relation to each other.

#### 1.4.1.2 IS RELIGIOUS THOUGHT DIFFERENT FROM ORDINARY THOUGHT AND WHY DO THESE IDEAS CONTINUE TO EXIST?

In the second half of the twentieth century research on religion focussed – under the influence of Durkheim and the French *année sociologique*<sup>46</sup>, and Mircea Eliade and Rudolf Otto – on the oppositional pair of sacred and profane, whereby the sacred was given a special status. Eliade says: "A religious phenomenon will only be recognized as such if it is grasped at its own level, that is to say, if it is studied *as* something religious. To try to grasp the essence of such a phenomenon by means of physiology, psychology, sociology, economics, linguistics, art or any other study is false; it misses the one unique and irreducible element in it – the element of the sacred."<sup>47</sup> This has sometimes led to mystification in the study of religion, in the sense that research was led by belief and experience of the sacred. Furthermore, the divide between the sacred and the profane is not as easily made as has been suggested.<sup>48</sup> Its influence in archaeology has however been widespread, separating the religious from the everyday practical domain.

In studies on religion researchers started to look for a better way of explaining religion and religious behaviour, and the angle they took was; is religious thought as different from ordinary thought as the sacred-profane divide wants us to believe?

On a general level religion has been compared to science, trying to overcome the idea that religion is irrational or bizarre.<sup>49</sup> The comparison to science has led to the insight that religion has its own rationale, and is just a specific way of explaining the world. In this thesis religion is not viewed as some sort of primitive science. Religion is both rational and symbolic, not related to a scientific but a cultural truth in which attention is drawn to certain ideas through the use of metaphor. However, not all religious acts should be considered purely symbolic. Moreover, religion is not science and therefore is not bound to the criteria of scientific reasoning – if there is such a uniform thing. Religion can only be talked of in terms of cultural laws and, as the sociologist

42 Sperber 1991, 137.

43 McCauley and Lawson 2002, 83.

44 McCauley and Lawson 2002.

45 McCauley and Lawson 2002, Turner 1997 [1969], 41 and 53.

46 Belier 1995 and Bowie 2002 [2000], 139.

47 Quoted in Lawson and McCauley 1996, 13.

48 Bowie 2002 [2000], 140.

49 For example, Guthrie 1980 and Horton 1967.

Anthony Giddens<sup>50</sup> explains, cultural laws are different from natural laws. Unpredictability is just one aspect which makes cultural laws differ from natural laws. This general insight does, however, not explain how people cannot only think creative, strange thoughts, but also perpetuate them.

Cognitive studies on religion try to deal with this aspect of religion. A cognitive approach takes an interest in how humans conceptualise the world around them. Starting from a human viewpoint Justin Barrett states: “Regardless of metaphysical claims, what we observe as religion is still a constellation of human phenomena communicated and regulated by natural human perception and cognition.”<sup>51</sup> It means that religion is part of the human world and should be studied in this respect, thereby denying the claim of Eliade that the sacred should be studied as a separate phenomenon, which cannot be grasped by relating to the ordinary world.

Barrett calls his approach the ‘naturalness-of-religion thesis’, which claims that “...what is typically called ‘religion’ may be understood as the natural product of aggregated *ordinary* cognitive processes.”<sup>52</sup> With ‘natural’ Barrett does not want to hold on to a deterministic view of religion, or culture for that matter, but he emphasizes that religious behaviour is normal behaviour. In other words, religion is a cultural engagement with the (natural) world around us, through our own cognitive mechanisms.

Sperber stated that we possess three kinds of knowledge, and argued that we store our knowledge about the world in encyclopaedic knowledge. Since the publication of *Rethinking Symbolism* the concepts used have been slightly changing. Although the difference is not very apparent at first sight, Pascal Boyer and Charles Ramble talk about kind-concepts and domain concepts or ontological categories<sup>53</sup> instead of semantic and encyclopaedic knowledge. In my view the encyclopaedic knowledge of Sperber is broader than the ontological category. Encyclopaedic knowledge could be about horses or dogs and animals as a category. In the perspective of Boyer and Ramble dogs and horses are kind-concepts and their ontological category would be animals. From this shift it is apparent that the cognitive study area has developed its own analytical concepts. Sperber was still working from a linguistically oriented field of study, which explains his use of the concept of semantic knowledge, which nowadays has lost most of its research value. Encyclopaedic knowledge is a concept still occurring and useful, but here the term ontological category will be used as an analytical concept. Boyer and Ramble start from a cognitive field of research and are more concerned with how we learn, store and exchange information. Their narrowing down of the ontological category is important for understanding the occurrence and perpetuation of religious thought.

Over the last twenty years much research has taken place in the field of cognitive science and these studies “have amassed considerable evidence supporting the idea that people have a large number of often tacit assumptions about the sort of properties different things possess, based on ontological category membership.”<sup>54</sup> In other words, people have a lot of tacit knowledge of ontological categories. Moreover, the number of ontological categories appears to be limited. According to Boyer “we have some reason to think that ANIMAL, PERSON, TOOL (including all manmade objects other than tools proper), NATURAL OBJECT (e.g. rivers, mountains) and PLANT more or less exhaust the list.”<sup>55</sup>

Following the definition of Lawson and McCauley religion is a worldview that includes CPS-agents.<sup>56</sup> An interesting aspect of CPS-agents is that they transgress or transcend these ontological categories and therefore go against the tacit knowledge of people. Boyer and Ramble, through the use of experiments<sup>57</sup>, may have found an answer to the question why these concepts that go against our tacit knowledge of ontological categories – in other words, counter-intuitive information – persist as they do. These experiments were conducted in France, Gabon and Nepal and participants were unaware of the religious dimension of the experiments. The stories were constructed per culture in such a way that the participants thought of them as ordinary stories with no reference to god-like creatures. In this way it is a cross-cultural experiment on cognitive processes that is sensitive to the cultural context of the participants. In each story there were ordinary persons and artefacts, and persons and artefacts that had aspects which transferred and/or breached ontological categories. The participants read or heard stories and after a diversion were requested to recall elements from the stories. They dem-

50 Giddens 1995.

51 Barrett 2000, 29.

52 Barrett 2000, 29.

53 In this thesis the term ontological category will be used.

54 Barrett 2000, 30.

55 Boyer 2001, 78.

56 See § 1.4.1.

57 Boyer and Ramble 2001.

onstrated that counter-intuitive information is better remembered than non-violated ontological categories. But at the same time that too much violation of the ontological category diminishes this effect. Boyer and Ramble expect that, “all else being equal, concepts that are very easy to recall to spread in a cultural environment and concepts that are intrinsically difficult to recall to spread less.”<sup>58</sup> So this would account for the persistence of the counter-intuitive knowledge, instead of its direct elimination.

Some researchers, especially Maurice Bloch, have criticised the counter-intuitive as a kind of universal category. Bloch’s main point is that through the everyday contact with, for example, ancestors, within a culture, these entities lose their counter-intuitive character.<sup>59</sup> I think this critique is founded on a misunderstanding of the idea of the counter-intuitive. The point is that how familiar an ancestor is, does not determine its measure of counter-intuitivity. The breaches and transfers of ontological categories *do* determine their measure of counter-intuitivity and this is not influenced by cultural images. In other words, “What is counterintuitive here is not even necessarily surprising. ... It becomes part of your familiar world...”<sup>60</sup>

Boyer and Ramble showed through the use of experiments what elements a religious concept needs to be culturally successful. A religious concept needs:

- “[1] a pointer to a particular ontological category
- [2] an explicit representation of a violation of intuitive expectations either:
  - [2a] a *breach* of relevant expectations for the category, or
  - [2b] a *transfer* of expectations associated with another category;
- [3] a link to (nonviolated) default expectations for the category.”<sup>61</sup>

Furthermore these elements are linked to religious concepts, which are more specific, or could be seen as the cultural infill of a more general concept. The religious concepts have therefore

- “[4] a slot for additional encyclopaedic information;
- [5] a lexical label.”<sup>62</sup>

The difference between the first three general elements and the last two cultural in fills makes it clear why people can easily understand the general ideas behind a specific religion, but need to acquire the specific details of that religion with more effort. Some gods and goddesses of another culture will look familiar because they have the same elements, although their names – or religious concepts – are different.

The breaches or transfers taking place in the religious concepts have an effect that might explain the use of symbols in religion. Sperber remarked that symbolic knowledge is knowledge about encyclopaedic knowledge, ordering and connecting different domains. These breaches and transfers go also beyond the boundary of a specific domain and link different domains through the combination of intuitive and counter-intuitive knowledge, thereby establishing new relations. Symbols have the same property of linking different domains and the more domains they link the more powerful they are.

Although it has become clear how these strange concepts can be explained within an ordinary cognitive framework, it is not clear why CPS-agents often take the form they do.

#### 1.4.1.3 WHY DO THE CPS-AGENTS LOOK LIKE THEY DO?

The occurrence of CPS-agents across all and even the most technological and scientific advanced cultures is a phenomenon that has to be explained in more general theories than cultural historic explanations. Cultural-historic explanations may explain the specific occurrence of certain CPS-agents, but not why they all have some link to human-like qualities. In other words, it has to be explained why CPS-agents always seem to have a pointer to or transgression of the ontological category person.

In order to answer this question Stewart Guthrie has put anthropomorphism at the centre of his theory of religion. He states that “religion may be defined as systematic application of human-like models to nonhuman,

58 Boyer and Ramble 2001, 538.

59 Bloch 2002.

60 Boyer 2001, 65.

61 Boyer and Ramble 2001, 537.

62 Boyer and Ramble 2001, 537.

in addition to human, phenomena.”<sup>63</sup> Guthrie argues that humans try to explain their world first in human terms and will only replace these explanations if better ones are made. The reason for these anthropomorphic explanations is that human relations are the most important relations in people’s lives and, therefore, they tend to model their worldview in a social perspective. Guthrie puts forward five propositions (P) and two informal deductions (D) to explain his theory. These are:

“P1. Phenomena (aspects of the world as known through our senses) initially are ambiguous.

D1. Therefore phenomena must be interpreted.

P2. Phenomena are interpreted by a set of models based on experience of analogous phenomena.

P3. A model by which to interpret a phenomenon in a context is chosen from the set by (a) its capacity to generate the phenomena; (b) the likelihood of occurrence of the phenomena from which the model derives, and (c) its subjective importance to the observer.

P4. Humans, (a) because they are complex and multifaceted generate a very wide range of phenomena; (b) as social beings, are likely to be wherever the human perceiver may be; and (c) are the most important factor in the human environment.

D2. Therefore human-like models frequently are chosen to interpret ambiguous phenomena.

P5. Generalization and systematization of this choice is the cognitive basis of religion.”<sup>64</sup>

These propositions and deductions are here considered not to be very problematic, except for P4. P4 puts the anthropomorphic explanation in the equation and therefore, has to be right. The difficulty with P4 is that the humans can be replaced by other entities. What is necessary to give anthropomorphism a central place in religion is evidence that people tend to explain their world in an anthropomorphic way, instead of in any other way, and that people perceive humans as the most important in their environment.

One of the most compelling studies addressing this problem has been the experiment performed in America by the cognitive scientists Justin Barrett and Frank Keil.<sup>65</sup> The basic aim of their research was the question if people anthropomorphise god even though they may adhere to a nonhuman image of god? College students with different religious backgrounds had to fill in a questionnaire on god, listen to a story and after a short diversion answer yes/no questions. Barrett and Keil found: “In striking contrast to the results of the questionnaire, the results of the story recall items suggest an anthropomorphic everyday God concept. ...most of the time subjects falsely remembered particular anthropomorphic characteristics of God being mentioned in the story.”<sup>66</sup> To take this experiment further they also told a story about a futuristic computer Uncomp. Here people also tended to anthropomorphise, but it was less marked. Although the study of Barrett and Keil is not conclusive there appears to be good reason to assume that people do tend to anthropomorphise the phenomena they encounter.

Anthropomorphism is still a very broad concept. Guthrie appears to focus on the human appearance in the things we see. Pascal Boyer<sup>67</sup> criticises Guthrie on this point. He proposes that people do not see human shapes but human traces. Paraphrasing Guthrie’s book title Boyer writes people see not faces in the clouds but traces in the grass.<sup>68</sup> In other words, people see the result of actions and infer from these the presence of (CPS)agents. Following Boyer, I would like to suggest that for religious ideas it is especially important that people see human agency in different phenomena. Because, closely bound with human agency is intentionality, making it into a social event. In other words, it relates to why things happen.

Besides, there is reason to think that people do pay special attention to other people from an early age. Studies in child-development have indicated that “from early infancy human beings represent agents and the actions they perform very differently from the ways they represent other entities and events.”<sup>69</sup> This is necessary because humans depend on other humans. People are social beings.

Guthrie’s Proposition 4 is partly validated by the cognitive studies as mentioned above. But it appears more appropriate to speak of human agency instead of human forms.

Boyer sees other cultural cognitive advantages if CPS-agents have person-like qualities. Persons cannot only do complex things they can also think complex things. Through different inferences about the ontological

63 Guthrie 1980, 181.

64 Guthrie 1980, 187.

65 Barrett and Keil 1996.

66 Barrett and Keil 1996, 228.

67 Boyer 2001, 143-146. Boyer is inspired here by the work of Justin Barrett.

68 Boyer 2001, 145.

69 McCauley and Lawson 2002, 24.

categories people can judge situations in complex manners and also speculate about imagined events. In this way people also interpret social action. In social situations people do not only react on the directly visible, but also on what they estimate the other person knows. What someone knows about a particular situation is called tactical knowledge. It is something especially associated with the domain concept of PERSON, because the other domains do not have these specific inference systems. However, normal human agents do not have access to all tactical information, because of their physical properties as persons. A very compelling thing about most CPS-agents is, however, that through their counter-intuitive properties they *do* have access to all tactical information. Taking into account that “[t]he religious concept preserves all the relevant default inferences except the ones that are explicitly barred by the counterintuitive element”<sup>70</sup> it becomes clear that CPS-agents have a great social advantage. As Boyer explains, if CPS-agents hold certain knowledge unknown to others, then this knowledge is usually perceived as tactical information and not information about objects. All people’s actions are known by the CPS-agent who acts according to this information and, therefore, people have to acknowledge the presence of CPS-agents in all events. As Boyer states “The powerful gods are not necessarily the ones that matter; but the ones that have strategic information always matter.”<sup>71</sup>

#### 1.4.1.4 SUMMARY OF THE COGNITIVE PERSPECTIVE

According to the cognitive perspective people’s tendency to see intentionality behind phenomena they experience leads to the creation of supernatural beings. Supernatural beings hold an element of counter-intuitive information that is remembered and therefore communicated better and which, leads to their spread throughout culture. And the best way to talk about these phenomena is in a symbolic way – crossing different domains or categories.

The interesting aspect of the cognitive perspective is that it shows how people can think religiously. In doing so they give some pointers to how this information can be used in an archaeological – or other human sciences – context. First, because religion is not so different from ordinary life, these two fields should be looked at together. Second, focalisation instead of decoding makes it clear that diversity within a culture is not something to be glossed over, but essential for the use of symbols. Difference is not splitting off, or getting it wrong, but engaging with the culture people grow up in. Third, the apparent strangeness of religion is its strength instead of its weakness. Fourth, people conceptualise the world through the use of a specific set of ontological categories. The way in which objects from different ontological categories are used in combination may give some insight into their cultural specific ordering of the world.

Cognitive studies have given insight in how the individual processes information and communicates. The relations between these social actions and culture are however less developed. I will therefore turn to the social perspective, through the work of Giddens and Lawson and McCauley. As mentioned in the beginning of this chapter I have not gone into the work of Lawson and McCauley within the cognitive perspective, because, although they rely heavily on the work of the afore mentioned cognitive researchers, their strength lies in the social application.

#### 1.4.2 A SOCIAL PERSPECTIVE

When talking about religion from a social perspective, one immediately thinks about the work of Emile Durkheim, who saw a direct relation between the social and the religious. He ascribed to religion the fundamental role of “maintaining the social system by strengthening the bonds attaching the individual to the society of which its god is the figurative representation.”<sup>72</sup> Functionalist approaches, which view religion as controlling the social order, have had considerable critique during the twentieth century and I will not repeat them here. To make it clear from the start, this is not what is meant here with a social perspective on religion. In this research the social perspective means that religion in itself is viewed as a social phenomenon.

70 Boyer 2001, 73.

71 Boyer 2001, 160.

72 Lawson and McCauley 1996, 49.

## 1.4.2.1 BELIEF AND THE QUESTION OF TRUTH

If we view religion as a social phenomenon the question of religious belief takes on different dimensions. The question of the irrationality or falsity of religious beliefs has mainly been dealt with in view of the intellectualist debate that sees religion as some kind of primitive science.<sup>73</sup> The question of belief is, however, not obvious in many cultures. It is typically a question for cultures in which there are different excluding religious doctrines. In other cultures it is obvious that there are CPS-agents with which everybody has to deal. As shown in the cognitive perspective, people ascribe agency to CPS-agents and these CPS-agents are part of social reality through their actions. It is not a question of believing but a question of knowing what these CPS-agents mean or want.<sup>74</sup>

From a social perspective the question of truth becomes irrelevant and shifts to the position of how people interpret and deal with the phenomena they encounter. However, it is of vital importance that most CPS-agents are considered to have full access to strategic information. Boyer links this to morality in the sense that “we intuitively assume that if an agent has full access to all the relevant information about the situation, that agent will immediately have access to the rightness or wrongness of the behaviour.”<sup>75</sup> Therefore, if something happens people will interpret this in view of their own and their group’s behaviour and consider what has to be done. Whether the right action is performed is judged not on the basis of belief but on the basis of efficacy.

Lawson and McCauley have approached this problem through the concept of competence. A concept closely related to the concept of monitoring used by Giddens.<sup>76</sup> The competence approach holds that: symbolic-cultural systems “are the kinds of system about which explicit instruction is, at least sometimes, completely absent, and about which, therefore, participants must have some form of intuitive knowledge. That knowledge is revealed by their acquisition of and successful participation in the systems and by their judgement about real and possible uses of the symbols within the system.”<sup>77</sup> In other words, agents are reflexive about their own behaviour and at the same time make judgements about their own and others behaviour. The success of a religious action is not successful because it conforms to the ‘truth’, but because the participants feel it was carried out according to their expectations. Irrational or false beliefs and practices are rational and true within their cultural context because they work. And in the case that misfortune continues the ritual is often not seen as false, but the interpretation of what the CPS-agent intended or wanted is. Someone’s competence to interact with CPS-agents is being challenged in this kind of situations.

These situations where someone’s competence is challenged leads to questions concerning authority. In other words, is everybody in a position to make these judgements? Perspectives in religious studies are shifting from proving that CPS-agents exists to seeing CPS-agents as a social phenomenon,<sup>78</sup> where the truth question becomes irrelevant and even undesirable. The interesting question is who has authority on religious matters and why?

## 1.4.2.2 AUTHORITY

Authority is linked to power. Power is used here in the way Foucault<sup>79</sup> and Giddens understand it – an enabling force. Giddens sees power as the ability to use “authoritative resources, which derive from the co-ordination of the activity of human agents, and allocative resources, which stem from control of material products or of aspects of the material world.”<sup>80</sup> Power is always a two ways – or dialectic – motion, where, although there may be little room, subordinate agents can always influence their superiors. The advantage of using a power concept, which does not automatically involve domination but focuses on the enabling aspect, can be applied

73 For Example, Frazer, 1996 [1922], 13 and 58. Horton 1967.

74 Bloch 2002, 136-139, Bowie, 245-246.

75 Boyer 2001, 187.

76 Although Lawson and McCauley do not refer to the work of Giddens in any of their publications, their approaches are very similar. Giddens work, however, is much more general encompassing all social action, place and time.

77 McCauley and Lawson 2002, 4-5.

78 The CPS-agent itself can be viewed as a non-social (or anti-social) entity within some cultures, but people have to deal with them within their social world.

79 Foucault 1980 [1976], 92-102.

80 Giddens 1995, xxxi.

to all kinds and all levels of societies. Archaeology has been especially concerned with the allocative resources; here the emphasis will be on authoritative resources.

Authority is based on three different aspects: knowledgeability, experience and position. These three elements are closely interlinked but do not have the same bearing in different cultural contexts. As a general rule, in large scale, differentiated societies the position of the agent will play an important role, while in more egalitarian societies knowledgeability and experience will be more valued.

Barrett shows there is a difference between theological concepts and religious concepts.<sup>81</sup> Theological concepts are based on explicit knowledge and religious concepts on tacit, everyday knowledge. Religious specialists will have more access to and use of theological concepts. Their authority on this level will be little challenged. Most people will assume that through their position or training they have acquired a certain amount of knowledge. Religious specialists will, however, be judged on the efficacy of their religious practice. Here tacit knowledge and/or expectations come into view. But participants in a religion will tend to view the specialist as a secure factor and in cases of failure of religious practice will first look for other circumstances to be the source of failure.<sup>82</sup> If there is no religious specialist knowledgeability and experience will take a more prominent role in the judgement of the efficacy of a religious practice. Discussion on the performance of the religious action will take prominence. These pointers are, however, no certainties; the circumstances in which the judgement takes place will also have a prominent place. Social commitments will be taken into consideration by the participants as well. The respect people possess will count when judged in different situations. If the person's competence is judged and this person is normally seen as very competent, people may explain failure because of hidden reasons, which are only known by the wrongdoer and the CPS-agent who has full access to strategic information, a trait not associated with the religious practitioner.

Authority depends on social position and efficacy. Efficacy is dependent on the situation and social position depends on the way a society is organized. Whether specific rituals were effective in the prehistoric past is very difficult to establish, but the institutions of a society may be grasped. In the next section religion will be viewed as a social institution.

#### 1.4.2.3 RELIGION AS A SOCIAL INSTITUTION

Religion is part of the life of people and from an analytical perspective can be seen as specific domain within the wider society. There will always be interplay between religion and other social actions. However, this is not to say that religion is a reflection *of* the social; religion is much more a reflection *on* the social. Religion makes the ideal order of the world explicit, not the real order. Religion is, however, not necessarily a masking device for inequality or power struggles. The fact that it is an ideal worldview means that reality will probably differ from this view. The ideal worldview can be achieved or maintained but just as well it can be contested. Furthermore, religion is seen as having effect in the real life-world of people and is not an extra layer of conceptual reveries.

In the cognitive sciences there is general agreement that religion can be studied in the same way as any kind of action. It means that religion can be regarded as any other social institution. Giddens made clear in his structuration theory that social institutions are not free-floating entities; they are grounded in the actions people take. These actions are however in their turn guided by the social institutions. This relation between action and structure is in the work of Giddens described as the 'duality of structure'. The duality of structure means that "the structural properties of social systems are both medium and outcome of the practices they recursively organize."<sup>83</sup> Agents use tacit knowledge to cope with everyday life and through the repetition of actions form social institutions. The reproduction of social institutions is never exactly the same, which makes them dynamic entities. However, agents are not robots. Agents are knowledgeable and intentional, having certain goals. The consequences of their actions can never be fully predicted, but this does not mean that social mechanisms are hidden for agents. Social institutions can be seen as traditions, the way people do things. *Action is dealing with a present situation on the basis of past experience and future expectancies.* Most action is, however, tacit; people perform many tasks without thinking about them.

81 Barrett 2000, 29-30.

82 McCauley and Lawson 2002, 29 and Lawson and McCauley 1996, Ch 5.

83 Giddens 1995, 25.

Giddens theory of structuration states that there is a constant movement between actions and social institutions. The relations between these different institutions are however less clearly defined. What binds the different institutions is the society of agents, who through their continuous re-enactment within a cultural framework reconstruct the institutions, which sustain their world. In everyday life the different institutions will not be as clearly demarcated as the researcher's analytical view envisages. People will draw from a mixed set of ideas involving different institutions, and at the same time act in different institutions. As Boyer says "religion is a *rather* practical thing."<sup>84</sup> Ideas must have a degree of coherence if people want to be able to function normally. This coherence will not always be present, but most people will either transform their ideas or their actions to make their world coherent. In other words, if their religious worldview differs too much from their everyday life, people will either make changes in their religious ideas or their everyday life. It is, however, necessary here to remember that, as Barrett showed, theological and religious concepts may differ considerably and that this will enable people to relate religion to their everyday life without too much conflict between different kinds of knowledge.<sup>85</sup>

The absence of a perfect fit between different institutions and institutions and agents is not in itself problematic; it explains why societies change and cannot remain as they were. Society is a dynamic system in which there is a measure of stability. This equilibrium is not static as it is moving between all the different institutions and agents, but it will stay within the cultural limits of a society. Sometimes actions undertaken have consequences which will push the equilibrium to its limit and when a certain boundary is crossed there is no way back and a new equilibrium will be established.

#### 1.4.2.4 SUMMARY OF THE SOCIAL PERSPECTIVE

The social perspective has shown that belief and truth are not very helpful in explaining religion. CPS-agents are part of the social world and religious concepts are not dealt with in abstract manners but are applied to real situations. Efficacy, competence and authority are determining factors in establishing if religious practices are done as they should be, not their relation to truth. Furthermore, religion is part of society and can be studied as every other aspect of society. Through the duality of structure religion as an institution comes to its full potential in religious acts. It follows that religion cannot be studied without taking into account the actions that sustain it. I will, therefore, now turn to a particular kind of religious action, ritual.

#### 1.5 RELIGIOUS RITUAL IN ACTION

In the previous section it was shown that religion is sustained through religious practice. Religious practice encompasses many acts, including offerings<sup>86</sup>. Here, I will focus on religious ritual practice in a general sense, later I will turn to offerings in particular. Ritual is a very vague concept, ranging from creative, expressive to formalised repetitive behaviour. Some even think that a definition of ritual is not necessary because people will recognise it when encountered. The range of (absence of) definitions is not very satisfying and just as with religion it has to be made clear what is meant with religious ritual, not only to guide research but also to avoid the problem that every ritual becomes religious. Again the definition of Lawson and McCauley is coherent, delineating the subject without constraining it too much. They propose that "All religious rituals – in our technical sense – are inevitably connected sooner or later with actions in which CPS-agents play a role and which brings about some change in the religious world."<sup>87</sup> Religious rituals have three main elements an agent, an act/instrument and a patient. The agent performs an act in order to bring about a change in the patient. They discuss all ritual in relation to these three elements or roles. Just as in their definition of religion the presence of CPS-agents is what demarcates a ritual as a *religious* ritual. Religious ritual acts are seen as any other social act, where the participants have the same kind of expectancy.

People's judgements of a religious ritual are influenced by the way in which the CPS-agent participates within

84 Boyer 2001, 138.

85 See § 1.4.1.2.

86 See § 1.5.2.

87 McCauley and Lawson 2002, 13.

the ritual. Therefore, Lawson and McCauley divide religious ritual in two kinds of religious ritual: special agent rituals and special patient or special instrument rituals. This division is based on where the presence of the CPS-agent is essential within the ritual, in other words what makes an element special. The main difference is that “Only special agent rituals’ consequences are permanent, since in these it is CPS-agents who have acted, either directly or through their intermediaries. These are the only rituals whose consequences might ever need reversing.”<sup>88</sup> For example, a marriage ceremony – a special agent ritual – has to be performed only once and can only be undone through new rituals. A special patient ritual, such as harvest offering, has to be repeated every year and because of its limited durability has no need for reversal. Furthermore, substitution in certain parts of the ritual will be less problematic in special patient and special instrument rituals than in special agent rituals.

Lawson and McCauley’s theory of religious ritual is interesting because it defines and analyses ritual on the basis of only a few comprehensible aspects. There are, however, also some serious flaws in their work when they propose that they can predict the general form of rituals on the basis of it either being a special agent or special patient/instrument ritual. The question is why pay much attention to the religious ritual theory of Lawson and McCauley, when it has flaws? To me there are several reasons why this theory is more appealing than others. First, their definition of ritual has clarity and is applicable in archaeological contexts. Secondly, the division in special agent and special patient or special instrument ritual is very important. This can give insight in which part of a ritual judgement will be placed and will therefore be under stricter control. Thirdly, this division gives an insight into the temporality of ritual. And lastly, they have pointed to several aspects that are of relevance for any theory of ritual and this should not be disregarded in future research. The challenge lies in using their theories potential for understanding past religious ritual and amending it in such a way that it will broaden its scope.

#### 1.5.1 RELIGIOUS ACTION IN RELATION TO SOCIETY

Looking at religious ritual as an ordinary social action with the participation of a CPS-agent has opened up new avenues in theory-forming. Research into the relation between specific religious action and other actions in a society may lead to a better understanding of both. Religion is not a free floating extra conceptual layer; it is firmly embedded in the everyday-world of people. Religion is thought of as relating to events which have to be dealt with in a specific way. Religious ritual is part of a symbolic-cultural system, which is different from everyday engagement with the world. However, for the rituals to have meaning they have to be related to everyday knowledge. Besides, a lot of everyday actions are not religious in themselves but are guided by religious concepts about how and where things ought to be done. In connection to Sperber it was already mentioned that symbolic knowledge is knowledge about encyclopaedic knowledge, which is about the world. In other words, symbolic action makes relations between different domains of the everyday world which are not intrinsic to the encyclopaedic knowledge about these domains. Symbolic knowledge may explicate that through similarities or differences, different domains are connected and that certain contexts ask for an approach which takes account of these relations.

Religious ritual – and religion for that matter – should not be analysed separately from the everyday world; for religious ritual through its use of symbols establishes relations in the everyday world, which will guide further action. Religious rituals that do not relate to the social world of everyday life will be of little importance to the people that perform them. When these rituals are not prescribed by doctrine it is not likely that they will be kept in use. On this note it should not be surprising that ritual objects are not necessarily very different from ordinary objects. In this view it is rather the other way around, for ritual objects to have any significance they have to relate to the everyday material culture of a society. It also becomes clear that the analytical division between different cultural institutions will not be perceived as sharp by the participants of a culture, when religious ritual not only affects their whole world, but is *meant* to do so.

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88 McCauley and Lawson 2002, 31.

## 1.5.2 THE PLACE OF OFFERING IN RELIGIOUS RITUAL

In this thesis offerings in low-lying wet part of the landscape are studied. Here offerings will be discussed in a general manner and in the next sections specific aspects of offerings will be discussed. Offerings<sup>89</sup> are a form of exchange between people and CPS-agents. In an offering a CPS-agent receives something from a human agent. Through the exchange a relation is established between them,<sup>90</sup> but unlike relations between people, the CPS-agent is only visible through cultural specific phenomena. The position of the participants varies in different circumstances. On the one hand, the relation with the CPS-agent is not always clear. On the other hand, the offering creates a bond between both parties.

In the model Lawson and McCauley present offerings are special patient rituals.<sup>91</sup> They attribute all kinds of characters to this kind of religious ritual. They are irreversible, frequently performed, low on sensory stimulation. The characters frequently performed and low on sensory stimulation appear to follow from the irreversibility of offerings, but this is not necessarily the case. An aspect of offerings that can be of interest for the analysis of pre- and protohistoric offerings is that well-formedness in special patient ritual is not as important as in special agent rituals.<sup>92</sup> Offerings have therefore the possibility of substitutes when it comes to the material component.

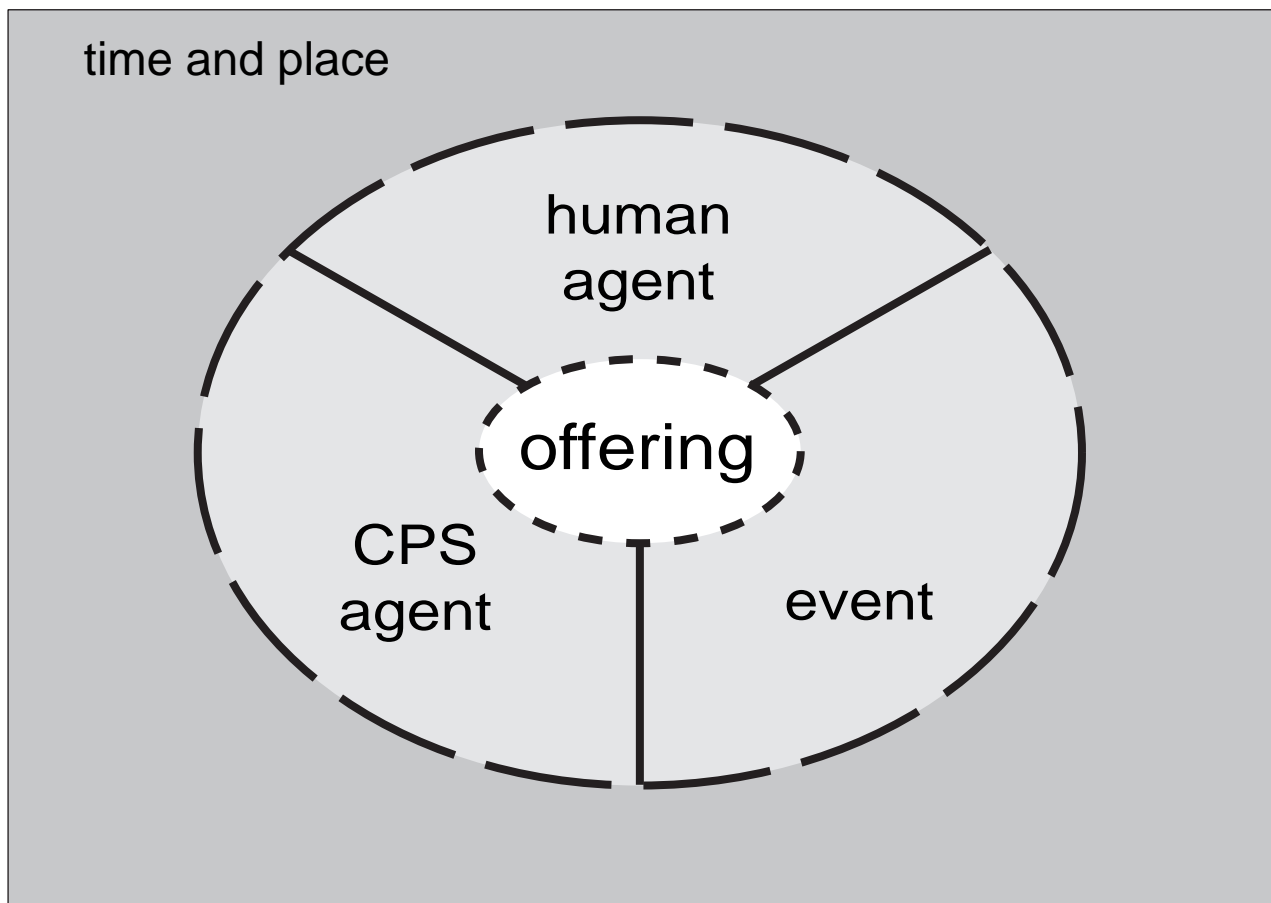


Figure 1.2 The different elements that are of importance for the performance of an offering.

89 The term offering is chosen as it is relatively neutral in relation to terms such as sacrifice (animate materials) or votive offering (inanimate materials). Bradley (1998 Ch.1) gives a short overview of the use of these concepts. Offering is also a more direct translation from the Dutch 'offer' and German 'Opfer' which encompasses both animate and inanimate materials.

90 Mauss 1967 [1925], Fowler, 2004, 54 ff, and Weiner 1992.

91 McCauley and Lawson 2002, 26.

92 McCauley and Lawson 2002, 32.

Figure 1.2 shows the different elements that are involved with offerings. The lines are dashed as the elements are influenced by each other and should be studied in relation to each other. For analytical purposes it makes it clearer to examine the elements separately. In the next sections each element will be briefly looked into at both a general theoretical and an archaeological level. Time and event are combined when the different time paths are discussed. After the separate elements are discussed a landscape perspective will be given that integrates the elements and guides further analyses.

### 1.5.3 THE MATERIALITY OF OFFERINGS

As mentioned above, offerings are a type of exchange that creates a relation between people and CPS-agents. It is fruitful to view offerings as analogous to the exchange of gifts instead of commodities,<sup>93</sup> as there are social relations involved and the outcome of the exchange is uncertain. The acceptance of a gift is often not free from obligations towards the giver, nor is it always possible to refuse a gift. One of the most important characteristics of gift-exchange is that not just anything can be considered a good gift. Gifts are value-laden. And the biography of the object can be important for its selection. The cultural biography of objects, is a term theorized by Kopytoff.<sup>94</sup> In short, things in a society have an expected trajectory of use and a cultural value, which is an important factor in the possibilities of exchange. Since the introduction of the term cultural biography it has been widely used in anthropology and archaeology.

The gift relates to at least three different elements of the offering practice: the human agent on whose behalf the offering is done, the CPS-agent and the event. The offering, respectively, has to belong to the human agent, the offering must be recognised by the CPS-agent and it must refer to the event to make clear what is wanted or achieved. The exact offering will vary in accordance to which element receives the most attention, the material culture available and the cultural-symbolic system of the participants.<sup>95</sup>

Some types of offering will have precise prescriptions about the objects to be used. But if the symbolic dimension of offerings is taken into consideration it is also possible that the objects used need to conform to certain domain characteristics, such as a domestic tool or wild animal. As mentioned above, symbols make relations between different domains, which lead to a certain degree of exchangeability between those domains.<sup>96</sup> Within a cultural-symbolic plane there will be a dynamic view, which allows for variability, but there will be limits to what is acceptable.<sup>97</sup> Not only is the type of object of importance, so is its state – perfect or obviously imperfect, complete, parts, or complete and then destroyed.<sup>98</sup> Certain objects will be excluded from offerings because they are deemed unfit for use in this context. But whatever choice is made it should not be forgotten that the objects used in offerings come from the social world of humans. It is a selection from all possible objects within a society. Therefore, to understand the selection made for the offering there always has to be a link to the material world of the agent who makes the offering.

From an archaeological perspective offerings are one of the most promising elements of religion that can be studied, because, by definition it involves an exchange of goods. Goods are not offerings because of some inherent quality. The cultural context defines which goods can be considered as offerings for specific occasions. Offering sites, therefore, always consist of a selection from all possible goods. The definition of these particular selections is the first step in understanding offering sites. On the basis of patterns of similarities and differences between these selections, it may be possible to grasp certain symbolic domain-transferring relations. This will be achieved through tables which list different find categories per offering site or/and offering if possible and the state of the goods when deposited. What is of the utmost importance is that the study does not focus on any particular kind of goods, but looks at all the goods in their combined occurrence. In the cognitive perspective

93 See Mauss (1967 [1925]) on obligation of returning a gift and Appudarai (2001 [1986], 11) on difference between gift and commodity.

94 Kopytoff 2001 [1986].

95 Turner, 1995, 41.

96 The substitution of a cow with a cucumber, outwardly unrelated objects, is a well known anthropological example of exchange between different domains through symbolic thought (Lawson and McCauley 1996, 162 and McCauley and Lawson 2002, 32).

97 See § 1.4.1.1.

98 Chapman and Gaydarska, 2007.

Boyer stated that we have five main ontological categories.<sup>99</sup> Some tables will be ordered according to these categories in order to see if they form specific relations.

#### 1.5.4 THE LOCALITY OF OFFERINGS

As any social action offerings take place in a particular place which is connected to an appropriate context. This place or locality can be connected in different ratios to the three different elements of offerings: the offerer, the CPS-agent or the event and has to be accessible for both the offerer and the CPS-agent.<sup>100</sup> The landscape will therefore have its effect on the possibility of the performance of certain rituals. This is not to say that the landscape defines religious practice, but puts certain limits on the successfulness of particular actions. Connecting specific CPS-agents to particular locales where there are no inscriptions may not be that easy. Different CPS-agents can be connected to water, mountains, trees etc. and one CPS-agent can be met in different places. The focus here, on watery contexts will, therefore, not engage with all offerings to all CPS-agents in the research area or to all types of offering to one particular CPS-agent.

Locality can refer to a specific place and a specific kind of place, for example, respectively, the river next to the big tree or the river. Furthermore, a watery context is not a uniform phenomenon. Water or wetness can have many different forms, which will add certain qualities to the perception of place. Open water differs considerably from a wet, but accessible, peat area. Flowing water has directional qualities missing in still-standing water. Salt and fresh water can not be used in the same manner and contain different life-forms. And then there are the seasons and tides, having their effect on the water, changing its shape, form and direction.

The locality of the offerings will probably be affected by the different properties of the watery context. It is therefore important, not only to look at the equation dry or wet, but also at the kind of wetness.

This study is concerned with offering sites in a wet context, so it appears obvious that the place is water. Water is however not a simple category when encountered in an estuary environment, like the Oer-IJ. It can take many forms from raging floods to quiet pools. It can be transparent and obscuring. The measure of movement, direction of flow, clarity, openness and presence of a CPS-agent can all be of major influence on the choice of a particular place. Historical events can also lead to the forming an offering site. Many offering sites in wet contexts are dry when excavated. A reconstruction of the environment is necessary to be able to construct the physical aspects of an offering site. The offering sites will be ordered in tables which deal with the type of water context, the flow, openness, the position of the deposition as seen from the shore and its position within the wider human-made environment. In this way it may be possible to see whether certain parts of the landscape were favoured for the practice of offering.

#### 1.5.5 TIME

As mentioned above Lawson and McCauley use the time concepts of frequent and infrequent ritual, which can give us insight into the temporality of a specific type of ritual. They make the observation that “From the standpoint of individual participation, many rituals are non-repeated; however, from the collective standpoint of the community, *all* rituals are repeated...”<sup>101</sup> Time has always been important in archaeology, but usually it was the time of chronologies. The perception of time has only received attention in the last twenty-five years.<sup>102</sup> Time, as perceived, is complex in that it combines at least two different motions – a straight line and a circle. Where the line stands for the ongoing accumulation of time with its direction towards the future from a person's birth to death and the circle for the repetition of time in which events keep on reoccurring the birth and death of different people, our everyday activities and the passing of the seasons. As becomes clear from the example of birth and death, depending on the perspective a life can be seen as having a direction in time, but the ac-

99 See § 1.4.1.2.

100 CPS-agents associated with very specific localities like mountains, for example, could not be easily reached in the Oer-IJ estuary.

101 McCauley and Lawson 2002, 156.

102 The three major publications which have had effect in archaeology have been; Pierre Bourdieu 1977 *Outline of a Theory of Practice*; Ferdinand Braudel 1975 *The Mediterranean and the Mediterranean World in the Age of Philip II*; and Christopher Gosden 1994 *Social being and time*.

cumulation of different lives is a cyclical movement, where continuously people get born and die. Lawson and McCauley's concepts of reversible and irreversible religious rituals and the consequential repetition of the later type relate more to the efficacy of the religious ritual than to the concept of linear or cyclical time. For example, offerings (as special patient rituals) are irreversible, but are not necessarily repeated in a cyclical way. They can be related to a life-changing moment, such as healing after serious sickness. In other words, the (ir)reversibility of a ritual can give some indication of the time-path involved, but is not a determining factor.

From an agent perspective the religious rituals closely associated with the linear or cyclical time are, respectively life-changing rituals and seasonal or periodic rituals. But there are also incidental rituals, which are closely associated with events rather than time perception, although these rituals often have a distinct time-path – (promise) event offering – which has to take place within limits. From a societal perspective nearly all rituals are cyclical and even incidental rituals will reoccur, although not at a regular interval.

To archaeologists, who have a societal perspective, most rituals will have a cyclical or recurring time-pattern. I will try to clarify the relations occurring in the three types of ritual – life-changing, seasonal/periodic or event related – from the agent perspective.

#### 1.5.5.1 LIFE-CHANGING RITUAL WITH A LINEAR TIME PATH.

Since the publication of Arnold van Gennep's 'The Rites of Passage' life-changing rituals have received much attention. The focus in archaeology has mainly been on the final stage – death and burial – an easily distinguishable process.<sup>103</sup> It is often presumed that the social status of the person is emphasized in one way or the other during burial. An important proposition is that every stage in life is accompanied by certain material items that will be deposited with the dead to mark their position.<sup>104</sup> Outside the burial context the other life-changing moments and their associated rituals are presumed to be near invisible. However, Fontijn has shown that bronze depositions in water may be associated with life-changing rituals.<sup>105</sup>

By definition life-changing rituals change the social position of a person, which makes these rituals into social events. A person cannot change her/his position in isolation. There has to be a special agent who can make the change and the social group has to witness this or made aware of this change. Not every ritual needs the same group of people. The early childhood rituals could be a family affair. Rituals concerning reaching maturity should have a wider audience – the community, – marriage or the forming of a new household could involve an even greater social group when the persons involved belong to different communities, and the social group involved in burial rituals will vary according to the social position of the dead. The place needed to accompany all these different social groups will be relevant for the placement in space of these rituals.

In short, life-changing rituals have a predominant social aspect and mostly take place in a social context, where the new social positions of the persons involved is often expressed by specific material attributes.<sup>106</sup>

#### 1.5.5.2 SEASONAL OR PERIODIC RITUALS WITH A CYCLICAL TIME PATH

Pierre Bourdieu's was one of the first researchers that combined seasonality with the structure of society and everyday practice.<sup>107</sup> In his analyses of the Kabyle household, time, place, material culture, life-stages, activities and values are transformed into one cyclical scheme. Here, of special importance, is the way that everyday activities operate in two cycles. On the one hand, the day to day events that have to be fulfilled. On the other hand, the change in these daily activities through the seasons. These cycles of time are closely related to the movement of heavenly bodies. The heavenly bodies move into certain directions in space and therefore can be used to give directions to place. Place can be meaningful bound to time through the use of orientation on heavenly bodies. Religious rituals related to seasonality may, therefore, also have directions incorporated

103 For example, Fowler 2004, especially Ch. 6, Arnold and Wicker 2001, and Arnold 2006.

104 Parker-Pearson 1999, 83-94, and Gilchrist 2004.

105 Fontijn 2003, figure 11.3 and 12.3.

106 For examples, in anthropology Van Gennep 1977 [1908] or in archaeology Díaz-Andreu 2005.

107 Bourdieu 2002 [1977].

into them.<sup>108</sup> Seasonal rituals are also linked to place in another way. Every season has its own set of activities that will be performed in different locales. Whether literal or conceptual, in rituals these activities and their place will be referred to. It is also probable that associated material culture is used that is connected with these specific activities or places. Seasonal rituals that are closely related to the farming world probably take place when changes in activities take place, demarcating time and actions. Specific rituals can also be related to the passing of the seasons itself.<sup>109</sup>

Religious rituals are always part of a larger cultural-symbolic system and there are probably links or transformations between all these rituals (including the life-changing rituals) within a society.<sup>110</sup> What these links and transformations are differs between cultures.

Religious rituals associated with the seasons or seasonal activities can have a local character, involving small communities. Another type of religious ritual is the periodic ritual, occurring once a year or every few years. This type of ritual usually involves large communities and is part of a range of activities, such as annual fairs, justice and the maintenance of social bonds.<sup>111</sup> These are the moments when social competition comes to the fore and have the potential for very elaborate religious rituals. This can lead to large quantities of goods or special goods being offered. The social group involved, can be very large and needs to be accommodated. Even if not all people participate directly in the religious ritual they still need to be in the vicinity. Large open places or demarcated open-air sites would be necessary.

#### 1.5.5.3 EVENT-RELATED RELIGIOUS RITUALS WITH INCIDENTAL TIME PATHS

The cognitive perspective<sup>112</sup> showed that people tend to see agency in events that they do not understand immediately or that require special attention. Most of these events are unpredictable and some have a far reaching impact on peoples' lives. If CPS-agents are accorded responsibility for these events some sort of acknowledgement has to be given by human agents. Although the occurrences of these religious rituals have no specific time interval, the religious rituals themselves have specific time paths, depending on the situation. The ritual can be performed in anticipation before an event will occur or as some kind of payment or thanksgiving after the event happened. There will, however, be a time-interval between the event and the offering. The place where the religious ritual is performed can depend on the event and/or on the place of the CPS-agent who is responsible for the outcome. The material culture used will be closely related to the event and the responsible CPS-agent, as both aspects will already be interlinked. The events may be unpredictable in themselves, but the response can be based on cultural rules that will result in the sporadic occurrence of similar religious rituals.

In archaeology the question of time can be answered in its simplest form with a date or time-range. This refers usually to the offering site as a whole. An offering site can be used over a long time and involve many separate offerings. The way in which the offering site is formed over a period of time can give insight into the timeframe used. In other words, it may be possible to distinguish offerings connected to cyclical or incidental events. To make these distinctions visible a table will be made which shows the duration of the offering site in combination with the type of deposition – at once, continuous or in bundles. With these last two types it is important to identify patterns between separate depositions, when possible that can tell something about the composition of separate offerings.

#### 1.5.6 HUMAN AGENTS

Who offered the goods is of importance for the understanding of any offering. Religion is theoretically approached from a social perspective that sees all religious practice as social action. Therefore it would be inconceivable to talk about offering sites without the agents involved. The identification of these agents is,

108 Therkorn 2004, chapter 6.

109 See § 1.6.

110 McCauley and Lawson 2002, 16 ff.

111 For example, tournaments of value (Appadurai 2001).

112 See § 1.4.1.3.

however, not easy and will be based on many generalities.

The placement of an offering site can give an indication of the social group involved. But the difficulty with offering sites in wet contexts is that they are almost never clearly demarcated. The position in the wider landscape can be of help here. For example, placement within or near a settlement context may point to local use. The size and importance of the settlement can be an indication of the importance of the offering site and its related social group.

The best indications derive from the complete social domain, with its roles and rules, of a society. And therefore it is important that offering sites are not investigated on their own but as part of a society. Identifying an offerer is less speculative if it is clear what kind of social persona takes part in the society as a whole.

#### 1.5.7 CPS-AGENTS

The identification of a specific CPS-agent will be very difficult when there is no textual evidence. But as Boyer and Ramble explained above<sup>113</sup> CPS-agents consist of general elements and specific religious concepts or infills. Although the religious concepts may be very difficult to determine, the general elements may be less resistant. To identify general elements that define a CPS-agent means to identify symbolic complexes which reoccur or are very specific. This is not just an attempt to avoid naming CPS-agents, but may help to get a better grip at the multiplicity of prehistoric religion. In the shift from cultural infill of a CPS-agent to general elements that define a CPS-agent, widespread cultural symbolic entities may become visible. Locally named CPS-agents may be seen as transformations of religious concepts that retain similar general elements. The cognitive study of Boyer and Ramble proposed that entities with too many breaches and transfers of domains will have less chance to become incorporated within a culture. It can therefore be proposed that separate CPS-agents do not breach or transfer many domains and in this way form relative coherent identities. The abilities of a CPS-agent can, however, be very diverse because certain breaches or transfers can give considerable power. For example, invisibility is more than not being seen. It means the CPS-agent can listen in unnoticed or make people trip and fall.

To summarize, in pre- and protohistoric archaeology it will be near impossible to identify the cultural infill of specific CPS-agents, like their name. The general elements of a CPS-agent could possibly be identified through analysing recurring symbolic complexes.

#### 1.5.8 SUMMARY OF OFFERINGS

Offerings are specific religious rituals that involve the value-laden exchange of goods between human and CPS-agents. The what, where and when of the offering will depend on three elements: the offerer, the CPS-agent and the event. Offerings are connected to the social world in that they are meant to change the world. Because offerings are value-laden, these relations are likely to be expressed in a symbolic form. Any understanding of offerings has to involve these different aspects and be sensitive to the complex of relations involved.

#### 1.6 A LANDSCAPE PERSPECTIVE

In the previous sections it has been argued that within the cognitive and social perspective religion and ritual are understood to be part of the everyday world of people even when religious practices take place in a separate place. To understand the place of the offerings in wet low-lying areas in relation to the everyday world a landscape perspective is added. This perspective will help to integrate the separate elements of the offerings as described above.

There are again many definitions of landscape available.<sup>114</sup> Here I will combine several definitions as they each place emphasis on different aspects that are of importance for the analyses of offering sites. The European Landscape convention has defined landscape as “an area, perceived by people, whose character is the result of

113 See § 1.4.1.2.

114 For an overview, Ashmore and Knapp 1999 and Bender 2006.

the action and interaction of natural and/or human factors.”<sup>115</sup> Perception means at the same time belief/opinion and an awareness of things.<sup>116</sup> According to Merleau-Ponty perception is always a bodily experience as people inhabit the world.<sup>117</sup> People experience their world through the practices they perform within that world. These practices take up place and time.<sup>118</sup> Time gives a landscape its depth as practices in specific places refer to the practices that went before and enables and constrains future practices.<sup>119</sup> These practices in specific places are linked to narratives and worldviews which circulate within a society. Tilley sees landscape as “a series of named locales, a set of relational places linked by paths, movement and narratives.”<sup>120</sup> According to Bender the landscape is besides all these things also a gendered and political landscape in which a person’s position influences the ability to perform certain practices or experience certain things.<sup>121</sup> It follows from all these different approaches to the landscape that in a landscape perspective practices through space and time can be considered in a detailed manner on different scales and from different angles. Below the influences on the approach taken in this thesis will be put forward.

This thesis draws on the work of J.D. Hill in the sense that his contextual approach is seen as very relevant for understanding offerings in the Oer-IJ area. In short, Hill not only looks at the similarities and differences between different archaeological contexts, but is also concerned with how these deposits were created.<sup>122</sup> Several researchers have continued in line with the work of Hill. Especially the study of fragmented objects has received attention in recent years, especially in relation to personhood.<sup>123</sup> These studies, however, also include landscape and ritual and domestic practices. From the studies concerned with fragmentation it can be taken that a broken object is something that needs to be analysed not just to reconstruct the whole object it was part of but also to analyse the use of broken objects in the enchainment of social relations.<sup>124</sup> Following Chapman and Gaydarska, broken objects can bring into mind people, objects and places that are not present and the placement of these broken objects within the landscape would be an important social practice.<sup>125</sup> Furthermore, fragmented objects – even waste – are seen as compelling symbolic carriers of meaning in ritual practices such as rituals associated with death, regeneration and life-cycles.<sup>126</sup> Due to the nature of his dataset, Hill concentrates on settlements. Brück and Chapman and Gaydarska look at the other parts of the landscape as well, but mainly burial contexts.

Another influence on this thesis is Therkorn her work on Noord-Holland, including the Oer-IJ area. In her work parts or fragments – especially feet – are considered as symbolically important in ritual depositions.<sup>127</sup> However, Therkorn is most interesting when she looks at a broader scale. She relates ritual depositions in pits and linear features to a cosmological vision of the landscape in which the heavens play an important part.<sup>128</sup> The cosmological vision encompassed economic and ritual activities and enabled the tracking of time and the seasons within a specific cultural framework. The year can be followed in the movement of the star-constellation in the sky. At the beginning of the new year in January Horse starts to rise. The summer solstice is associated with new calves, the rising of the Pleiades and Cow. The harvest is associated with the rising of Greater Dog and during the slaughter period of November Thor/Donar rises, as Cow dies on the western horizon. The constellations Horse sometimes with rider (Pegasus), Cow (Taurus), Greater Dog (Canis Major) and, Donar/Thor (Hercules) were recreated in pits and linear features around the settlement. The pattern of Horse can also be associated with linear features to the west that may represent the Milky Way. Besides a spatial

115 Clark, Darlington and Fairclough 2003, 6-7.

116 Cambridge Advanced Learner’s Dictionary 2003.

117 Merleau-Ponty 1995 [1945].

118 Giddens 1985.

119 Barrett 1994.

120 Tilley 1994, 34.

121 Bender 1998 and 2006.

122 Hill 1995, 95 and 98 a.o.

123 Brück 2006, Chapman 2000, Chapman and Gaydarska 2007, and Fowler 2004.

124 Chapman and Gaydarska 2007, a.o. 111, and Brück 2006, 297.

125 Chapman and Gaydarska 2007, 111.

126 Brück 2006, 302-305, Fowler, 2004, 59, and Hill 1995, Ch. 11.

127 Therkorn 2004, § 3.1.

128 Therkorn 2004, Ch. 6 and 7. See also, this thesis § 3.5.4 for a placement within the research tradition of the Oer-IJ area.

patterning there is also a material patterning in the ritual depositions within the pits and linear features with preferences for specific depositions per star-constellation. The features associated with the Milky Way divide the landscape into an inner and outer part of the settlement and the otherworldly (the heavenly landscape). Of special importance for this study is the linking of economic, seasonal and ritual practices into one framework this places religion in direct relation to all other elements of the society under study.<sup>129</sup>

This thesis lies somewhere in between these two approaches as it will look at the landscape of the Oer-IJ as the resource and outcome of peoples ideas about that landscape. Analyses will take place at three levels: the offering sites, the offering sites in relation to other sites in the Oer-IJ area, and the relations with the areas outside the Oer-IJ area. The level of analysis applied will be determined by the questions that are posed.

#### 1.6.1 THE OFFERING SITES

At the level of the offering sites the practice involved with offerings in relation to the specific place can be analysed. As this research deals with offering sites in wet low-lying parts of the landscape it may seem that the question of where in the landscape ritual depositions took place is already answered. This is, however, not the case as, in the estuary landscape of the Oer-IJ area, water comes in many shapes and qualities. In chapter 4 the offering sites will therefore be grouped together not in archaeological periods or similarities in performed offering, but they are ordered in specific types of watery landscapes. This ordering will also be helpful in chapter 5 as the predictive maps will be based on landscape features in combination with archaeological sites and cultural rules.

The offering site itself is viewed as a place for specific ritual practices. The use and spatial structure of these places will be analysed at a small scale level. Hill sees how a deposit is created as a possible criterion for establishing ritual practices and the how could be more important than the when and what.<sup>130</sup> The how of offerings can be explored with the concept of placement. Placement involves at the same time the manner and the specific place where an object is deposited. In placement the element of position is of importance as a position shapes a relation. Objects placed together can form symbolic connections. Patterns in deposition practices can be analysed when the different offerings are considered together. Hill showed that no preselection of materials should be made when studying ritual deposits. The same applies to establishing which characteristics, such as colour, origin, and texture, associated with these materials has cultural significance. The placement of different or similar objects together, whole or fragmented, can inform us on the meaningful relations used within the society under study.

The term site can be confusing in a landscape approach as a landscape is a continuous concept even when boundaries are present. It should therefore be clear that here with an offering site an archaeological site is meant in the sense that it concerns the excavated area or the archaeological find spot where a specific practice took place. In other words “offering site” is shorthand for “a place where an offering took place”.

#### 1.6.2 THE OFFERING SITES IN RELATION TO THE LANDSCAPE OF THE REGION

The composition of the offering can be studied by just analysing the deposition itself, however, it can not be determined if we are dealing with a specific selection until we look outside the offering sites. To fully understand a selection, like an offering, it should be clear what the totality of choices was. In reality the totality of choices can not be defined as the archaeological remains are fragmentary. This does not mean that analysing selections in archaeology is futile, but that it has to be understood that the total picture is already a selection that is either formed consciously or unconsciously by cultural and/or natural processes. In other words, a selection can only be understood in comparison to a totality and the nature of this totality determines what kind of comparisons can be made.

Offering sites should therefore be studied not only in relation to other kind of sites but to the wider landscape in general. It is not just a question of what was selected, but also from where the selection was taken. Research has shown that when obtaining raw material for the production of artefacts besides practical qualities, the

129 See § 1.4.2.3.

130 Hill, 1995, 98.

location of its origin and associated narratives may also have been of importance.<sup>131</sup> But also the origin of complete objects that were exchanged could be of significance.<sup>132</sup>

In chapter three a background to the Oer-IJ area is given that provides us with an insight into what could be locally obtained and from what part of the landscape. The relation between the offerings and the surroundings are proposed in chapter 4. At this level possible meaningful connections can be made between the offerings and the surrounding landscape. People's perception of the landscape they lived in may come to the fore when the selections they made and the practices involved are analysed. The spatial and temporal positions between different and similar practices will be important for people's understanding and subsequent use of their landscape. But also links could be established between different parts of the landscape either through use of materials or similar practices.

### 1.6.3 RELATIONS WITH THE AREAS OUTSIDE THE OER-IJ AREA

An archaeological region is a construction of the present and the people of the past would not have been aware of all the boundaries we map. Although it can be argued on archaeological grounds that the main daily activities people undertook took place within this region people would have travelled outside the region.<sup>133</sup> And they probably felt part of a wider society as cultural connections can be established over quite some distances.<sup>134</sup> The offering sites will therefore be analysed in relation to the offering sites of North Germany, Denmark and South Sweden as described in chapter 2.

The way a landscape is perceived also depends on the knowledge or experience of other landscapes. In chapter 4 attention will be paid to the incorporation of foreign/imported objects within the offering sites. The way in which foreign/imported objects were incorporated into the local life world may give an indication not only of how they perceived the outside world but also how they perceived their own landscape.

To summarize, the landscape will be viewed as a locality in which certain activities were performed in specific places and as a resource from which people drew certain materials to create a narrative about their perception of the landscape.

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131 Bradley 2000, 85-90. Cooney, 1998 110-113, and Chapman and Gaydarska 2007, 171, 198.

132 Fontijn 2003, 217, 240-246, Kopytoff 2001 [1986], Mauss 1967 [1925], 8-10, and Weiner 1992.

133 Van Heeringen 1992.

134 Van Heeringen 1992, Fontijn 2003, and Therkorn 2004.



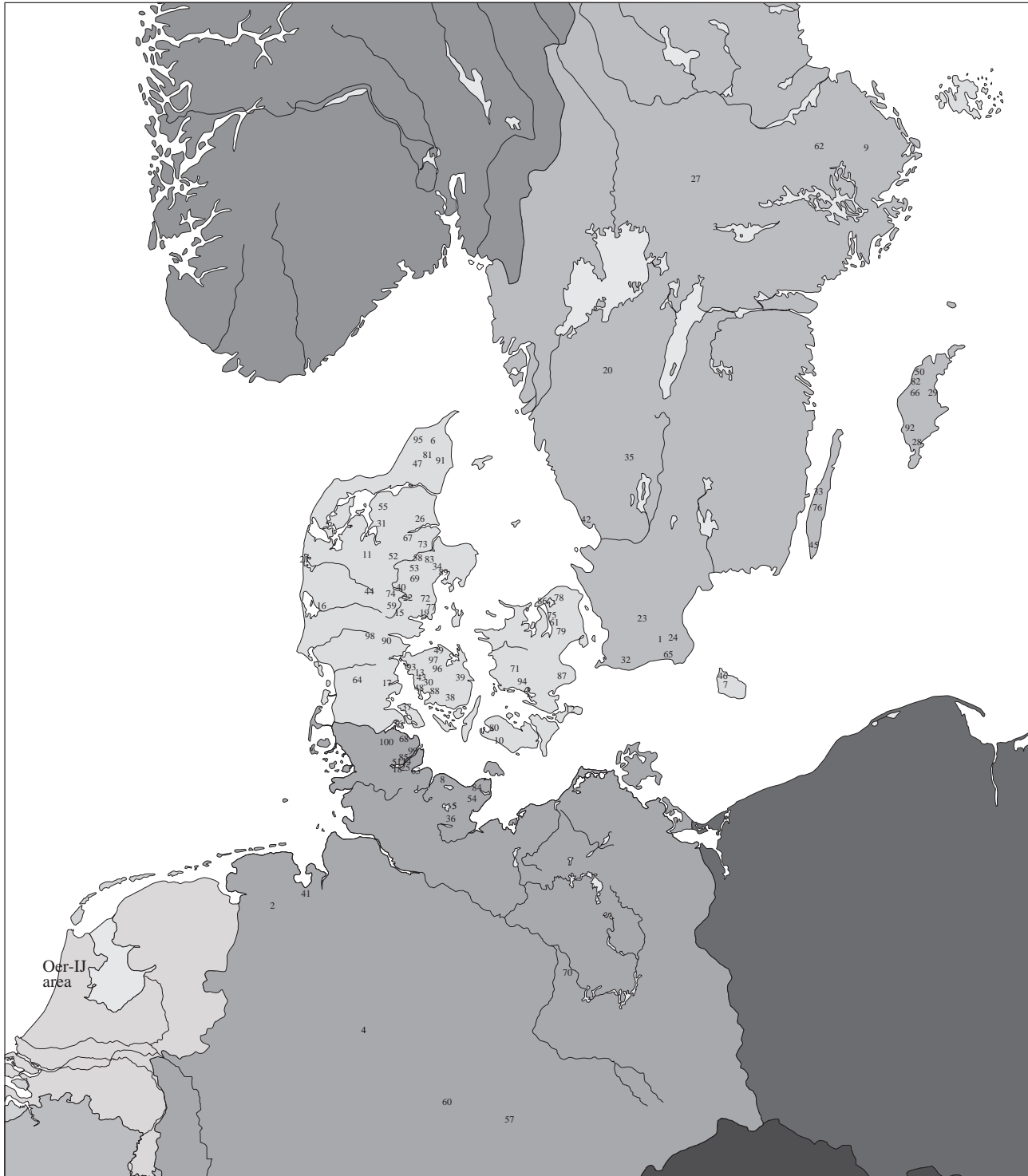


Figure 2.1 Map showing the 100 sites used in chapter two. 1: Åmossarna, 2: Apenteiche, 3: Äversta, 4: Bad Pyrmont, 5: Braak-Aukamper Moor, 6: Baggessvogn, 7: Balsmyr, 8: Barsbek, 9: Bokarn lake, 10: Brandstrup, 11: Broddenbjerg, 12: Budsene, 13: Bukkerup Langemose, 14: Büsdorf, 15: Dallerup Sø, 16: Dejbjerg, 17: Ejsbøl, 18: Esmark-Süderfeld, 19: Falling, 20: Finnestorp, 21: Fjaltring, 22: Forlev-Nymølle, 23: Gårdlösa, 24: Geel-Royum, 25: Glerup, 26: Grimsöbodarna, 27: Gudings, 28: Gudingsåkrarna, 29: Gummerup, 30: Gundestrup, 31: Hassle-Bösarp, 32: Hässleby, 33: Hedeliskær, 34: Hedenstorp, 35: Heilshoop, 36: Hjortspring, 37: Hundstrup, 38: Illemose, 39: Illerup, 40: Ipweger Moor, 41: Kanalgatan, 42: Käringsjön, 43: Kirke Søby, 44: Kjellerup, 45: Kleva, 46: Knarremose, 47: Kornumgaard, 48: Kragehul, 49: Krogsbølle, 50: Kyrkebys, 51: Lottorf, 52: Lundtoft, 53: Lyngaa, 54: Manhagen, 55: Nørrekær, 56: Nydam, 57: Oberdorla, 58: Paderup, 59: Porskær, 60: Possendorf, 61: Rappendam, 62: Rickebasta, 63: Rieseby, 64: Rødding, 65: Röekillorna, 66: Roma fen, 67: Rosbjerggaard, 68: Rüder Moor, 69: Sall, 70: Salzbrunn, 71: Sandby, 72: Sattrup, 73: Sem mose, 74: Sjørring, 75: Skaevinge, 76: Skedemosse, 77: Smederup, 78: Søberg Sø, 79: Sømose, 80: Sørup Moor, 81: Spangerholm Moor, 82: Stora Hammars, 83: Tangkaer, 84: Techelwitz, 85: Thorsberg, 86: Tibirke mose, 87: Toftegaardsmose, 88: Topkaer, 89: Torsager Dairy, 90: Tranbær Moor, 91: Trinnemose, 92: Tuna, 93: Turup bog, 94: Valmose- Rislev, 95: Varbrogaard, 96: Villestofte, 97: Vimose, 98: Vingsted Sø, 99: Wagersrott, 100: Wees.

## 2. WET OFFERING SITES IN NORTH GERMANY, DENMARK AND SOUTH SWEDEN: A THEMATIC APPROACH.

### 2.1 A GENERAL OVERVIEW AND SUMMARY OF OFFERING SITES IN NW EUROPE

The Oer-IJ area lies on the southwestern edge of the Germanic world,<sup>1</sup> therefore, an overview of NW Europe – although schematic or incomplete – is necessary for an understanding of the offering sites. One hundred offering sites were chosen for analyses from the Germanic world (figure 2.1). The sites are of different size and composition but all are located in a watery context. All hundred sites were interpreted as offering sites in the literature. Offering sites are known in the Germanic world, going back at least to the Neolithic. In this study the focus will be on the Pre-Roman Iron Age until the Migration Period (700 BC – AD 500). An overview of the offering sites of NW Europe can be approached in many ways. Because of the large amount of data and literature on this subject, completeness is an illusion. Furthermore, all inferences are made on the basis of published data, which is not always up to date or complete.

As there is a large body of literature not everything can be discussed. The classifications by Becker, Behm-Blancke, Geißlinger, Jankuhn and Stjernquist are, however, much referred to and will be given here. Emphasis will be put on a critical evaluation of the criteria they use and the associations they make. In this way the use of terms made by them and other researchers can be put into perspective.

Subsequently, the different offering sites will be discussed in a thematic way, following the main elements of an offering as set out in chapter 1.<sup>2</sup> In these thematic blocks different kinds of data will be used in a complementary way. None of these kinds of data are seen as more important than the other, but as different kinds of information on the same phenomena. It suffices to say that these different types of data all have their own merits and problems and can only be used in a critical manner. The classifications made by the different researchers will be reviewed in chronological order of research. In this way the development of this particular field of research becomes more clear.

#### 2.1.1 BEHM-BLANCKE 1957<sup>3</sup>

The classification by Behm-Blancke (1957) is based on the find spectrum of offering sites from North Germany and Denmark as described by Jankuhn in 1952. Behm-Blancke distinguishes five different types of offerings (figure 2.2). A problem with Behm-Blancke's classification is the lack of explication or coherence between the different criteria used to formulate the different types of offering sites. Type I is a social category; type II is a social or geographical category; type III is an object and social category and; type IV and V are object categories. Some types of offering sites show considerable overlap (I-IV, II-III and II-IV), while another (V) is set apart, although it also occurs in combination with the other types. Another striking feature of this classification is the linkage to specific CPS-agents and/or cults. This is done without much explanation; especially the naming of CPS-agents is something that should be done with caution if there are no inscriptions or images. The only justification given for this classification is that it is based on site descriptions made by Jankuhn. After the description of the two sites Possendorf and Niederdorla, the classification of the different types of offering sites directly appears, followed by the classification of the two sites discussed as type I. Although Behm-Blancke probably made this classification with a lot of unspecified background knowledge, it is strange how this classification is widely used, without any critical note. When I read the article so many researchers had used uncritically, I was surprised to find a nearly complete lack of theory and justification in the article. Probably this says more about archaeological practice than the quality of Behm-Blancke's work; however, it shows that a lot of work is still to be done.

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1 Todd 1975, Ch 1, Krüger 1976 a.o. fig 53 and 396 or Hiddink 1999, Ch. 1-3 for a discussion on why the Oer-IJ area is seen as part of the Germanic world, but also the difficulties involved with establishing the limits of the Germanic world. In this thesis, as a general background, the Germanic world is seen as highly informative.

2 See figure 1.2.

3 The classification is given in Behm-Blancke 1957.

classification	characteristics	site	CPS-agent	period
I. Family or relatives of a village offering: spring and autumn offering (Frühjahrsbittopfer and Herbstdankopfer)	pottery with food, domestic animal (parts), harvest products and tools, domestic objects and tools. And possible structures: wooden figures, stone heaps, hearths (with human and animal bones), wooden shafts, layer of sods and wattle work.	Possendorf, Niederdorla	Njord-Nerthus, Freyr-Freya (vegetative fertility cult)	100 BC - AD 200
II. Large tribal offering or central offering site.	especially of: ornaments (rings and beads), Roman coins and weapons.	Thorsberg	Thor, Sif, Tyr (Mars thingus), Ullr	AD 200 - 400
III. Boat offering of a large warrior community.	weapons and armour		war offering for God of shipping or Freyr	
IV. Special offerings. (peace-offering and votive offering)	pottery with women's hair, shoes, clothes, coins, beads and iron ingots	Thorsberg	chthonic god(dess) or idol cult	
V. Human offerings.	human (parts)	possibly Possendorf	Nerthus	

Figure 2.2 Classification of offering sites by Behm-Blancke, after Behm-Blancke 1957, 134-135.

#### 2.1.2 GEISSLINGER 1967<sup>4</sup>

classification	characteristic	site	CPS-agent	period
A. Weapon offering in peat bog	large amount of (iron weapons), central place in a natural, demarcated area	Kragehul, Nydam, Ejsbøl, Vimose, Illerup, Thorsberg, Skedemosse	tribal god	AD 150 - 700
B. Weapon hoard in river	One type of weapon	Schwaan		Bronze Age - AD 1300
C. Precious metal warlike (male) character	Weapons, horse gear, and drinking horns (male). High- aristocratic collective warrior band offering	Sösdala, Gallehus, Hasle-Bosarp, Åmossarna, Sjörup	'Königsheil'	AD 500 - 700
D. Bronze fibulae	In peat bog and after 700 on land. Individual offering (possibly female)	Butzke		AD 500 - 700
E. Family-possessions	Everyday-objects (possibly in same peat bog as A.) local	Vimose (wooden containers), Albersdorf	well-being, fertility	
F. Single anthropomorphic figures	Mainly bronze figurines (offerings or profane hoards)			AD 500 - 700
G. Ornaments and coins from precious metal	Ornaments, coins and cut-silver/gold, bracteates			AD 500 - 700
H. Bronze coins	1-1000 coins. probably hidden treasure		no CPS-agent	

Figure 2.3 Classification of offering sites by Geißlinger, after Geißlinger 1967, 87-124.

Geißlinger's study is one of the most extensive, considering a range of variables that can influence the interpretation of offering sites. Geißlinger's final classification is mainly based on the objects deposited, sometimes combined with their location (figure 2.3). Importantly, he distinguishes between different regions. In this way he shows that local traditions influence the type of depositions that are found in a specific area. The different types of deposition are not evenly distributed across the study-area.

Geißlinger not only looks at the type of object, such as ornament or coin, but also at its material component, such as bronze and gold. In this way he tries to distinguish between social groupings taking part in the offering.

<sup>4</sup> The classification is given in Geißlinger 1967.

There appears, however, to be a division between socially low families, which consist of male and female expressions, and aristocratic families, which are only defined by their male warrior component. Everyday objects are seen as representing complete families. All precious metal equipment or weapons (type B) are all seen as part of the male sphere. Gender archaeology was not yet a field of research when Geißlinger made his study.<sup>5</sup>

### 2.1.3 JANKUHN 1967<sup>6</sup>

Jankuhn's work is characterized by attention to theory and methodology. Jankuhn wants to further the research in offering sites by emphasising other parts of the offerings than solely metal finds. The link to his own theory is, however, less clear in his classification (figure 2.4). He considers offerings in peat environments, leaving out wells and rivers because Stjernquist and Törbrugge<sup>7</sup> had dealt with these. The spatial component of the offering appears to be the basis of the classification. His types are all explained through the use of a type-site, respectively Rislev, Rosbjerggaard and Nydam. The bone component is less clearly defined, although Jankuhn emphasises bones in his text. The bones in the different types of sites are explained in a similar manner. Jankuhn ascribes to all the different animals a specific meaning. For example, dogs are seen as related to persons. Horses are possibly connected to Freyr or Odin. Jankuhn is aware of the difficulties of linking specific gods or goddesses to specific animals but he sees also problems when these links are not acknowledged. Horses, cattle and sheep/goat were probably used in cult meals during which certain parts of animals were offered. Jankuhn does not link cattle and sheep/goat to any CPS-agent or mythical story. This is strange because they both occur in Northern Mythology. In the creation myth Gylfaginning the cow Auðhumla takes a prominent role<sup>8</sup>. And the god Thor rides a wagon drawn by goats.<sup>9</sup> According to Jankuhn pigs take in a rather peculiar position because they are seldom found in offerings, but they are seen as a sacred animal in later periods, associated with Freyr. The deposited remains of women, children and some of the men are seen as fertility offerings.

Jankuhn	characteristics	site
Simple peat offering sites	on the edge of an accessible moor within an agricultural landscape. No structures except covering with branches and multiple depositions during a considerable time. Bones of animals and humans, pottery, ornaments, stones and household tools	Rislev-Valmose (type site), Bukkerup, Hundstrup, Turup, Barsbek,
Places with special structures	animal and/or human bones with stone heaps, hearths, or fences/enclosure	Rosbjerggaard, Broddenbjerg, Braak, Hedelisker (because of weapons separated), Wagersrott, Vimose, Oberdorla,
Animal and human offerings in still-standing water	bones in open water	Nydam, Skedemosse, Illerup, Ejsbøl

Figure 2.4 Classification of offering sites by Jankuhn, after Jankuhn 1967a, 121-141.

5 I would propose that in certain contexts weapons could be seen as heirlooms or family related objects. Aristocratic families would otherwise be reduced to a one-dimensional male warrior ideology, instead of a combination of male, female and family as a social unit.

6 The classification is given in Jankuhn 1967a.

7 Stjernquist 1962-63, 5ff, and Torbrugge 1960, 6ff.

8 De Vries 1957, § 570 and §574. Snorri Sturluson 2001 [c. 1220], 11.

9 De Vries 1957, § 257 and §418. Davidson 1990, 27 and 76.

2.1.4 BECKER 1970<sup>10</sup>

Becker is very clear about what he wants to achieve. He wants to classify the different kinds of offerings that consist mainly of pottery. He bases his classification on type-sites that give their name to the specific classes (figure 2.5).

classification	characteristics	site	period
A Typ Skaevinge	pottery without bones in pits that cannot be explained in a profane manner	Skaevinge, Büsdorf	0 - AD 200
B Typ Varbro	large and small pots with broken bones (meals)	Varbrogaard	0 - AD 200
C Typ Lundtoft	large pots with animal (part)	Lundtoft, Topkaer, Baggesvogn, Sem mose, Tangkaer	200 BC - AD 200
D TypTibirke	small pots with only dogs	Tibirke mose, Toftegaardsmose, Brandstrup	0 - AD 200
E Typ Bukkerup	pot with a tethered leg of animal	Bukkerup, Turup, Gummerup mose, Lundsgaarde	100 BC - AD 400
F Typ Käringsjön	pottery with animal products	Käringsjön, Fjaltring	AD 200 - 500
G Typ Forlev	pottery and other objects arranged around stone heaps (primitive altars)	Forlev Nymølle, Rosbjerggaard	500 BC - 0
H Typ Rislev	dominated by bones (extra possible category)	Rislev-Valmose	0 - AD 400

Figure 2.5 Classification of offering sites with pottery by Becker, after Becker 1970, 147-164 and 1971, 33-49.

The types are based on the combination of pottery and finds – mainly bone (seven out of eight). Not so much differences in pottery as differences in bone assemblages appear to define the types. The types are clearly distinct from each other, but all offerings of different types are interpreted in the same way. Becker sees them as similar religious expressions in the form of peaceful farmer's rituals related to a fertility cult. Becker does not want to specify this any further because then it would turn into speculation. However, he is very clear in that to ignore the problem of religion is just as unsatisfying.

Although Becker is often mentioned by researchers who have pottery within their dataset, his classification is rarely used or explicitly referred to. It often looks as an obligatory reference and little research is undertaken to take Becker's analysis further, although he realised himself that still much has to be done.

2.1.5 STJERNQUIST 1973<sup>11</sup>

Berta Stjernquist's work on offering sites is characterized by a systematic approach of questions and answers. In 'Germanische Quellenopfer' she focuses on the question when a site becomes an offering site. She does this on the basis of the nature of the objects, their combination and context. Repeated deposition and deposition in water or with structures are considered as indications. What kinds of artefact indicate an offering site is less clear; bone and cult-objects are mentioned. The rather vague term 'qualified artefact' is also used, but this does not give any insight into why or what a 'qualified artefact' is. In her later work on Hassle Bösarp this problem is not completely overcome. There she defines four questions and possible answers for analysing the character of offering sites in peat bogs (figure 2.6).<sup>12</sup>

10 The classification is given in Becker 1970 and 1971.

11 The classification is given in Stjernquist 1973.

12 Stjernquist 1973, 23.

questions	possible answers
when did the offering take place	successive, at once
where did the deposition take place	in water, on the shore, on the surface of a peat bog
who performed the deposition	individual, collective
what idea stands behind the offering	thanking, request

Figure 2.6 Possible questions and answers put forward by Stjernquist, after Stjernquist 1973, 23.

Stjernquist does not include the nature of the artefacts as a basic question for the analysis of offering sites. Even though she started dividing the offering sites according to their most common artefact type – bog bodies, pottery, weapon, wagon, human figures, and human and animal bones<sup>13</sup>. It appears that these artefacts are automatically connected to ritual practices and do not need the same level of explication. The artefacts seem to speak for themselves. This self-explanatory character becomes more clear when the artefactual nature of the offerings is used as an important criterion for answering especially the last two questions. For example, in her analysis of Hassle Bösarps, it is assumed that the offering is a war-booty sacrifice partly on the basis of the presence of horse gear and the collective character is partly based on the deposition of human remains.<sup>14</sup> Furthermore, her table depicting the main types of offerings for the (Scandinavian) Iron Age are defined by artefacts (figure 2.7).<sup>15</sup>

	Dankopfer (Thank offering)	Opfer für Wohlstand (Propitiation offering)
Individual offering	?	pottery offering (food) small animal offering
Collective offering	war-booty offering (weapons etc.) Valuable cult objects	human offering large animal offerings Valuable cult objects

Figure 2.7 Classification of offering sites by Stjernquist, after Stjernquist 1973, figure 29.

Artefacts are linked to specific types of offerings without much discussion why this is the case. Just like the assumption that archaeologists will know what a qualified find is, there is a tendency to link certain types of artefacts directly to social groups and events. Such an approach can be seen in most classifications. There appears to be an intrinsic tendency in this type of research that people will recognise offerings by an inner quality of the artefacts deposited. However, in chapter 1 it has already been discussed that symbols/offering do not have an intrinsic meaning and that their meaning can only be investigated if a contextual analysis is used.<sup>16</sup> The answer may, therefore, not lie in defining beforehand what an offering should look like, but in considering the separate variables including patterns of similarity and difference with other contexts. An artefact becomes an offering only through its specific use in a specific context. Anything can become an offering, but because offerings are part of a symbolic system within a community/culture there will be limits and preferences. These could become clear in analysing the patterns of similarity and difference between contexts. Therefore, Stjernquist's approach of systematic questioning is in itself a good start.

#### 2.1.6 REFLECTION ON THE DIFFERENT CLASSIFICATIONS

This short excursion into the frequently quoted classifications does not do full justice to the work of the

13 Stjernquist 1973, 21-22.

14 Stjernquist 1973, 45.

15 Stjernquist 1973, 47 fig. 29.

16 See § 1.5.3 and § 1.6.1.

researchers. Classifications of offering sites are often based on the material and spatial component of the offering sites. As the data consists of archaeological finds this is not surprising. What is more remarkable is that a whole set of sociological and religious aspects are linked to these categorisations without a clear theoretical framework. Implicit assumptions are made about the relation between artefacts, social groups and religious practices. These classifications appear to be a mix of material, size, place, event, social grouping, folklore, classical sources and modern views on valuables with a limited consistency at most. This diffusion of criteria within the schemes may be due to the way the problem is approached. It appears that first the offering sites are lumped together on the basis of material criteria and, subsequently, are given a designation, which can encompass any other element. Type-sites are the basis from which extrapolations are made, usually focussing on one aspect.

The classifications are, however, often used by others without much comment. This is especially true for Behm-Blancke's 'Frühjahrsbittopfer' and 'Herbstdankopfer'. What is worrying is that after Stjernquist's article in 1973 there are few publications that have dealt with the general notion of offering sites. The discussion appears to have dissolved when there was still much to discuss. Later publications usually discuss one offering site and possibly related sites, but the general nature of offering sites is much less a topic. Nearly twenty years later there appears to be a renewal of interest. The focus is, however, on just one type of deposition – the war-booty sacrifices.<sup>17</sup> This discussion is not included here, because its focus is on one type of offering site with a very specific geography and timeframe. Furthermore, the discussion focuses on the warrior and warfare element in these offering sites and pays only cursory attention to other types of offerings, within the same sites.

To conclude, the different offering sites are very diversely constituted and overlap and divergence appears to be the pattern rather than background noise. Many offering sites fall within different categories made by the same (or other) researcher, making it even more difficult. Geißlinger comments on this problem: "... , daß jedes Opfermoor seine eigene Geschichte hatte und kein Einzelbefund verallgemeinert werden kann."<sup>18</sup> Still there are some patterns that can be observed, but perhaps a better way to approach the problem is not by starting with classifications, but as Stjernquist, start with questions.

In this study, the problem will be approached by using five thematic blocks (what, when, where, who and to whom) based on chapter 1.<sup>19</sup> No classification is made in advance, but the sites will be interpreted according to the outcome of the analyses. The question whether a site is an offering site is left out in chapter two, because others have written<sup>20</sup> on this subject and too much attention is going in that direction. All offering sites mentioned in chapter two are interpreted in this way by the researchers. Furthermore, all used sites consist of depositions in watery context, which are generally seen as less problematic.<sup>21</sup>

## 2.2 MATERIALITY OF THE OFFERING SITES

As mentioned before, offerings are religious rituals in which goods are exchanged between human-agents and CPS-agents.<sup>22</sup> The goods refer symbolically to the event and the related agents that invoke the need for an offering. Offerings consist of a selection from all available material culture. As offerings are goods with a symbolic component it is expected that not just anything could be selected for deposition. What was considered a suitable deposition in the Iron Age of Northwest-Europe is analysed here. This may not be an easy task in which the 'qualified finds' will just show themselves. As Struve remarks on some offerings: "Unter den hier aus verschiedenen Mooren aufgezählten Fundobjekten befinden sich keine, die von solcher Qualität sind, daß man von ihnen von vorherein sagen könnte, sie hätten sakrale Funktion gehabt."<sup>23</sup>

17 For example, Fabech 1991a, Ilkjær 2002, and Randsborg 1995, and the two large research projects 'Zwischen Thorsberg und Bornstein' and 'Jernalderna i Nordeuropa', respectively an ESF- and a Carlsberg Stiftung-project.

18 Geißlinger 1967, 97.

19 See figure 1.2.

20 For example, Bradley 1998 [1990] and Fontijn 2003.

21 For example, Geißlinger 1967 and Bradley 1998 [1990].

22 See § 1.5.2.

23 Struve 1967, 62.

WET OFFERING SITES IN NORTH GERMANY, DENMARK AND SOUTH SWEDEN

SITE	PERSON	ANIMAL	PLANT	NATURAL	TOOL	TOTAL of ontological categories	HOUSEHOLD/ AGRICULTURE	ORNAMENT	WEAPON	HORSE_GEAR	WAGON/BOAT	OTHER	STRUCTUR	total of subclasses of TOOL
Åmossarna	0	0	0	0	1	1	0	0	0	1	0	0	0	1
Apenteiche	0	0	0	0	1	1	1	1	0	0	0	0	0	2
Åversta	1	1	0	0	1	3	1	1	1	0	0	0	0	3
Bad Pyrmont	0	0	1	0	1	2	1	1	0	0	0	0	0	2
Baggesvogn	0	1	0	0	1	2	1	0	0	0	0	0	0	1
Balsmyr	0	0	0	0	1	1	1	0	1	0	0	0	0	2
Barsbek	0	1	1	0	1	3	0	0	0	0	0	0	1	1
Bokarn lake	1	1	1	1	1	5	0	0	0	0	0	0	1	1
Braak-Aukamper Moor	1	0	0	1	1	3	1	0	0	0	0	0	1	2
Brandstrup	1	1	0	1	1	4	1	0	0	0	0	0	0	1
Broddenbjerg	1	0	0	0	1	2	1	1	0	0	0	0	1	3
Budsene	0	1	0	0	1	2	0	0	0	0	0	1	1	2
Bukkerup Langemose	1	1	0	1	1	4	1	0	0	0	0	0	0	1
Büsdorf	0	0	0	1	1	2	1	0	0	0	0	0	0	1
Dallerup Sø	0	1	0	0	1	2	0	0	1	1	0	0	0	2
Dejbjerg	0	0	0	0	1	1	1	0	0	0	1	0	1	3
Ejsbøl	1	1	1	1	1	5	1	0	1	1	1	0	1	5
Esmark-Süderfeld	0	0	1	1	1	3	1	0	0	0	0	0	1	2
Falling	0	0	0	0	1	1	0	1	0	0	0	0	0	1
Finnestorp	1	1	0	0	1	3	1	1	1	1	0	0	0	4
Fjaltring	0	0	1	0	1	2	1	0	0	0	0	0	1	2
Forlev Nymølle	2	1	1	1	1	5	1	0	0	0	0	1	1	3
Gårdlösa	0	1	0	1	1	3	1	1	0	0	0	0	1	3
Geel-Royum	0	0	0	1	1	2	1	1	0	0	0	0	1	3
Glerup	0	0	0	0	1	1	1	1	0	0	0	0	0	2
Grimsöbodarna	0	1	0	0	1	2	0	0	1	0	0	0	0	1
Gudings	0	1	0	0	1	2	0	1	0	0	0	0	0	1
Gudingsåkrarna	0	0	0	0	1	1	1	0	1	1	0	0	0	3
Gummerup	0	1	0	0	1	2	1	0	0	0	0	0	0	1
Gundestrup	0	0	0	0	1	1	0	0	0	0	0	1	0	1
Hassle-Bösarp	1	1	1	0	1	4	1	0	1	1	0	1	0	4
Hässleby	0	1	0	0	1	2	0	0	1	0	0	0	0	1
Hedeliskær	2	1	0	1	1	4	1	0	1	0	0	0	1	3
Hedenstorp	0	0	1	1	1	3	1	0	0	0	0	0	1	2
Heilshoop	0	1	0	0	1	2	1	0	0	0	0	0	0	1
Hjortspring	0	1	0	1	1	3	1	1	1	1	1	1	0	6
Hundstrup	1	1	0	0	1	3	1	0	0	0	0	0	0	1
Illemose	1	1	0	0	1	3	1	0	1	0	0	0	0	2
Illerup	0	1	0	0	1	2	1	0	1	1	0	1	0	4
Ipweger Moor	0	0	1	1	1	3	1	0	0	0	1	0	1	3
Kanalgatan	0	0	0	0	1	1	0	0	0	1	0	0	0	1
Käringsjön	0	0	1	1	1	3	1	0	0	0	0	0	1	2
Kirkesøby	0	1	0	0	1	2	1	0	0	0	0	0	1	2
Kjellerup	0	0	0	0	1	1	0	1	0	0	0	0	0	1
Kleva	1	0	0	0	1	2	0	1	0	0	0	0	0	1
Knarremose	0	0	0	0	1	1	1	0	1	0	0	0	0	2
Kornumgaard	1	0	0	0	1	2	1	0	0	0	0	0	0	1
Kragehul	0	1	0	0	1	2	1	1	1	0	1	0	0	4
Krogsbølle	0	0	0	0	1	1	1	0	1	0	1	0	0	3
Kyrkebys	0	1	0	0	1	2	1	0	0	0	0	0	0	1

SITE														total of subclasses of TOOL
	PERSON	ANIMAL	PLANT	NATURAL	TOOL	TOTAL of ontologi- cal categories	HOUSEHOLD/ AGRICULTURE	ORNAMENT	WEAPON	HORSE_GEAR	WAGON/BOAT	OTHER	STRUCTUR	
Lottorf	0	0	0	0	1	1	0	0	0	0	0	1	0	1
Lundtoft	0	1	0	0	1	2	1	0	0	0	0	0	0	1
Lyngaa	0	0	0	0	1	1	1	1	0	0	0	0	0	2
Manhagen	1	1	0	0	1	3	0	0	0	0	0	0	1	1
Nørrekær	0	1	0	1	1	3	1	0	0	0	0	0	1	2
Nydam	0	1	0	0	1	2	1	1	1	1	1	1	0	6
Oberdorla	2	1	1	1	1	5	1	1	1	0	1	0	1	5
Paderup	0	0	0	0	1	1	0	1	0	0	0	0	0	1
Porskær	0	0	0	0	1	1	1	1	1	0	0	0	0	3
Possendorf	2	0	1	0	1	3	1	1	0	0	0	0	0	2
Rappendam	1	1	1	0	1	4	1	0	0	0	1	0	0	2
Rickebasta	0	1	0	0	0	1	0	0	0	0	0	0	0	0
Rieseby	0	0	0	1	1	2	1	0	0	0	0	0	1	2
Rødding	0	0	0	0	1	1	0	1	0	0	0	0	0	1
Røekillorna	2	1	0	1	1	4	1	1	1	0	0	0	1	4
Roma fen	1	1	0	0	1	3	0	0	0	0	0	0	1	1
Rosbjerggaard	0	1	0	1	1	3	1	0	0	0	0	0	1	2
Rüder Moor	0	1	0	1	1	3	1	0	0	0	1	0	0	2
Sall	0	0	0	0	1	1	0	1	0	0	0	0	0	1
Salzbrunn	0	1	0	0	1	2	1	0	0	0	0	0	0	1
Sandby	0	1	0	0	1	2	0	0	0	0	0	0	1	1
Sattrup	0	0	0	0	1	1	1	1	0	0	0	0	0	2
Sem mose	0	1	0	0	1	2	1	0	0	0	0	0	1	2
Sjørring	0	0	0	0	1	1	0	1	0	0	0	0	0	1
Skaevinge	0	0	0	1	1	2	1	0	0	0	0	0	1	2
Skedemose	1	1	0	1	1	4	1	1	1	1	0	1	0	5
Smederup	0	0	0	1	1	2	1	1	1	0	0	0	1	4
Søberg Sø	0	0	0	0	1	1	0	0	1	0	0	0	0	1
Sømose	0	0	0	0	1	1	0	1	1	0	0	0	0	2
Sørup Moor	0	0	0	0	1	1	1	0	1	1	0	0	0	3
Sprangerholm	1	0	0	0	1	2	1	0	0	0	0	0	1	2
Stora Hammars	0	0	0	0	1	1	0	0	1	0	0	0	0	1
Tangkaer	0	1	0	0	1	2	1	0	0	0	0	0	0	1
Techelwitz	0	1	0	0	1	2	1	0	1	0	0	0	0	2
Thorsberg	1	1	0	0	1	3	1	1	1	1	1	0	1	6
Tibirke mose	0	1	0	1	1	3	1	0	0	0	0	1	0	2
Toftegaardsmose	0	1	0	0	1	2	1	0	0	0	0	1	0	2
Topkaer	0	1	0	0	1	2	1	0	0	0	0	0	0	1
Torsager Dairy	1	1	0	0	1	3	1	0	0	0	0	0	0	1
Tranbær Moor	0	0	0	0	1	1	1	0	1	1	1	1	0	5
Trinnemose	0	0	0	0	1	1	0	0	1	1	0	0	0	2
Tuna	0	0	0	0	1	1	0	1	1	0	0	0	0	2
Turup bog	0	1	0	1	1	3	1	0	0	0	0	0	1	2
Valmose	1	1	1	1	1	5	1	0	0	0	0	0	0	1
Varbrogaard	0	1	0	1	1	3	1	0	0	0	0	0	0	1
Villestofte	0	0	0	0	1	1	1	0	1	0	0	0	0	2
Vimose	1	1	0	0	1	3	1	1	1	1	1	1	1	7
Vingsted Sø	0	0	0	0	1	1	1	1	1	1	0	0	0	4
Wagersrott	0	0	0	0	1	1	1	0	0	0	0	0	1	2
Wees	0	0	0	1	1	2	1	0	0	0	0	0	1	2

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Figure 2.8 The presence of specific ontological categories and subclasses of tool per site used in chapter two. 1= present, 0= absent/ unknown. The table is based on: Andersen 1994, Arbman 1945, Barner 1958, Becker 1970 and 1971, Behm-Blancke 1957 and 2003, Bemann and Bemann 1998, Engelhardt, [1863, 1865, 1867, and 1869]. Fabech 1990, Ferdinand 1961, Geißlinger 1967, Glob 1975, Hagberg 1967, Ilkjær and Lønstrup 1982, Jankuhn 1958 and 1967a, Krämer 1992, Kunwald 1970, La Baume 1952, Lund 2002, Müller-Wille 1999, Ørsnes 1963, Randsborg 1995, Schwabedissen 1951, Simonsen 1953, Stjernquist 1964, 1970, and 1973, Struve 1967, and Vebæk 1945.

However, if there was a preference for certain artefacts, this will be reflected in the content of offering sites. Therefore, a logical starting point is to look at the inventory of offering sites. In this way the spectrum of finds appropriate for deposition will become clear.

### 2.2.1 THE SPECTRUM OF OFFERINGS

A problem with publications on offering sites is that they tend to focus on the spectacular finds and shiny objects, such as metal artefacts. So-called uninteresting finds are left out or just mentioned, leaving their number and placement obscure. To overcome this bias as far as possible, figure 2.8 will only show if a certain type of object is present, not the actual number. The objects are classified according to the ontological categories of PERSON, ANIMAL, PLANT, NATURAL OBJECT and TOOL.<sup>24</sup> The ontological category tool has such a wide range, as it includes all man-made objects, that for analytical purposes it is further subdivided. This subdivision is based on the following domains of use: household/agricultural, ornament, weapon, horsegear, wagon/boat, structures, and other.

The overview of material from offering sites shows that a diversity of material is used in different combinations for deposition. This is in contrast with the earlier period of the Bronze Age. David Fontijn argues that the Bronze Age is marked as unique by selective deposition in specific places and consisting only of specific metal artefacts.<sup>25</sup> Although, the complexity of Iron Age depositions appears to refute such a selective practice, the diversity of the artefacts involved does not exclude selection altogether. Through the analysis of patterns in deposition, it may still be possible to define selective practices.

ontological category	PERSON	ANIMAL	PLANT	NATURAL OBJECT	TOOL
N sites	27 (21/12)	52	15	29	99

Figure 2.9 The number of offering sites with a specific ontological category. Person: (human bone/cult figure).

Figure 2.9 shows that if the depositions are ordered according to ontological categories all but one offering site (Rickebasta) have tools among their offerings. From this it can be concluded that man-made objects dominate the depositions. Furthermore, at least half of the offering sites contain animals and a quarter contains humans or cult-figures and/or natural objects. These are minimal numbers because peat bogs do not preserve bone. Plant is the category least recovered from offering sites. This may be due to the lack of preservation, but also to a lack of interest for this type of deposition in excavations, in which branches and the like are not always recorded as depositions.

N ontological category	1	2	3	4	5
N sites	31	33	24	7	5

Figure 2.10 The number of offering sites with a specific number of ontological categories.

When the number of ontological categories represented in an offering site is considered, it is striking that a third of the offering sites have only one ontological category (figure 2.10). These all contain tools, except for Rickebasta, which contains only animals.

<sup>24</sup> See § 1.4.1.2.

<sup>25</sup> Fontijn 2003.

There is no clear pattern of association between different ontological categories if we look at the whole spectrum of offering sites. All categories are found together in different combinations. What is more surprising is that, except for tools and animals, the other ontological categories occur only in combination with other categories, especially tool. And even then the combination animal-tool dominates. Therefore, it could be argued that tool followed by tool-animal are the primary choice for depositions<sup>26</sup> as they comprise more than half of the 100 offering sites.

The ontological category natural object is possibly better associated with the category plant and animals are better associated with tools. All other ontological categories are distributed in relatively even proportions. What has to be remembered is that in a general overview things may appear much more diffuse than the actual practice in a small area or time period as already noted by Geißlinger.<sup>27</sup> Detailed research is therefore important and the ontological category tool will be approached in this way.

The ontological category tool is divided into seven subclasses: household/agricultural, ornament, weapon, horse gear, wagon/boat, structure, and other.<sup>28</sup> This is done in order to be able to differentiate between the different spheres of practice in which these tools are used.

tool subclass	household/ agricultural	ornament	weapon/ equipment	horse gear	wagon/boat	other	structure
N sites	73	32	34	17	13	12	34

Figure 2.11 The number of offering sites with a specific subclass of tool.

From figure 2.11 it is obvious that household/agricultural tools are, by far, the most common type of tools deposited. They are deposited in three quarters of all the offering sites, while ornaments and weapons/equipment are only deposited in one third of all the offering sites. A third of the offering sites has one or more structures.

N subclasses of tool	0	1	2	3	4	5	6	7
N sites	1	37	35	12	7	4	3	1

Figure 2.12 The number of offering sites with a specific number of subclasses of tool.

Figure 2.12 shows that over two thirds of the offering sites contain one or two subclasses of tools and only a quarter includes three to six subclasses. All subclasses of tools occur in combinations in the total of offering sites. Except for wagon/boats, all subclasses of tools occur as the only type of tool deposited in an offering site. This does not mean that they all occur as single deposits in offering sites as other ontological categories may be present. There are three subclasses of tools that are always combined with other depositions – household/agricultural, wagon/boat and structure. Although household/agricultural tools occur in 23 offering sites with only tools, they never occur as the only type of object. This is in contrast to the smaller subclasses of tools – ornament, weapons/equipment and horse gear, which appear in a total of 10 sites as the only type of object in the deposition. In the offering sites with only tools there is preference for ornaments, weapon/equipment and horse gear. When the number of ontological categories rises, the number of ornaments declines faster than any other subclass of tool. In other words, ornaments, weapon/equipment and horse gear can stand on their own, but household/agricultural objects are always combined with other artefacts. Furthermore, horse gear is strongly associated with weapons. If horse gear is combined with other subclasses of tools, weapon/equipment is always present.

If the number of ontological categories is combined with the number of tool subclasses there appears to be a negative relation. The more ontological categories a site contains the less tool subclasses occur and vice versa.

26 Bog bodies are not taken into consideration here. Dieck (1986), Glob (1975 [1965]), Van der Sanden (1996) and others have done many studies on the subject.

27 Geißlinger 1967.

28 This division is an analytical tool based on the divisions made in articles on offering sites. It should be realised that this division is not based on cognitive studies, as is the case with the ontological categories.

As shown above, the category tool is diverse with different trends. The much smaller ontological category plant shows, however in a less pronounced way, also a trend. Although there are few sites with plant, one aspect stands out immediately: beside wood only one type of plant is present, – flax – something Jankuhn already noticed nearly 50 years ago.<sup>29</sup> From the whole range of domesticated plants, only flax has been recovered in 7 of the 100 offering sites.<sup>30</sup> In spite of depositions of agricultural tools, such as ploughs and planting sticks, not one grain of cereal has been recorded. The closest any offering gets to a grain is Forlev Nymølle with a quern stone.<sup>31</sup> The importance of flax in connection to religion can be detected in the historical sources. One of the names of the goddess Freya is ‘Horn’ which is related to flax.<sup>32</sup> Hagberg mentions the use of flax in a fertility ritual as described in the Flatöy book. “The housewife said ‘You, Volsve [stallion penis], have grown bigger, you are strengthened with flax and onion; may the Mornir receive this sacrifice; but you farmer, take Volsve to yourself.’ With these words she placed Volsve on the knees of her husband. A female thrall then said: ‘I would be sure to put it into me, if we two were alone!’”<sup>33</sup> Of the seven offering sites with flax only two contain horse bones.<sup>34</sup> A direct relation between the narrative and archaeology is impossible, but it gives an indication that flax was associated with fertility. This is in accordance with the general interpretation given to the seven offering sites.<sup>35</sup>

## 2.2.2 SETS OF OFFERINGS

An offering site can be viewed as a closed find complex, as was done by the first excavators and above, but in that way no justice is done to the complexity of most offering sites. If possible, it will be helpful to look at different find complexes within the offering sites. If offering sites are viewed as one complex, a symbolic connection is constructed between all the different finds, but if the finds were deposited at different occasions or in different combinations symbolic meaning would have varied and expressed symbolic connections between different categories of artefacts and/or different stages in the use of the offering site. Here I will restrict myself to the material sets; the timeframe will be considered at a later stage. Firstly, recurring sets in offering sites will be described, followed by divergent sets.

### 2.2.2.1 RECURRING SETS

Recurring sets can comprise combined artefact types or the deposition of one type of artefact at different places. First I will turn to the deposition of one type of artefact. As shown above, the ontological category tool is (nearly) the only one that is deposited on its own. In order to understand if in the broad category of tools there are specific sets that occur in different offering sites tools will be looked at in more detail. Thirteen of the 100 sites have only one type of tool and no finds from the other ontological categories. Three of these stand on their own: Gundestrup-silver cauldron, Lottorf-shoes, and Rickebasta-animal bones. The other 10 offering sites can be divided into weapon, horse gear and ornament depositions.

Figure 2.13 shows that the single deposition of ornaments and horse gear is both geographically and temporally restricted. Ornaments are deposited on their own in Early Iron Age Denmark and horse gear in the Early Germanic Iron Age in Sweden. This confirms Geißlinger’s observations on regionality and period-specificity.<sup>36</sup> Single depositions of weapons are less constrained by geography but all take place in the Roman Iron Age. The content of most groups of sites is fairly similar. The sites with ornaments are dominated by (loop)rings. Horse gear is less well defined as to what part of the gear is found.

29 Jankuhn 1958, 210.

30 Bokarn Lake, Esmark-Süderfeld, Fjaltring, Forlev Nymølle, Hedenstorp, Käringsjön and Oberdorla.

31 Lund 2002, 158.

32 Snorri Sturluson 2001[c.1220] *Gylfaginning*, 30 and *Skaldskaparmal*, 157.

33 Hagberg 1967, 81-82.

34 Bokarn Lake and Forlev Nymølle.

35 Arbman 1945, Becker 1970, 165, Behm-Blancke 2003, 267ff, 110, Fabech 1991b, 284, and Hagberg 1967, 71.

36 Geißlinger 1967.

ornament		horse gear		weapon	
Falling (D)	(500 BC - 0)	Åmossarna (S)	(AD 400 - 500)	Søberg Sø (D)	(AD 200 - 300)
Kjellerup (D)	(500 BC - 0)	Kanalgatan (S)	(AD 400 - 500)	Stora Hammars (S)	(AD 180 - 400)
Paderup (D)	(500 BC - 0)				
Rødding (D)	(500 BC - 0)				
Sall(D)	(500 BC - 0)				
Sjørring (D)	(500 BC - 0)				

Figure 2.13 Offering sites with one subclass of tool and no offerings from other ontological category. Country and date between brackets, D = Denmark, S = Sweden.

The sites with weapons are less uniform; Søberg Sø has few but different weapons, whereas Stora Hammars has many weapons of only one type. What is striking is that when we look at the individual sites there are large differences in amounts within the groups of single deposits. Two groups have one site with many artefacts – Falling (271), and Stora Hammars (142) – followed by the rest of the sites with only a few artefacts. It appears that especially ornaments and horse gear have only been recognized as offerings after a large deposit (also in different conditions) was discovered.<sup>37</sup> Smaller deposits are then interpreted in a similar way, broadening the range of what counts as an offering. The recognition of one or a few artefacts as an offering is difficult and usually depends on the uniqueness or splendour of the artefact, like the Gundestrup cauldron. However, there has to be awareness that single vessels, animals or other more everyday objects can also represent offerings. In other words, the same inferences made for metal should also be made for non-metal artefacts. These inferences have already been made for more complicated sets, to which I will turn now.



Figure 2.14 Bukkerup: T1 deposit of leg bones, rope and small vessel, after Becker 1971, figure 17.

The best examples of complex recurring sets of non-metal offerings are Bukkerup-Langemose and nearby Turup. Bukkerup has two sets of recurring depositions: “T1 consisted of the limb bones of a small cow, its tether in the form of a bast rope and wooden tethering peg, and a little drinking cup of clay, [11] (figure 2.14).

<sup>37</sup> Weapons were already considered as special deposits or offerings because of a long tradition of deposition with a peak in the Bronze Age. The deposits of horsegear are compared to similar deposits in dry conditions, especially Sösdala (Hagberg 1967, 74) which had 200 parts of horse gear.

T2 was a halved large pot together with a piece of raw clay, [6]. These two are sometimes combined T3, [5].”<sup>38</sup> This site also contained human bone. The small drinking vessels had contained a herbal drink that Andersen associates with a fertility drink. Andersen sees the offerings as symbols and he concludes that they “were agricultural sacrifices involving the more specific wish for fertility, as is emphasized by the fertility drink.”<sup>39</sup> A few kilometres west of Bukkerup is Turup bog. Here seven sets of depositions of a similar type were made, “each consisting of a small pottery vessel that had been placed on the bog surface together with the limb of a farm animal (5 cows, 1 bull and 1 sheep).”<sup>40</sup> Once these sets have been recognised in one offering site, single finds can also be related to a larger pattern. For example, at Gummerup, in a wetland area, a few kilometres east of Bukkerup a limb of young cow and a pot were deposited. It appears that in a small part of Fyn the same type of deposition were made at different places in a structured manner.

There are also recurring sets, which are not as strict as the ones at Bukkerup, but show a remarkable consistency. The combination of pottery, stones, wood and a range of bones or animal products are found in different offering sites. And although they all have similar features, they also have their own specificities. At Forlev Nymølle<sup>41</sup> nine find concentrations were found. Although they are all different, there are several elements that reappear in nearly all of the depositions. These are the deposition of pottery, pairs of ash wood sticks, and heaps of hand-sized stones (figure 2.15).

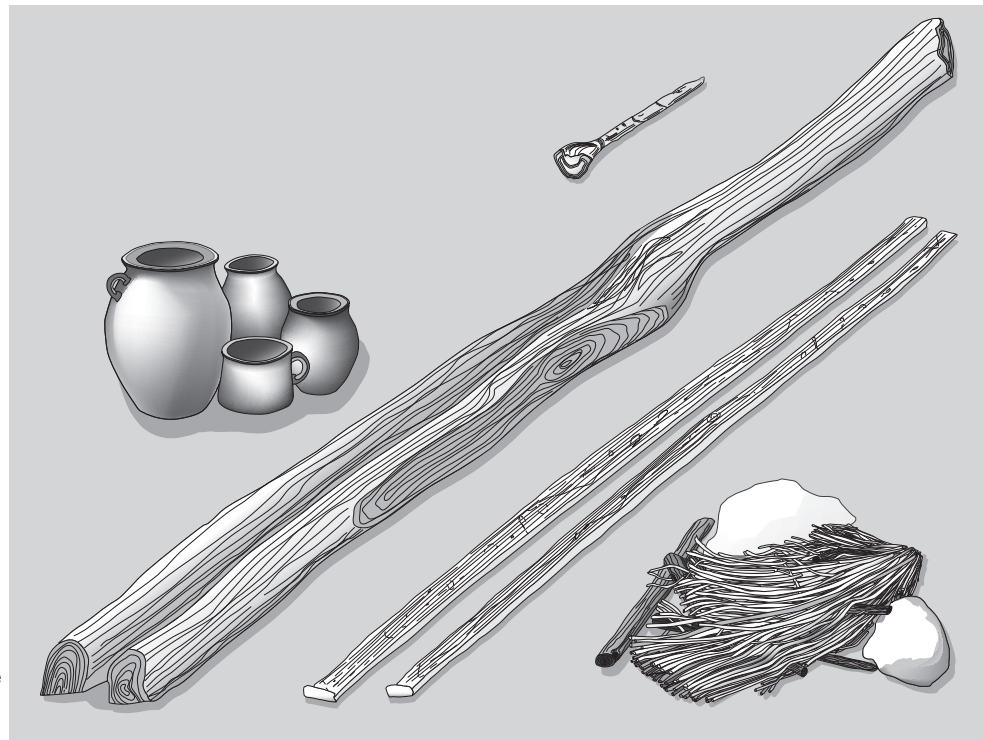


Figure 2.15 A collection of artefacts from Forlev Nymølle. The artefacts are not portrayed in situ and the vessels were broken when excavated. A selection of wooden artefacts and at the bottom right a bundle of flax with sticks and stones, after Becker 1971, figure 20.

Two thirds of the depositions also contained bones, but there is no clear pattern. Several different animals, in different combinations are deposited and there is also one polished human shoulder blade. Furthermore, a wooden cult-figure and a bundle of flax were laid in the water. At Käringsjön<sup>42</sup> over a long period of time people offered pottery which contained animal products, threw stones in the water and deposited large quantities of wood and wooden objects. And, as in Forlev Nymølle, several bundles of flax were deposited there. At Hedeliskær<sup>43</sup>, the early deposits contain wood, pottery, (large) stones, human and animal bones and a wooden phallus. At a later stage deposition of weapons took place. And at Rislev-Valmose a small amount of pottery,

38 Andersen 1994, 210 [number of sets].

39 Andersen 1994, 210.

40 Andersen 1994, 210.

41 Lund 2002.

42 Arbman 1945.

43 Van der Sanden and Capelle 2002, 77.

many animal and human bones, wood and wooden pegs, and stones were deposited.<sup>44</sup>

The offering sites just discussed are all interpreted as linked to fertility offerings. This is based on the presence of animal remains and pottery, possibly filled with animal products and ‘fertility’ drinks. Many researchers link the deposition of pottery and/or animals to fertility, usually with reference to Becker, Behm-Blancke and Jankuhn. The stones are – sometimes with reservation – seen as part of a stone-throwing ritual, as Arbman proposed.<sup>45</sup> The deposition of wood is mainly regarded in a practical manner as reinforcing the surface of the peat or as a cover of the deposit. There is, however, a lot of (worked) wood that cannot be explained in this manner. In this respect it is a problem that often only the species of wood is specified for the objects. The pieces of wood with a less obvious function are not identified and/or published. This leaves a large amount of data not fully explored. Especially if it is taken in consideration that many historical sources relate to the significance of tree-species in the Germanic world.<sup>46</sup>

Another type of recurring set is the weapon/equipment deposition. It is probably the best-known type of offering and has led to many detailed studies.<sup>47</sup> There are different types of recurring sets, ranging from specific types of weapons to the complete equipment of a group of warriors. The latter will be discussed here.

The main characteristic of the large weapon/equipment offerings is of course the large amount of artefacts that are deposited in a very short time span.

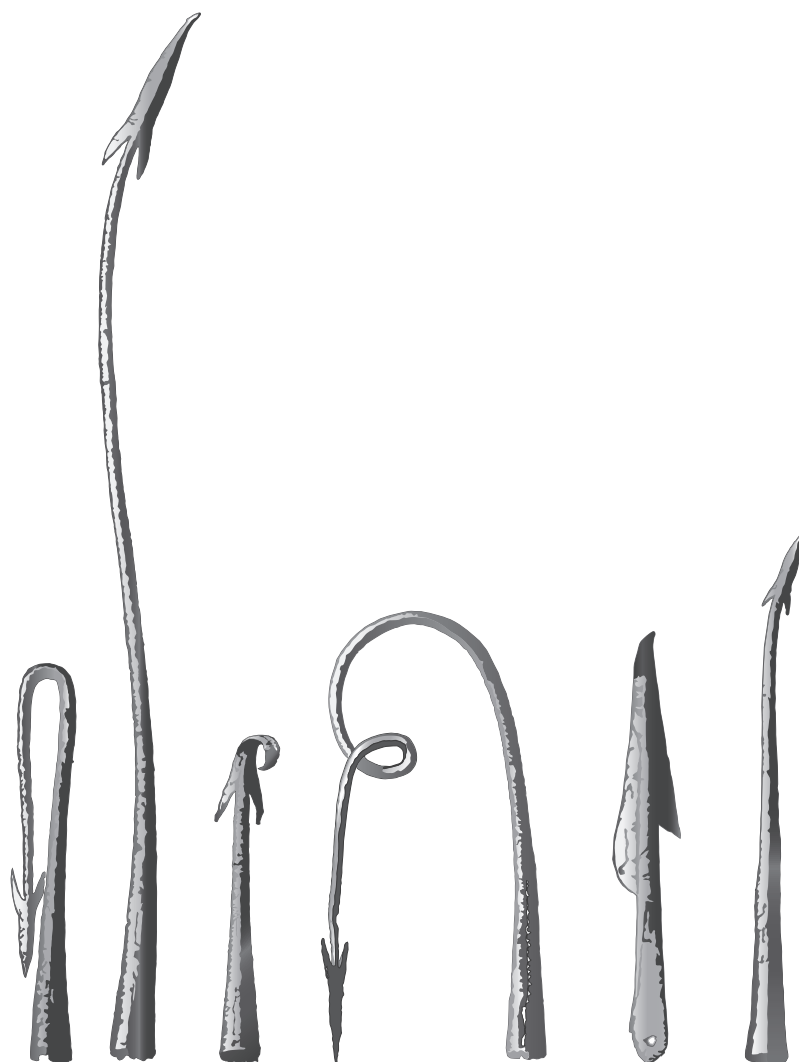


Figure 2.16 Mutilated weapons from Nydam, after Engehardt 1865, plate XI.

44 Ferdinand 1961.

45 Arbman 1945, 103.

46 For example, Snorri Sturluson, *Edda*, 115-117 and Tacitus, *Germania*, 9,10, 39, and 40.

47 For example, the more than ten volumes on Illerup Ådal by Ilkjær and Von Carnap-Bornheim published between 1990 and 2001.

The main artefacts are: swords, scabbards, lance- and spearheads, shields, arrows, horse gear, belt-fittings and other personal equipment such as fire-lighters, knives, coins and tools for maintenance. These large offerings are interpreted as war-booty offerings on the basis of several aspects. The most obvious is the large amount of weapons and equipment. These objects do not in themselves point to war-booty but could also have been the property of the offerer. However, there are a few historical sources that relate to the destruction and offering of the war-booty after a battle has been won.<sup>48</sup> Not only do these sources give an account of the practice of offering what has been won, they also mention the destruction of the artefacts. Many of the artefacts in war-booty offerings are mutilated before deposition, which is in agreement with the historical sources (figure 2.16). This mutilation of artefacts has also disqualified the hypothesis that these sites were battlefields. The damage is not consistent with battle but shows signs of purposeful destruction of the artefacts themselves.<sup>49</sup> Sometimes pieces of one artefact are found over considerable distances in the offering site (figure 2.17).<sup>50</sup>

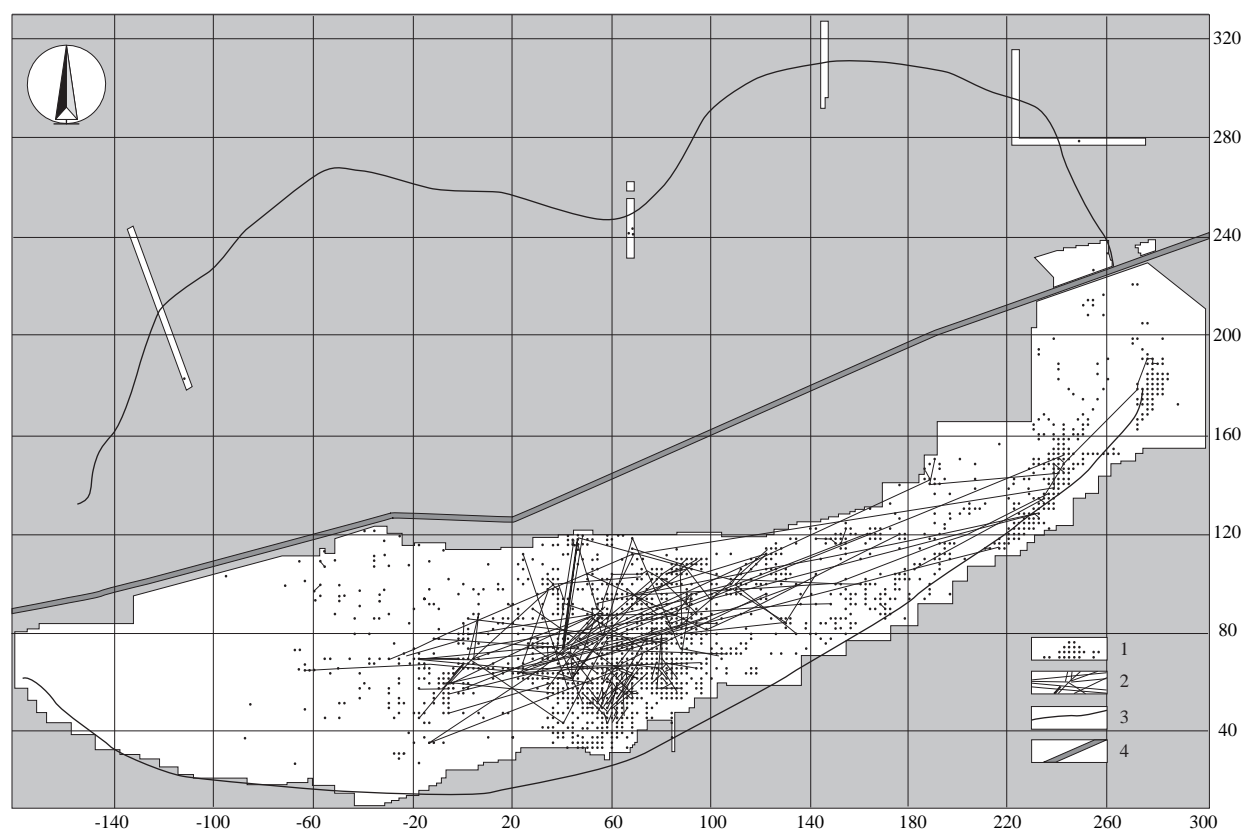


Figure 2.17 Illerup with each line connecting fragments of the same artefact. 1 = location of artefact, 2 = line connecting fragments from same artefact, 3 = circumference of the lake, 4 = Illerup river, after Ilkjær 2000, 28-29.

The weapons and equipment are also often found in bundles, which gives the impression of selective deposition instead of a battle.<sup>51</sup> Furthermore there is little evidence of slain warriors. Only a few war-booty offerings contain some human bone. Only at Skedemosse the remains of 50 individuals – young and old, men and women – have been found but here the relation to the weapons offering is not clear. An indication that the weapons were not of the local population is that most weapons are of a foreign type. The foreign weapons not only underline the possibility of invading warrior bands but has led researchers to reconstruct the different origins of invading groups per period.<sup>52</sup> Because the offerings are seen as representing the largest part of the invading group, some researchers have even reconstructed standard sets of weapon and equipment of warriors

48 I will not repeat these texts here because of their frequent quotation in publications on war-booty offerings, for examples Hagberg 1967, 64-66ff.

49 For example, Von Carnap-Bornheim 1999, 143 and 160, Ørsnes 1963, 235, and Randsborg 1995, 42.

50 For example, Ilkjær 1991, Fig 1.

51 Illerup, Skedemosse, Vimose.

52 For example, Ilkjær 2002, 67-73 and Randsborg 1995, 64-70.

and the different ranks by which they operated.<sup>53</sup> All the above shows that the war-booty hypothesis is in accordance with the evidence and should therefore be considered as valid. Skedemosse and Thorsberg are the only sites for which the evidence is not as straightforward. Furthermore the war-booty offering sites are often accompanied by other offerings that were clearly not part of the war-booty. These other offerings are often less thoroughly studied or even left out. I will return to this point when discussing divergent sets after I have discussed the less obvious recurring sets.

Some recurring sets or associations are nearly invisible because of the size of the depositions. This is especially true for the war-booty offerings. Although there are many different types of artefact, some stand out by their rarity and their absence from other types of offerings. Here I will discuss coins and boats.

Coins are often seen as a regular feature of offerings. For example in Behm-Blancke's classification coins are seen as characteristic of big tribal offerings and special/personal offerings. Of the 100 sites investigated here, only six contain coins, of which five are part of large weapon depositions.<sup>54</sup> The sixth site is Bad Pyrmont which is one of the southern sites that lies closest to the Roman Limes. The number of coins in Bad-Pyrmont, however, is limited to three silver denarii.<sup>55</sup> The over 250 fibulae are the main part of the deposition. This is in stark contrast to some of the offering sites in water within the Roman empire where hundreds or thousands coins are deposited.<sup>56</sup> Coins did circulate in the area but were in general not seen as proper offerings in themselves. The reason they occur in large weapon/equipment offerings is that they were part of what the warriors had on them and were deposited as part of the booty.<sup>57</sup>



Figure 2.18 Large oak boat from Nydam, after Müller-Wille 1999, figure 54.

There are only three offering sites with remains of large rowing boats – Ejsbøl, Hjortspring and Nydam (figure 2.18).<sup>58</sup> The boats are filled with or found amidst the weapon/equipments, but in Ejsbøl the boat is only represented by rivets, pieces of wood and oars. Although large weapon/equipment depositions are found

53 Ejsbøl and Hjortspring.

54 Illerup, Nydam, Skedemosse, Thorsbjerg and Vimose.

55 Müller 2002, 85.

56 For example, Conventina's well (England) with at least 13500 coins (Allason-Jones and McKay 1985, 50) or Zürich-Bahnhofstrasse (Switzerland) with 18000 coins (Müller 2002, 198).

57 For example, the coins at Illerup were contained in purses (Ilkjær 2002, 122).

58 Rüder Moor is left out because it contains canoe-like boats made of a tree trunk instead of composed rowing boats for larger crews. And Oberdorla is left out because it only contains paddles which probably belong to canoe-like boats.

in a large area, the three offerings with boats are relatively close together (maximum of 50 km apart). The time-range is much wider, spanning nearly a thousand years. The boats are seen as part of the equipment of (probably invading) warrior groups. Randsborg, however, also considers links with fertility rituals, because the boat is traditionally seen as related to fertility.<sup>59</sup> If boats were more generally related to fertility it is not clear why they are not found in deposits without weapon/equipment. Several interpretations of these boat depositions are possible, especially, at Ejsbøl and Hjortspring where the offerings were not confined to just the spoils of war. Here the offerings also contained many stones, thrown into the lake at the same time of the depositions. In Ejsbøl at least 1500 branches were cut and laid among the offerings. These two types of artefact are not directly linked to battle, but are also found among bigger weapon/equipment depositions, such as Skedemosse in Sweden. This association is not exclusive, for at sites such as Käringsjön and Forlev Nymølle stones and branches were also found among household and agricultural artefacts. As mentioned above, Arbman suggests the stones may be part of some ritual stone-throwing linked with fertility. This in turn would support Randsborg idea of a fertility ritual, although he does not make this link himself. If ships are, however, connected to fertility, it is strange that they are not found in other kind of offerings more directly related to fertility. Therefore, I would not link the boats of these three offering sites directly to fertility because of their more direct link with battle.

#### 2.2.2.2 DIVERGENT SETS

Diverging sets within offering sites could point to different and/or complex uses and meanings of the same place. Distinguishing between variations on a theme or different themes is of importance but will not always be clear-cut. One of the best examples of diverging sets (Bukkerup Mose) was also the best example of recurring sets. The difference between the sets (T1 and T2) is so marked because of their recurrence.<sup>60</sup> The different sets cannot be linked to specific periods or areas within the offering sites and sometimes they occur in combination. The specificity of the depositions makes it hard to see them as variations on the same theme. The combination of the depositions makes it difficult to see them as unrelated. Probably they are both referring to everyday activities: T1 the production and consumption of food, and T2 the production and life-cycle of pottery. It could be that the distinct depositions refer to specific activities and the combined depositions refer to the household as a unity. A better insight in the division of labour within the household, their place and their temporal dimension could lead to more encompassing explanations of this phenomenon.

At other sites it is possible to differentiate between different themes. Many of the sites with large weapon deposits also contain depositions of a household/agricultural nature. These different depositions relate to different domains of the lives of people. The household/agricultural depositions can be earlier (Ejsbøl, Hjortspring), contemporary (Skedemosse) or later (Illerup Ådal) than the weapon deposits. At all sites where this combination of depositions occurs, all attention is directed at the weapons and equipment; the other finds are mentioned but not analysed with a similar intensity. This makes the discussion of these complexes very difficult. What it does show, however, is that the users of the offering sites did not necessarily focus on one area of life.

#### 2.2.3 SIMILARITIES AND DIFFERENCES WITH OTHER FIND COMPLEXES

The spectrum of depositions was the starting point for the consideration of the materiality of offering sites. An important aspect of a selection of material culture is not only that it is a selection of all available material culture but that it is related to other find complexes in including and excluding ways. To understand the pattern of deposition in offering sites it is therefore important to understand patterns of deposition in other complexes such as settlements and graves. It would be too great a task to do this for all the offering sites used here, therefore only the results of some researchers concerned with this subject area will be evaluated here. In the chapter on the Oer-IJ estuary, where possible, the patterns between different find complexes will be looked at.

59 Randsborg (1995, 83): "The role of the ship in Nordic cult, in particular fecundity, is uncontested..."

60 T1 Limb, tether pole and small vessel. T2 half of a pot and lump of raw clay. Andersen 1994, 210.

The difference between the bone spectrum in offering sites and settlements has been examined for some time. Jankuhn and Stjernquist came to similar conclusions by comparing different sites, respectively in Germany and Denmark, and Sweden.<sup>61</sup> Dog and horse are over represented in offering sites. Stjernquist adds that the occurrence of human bones in offering sites differs from settlements where no human bones are found. The predominance of certain species, especially horse and dog, in offering sites is a recurring phenomenon and has been documented for many different sites. Jankuhn also emphasises the dominance of certain parts of animals especially heads and lower legs. This is also a widespread phenomenon, which has received much attention.<sup>62</sup> Geißlinger in his study of deposits from the Migration Period also looks at different contexts, especially hoards and graves.<sup>63</sup> He concludes that a greater diversity of artefacts is deposited in hoards but that the diversity of artefacts within a specific hoard is less than in the graves. Furthermore, artefact depositions in graves and hoards appear to exclude each other in specific areas and periods. Geißlinger does not think, however, that this exclusion or alteration of deposition context means that the ideas underlying these depositions can be exchanged in a direct way.

### 2.3 TIME FRAME OF THE OFFERING SITES

In chapter 1 different time frames – linear and cyclical – were introduced which were related to the permanency of the offering performed. Although the time resolution of offering sites is not very narrow, some of them can be analysed as belonging to a certain time frame.

#### 2.3.1 USE PERIOD OF OFFERING SITES

Most offering sites are dated in a very general manner only ascribing them to a certain period (figure 2.19). In most cases the reconstructed use period of the sites is longer than the actual use period. Even if this extension is taken into consideration, the use period of some offering sites is still remarkably long, sometimes involving Neolithic predecessors, as at Röekillorna and Thorsberg. It is very common for offering sites to be in use for over hundreds of years. This means that generations of people returned again and again to these places in the landscape to perform their religious rituals. In this way religious practice in certain wet places of the landscape achieves a permanency that does not immediately come to the fore if the lack of monumentality is taken into consideration. These offering sites can be viewed as cognitive monuments, which stand the test of time through memory and practice.<sup>64</sup> Although in every part of the area under study depositions took place in all periods, some areas witnessed peaks in certain periods. This is especially clear when the period of use of the offering sites is relatively short, as for example in Sweden in the fifth century AD or Denmark in the first two centuries AD. The use period of an offering site can tell us something about the long tradition of depositions in wet places, but this does not mean that similar practices took place throughout this period. For understanding continuity or change within depositional practices it is therefore more interesting to look at time frames within the use period.

#### 2.3.2 TIME FRAMES WITHIN USE PERIODS

When the first large offering sites were discovered at the end of the nineteenth century, it was thought that they were the result of one large action. Consequently, all analyses were done with this time frame in mind.

61 Jankuhn 1967a, 131ff and Stjernquist 1970, 90ff.

62 For example Hagberg 1970, 168, Behm-Blancke 2003, and Piggott 1962.

63 Geißlinger 1967, 86.

64 The long use of certain offering sites points towards a long tradition of ritual depositions within specific elements of the landscape. This involves not necessarily the same local group, but implies a recognition of wet places as suitable for specific ritual practices.

WET OFFERING SITES IN NORTH GERMANY, DENMARK AND SOUTH SWEDEN

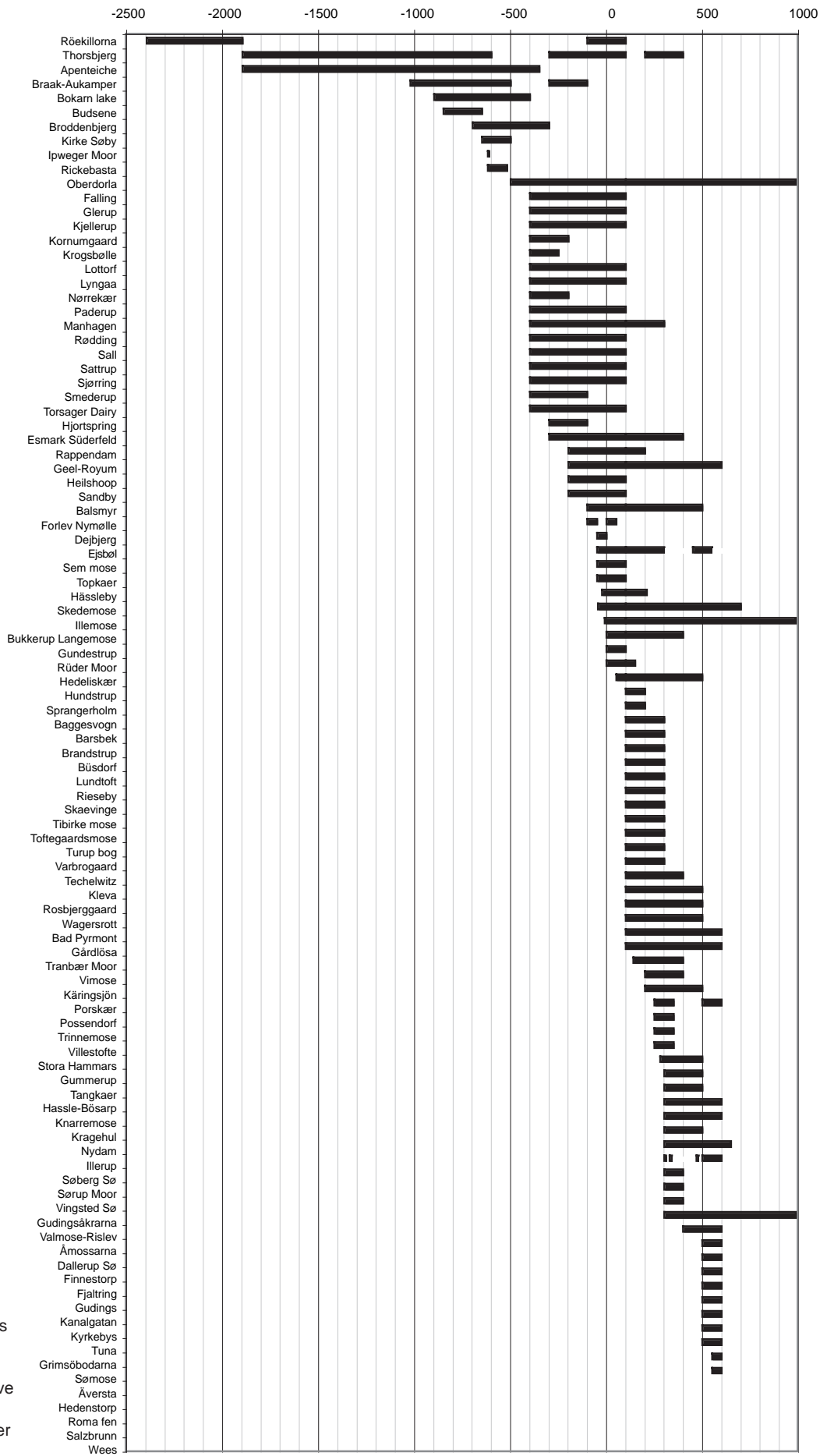


Figure 2.19 The use period of the offering sites of chapter two. At the bottom of the figure are five offering sites that have no clear date but that do belong to the period under study.

Jankuhn criticised this approach and showed that Thorsberg was not only used over a long period but also contained different types of offerings.<sup>65</sup>

Nowadays, many large offering sites are viewed as having several deposition horizons. These horizons are, however, not only of interest for the dating of sites and chronological schemes of artefacts. Of interest is, whether, the offering sites accumulated through time as part of cyclical or linear time frames. By this I mean, can the accumulation be expected, because of the cyclical nature of the depositions or is it the result of separate event-related linear depositions performed in the same place, or a combination of these options?

For the establishment of time-frames it is important that the deposition pattern is known. One of the most straightforward ways of establishing the rhythm of the depositions is dividing the total number of years of the use-period by the number of separate deposition events made. To define these patterns the frequency and fine dating of deposition is of importance. The archaeological record, however, is a palimpsest of actions through time. And different or multiple actions can not always be discerned archaeologically. C-14 or tree-ring dates of all the different deposition sets would be ideal, but costly and not always possible. Unfortunately, use-periods of sites are often referred to in periods instead of exact years and as a result tend to have a longer timespan than the actual use. The time frames of deposition events calculated in this way are, therefore, also longer. This has to be kept in mind and refinements should be made when possible.

Number of depositions per offering site	Time span of single deposition									
	un-known	1-5	2-20	5-100	10-57	16-28	33-150	50	50-500	100-500
1	-	-	-	-	-	-	-	2	-	34
1-4	-	-	-	-	1	-	2	-	3	10
1-20	-	-	-	1	-	-	-	-	1	-
4-6	-	-	-	-	-	-	1	-	-	-
7-9	-	-	-	-	-	2	-	-	-	-
5-50	-	-	1	-	1	-	-	-	-	-
20-30	-	-	1	-	-	-	-	-	-	-
22-52	-	-	1	-	-	-	-	-	-	-
100-114	-	3	-	-	-	-	-	-	-	-
several (?)	19 (12)	-	-	-	-	-	-	-	-	-
unknown	5	-	-	-	-	-	-	-	-	-

Figure 2.20 The number of offering sites with a specific time span within the use period of the separate depositions set against the number of separate depositions taken place within the offering site.

Figure 2.20 shows that the fewer separate depositions per site, the larger the time-span per deposition. This can partly be explained by the fact that most use-periods of offering sites are too broad. These large time-spans per deposition suggest depositions associated with specific events. But it should be remembered that single deposits always appear to fit in this category, rather than a cyclical time frame. The only way to establish if this is the right time frame to associate them with is to look at the single deposits as a group, instead of loose entities.

Of more interest are the offering sites where multiple deposits are recognised but the time span of the single deposit still exceeds fifty years. These depositions at one place occur less than once every generation and can therefore be placed in the category of event-related depositions. There are a few multiple depositions at

<sup>65</sup> Jankuhn 1967b, 22-23.

offering sites that have a time span of around 20 to 50 year. Here it could be the case that they occur once in a life-time and have a cyclical nature in that everyone can participate in them once or an event-like nature in that they take place with relatively common but irregular events.

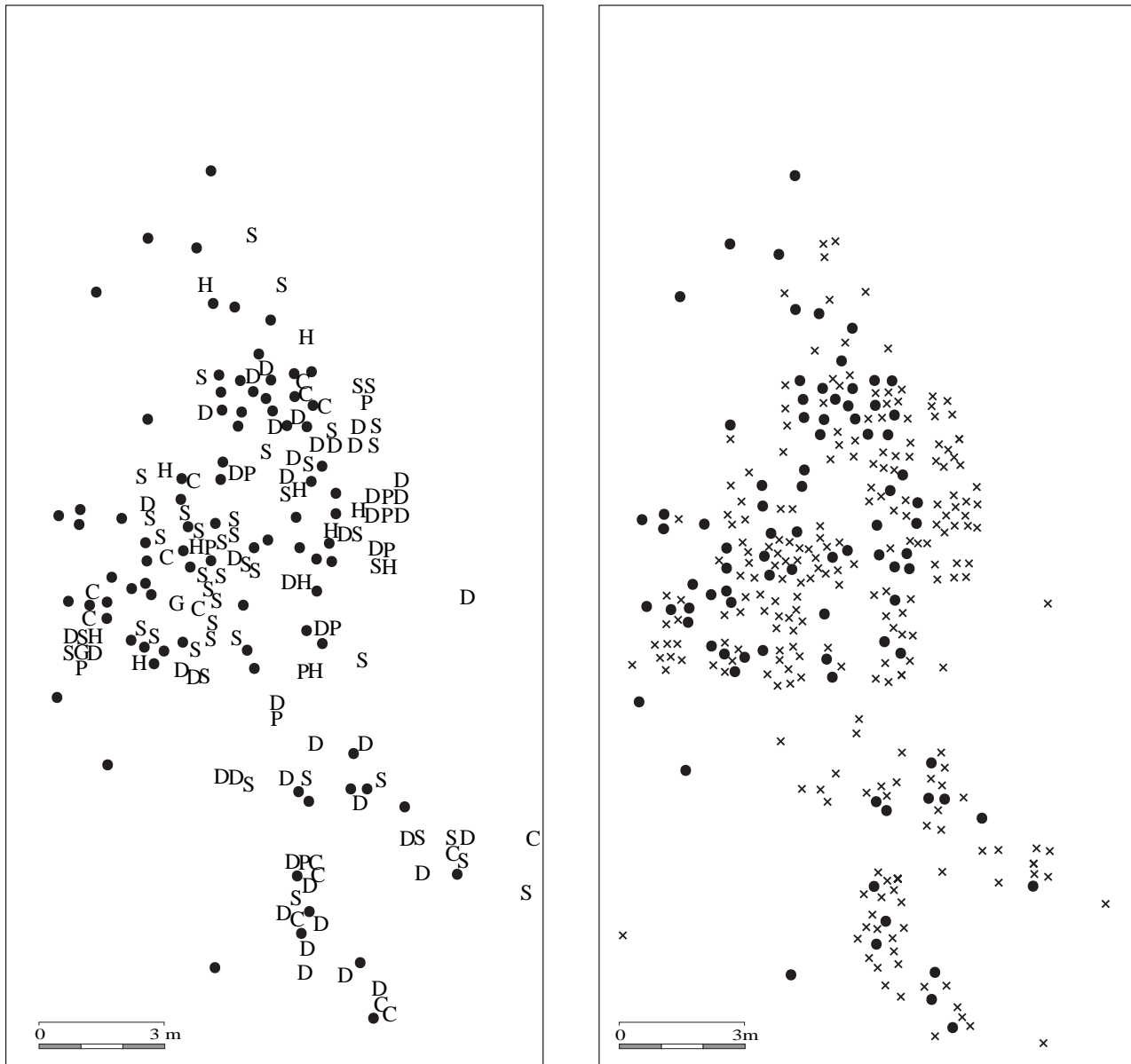


Figure 2.21 Schematic representation of Varbrogaard.  
 On the right side x = bone and • = pottery.  
 On the left side C = cattle, D = dog, G = goat, H = Horse, P = pig, S = sheep/goat, and • = pottery.  
 After Becker 1971, figure 14 and 14a.

There are three sites that clearly have a cyclical pattern (figure 2.21). At least a hundred times deposition events took place with an interval of 1 to 5 years at the same offering site. This shows that several generations were participating in the same practice every year. This could also be the case for six other offering sites but here the number of depositions was below fifty and the ranges too wide. At these sites in each generation at least one deposition event took place.

There remains a category for which the time-span per deposit event remains too uncertain to make assumptions. These sites consist mainly of offerings that could have been made at once or repeatedly over a long period. Through the analysis of the offering sites that can be ascribed to a certain time frame there may, however, be a possibility that less clear offerings can also be assigned to a specific category of use through time. This requires a more detailed study of the sites that are assigned to a either cyclical or event-related time frame.

2.3.2.1 CYCLICAL TIME FRAME

In order for a deposition to have a cyclical nature the same action has to be repeated at a regular interval. Three to nine sites show evidence of repeated action at regular intervals. Their time path will be analysed in combination with the recurring sets as discussed earlier.

The three sites with an obvious cyclical time frame are Käringsjön, Torsager Dairy and Varbrogaard. The main characteristic of these sites is that they comprise at least a hundred vessels that probably contained food products. Although not all the single pots are separated in a physical way, it is assumed that the vessels were deposited in separate events instead of during a single action. In Käringsjön and Varbrogaard small stones were found as part of the deposition and at Torsager Dairy and Varbrogaard animal bones were present. Bones have little chance of surviving in Käringsjön, but the remains of animal products were found inside the vessels.

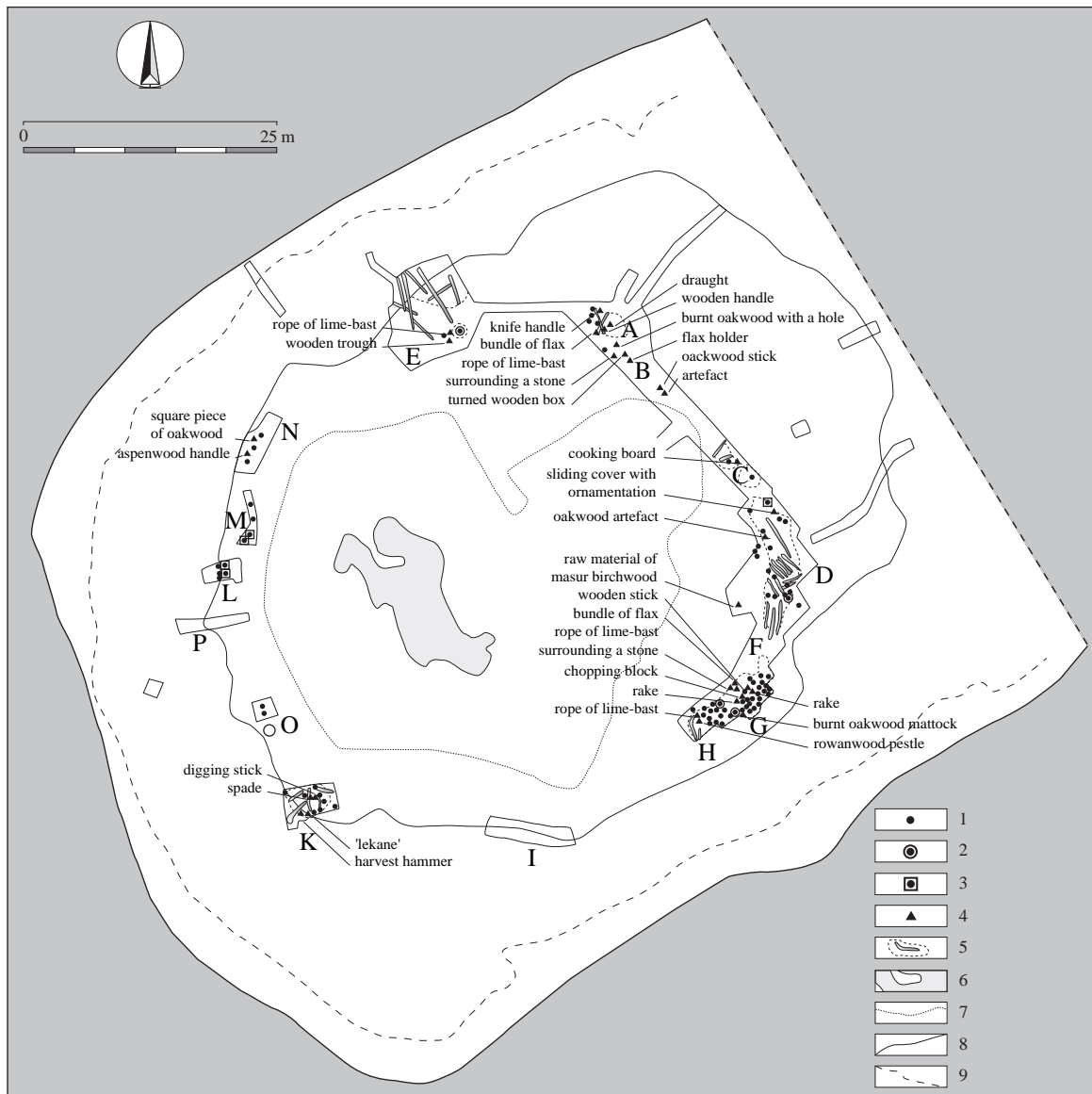


Figure 2.22 Käringsjön with the wooden objects explicated. 1 = clay vessel, 2 = clay vessel 3rd century AD, 3 = clay vessel 4th century AD, 4 = wooden artefact, 5 = concentration of branches, tree-trunks and stones, 6 = wet bog, 7 = borderline for permanent vegetation (1941), 8 = borderline for large birch forest (1941), and 9 = borderline for peat cutting in the beginning of the 20th century. After Carlie 1998, figure 4.

These sites could be interpreted as seasonal offering sites at which each year a deposition was made linked to the household/agricultural sphere. Whether they are fertility offerings or harvest offerings is less easy to determine. Anne Carlie has tried to make this distinction for Käringsjön (figure 2.22). She did this on the basis of the agricultural tools deposited. Tools for ground preparation, sowing and grazing consisting of a spade,

digging stick, mattock, part of a draught beam, tether peg, and swivel<sup>66</sup> marked spring offerings. Autumn/winter offerings were marked by tools for harvest, slaughter and baking consisting of a harvest hammer, rakes, flax holder, bundles of flax, cooking board and wooden trough for preparing food and drink.<sup>67</sup> Both in spring and autumn/winter the deposition of pottery for food and drink took place. These specific depositions were not confined to a specific place and it appears therefore probable that they occurred throughout the use period of the site. The number of the tools shows, however, that they were not part of every seasonal offering and therefore may be seen as part of more specific aims than just fertility or thanks-giving on the part of the offerer.

The six sites with a probable cyclical time frame are Bukkerup Langemose, Forlev Nymølle, Lundtoft, Rappendam, Sprangerholm and Turup bog. There appears to be a clearer pattern of separate depositions in these offering sites, with a minimum of five separate deposition areas. Pottery and animal bones are the main characteristics of these sites, except for Rappendam, which contains 40 wheels and wood depositions. The offerings made are recurring combinations that show some form of standardisation within offering sites. This indicates that not only repeated offerings took place at these sites but also repeated practices. Similar practices recurring at least once every generation would also indicate a cyclical time frame for these depositions. It is even probable that these depositions took place more often, if we take into consideration that the use period is based on archaeological periods instead of exact dating. Narrowing the use period would make the cyclical character of these offerings more probable. Furthermore, the standard deposition per site appears to point in the direction of a prescribed ritual instead of a ritual that is a reaction to a sudden event. This in contradiction to the opinion of Lund who sees in the absence of yearly offerings an indication that they were linked to certain events as the collective offering of a small community.<sup>68</sup>

I think that these six sites can be seen as evidence for seasonal rituals probably linked to the household/agricultural sphere. It is of interest that all the sites related to a cyclical time frame are linked to the household/agricultural sphere through their material component. An interpretation of these sites as seasonal offering sites appears therefore plausible. Following Carlie, three sites show a link to a specific season. Bukkerup Langemose and Rappendam could be spring offerings, with respectively tethering pegs and ploughs. Forlev Nymølle could be seen as an autumn/winter offering with a flax bundle and a quern stone.

#### 2.3.2.2 LINEAR TIME FRAME

The depositions most directly related to a linear time frame are those that occur only once at a specific place; 34 of the 100 sites studied follow this pattern. These sites all have a use-period of at least a hundred years. This time frame is of course not related to past reality but to present-day dating systems. These single depositions probably took place during a short interval. The gathering of the artefacts for the deposition may have taken a longer time, but many depositions are relatively small with only a few artefacts. Most of these depositions appear to have been made on a personal/family level, related to personal events. This interpretation is especially valid for the small ornament offerings, such as Paderup and Kjellerup but could also be applied to the small weapon or horse gear offerings, such as Søbørg Sø or Åmossarna.

There are eleven sites that appear to have a different linear time frame.<sup>69</sup> These are the sites with a few separate depositions that do not take place at least once every generation of people. The depositions can be separated by as many as seven generations (around 175 year). This shows a remarkable consistency in the use of a place that often has no external markers. Of interest is that these eleven sites all contain weapons and sometimes ornaments and/or horse gear. This is in stark contrast with the sites that had a cyclical time frame.

Illerup is one of the best examples of an offering site with a long use-period but short periods of deposition. This site was in use over a period of 300 years. Three large weapon depositions were performed around the years AD 200, 230 and 375, followed by the deposition of different types of artefacts in the fifth century. The weapon depositions are interpreted as discrete events taking place in a very short time. This is especially clear for the site Illerup-A, where pieces of mutilated objects were fitted together that were scattered over hundreds

66 A swivel is a tool to roll string or rope upon.

67 Carlie 1998, 29.

68 Lund 2002, 195.

69 Balsmyr, Ejsbøl, Finnestorp, Gudingsåkrarna, Hassle-Bösarp, Illerup, Knarremose, Kragehul, Nydam, Porskær, and Vimose.

of metres. The time frame of the offering site suggests that depositions took place on a linear time path, related to a specific event, such as a victory over invaders. It is, however, not clear how long the interval was between the battle and the deposition. There are several indications that some time may have passed between the two events. First, it took some time to collect all the weapons and equipment, because it is thought that the battle did not take place at the offering site but on a battlefield.<sup>70</sup> Second, some of the artefacts show signs of exposure before having been deposited. It is not clear if this exposure was a consequence of the time it took to collect all artefacts or if the offerers waited for a specific moment. Bemann and Bemann propose the latter for Nydam.<sup>71</sup>

### 2.3.2.3 SUMMARY OF THE TIME-FRAMES

The different time frames – linear and cyclical – are not necessarily separated within offering sites. Especially large sites such as Skedemosse and Thorsberg appear to contain different types of offerings. Unfortunately the non-metal depositions are less thoroughly published. It is therefore not easy to understand the relation to the metal depositions. Furthermore, at many sites separate depositions cannot be separated archaeologically, rendering it impossible to say anything about the character of their time frame. However, if we extrapolate from the sites with clear cyclical or linear time frames it becomes clear that offerings with animals and household/agricultural artefacts but without weapons appear to belong to a cyclical time frame, whereas the offerings dominated by weapons were more related to a linear time frame.

## 2.4. LOCALITY AND PLACEMENT OF THE OFFERING SITES

The religious nature of depositions is often validated or refuted on the basis of topography. This is better known as the dry or wet debate. As this study is limited to the offering sites in wet contexts, the designation ‘offering’ appears less problematic. Many researchers have chosen to see offerings as the most likely explanation for artefact complexes in wet contexts.<sup>72</sup>

As stated in chapter 1, the locality of the offering site has to be accessible to both the offerer (giving) and the CPS-agent (receiving). The association between certain CPS-agents and watery places is well known in archaeology from the Late Iron Age and the Roman Period, for which specific deities can be linked to specific waters and specific depositions. As literacy was there from an early period onward, most of these come from the Celtic region, like Sequana associated with the source of the Seine.<sup>73</sup> Although this example is not taken from the research area, there are some later historical sources, which make the same kind of links for the Germanic world, for example, Forsetti’s spring.<sup>74</sup>

The association between the CPS-agent and water can refer to a specific locality, like Forsetti, but also to a more general idea of watery place, like Aegir who is linked to the sea and his nine daughters, the waves.<sup>75</sup> Without the aid of inscriptions, linking named CPS-agents to specific localities appears to be unfeasible for archaeology. What appears to be clear, however, is that certain CPS-agents were linked to water and could be communicated with at these places. Therefore it will be necessary to analyse what kind of deposition took place in what kind of watery place and if specific locations are of importance.

### 2.4.1 WHAT KIND OF WATERY PLACES?

The type of wet context in which an offering takes place is nearly always obscured. Through the years the

70 The absence of large quantities of human bones, for example at Illerup, Hjortspring and Nydam seem to indicate that these places are not the battle sites.

71 Bemann and Bemann 1998, 318.

72 Jankuhn 1967b, 6.

73 Green 1999 [1996], 28.

74 Davidson 1990, 171.

75 Davidson 1990, 128-129.

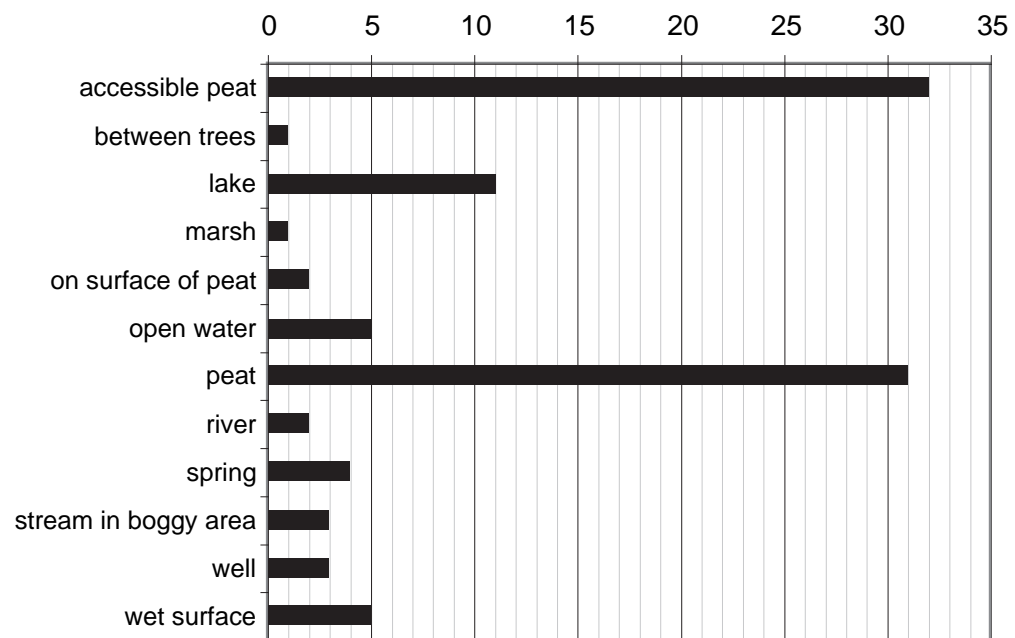


Figure 2.23 The number of offering sites with a specific topography. The topography peat is used when no specific description of the site at the time of deposition is made.

landscape has changed and many of the so-called bog finds were not deposited in bogs but open water. Reconstructing the environment at the time of deposition is therefore of the utmost importance. Old, small or unexcavated offering sites often lack this kind of information, but nowadays it has become standard practice to reconstruct the environment when possible.

Figure 2.23 shows that the largest part of the offerings took place on accessible peat. In this kind of place mostly animals and household/agricultural tools were deposited. This is also the environment in which most of the hearths and stone platforms were made. Accessible peat is an environment between land and water where the seasons determine whether it belongs more to land or to water. The offering sites were close to settlements and some of the peat bogs show more utilitarian uses such as peat or iron-ore extraction. The use of these offering sites for more everyday activities has also been noted by some researchers for other topographies, such as lakes. For example, at Illerup and Oberdorla there is evidence of fishing in the form of iron fishing hooks and fishing equipment.<sup>76</sup> These everyday tools are not regarded as part of the offerings on archaeological grounds.

Weapon/equipment offerings appear to take place in open water, with a preference for lakes. These offerings of shiny metal were not on show but taken away from view. This is in contrast with the war-booty offerings in the north of France, which held an element of display.<sup>77</sup> These lakes were, however, also used for the offering of animals and household/agricultural tools. No clear pattern can be distinguished and a general idea of wetness appears to have been of importance. Only the scarcity of river locations is remarkable, because they are a well-known context for deposition in southern Germany and the Celtic area.<sup>78</sup>

#### 2.4.2 STRUCTURING PLACE

Offerings take place, not space. This place is not always directly recognisable as the offerings disappeared into the water. Perhaps reflections were visible, if the water was clear, or they would remain exposed for some time before they sank or were overgrown by peat.

<sup>76</sup> Behm-Blancke 2003, 24, and Ilkjær 2002, 140-142.

<sup>77</sup> For archaeological examples, Gournay-sur-Aronde and Ribemont-sur-Ancre (Brunaux 2000 [1995]). For textual example, Caesar, *The conquest of Gaul*, VI.17.

<sup>78</sup> For example, Torbrüge 1972, Fitzpatrick 1984, and Brun 2000.

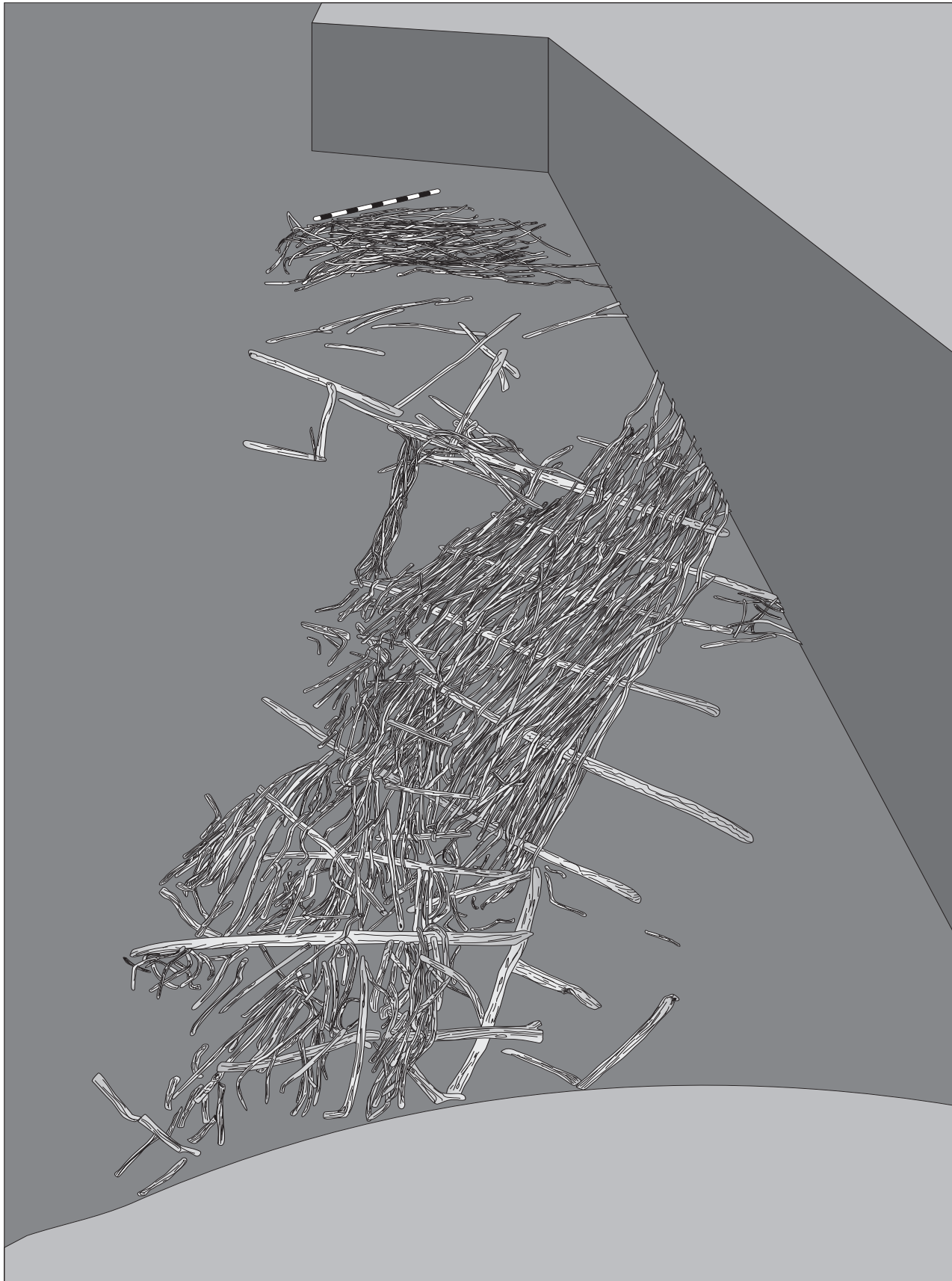


Figure 2.24 The remains of a wattlework fence at Oberdorla, after Behm-Blanke 2003, plate 6.1.

It should be taken into consideration that visibility of what had taken place was not always necessary or desired. Some depositions were put in pits in the peat that would have been covered quite soon<sup>79</sup> or thrown in the middle of lakes. It means that recognition of many offering sites in the past depended on cognitive actions – memory and story telling. This lack of buildings confirms Tacitus' views that the Germans did not built walls for their gods.<sup>80</sup> The lack of buildings, however, does not mean that offering sites were always without permanent structures. A third (34 of 100) of the offering sites have structures that emphasised the offering place. The way in which these structures were made varies considerably, ranging from rows of stones and/or poles to platforms, wells and wattle work (figure 2.24).<sup>81</sup>

Figure 2.25 shows that the occurrence of different types of structure does not appear to be limited by time or geography, except for wells (3) that occur only in Denmark before the Roman Iron Age, and wattle work is not known from Sweden. There are only very slight indications for regional traditions or lack of tradition. The sites in Germany are very diverse, combining different structural elements, while in Denmark there are fewer combinations and a preference for stone heaps, hearths, wattle work and wells. There are only six sites from Sweden, which show no particular preferences.

Denmark		Germany		Sweden	
hearth	3	pit with poles and stone floor	1	hearth	1
pavement stone	1	platform with poles or stones	2	hearth and poles	1
pit under stone heap	1	poles or posts	3	platform	2
poles	1	stone and pole row	1	poles	1
stone heap	5	wattle work	1	stone heap	1
wattle work	3	wattle work and poles or stones	3		
well	3				
total	17	total	11	total	6

Figure 2.25 The number of offering sites with structures arranged per country.

Although the making of a structure can be an act of offering in itself, the structures are always accompanied by a variety of depositions. The distribution of the different ontological categories in offering sites with structures is, however, not similar to the general distribution of all offering sites. All categories, except tool<sup>82</sup>, are over-represented, with plant and natural object being represented twice as often as expected. Interestingly, all flax belongs to offering sites with structures (of different types). There is no clear pattern between the type of structure and the different ontological categories.

If the subclasses of tools deposited at sites with structures is taken into consideration it becomes clear that there was not so much a preference for depositing certain types of tools as quite the reverse. Three types of tools – ornaments, weapon/equipment and horse gear – are underrepresented by 30 to 50 percent. Weapons accompany ornaments and horse gear at these sites, which narrows the distribution of these types of offerings in combination with structures. Furthermore, in three of the six offering sites the weapons deposited are few and from an earlier date than the structure. In other words, the seemingly prestigious subclasses of tools with a high metal count and military connotation were not emphasised by structures but deposited in a natural environment.

79 The condition of the artefacts indicates that they were not exposed for long and were covered by water or redeposited peat.

80 Tacitus Germania IX.

81 The chalkblock at Possendorf is not counted as a structure, because it is a natural feature, although it can be seen as a focal point.

82 The ontological category tool is always evenly represented because 99 percent of the offering sites contain tools.

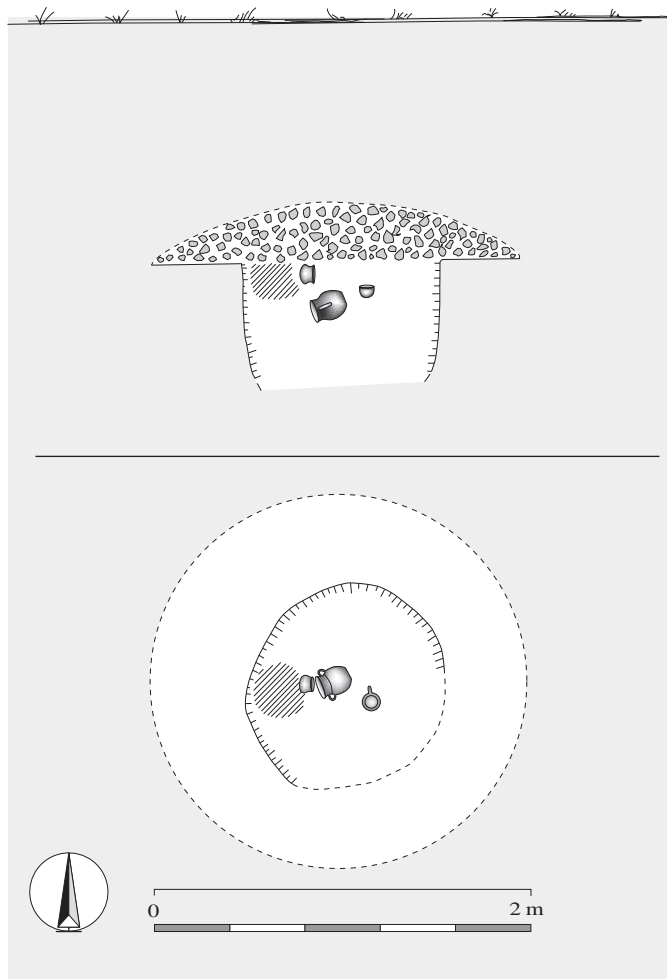


Figure 2.26 The pit with offerings covered by a stone heap at Skaevinge. The hatched area contains a broken vessel, after Becker 1971, figure 12.

#### 2.4.3 DIRECTION

Most structures appear to emphasize the place of deposition (figure 2.26), such as wells and platforms whereas other structures give the offering site direction through the use of rows of stones or poles. Unfortunately the direction of the rows is rarely given. This is partly due to the early date of excavations when sightlines did not get the attention they get nowadays. However, this situation is changing, such as at Ipweger Moor. Here a platform was made on the south side of a road with at the south side of the platform an east-west row of poles enforcing the end of the platform and a large upright post emphasising a southern direction.<sup>83</sup>

Furthermore, the place of the depositions themselves can also give direction to a site and early excavated offering sites can be re-evaluated in this way. Anne Carlie has looked at the offering site Käringsjön.<sup>84</sup> She argued that the depositions started in the (south-)eastern part of the lake and in a lesser degree to the north and shifted after a century towards the western side of the lake. Carlie links this to the sunrise-east and the sunset-west. Although it is an interesting interpretation, the question that is less easy to answer is: did they offer facing the sun or with their back towards the sun? If they were facing the sun Carlie's analysis would have to be turned 180 degrees, but nonetheless the observations remain of importance. In this case I would suggest that, if their offering were linked to the sun, they would have faced the sun when they made the depositions, especially, because the small lake was in a wooded area and sightlines would have been easier across the lake.

The connection between rituals/offerings and the seasons has been attested for some time, but there is still little attention for sightlines in offering sites, which could point to celestial phenomena related to the seasons. The spatial dimension of time would be much more obvious to a people that measured time by the movement of the celestial bodies. The spatiality of offering sites should therefore be studied in more detail. Only for 16 of the 100 offering sites the placement of depositions in certain parts of the peat bog or lake have been published.

83 Krämer 1992, 110-112.

84 Carlie 1998.

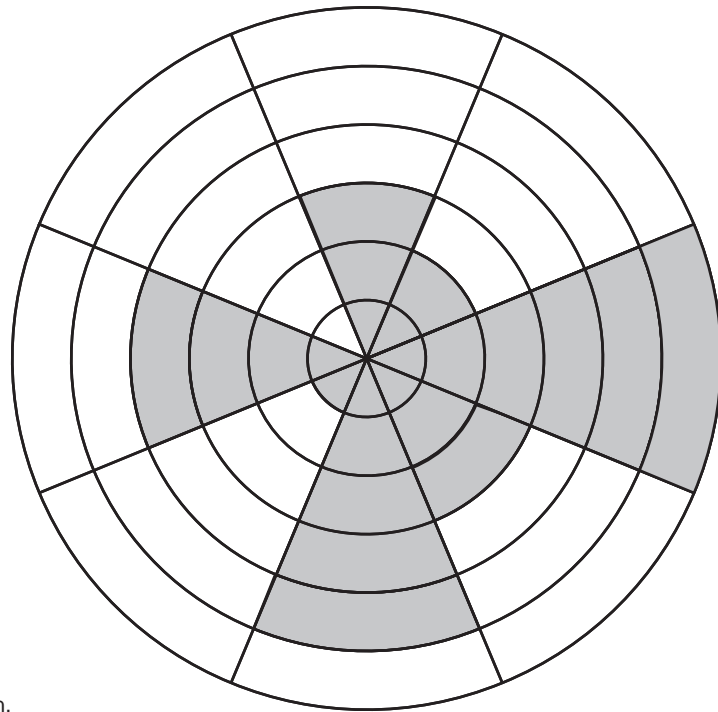


Figure 2.27  
Location of the depositions at the offering sites. A segment represents one deposition with a known location.

Sometimes a site contains different depositions in different places, leading to a total of 24 directions. Figure 2.27 indicates that there appears to be a slight preference for the east side and an avoidance of the northwest of the lakes or peat bogs. This preference could be associated with the movement of the celestial bodies. More attention has to be given to this aspect of offering sites, before a reliable analysis of the data can be made.

#### 2.4.4 LOCALITY OF OFFERING SITES WITHIN THE WIDER LANDSCAPE

A place is not a free-floating entity; it is connected to other places in a web of associations and practices. Sometimes the offering site is directly associated with a structure which is not part of the offering site itself. For example, Krogsbølle and Ipweger Moor are both situated next to a road. Sometimes the associated structure is somewhat more enigmatic, as in Hassle-Bösarp, which lies close to a stone setting. A place can have significance because of specific features in the surrounding landscape but also through its own position within the landscape. Therefore, attention will be given to the wider landscape of offering sites.

Many researchers have understood that it is of importance to identify what the surroundings of the offering sites looked like. In some cases through the use of pollen samples the surrounding landscape was reconstructed. From these pollen samples it became clear that many of the offering sites with animals and household/agricultural tools lay in the vicinity of farmland.<sup>85</sup> It led, however, seldom to survey or excavation of settlements in the surrounding area. Ulf Hagberg was one of the first to incorporate the surroundings landscape of Skedemosse into his interpretation (figure 2.28).<sup>86</sup> Skedemosse is ideal for this kind of research because it is situated on the island Öland.

In Hagberg's view Öland had three centres of chieftains of which one was near Skedemosse. He interprets Skedemosse as a site of possible regional character on the basis of its size, the human sacrifices, its placement at three parish boundaries, its centrality on the island, and the possibility of the regional importance of herding animals and associated social events along the 'skede' which lies next to the offering site.

Studies of the offering sites within the wider landscape are mostly initiated from a specific offering site.

85 Behm-Blancke 1957, 133, and Jankuhn 1967a, 133.

86 Hagberg 1967, 81 and Ch. IX.

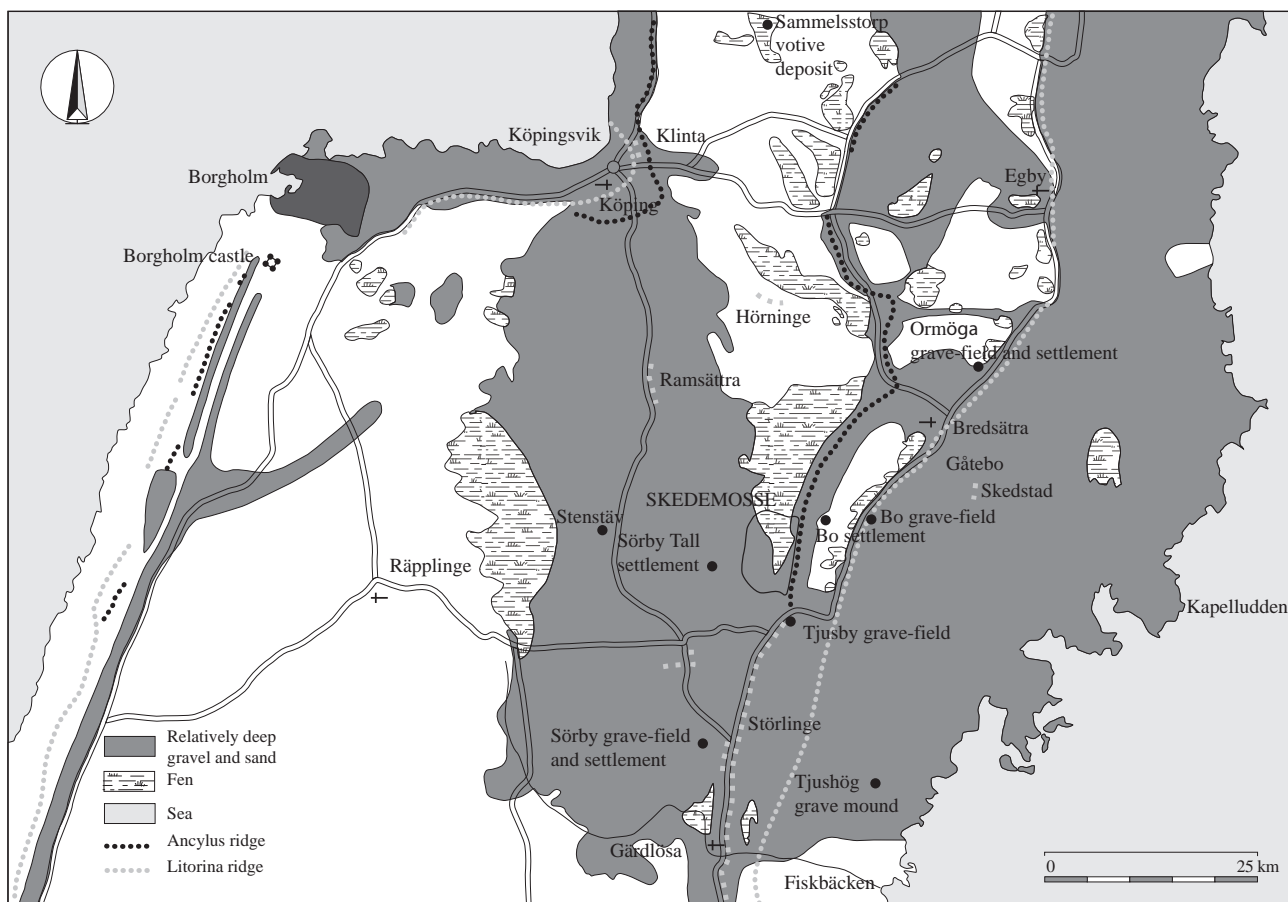


Figure 2.28 Skedemosse and its surroundings, after Hagberg 1967, figure 34.

Charlotte Fabech made a more general study of southern Scandinavia in which she related the place of specific types of offering sites in the wider landscape to the social organization of that society through time (figure 2.29).<sup>87</sup> She sees a shift from accessible small local wet offering sites and large collective war-booty offerings at the border of a territory, to war-booty sacrifices at the borders and inaccessible gold deposits at dry land in the settlements of the emerging aristocracy. These are also the places where the first churches were built. Although Lotte Hedeager rightly criticises Fabech that her study should be more nuanced in the sense that small offerings continued longer and at the same places as the war-booty sacrifices,<sup>88</sup> it remains interesting that Fabech talks about accessibility of offerings and continuity of place into the Christian period. In this way she shows that relations between social structure, landscape and religion can be very illuminating in understanding the dynamics that shape a society.

## 2.5. THE USERS OF THE OFFERING SITES

In order to understand how religion was integrated into a society, it is necessary to understand who partook in the rituals performed. Ritual and offerings are often envisaged as arenas of competition, where prestige is gained through the destruction of goods.<sup>89</sup> The validity of such statements can only be judged if the whole of society with all its participants is taken into consideration. Furthermore, ritual and offerings are often envisaged as associated with religious specialists. The need for and evidence of these specialists has to be analysed carefully.

<sup>87</sup> Fabech 1991b.

<sup>88</sup> Hedeager 2003, 152-153.

<sup>89</sup> For example, Barrett 1991, 7, Bradley, 1998 [1990], 138, and Pryor 2005, 155.

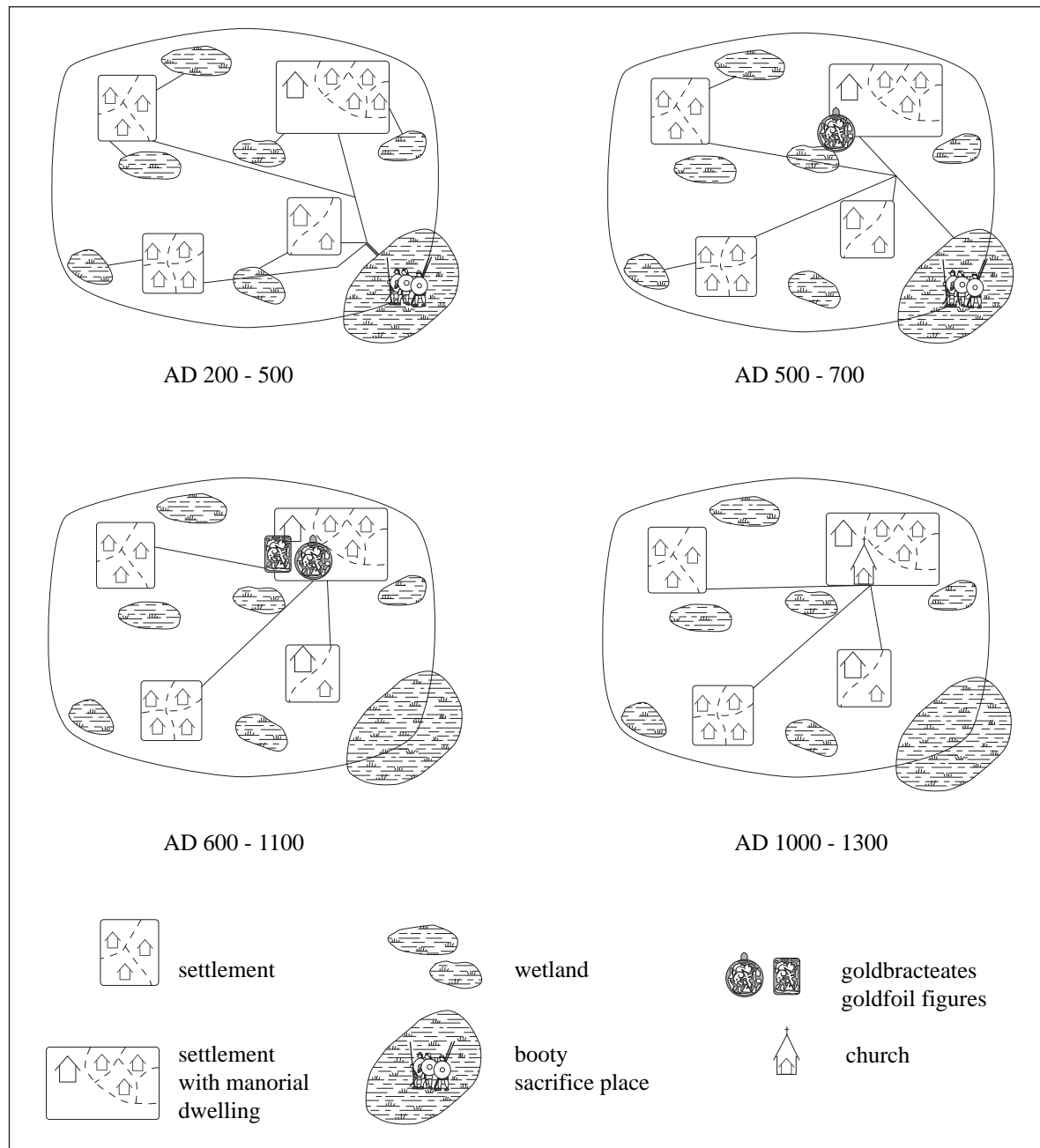


Figure 2.29 Schematic representation of the locations of religious sites in relation to settlements in South-Scandinavia, after Fabech 1991b, figure 11.

### 2.5.1 INDIVIDUAL/FAMILY AND COLLECTIVE OFFERINGS

There appears to be little discussion on offering sites with pottery, small animals and agricultural products. The presence of these artefacts is seen as a good indication of individual/family offerings. Individual and family offerings of this type are usually put together on the basis that it would be nearly impossible to differentiate between the two archaeologically. And if the offerings are attributed to a specific gender, the assumption is often made that an individual offering will have effect on the family of that individual. There is also little disagreement about the large weapon finds, which are seen as collective offerings. Sites, such as Illerup, involve so much work with hundreds or thousands of mutilated weapons and equipment that it would be nearly impossible for a very small group to achieve their deposition in a short time-span.

There are, however, many sites that appear to combine collective and family/individual offerings. Where this is the case, usually all attention is directed towards the collective offerings. The family/individual offerings are almost treated as disturbances or noise in the clear pattern of collective depositions. The exact nature of

these family offerings is often not given and unfortunately it is therefore impossible, in this study, to look at the relations with the collective offerings. It would be interesting to see if the family offerings consisted of material related to a more aristocratic part of society or that, so to speak, anyone could use an offering site of collective importance. The relation between these two types of offerers would also be of interest for the better understanding of offerings that are not as clearly ascribed to certain groups of persons.

The inference of who performed the offerings is often related to the objects deposited. When other artefacts than pottery and small animals or large amounts of mutilated weapons are considered unity in explanation starts to break down. The size of the animal deposited or the presence of human bones is interpreted in different manners. Becker, Behm-Blancke and Jankuhn see all animal offerings as part of the action of a family or individual. Stjernquist sees the deposition of complete animals as very valuable and therefore as collective offerings. The attribution of offering of complete animals to the collective type appears, however, to be influenced by the size and composition of the deposit they are part of.

Human bones are often seen as indicative of a collective offering. Historical sources appear to indicate that the offering or killing of humans is the prerogative of religious specialists.<sup>90</sup> Some researchers follow the historical sources. Stjernquist sees a direct relation between human offerings and collective offerings when discussing Hassle-Bösarp, even though the human remains are not skeletons but five bones from at least two individuals.

<sup>91</sup> Hassle-Bösarp is a complex site with indications for fertility and weapon offerings, that could be used in both a family and a collective practice. In this respect it has many similarities with Skedemosse. Skedemosse differs in that it contained the remains of 50 individuals, both men and women, young and old. Hagberg is less specific about who would have performed the offering. Although he refers to the Gutasaga that deals with a collective practice, he does not explicate who would have been involved and if the offerers at Skedemosse either belonged to a family or a collective offering.<sup>92</sup> After the detailed analyses of all metal objects it is a bit disconcerting how little attention both Stjernquist and Hagberg pay to the human remains. Jankuhn criticised this tradition of neglecting bones that are part of large metal finds in the same year Skedemosse was published.<sup>93</sup>

The presence of human bones is not as clear an indication of the group of offerers, as would be expected from the historical sources. Jankuhn and Behm-Blancke both see human bones as part of the family offering. Usually they are single bones but at several sites complete skeletons were found. Jankuhn also notes that the human remains are mainly of (young) women or older children. According to Jankuhn this contradicts the accounts given by Strabo, Tacitus and Orosius about the offering of slaves and prisoners of war.<sup>94</sup>

The archaeology of the Neolithic period is full of narratives in which single human bones were handled and deposited in specific places.<sup>95</sup> Single human bones in Iron Age offerings are however a much less discussed phenomenon. Bones are mentioned but not actively dealt with in interpretations. For example, Jørgen Lund interprets a cut and polished human shoulder blade as a possible amulet but leaves it there.<sup>96</sup> Possible relations to rituals associated with ancestors or the dead are largely left aside. Because of the lack of discussion on human bones the difference between family and collective offerings is less an issue of debate than it should be.

Once it is decided if we are dealing with a collective or family offering, there is less clarity on who performed the ritual. Tacitus speaks of collective rituals performed by a priest and small rituals performed by the head of the household.<sup>97</sup> He speaks here of rituals related to the casting of lots but it appears probable that offerings followed a similar pattern. If it would always have been the male head of the family is less sure because Tacitus himself wrote only two chapters earlier “More than this, they believe that there resides in women an element of holiness and prophecy, and so they do not scorn to ask their advice or lightly disregard their replies.”<sup>98</sup> This

90 For example, Caesar, *The conquest of Gaul*, VI.16, and Tacitus *Germania*, VII.

91 Stjernquist 1973, 45 and figure 29.

92 Hagberg 1967, 81.

93 Jankuhn 1967a, 120.

94 Jankuhn 1967a, 133.

95 For example, Shanks and Tilley 1982.

96 Lund 2002, 183.

97 Tacitus *Germania* X.

98 Tacitus *Germania* IIX.

makes it just as believable that women performed certain rituals. It is never clearly stated in studies on offerings but it appears that the family/individual offerings were performed by a family-member. An exception is Aase Anderson, he proposes that the structured nature of the offerings at Bukkerup (figure 2.30) suggests that a sort of priest performed the offerings.<sup>99</sup> This is in my opinion not necessary. There were many traditions in these societies that are much more complex – such as building a house – that did not require a priest. Once ritual is in play there is a tendency to assign a priest-like agent to all activities that show some consistency. There is, however, seldom a need for this. It is assumed that people can make pottery in the same structured manner but as soon as depositions are in question it is assumed that people cannot perform similar ritual actions over a period of time without some specialist aid.

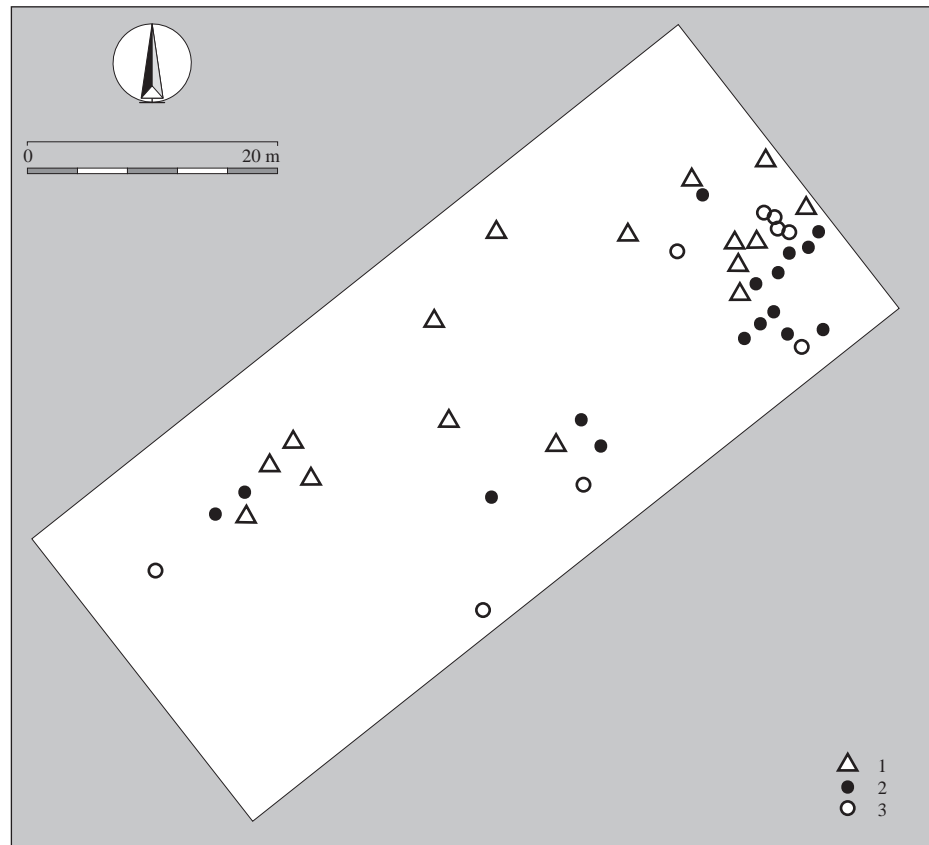


Figure 2.30 The distribution of the different sets of offerings at Bukkerup Langemose.  
 1 = clay vessels with animal bones  
 2 = clay vessels without bones  
 3 = finds of diverse nature, usually clay vessels with or without bone, after Becker 1971, figure 16.

## 2.6. THE CPS-AGENTS AND THE OFFERING SITES

The existence of CPS-agents in the (Late) Iron Age of northwestern Europe is rarely contested.<sup>100</sup> The early authors write about the different gods and goddesses that were venerated. Tacitus wrote that the Germans did not make images of their gods;<sup>101</sup> the interpretation of wooden statues found at offering sites are at odds with this.<sup>102</sup> These statues are shaped like humans and it can be assumed that the offerings were given to CPS-agents with human-like appearances (figure 2.31).

One of the most difficult questions to answer is, to whom precisely the offerings were made. Names cannot be directly related to offerings because of the lack of inscriptions denoting CPS-agents. If inscriptions are found in offering sites, they appear to be related to the owner or maker of the artefact. For example, the runic inscription ‘WAGNIJO’ on lances in Illerup appears to be related to the maker.<sup>103</sup> A direct link between a name

99 Andersen 1994.

100 It is a subject that is, however, nearly absent in archaeological publications. Evidence for ritual practices are described in a manner devoid of religion. An example of the exception is Cunliffe (1992).

101 Tacitus. *Germania* IX.

102 For an overview of wooden statues, Van der Sanden and Capelle 2002.

103 Ilkjær 2002, 44-46.

and an offering site is not yet made for the offering sites in the northern part of Europe. The only indications for possible names of CPS-agents are written sources by others. The naming of CPS-agents to whom the offerings are made can therefore be seen as a troubled enterprise. This has not withheld speculations about possible names. One of the most discussed names is Nerthus and this ongoing discussion will be used as an illustration of the difficulties with this type of research.

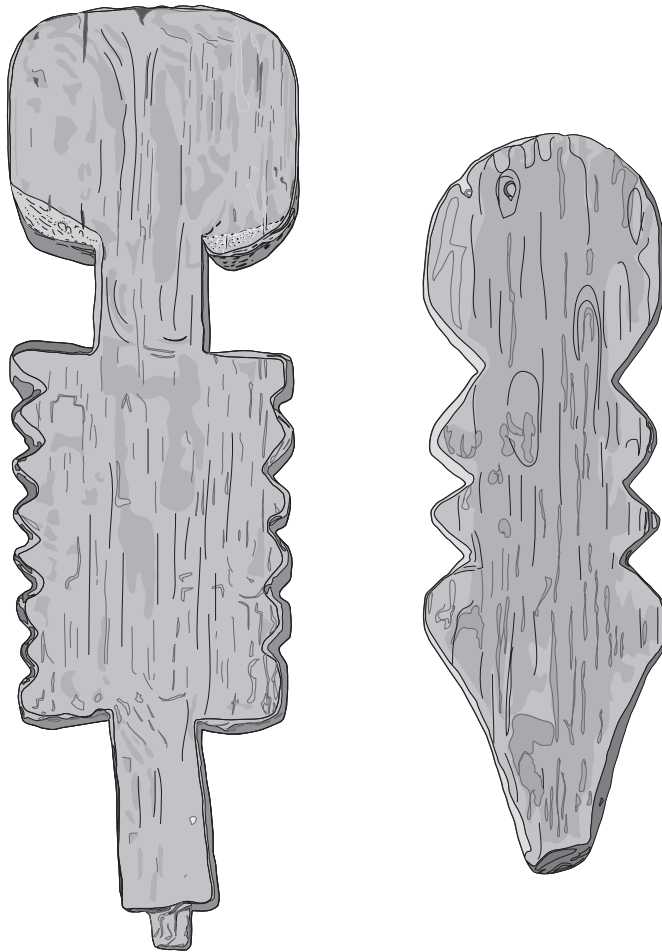


Figure 2.31 The pair of figures made from oak from Wittemoor. The figure on the left is 105 cm and the one on the right is 95 cm, after Hayen 1991, figure 7.

The source of the discussion about Nerthus is Tacitus. In *Germania* XL he writes “After them [Langobardi] come the Reudigni, Aviones, Anglii, Varini, Eudoses, Suarini and Nuitones behind their ramparts of rivers and woods. There is nothing particularly noteworthy about these people in detail, but they are distinguished by a common worship of Nerthus, or Mother Earth. They believe that she interests herself in human affairs and rides through their peoples. In an island of Ocean stands a sacred grove, and in the grove stands a car draped with a cloth which none but the priest may touch. The priest can feel the presence of the goddess in this holy of holies, and attends her, in deepest reverence, as her car is drawn by kine [cows]. Then follow days of rejoicing and merry-making in every place that she honours with her advent and stay. No one goes to war, no one takes up arms; every object of iron is locked away; then, and then only, are peace and quiet known and prized, until the goddess is again restored to her temple by the priest, when she had her fill of the society of men. After that, the car, the cloth and, believe it if you will, the goddess herself are washed clean in a secluded lake. This service is performed by slaves who are immediately afterwards drowned in the lake. Thus mystery begets terror and a pious reluctance to ask what that sight can be which is allowed only to dying eyes.”

There are several elements that are picked out from this account – the designation Mother Earth, the cart, and the slaves being drowned.

Offerings that contain wagons are almost directly related to the goddess Nerthus on the assumption that they are the remnants of the cult-wagon that carried the goddess through the land. The wagon from Dejbjerg is the best example of this, especially because the wagon has a ceremonial seat. The seat would be consistent with the driving around of the goddess. Also a loom was found on the wagon giving it a feminine touch.<sup>104</sup> Only Tacitus does not mention the offering of the wagon itself. It would, however, not be strange that the wagon should also be offered after its use-period.

Another offering connected with wagons is Rappendam. Here the remains of 40 wheels were found together with a plough, animals and a woman. George Kunwald makes the link with Nerthus, but also makes some objections.<sup>105</sup> First Tacitus does not mention the offering of the wagon itself. Second, the slaves are men but the body in Rappendam is of a woman. Third, the plough could be associated with Gefion a goddess known from the Edda who ploughed the land. The geographical situation of Rappendam is, however, consistent with Tacitus. Kunwald does not want to see Rappendam as a direct reflection of Tacitus' Nerthus but sees the site as dedicated to a fertility ritual. There are many offering sites connected to fertility and they appear to have originated from the same tradition. In this way, Kunwald proposes, they could all be seen as part of a cult that could be named a Nerthus-cult.

Kunwald here accidentally exposes a central weakness in most studies that connect named CPS-agents to offering sites. It could be Nerthus but it could just as well be any other CPS-agent who works in the same realm of activity. Because Nerthus is seen as a Mother Earth goddess all offerings that can be related to fertility are almost automatically assigned to Nerthus or her male equivalent Njord.<sup>106</sup> See for example Behm-Blancke's categorisation in figure 2.2. Many researchers appear to be aware of this problem but decide to assign the name Nerthus anyway because Tacitus mentioned her in relation to the Danish area and she has in that way achieved a different historical status.

The association between Nerthus and wet offering sites can become tiresome and hold back research that tries to discern patterns in offerings. This can be felt when Karl Struve with a note of irritation writes "Diejenigen, die bei der Moorleichen-Deutung dem Opfermotiv den Vorzug geben, berufen sich immer wieder auf den Nerthuskult."<sup>107</sup> The relation between historical and archaeological sources is always difficult when the latter do not include any inscriptions. And care should be taken, especially with something as suggestive as the naming of CPS-agents, which brings prehistoric religion somewhat closer to the magnificent sagas and myths. It does not mean that historical sources should be left aside and research should focus on 'pure' archaeology. Historical sources show the richness of the worldviews held in the past. Direct relations remain, however, difficult; for example, even when one of the names of the goddess Freya is 'Horn'<sup>108</sup> which is related to flax, it would still be a leap of faith to attribute all offerings with flax to Freya.

The problem of CPS-agents may need a different approach, where the specific naming is left aside without forgetting that there were real named CPS-agents. The remembrance of the existence of CPS-agents is important in order to keep ritual and offerings in the religious sphere. Jankuhn warned against a focus on artefacts at the expense of religious aspects.<sup>109</sup> There is a tendency to skip the investigation of religious implications of offerings because of the lack of myths and names in prehistoric archaeology. It turns ritual into a repetitive formalistic action instead of an action, which deals with the CPS-agents inhabiting their world. As mentioned above<sup>110</sup>, CPS-agents have general elements and a cultural infill. The general elements, such as abilities and action-spheres of a CPS-agent are usually stable, while the cultural infill, such as appearance and, especially, the name can more easily undergo changes. Therefore, it may be more fruitful to start relating offering sites to spheres of activities in a detailed manner. Broad categories such as weapon offerings or interpreted fertility offerings are too general and could be linked to nearly all different CPS-agents known from historical sources. Narrowing down these broad categories and differentiating between offerings may give a clearer insight. Can the offering site of Dejbjerg with a beautiful wagon and a loom, for instance, still be seen as relatively similar to Rappendam where mainly wagon wheels animals, a woman and a plough were deposited? This study does

104 See Glob 1975 [1965], 118, and Aldhouse-Green 2001, 116.

105 Kunwald. 1970, 113-118.

106 Njord is a god known from later sources and is often paired with Nerthus on the basis of similarities in name and the association with fertility (Davidson 1990, 94 and 106).

107 Struve 1967, 64.

108 Davidson 1990, 116, and De Vries 1957, §556.

109 Jankuhn 1967a, 120.

110 Chapter 1 § 1.4.1.2.

not have the room for a detailed investigation into the different possible general elements of CPS-agents of northwest Europe.

## 2.7 GENERAL REMARKS

What I have tried to show in this chapter is that a view which takes a thematic approach to offering sites can bring different elements to the front. It becomes clear that certain aspects of the research into offering sites have dominated the debates as other aspects are less well known. Metal objects have received more detailed attention than organic material. And in general the objects receive much more attention than the landscape setting in which they are found. In other words most studies are artefact orientated instead of socio-religious orientated. Part of this problem is the result of small-scale excavations that focus predominantly on the offerings itself and not the general landscape setting in which they are found. An approach which takes the landscape as an integral part of research of offering sites can overcome this. And large scale excavations covering different contexts are necessary for this type of research as the different aspects of a society are embedded in the landscape. Or in the words of Julian Thomas: ‘... a lived landscape is a set of relationships’ and ‘The landscape is the familiar world within which people perform their everyday tasks, but religious observances and other rituals are likely to fit into and inform the mundane pattern.’<sup>111</sup>

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111 Thomas 2004 [2001], 173 and 175.





Figure 3.1 Oer-IJ area with the modern topographical names.

### 3. DEVELOPMENTS IN THE OER-IJ AREA

#### 3.1 THE OER-IJ AREA<sup>1</sup>

The Oer-IJ area is situated between the modern towns of Alkmaar, Haarlem and Zaanstad, and the North Sea in the province of Noord-Holland (figure 3.1). The area covers approximately 250 km<sup>2</sup>. The region is defined on a geological basis and comprises the Duinkerken-I deposits<sup>2</sup> that were deposited through the Oer-IJ with the addition of the municipal Heiloo which lies at the northern part of the northwestern coastal barrier.<sup>3</sup>

Nowadays habitation is concentrated on the former coastal barriers and old dunes, along the Zaan, and in the ribbon village Assendelft, with recent extensions into the peat areas, former coastal plain and Oer-IJ basin. Cattle breeding in the coastal plain and peat area and floriculture on the old dunes and former coastal barriers are the main agricultural activities, although crop growing in former cattle breeding areas is becoming an additional agricultural activity. Industry is concentrated along the Zaan and the harbour of IJmuiden. The dunes along the coast are a large nature reserve, which is used for water winning and recreational purposes. In short, the Oer-IJ area is a rural area surrounded by cities, industry and bordered by dunes along the coast.

The Oer-IJ area is a dynamic landscape in which archaeology cannot be understood separate from geology and ecology. The environment has to be reconstructed for the different periods under study. But the environment is not just a background against which human activities took place. Although the changing landscape could inhibit certain activities, people actively engaged with their surroundings and altered their environment. In this chapter the relations between the people and their environment in the Oer-IJ area will be discussed. In this way the environment will become a landscape in the sense that a landscape is a 'social construction of space, containing a bundle of practices, meanings, attitudes and values...', a humanistic understanding of the environment.<sup>4</sup>

This chapter outlines the more general background to the wet low-lying offering sites in the Oer-IJ area that will be discussed in chapter 4. Attention will be given to the geological, ecological, and cultural developments in the Oer-IJ area. In order to give a background to the development of the knowledge about the area first a short oversight of the research that has taken place will be given.

#### 3.2 RESEARCH TRADITION IN THE OER-IJ AREA

Archaeological research in the Oer-IJ area really started in the 1950s when the AWN<sup>5</sup> was formed. Before that time there were some incidental artefacts reported and collected. From the start the members of the AWN held close relations with the professional archaeologists, as is shown in their journal *Westerheem*.<sup>6</sup> From the first issue onward archaeological discoveries in the Oer-IJ area are reported at a steady pace. Especially Velsen and Krommenie were the focus of activity. In the period 1955-1960 at Krommenie housing projects had led to major building activities that were monitored by the local AWN-group.<sup>7</sup> It was realised that this area had been occupied much longer than expected. Until that time it was thought that the peat would not have been inhabited during the prehistoric period. The first excavations of two houses dated to the Roman Iron Age took place in 1959 in cooperation with the University of Amsterdam.<sup>8</sup> Due to the large amount of local work in 1960 the AWN-group Zaanstreek was formed and in the next twenty years the members discovered over

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1 Here the Oer-IJ area means the research area and the Oer-IJ estuary means the geological phenomenon.

2 In the new naming system 'Oer-IJ deposit', see § 3.3.

3 This addition is made after the completion of Lange et al. (2004) as it became clear that the area would be more coherent when Heiloo would be added.

4 Darvill 2002.

5 Archeologische Werkgemeenschap Nederland, the association for non-professional archaeologists in the Netherlands.

6 The first issue of *Westerheem* starts with contributions by professor in archaeology Byvanck and the head of the State Service (ROB) Modderman.

7 Prinsze 1971, 3.

8 Groenman-van Waateringe, Glasbergen and Hamburger, 1966 [1961].

60 sites dated to the (Roman) Iron Age and several sites were excavated.<sup>9</sup> At the same time the State Service for Archaeology (ROB) excavated three important sites on the old dunes – Santpoort-Spanjaardberg, Velsen-Hoogovens and Velsen-Hofgeest.<sup>10</sup> These excavations uncovered buried landscapes that demonstrated the archaeological potential of the area. The study by Jelgersma et al. showed for the coastal area that a lot could be gained when archaeology, geology and ecology were studied in an integrated way. Thus in a period of twenty years the archaeological knowledge in the area was extended backwards in time and across the area.

In 1976 the ROB requested if the AAC<sup>11</sup> would want to excavate in the Assendelver Polders because the archaeological remains were threatened by the artificial lowering of the water table. Brandt and Hallewas thought it would be an ideal opportunity to try out some ideas in a regional project.<sup>12</sup> The main aim of the project was ‘to consider settlements in their regional context as well as on their own merits. By analysing the settlement pattern in a region’ it was argued that ‘it would be possible to specify which elements were important in the interaction between the settlements which together form a settlement pattern.’<sup>13</sup> The project had a clear theoretical background taken from Flannery’s *The Early Mesoamerican Village* (1976) and research was organized at three levels: the house and/or unit of economic activity within a settlement, the settlement and, the region.<sup>14</sup> At all three levels five problems were analyzed: the chronology of the settlements; the nature and duration of habitation; the economic structure of the area; social structure; and the relationship between nature and the settlement pattern.<sup>15</sup> A fourth level encompassing the outside world from the Roman empire to Friesland was added early in the project but most analyses took place at the first three levels.

It was evident that in order to explain the archaeology it was important to understand the genesis of the area. From two assumptions it followed that the settlement level had to be approached from the landscape in a new way. ‘Firstly the location of a site reflects a choice by its inhabitants, a choice that positions that settlement in a wider landscape according to the inhabitants’ perception of that landscape. ... And secondly, that in order to expend one’s resources rationally, one had to have at any time the necessary information to rationally decide the next step.’<sup>16</sup>

The new approach not only involved an intellectual change, but also a change in the fieldwork practice. Although digging by artificial levels was still practiced it became apparent that the different layers and features had to be followed when excavating. Before week- and day-reports had been the main source of information on features, but now features were described on specially designed forms based on experiences from Great Britain and the United States.<sup>17</sup> During the work the project shifted from a processual approach towards a more post-processual perspective as concepts such as structuration theory, ethnohistory and perception became important in the discussions. The results of the project were published in the volume *Assendelver Polder Papers 1*.<sup>18</sup> One of the main things taken from the project into future research was that ‘Landscape was not just a ‘settlement’ but was the totality of physical combinations, high and dry as well as low-lying areas, to fill in the lacunae of landscape use and marking.’<sup>19</sup>

During the Assendelver Polder Project it had become clear that to understand the peat area the region had to be extended and in 1982 Brandt started the Oer-IJ Estuary Project with excavations in Velsen, Uitgeest and Schagen. The relationship between what people did in the dynamic Holocene landscape became part of the interpretations.<sup>20</sup> At that time the ROB was involved in a large excavation on the former coastal barrier of Uitgeest.<sup>21</sup> The AAC in cooperation with the local AWN-group Velsen was already involved in a long term

9 Assendelft-8, -17, -28, -32 and -43 (Van der Leeuw 1987, 1).

10 Modderman 1961, Jelgersma et al. 1970 and Woltering 1979.

11 Amsterdam Archaeological Centre, then IPP: Institute for Pre- and Protohistory.

12 van der Leeuw 2005, 11.

13 van der Leeuw 1987, 2.

14 Van der Leeuw 1987, 2.

15 Van der Leeuw 1987, 2-3.

16 Van der Leeuw 2005, 11.

17 Therkorn 2005, 87.

18 Brandt et al. 1987.

19 Therkorn 2005, 91.

20 Therkorn 2005, 90-91.

21 The work of de Koning 2000 and Abbink 1999 gives insight into the archaeological potential and importance of the site.

project to excavate the Roman fort at Velsen.<sup>22</sup>

In 1996/1997 the Assendelver Polders were revisited. This time four hectares were excavated; the largest continuous space in a peat area up to then. In this way not only the houses, but also their surroundings could be investigated. This furthered the landscape perspective as it became clear that people had altered their landscape on a large scale in the past. And it led to awareness that geological information should not only be used to understand archaeology, but also the reverse.<sup>23</sup>

In the next few years several doctoral theses with subjects related to the Oer-IJ area were finished. Two theses focussed on the Assendelver Polder respectively, furthering the knowledge of internal relations and placing the Assendelver Polder in a wider context.<sup>24</sup> And the two others were material studies respectively, the finds from the Roman fort-1 at Velsen and the production, use and deposition context of locally produced ceramics at Uitgeest-Dorregeest and Schagen-Muggenburg.<sup>25</sup>

Two major excavations in advance of housing projects started in the late 90s, Castricum-Oosterbuurt and Beverwijk/Heemskerk-Broekpolder. The first done by the ROB still had as a major focus the houses. The latter done within the framework of the AAC Oer-IJ project concentrated besides the houses on the fields and low lying areas and a total of 12 ha was excavated. Part of the excavation strategy was guided by the doctoral thesis Therkorn was working on which studied the ritual marking of the landscape in Noord-Holland.<sup>26</sup> The current study is a continuation of the new insights into the use of the landscape in the Oer-IJ project and focuses on the wet low-lying areas that have been excavated over the years.

### 3.3 THE GEOLOGICAL DEVELOPMENT OF THE OER-IJ AREA (A CONTRIBUTION BY PETER VOS)<sup>27</sup>

The habitation models of the Oer-IJ area traditionally have a strong link with geology.<sup>28</sup> And usually the area is divided into distinctive geological zones. For example, the distinction made by Hallewas consisting of:<sup>29</sup> the Older Dunes, the Duinkerke I channel deposits and sand flats in the estuary, the Duinkerke I channels and cover deposits in the hinterland, and the fringes of the peat area; or the ideal transect as proposed by Brandt and Van Gijn (figure 3.2).<sup>30</sup> These zonations are not just based on morphogenetic properties but more on their suitability for specific uses.

In the last few years major changes have taken place in the geological study of the area. It is decided that geological descriptions will no longer use the old names that incorporated a time dimension, such as Duinkerke I. A new naming system is applied in geology that emphasizes the lithological character and formation process of a deposit, but is not explicit about its date. Most archaeological publications use the old naming system. Here the new names will be used with the old names in brackets.

To avoid a division in the landscape before analysis takes place the morphogenetic units are used here without placing them directly into geological landscape zones. The Oer-IJ area consists of three different types of morphogenetic landscapes: tidal, terrestrial, and stagnated water landscapes. Tidal landscapes are below extreme high water and include tidal areas and wash-over systems. Terrestrial landscapes are above extreme high water and include coastal barriers, dunes, peat and former tidal areas. Stagnated water landscapes are under water and include lakes and brackish lagoons.<sup>31</sup>

22 The project took place from 1972 to 1994, Bosman 1997, 8-9 and Morel 1988.

23 Therkorn 2005, 92-93.

24 Meffert 1998, and Hiddink 1999.

25 Bosman 1997, and Abbink 1999. In 1988 Morel had already written a thesis on the structures of the fort and harbour at Velsen.

26 Therkorn 2005 and see the last section of this chapter.

27 Peter Vos has written a Dutch text on the geological development of the Oer-IJ area and constructed six paleogeographical maps especially for this thesis. The text is translated by the author of this thesis.

28 Vos 1983, Brandt, Van der Leeuw and Van Wijngaarden-Bakker 1984, Brandt and Van Gijn 1986, Hallewas 1987, and Meffert 1998.

29 Hallewas 1987.

30 Brandt and Van Gijn 1986.

31 Lange et al. 2004, 38.

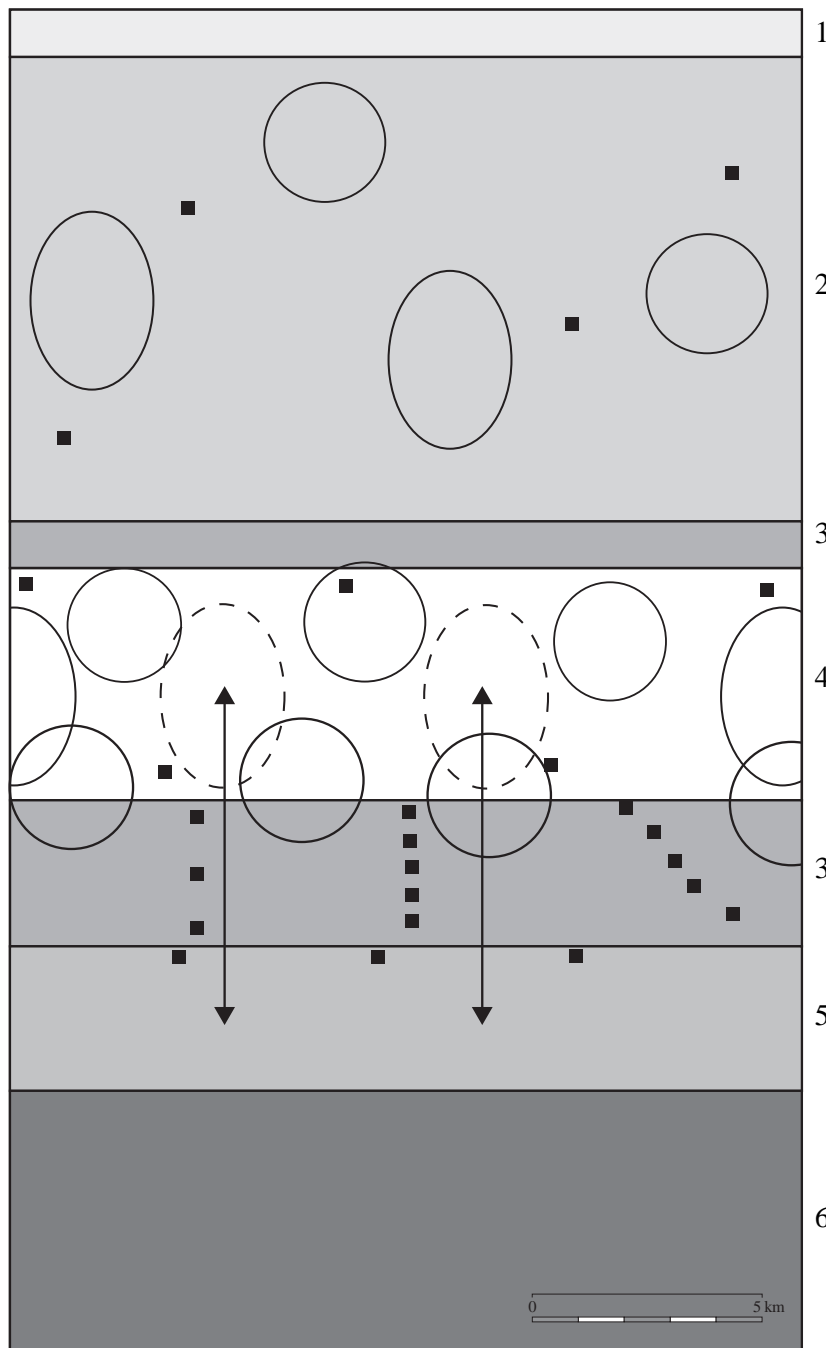


Figure 3.2 Ideal transect across the Oer-IJ area as used during the winter as proposed by Brandt and Van Gijn.

- 1 = Noordzee
- 2 = area with old dunes and coastal barriers
- 3 = former tidal area with creeks, levees and basins
- 4 = former intertidal area with channels and mudflats
- 5 = reed peat
- 6 = oligotrophic peat

After Brandt and Van Gijn 1986, figure 7.4.

The Oer-IJ area is one of the best researched geological and archaeological areas of the Netherlands. The geological and archaeological studies are the building blocks used in the landscape reconstruction of the area.<sup>32</sup> The geological maps give insight into the location of the diverse landscape units, such as coastal barriers, creek systems, and peat expands. The archaeological sites are an important source for the dating of the morphogenetic landscape elements. The first palaeogeographical maps of the Oer-IJ area were constructed by Zagwijn on the basis of geological knowledge.<sup>33</sup> Vos extended the level of detail on these map on the basis of geoarchaeological data from the Assendelver Polders.<sup>34</sup> In 2004 these maps were updated with geological and archaeological data from the area.<sup>35</sup> The palaeogeographical maps in this thesis are a further adjustment and addition of the maps of Vos and Soonius. The adjustments consist of a more detailed underlying map, the geolandscape map, on a scale of 1:25,000, when the maps by Vos and Soonius were made on a scale of

32 See chapter 8 of the national research agenda archaeology (NOAA), [www.noaa.nl](http://www.noaa.nl) (30-10-2006).

33 Zagwijn 1971.

34 Vos 1983.

35 Vos and Soonius 2004.

1:50,000 with the geological map 19W as the main basis. Furthermore, new geo-archaeological data has been used from Castricum-PWN<sup>36</sup>, the excavations at Limmen-de Krocht<sup>37</sup>, and the building trenches in Castricum and Akersloot-Klein Dorregeest.<sup>38</sup> The addition consists of two new palaeogeographical maps covering the reconstruction of 1500 and 500 BC.

Due to the time-limit of the geolandscape research related to this thesis, not all geological and archaeological sources could be used<sup>39</sup>, such as the data collected during the construction of the new housing project at Velsbroek during the eighties and nineties.<sup>40</sup>

The geological landscape development of the Oer-IJ area will be discussed below, following the six palaeogeographical maps: 2500, 1500, 1000, 500 BC, 0 and AD 1000.

### 3.3.1 PALAEOGEOGRAPHICAL MAP 2500 BC

The Oer-IJ estuary originates between 3000 and 2750 BC when the old Atlantic-Subatlantic tidal system situated between Haarlem and Amsterdam moved in a northerly direction. The silting up of the mouth of the tidal system has led to this movement. Around 3000 BC the remnants of the tidal inlet of the system were situated near Bloemendaal/Santpoort.<sup>41</sup> Around 2750 BC a newly formed tidal inlet was situated at the border between Beverwijk and Heemskerk. The peat areas of the Uitgeesterbroekpolder near the new tidal inlet were sheltered from the sea by a coastal barrier during the period of 2500-2000 BC. The sheltered position can be deduced from the existence of oligotrophic peat directly east of the current coastal barrier Assum-Uitgeest.<sup>42</sup> The existence of oligotrophic peat indicates that the peat was not flooded with nutrient rich (sea) water.

The Uitgeesterbroekpolder and Assendelverpolders peat area is part of the large scale peat area of central Noord-Holland, which developed between 4300 and 2750 BC.<sup>43</sup> The peat formation on older tidal deposits in Noord-Holland<sup>44</sup> was a consequence of the diminishing of the sea level rise in the period Late Atlanticum and Subboreal. This area became land as the marine sedimentation developed in a faster pace than the rising sea level.<sup>45</sup> As a consequence of this silting up and extension of land the coastal area of the Western Netherlands was closed off by a near continuous coastal barrier. The coastal barriers were only open where rivers drained into the sea. The tidal system of the Oer-IJ area was one of the drainage systems into the sea. The Oer-IJ estuary naturally drained the peat hinterland near Amsterdam, and the Flevo lakes in the IJsselmeer area. Without this drainage function the Oer-IJ system would have been covered with peat.

Around 2500 BC north of the mouth of the Oer-IJ estuary near Bergen was a tidal inlet that was connected to the active tidal system of West-Friesland.<sup>46</sup> This tidal system quickly started to silt up after 2500 BC. Near the mouth of this system the process of silting up led to the extension of the coastal barrier of Limmen-Heiloo towards the sea.

36 In 2000 and 2001 during the clearing activities of pump- and waterwork stations in the PWN-dunes near Castricum eight trenches situated at a right angle of the mouth of the Oer-IJ estuary were investigated. The trenches opened up dunes and coastal depositions reaching a depth of -1m NAP. The deeper situated estuary deposits were studied and dated through eight coring samples, Vos in preparation.

37 Dijkstra et al. 2006.

38 Vos 2005.

39 Valuable landscape data is not readily available (grey literature). There was no time to search and collect this grey literature that mainly consists of small publications and research reports.

40 Municipal archaeologist W. Bosman has collected this data and integration of this data would strongly enhance the reconstruction south of the Noordzeekanaal.

41 Van der Valk 1992.

42 The date of the oligotrophic peat is based on the stratigraphic position of this layer at the base of the 'Hollandveen'. Absolute dates of this oligotrophic peat are absent.

43 Westerhoff et al. 1987.

44 These tidal deposits are part of the 'Deposit of Wormer' (formerly Calais).

45 Beets and Van der Spek 2000, and Vos and Kiden 2005.

46 Roep and Van Regteren Altena 1988.

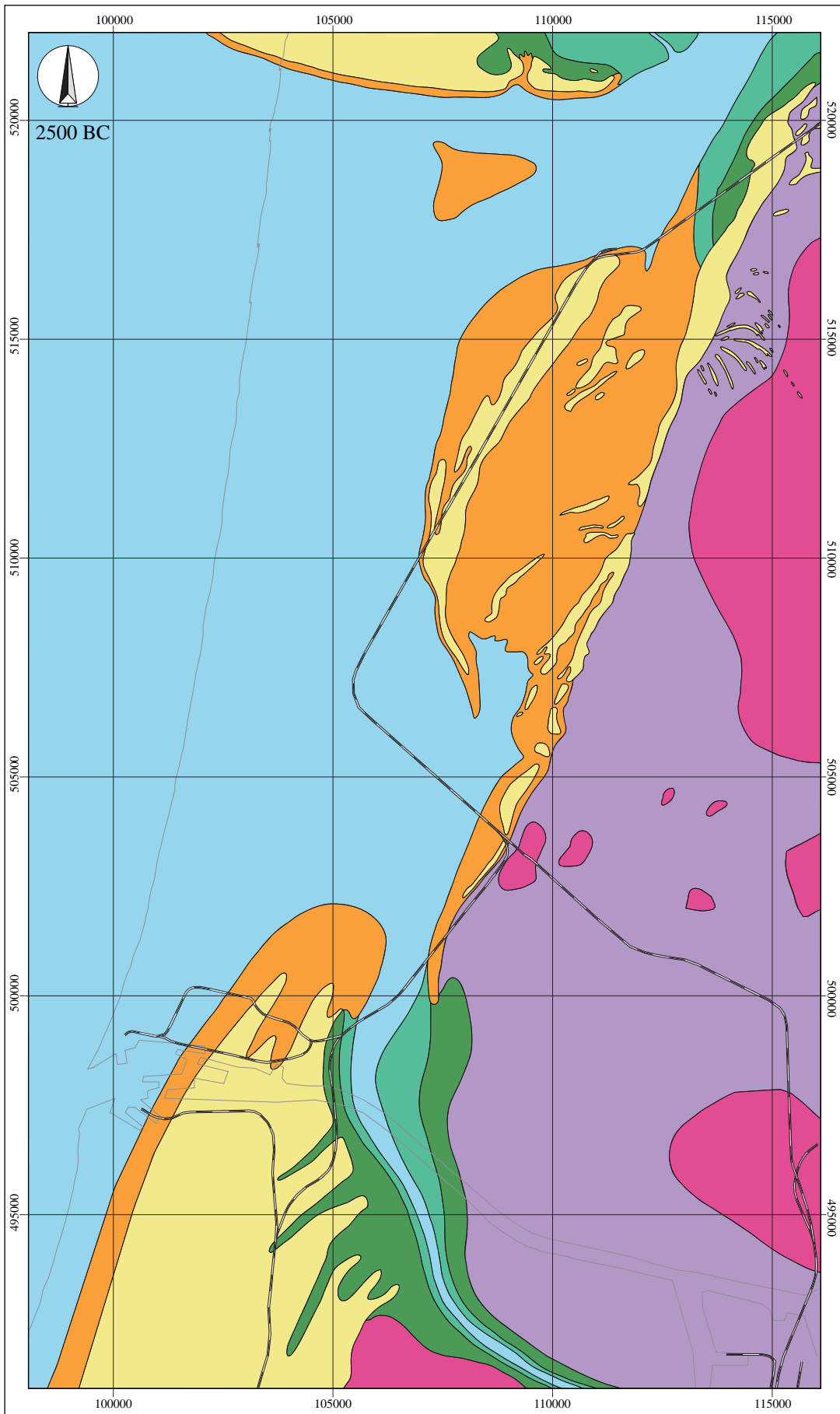


Figure 3.3 Palaeogeographical map of the Oer-IJ area around 2500 BC, legend in appendix 1.

## 3.3.2 PALAEOGEOGRAPHICAL MAP 1500 BC

Around 1500 BC the tidal inlet near Bergen was greatly diminished due to the silting up process and here the coastal barriers and tidal flat areas were extended. In the hinterland of West-Friesland the tidal influence was nearly gone, which led to the expansion of the peat areas across the former tidal deposits.

During this time the mouth of the Oer-IJ had shifted north and stabilized at the level of the Castricumerpolder. The coastal barriers near Beverwijk and Heemskerk were much extended. Due to the shifting of the mouth of the Oer-IJ, the coastal barrier of Assum-Uitgeest was reduced and the peat area of the Uitgeesterbroekpolder was flooded. The continuous coastal barrier of Assum-Uitgeest-Dorregeest was intersected by a number of tidal creeks. The flood history of the Uitgeesterbroekpolder is unclear. In a small bowl shaped basins at the base of the flood deposits there are deposits of brown, strongly humid clays that contain many ostracodes, the so-called 'ostracode layer'. In an erosive phase that cut into the base of the 'Hollandveen' this clay has been deposited. The age and origin of the clay is unclear. The basins with ostracode clay are not defined at the palaeogeographical map and the entire clay deposits in the Uitgeesterbroekpolder are viewed as tidal flat deposits.<sup>47</sup>

At this time marine activity increased also in the Velsbroekpolder and the southwestern part of the Assendelpolder.<sup>48</sup> This increase in marine activity is shown by a clay layer<sup>49</sup> that was deposited on the underlying peat.<sup>50</sup>

The increase in marine activity in the Velsbroekpolder and Assendelpolder could be related to the increase of water draining from the Flevo lakes. According to this hypothesis the increase in drainage led to an increase in size of the main streambed, which allowed easier access of the tidal waters into the hinterland. The increase in tidal influence led to the regular flooding of the borders of the peat area during high water levels, such as storm floods.

In the central peat area of Noord-Holland the oligotrophic peat extended as the surface of the peat was heightened due to peat formation. The peat became raised bog that was no longer flooded with nutrient rich water from the peat drainage systems. The absence of absolute dates of the base of the oligotrophic peat east of Assendelft, around the Woudpolder, and near Krommenie makes the reconstruction of the peat extensions at the palaeogeographical maps less certain. The same uncertainty applies to the oligotrophic peat borders in reconstructions of areas where the peat largely disappeared due to oxidization, for example, in the area between Egmond-Alkmaar-Bergen, and erosion, such as the Alkmaardermeer.

47 In order for the construction of a more detailed interpretation of the Uitgeesterbroekpolder in the period 2000-500 BC further paleo-ecological and dating research of especially the ostracode clay is needed.

48 The area southwest of the road 'Genieweg'.

49 Formerly Duinkerke 0 deposits.

50 In the southern part of the Assendelpolder this clay layer is dated on the basis of stratigraphy. The clay is situated below the oligotrophic peat on which the Early Iron Age farmstead of Assendelft-Q was built, (Vos 1998). There are no absolute dates of this clay.

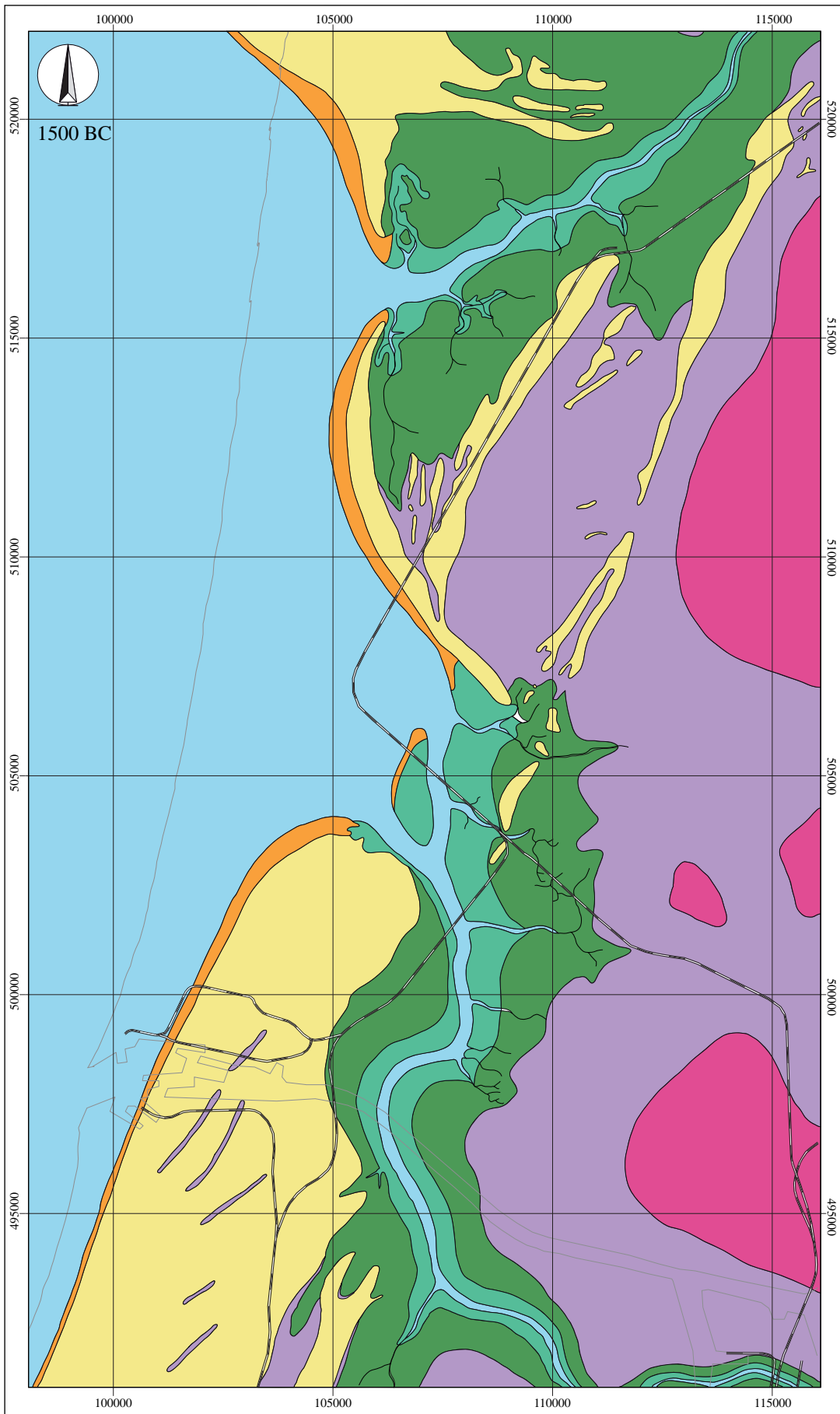


Figure 3.4 Palaeogeographical map of the Oer-IJ area around 1500 BC, legend in appendix 1.

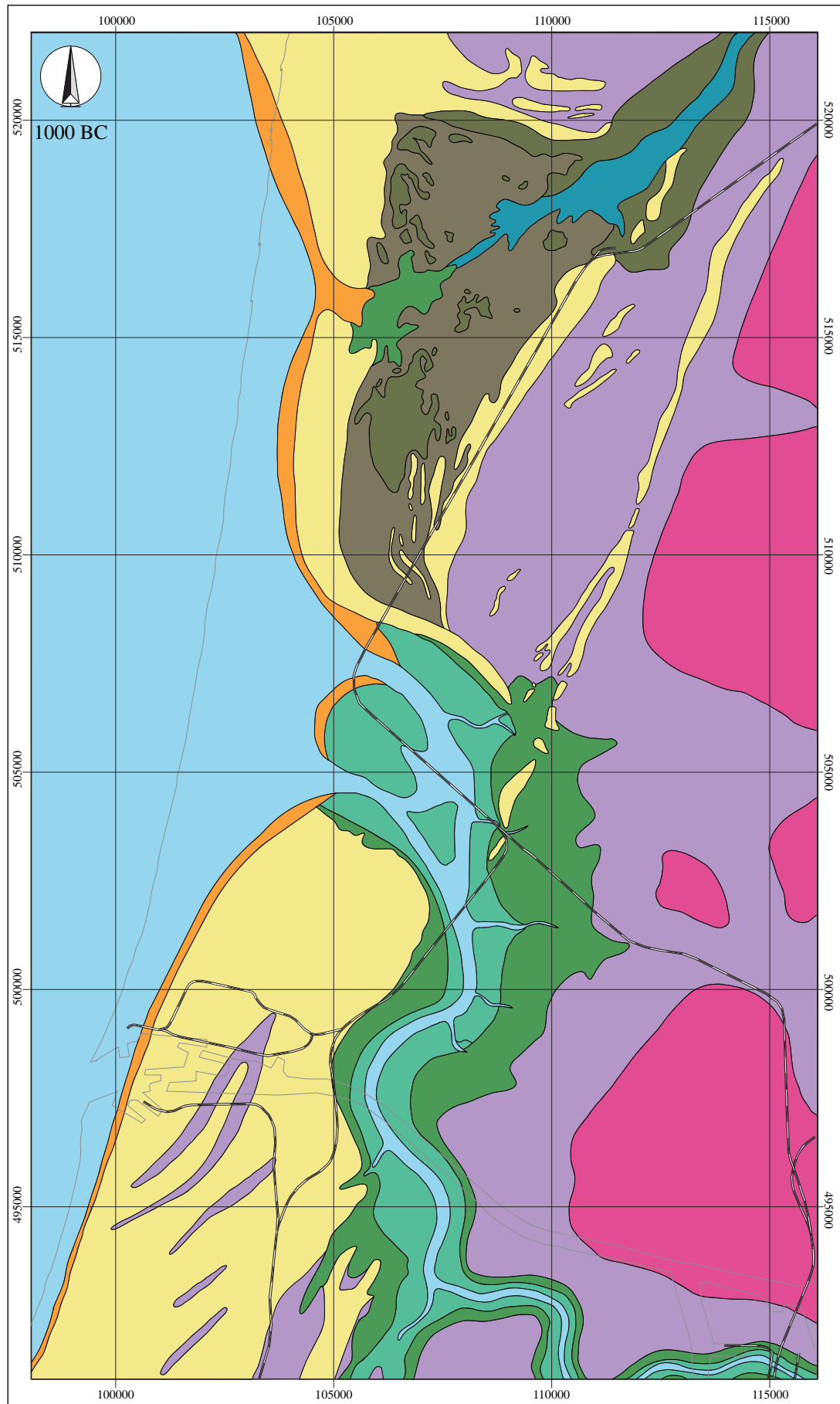


Figure 3.5 Palaeogeographical map of the Oer-IJ area around 1000 BC, legend in appendix 1.

## 3.3.3 PALAEOGEOGRAPHICAL MAP 1000 BC

From 1000 BC onward into the Early Iron Age the peat extended across the earlier deposited clays in the Velsbroekpolder and Assendelpolder. At the same time locally oligotrophic peat developed along the Oer-IJ, for example around Assendelft-Q.<sup>51</sup> The peat expansion during the Late Bronze Age and Early Iron Age indicates a decrease of marine influence in the Oer-IJ estuary as the peat was no longer flooded during high water levels. This decline in marine influence has been confirmed at Heemskerk-Broekpolder as reed dated to the Early Iron Age<sup>52</sup> grew at the edge of the tidal ridge towards the main streambed of the Oer-IJ (figure 3.6). Furthermore, it could be derived from the land snails<sup>53</sup> that lived at the tidal ridge that the water of the Oer-IJ was brackish to fresh. Due to the limited marine activity there are no high storm floods.

The increasing freshness of the water of the Oer-IJ was probably caused by the increasing influence of the rivers from the Utrechtse Rijn-Vecht system.<sup>54</sup> The development of a channel from the Oer-IJ passing through the Flevo lakes to the Rijn-Vecht system means that from 1000 BC the Oer-IJ can be viewed as a Rijn estuary.

Around 1000 BC the mouth of the West Frisian<sup>55</sup> tidal inlet near Egmond was strongly reduced due to the extension of the coastal barriers in that area. The influence in the tidal area behind this tidal inlet was strongly reduced. The drainage of water from the Flevo lakes through the Westfriese tidal inlet must have been close to nothing. Otherwise the mouth of the tidal inlet would not have started to close. After 1000 BC the small tidal mouth was closed and a continuous coastal barrier developed (fig 3.7).

The mouth of the tidal inlet of the Oer-IJ moved also in a westerly direction due to the expansion of the coastal barriers towards the sea near Limmen in the north and Beverwijk-Heemskerk in the south. Here a large intertidal area develops with mudflats and tidal creeks.<sup>56</sup>

Around 1000 BC probably two major tidal creeks were active: one tidal creek near the northern border of Heemskerk at the height of 'Huis Marquette' and the other in the central area of the Castricumerpolder. The northern tidal creek in the Castricumerpolder gained in importance during the next phase.

time period	Mean Low Tide (MLT)	Mean High Tide (MHT)	Base of saltmarsh vegetation	Extreme Spring Tide (EST)
0	-	-	-	-0.65
200 BC	-0.90	-0.70	-0.90	-0.50
400 BC	-1.60	-0.55	-0.75	+0.10
600 BC	-1.95	-0.35	-0.55	+0.55
800 BC	-1.65	-0.90	-1.10	-0.25
1000 BC	-2.25	-0.80	-1.00	+0.05

Figure 3.6 Water levels through time as measured at Heemskerk-Broekpolder in metres NAP, after Vos 2000, table 3.

## 3.3.4 PALAEOGEOGRAPHICAL MAP 500 BC

Around 500 BC the tidal inlet near Egmond was silted up, which caused a drainage problem in the former tidal area between Egmond-Alkmaar-Bergen. Due to the bad drainage conditions this entire area was overgrown with peat. This peat disappeared from the Late Middle Ages onward due to oxidization, and erosion when the lakes Bergermeer and Egmondermeer developed.

51 Vos 1998. In order for the full extension of the peat during the Late Bronze Age and Early Iron Age to become clear an additional paleogeographical map of 750 BC should be reconstructed.

52 Therkorn et al. forthcoming: C-14 (KIA 12302) 2484 ± 27 BP: 2σ: 770-440 BC.

53 Meijer 2000 in Therkorn et al. forthcoming.

54 The development of the river Vecht start around C-14 2895 ± 35 BP (Van de Meene 1988 cited in Berendsen and Stouthamer 2001). This date is taken from a non-eroded top of peat underneath 'Vecht clay'. More recent dates of the top of the peat underneath the 'Vecht clay' also point in the direction of a starting date of the Vecht at C-14: 2900-2800 BP (unpublished dates of I.J. Bos). In calibrated years the development of the Vecht towards the north in the direction of the Flevo lakes takes place around 1000 BC.

55 The West Frisian tidal inlet develops into the hinterland out of the Bergen tidal inlet.

56 De Roo 1953 described the mouth of the estuary near Castricum as the inner delta.

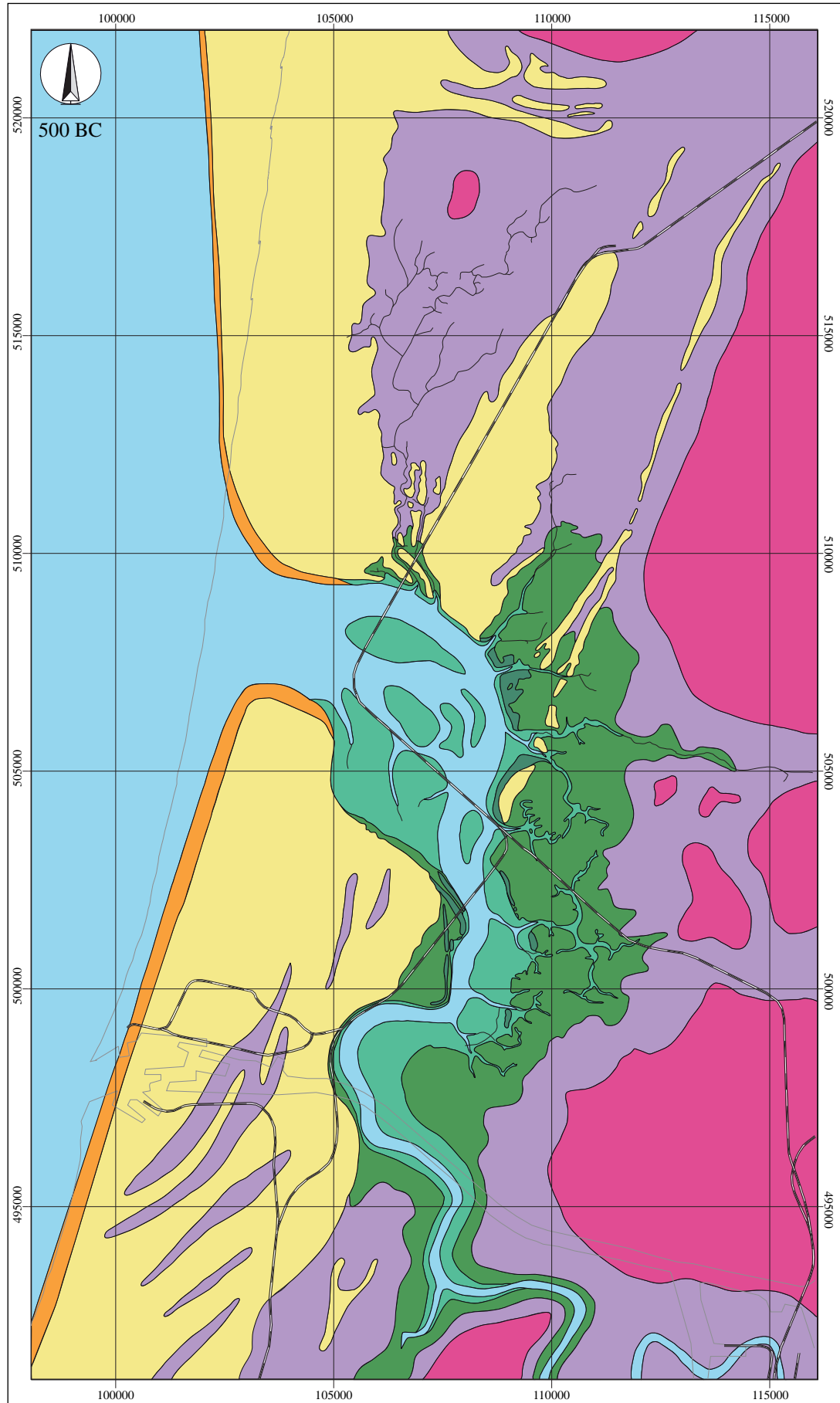


Figure 3.7 Palaeogeographical map of the Oer-IJ area around 500 BC, legend in appendix 1.

In the Oer-IJ estuary marine activity increases from 650 BC to 550 BC. In the Uitgeesterbroekpolder and the Assendelpolder the tidal flat area expands at the cost of the peat. As a result of marine flooding in the peat border area the Early Iron Age farmstead at Assendelft-Q among others was covered by marine clay.<sup>57</sup> At the same time new creek systems develop within the tidal flat area. These creeks cut into the base of the 'Hollandveen' and through the coastal barriers of Assum-Uitgeest-Dorreegeest. Underneath the railroad at Uitgeest a canoe was discovered in one of these creeks.<sup>58</sup> The tree-felling date of the oak of the canoe is dated between 617 and 600 BC. The canoe probably sunk between 600 and 550 BC. At the base of the creek and directly beneath the canoe great lumps of peat were deposited that point to a strong eroding effect of the creek (figure 3.8).



Figure 3.8 The canoe of Uitgeest-De Kleis in situ with the peat lumps as dark blocks underneath it (2003). In the back are Jan de Koning (left) and Peter Vos discussing the stratigraphy of the sedimentary deposits.

The increase in marine activity in the Oer-IJ estuary around 650 BC was possibly a consequence of a strong increase in fresh water drainage from the Flevo lakes and the Rijn-Vecht river system. The increase in freshwater drainage enlarged the main streambed of the Oer-IJ, which caused the tidal waters to enter the estuary. The increase in the tidal range in the estuary led to a larger volume of tidal water. As the amount of tidal water is related to the size of the tidal creeks, the tidal creeks increased in size. The increase in tidal range meant that the mean high tide (MHT) rose<sup>59</sup> and the mean low tide (MLT) lowered. The maximum water level of spring tides rose as well<sup>60</sup> (figure 3.6).

It is probable that human practices, such as reclamation, led to the drowning of the peat at the border zone.

57 Therkorn et al. 1984, 363 and Hallewas 1987, fig 2.2. This layer of clay used to be called Duinkerke 1 deposits, for example Westerhoff et al. 1987.

58 De Koning and Vos 2005, and Koehler 2005.

59 The rising of the MHT level could be reconstructed from the southwestern part of the Uitgeesterbroekpolder as mudflats were situated on top of old tidal flats.

60 The rise of the water levels at spring tides can be deduced from expansion of tidal deposits across the peat in the Uitgeesterbroekpolder and Assendelpolders. In the borderzone of the peat this comes to the fore in the occasionally flooded reed peat, which starts to grow on top of the oligotrophic peat.

The lowering of the surface could have made the area susceptible to flooding.<sup>61</sup> ‘Autocompaction’ could also cause the lowering of the surface in the peat border zone, as the soft peat would subside under the weight of the newly deposited flood clays. The process of the lowering of the surface in the peat border zone during the Early Iron Age also causes the enlargement of the amount of tidal water that can enter the estuary and thereby the increasing size of the tidal creeks.

Near the coastal barrier of Limmen-Heiloo dune formation took place during the Early and Middle Iron Age. On the eastern side of the coastal barrier a thick layer of sand was deposited.<sup>62</sup> The covered peat, situated at the southern end of the coastal barrier, is dated at Limmen-de Krocht to the period 1800-600 BC.<sup>63</sup> The drift sands must have developed later than 600 BC. This places the drift sand near Limmen in the same period as the increase in marine activity in the Oer-IJ area.

It is probable that there is a causal relation between the sand drifts and the increased marine activity in the Oer-IJ area between 700 and 550 BC. During this period the large northern tidal creek of the Oer-IJ shifts even more towards the north. This shifting of the tidal creek led to the erosion of the coastal barrier and Oer-IJ deposits on the northern rim of the Oer-IJ between Bakkum Noord-Limmen-Uitgeest-Assum. Large amount of sand between Bakkum Noord and Limmen were probably released as in the previous period a large sandy dune was situated here. A large part of the released sand was deposited on the northern side of the creek. This sand was blown across the coastal barrier of Limmen into the peat areas by the prevailing southwestern winds.

Between 550 and 400 BC the active marine phase became an inactive marine phase. Around 400 BC the process of silting up arose and within the tidal flats area of the Uitgeesterbroekpolder and Assendelpolder the creeks started to fill in.<sup>64</sup> In the next period the silting up of the Oer-IJ area continued. Around 200 BC the creeks of the Uitgeesterbroekpolder and Assendelpolder were still open but they were very shallow. The silting up of the creek system increased the resistance of the surface to let the tidal waters flow freely and this process led to a diminishing of the tidal influence and the maximum high tide levels lowered within the estuary. Due to the lowering of the mean high tide (MHT) and the maximum spring tide (MST) large parts of the estuary became dry more often and for longer periods. The reed peat in the peat border zone near Assendelft was no longer flooded during spring tides and the highest parts of the tidal area, such as the salt marsh ridge at Beverwijk/Heemskerk-Broekpolder became permanently dry. The areas that were no longer flooded were artificially drained during the Late Iron Age. The oligotrophic peat expanded as it became dependent on rain in the areas of the peat border zone where people did not start reclamation practices. The relatively low parts of the tidal flats at the Castricumerpolder were still flooded during the Late Iron Age. The process of silting up in the Oer-IJ estuary during the Middle Iron Age was probably related to the new drainage channels of the Flevo lakes towards the north. As the Waddensea area became connected to the Flevo lakes, the Oer-IJ lost its function as drainage channel of the Flevo Lakes. Because of the decreased amount of water flowing through the main streambed of the Oer-IJ estuary the water no longer had the force to keep the connection with the sea open.

### 3.3.5 PALAEOGEOGRAPHICAL MAP 0

At the beginning of the Roman Iron Age the tidal influence in the Oer-IJ estuary was nearly absent. Research at the PWN-dune area has shown that large parts of the mouth of the estuary were completely silted up.<sup>65</sup> Coastal and lower coastal barriers deposits blocked nearly the entire tidal inlet. There was probably still a small gap in the coastal barrier. Only during incidental periods of high water, such as storm floods, the areas behind the coastal barrier were flooded. At these times washover sediments consisting of horizontal layers of sand with shell layers and shell banks were deposited. OSL-dating of the horizontal layers of washover sands

61 Vos 1983.

62 For comparison look at the paleogeographical maps of 1000 BC and 500 BC. The extent of the sand deposits on top of peat is reconstructed from the geological map 19W.

63 Dijkstra et al. 2006, 41. The base of the peat is C-14 dated to (UtC 14034) 3491 ± 40 BP: 2σ 1920-1690 BC. The top of the peat is C-14 dated to (UtC 14033) 2582 ± 49 BP: 2σ 840-520 BC.

64 At the base of the remainder of the creek at Assendelft-N bone was C-14 dated (GrN11477) 2300 ± 30 BP: 2σ 410-230 BC. Van Gijn 1987 and Vos 1998.

65 Vos in preparation.

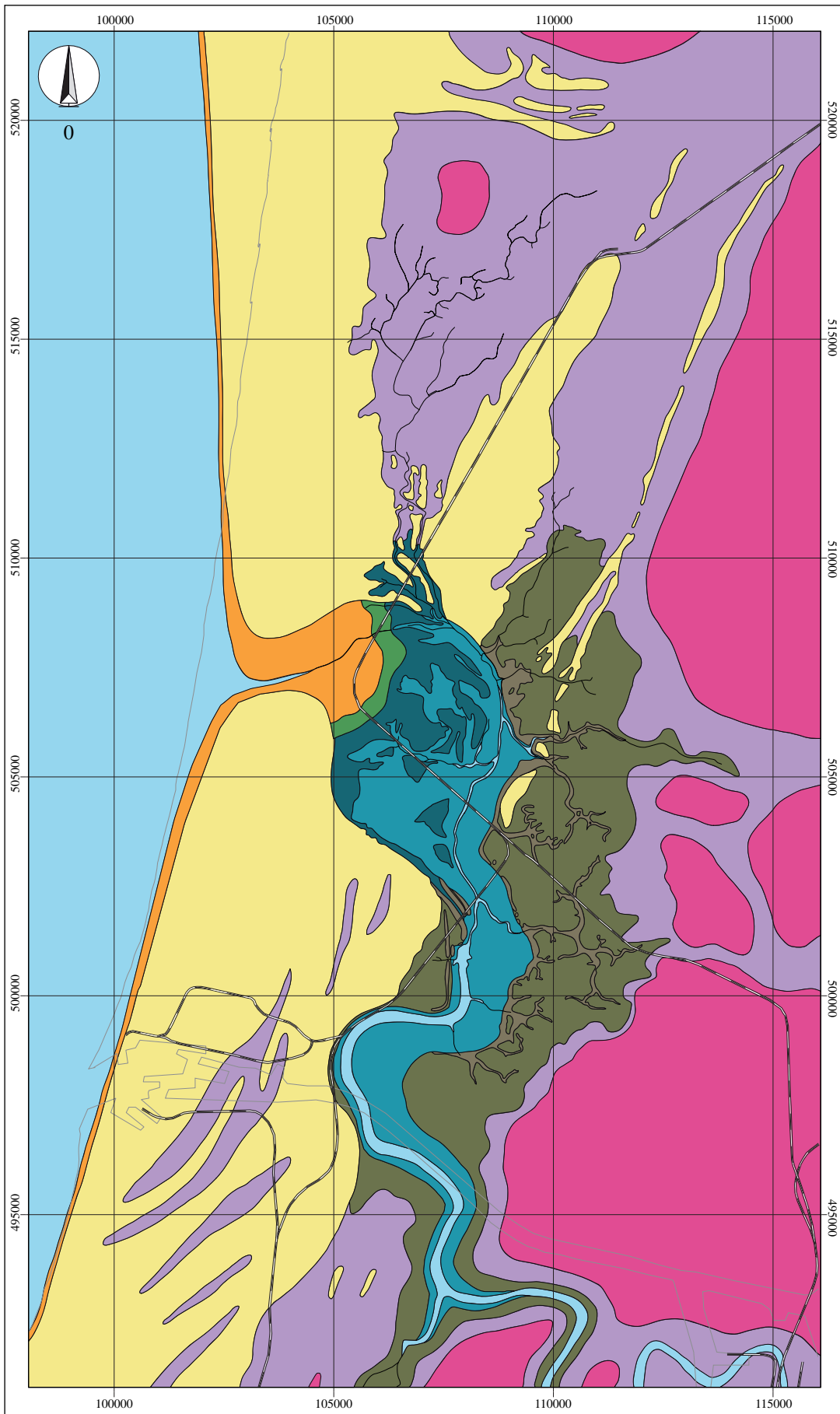


Figure 3.9 Palaeogeographical map of the Oer-IJ area around 0, legend in appendix 1.

at Castricum-Zanderij showed the flooding continued into the second century AD.<sup>66</sup>

During the Early Roman Iron Age a small gap possibly existed south of the former pumping station in the PWN-dune area. The depth of the gap was at most 1 to 2 m beneath mean sea level, which at that time was around 0.75 m NAP. Probably only at high tide or extreme high water it could be used as a waterway.

The (near) closing of the gap during the Early Roman Iron Age can be deduced from the absence of tidal influence in the Oer-IJ. Archaeological data seems to confirm this as the lower parts of the Oer-IJ area, such as the former intertidal area in the Castricumerpolder were inhabited. These areas were at most flooded during exceptional floods when sea water was pushed across the protecting coastal barrier.

During the Middle Roman Iron Age the Oer-IJ was cut off from the sea as a continuous row of dunes developed. The entire Oer-IJ area turned into a fresh water environment. Drainage now took place in the opposite direction towards the east passing through the Flevo lakes towards the Waddensea in the north.

Due to the lack of direct drainage towards the sea and the silting up of the Oer-IJ streambed, the drainage possibilities in the area deteriorated. The remnants of the main streambed of the Oer-IJ near Heemskerk-Broekpolder turned into a broad shallow basin.

The deteriorated drainage led to the expansion of the peat in the border zone of the Assendelverpolder between AD150 - 300.<sup>67</sup>

During the Middle and Late Roman Iron Age the poorer drainage led to the development of peat in the lower parts of the former intertidal areas of the Oer-IJ estuary. This process continued into the Early Middle Ages. At the end of the Early Middle Ages only the higher coastal barriers and former tidal ridges were not covered by peat.

From the Iron Age onward the old main streambed of the Oer-IJ becomes shallower between Velsen and Amsterdam. The streambed was filled in with the sediments from the banks, which were eroding. This process led to the development of an elongated lake around the old streambed, which later became the IJ-lake. During the Late Middle Ages human practice had increased peat erosion and the IJ-lake reached its maximum circumference.

### 3.3.6 PALAEOGEOGRAPHICAL MAP AD 1000

The strong peat expansion in the former Oer-IJ estuary continues into the tenth century. From then on people start with peat reclamation and ditches and canals are dug at a large scale. This process starts between AD 900-1000 west of the village of Assendelft. Already in the twelfth century the entire peat area of the Zaanstreek has been cultivated.<sup>68</sup> The peat development came to a final end in the area.

As a consequence of the peat reclamations lakes started to form, which became larger as the peat along the borders eroded even further. An example of this development is the Alkmaardermeer.

The peat that had grown across the West Frisian tidal inlet and the former Oer-IJ estuary disappeared due to oxidization. The remnants of this peat are nowadays nothing more than a black spotted band (oxidization level) beneath the Late Medieval clay ('Pikclay').

66 East of the train station at Castricum the washover sands are dated AD 163 ± 106. The base of the dunesands on top of the washover sands is dated AD 393 ± 93, Vos forthcoming.

67 Vos 1998, the start of peat overgrowing Assendelft-O and -R has been dated at C-14 1790 ± 30 BP: 2σ AD 130-340.

68 Zeiler 1998, and Vos 1998.

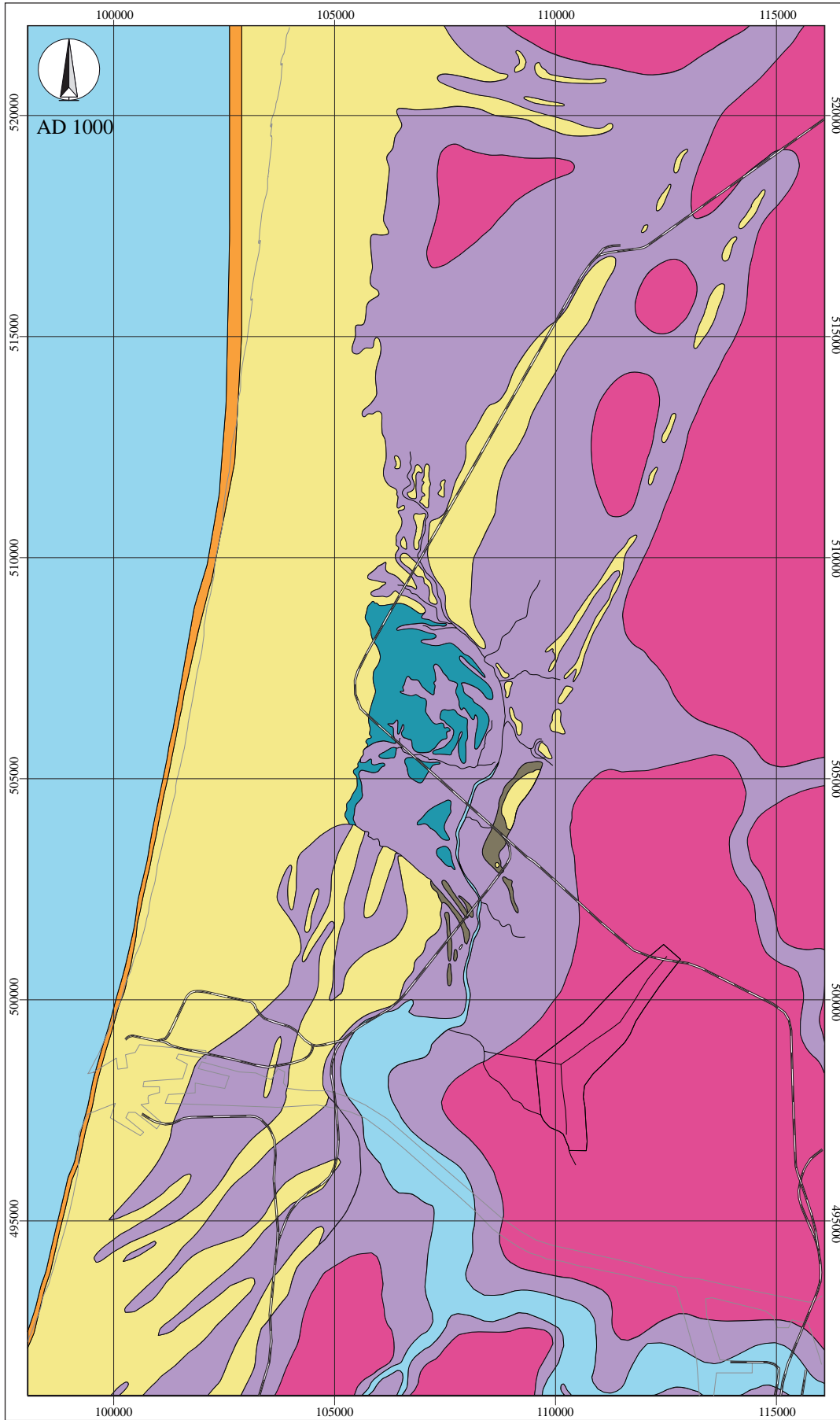


Figure 3.10 Palaeogeographical map of the Oer-IJ area around AD 1000, legend in appendix 1.

PHASE	GEOLOGICAL LANDSCAPE DEVELOPMENT OF THE OER-IJ AREA
phase 1: 3000 - 2500 BC	Beginning of the Oer-IJ. The mouth of the old tidal system between Amsterdam and Haarlem moves towards the area between Beverwijk and Heemskerk.
phase 2: 2500 - 1500 BC	Relative calm begin phase. Marine activity along the borders of the Oer-IJ streambed and large scale peat formation in the eastern part of the Oer-IJ area.
phase 3: 1500 - 1000 BC	Active marine phase. The mouth of the estuary moves further north towards Castricum-Uitgeest. The borderzone of the peat area are flooded and silt is deposited.
phase 4: 1000 - 700 BC	Calm marine phase with more fresh water in the estuary. Tidal range declines. More fresh water in the estuary due to drainage from the hinterland.
phase 5: 650 - 550 BC	Active marine phase. Enlargement of the tidal channels and a rise of the MHT and MST. Borderzone of the peat is flooded and the tidal flats expand in this area. Large sand drifts near the coastal barrier of Limmen as a consequence of erosion caused by the northern Oer-IJ channel.
phase 6: 550 - 450 BC	Turning point from active to calm marine phase. The effect of silting up is stronger than the water containing capacity. Due to the decrease of the amount of tidal water the creeks and channels become more shallow.
phase 7: 400 - 200 BC	Calm marine phase. Decrease of marine activity in the estuary. The process of silting up of the creeks and channels continuous. Tidal creeks were still open but the tidal influence is limited.
phase 8: 200 BC - 0	Beginning of the complete silting up. Due to the decrease of the MHT and MST large parts of the Oer-IJ estuary are less often flooded, and the higher parts of the tidal area become permanently dry.
phase 9: 0 - AD 200	Closing of the Oer-IJ estuary, phases of incidental storm floods in the mouth of the former estuary. The mouth of the estuary has silted up. Only during large storm floods this part is still flooded. The tidal influence in the Oer-IJ is minimal.
phase 10: AD 200 - 400	Wetter phase. The drainage conditions deteriorate and the peat expands across the former tidal areas of the Oer-IJ estuary.
phase 11: AD 400 - 1000	Phase of large scale peat growth. Due to the bad drainage conditions large parts of the Oer-IJ area are covered in peat. Except for the higher and dryer parts of the landscape.
phase 12: AD 1000 - 2000	Phase of increased large scale influence of human practices on the landscape. Humans become the dominant factor in the shaping of the landscape.

Figure 3.11 Summary of the geological developments in the Oer-IJ area.

### 3.4 THE ECOLOGICAL DEVELOPMENT OF THE OER-IJ AREA

Landscapes cannot be studied meaningfully without reconstructing the vegetation. The perception of the landscape will be closely associated with the location of trees, plants and the more mobile animals. Mammals would favour certain locations but could move around. Some species of fish would be confined to specific waterways due to the occurrence of salt, brackish and fresh water. Birds would not so much be confined by space, but by the seasons. The possibilities for specific trees and plants will be determined by the geological situation, but can also be influenced by people as Brandt and Van der Leeuw showed.<sup>69</sup> The vegetation in the Oer-IJ area has been reconstructed for several geological zones. Here I will discuss the animals known in the Oer-IJ area, followed by the vegetation in specific geological zones, where necessary, through time. The focus will be on plants and trees that were of use to the inhabitants. Otherwise, the lists would be quite long but with little relevance to current research.

#### 3.4.1 ANIMALS

The information we have on the different animal species living in the Oer-IJ area is based on the bones collected during excavations. This limits the number of species to the ones that were used by human beings. In

<sup>69</sup> Brandt and Van der Leeuw 1987, 208-210.

the western Netherlands the domesticated animals are: cattle, sheep, goat, pig, horse and dog.<sup>70</sup> Cattle are the dominant species, followed and sometimes surpassed by sheep/goat and with far fewer numbers of pig, horse and dog. The mobility of the animals makes that the animal species cannot easily be pinned down to specific parts of the Oer-IJ. The seasonal occurrence of specific vegetation or nuts and fruits could be an important factor in the location where the animals were fed. It is unclear if there were common grounds, although these can be assumed for the estuary.

The animals taken from the wild, although small in number (<1%) are diverse. Especially many species of fish are found. These are fish that mainly come from fresh water or could be caught in the estuary. Sea (shell)fish remains do occur in minimum numbers both in the eastern part of the Oer-IJ area as well as closer to the sea.<sup>71</sup> The remains of sea mammals are also present throughout the Oer-IJ area in low numbers. The species include whale<sup>72</sup>, dolphin<sup>73</sup> and seal<sup>74</sup> of which the bones could be collected from landed or stranded animals. In the estuary beaver, otter, elk and roe deer were hunted and red deer, fox and wild boar in the wooded dunes.<sup>75</sup> Many birds would have been present in the food-rich estuary and wetlands of which the crane<sup>76</sup>, the white-tailed eagle and the Dalmatian pelican<sup>77</sup> are the most extraordinary in comparison to the current bird population. The main amounts of birds recovered during excavations are, however, duck and goose.

### 3.4.2 PLANTS

In the area of the former coastal barriers and old dunes geologists, ecologists and archaeologists have been able to research the development of this type of landscape due to large infrastructural and building projects.<sup>78</sup> Soil profiles show that there were cycles of pedogenesis or peat formation and drift sand deposits. These cycles were not locally determined but took place on a regional scale.<sup>79</sup> Zagwijn reconstructed the development of vegetation using three main types of vegetation: forest, shrubs, and grassland (figure 3.12).<sup>80</sup> Forests consisted of oak, birch, elm, pine (until the Early Iron Age) and to a lesser degree beech and lime that were probably located more inland. Shrubs were dominated by either sea buckthorn or juniper with the addition of elderberry from the Iron Age onward. Grassland is defined by the presence of dry grasses. Figure 3.12 shows that from the Neolithic until the beginning of the Roman Iron Age there was a constant shift between the amount of forest or shrubs within relative open dune vegetation: with shrubs having the largest extension in the Bronze Age and more fluctuations between forest and shrubs in the Iron Age. During the Early and Middle Bronze Age the influence of people is shown by cereal, ribwort plantain and chenopodiaceae. This human influence in the vegetation diagram declines at the end of the Middle Bronze Age but remains present. The effect people had on the open vegetation itself is difficult to establish, but the grazing of domestic animals probably had some influence in connection to the openness of the landscape.<sup>81</sup> During the Late Bronze Age and Early Iron Age at Velsen there are two local peaks in the amount of juniper.<sup>82</sup> In the Late Iron Age there are strong sand drifts and the old dunes have an open vegetation with shrubs, which is first dominated by sea buckthorn and then

70 Van Wijngaarden-Bakker 1988, 154.

71 For example, Assendelft-F (Van Wijngaarden-Bakker 1988, table 4.12), Castricum-Oosterbuurt (Hagers and Sier 1999, table 8.7), and Velsen-fort-1 (Van Wijngaarden-Bakker 1988, 175). At Velsen-fort-1 it is not clear if they were fished by the Romans or the local inhabitants.

72 For example, Assendelft-N (Van Gijn 1987, 109), Beverwijk/Heemskerk-Broekpolder (Therkorn et al. forthcoming) and Castricum-Oosterbuurt (Hagers and Sier 1999, table 8.7).

73 Beverwijk/Heemskerk-Broekpolder (Therkorn et al. forthcoming), Velsen-Hoogovens (Van Wijngaarden-Bakker 1988, 173).

74 Velsen-Fort-1 (Van Wijngaarden-Bakker 1988, table 4.14).

75 Van Wijngaarden-Bakker 1988, 172-174. The wild animals from Velsen-Fort-1 are left out because their origin is less clear.

76 Beverwijk/Heemskerk-Broekpolder (Therkorn et al. forthcoming) and Castricum-Oosterbuurt (Hagers and Sier 1999, table 8.7).

77 Assendelft-F (Van Wijngaarden-Bakker 1988, table 4.11).

78 IJmuiden-Spuijsluis, Velsen-Noordzeekanaal and Velsen-Hoogovens (Jelgersma et al. 1970).

79 Zagwijn 1997, 96.

80 Zagwijn 1997, a.o. fig.1, p. 94 and 103.

81 Zagwijn 1997, 103.

82 Jelgersma et al. 1970, fig 27 and 30.

by juniper.<sup>83</sup> In the first half of the Roman Iron Age the old dunes became dominated by grassland and for the first time the shrubs contain creeping willow. But at the end of the Roman Iron Age in the old dunes the forest and shrubs have overtaken the grassland and beech and oak starts to expand indicating a wood with foliage at a certain height.

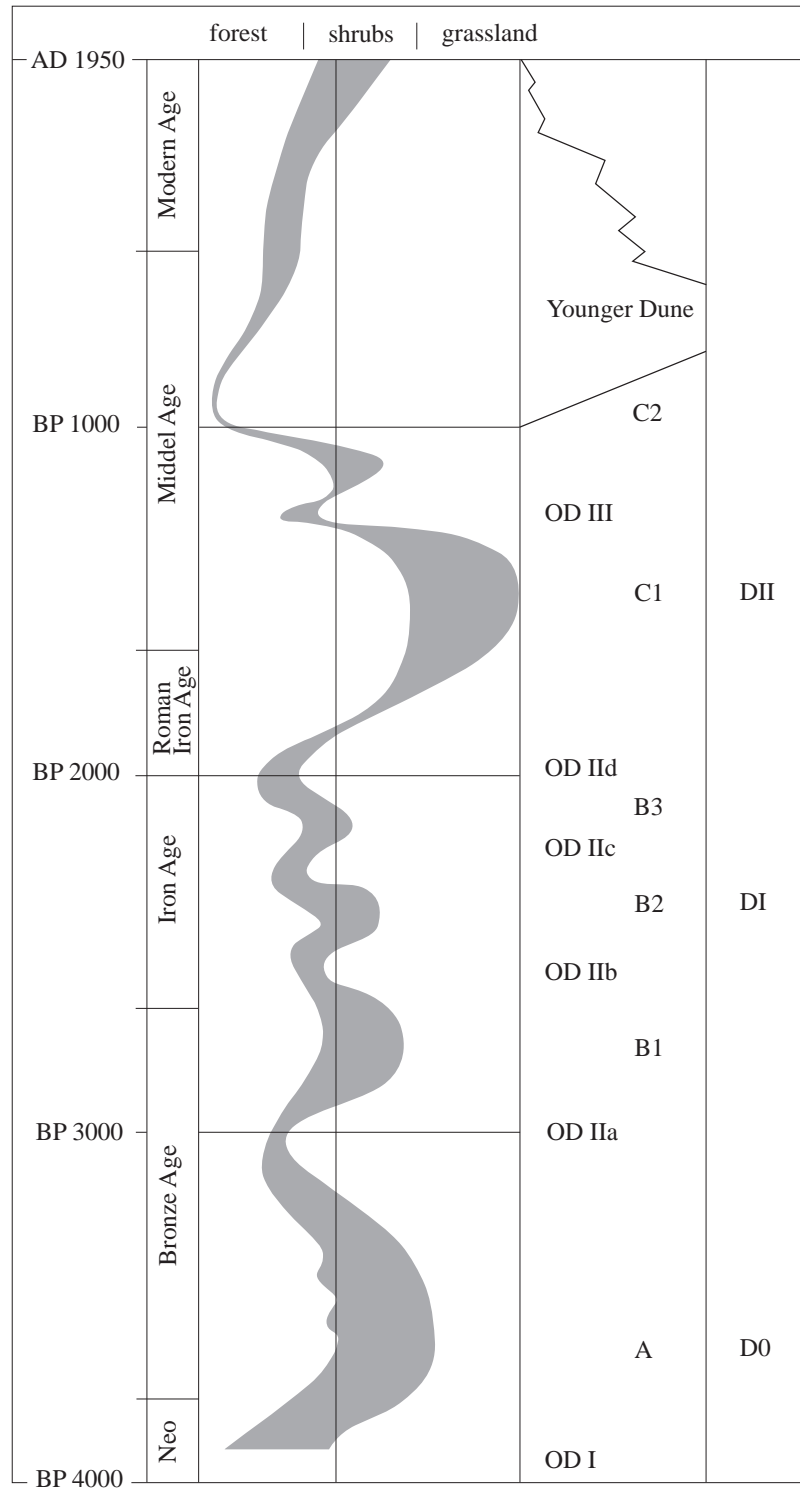


Figure 3.12 Schematic representation of the dune vegetation through time with the old geological terms on the right side, after Zagwijn 1997, figure 1.

The tidal area would have had salt resistant plants of which some would have been edible and are nowadays considered to be delicacies, such as sea lavender and glasswort. The higher salt marshes would have had mud rush and lesser sea spurrey that could be eaten by the cattle.<sup>84</sup> Orache was also present in the salt marshes. The former tidal flats are diverse as they contain brackish and freshwater conditions. These conditions would

83 Zagwijn 1997, 103.

84 Therkorn et al. 1984, 369.

have changed over time with the freshwater conditions slowly arising. The brackish areas would have low vegetation of sea club-rush sedge and reed.<sup>85</sup> The freshwater part and damp grasslands would have had an abundant variety of plants that were attractive for cattle. On the levees alder, willow and birch would have grown and possibly oak and ash. These levees would also have been suitable for agriculture.

There were two main types of peat in the area: reed peat and oligotrophic peat. The accumulation of the peat would have changed due to the influence of the water levels and drainage caused by trans- and regression phases, but also due to human activity such as reed and peat cutting. On the oligotrophic peat there would be no high growing plants but a cover of heather and bog myrtle could develop.<sup>86</sup> The peat goes through successive stages, starting with mainly reed, and the later addition of marsh fern and finally sphagnum and bog myrtle. Reed will, however remain the dominant plant.<sup>87</sup> This is a rich biotope that can be attractive for people when they know how to utilize the potential of the environment.<sup>88</sup>

The open water in the Oer-IJ area changes ranges from salt to fresh water. In the fresh open water several usable plants would have grown such as reed and reedmace.

### 3.5 THE HISTORY OF THE OER-IJ AREA FROM THE LATE NEOLITHIC UNTIL THE ROMAN IRON AGE

A history<sup>89</sup> of the Oer-IJ area will be given from the first traces of occupation until the Roman Iron Age. This is a history with many gaps and choices. The gaps are inherent as archaeology consists of fragmented evidence and not all periods are represented in the same manner. Furthermore, history as a complete story can never be told and always depends on the choices made. Here, the main aim is to construe the development of the settlements and their place in the landscape. The existing models are placed within the context of new information from more recent excavations. And the less well known periods receive attention in order to make them known to a wider audience. Moreover, emphasis is placed on those elements of the cultural development of the Oer-IJ area that are of importance for analyzing the offering sites within the landscape.

It will be a ‘looking up’<sup>90</sup> story in the sense that people in the past did not know the future. Therefore, it is more fruitful to start from their perspective than to reason back from an established situation. This is also in accordance with structuration theory in that people in their actions draw on the rules and resources available to them.<sup>91</sup> Furthermore, although history is created through intentional action it is not an intended project.<sup>92</sup>

#### 3.5.1 LATE NEOLITHIC UNTIL BRONZE AGE

During the Late Neolithic coastal barriers were extended and new ones formed which made the area habitable for the first time during the Holocene. According to Peter Vos from this moment on the environment directly became a cultural landscape.<sup>93</sup> For the people of the Neolithic this would not have been a totally strange or new landscape. The southern coastal barrier in the Oer-IJ area was an extension of the large coastal barrier of Haarlem, on which just south of the Oer-IJ area plough layers and artefacts from the ‘Standvoetbeker’ and ‘Vlaardingen Culture’ were discovered dated to the third millennium BC.<sup>94</sup> The coastal barriers of Limmen/Heiloo and Akersloot/Uitgeest would have been dry islands with mudflats on the north side, which were close to the northern coastal barrier that extended towards Friesland. A familiarity with this type of surroundings and its potential can be assumed for the Neolithic people. There are no specific archaeological models related to this period for the area but the assumption is made that these dry areas, after some initial visits during the

85 Brandt and Van der Leeuw 1987, 208.

86 Therkorn et al. 1984, 354.

87 Groenman-van Waateringe 1983, 39.

88 Groenman-van Waateringe 1983.

89 History as described by Giddens (1995) as the structuration of events in time and space through the continual interplay of agency and structure.

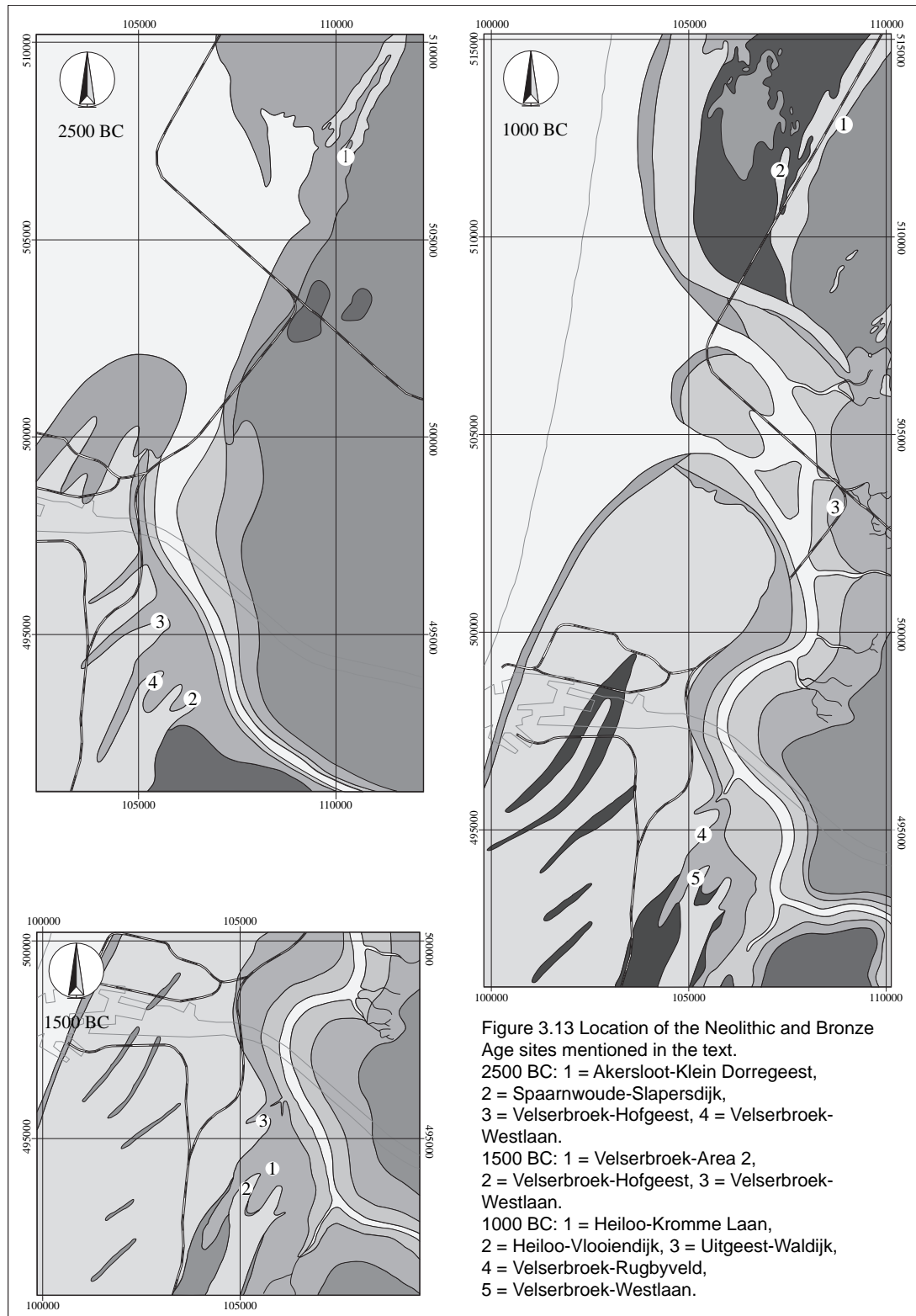
90 As mentioned in Vitelli 1998, following Wilson and van der Leeuw.

91 Giddens. 1995, 19.

92 Giddens. 1995, 27.

93 Peter Vos personal communication.

94 Spaarnwoude-Slapersdijk/Surfplas (Ten Anscher press release 11-04-1990).



Middle Neolithic as indicated by the Vlaardingen sherds near Velsbroek,<sup>95</sup> were inhabited from the Late Neolithic onward.<sup>96</sup> This assumption seems to be affirmed by a few artefacts and evidence of probable fields in Klein-Dorregeest dated to 2450-2000 BC (figure 3.14).<sup>97</sup> Several sites of the earlier ‘Single Grave Culture’ are known about twenty kilometres to the northeast of Klein-Dorregeest at the Groetpolder. The geological

95 Velsbroek-Surfplas: Archis nr. 211438.

96 Brandt, Van der Leeuw and Van Wijngaarden-Bakker, 1984, 7.

97 AWN research 2004 Ron Duijndam and Mark van Raay personal communication.

situation is somewhat different – a creek system with levees – but permanent settlement with mixed farming in combination with seasonal occupation is evident.<sup>98</sup> The existence of fields was viewed as one of the indications for the permanent settlements<sup>99</sup> and it can therefore be assumed that a permanent settlement should also be close by at Klein-Dorreegeest.

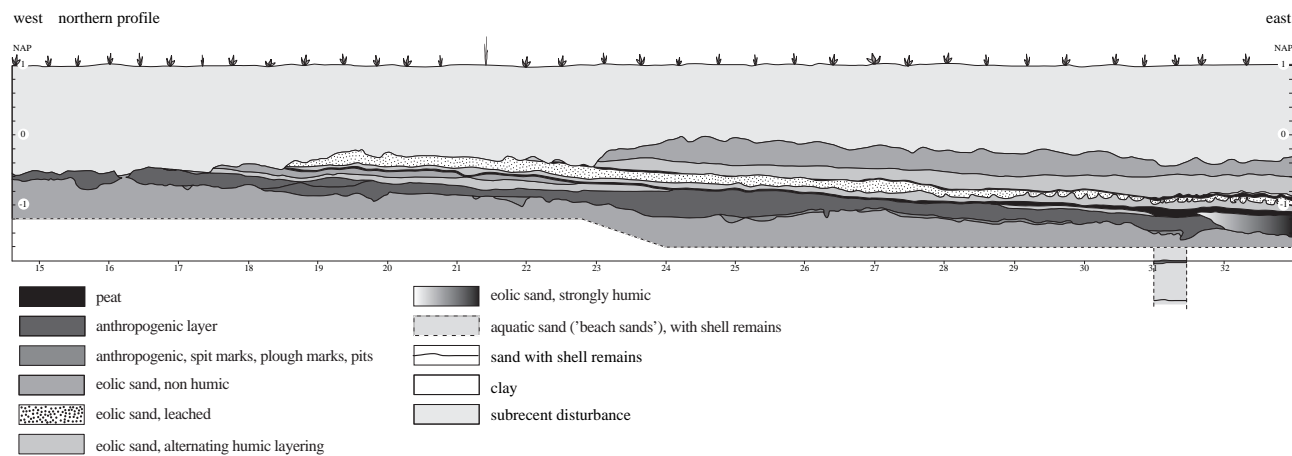


Figure 3.14 East-west profile looking north at Akersloot-Klein Dorreegeest, after Vos 2005 appendix 2.

The first evidence for the structuring of the landscape come to light in the old dunes at Velsen, dated to the transition from the Late Neolithic to the Bronze Age. Round barrows were constructed in two places less than two kilometres apart. At Velsen-Westlaan a barrow was constructed,<sup>100</sup> which became a structuring element in the landscape as is inferred from the recurring additions and depositions that took place over the next 1200 years. A later road (at least Bronze Age) going over the barrow leads in the direction of Velsen-Hofgeest<sup>101</sup> where four more barrows are situated. The combination of roads and barrows is known from other areas.<sup>102</sup> The four barrows lie in an approximate northwest-southeast line on top of an old dune (OD-I). The oldest Barrow A is dated to the Early Bronze Age, as 'wikkeldraad' pottery is present in the edge of the mound.<sup>103</sup> The dating of the other three barrows is less certain but they are at least later than A.<sup>104</sup> Under two of the barrows (B and C) the ground was worked, but it is unclear whether this was done in connection to the building of the barrows or indicates earlier land use. The barrows are multi-phased monuments with wooden post settings (A B and C) and even a rectangular gully and associated planked structures (B) that enlarged their visibility. Pits and posts in the vicinity associated with 'wikkeldraad' pottery indicate that other activities, possibly related to burial practices, took place near the barrows.

The barrows at Velsen were constructed and modified time and again and activities took place in their vicinity. A sense of place connected to the ancestors was created over the centuries. Especially the barrows at Hofgeest on top of an old dune would have had a visual impact in the fairly open landscape. These barrows were possibly visible from the Oer-IJ channel across the salt marshes. The barrows disappeared from sight at the end of the Late Bronze Age when dunes (OD-II) covered them.

Contemporary with the barrows are pits,<sup>105</sup> fields, fences<sup>106</sup> and a cattle enclosure<sup>107</sup>, but no farmsteads are known. The different features are all situated close to the barrows. Although the barrows in itself were respected as is shown by their reworking through time, they were not separated in space from activities associated with the living.

98 Hogestijn 1997 and 2005.

99 Hogestijn 2005.

100 Therkorn and Van Londen 1990. C14 wood from burial (GrN-16893) 3635 ± 30 BP: 2σ 2140-2080 BC (12,5%) and 2050-1890 BC (93%).

101 Woltering 1979.

102 Drenth and Lohof. 2005, 434.

103 Woltering 1979, 254.

104 Barrow D was partly destroyed.

105 Velsen-Hofgeest (Perger and Hendrichs 1991).

106 Velsen-Westlaan (Therkorn and Van Londen 1990).

107 Velsbroek-area-2 (Therkorn 1987c).

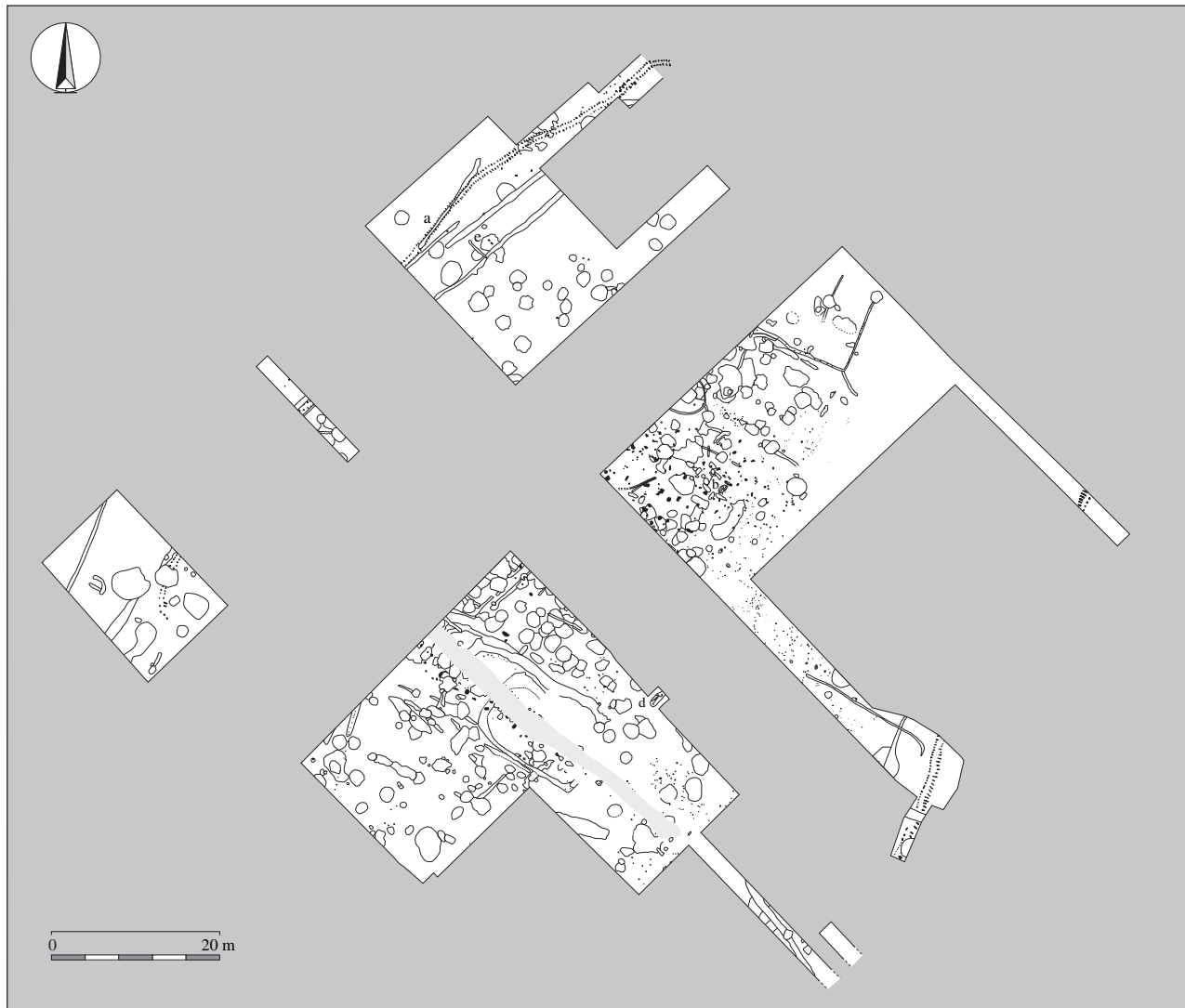


Figure 3.15 Cattle enclosure at Velsbroek-area-2. The cattle enclosure is formed by a double post row. At a later date inside this area many pits and five consecutive houses were situated, after Therkorn 1987c, figure 7.

The Early Bronze Age cattle enclosure on the same road between Hofgeest and Westlaan was constructed of a double stake row, encircling on three sides the rise of a small dune indicating that the landscape was ordered in a more physical way than in the Neolithic (figure 3.15). In any case cattle were not allowed to roam about freely at all times. The enclosed space covers about 6570 m<sup>2</sup> and as it was close to the salt marshes it could have had a visual impact equal or more forceful than the four barrows in Hofgeest and the barrow at Westlaan. The enclosure itself was, however, used for a shorter period than the barrows.

In a marshy pool 25 metres south of the barrow at Westlaan over a long period of time pits were dug in which deposits were made.<sup>108</sup> The oldest deposit a bull's head with a basket pinned on its horn could be earlier or contemporary with the barrow.<sup>109</sup> A row of stakes was placed in the marshy pool which points towards the barrow. In this way a link was made with the other use of the landscape. From the Middle Bronze Age-B the first farmsteads known are all situated at the older dunes of the southern part of the research area. On top of the area of the former cattle enclosure five, consecutive, farmhouses were built (figure 3.15).<sup>110</sup> At the end of the Middle Bronze Age<sup>111</sup> at Westlaan a few hundred metres west of the marshy pool a barrow and a farmstead

108 See chapter 4, section Velsbroek-Westlaan.

109 C14 wood from basket (GrN 16895) 3560 ± 70 BP: 2σ 2140-2080 (4%), 2060-1730 (90%), and 1720-1690 (1%) (Lanting and van der Plicht 2002, 187).

110 Velsen-area 2 (Therkorn 1987c).

111 C14 bone from ditch associated with the house (GrN 17783) 2960 ± 70 BP: 2σ 1400-980 BC, C14 bone from pit inside house (GrN 17781) 3020 ± 50 BP: 2σ 1410-1120 BC (Lanting and van der Plicht 2002, 187).

with two (re)building phases were constructed (figure 3.16).<sup>112</sup> A smaller building, possibly also a farmhouse, was situated only a few metres away in line with the other farmhouse.

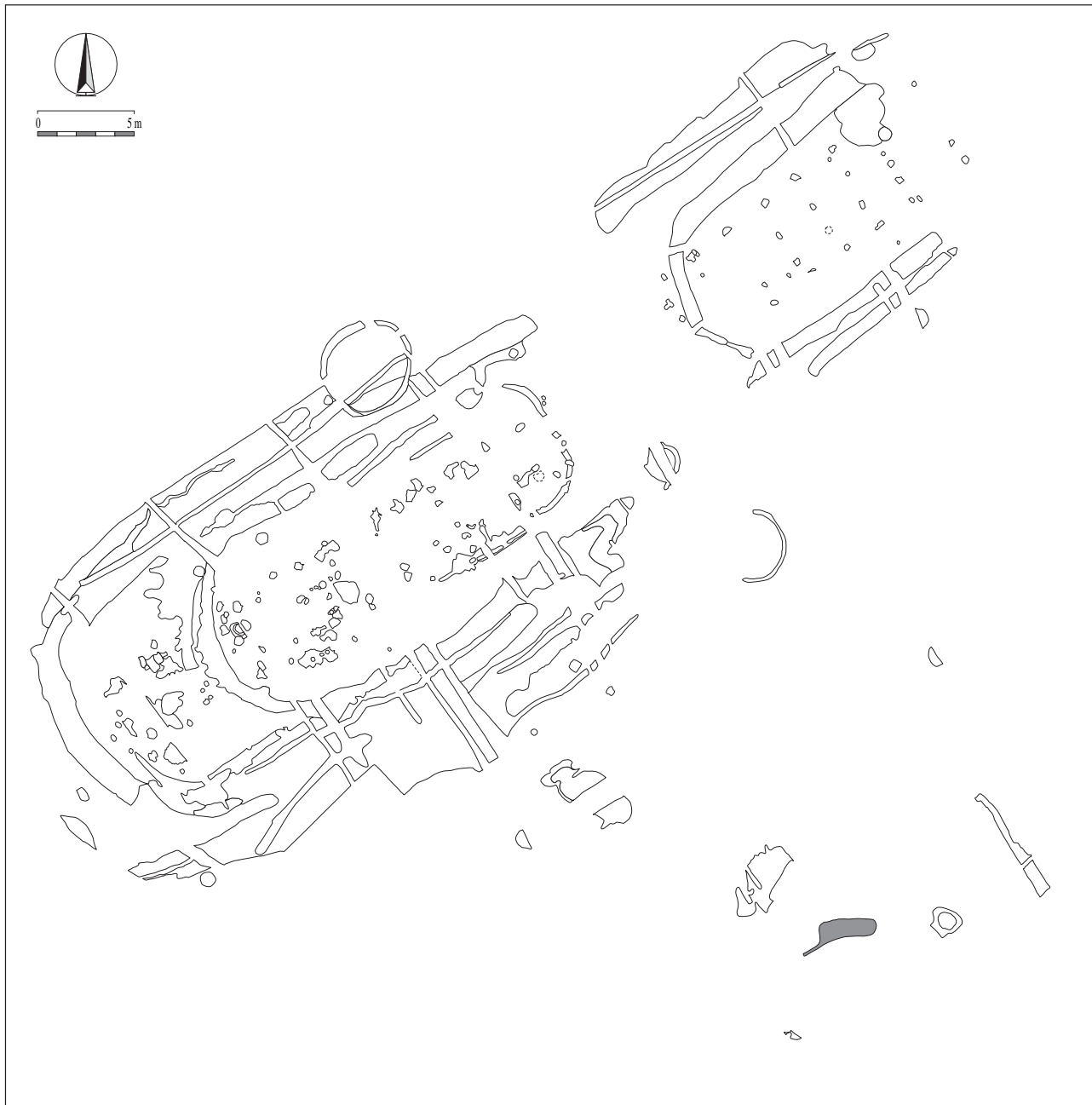


Figure 3.16 Houses at the southwestern part of Velsbroek-Westlaan. The dark shape is the remnant of the so-called warrior grave underneath a completely destroyed barrow, after original field drawing.

In the Late Bronze Age south of Hofgeest a farmstead was built with probably a (re)building phases (figure 3.17).<sup>113</sup> The building of farmsteads at the same spot is normal practice for the Bronze Age of West-Friesland and the Dutch river area. But it is absent in all other parts of the Netherlands.

All the different elements in the landscape, whether they are barrows, farmsteads, fields or pits in a marshy pool, point towards a tradition that reaffirms specific uses of specific places through time, a rootedness. This rootedness does not equal a static community. There are several indications from the Bronze Age that point to widespread contacts and exchange of ideas. For example, the second barrow at Westlaan fits in the pattern of

112 Velsen-Westlaan (Bosman and Soonius 1990).

113 Velsbroek-Rugbyveld (Brandt 1988, 69, and Beemster and Brandt 1986, 282).

the so-called warrior graves with a rapier and gold coiled rings (figure 3.18).<sup>114</sup> This type of grave is known throughout northern Europe but is infrequent. The nearest similar type of grave is in Zwaagdijk about 40 km to the northeast. Fontijn argues, due to the infrequent occurrence, that the warrior graves were probably linked to specific events instead of just a warrior aristocracy.

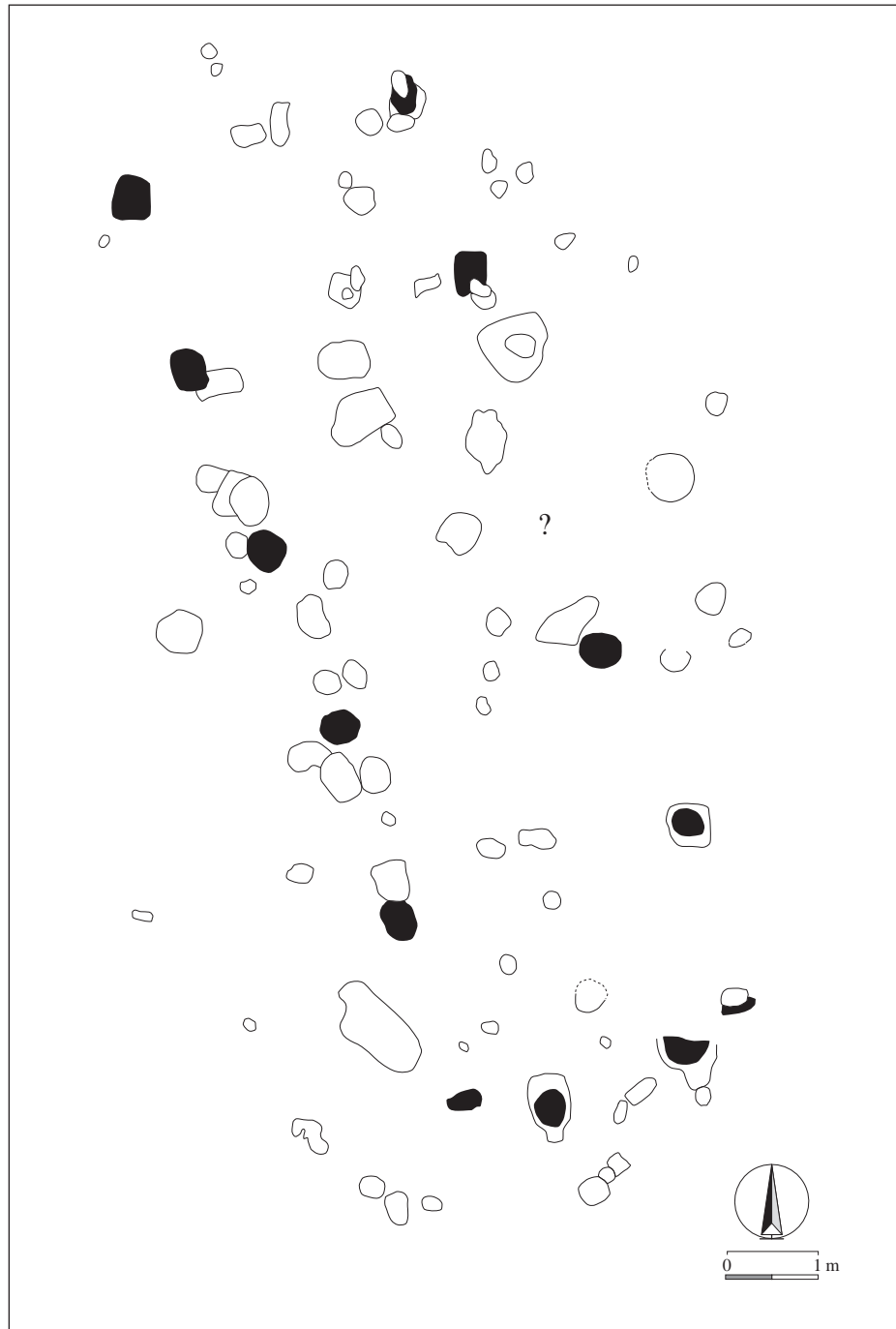


Figure 3.17 The plan of a three-aisled house at Velsbroek-Rugbyveld, after Brandt 1988, figure 6.

Also the pottery shows links to areas outside the Oer-IJ area. Van Heeringen defines for the Late Bronze Age the Heemskerk Pottery Style Group as characteristic for the Oer-IJ area (figure 3.19).<sup>115</sup> He sees a similar development in the pottery to the south and a close resemblance to the northern Bovenkarspel Pottery Style Group. In the ninth century Van Heeringen sees a divergence from the Bovenkarspel Pottery Style Group but a recently excavated pit at Uitgeest-Waldijk contained ninth century pottery that strongly resembled

114 Fontijn 2003, 228.

115 Van Heeringen 1992, 277.

the Bovenkarspel Pottery Style Group.<sup>116</sup> All the coastal groups show links with pottery from the eastern Netherlands indicating communication through the use of the larger waterways, which run east-west. From the northern coastal barriers no farmsteads are known, but the area was occupied as there are several traces from especially the (Late) Bronze Age. Pollen analysis from a pit indicates at least the presence of agricultural activities.<sup>117</sup> That the land was worked is also evident from several flint sickles found in the municipality Heiloo (figure 3.20).<sup>118</sup> A ritual deposition at Heiloo-Kromme Laan consists of one bronze and four flint sickles in a row on dry land.<sup>119</sup> Analysis of the flint sickles showed that they were most likely used for cutting sods instead of grain.<sup>120</sup> Flint sickles are not known from other parts of the Oer-IJ area, but there is ample evidence for the use of sods throughout pre- and protohistory.<sup>121</sup>



Figure 3.18 The golden coiled rings and bronze axe from the warrior grave at Velsbroek-Westlaan, after Bosman and Soonius 1990, figure 3 and 4.

116 Jan de Koning personal communication.

117 Heiloo-Vlooiendijk (Van Haaster and Van Dijk 1997, 9).

118 For an overview, De Ridder 1995.

119 The description of this deposition as a bog find in Butler 1990 is an error, Jay Butler personal communication.

120 Van Gijn, 1992.

121 For example, the linear banks at Velsbroek-B6, (Therkorn 2004, 108) or the wall-ditch house at Uitgeesterbroek-polder-54 (Therkorn et al.1986).

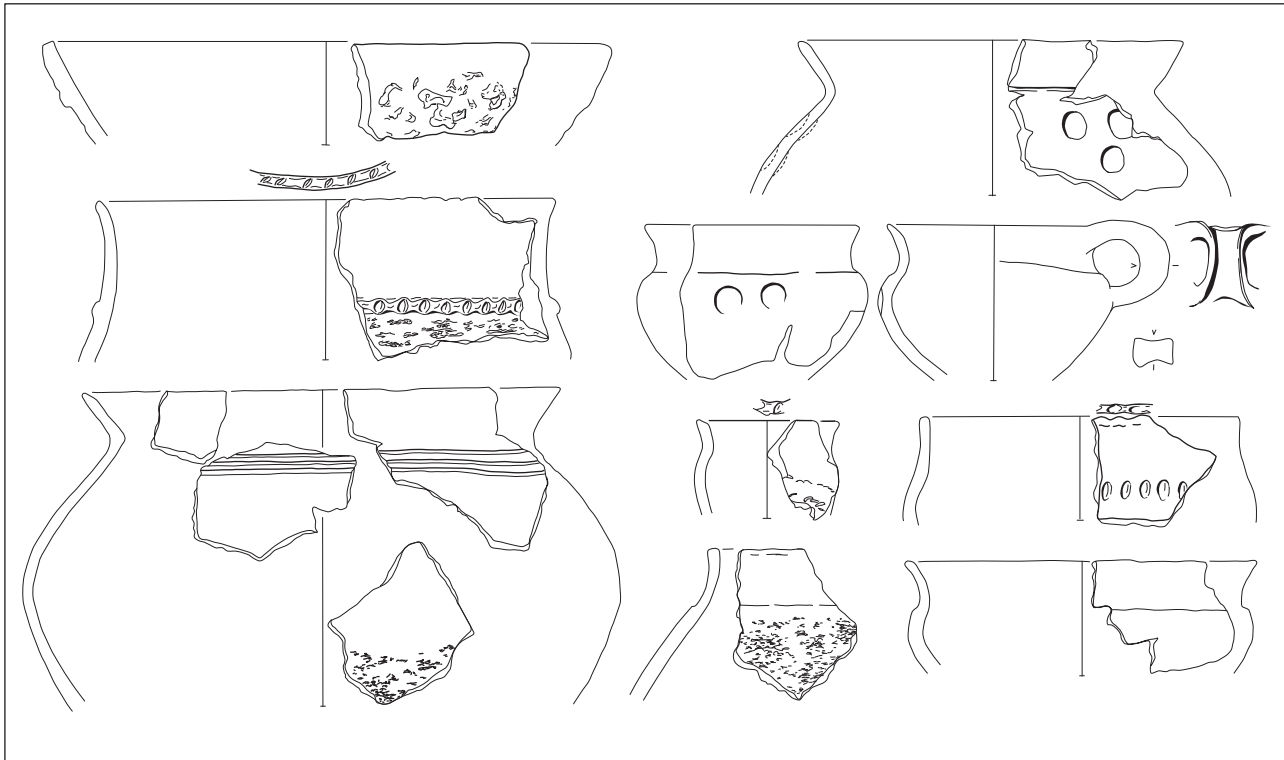


Figure 3.19 Some pottery from the Heemskerk Pottery Style Group, after Van Heeringen 1992, figure 64.

There is no evidence of the presence of people on peat during the Neolithic or Bronze Age. The presence of people in peat areas outside the Oer-IJ area, however, has been attested in many instances.<sup>122</sup> It is therefore highly likely that, although the evidence is absent in the Oer-IJ area, the peat was probably visited throughout the Late Neolithic and Bronze Age.

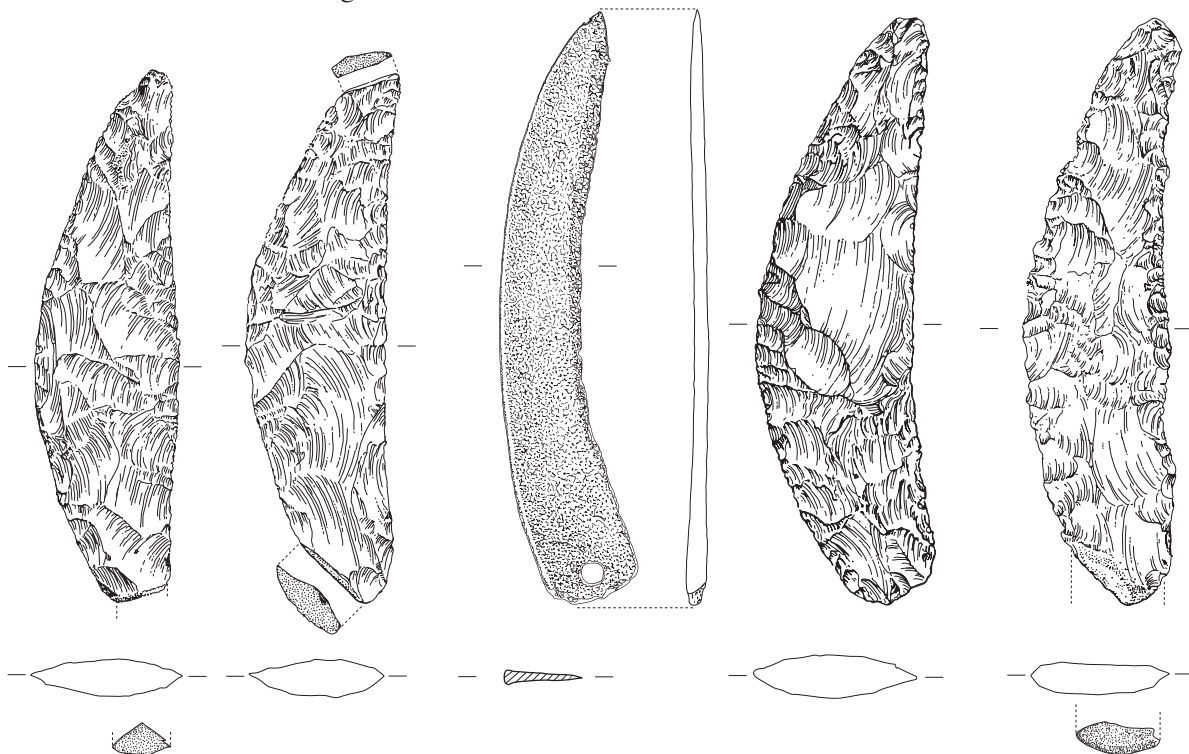


Figure 3.20 The sickles from Heiloo-Kromme Laan, scale 1:2, after Butler 1990, figure 24.

122 For example, the bogroads and the ritual site of Barger-Oosterveen in Drenthe (Van der Sanden 1990).

## 3.5.2 EARLY AND MIDDLE IRON AGE

In the Early Iron Age the first traces of occupation outside the former coastal barriers and old dunes occur (figure 3.21). Oligotrophic peat formed within the reed peat area due to the development of a less active marine phase at the end of the Bronze Age.

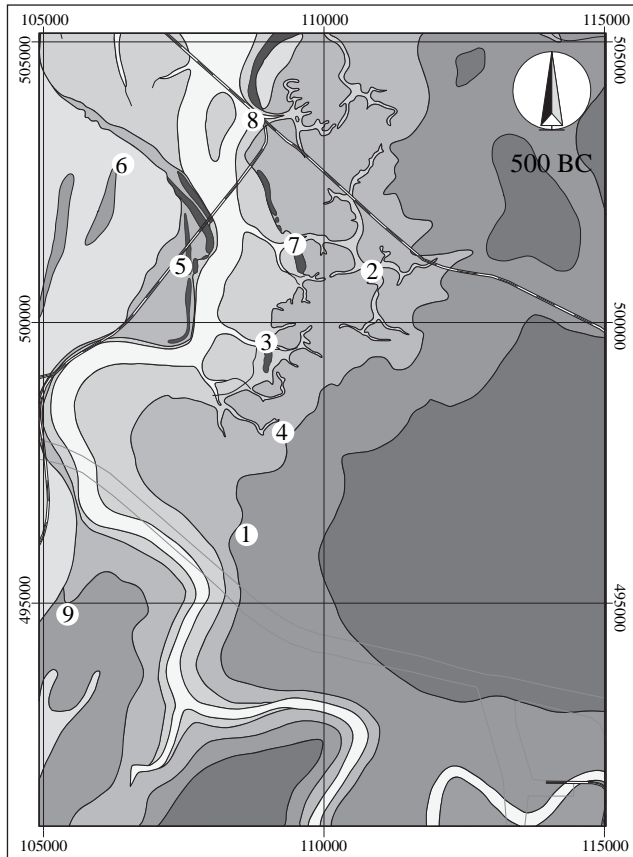


Figure 3.21 Location of the Early and Middle Iron Age sites mentioned in the text.

- 1 = Assendelft-39
- 2 = Assendelft-F
- 3 = Assendelft-N
- 4 = Assendelft-Q
- 5 = Beverwijk/Heemskerk-Broekpolder
- 6 = Heemskerk-Kerkweg
- 7 = Uitgeesterbroekpolder-16
- 8 = Uitgeester-De Kleis
- 9 = Velsbroek-Hofgeest

During the less active marine phase in the Early Iron Age natural creeks and dug ditches drained the peat, which halted the peat accumulation and started soil formation processes that made the peat accessible. Several farmsteads are known from this part of the landscape of which Assendelft-Q is the most widely referred to (figure 3.22). Assendelft-Q is a well-preserved three-aisled farm, which provided the opportunity to study a farm and its uses in more detail. The results from the different analyses of Assendelft-Q give insight into the use of the landscape within the Oer-IJ area. Garthoff-Zwaan her study of the use of specific wood species within the building has shown that besides building properties also the perception of the magical/religious qualities of wood was taken into account when building a farm.<sup>123</sup> Insect remains indicate that the sand used in the flooring was taken from the levees of a salt marsh creek. Building materials were collected in different elements of the landscape. Oak and purging buckthorn from the old dunes, sand from the salt marshes and roof material from the reed peat area. This means that people moved around the Oer-IJ area collecting in different places the materials needed for building their farmstead.

At the dwelling end a complete pot was deposited in the first floor. Its content could not be determined, but it is probably a ritual deposit associated with the building of the house. From the absence of wood destroying insect remains it can be inferred that the farmstead was abandoned before the wood was decaying.<sup>124</sup> When the farmstead was abandoned it was partly dismantled. The roof supports were cut down, which means that the roof had to be taken off after the use of the farmstead.<sup>125</sup> The farmstead contained secondary used timbers, indicating that it was a normal practice to re-use wood from other structures. Whether this re-use of timbers was related to ideas of continuity of the family through the use of parts of the old farmsteads in new ones or

123 Garthof-Zwaan 1987.

124 Hakbijl 1989, 99.

125 Therkorn et al. 1984, 363.

was a purely pragmatic act in a tree-scarce environment is difficult to establish. Both aspects could influence the decisions made when building a new farm. Therkorn has shown that the building of farms probably was a family affair in which traditions on the proper dimensions of a farm were transmitted over the generations.<sup>126</sup> The use of the wider landscape, deduced from the building materials of the farmstead at Assendelft-Q, also comes to the fore in the plant remains taken from dung samples. Plants from the tidal flats, desiccating peat, wet meadows and reed areas/fresh water marshes are represented in the dung.<sup>127</sup> A distinction between sheep and goats on the basis of bones alone is difficult but droppings and insects in the stable area have shown that at least goats were held.<sup>128</sup>

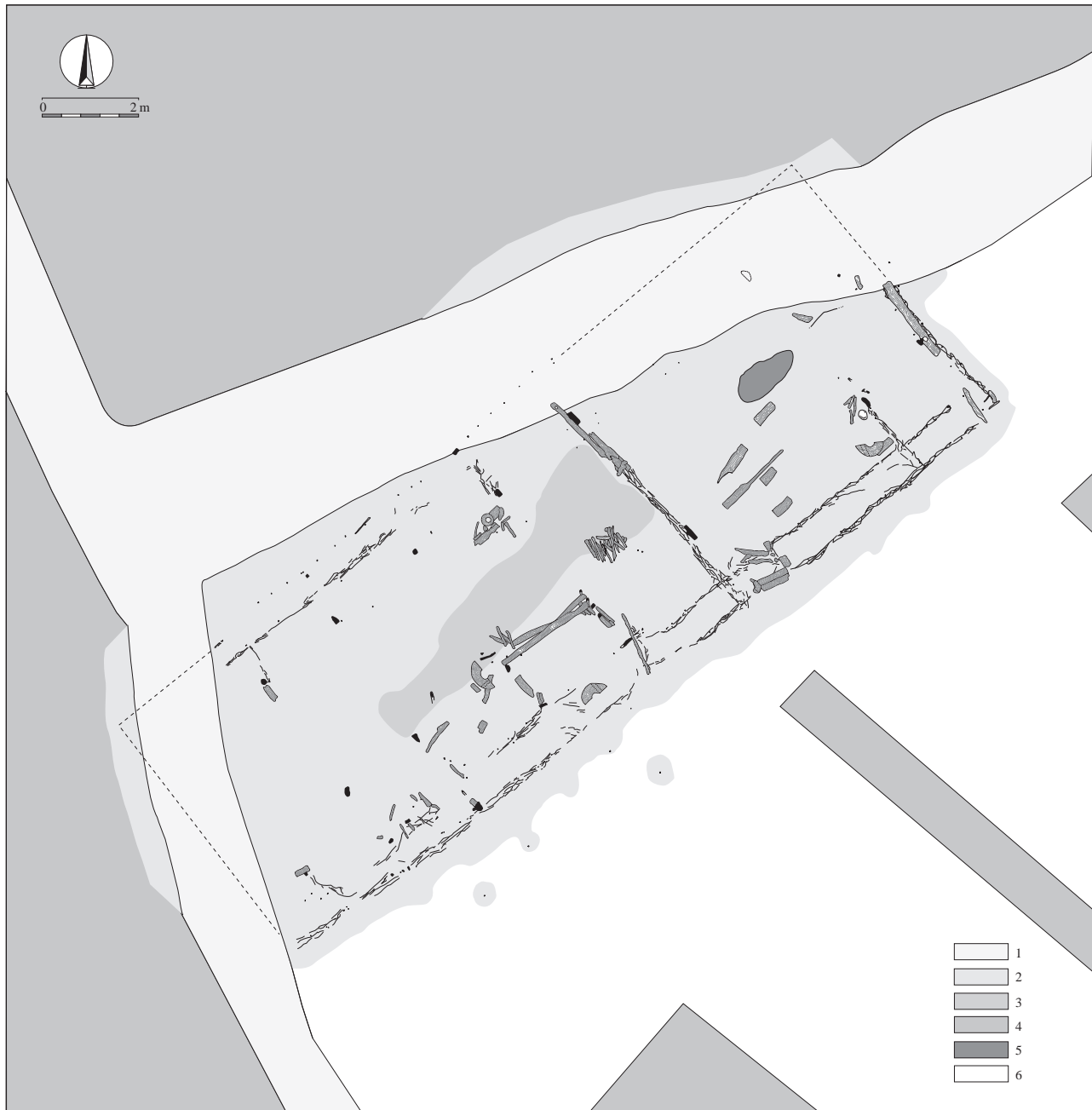


Figure 3.22 Plan of the house at Assendelft-Q. 1 = modern ditch, 2 = floor, 3 = peat fault, 4 = outside trench, 5 = hearth, 6 = trench. After Therkorn et al. 1984, figure 2 and 3.

126 Therkorn 1987b, 194-201.

127 Pals 1983, 34.

128 Pals 1983, 34, and Hakbijl 1989, 97.

It was assumed that the presence of peat cushions determined the spacing and possibilities for habitation in the Early Iron Age.<sup>129</sup> Additional research in the Assendelver polders<sup>130</sup> has given new insight into the way people engaged with their environment. It is now hypothesized that there were no peat cushions but that there was a blanket of peat which was subsequently cut away by the people altering their environment in such a way that not only habitation became possible but that habitation was located on an enormous fuel resource. In a tree scarce landscape peat can be an important fuel. The evidence from the hearth of the farmstead of Assendelft-Q shows that the burning of peat was a normal practice.<sup>131</sup> The burning of other fuels than wood is also suggested by the absence of wood destroying insects.<sup>132</sup> These fuel aspects could have made the peat a favourable place for settling.

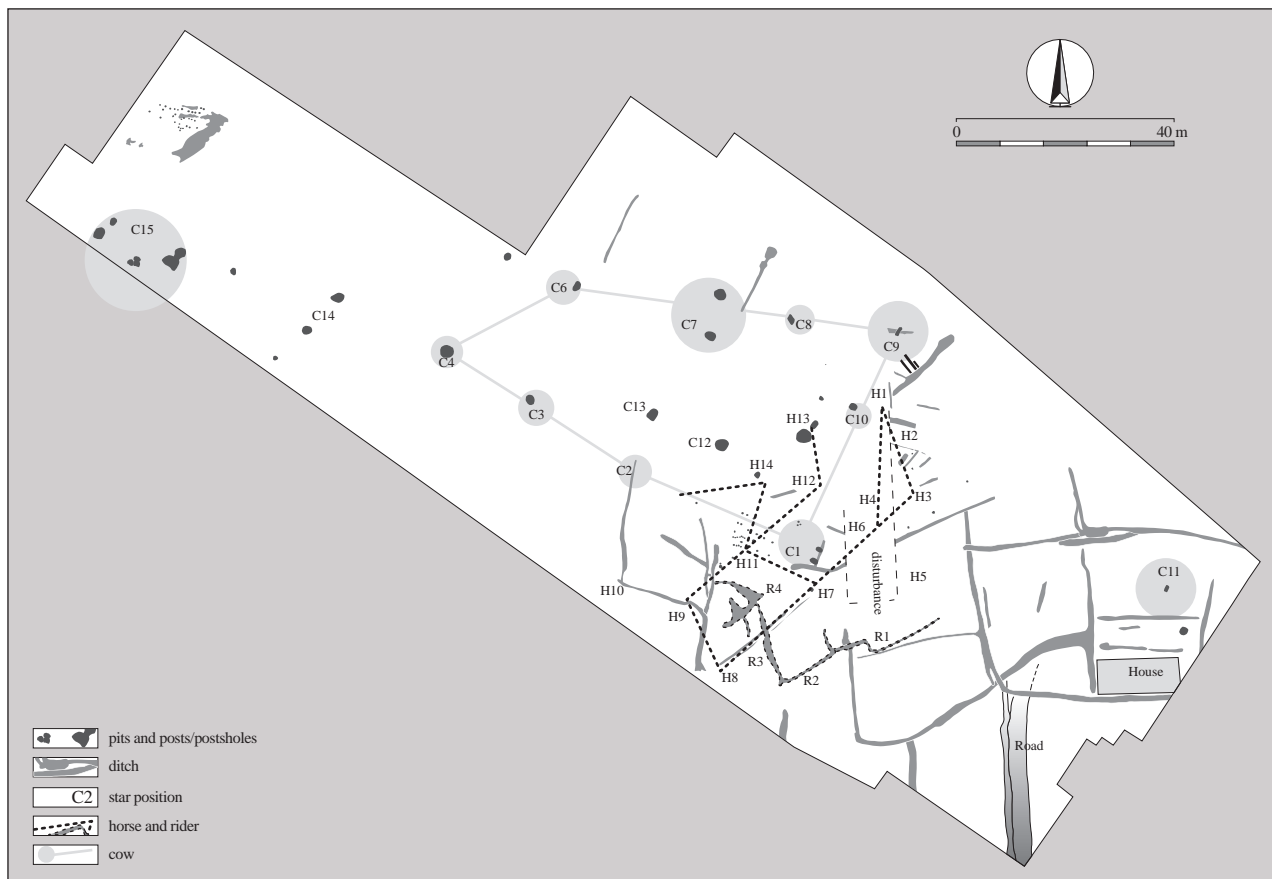


Figure 3.23 Schematic plan of the main features at Velsbroek-Hofgeest, after Therkorn 2004, figure 51.

The initial research in the peat area has been influenced by a general perception in Dutch archaeology that dry (sandy) areas were good for habitation and wet areas were not.<sup>133</sup> This has led to several theories of how and why people inhabited the peat area based on the idea that agriculture was, if possible, executed at a small scale.<sup>134</sup> More recent excavations have established the presence of fields on the peat, which would heighten the agricultural potential.<sup>135</sup> Furthermore, it can be assumed that the people in the peat area used the levee systems

129 Brandt, Van der Leeuw and Van Wijngaarden-Bakker 1984, Brandt and Van Gijn 1986, and Brandt and Van der Leeuw 1987.

130 Therkorn, Besselsen and Oversteegen 2006.

131 Therkorn et al. 1984, 370.

132 Hakbijl 1989, 99.

133 The so-called 'wet feet' theories (Abbink 1986).

134 For example, Brandt's (1988, 75) theory that peoples perception about themselves as associated with animal husbandry enabled them to inhabit the peat area or the theory of Brandt and Van Gijn (1986, 72) that intensive exchange with the dry areas was necessary for the subsistence of the inhabitants of the peat areas.

135 Therkorn, Besselsen and Oversteegen 2006, 46-47.

for arable. In a similar manner as suggested for the early fields at Assendelft-F and -N.<sup>136</sup> Although the levees are not directly next to their farms this should not be an obstacle. Mobility in the form of boats or walking probably was an integral part of everyday life of Iron Age farmers. Furthermore, the distances are not that great to be unfeasible for use in a daily practice, as Brinkkemper has argued for the Meuse estuary.<sup>137</sup> Mixed farming is now seen as the base of subsistence of the inhabitants of the peat area.

The term used for the first inhabitants of the peat area is often 'colonizers';<sup>138</sup> we have to consider what this exactly means. Most probable these so-called colonizers came from a distance of less than 8 kilometres, namely the old dunes and former tidal area and remained within what they would consider to be their own land. Habitation in the peat area continued into the Roman Iron Age.<sup>139</sup>

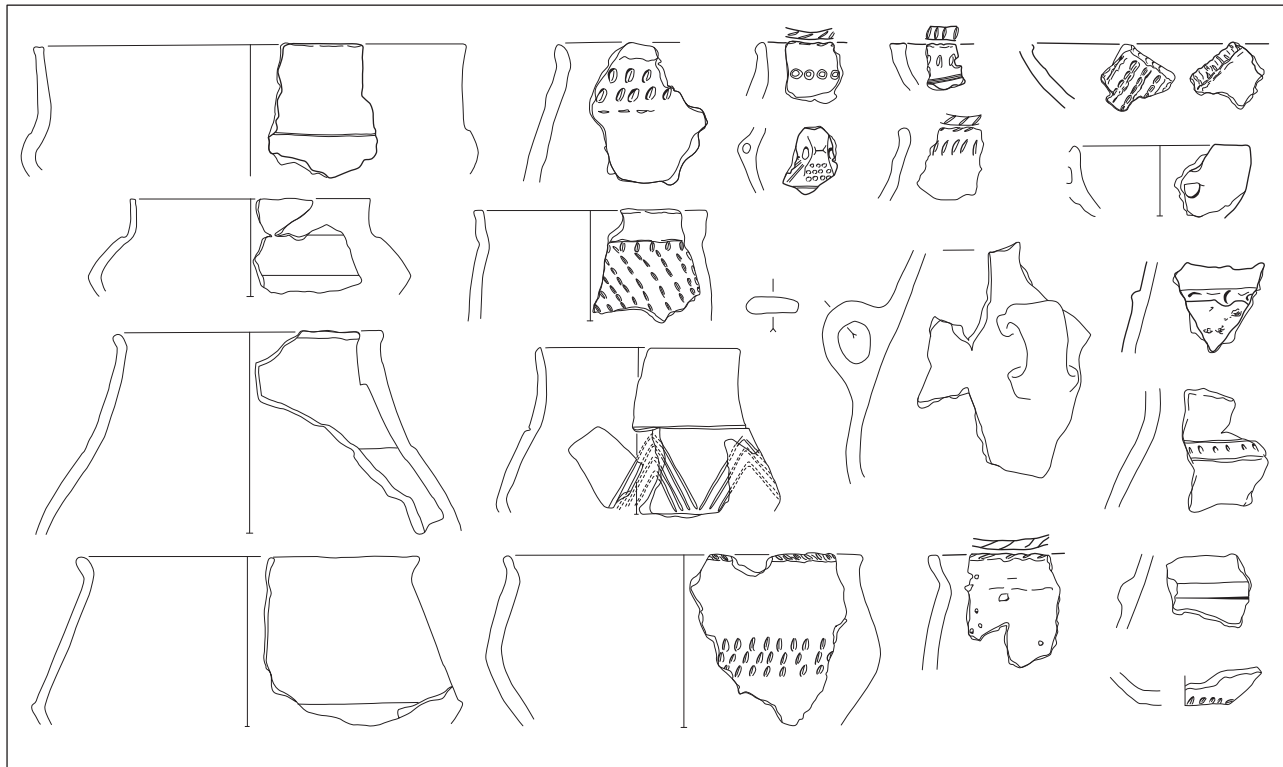


Figure 3.24 Some pottery from the Assendelft Pottery Style Group, after Van Heeringen 1992, figure 64.

In the western part of the Oer-IJ habitation continues in the Early and Middle Iron Age. There is evidence for a more explicit ordering of the landscape that incorporated the people's worldview. At Velsbroek-Hofgeest the landscape was ordered in a specific manner, which transformed the night sky and the seasons in the form of specific constellations into the earth by means of pits (figure 3.23).<sup>140</sup> The constellation of horse and cow were laid out, respectively on the arable fields and on the pastures.<sup>141</sup> This indicates that the people of the Oer-IJ area had a view of their world which incorporated different elements, such as space, time and different animals and agricultural practices into a consistent whole. Velsbroek-Hofgeest is the eldest example of this specific way of ordering the landscape. Other sites with similar features are, however known in and outside the Oer-IJ area until the Roman Iron Age.<sup>142</sup>

In the Early Iron Age the pottery in the Oer-IJ area differs from the pottery of the southern coastal region but has affiliations with the pottery from the northern coastal region (figure 3.24). Van Heeringen sees the unique

136 Therkorn and Abbink 1987, 140.

137 Brinkkemper 1991, 151 and 217.

138 For example, Brandt 1986.

139 Therkorn and Abbink, 1987, 132.

140 Therkorn 2004, 130 ff.

141 Therkorn 2004, fig 51.

142 Sites outside the Oer-IJ area are Schagen-Muggenburg I and III, 20 km to the north (Therkorn 2004).

style of pottery (Assendelft pottery style group), which is formed from different influences, as an expression of a close-knit socio-cultural organization.<sup>143</sup> The people in the Oer-IJ, however do not turn inwards. The contacts with the northern area remain and contacts with the (south)east are indicated in Nigtevegt where a canoe with a pottery assemblage similar to Assendelft was found.<sup>144</sup> The paddle from site Q and the discovery of a canoe from 612 BC in Uitgeest also points towards use of water as a way of transport. Whether they went as far as the German Rhineland remains a point of debate. Although some contact from this area is visible in the pottery and the presence of stones, the question remains how far the people of the Oer-IJ travelled themselves or whether they were at the end of a chain of exchanges. Salt from the coastal area is often mentioned as the main element in the exchange with inland areas.<sup>145</sup> Although briquetage pottery for the production of salt is found in the area, including site Q<sup>146</sup>, no production sites are known yet. These sites would, however, be situated in or next to freshwater creeks or in the tidal areas and were therefore easily subjected to erosion.

Little evidence from the sixth and fifth century BC is known compared to the preceding and following period. Only the remains of fields are known on the southern old dunes in the Oer-IJ area of which most are dated in a very broad range, except for one site.<sup>147</sup> The absence of evidence for occupation in most parts of the Oer-IJ area is ascribed to deteriorating conditions with many storm floods.<sup>148</sup> These storms also led to erosion and traces of occupation may have disappeared. It is hard to imagine the entire Oer-IJ area empty of occupation. At least for the old dunes continued occupation can be postulated as is indicated by fields.

### 3.5.3 MIDDLE IRON AGE TO LATE IRON AGE<sup>149</sup>



Figure 3.25 The lower jaw of a young man placed in a ditch at Beverwijk/ Heemskerk-Broekpolder.

During the fourth century BC the occupation traces in the Oer-IJ area become more visible again. Part of

143 Van Heeringen 1992, 302.

144 Van Heeringen 1992, 268.

145 Van Heeringen 1992, 302, and Van den Broeke 2005.

146 Other sites are Assendelft-39 and Velsbroek-Hofgeest (Van Heeringen 1992, 324).

147 185.Heemskerk-Kerkweg: a cultural layer with sherds, tephrite, loomweight and daub. C-14 (GrN 11496) 2360 ± 25 BP: 2σ 520-380 BC (Van Heeringen 1992).

148 Van Heeringen 1992, 314.

149 The location of the sites Beverwijk/Heemskerk-Broekpolder and Uitgeesterbroekpolder-16 are on figure 3.21. The location of the sites Assendelft-K and -L are on figure 3.29.

Heemskerk-Broekpolder is dated to the beginning of the fourth century.<sup>150</sup> The associated layer is stratigraphically distinct from the other phases. There is some evidence for a farmstead and several pits and ditches with ritual depositions. This ties Heemskerk-Broekpolder into the tradition of placing complex ritual depositions in pits.

At Beverwijk/Heemskerk-Broekpolder a so-called ‘loose’ human bone was found – a human jaw was placed in a ditch dated to the Middle Iron Age (figure 3.25). The deposition of loose human bones is a practice that continues into the Roman Iron Age in the Oer-IJ area. Hessing, in his overview article on human remains from the coastal area could only propose that the loose human bones were possibly related to some sort of ritual practice, but could also be just left there or be the result of post depositional processes.<sup>151</sup> The deposition of human bones outside a regular burial context such as a grave has also been attested for the Late Bronze Age and points towards a long tradition.<sup>152</sup> The practice of selecting human bones, curating and placing them in specific contexts is well known for prehistoric societies in Britain and Scandinavia.<sup>153</sup> At Heemskerk-Broekpolder there were also cremation remains in a pit and at Velsen-Hoogovens an inhumation was found, all dated to the Middle Iron Age.<sup>154</sup> This indicates at least a varied treatment of the dead within the Oer-IJ area.

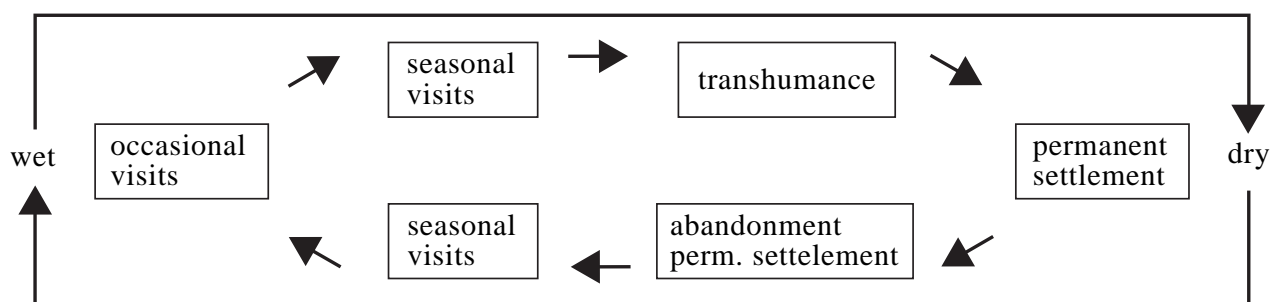


Figure 3.26 Schematic representation of the trans-humance cycle, after Brandt et al. 1984, figure 5.

Although there is little evidence from the northern part of the Oer-IJ area, the people utilized different parts of the landscape. The known remains of farmsteads are restricted to the sandy south part of the Oer-IJ area, but for the first time archaeological remains also come from the former tidal marsh. At Assendelft-N depositions were made in a creek before habitation started there and, sherd and carved bone are known from Uitgeesterbroekpolder-16. These sites Brandt et al.<sup>155</sup> associate with seasonal visits taken place when the regression phase starts and the area became drier. They postulate a period of transhumance before the area is settled permanently (figure 3.26). Transhumance is a system in which there are summer grazing grounds away from the permanent settlement where the herdsman lives periodically. The question remains whether the area is not too small for such a subsistence strategy. Cattle does not need constant supervision and could be left alone during the night or even be driven back to the farmstead. Terms such as transhumance and colonization should be used with some care or even be avoided as it gives a distorted view of the size of the area under discussion and the processes involved. The concept of grazing grounds instead of transhumance would suffice for the Oer-IJ area as an explanation.<sup>156</sup>

At the transition from the Middle to the Late Iron Age, during the third century BC habitation in the peat becomes visible again. Assendelft-L is situated at the southern end of the peat area and dated to the third century BC (figure 3.27). Another farmstead, Assendelft-K, initially dated to this period may be somewhat later and there is some discussion about the layout.<sup>157</sup> Both farmsteads contain ritual depositions, respectively a pot with cremated bone and a pit with a wooden bowl.<sup>158</sup> These depositions are interpreted as house offerings, a

150 C-14 (KIA 12280): 2340 ± 25 BP: 2σ, 407-383 BC (Therkorn et al. forthcoming).

151 Hessing 1993.

152 Beemster and Brandt 1986, 282.

153 For example, Shanks and Tilley 1982.

154 Heemskerk-Broekpolder: feature 3344 (Therkorn et al. forthcoming) and Velsen-Hoogovens (Verhagen 1985, 27).

155 Brandt, Van der Leeuw and Wijngaarden-Bakker 1984.

156 Meffert (1998, 71) calls this short-distance trans humance.

157 Compare Ther Korn 1987b, 181-182, and Meffert 1998, 53-54.

158 Ther Korn 1987b, 181.

phenomenon that is attested throughout the Oer-IJ area in all periods. The number of sites from the end of the Middle Iron Age remains low. From this period onward the (north)eastern side of the Oer-IJ becomes part of everyday activities.

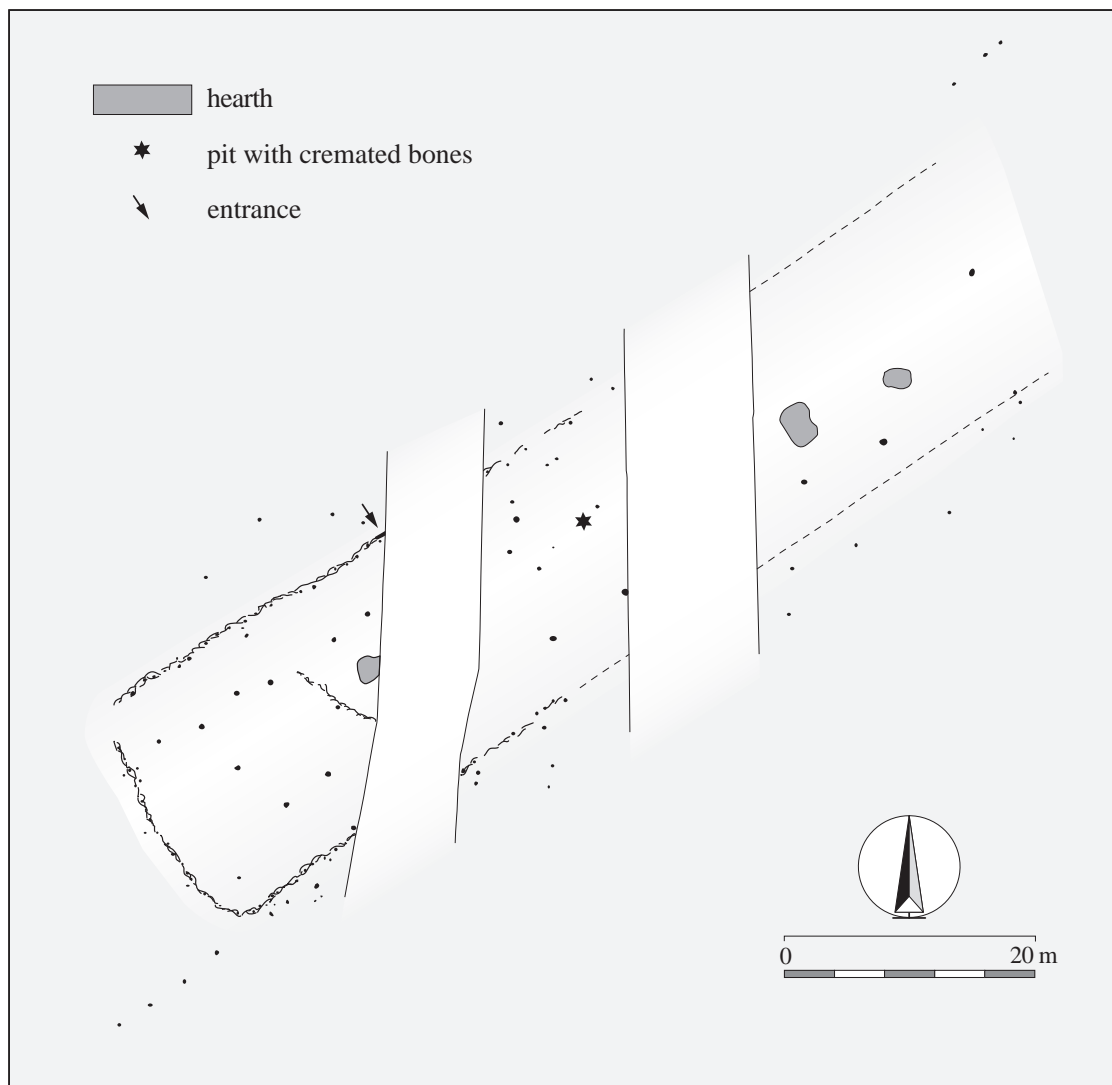


Figure 3.27 Plan of the house at Assendelft-L. The star indicates the position of a small pit with cremated bones, after Therkm 1987b figure 10.6.

During the Late Iron Age traces of occupation at the former mudflats south of the Oer-IJ have come to light. Unfortunately most information is derived from field walking and core boring. A hasty rescue excavation at Castricum-Korendijken carried out by the local AWN has revealed features such as pits and gullies, but these could not be registered due to time pressure. There is no indication of the type of farmsteads used, if present, or the structuring of the landscape. We can, however, deduce that the Oer-IJ area became a more and more structured place with few unaltered spaces. As the digging of peat was possibly practiced the oligotrophic peat area would be a cultivated landscape.

The Middle and Late Iron Age are viewed as the periods when the Oer-IJ area became widely used. Due to the – in some views – lesser quality<sup>159</sup> and smaller amount of evidence in view of the period after and before little attention has been given to the Middle and Late Iron Age. This period needs more research in the future as it bridges the earliest and later occupation and makes local traditions visible. For example, Van Heeringen establishes for the pottery of the Late Iron Age the same characteristics as can be seen in the pottery of the

159 There is a lesser degree of preservation of sites, but more important the local pottery is seen as less useful as a dating tool. The later sites with Roman imports have been given much more attention. But again with a focus away from the local pottery.

coastal area of the northern part of the Netherlands (figure 3.28).<sup>160</sup> Indicating at least some form of communication or exchange. For the understanding of the Roman Iron Age the earlier periods are significant for the establishment of transformations and continuity.

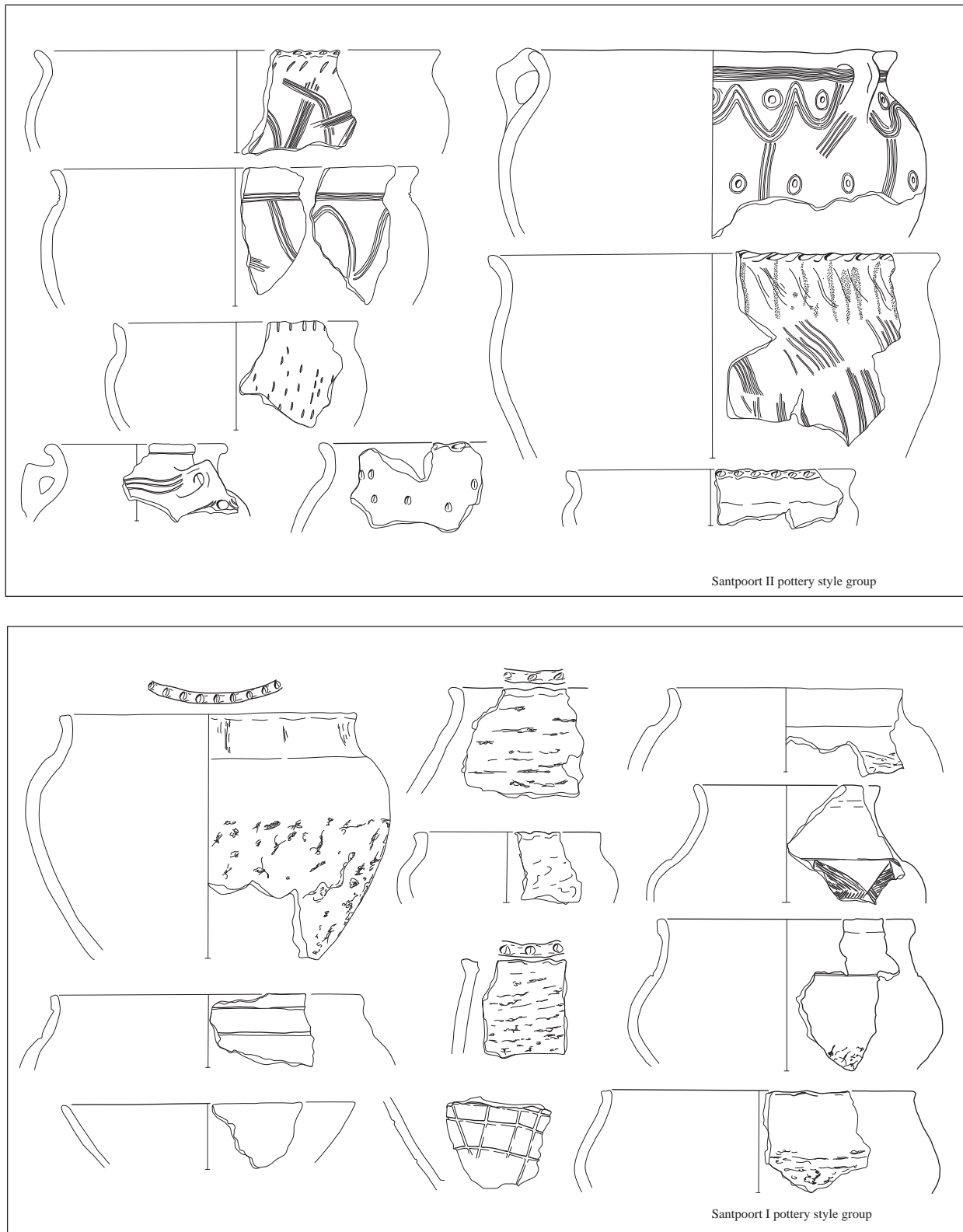


Figure 3.28 Some pottery from the Santpoort 1 and 2 Pottery Style Group, after Van Heeringen 1992, figure 69.

<sup>160</sup> Van Heeringen 1992, 316.

## 3.5.4 ROMAN IRON AGE

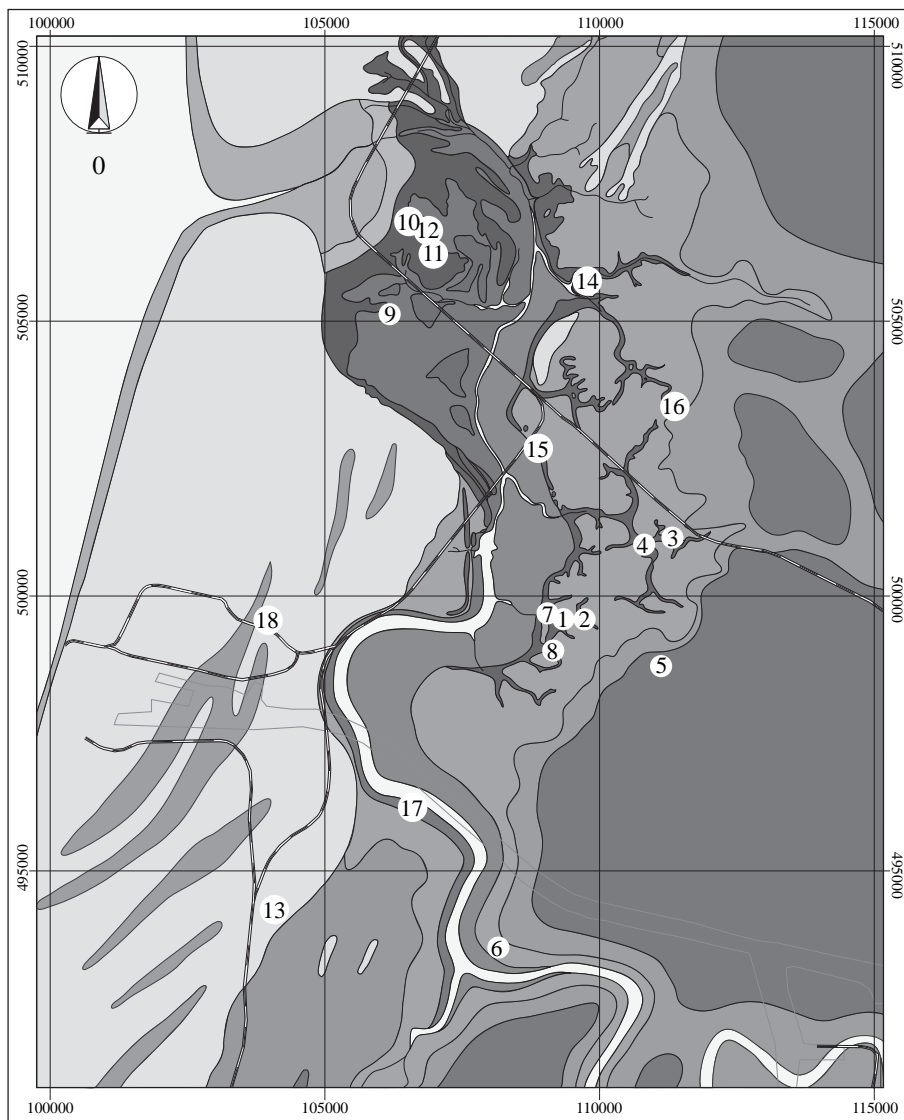


Figure 3.29 The location of Late and Roman Iron Age sites mentioned in the text.

- 1 = Assendelft-B
- 2 = Assendelft-C
- 3 = Assendelft-D
- 4 = Assendelft-F
- 5 = Assendelft-K
- 6 = Assendelft-L
- 7 = Assendelft-N
- 8 = Assendelft-P
- 9 = Castricum-Korendijk
- 10 = Castricum-Molendijk
- 11 = Castricum-Oosterbuurt
- 12 = Castricum-Rietkamp
- 13 = Santpoort-Spanjaardsberg
- 14 = Uitgeest-Dorregeest
- 15 = Uitgeesterbroekpolder-18
- 16 = Uitgeesterbroekpolder-54
- 17 = Velsen-fort-1
- 18 = Velsen-Hoogovens

The start of the Roman Iron Age appears to be very obvious with the construction of the Velsen fort at the southern bank of the remnants of the Oer-IJ. There can be no doubt that the Romans had arrived in the Oer-IJ area. Their stay was, however, not long lived with a duration of forty years with an interval of several years.<sup>161</sup> The effect the Romans had on the occupants of the Oer-IJ area is less clear. It remains a puzzle which sites are contemporary with the Roman forts. The evidence for clearing the area around the fort from all native habitation is just as absent as evidence for the probable presence of habitation as there is no hiatus observable between the Late and the Roman Iron Age habitation. This uncertainty is mostly due to the difficulty in dating Late Iron Age and non-Roman sites to short intervals of time, as their material culture does not change quickly in a significant manner. Furthermore, the evidence for direct exchanges between the inhabitants of the Oer-IJ area and the Romans is scant. Inside the fort local Iron Age pottery has been found, indicating some form of exchange with the local inhabitants.<sup>162</sup> However, little Roman material appears to have entered the local settlements. Until recently only small sherds were sporadically found in settlements. In first instance these sherds were viewed as some form of primitive money.<sup>163</sup> This idea was soon regarded as improbable. Further research showed that the Roman sherds did not form complete objects and could not be fitted to other sherds in the same settlement. Strangely enough Roman sherds from different settlements did fit together. This evidence forms the basis of the so-called 'pick-up theory'. 'This theory proposes that the local inhabitants had no access

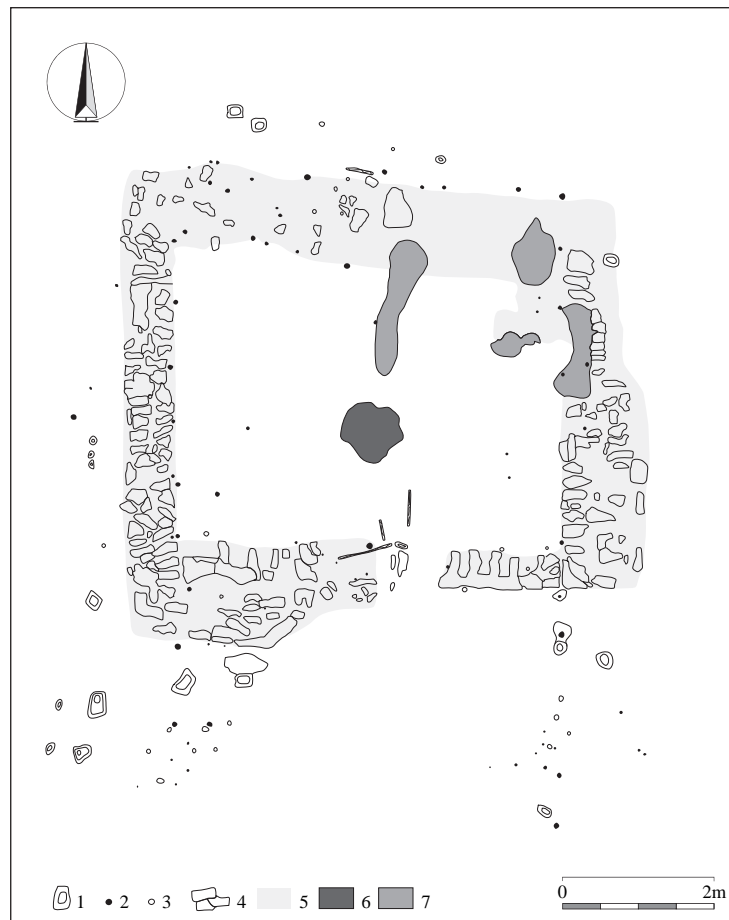
161 Fort 1 dated AD 15 - 30. Fort 2 dated AD 40-50 (Bosman 1997, 321).

162 Bosman 1997, 87.

163 Brandt 1983.

to Roman objects through exchange, but picked up the sherds after the Romans were partly defeated in 28 AD and/or left definitely, after abandoning the rebuilt fort, around 48 AD.’<sup>164</sup> If the ‘pick-up theory’ is followed it becomes clear that Roman sherds can only be used to date the possible beginning of sites in the Oer-IJ region, but not their duration. Especially, since the Roman sherds are also encountered on medieval sites.<sup>165</sup>

Figure 3.30 Plan of the wall-ditch house at Uitgeesterbroekpolder-54.  
 1 = post pits  
 2 = posts  
 3 = post holes  
 4 = separate sods  
 5 = probable wall  
 6 = burnt layer through floor and wall  
 7 = hearth second phase  
 After Ther Korn et al. 1986, figure 5.



A possible local reaction on the Roman presence is a new type of structure, the wall-ditch house, developed during the first century AD (figure 3.30). The wall-ditch houses are typical for a specific part of the Oer-IJ area and the closest parallel is found in Denmark.<sup>166</sup> All wall-ditch houses are situated on the sandy clay in the former tidal marshes zone northeast of the Oer-IJ. The traditional three-aisled farmstead continued to be used at the same time. Not only the construction of the wall-ditch houses is different but they also break with the long tradition of stalling livestock under the same roof as the human inhabitants. Livestock was now being stalled in roofless enclosures. Meffert, who dates the wall-ditch houses a bit later to the period AD 90-150, proposes that the new houses were a local adaptation to the progressively wetter environmental conditions. The wall-ditch houses could be seasonally occupied by the persons who looked after the cattle grazing in the former tidal marshes during the summer. In winter they would return to the three-aisled farms and stall the cattle traditionally indoors.<sup>167</sup> Hiddink objects to the habitation models in their interpretation of the wall-ditch houses as family units who only produce livestock. He states three reasons for his objections: households in the area try to establish a broad as possible subsistence base and specialisation of this kind would be unique; it is unclear why this specialisation would involve a new type of house, especially because the three-aisled house is associated with cattle breeding and it would mean that the surrounding area cultivated extra crops, this is unlikely due to the geo-ecological circumstances.<sup>168</sup> Furthermore, the distance between the different types of houses is only a

164 Kok 2005, Vons and Bosman 1988, and Meffert 1998.

165 Vons and Bosman 1988.

166 Ther Korn 1987b, 206.

167 Meffert (1998, 71) uses the term short-distance trans humance.

168 Hiddink 1999, especially 100-108.

few hundred metres, which is too small for seasonal housing. And both types of houses have the same quality and range of artefacts, which suggests similar use.<sup>169</sup> Whatever the reason for the development of this new type of house, this new style of housing was used less than a century before disappearing altogether.

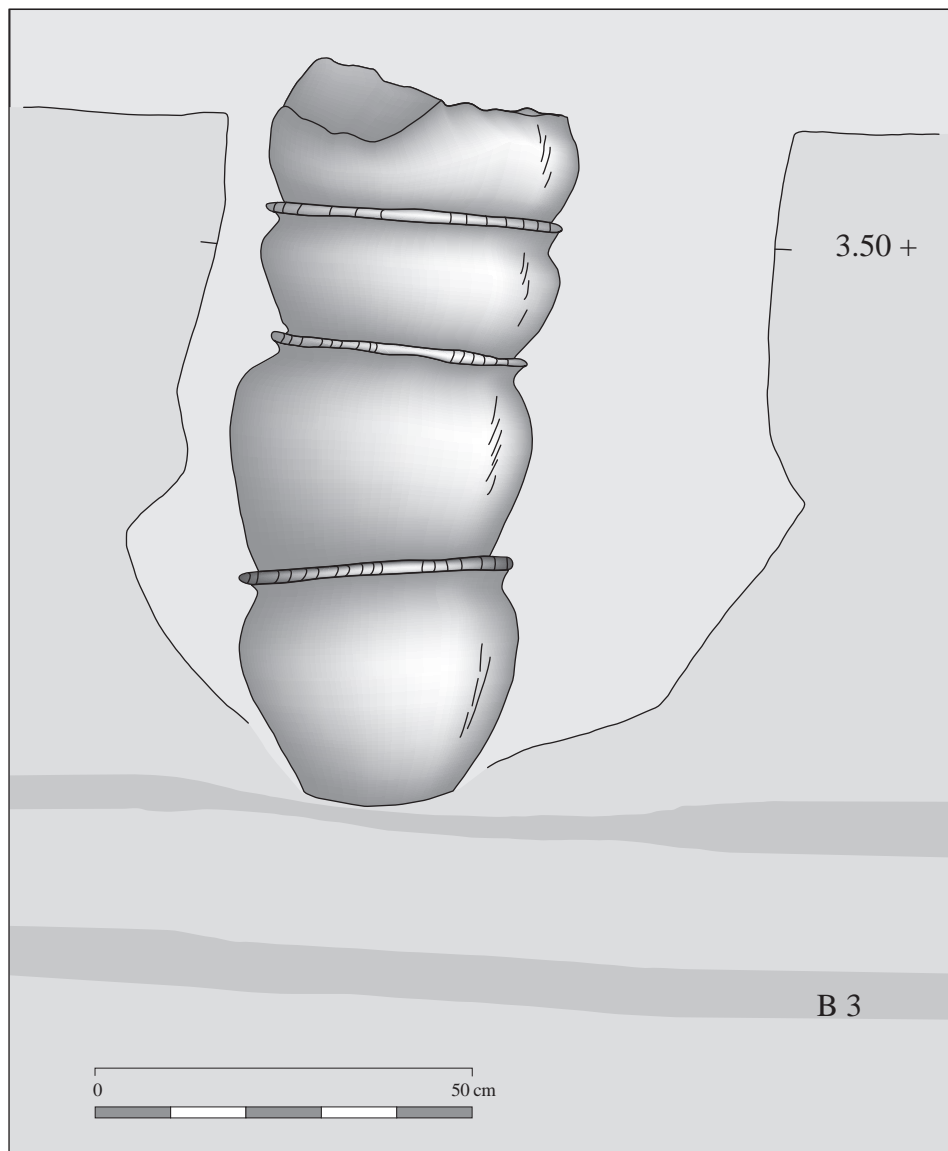


Figure 3.31 Velsen-Hoogovens potstack, after Verhagen 1985, figure 28.

The settlement structure itself, even with the consideration of the wall-ditch houses, can not be used for the dating of sites to small periods in time. In contrast to the rest of the Netherlands, the farmsteads in the Oer-IJ area do not cluster into small hamlets or villages during the Roman Iron Age.

On the east side of the Oer-IJ farmsteads are situated in the reed peat area and on the levees in the former tidal area. The spacing of the farmsteads is viewed as related to the geology, with linear spacing at the levees and linear spacing in the reed peat area along the border with the former tidal marsh.<sup>170</sup> Whether the people living there perceived it as a linear pattern can be questioned. The site dots on our maps with a geological underground may make them look like linear structures. The levees are, however, not straight but snake through the landscape with many side branches. If the geological underground is taken away from the map the sense of linearity disappears. Besides, all the sites would not have been used at the same time. Furthermore, the farmsteads in the reed peat area could be associated with the farmsteads in the former tidal area instead of with the other farmsteads in the reed peat area. And some farmsteads seem to be built on sandy parts of the former

169 Therkorn and Abbink 1987, and Kok 2005.

170 Brandt, Van der Leeuw and Wijngaarden-Bakker 1984, and Brandt and Van Gijn 1986.

tidal flats in between the levees.<sup>171</sup> The extent of the habitational area appears to be bordered at the east, where the oligotrophic peat is present. This border zone has the advantage that it is on one and close to two different geomorphological surfaces. As Groenman-van Waateringe showed for the daily subsistence the former tidal area would be used for agriculture and cattle breeding but also the peat area would have been important for the collection of fuel, another daily necessity.<sup>172</sup> For the reed peat area this would all be available within 500 metres distance, as for the former tidal area the peat for fuel could be as far away as two kilometres. The reed peat area east of the Oer-IJ is often seen as marginal and less suitable for agriculture.<sup>173</sup> As argued above this idea of dependant farmsteads cannot be sustained. Another aspect that should be considered is that farmsteads were not built on pristine grounds and that previous use of a specific place can also determine subsequent use. At several sites, also west of the Oer-IJ farmsteads are built on land that was previously used as fields.<sup>174</sup> At the small sites there was never a second farmstead. But the farmsteads could be covered by a low mound, just as the larger site.<sup>175</sup> The larger sites had successive farmsteads but these would be in the same plot. The different farmsteads would remain spatially separated even through time.<sup>176</sup>

In short, the single farmstead spaced from other farmsteads, in combination with previous use and probably the accessibility of different geomorphological zones, appear to be the way in which settlements are structured. This seems also to be the case for the former coastal barriers and old dunes. Here the sites are on the sandy parts but close to low-lying areas filled with peat or close to the edge of the Oer-IJ. Velsen-Hoogovens could have had two houses at one time, but the date range also allows for successive farmsteads. Especially, as the successive farmsteads – in the two separate groups – that were built partly on top of each other were separated by layers of drift sand, which indicates periods of non-use.<sup>177</sup>

At the western side of the Oer-IJ Brandt et al. postulate that the placement of settlements would not be restricted by the landscape as agricultural land is abundant.<sup>178</sup> If the now known sites are projected on the geomorphological map it appears that especially the former wash over grounds seem to be favoured over the former mud flats. However, both types of geological deposit are occupied and the picture may be distorted as not many excavations have taken place. Several small areas were excavated by the local AWN that revealed houses, ditches, pits and wells made from potstacks (figure 4.42).<sup>179</sup> This typical type of well construction is also known from Velsen-Hoogovens (figure 3.31).<sup>180</sup>

At Castricum-Oosterbuurt a large scale excavation took place which showed several houses and field systems ranging from the second to the middle of the ninth century AD and a small cemetery with six inhumations dated AD 230-330 (figure 3.32).<sup>181</sup> At Castricum-Oosterbuurt, besides the small cemetery, spread throughout the settlement somewhat earlier inhumations occurred. Hagers and Sier associate these early inhumations to the boundary ditches of the farmyard and propose that around the third century a more structured way of burial took place in the form of a small cemetery.<sup>182</sup> De Koning sees a similar association between the second/third century inhumations and the settlement boundaries in Uitgeest-Dorregest (figure 4.19).<sup>183</sup> Here also four later inhumations occurred which are buried within a small part of the settlement where also four animal burials were situated.<sup>184</sup> Hagers and Sier propose that the small cemetery is part of a generally more formalized way of organizing the landscape.<sup>185</sup> Although cemeteries are missing from the earlier periods, Therkorn has shown

171 For example, Assendelft-P (Hallewas 1987, fig 2.4b).

172 Groenman-van Waateringe 1983, 40.

173 Brandt and Van Gijn 1986, 72.

174 Assendelft-B, -C, -D, -F and -P (Therkorn and Abbink 1987), Castricum-Oosterbuurt (Hagers and Sier 1999), Santpoort-Spanjaardberg (Modderman 1961), Uitgeesterbroekpolder-18 (Therkorn 2004), and possibly Velsen-Hoogovens (Verhagen 1985).

175 Assendelft-B and -D (small sites), Assendelft-F, -N and -P (large sites) (Therkorn and Abbink, 1987).

176 Therkorn and Abbink, 1987, 135.

177 Verhagen 1985, 57.

178 Brandt, Van der Leeuw and Van Wijngaarden-Bakker 1984, 7.

179 Castricum-Molendijk (Mooij 1979) and Castricum-Rietkamp (Mooij 1996).

180 Verhagen 1985.

181 Hagers and Sier 1999, 85 and 187-197.

182 Hagers and Sier 1999, 88.

183 De Koning 2000, 58.

184 M6 and M7 Late Roman period-Early Medieval, M8 and M9 Early Medieval.

185 Hagers and Sier 1999, 88.

that the landscape in the earlier periods was just as well spatially organized.<sup>186</sup> Interestingly both Castricum-Oosterbuurt and Uitgeest-Dorregeest are still occupied in the Early Medieval Period.

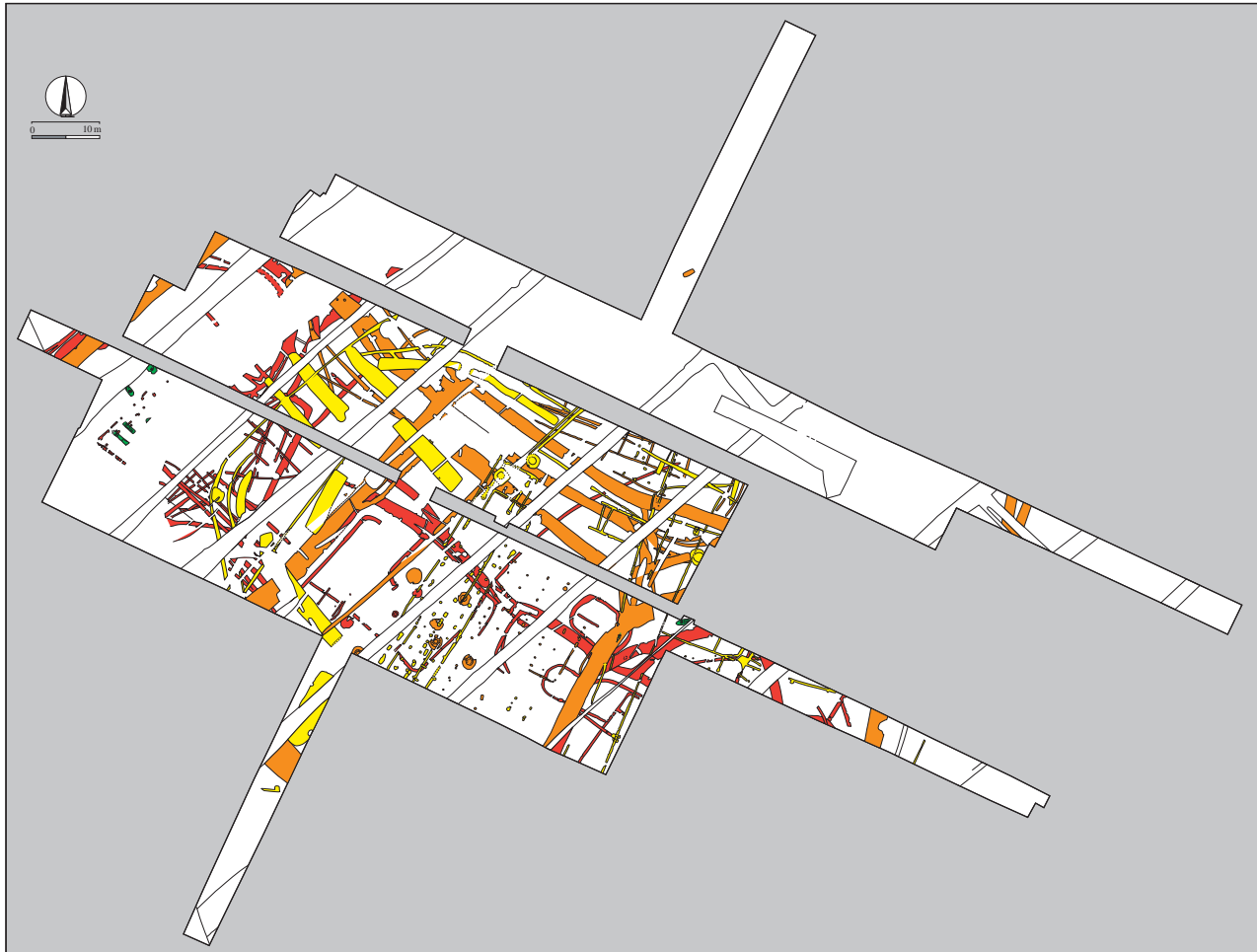


Figure 3.32 Plan of the features at Castricum-Oosterbuurt. red = phase I, orange = phase IIa-b, yellow = phase IIc-e, green = phase III. After Hagers and Sier 1999 (all features plan, fold-out).

The area east of the Oer-IJ became wetter during the third century AD and after some initial effort to keep the area dry by digging long ditches, there is no evidence of occupation after AD 300. There may, however, have been small spots where habitation was still possible until the end of the Roman Iron Age.<sup>187</sup>

The focus has mainly been on the development and spacing of settlements, the economy and its social implications. In more recent years the ordering of the landscape from a religious perspective has become more prominent. With the thesis of Therkorn as a major part of the Oer-IJ project.<sup>188</sup> Therkorn has made a landscape model on the basis of five excavations in Noord-Holland. She proposes that large scale patterns of features were used for the tracking of time and the seasons in relation to economic and ritual activities. Pits and linear features around the settlement are seen as figures based on star-constellations: Horse sometimes with rider (Pegasus), Cow (Taurus), Greater Dog (Canis Major) and, Donar/Thor (Hercules). The pattern of Horse can also be associated with linear features to the west that may represent the Milky Way. Besides a spatial patterning there is also a material patterning in the ritual depositions within the pits and linear features with preferences for specific depositions per star-constellation. The features associated with the Milky Way divide the landscape into an inner and outer part of the settlement and the otherworldly (the heavenly landscape). The year can be followed in the movement of the star-constellation in the sky. At the beginning of the new year in

<sup>186</sup> Therkorn 2004.

<sup>187</sup> The absence of sites from this period could also be due to dating difficulties. Dating with Roman imports in a local context usually gives dates which are too early.

<sup>188</sup> Therkorn 2004.

January Horse starts to rise. The summer solstice is associated with new calves, the rising of the Pleiades and Cow. The harvest is associated with the rising of Greater Dog and during the slaughter period of November Thor/Donar rises, as Cow dies on the western horizon.

### 3.5.5 SUMMARY

In this chapter a history of the Oer-IJ is given in relation to the habitation models developed over the last two decades of the twentieth century. Models were mainly based on the evidence from the Assendelver polder and especially the Late and first half of the Roman Iron Age. Excavations in other parts of the Oer-IJ area have given ground for a refinement and extension of these models. To summarize, since the formation of the coastal barriers in the Late Neolithic the Oer-IJ has been inhabited by farmers with a mixed subsistence base. The archaeological remains dated until the Late Bronze Age of barrows, fields, roads, and houses that were built at the same place were uncovered at the (former) coastal barriers. The areas in between and surrounding the (former) coastal barriers were used, but little traces were left. There is no evidence for use of the large peat areas to the east until the Early Iron Age. From that time onward this part of the landscape has the remains of houses and fields, which, are situated close to the western boundary of the large peat areas. Houses are no longer built at the same place and graves are (nearly) absent. When the Oer-IJ estuary to the west starts to close off from the sea in the Late Iron Age the former tidal areas are also used for farmsteads. Into the Roman Iron Age single farmsteads are built, but a new type of wall-ditch house without byre appears, which is unknown to the Netherlands. The wall-ditch houses disappear again in the Middle Roman Iron Age. Successive farmsteads start to be built in the same area but not on top of each other and burials in graves appear next to these farmsteads. The archaeological data diminishes at the end of the Roman Iron Age, but there is evidence that the Oer-IJ area was not abandoned.

The shift in research attention towards the religious dimensions in combination with the landscape has also shifted the research towards the wet places in the Oer-IJ. In the next chapter these wet places will be analyzed with the purpose of adding a new layer to the ongoing research of the Oer-IJ area.



#### 4. THE WET LOW-LYING OFFERING SITES WITHIN THE OER-IJ AREA: AN ANALYSIS FROM A LAND-SCAPE PERSPECTIVE

The focus on landscape within the Oer-IJ project of the Amsterdam Archaeological Centre has led to excavations in areas outside the direct settlements and this has given new information on the wet low-lying areas and fields.<sup>1</sup> This new information has not yet been fully integrated into the habitation/land-use models of the area. The main aim here is to comprehend the ritual use of the low-lying parts of the Oer-IJ area and relate these practices to the wider landscape. This is done in order to integrate the low-lying parts of the landscape into land-use models<sup>2</sup>, which can be used in archaeological prospection and the decision making process. In this chapter the land-use model will be formed and in the next chapter the implications for archaeological survey and the decision-making process will be put forward.

##### 4.1 THE APPROACH TAKEN IN ANALYSING OFFERINGS IN WET LOW-LYING AREAS

Two theoretical standpoints from chapter 1 form the basis for the analysis of the ritual use of the wet low-lying areas in the Oer-IJ area. It is taken that people intensively ordered, perceived and used their landscape in accordance with their worldview.<sup>3</sup> And ritual practices affect and relate to the everyday world of people.<sup>4</sup> This means that, although, the focus here is on the ritual use of the wet low-lying areas of the Oer-IJ because they have received less attention, these areas can only be fully understood in relation to other elements in and use of the landscape.

As the wet low-lying areas are viewed from a landscape perspective it is relevant to look at the different character of these areas. In an estuary environment not only the shape and size but also the quality of the water differs over relatively small distances. There is salt, brackish and fresh water, tidal and seasonal influences on the water levels, flowing and stagnate water, and open water and wet-land/peat. The different kinds of water also relate to specific natural cycles that could be of importance for their choice as a place of offering. The question should therefore not only be 'where' in the wet low-lying parts of the landscape, but also in 'what kind' of wet places were these ritual practices performed.

Several conclusions are drawn in chapter 2 which will be taken further here. The main observation is that the offering sites are highly variable in their content and appearance.<sup>5</sup> This high variability diminishes the usefulness of a checklist for the determination of a site as an offering site. Along a different route Fontijn reached a similar conclusion. He summarized and analysed the main literature written on the subject of ways to distinguish between ritual and non-ritual deposits.<sup>6</sup> He concluded that there is no consensus on which elements are of a determining nature and that only when an economic-functional explanation is unsatisfactory a ritual explanation is brought to the fore.<sup>7</sup>

Other methods have to be applied as there is no checklist against which the data can be analysed. Stjernquist's method of asking more general questions appears to be the most fruitful way to analyse the offering sites.<sup>8</sup> Her questions are, however, related to the analyses of already recognised offering sites. A new set of questions is necessary for the determination whether a site is an offering site. In chapter 1 an offering is defined as a material exchange between a human and a CPS-agent and this exchange takes place because of a specific reason at a certain time and in a certain place and within a specific worldview.<sup>9</sup> This definition does not describe the specific appearance of an offering. This unspecific character of the definition can be seen as a drawback, but at the same

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1 Therkorn 2005, 91.

2 To avoid a direct bias towards settlements it is more consistent to talk of land-use models instead of habitational models as land-use models relate to any practice within the landscape including habitation.

3 Chapter 1 §1.6.

4 Chapter 1 §1.5.1.

5 Chapter 2 § 2.2.1 and § 2.4.2.

6 Fontijn 2003, 13-22.

7 Fontijn 2003, 17. Fontijn does not agree with the idea that a ritual explanation can only be given when economic-functional explanations are unsatisfactory.

8 Chapter 2 § 2.1.5.

9 Chapter 1 § 1.5.2.

time it can avoid constraints, which would exclude many offerings that do not fit into a tight pattern, like some of the offerings mentioned in chapter 2. Offerings in pre- and protohistoric northwest Europe take place within the context of a religion with many CPS-agents. This is very different from the later monotheistic religions that have written proscriptions for the manner in which many rituals should be performed. Furthermore, the term offering, as used in the above manner is broadly applicable. More neutral terms as 'ritual deposition', which in archaeology often leads to the neglect of the religious aspect can be left aside.

The main issue with the analyses of depositions in relation to offerings is whether they were the result of a material exchange between humans and CPS-agents. What is of importance here is that there is every reason to assume that the people of the Oer-IJ area held a worldview, which incorporated CPS-agents. The difficulty is to establish whether the people in the Oer-IJ gave objects to these CPS-agents in these specific places, namely the wet low-lying areas. In chapter 2 the type of depositions in wet places discussed were interpreted as offerings. Ritual depositions in wet places within the Oer-IJ will be interpreted in a similar line as offerings.

The elements of an offering as defined above that we can analyse are location, placement, time, and similarities and differences with other find-complexes. And questions should focus on these elements. The analyses take place on the assumption that, although the appearance of an offering is not defined, the specific practices involved in an offering could be discernable.

The question of location is concerned with the different kinds of wet places in low-lying areas. In chapter 2 it was shown that wet places are suitable for offerings in the Germanic world. Here the aim will be to see whether specific kinds of wet places were preferred for (specific) offerings. Placement involves the manner in which objects were placed within the wet low-lying areas. All social exchanges have some tradition of performance. Objects can either be set in an arrangement or hurled towards someone or something, to name but a few possibilities. Here the question of time also comes into play. This not only involves the duration of the practice but also the moment of the exchange. Are there preferred periods or seasons in which the exchange takes place? The influence of seasonality on ritual depositions in specific pits and watery places has been demonstrated in the Oer-IJ area.<sup>10</sup> Finally, the question of similarities and differences with other find-complexes can give insight in the selection of objects. Even though all objects could be considered as an offering a preference for specific objects is to be expected. This preference leads to selective practices that could make it possible to distinguish between different assemblages. But also the condition of the object could make it possible to distinguish between different practices.

In the Oer-IJ area 499 sites are known within the date range of the Late Neolithic Period to the Roman Iron Age.<sup>11</sup> These sites can encompass a single sherd or settlements and fields spanning several hundreds of years and anything in between. All sites were analysed according to the above questions. A large number of sites were in an early stage of the research disqualified on the basis of several criteria. For example, about 250 sites contained only pottery sherds that were collected mainly during surveys. The lack of information on the context of the sherds made it impossible to give these sites an interpretation as offering sites or any other uses for that matter. Over twenty sites were disqualified as they consisted only of plough marks or arable layers with few to no artefacts. Other sites were disqualified as they were not (partly) situated within wet parts of the landscape. The more complex sites were not considered to be offering sites in low-lying wet areas mainly as the location, placement, and/or selection of artefacts did not indicate an offering practice. These sites could contain offerings of other types, such as house-offerings, not associated with low-lying wet areas.

Eventually this has led to the selection of 22 sites as (probable) offering sites. The data of these 22 sites will be presented below. They are grouped according to the different kind of wet low-lying area.<sup>12</sup> After the descriptions of the sites further analysis will take place in which the relation with the wider landscape, other land-uses and practices and the embedding in the wider northwest European practice of offerings as described in chapter 2 are investigated.

10 Therkorn 2004, chapter 6.

11 Appendix 3.

12 Two sites are situated in peat that is not low-lying in relation to its direct surroundings, see section 4.1.2.

site	x-coordinate	y-coordinate	archis wnr
Assendelft-42	108580	495850	
Assendelft-51	110090	498390	
Assendelft-56	111750	500100	33722
Assendelft-N	109040	499470	31688, 35559
Beverwijk/Heemskerk-Broekpolder-1, -2 and -3	107540	501000	32707, 33072, 37219, 37222, 42897, 42936, 42964, 42987, 47007, 50015, 50239, 108330, 121002-121016, 121018-121029
IJmuiden-Duinvlief	102910	497730	
Krommenie-14-Hain	111500	501860	31836, 40291
Krommenie-21	111940	502950	48890
Limmen-1	108490	508620	18814
Limmen-2	107970	508420	
Limmen-Dusseldorper Vaart	108820	509400	
Limmen-Zuideinderweg	108300	508380	18819
Uitgeest-Achterloet	109310	504930	39340
Uitgeest-Dorregeest	109550	505800	15109, 29950
Uitgeest-Uitgeesterbroekpolder-18-1and -2	108810	502480	18532, 18533, 51000
Velsen-fort-1	106460	496180	31692, 34059
Velsen-Noordzeekanaal	102000	497600	
Velserbroekpolder-B6	104797	494199	31718
Velserbroek-Westlaan-2	105180	493670	22542

Figure 4.1 Reference points of the offering sites in wet low-lying areas.

#### 4.2 THE OFFERING SITES IN THE WET LOW-LYING PARTS OF THE OER-IJ AREA

The different kinds of wet low-lying areas are peat/marshy areas on or next to (former) coastal barriers, peat areas at a distance from the coastal barriers, creeks, and low-lying parts on the side of the Oer-IJ main streambed. For every type of wet low-lying area the sites are placed in chronological order. A description of the site is given in which questions of locality, placement, time, and choice of objects are answered and a final assessment why the site is considered an offering. The site name is a combination of the municipality followed by a toponym or a designation given by the excavators or a designation as used in the literature. The references given next to the site name are the main sources of information for the descriptions. Figure 4.1 shows the site names, their location in the Dutch coordinate system and their central archaeological archive number.

##### 4.2.1 PEATY/MARSHY AREAS ON OR NEXT TO (FORMER) COASTAL BARRIERS

The peat/marshy areas on or next to the (former) coastal barriers are bordered by dry land that is within visual range of a person standing at the offering sites. These areas are not necessarily small but have a human scale in the sense that the extent can be grasped directly. These are wet areas bounded by dry land. The size ranges from a few metres to two kilometres across. Accessibility depends on the water table and the weather. In wet seasons parts can become inaccessible and the reverse occurs during periods when an ice cover is established. At the moment of deposition there could be open water in these low-lying areas. Figure 4.2 shows the location of the nine sites discussed here.

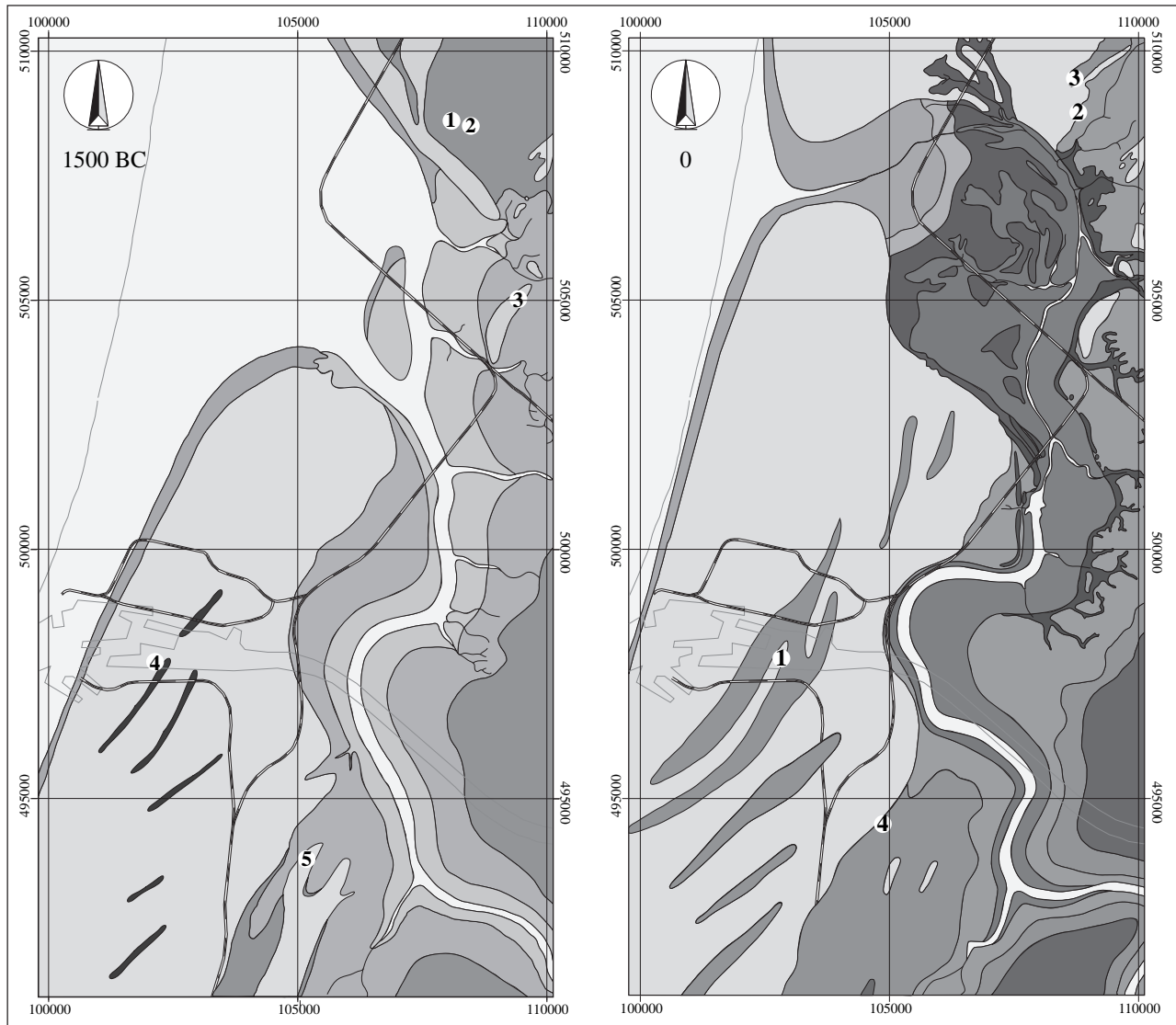


Figure 4.2 Location of the offering sites situated in peat/marshy area on or next to (former) coastal barriers and old dunes. On the left 1500 BC: 1 = Limmen-2, 2 = Limmen-Zuideinderweg, 3 = Uitgeest-Achterloet, 4 = Velsen-Noordzeekanaal, and 5 = Velsbroekpolder-Westlaan. On the right 0: 1 = IJmuiden-Duinvlief, 2 = Limmen-1, 3 = Limmen-Dusseldorpervaart, and 4 = Velsbroekpolder-B6.

#### 4.2.1.1 UITGEEST-ACHTERLOET<sup>13</sup>

In 1926 J. Twaalfhoven discovered a stone axe and some cattle teeth during digging activities in his bulb-field at a depth of approximately 2.5 m. The complete axe (figure 4.3) is made of Smaland Porphyry and is dated by Halbertsma and van Regteren Altena to the transition of Late Neolithic to Early Bronze Age.<sup>14</sup> The reason Twaalfhoven dug holes in his field was that in a specific area the rain would not drain off easily. The cause of this problem was a layer of peat at 1.65 m. depth. In 1971 the AWN-group Zaanstreek excavated a small area and they determined that there were two peat layers, which did not extend across the entire field. This indicates a small depression within the coastal barrier. This spot must have been wet place from an early date on. This is considered an offering as an axe together with cattle teeth are placed in a small bog area.

13 Helderma 1972.

14 Helderma 1972, 242.

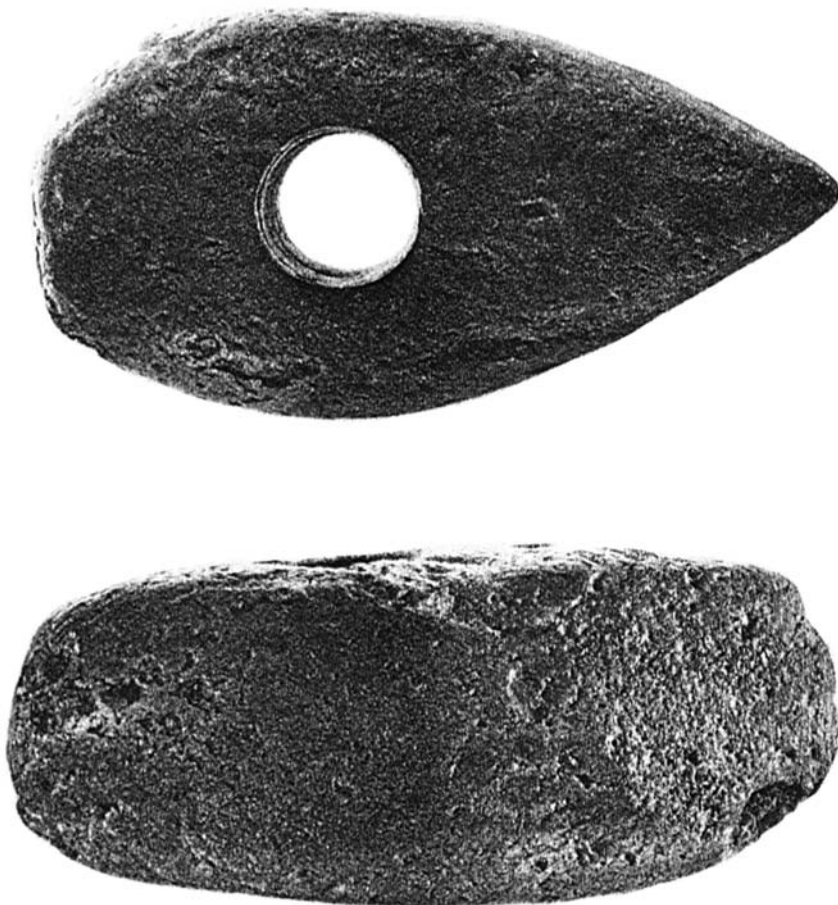


Figure 4.3 Axe from Uitgeest-Achteloet (13 x 6.7 x 5.6 cm), original photo ROB.

#### 4.2.1.2 LIMMEN-2<sup>15</sup>

A complete saddle quern dated to the Late Neolithic/Early Bronze Age<sup>16</sup> has come into the possession of the AWN-group Baduhenna (figure 4.4). The quern stone had lain in the garden of Mr. D. Baltus who found it years earlier. Enquiries made by R. Duyndam and M. van Raay made it possible to locate the find spot in the southeast side of Limmen. This would situate the find spot at the south end of the former beach barrier. The nearest possibly contemporary site is an axe deposited at the Zuideinderweg just over 300 m to the east.<sup>17</sup> The saddle quern is made of two different types of granite. Core boring at the find spot by the AWN-group 'Baduhenna' has not led to any further insight into the date or other archaeological remains. On the map of De Roo the presence of peat is indicated.<sup>18</sup>

This is considered an offering as a complete saddle quern and its matching rubber are placed on the side of a beach barrier and probably in bog.

15 Personal communication Ron Duyndam.

16 The saddle quern was dated by specialists at the ROB.

17 § 4.2.1.4.

18 De Roo 1953, appendix 1.



Figure 4.4 Saddle quern and rubber of Limmen-2.

#### 4.2.1.3 VELSERBROEK-WESTLAAN<sup>19</sup>

Velserbreek-Westlaan is situated at the old dunes, which formed on top of the northern part of the coastal barrier of Haarlem. On a narrow old dune and a small dune to the north bordered by tidal areas three areas which are approximately 150 to 500 m apart were excavated by the AAC. The area contains features dating from the Late Neolithic to the medieval period. I will focus on the Bronze Age features as a small pool with ritual depositions is dated within this period (figure 4.5). Probably, the earliest sign of land use on the narrow dune is a multi-phased barrow of 18 metre in diameter constructed around 2130-1900 BC.<sup>20</sup> The earliest phase consists of the burial of a flexed, footless man between oak planks. The barrow with an initial height of 0.20 m was heightened three times and several deposits were made, including the head of a child, and several pits with cremated remains. After the barrow was partly covered with peat ritual practices continued to take place here indicating that it was a meaningful and remembered place until the Early Medieval period<sup>21</sup>.

Forty metres to the south of the barrow in a marshy pool ten pits were dug into the fill and a stake row was set up. The row of thirteen stakes was aligned in a north-easterly direction towards the barrow. The pits contained the remains of offerings and were filled in shortly after the depositions were made. The pits are filled with peaty material sometimes combined with sand or clay. Most of the pits were dug in the same layer (7) of the marshy pool, but two came from a different layer (4 and 6)<sup>22</sup>. The pits are dated on the basis of pottery and C14 to the period of 1800-1500 BC.<sup>23</sup> Thus over a period of time several discrete events of pit digging and deposition took place in the marshy pool. The content of the marshy pool and pits will be given here:<sup>24</sup>

marshy pool 534: pieces of radius, humerus, shoulder blade, tibia and a tooth from cattle, a piece of skull from a medium mammal, and a right jaw of a piglet, a white stone, and a piece of willow.

pit 536: wattle work of alder and willow, a 40 cm long stick at the bottom, some indeterminable bone, a piece of a cattle shoulder blade, and a bone awl. The wood is dated 1530-1410 BC.<sup>25</sup>

19 Therkorn and Van Londen 1990 and Besselsen 1996.

20 Oak plank: C-14 (GrN-16893) 3635 ± 30 BP: 2σ 2130-1900 BC (Therkorn and Van Londen 1990).

21 Therkorn forthcoming.

22 Pit 540 is dug into layer 6 and pit 543 is dug into layer 4.

23 Pit 536 (C14 date in note below) is stratigraphically one of the youngest pits. Besselsen 1996, 8.

24 The description of the pits is taken from Besselsen 1996.

25 Pit 536: C-14 (GrN-16896) 3215 ± 30 BP: 2σ 1530-1410 BC.

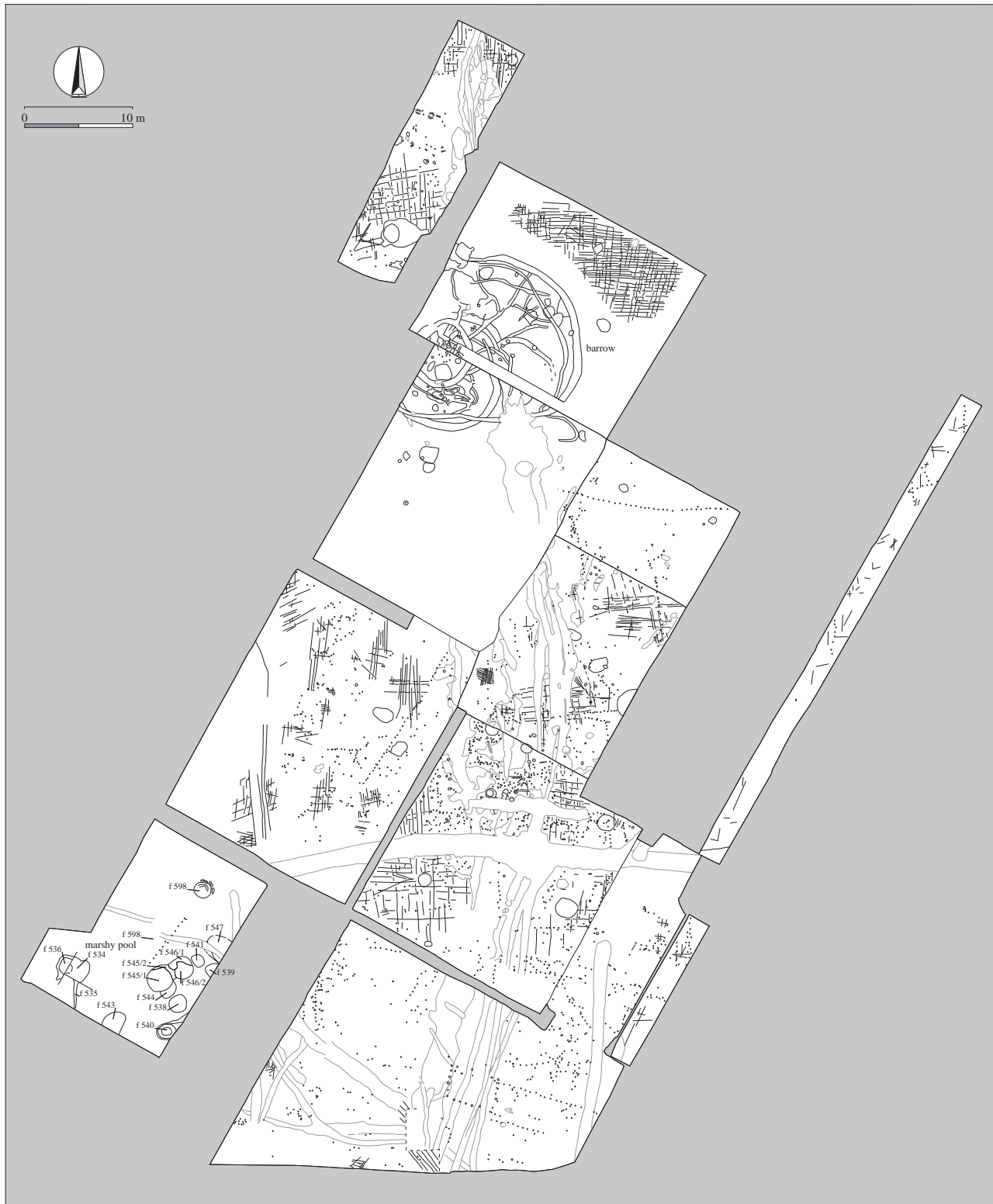


Figure 4.5 Plan of the main features at the southeastern part of Velsen-Westlaan, after Besselsen 1996, figure 3.1.

gully 535 leads to pit 536 it contains a bowl made of oak, cattle bones and the jaw of a horse.

pit 538: alder twigs, 'Hoogkarspel' or 'Laren' sherd, and quartz pebble.

pit 539: a piece of a cattle teeth and a right tarsus.

pit 540: possibly a sod lining, cattle bones, two pebbles, two worked pieces of hazel, pieces of yew and sweet cherry.

pit 541: pieces of a skull of a medium mammal and a radius of a sheep/goat.

pit 543: bones and a shoulder blade of both cattle and sheep/goat, piece of wood angled upright.

pit 544: possibly sods, and a square piece of alder.

pit 545: nearly complete cattle skeleton without skull, some fish, duck and pig bones, black flint scraper, sticks of alder of which one is sharpened are placed on top of the skeleton, and some willow. This pit cuts pit 544.

pit 546: a left radius, parts of a skull of a bull, a right radius of a dog and sheep/goat bones, alder, willow, and hazelnut.

pit 547: bones of cow and fox, skull of a bull with a basket made of willow and bark stuck on its horn, pieces of alder, hazel, oak, and willow (figure 4.6).

pit 548: 50 cm long pointed stick of juniper, and forked willow twigs.

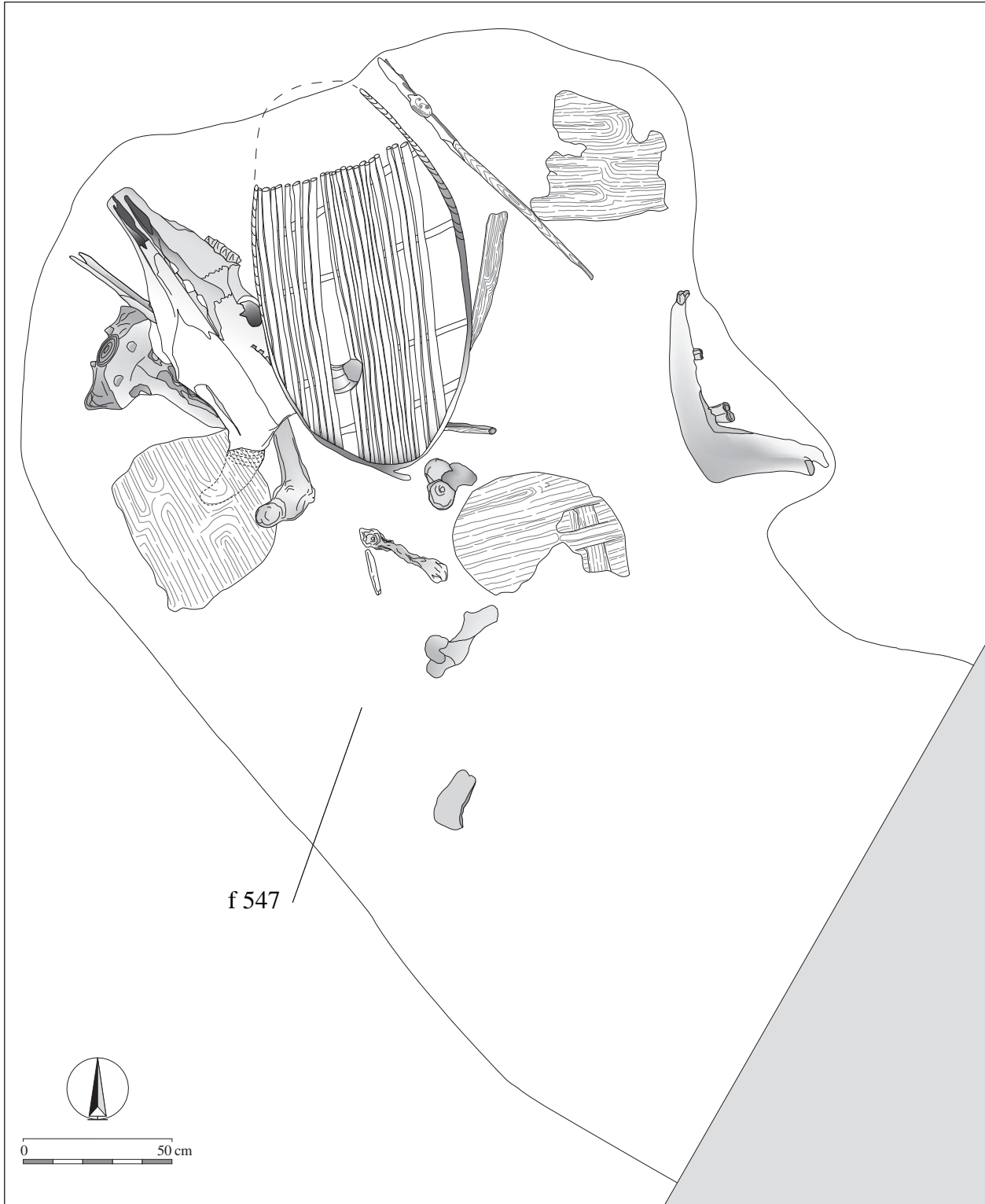


Figure 4.6 Detail of pit 547: the skull of a bull with a basket stuck on its horn.

North and east of the marshy pool many small rows of stakes and ard marks were excavated that have been dated to the Early and Late Bronze Age. These features do not over cut the marshy pool. The small rows of stakes are probably the remains of movable fences. It is unclear whether the ard marks indicate fields or land reclamation. In the area of the fences and ard marks several pits were dug. The pits do not cluster as the pits in the marshy pool and appear to be distributed relatively even across the area. The pits contain few artefacts and their function is unclear. Forty metres east of the marshy pool a rectangular structure can be seen whether this is an enclosure remains uncertain.

Around 1400 BC a new barrow was constructed in the south-western area on a small dune top approximately 150 m west of the marshy pool.<sup>26</sup> This barrow is nearly completely destroyed, but as younger features avoid the area surrounding the surviving grave it can be assumed that the barrow was visible for quite some time, at least into the Iron Age. Fontijn has categorized this grave as a Middle Bronze Age B warrior grave.<sup>27</sup> Less than forty metres to the northwest of the barrow two three-aisled buildings were constructed. These buildings are dated Middle Bronze Age and little can be said about contemporaneity. The two buildings lie on a similar line and have a northeast-southwest orientation. The buildings are just ten metres apart and have gullies along the long sides and the southwest side. The smallest northern building is 12 m long and is viewed as an outbuilding<sup>28</sup>, even though the size does not foreclose an interpretation as a house. The larger building of 20 m has at least two phases and the depth of the post setting indicates a living area and a byre.

The pool is considered an offering site as specific objects are placed within pits in the pool.

#### 4.2.1.4 LIMMEN-ZUIDEINDERWEG<sup>29</sup>

A fragment of a stone axe (figure 4.7) was found on the southeast side of the old dunes on the coastal barrier in 1963 after the deep ploughing of a field. The axe was probably deposited in the bog that is still present as a thick peat layer. The axe is broken in the middle, but on the drawing and photograph it looks like the broken end has been used and/or modified after its original function.<sup>30</sup> The axe is dated to approximately 1700 BC.<sup>31</sup> This is considered an offering as a possibly modified axe is placed in bog.



Figure 4.7 Axe from Limmen-Zuideinderweg (scale 1:1), original photo ROB.

26 Bosman and Soonius 1990, 4.

27 Fontijn 2003, 228-229. The warrior graves are not interpreted as representing a warrior aristocracy, but a warrior ideology. The graves are exceptional and are therefore linked to specific events, like claiming territories or the formation of a new group. As the warrior grave in the Velsbroekpolder lies within an area that was already occupied, we have to be careful with generalizing interpretations as given by Fontijn.

28 Bosman and Soonius 1990, 3.

29 Cordfunke 1969, 49 and De Ridder 1995, 12.

30 Cordfunke 1969, figure 12 and 14.

31 De Ridder 1995, 12.

4.2.1.5 VELSEN-NOORDZEEKANAAL<sup>32</sup>

A bronze socketed axe (figure 4.8) was found during dredging activities in the Noordzeekanaal. The axe is dated to the ninth century BC. Although it was found in a nowadays wet context this does not mean it was deposited in water. During the Bronze Age the location was situated on the old dunes. Whether there was a small wet depression in the Bronze Age can no longer be investigated geologically due to the construction of the Noordzeekanaal. Its position on the map does, however, favour the idea that it was deposited in a low-lying area within the old dunes, which was probably filled with peat. The nearest known occupation traces are 2200 m to the east.

This is considered an offering as a complete axe is placed in a wet environment.

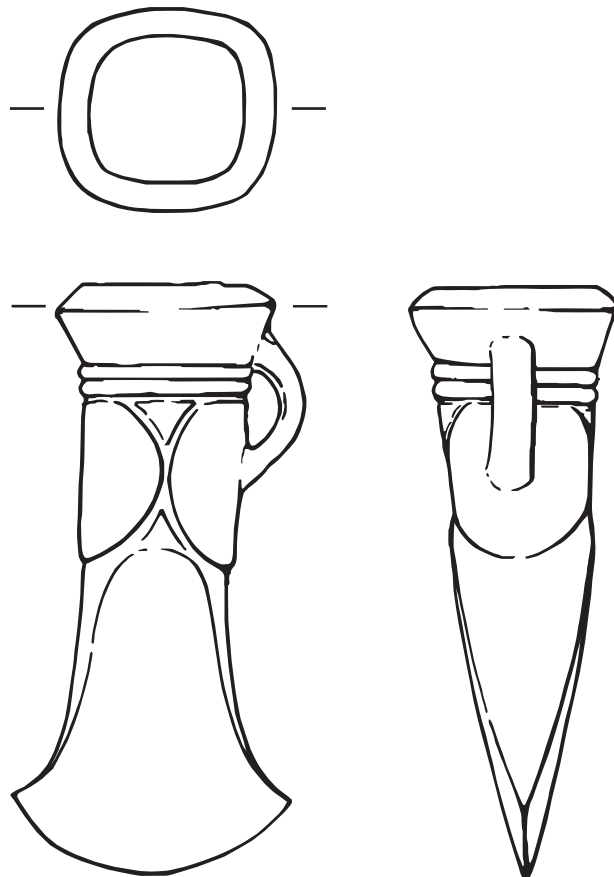


Figure 4.8 Bronze socketed axe from Velsen-Noordzeekanaal. Length of the axe is just over eleven cm, after Van Heeringen 1992, figure 28.

4.2.1.6 LIMMEN-1<sup>33</sup>

Pottery was discovered approximately one metre below the surface in 1950 during the construction of a PWN<sup>34</sup> conduit. A complete Ruinen-Wommels I vessel was reconstructed (figure 4.9). This pot was probably deposited as complete. Four sherds also of the Ruinen-Wommels type did not belong to the vessel. The vessel was found on the east side of Limmen at the western side on the slope of old dune sand on beach sand at the point where peat appears underneath the dune sand.<sup>35</sup> It appears that the pot was placed at the base of the bog, but the vessel could have been dug into the sand under the layer of peat. Van Regteren Altena dates the vessel to the sixth century BC.<sup>36</sup> However, van Heeringen in his more recent study has dated the vessel to the fourth century BC.<sup>37</sup>

32 Van Heeringen 1992, 168.

33 Van Regteren Altena 1969, 61.

34 PWN: Provinciaal Waterleidingbedrijf Noord-Holland is the province's waterworks.

35 De Roo 1953, map 1.

36 Van Regteren-Altena 1969, 62.

37 Van Heeringen 1992, figure 58.

Just fifty metres to the south in 1938 a complete thirteenth century AD cooking vessel was found in the sand at a metre below the surface. A peat layer is not mentioned here.<sup>38</sup>

The Ruinen-Wommels vessel is considered an offering as a complete vessel was placed in a wet environment.

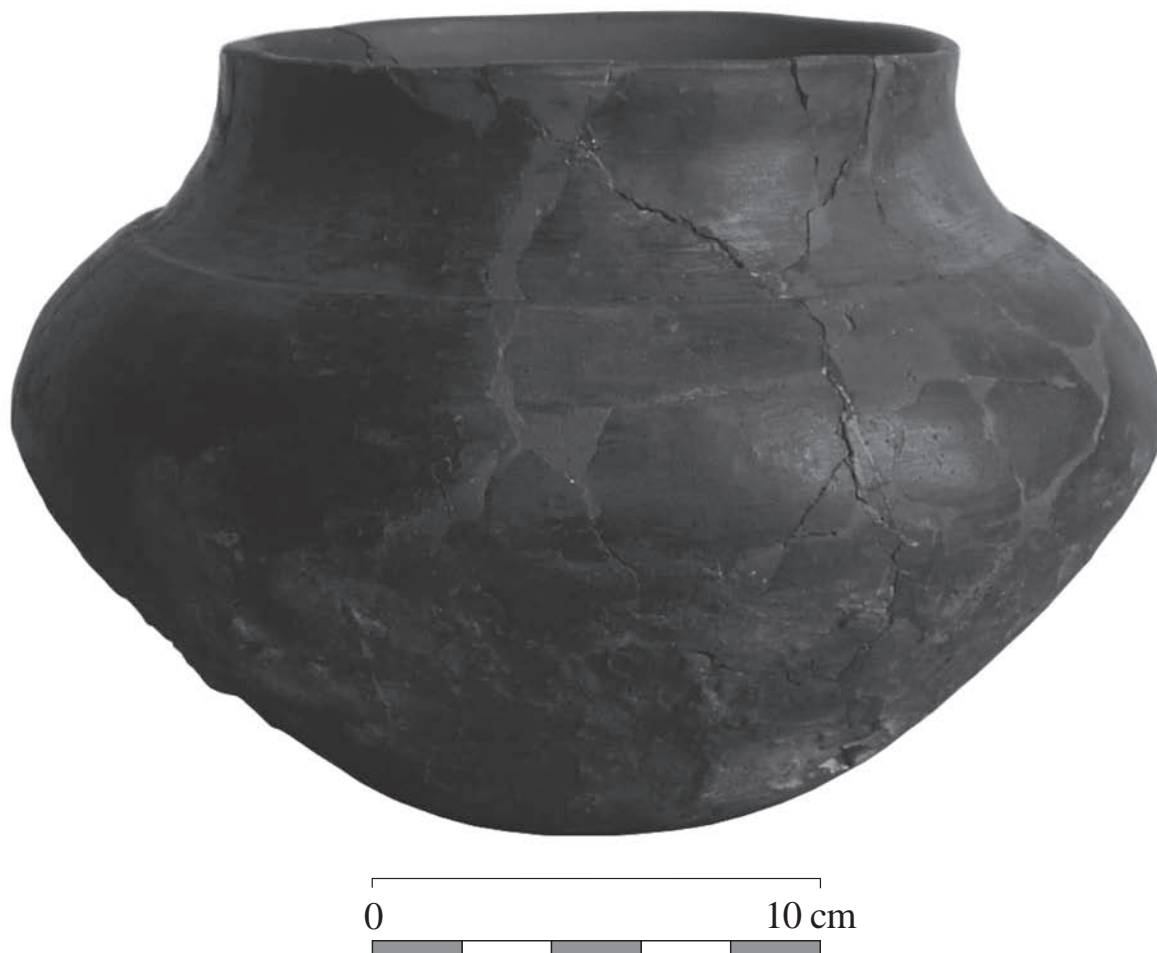


Figure 4.9 Ruinen-Wommels vessel from Limmen-1.

#### 4.2.1.7 VELSERBROEK-B6<sup>39</sup>

In advance of building activities 1.75 ha were excavated by the University of Amsterdam. The excavation revealed a two metre deep stratigraphy with features ranging from the Early Bronze Age to the 19th century. Nine phases of use were established that are described below (figure 4.10).<sup>40</sup>

38 Cordfunke 1969, 53.

39 Therkorn 2004.

40 Therkorn 2004, 107-117.

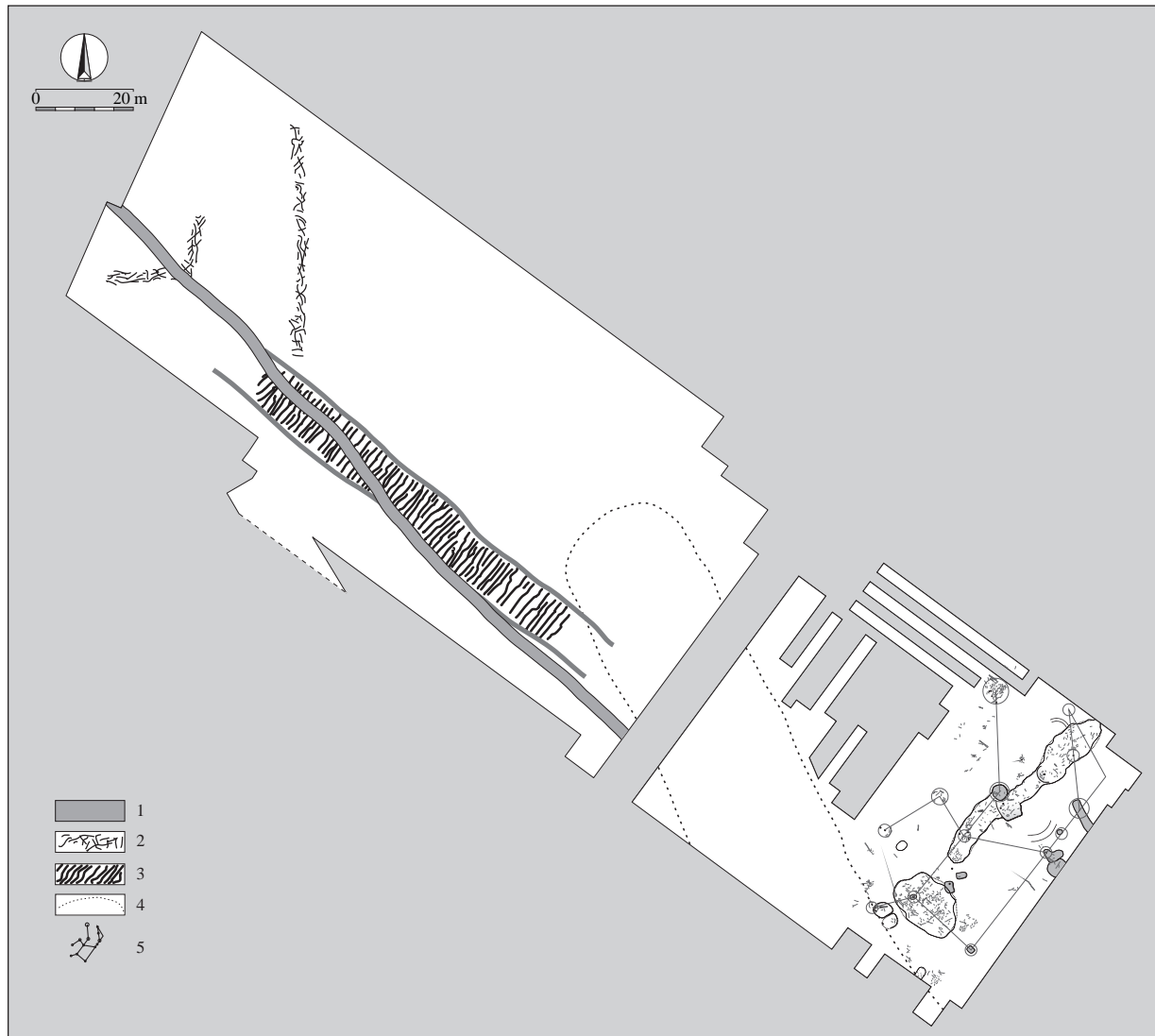


Figure 4.10 Plan of the main features at Velsbroek-B6. 1 = bank from phase 5, 2 = juniper deposits, 3 = mound with branches, 4 = dug channel, and 5 = pits and constellation pattern Horse, after Therkorn 2004, figure 37 and 39.

1. Bronze Age concentrations of charcoal on the top of the slope of a dune indicating incidental use.
2. During the Middle Bronze Age a depression with open water partly filled with clay and plant dust and slowly accumulated reed peat. No uses are identified. In the Middle or Late Iron Age over twenty reworked beams were deposited in open water. The beams, of oak and alder, formed two axes.
3. The beams were covered by silts and plant dust. Between 200-100 BC bundles of peeled juniper trunks and branches were pinned down with stakes on the bottom of the pool. The bundles must have been under water as they were still well preserved when excavated. The bundles were arranged in near north-south linear patterns of up to 45 metres of which one line of bundles was set at a right angle. Possibly every 20-30 years a line of bundles was pinned down.<sup>41</sup>
4. Plant dust silts covered the juniper branches and the surface of the raised swamp had dried up. In the first century BC on top of this surface a long mound of 103 metres was constructed of two slightly curved parallel ditches running northwest-southeast. The ditches were a metre deep and the material from them was used to heighten the area in between and was covered with hundreds of oak branches. On top of the branches cut reed peat was deposited, which was covered by sand. The recovered height of the long mound was 55 cm. Its visibility was heightened by the placement of three vertical oak posts at the northwest end. No burial was found but several deposits were made including elements of dog and horse skulls, a human thigh bone, a metal and an antler spear head, and a triangular piece of oak with an iron nail.

<sup>41</sup> Bloemers and Therkorn 2003, 27.

5. Sedimentation and at least two floods took place which covered the long mound. Two more human thighbones were deposited. In the Roman Iron Age a number of linear banks were constructed on top of the long mound, although with a slightly different orientation. The best preserved bank consisted of two banks about 75 cm apart covered with cut sods with the grass side up. The space in between was filled with re-deposited white sand. This bank was at least 120 metres long<sup>42</sup> with open water at its eastern end. Bronze fastenings, fibulae and a human thighbone were deposited here. The connection to the somewhat further peat area could not be established due to a modern ditch.

6. In the peat accumulation a northwest-southeast channel, 27 metres wide and at least 100 metres long, was dug to a depth of the sandy sediments. Varied deposits, mainly of wood and metal were made into the water, which gradually filled up with plant dust and sand (figure 4.11). The area to the east, in the second or third century AD, was marked by pits forming the constellation Horse.<sup>43</sup>

7. The area with the covered long mound and banks was used for small fields, a cart-way and pit alignments. These features could be contemporary with phase 6.

8. During the Medieval period the place of the pits forming the constellation Horse was remarked. Over position H11 five horseshoes and a near complete shoulder blade of a horse were deposited on top of which a round mound of cut turfs covered by white sand was constructed. Thin unpeeled juniper branches were deposited at the edge of the mound. Near position H8 a pit was dug in which a horseshoe was deposited. Here similar juniper branches were found alongside the pit.

9. In the nineteenth century again a horseshoe was deposited in a pit. A well contained a foot bone and a pseudo-pocket watch showing the eleventh hour. Furthermore a field system and three pits with standing whale bones were recovered.

Other sites dating to the Middle to Roman Iron Age within a kilometre distance are Velsbroek-Hofgeesterweg, Santpoort-Spanjaardsberg and –Hagelingerweg. The first two sites consist of settlements and fields and the last site has fields. Several sites dated to earlier periods are just as close by, such as Velsbroek-Westlaan, – area 2, and – Rugbyveld.

This is considered an offering site as there is a continuous shaping of the landscape involving the placement of specific wood species, human bones and specific objects in a sometimes wet environment and the placement of specific objects in the dug canal, especially metal, bone and wood.

object	material	N	object	material	N
bracelet	bronze	1	nail	silver	1
	silver	1	needle	bronze	1
chissel	iron	1	object	iron	1
coin	brass	5	part of chainmail	metal	1
	copper	6	pendulum	silver	1
	silver	7	pilum foot	iron	1
fibula	email	1	pilum head	iron	1
	metal	17	pottery	local	6330
	silver	1		roman import	30
	silver coated	1	ring	bronze	1
fitting	bronze	2		copper	1
	lead-tin	1		iron	2
	metal	2	spatula	copper	1
	silver	1	spear head	antler	1
	silver inlaid with niello	1		iron	1
fragment	bronze	1	tenon	oak	6
lance head	iron	2		hazel	1
nail	bronze	1		willow	1
	bronze/silver	1		juniper	2
	iron	1	elm	1	

Figure 4.11 Artefacts recovered from the dug channel at Velsbroek-B6.

42 The north-western side went further than the excavated area but could not be investigated due to a road.

43 Chapter 3 § 3.5.5.

4.2.1.8 IJMUIDEN-DUINVLIET<sup>44</sup>

Several artefacts (figure 4.12) were found in a peat layer at a depth of five metres in 1921 during digging activities for the construction of a ship lock. The peat layer was embedded in the old dune sands indicating a low-lying area within the old dunes. The find consisted of a bronze neck ring, 34 amber beads, 10 glass beads and a human jaw set together in the peat. The neck ring is dated to the Late Iron Age. The location and combination of artefacts suggests this is a single deposition. The nearest site Velsen-Noordzeekanaal is 1 km away and is dated much earlier.

This is considered an offering as the human jaw and foreign ornaments are placed together in a non-burial context.

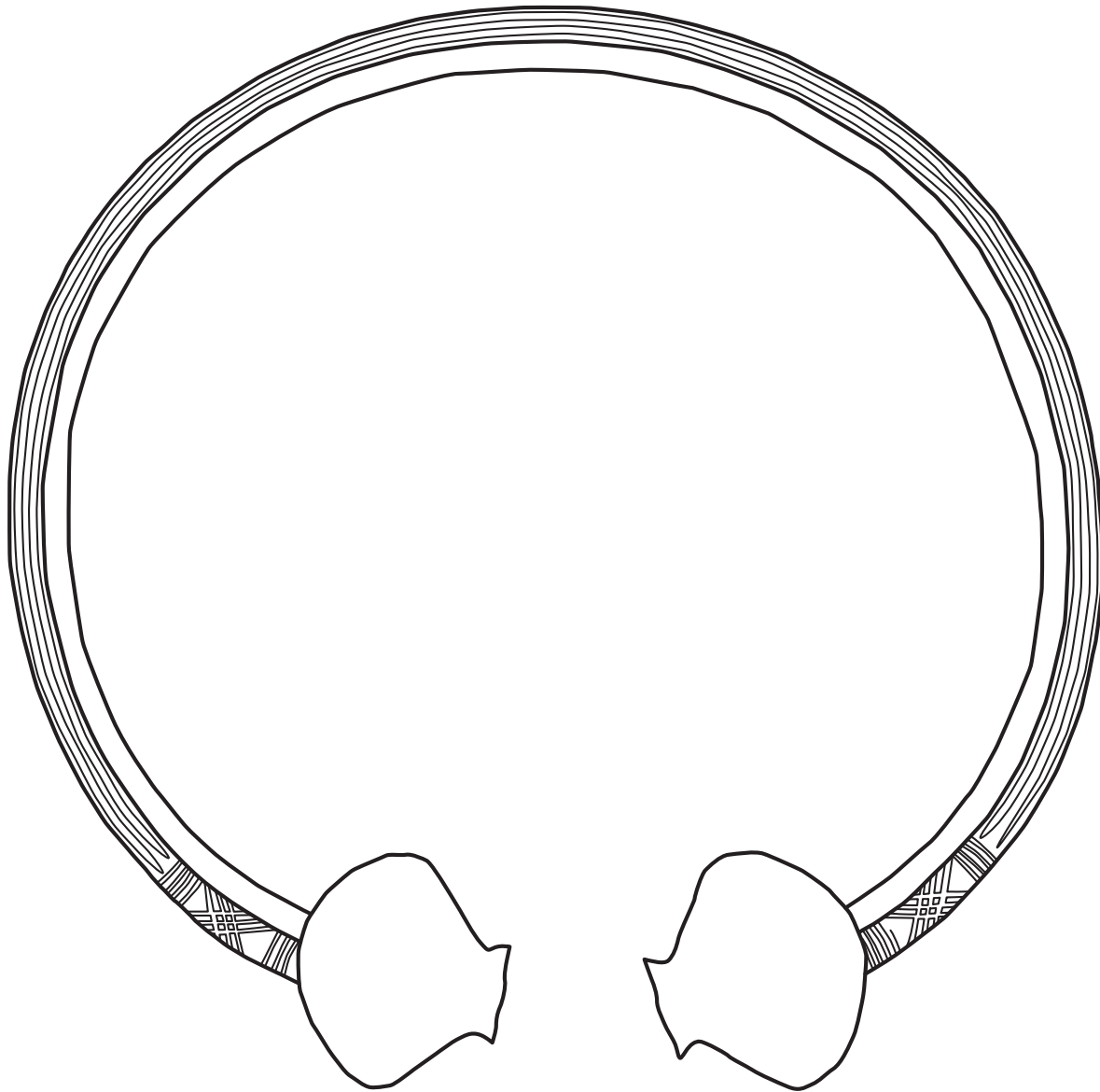


Figure 4.12 Bronze neck ring of IJmuiden-Duinvllet. Inner diameter of the neck ring is just over thirteen cm, after Van Heeringen 1992, figure 30.

44 Van Heeringen 1992, 174-175.

4.2.1.9 LIMMEN-DUSSELDORPERVAART<sup>45</sup>

A complete vessel (figure 4.13) was found at the bottom of a peat layer in 1969 during digging activities on the Dusseldorpervaart. The 40 cm thick peat layer was situated on top of the old dunes and beach sands. The vessel is of the 'streeband' type and can be dated to the last century BC.

This is considered an offering as a complete vessel is placed in a wet place.



Figure 4.13 'Streeband' vessel from Limmen-Dusseldorpervaart.

## 4.2.2 LARGE PEAT AREAS IN THE EASTERN PART OF THE OER-IJ AREA

The large peat areas lie in the eastern part of the Oer-IJ area and changed from reed peat into oligotrophic peat. The blankets of oligotrophic peat have a diameter of over 30 kilometres in both directions and are intersected by rivers and tidal areas. These blankets, some even bigger, occur in the entire western part of the Netherlands. The extent of the peat areas would have been known as either first or second hand knowledge, but could not be seen directly. For the eye the peat seems to go on forever. Accessibility of especially the oligotrophic peat could be difficult, but dry seasons and ice could change that. The top of the peat blankets are not low-lying because the peat growth could rise to several metres above the surrounding landscape. These sites are added to the analysis in order to get a more complete picture. Figure 4.14 shows the location of the two sites discussed here.

<sup>45</sup> Van Heeringen 1992, 187.

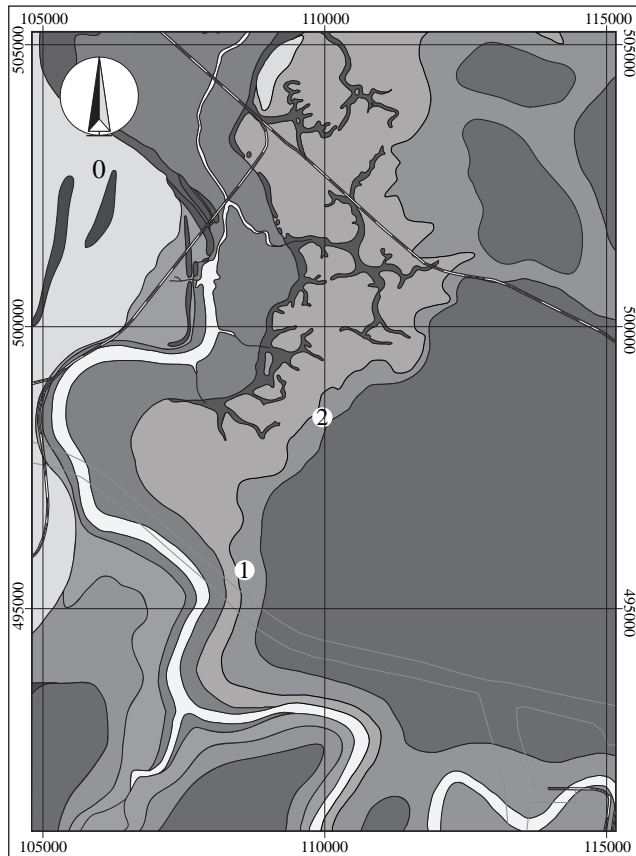


Figure 4.14 Location of the offering sites in the large peat areas in the eastern part of the Oer-IJ area.

1 = Assendelft-42  
2 = Assendelft-51

#### 4.2.2.1 ASSENDELFT-51<sup>46</sup>

A rough-walled bipartite bowl that originally had three legs was found in 1972 by the AWN-group Zaanstreek in lumps of peat. The bowl is dated to the seventh century BC. It is situated in the middle of the reed peat zone. It could originally have been placed in a pit, but these are difficult to distinguish in peat. The house of Assendelft-Q is situated 1100 m to the southwest. In the direct vicinity Iron Age and Roman Iron Age sherds were collected by the AWN-group Zaanstreek.

This is considered a possible offering as it is a single pot placed in peat, possibly in a pit, or water. It is incomplete, but the removal of legs may be significant as legs have a symbolic value in the Oer-IJ area and NW-Europe.<sup>47</sup>

#### 4.2.2.2 ASSENDELFT-42<sup>48</sup>

A wooden leg (figure 4.15) was discovered in 1968 during an excavation by the AWN-group Zaanstreek of a peat site in the corner of the trench with a Roman Iron Age farmstead at a depth of 40 cm. The excavators did not distinguish whether it was found in a pit. But pits in peat are difficult to establish and the depth of the artefact indicates the presence of a pit. The small leg is described as found in a peat layer and is broken at the upper leg end. Although toes are not carved, it appears to be a right leg. The leg part is 12 cm and the foot 6 cm long. In the vicinity a small pointed post and some charcoal were found, but no sherds. Due to its position it is dated to the Iron Age, but the Roman Iron Age should not be excluded. The site lies 150 m south of Assendelft-39, a possible salt-production site, and is situated in the same reed peat zone.

This is considered a probable offering as the leg is placed (possibly in a pit) in peat and legs have a symbolic value in the Oer-IJ area and NW-Europe.<sup>49</sup>

46 Van Heeringen 1992, 169.

47 Therkorn 2004 and see § 2.2.3.

48 Helderma 1969.

49 Therkorn 2004 and see § 2.2.3.



Figure 4.15 Twelve cm long carved wooden leg from Assendelft 42, after Helderma 1969, 44.

#### 4.2.3 CREEKS

Creeks would cut through the entire Oer-IJ area and mainly drain towards the streambed of the Oer-IJ. The creeks could contain saltwater, brackish or freshwater depending on their origin and degree of closeness to the tidal water. If under the influence of the tides the water level and the direction of the flow of the water would change with the tides. The possibilities for boating and/or crossing these creeks would vary with the daily rhythms of the tides. The fresh water creeks outside the influence of the tides would have a more constant character with water level changes especially related to seasonal influences. Figure 4.16 shows the location of the six sites discussed here.

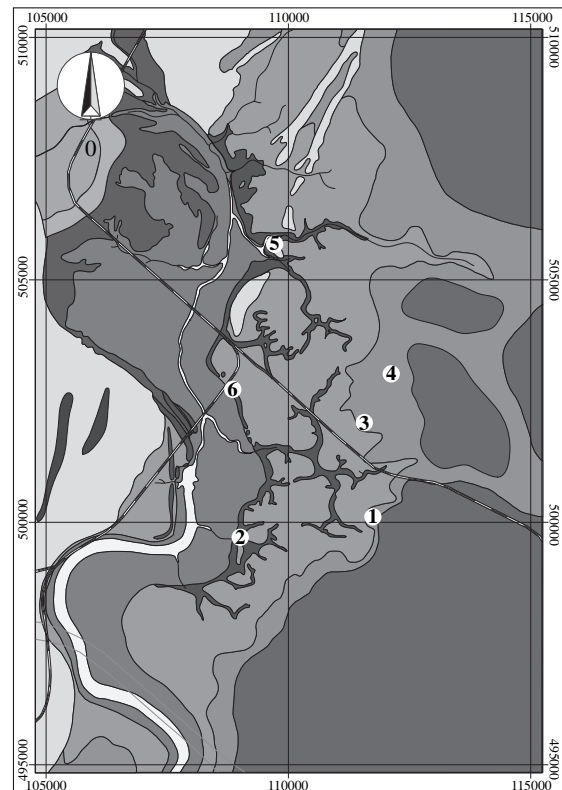


Figure 4.16 Location of the offering sites in creeks.  
 1 = Assendelft-56  
 2 = Assendelft-N  
 3 = Krommenie-14  
 4 = Krommenie-21  
 5 = Uitgeest-Dorregest  
 6 = Uitgeesterbroekpolder-18-1

4.2.3.1 ASSENDELFT-N<sup>50</sup>

The archaeological remains in the Assendelver polders were in danger due to deep ploughing and the artificial lowering of the water table, which would lead to peat oxidization. On request of the ROB the AAC undertook several excavations starting in 1978.<sup>51</sup> Assendelft-N is situated at the same creek system as Assendelft-B and -C, but lies at the western end 500 metres from the Oer-IJ. In 1981 Assendelft-N (figure 4.17) was excavated as part of the Assendelver Polder Project. Eight phases of occupation were distinguished in an area of approximately one hectare.

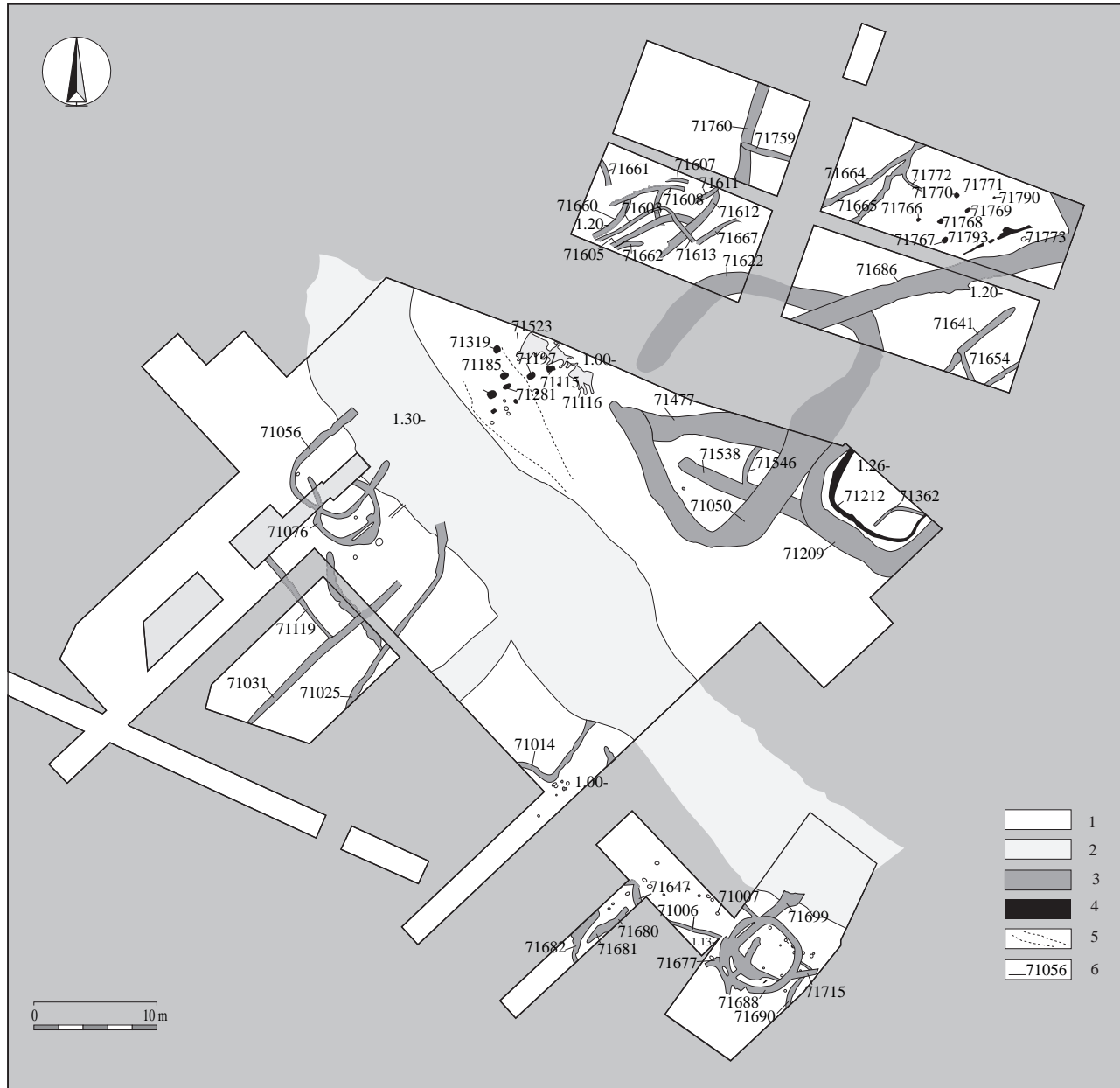


Figure 4.17 Plan of Assendelft N phase 2 and 3. 1 = levee, 2 = the creek, 3 = features from phase 3, 4 = features from phase 2, 5 = layer associated with house N1, 6 = feature numbers, after Van Gijn 1987, figure 7.2.

Assendelft-N is situated at the southern creek system of the Assendelver Polders that is part of the Uitgeesterbroek layer (Duinkerke I). The final phase of this creek system is dated to the fourth century BC by artefacts found at the bottom of the creek.<sup>52</sup> This final phase coincides with the first phase of use of the site, on focus here. The

50 Van Gijn 1987.

51 Van der Leeuw 1987, 1.

52 Vos 1983, 23.

environment was still marshy and diatom analysis indicates that the water in the creek was brackish, but levees were already formed.

No features belong to phase 1 and there is no evidence for habitation on the levees. Although the conditions were rather wet in the area, habitation nearby cannot be excluded. The creeks started to fill up and a layer of a metre thick was formed at the bottom. The layer is thinner at the sides of the creek and its deepest point lies at approximately -2.15 m NAP.<sup>53</sup> The artefacts were found at the base of this fill and the artefacts consist of two bone pestles, a haft from a metatarsus, whalebone, other bone, pottery, two pottery discs, sixteen stones, three cinders, and a whetstone.<sup>54</sup> On the basis of both pottery and C-14,<sup>55</sup> phase 1 is dated to 400 - 350 BC. As the artefacts are not spread throughout the fill and the dating range is fairly small, a short period of deposition can be assumed.

The second phase of use is dated to about 100 BC and consists of at least two post-built houses and ditches. House N1 had a human femur placed in a posthole. Phase 3 consists of ditches and a wall ditch house. In phase 4 four platforms are formed and on the two north-eastern platforms a wall ditch houses was built. At the north-western platform a channel was dug in which a complete pot and some bones were deposited. At the location of house N1 a piglet was buried. In phase 5 the area is slightly raised again and a wall-ditch house was built at the north-eastern platform. In a channel to the east a horse skull was deposited. Phase 6 consists of some gullies, which are still open when peat starts to form. The last phases 7 and 8 are dated AD 300 – 1100 and consist of a field system with plough marks on oxidized peat.

About 3-400 metres south of Assendelft-N are two settlements, which are not situated at levees but in the former tidal plain.

The deposition in phase 1 is considered an offering as a selection of specific objects is placed together at the bottom of the creek.

#### 4.2.3.2 UITGEEST-UITGEESTERBROEKPOLDER-18-1<sup>56</sup>

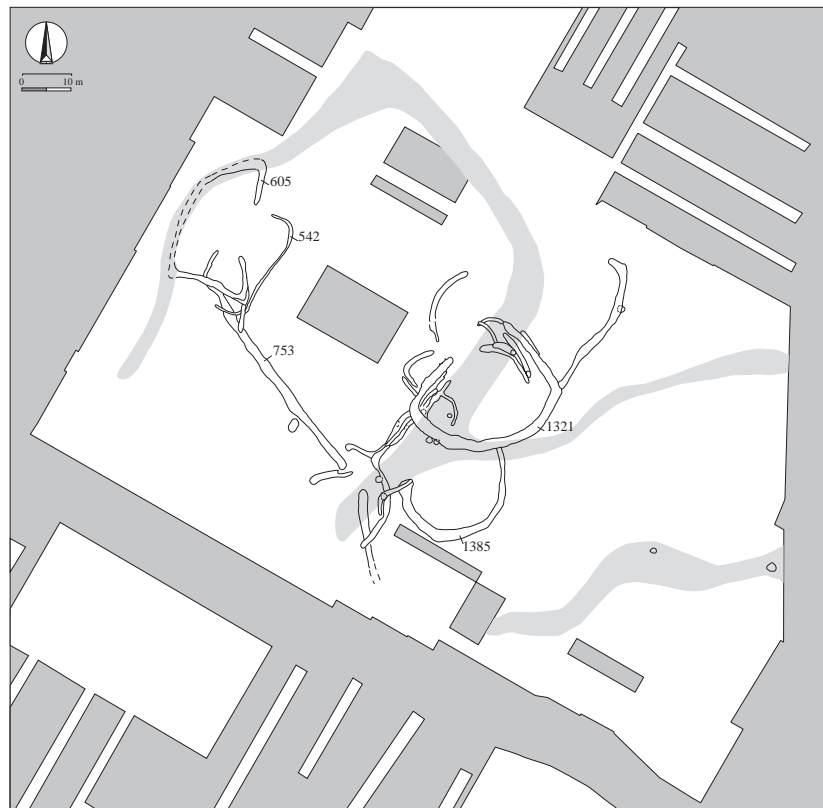


Figure 4.18 Plan of Uitgeesterbroekpolder 18 phase 1 and 2. The shaded areas are remnants of creeks, after Therkorn 1989, figure 8.

53 Van Gijn 1987, figure 7.1.

54 Meffert 1998, table 15.

55 C-14 (GrN 11477) 2300 ± 30 BP: 2σ 410-350 BC (69%) and 300-230 BC (26,3%).

56 Therkorn 2004, § 4.4. The site will be referred to as Uitgeesterbroekpolder-18-1.

In 1987-88 the AAC excavated two hectares at the Uitgeesterbroekpolder due to the relocation of the Motorway A9. The site is situated at the levee deposits on the northeast side of the Oer-IJ. Three main phases of use have been distinguished (figure 4.18). During phase 1, which is dated to the Late Iron Age, complete vessels and bone were deposited in small creeks. These creeks were connected to the Oer-IJ in the west. After the deposition the creeks silted up. Phase 2 consists of enclosures probably for livestock, field systems and pits and gullies forming the star patterns of Cow and Horse<sup>57</sup>. On the raised banks of the, now less active, Oer-IJ were possibly contemporary farmsteads. To the southwest was a border zone between a dry and a wet area, which will be dealt with in section 4.1.4.1 on Uitgeest-Uitgeesterbroek-18-2.

The depositions in phase 1 are considered an offering as it consists of complete vessels and bone placed at the bottom of a creek.

#### 4.2.3.3 UITGEEST-DORREGEEST<sup>58</sup>

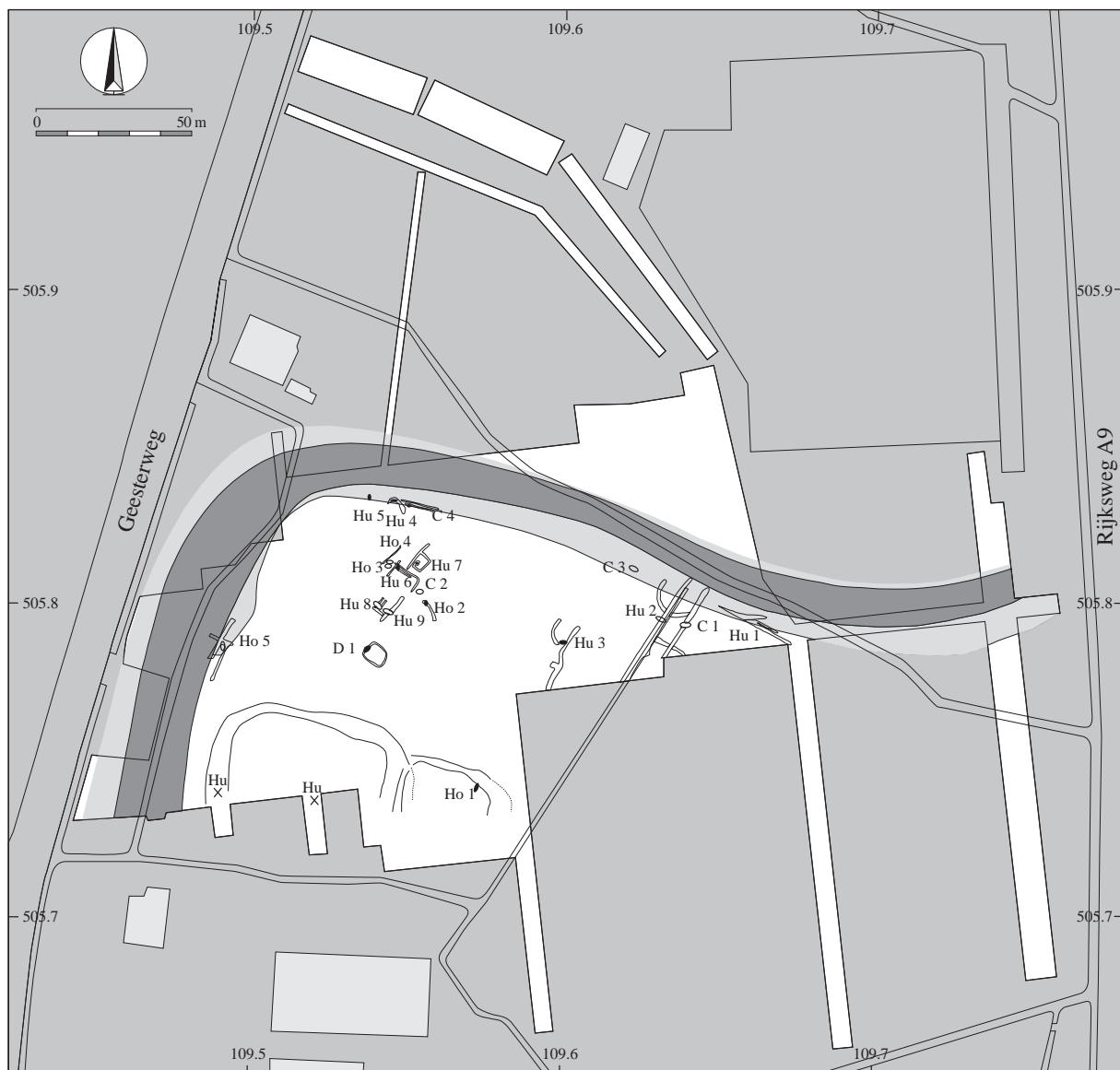


Figure 4.19 Plan of the main burial features and creek at Uitgeest-Dorregest, after Abbink 1999, figure 3.1, De Koning 2000, figure 83.

The early settlement of Uitgeest-Dorregest was discovered during the levelling of a Late Medieval heightened

<sup>57</sup> See last section § 3.5.4.

<sup>58</sup> De Koning 2000.

area in 1952.<sup>59</sup> 28 years later the ROB excavated about 3 ha of the site over a period of three years in advance of building activities related to small industries and sporting facilities.<sup>60</sup> The site has features from the Late Iron Age until the medieval period, possibly representing continuous occupation (figure 4.19). The settlement of Uitgeest-Dorreveest, consisting of at least sixteen (consecutive) houses, is situated on a former coastal barrier at the south-eastern side of an early creek of the Oer-IJ system. The creek itself was also excavated. It already contained fresh water in the Late Iron Age and filled up during the Roman Iron Age but remained a low-lying area.<sup>61</sup> Along and on the edge of the creek are five human burials and from the creek some skull fragments were recovered.<sup>62</sup> In the creek and on the banks masses of pottery were deposited, but due to the excavation techniques used not a single complete vessel could be reconstructed.<sup>63</sup> Only two small vessels were not destroyed.<sup>64</sup> Besides pottery, some remarkable metal artefacts came from the creek fill (figure 4.20 and 4.21). Among them a small bronze flask with three types of herbs and 1302 denarii from the second century AD probably deposited in a container of perishable material.<sup>65</sup> Of interest here are the deposition of both Roman and Germanic (parts of) military equipment. Roman (roof)tiles were also found but their location is not clear from the publication.<sup>66</sup>

Part of the deposition in the creek is considered an offering as it consists of specific artefacts placed in the creek depression. Furthermore there are human burials along and at the edge of the creek.

material	object	element/type	begin date	end date	remark
bone	skull	human			2 fragments
brass	drinking horn	Germanic	100	300	fragment
bronze	helmet	Roman	0	100	cheek plate
bronze	cingulum plate	Roman	0	100	
bronze	brooch	Roman	0	100	several
bronze	stirrup	Germanic	100	300	
bronze	umbo	Germanic	100	300	fragment
bronze	hairpin	Wijster	350	450	
bronze	brooch	ringfibula	350	450	trapezium shaped extension.
bronze	brooch	bow brooch	525	575	2
bronze	brooch	Domburg brooch	550	625	
bronze	flask	Roman	100	300	marjoram, celery, and mallow seeds.
bronze	vessel handle	Roman			
bronze	feet	lionhead			bronze feet of an object with lionhead
bronze	plate	Roman			
bronze	fitting	Roman			
bronze	ring	Roman			with gemstone
bronze	buckle	Roman			
bronze	lump	melted			
silver	coin	denari	100	200	1302 silver coins and several bronze objects
glass	fragment	Roman			
lead	lump	melted			
pottery	sherds	local			
pottery	sherds	Roman			
pottery	(roof)tile	Roman			fragments

Figure 4.20 List of the main artefacts from the creek at Uitgeest-Dorreveest.

59 Abbink, 1999, 63 and De Koning 2000, 3.

60 Woltering 1982, 204.

61 Jaarverslag ROB 1982, 28.

62 De Koning 2000, 57-59.

63 Abbink 1999, 67.

64 Abbink 1999, figure 8.12.1 (34-3) and 8.12.2 (33-3).

65 Vons 1987, 123-124.

66 Woltering 1982, 219.

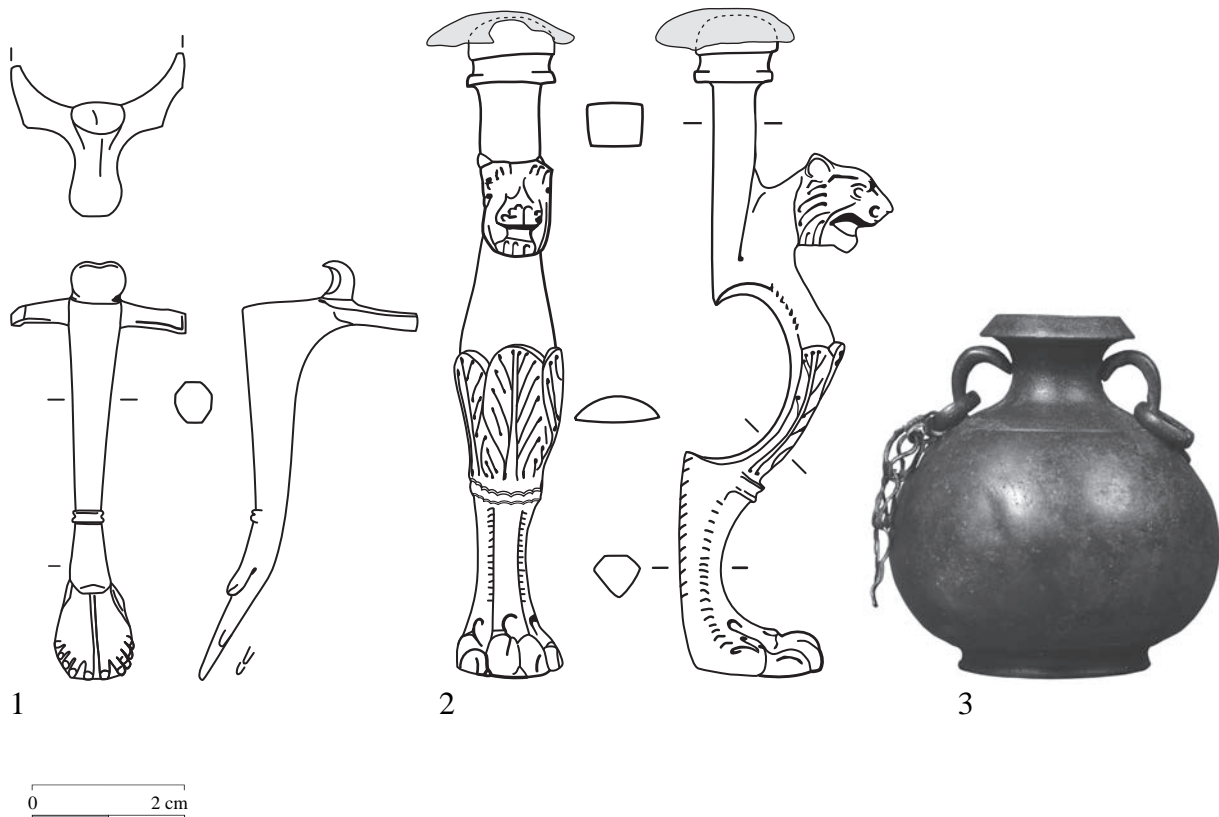


Figure 4.21 Some of the Roman artefacts found within the creek, after De Koning 2000, figure 31.

#### 4.2.3.4 ASSENDELFT-NOORD-56<sup>67</sup>

Trial trenches were executed by the AAC in order to establish the archaeological potential and its management in 1996 in advance of a large, Vinex housing project. In 1997 1.8 ha were excavated. This is the largest peat excavations and involves a farmstead and its surroundings. This makes it possible to view offerings and farmstead as one complex (figure 4.22). The stratigraphy of the site consists of a Deposit of Wormer (Calais IV) with its top at 3.85 m below NAP. On this lies a nearly two metre thick layer of reed peat with an occasional small discontinuous band of heavy clay and a weathered top. This weathered top at -2.1 to 1.9 m below NAP is the prehistoric level. At some spots an original oligotrophic peat layer is preserved. A thin layer of black peaty clay and topsoil up to 35 cm thick covers this prehistoric level. The zone of reed peat is less than a kilometre wide. 150m to the east of the site is bordered by oligotrophic peat and 300 m to the west the former tidal flats begin with the first levee at a distance of 800 m.

The first traces of land use are peat cuttings in the area, at that time still covered with raised bog and a naturally filled creek running northeast/southwest that are dated to the first century AD. At right angles to and along the creek long narrow peat cuts were situated. Turf was dug from the southern part of the creek to a depth of 1 m. As a consequence a hole (f130) was created and one side was packed with broken vessels in order to strengthen it. The fill of amorphous lightly clayey peat indicated standing water inside the hole. The hole was marked with two deposits. At the south-western end two upright near complete vessels were deposited. At the north-eastern end a platter made of alder was placed with above it short lengths of branches and worked wood.<sup>68</sup> Along the western side of the re-opened creek hearth material, burnt lumps of peat, quern fragments, two spindle whorls, a fragment of a loom weight, a crucible fragment and calcinated bones were deposited. In this area were also the remains of turf stacks. An oval hearth/pit (F125) is associated with the activities carried out here. At the bottom of the pit was a complete vessel of unusual type covered by thin layers of ash and potting clay. On top of this was a layer of vessel-halves set close together. This was covered by layers of turf, reed and potting clay.

<sup>67</sup> Therkorn, Besselsen and Oversteegen 2006. In the text the site will be referred to as Assendelft-56.

<sup>68</sup> A small post is dated C14 (GrN 23573) 1890 ± 20BP: 2σ AD 60-180 (92%) and AD 190-210 (3%).

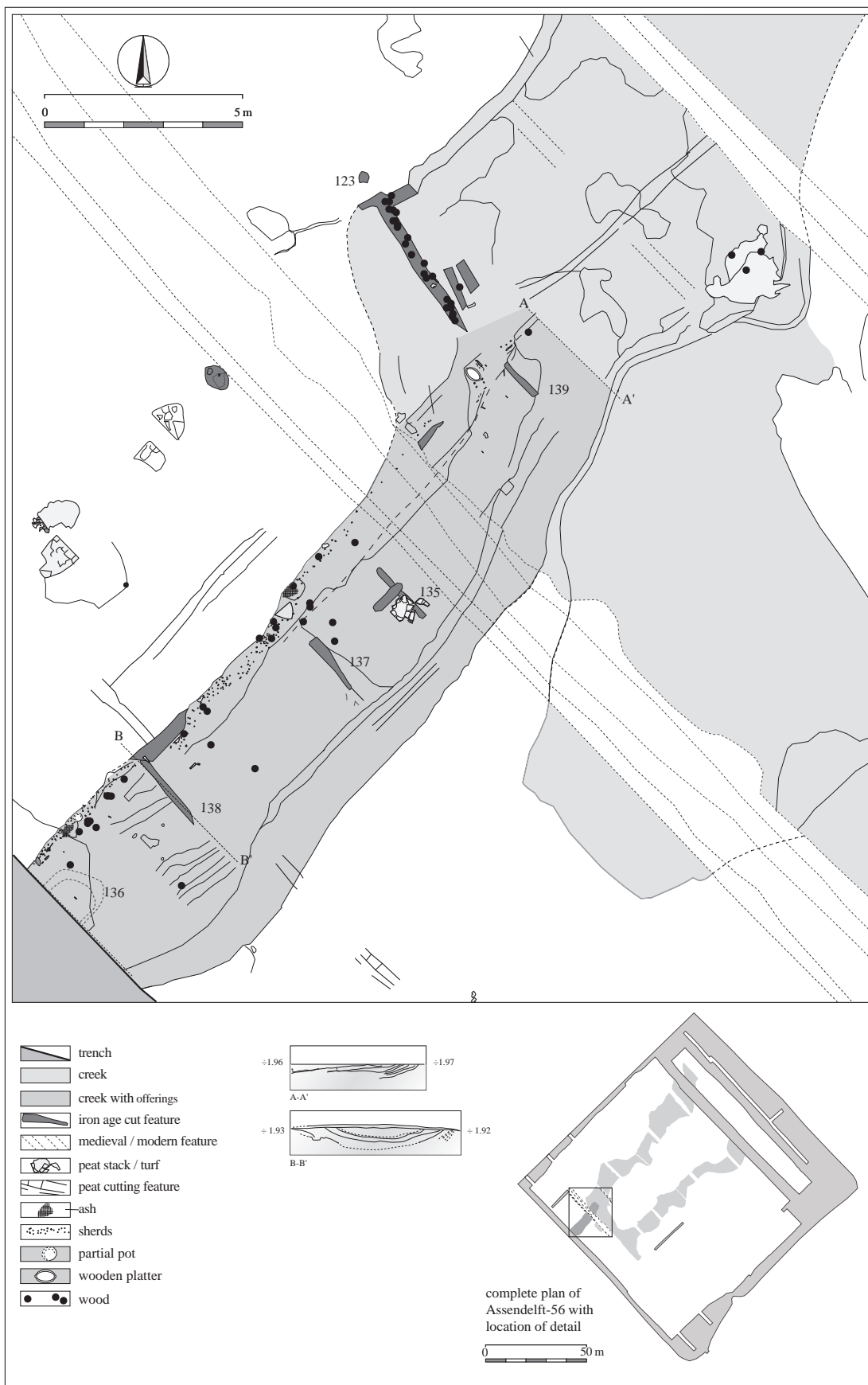


Figure 4.22 Plan with main features of Assendelft-56, after Therkorn et al. 2006, figure p.85 and plan 1.

A top layer of sherds covered with clay was the surface on which a fire was lit.

Round pit 123 has a diameter of 1.5 m and is 1.45 m deep. The first deposit was an alder branch in a partial vessel. The fill consisted of cut turf and contained branches, worked wood, wood chips, a quern fragment, a triangular stone and a vessel.

Towards the east the remains of a farmstead were indicated by a rectangular distribution of sherds, a hearth and stall debris. The farmstead was 5 x 13 m and had a northeast-southwest orientation. Associated with the dwelling are a path and seven pits.<sup>69</sup> The pits contained several deposits and were filled with turf shortly after the deposits were made.

Between the farmstead and the activity area were two deposits of wood. One consisted of the roots of a juniper tree (possibly natural) and the other of an ash, alder, willow and bog myrtle.

In the second century AD a low platform was made at the eastern side of the excavated area. On the platform a hearth and a hearth/pit with deposits were constructed. There were also some paths.

In the north-western area part of another raised surface was situated possibly indicating another farmstead.

The depositions in the peat-cutting hole are considered an offering as they consist of the placement of complete vessels and wood.

#### 4.2.3.5 KROMMENIE-21<sup>70</sup>



Figure 4.23 Plan of Krommenie-21.  
A = location first phase  
B = location second phase after Mooijman and Van Roon 1983, figure 1.

<sup>69</sup> Feature 15, 16, 64, 65, 68, 84 and 86.

<sup>70</sup> Mooijman and van Roon 1983.

Local protests stopped the building activities as a depot for mud was created. The AWN-group Zaanstreek investigated the partly dug up terrain during 1981 and 1982. The site is situated on the west side of a relatively small oligotrophic peat blanket of 4.7 km<sup>2</sup>. The reed peat is less than 100m away. Two phases of use could be established (figure 4.23). The first phase consisted of a rectangular, split oak post setting of 7 x 13.5 m with an east-west orientation. It was partly excavated due to the destruction of the north-eastern part. The oak posts were not set close together. The old surface of oxidized peat is somewhat disturbed possibly due to trampling. On the south-eastern side was a creek of 1.5 m wide and 0.5 m deep. At the bottom lay half a vessel with an alder branch and some wood above. The wood included a post with a hole, a long stick or handle and part of a possible yoke made of oak. A second phase consisted of several round posts at the now filled in creek. No structure could be established. Both phases are dated to the first century AD. A total of 9000 sherds, including a miniature vessel, were found mainly in six large concentrations that were not hearths. Of the six concentrations only twelve sherds were of Roman origin. Artefacts further included many small pieces of daub, some stones – including four whetstones and a quern fragment – calcinated bones (cattle bones and a pig's tooth could be identified), eight spindle whorls, two playing discs, a blue glass bead and two small linked bronze rings. The deposition in the creek is considered an offering as it consists of half a vessel with an alder branch and wooden artefacts placed at the bottom of the creek.

#### 4.2.3.6 KROMMENIE-14 ('T HAIN)<sup>71</sup>

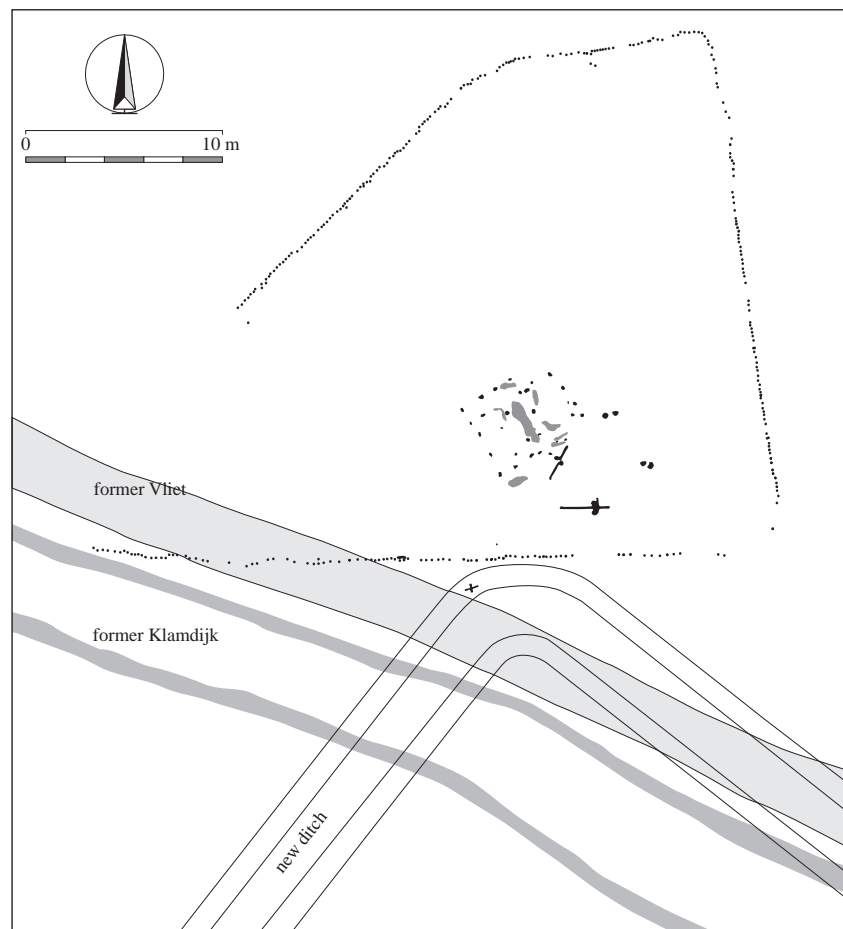


Figure 4.24 Plan of Krommenie-14, after Helderma 1971, figure 11.

A trapezoidal enclosure made of a single row of split alder posts (figure 4.24) was excavated in 1964 and 1965 by the AWN-group Zaanstreek in cooperation with the ROB. The close-set posts were driven into peat that was covered with a thin clay layer. At the western side was an entrance of 14 m wide. Four pairs of heavy wooden posts (18-25 cm in diameter) were set in a square, bordered on the northwest side by a rectangular setting of

<sup>71</sup> Halbertsma 1964, 281-4, Helderma 1971, 64-75, and Stolp 2000, 41-45.

smaller posts inside the enclosure. Small patches of the original surface were found near the posts at a depth of 1.68 m below NAP. The enclosure was situated on the northern bank of an early creek with still standing water. It could be that the creek was already filled in and a hole was dug as the palisade crosses the creek towards the west. In the creek, up to a depth of two metres, a large amount of local pottery, including two complete vessels, Roman pottery, cattle bones, six coins and an iron adze were deposited. A lesser amount of sherds and some hearth pits were recovered inside the enclosure, especially in and near the post structures. At the northern edge of the light post structure was a concentration of 19 slingshots.<sup>72</sup> All but two posts of the enclosure were upright even though they would have been easy to push over. When the site was no longer in use the posts just slowly rotted away.

The structure is dated in the first century or first half of the second century AD, based on the Roman pottery. The site is situated in the middle of the read peat zone, which is only 400 m wide at this point. The oligotrophic peat is 200 m towards the east and the nearest levee lies at 800 m towards the west. At this levee lie also the nearest known contemporary sites.

The deposition in the creek is considered an offering as a selection of objects including two complete vessels, six coins and an iron adze are placed at a considerable depth. There is the possibility that the offerings are mixed with the deposition of debris.

#### 4.2.4 LOW-LYING PARTS ON THE SIDE OF THE OER-IJ STREAMBED

The degree of wetness in the border zones of the Oer-IJ would at first have depended mainly on the difference between high and low tide. The difference between high and low tide fluctuates over time and could be over a metre and a half during dynamic periods and just twenty centimetres near the closing of the estuary system.<sup>73</sup> The border between wet and dry would shift in a daily rhythm. Salt water would have entered the area. After the closing of the estuary at the end of the Late Iron Age tidal influence was absent and a more stable border between wet and dry would have existed. Occasional storm floods could enter deep into the former estuary, but the wetness of the area would now be under the influence of the seasons. Water flowed towards the (south)east after the closure of the estuary. Figure 4.25 shows the location of the five sites discussed here.

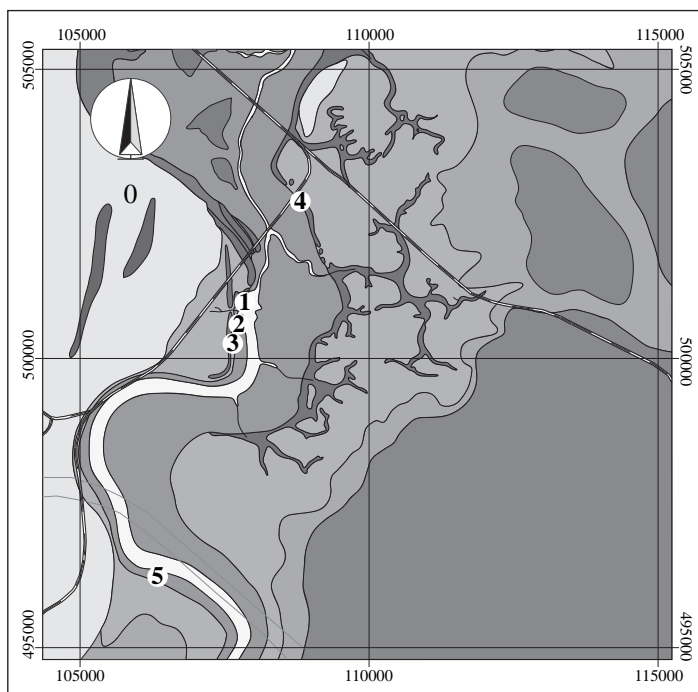


Figure 4.25 Location of offering sites in the borderzone of the Oer-IJ.

- 1 = Broekpolder-1
- 2 = Broekpolder-2
- 3 = Broekpolder-3
- 4 = Uitgeesterbroekpolder-18-2
- 5 = Velsen-fort-1

<sup>72</sup> Mooijman 2005, 70.

<sup>73</sup> Vos 2000, table 3.

4.2.4.1 UITGEEST-UITGEESTERBROEKPOLDER-18-2<sup>74</sup>

In 1987-88 the AAC excavated two hectares at the Uitgeesterbroekpolder due to the relocation of the Motorway A9. The site is situated at the former mud flats on the northeast side of the Oer-IJ. Three main phases of use have been distinguished. During phase 1, which is dated to the Late Iron Age, complete vessels and bone were deposited in small creeks.<sup>75</sup> These creeks were connected to the Oer-IJ in the west. After the deposition the creeks silted up. Phase 2 consists of enclosures probably for livestock, field systems and dug features forming the patterns of Cow and Horse. Farmsteads were possibly on the raised banks of the now less active Oer-IJ. To the southwest was a border zone between a dry and a wet area (figure 4.26). This zone was demarcated with ditches that were sometimes under water. In these ditches deposits were made of two complete horse skulls, of which one had a horn pit in it, bones, two clay dice, a pit with cremated bone and the roundel of a human skull, and a vessel base containing ash and an ox astralagus, and a pit with bones and an ox skull.

In the last phase the area of the border zone became swampy and the features were covered with silts. In this wet layer deposits were made of twelve fibula, three coins, and a complete rotary quern. Due to preservation conditions wood, if deposited would have decayed. Although the artefacts could have been deposited at once, it is likely that they were deposited on several occasions.

These are considered offerings as there is a distinct placement of specific artefacts including both parts of a complete rotary quern, fibulae, coins, human bone, and a horse skull with a cow's horn pit in small pits and gullies in a wet place.

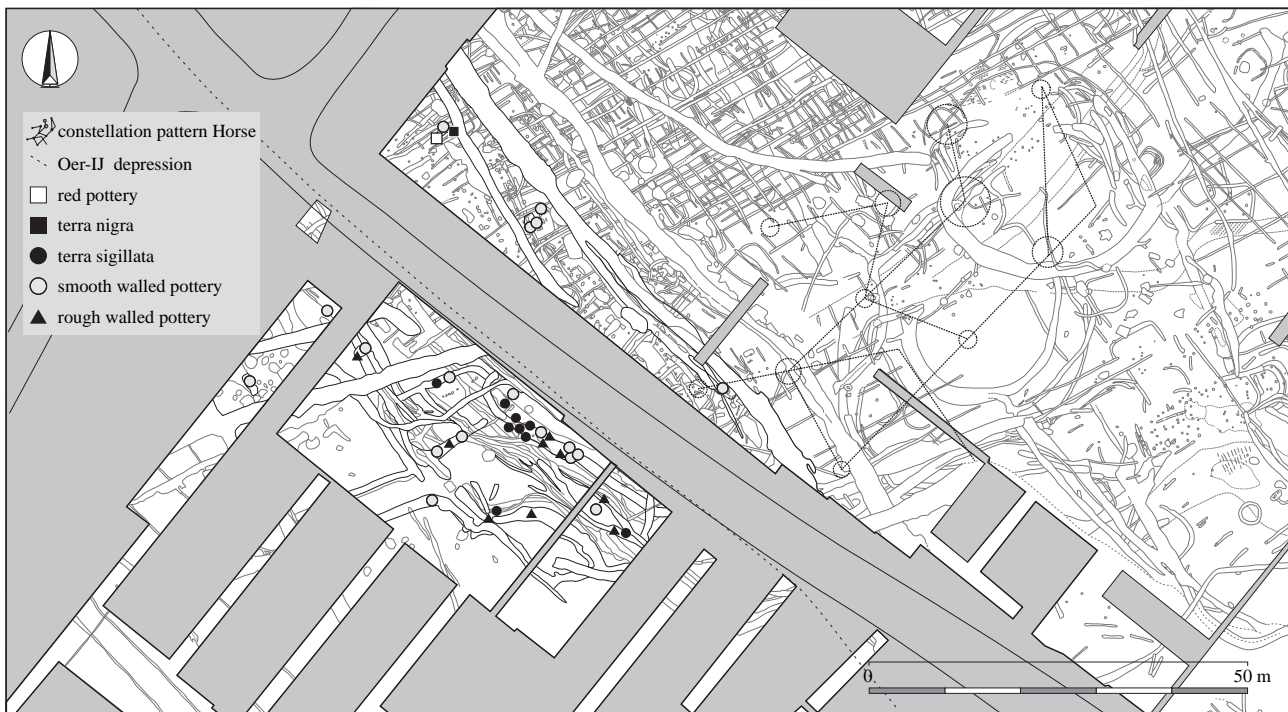


Figure 4.26 A selection of black features and artefacts at Uitgeesterbroekpolder-18-2 used for offerings. Grey features show the intensity of ditch digging across the site, after Therkorn 2004, figure 42 and Gerritsen 2000, figure 3.9.

4.2.4.2 VELSEN-FORT-1<sup>76</sup>

In 1972 the site of Velsen-1 was discovered, the site could not be preserved due to the construction of the 'Wijkertunnel'. Between 1974 and 1990 excavations executed by the AAC and the AWN-group Velsen have taken place. Additional observations were made in 1994, during the construction of the tunnel. The remains of a Roman fort and a harbour (figure 4.27) were uncovered over the years. The fort and its harbour are dated to the period AD 15 to 30. There is some evidence of earlier use of the site, such as Bronze Age plough marks and

<sup>74</sup> Therkorn 2004, chapter 4.4. The site will be referred to as Uitgeesterbroekpolder-18-2.

<sup>75</sup> See also § 4.2.3.2.

<sup>76</sup> Bosman 1997 and Dijk 1987.

Late Iron Age pottery, including a complete pot from the Oer-IJ.<sup>77</sup> Diverse excavation strategies and unequal preservation, especially erosion, influence the recovered distribution of artefacts. An overview of the site will not be given here;<sup>78</sup> instead there will be a focus on some aspects that might be of interest for the research question related to depositions in wet contexts.

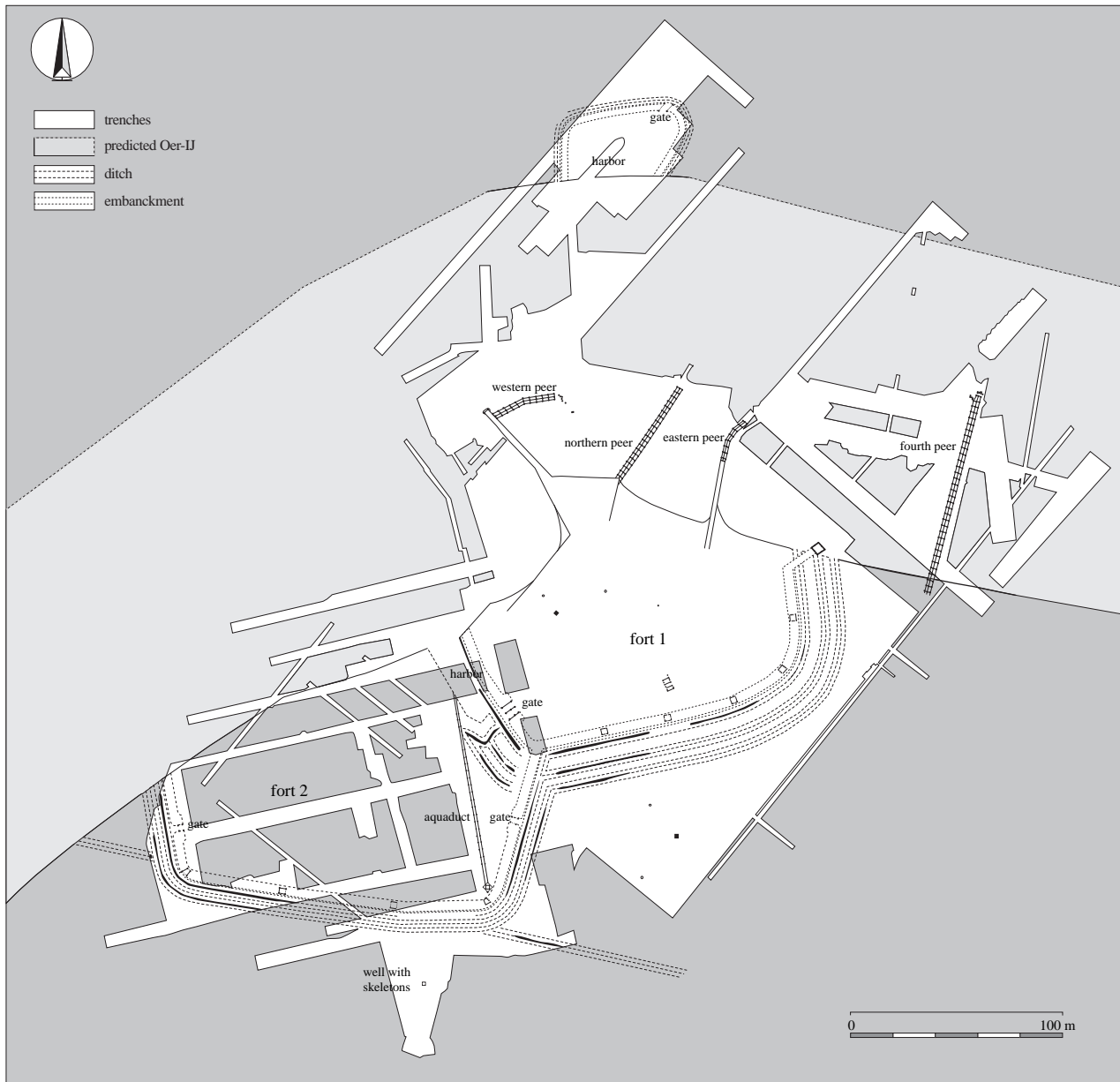


Figure 4.27 Plan of the Roman fort and harbour at Velsen, after Morel and Bosman 1990, figure 15.

The fort and harbour are situated at the south bank of the Oer-IJ, which during this period was no longer connected to the sea at Castricum. The main connections to the sea were now the Flevo-lake in the east. During an early phase the harbour was deepened through dredging. The dredging activities have led to the formation of a so-called 'bagger'<sup>79</sup> layer in which artefacts were recovered. On top of this 'bagger' layer was an undisturbed Roman layer also with artefacts. A natural sand layer without finds was deposited after the use of the fort and some of the harbour posts were extracted. Large artefacts, including cattle skulls were found in some of the postholes of the pulled out posts.<sup>80</sup> Objects with religious depictions found at Velsen 1 are a bronze statue of

77 Bosman 1997, 96.

78 For an overview see Morel 1988 and Bosman 1997.

79 Bagger is Dutch for dredgings.

80 Bosman 1997, 33.

Hercules Bibax and 65 gems of which, all but three, had religious or charm signs.<sup>81</sup> Several complete vessels were deposited in the harbour. There was also a complete vessel deposited with human remains in well 2. Several single human bones were recovered and in addition human hands from at least three individuals and possibly feet were deposited in a well. Two concentrations of respectively four metacarpals and four vertebrae of different individuals were found in the harbour. There is, however, no clear pattern in human bone distribution in the Roman layer in the harbour. The partial remains of several individuals were also recovered from the harbour and included women and children. Their bones were scattered due to water movement as they were on the upper part of the Roman layer, which dates them to the final phase or after use of the fort by the Romans. Parts of the deposits in the harbour are considered offerings as there is a placement of a cattle skull in a posthole, complete vessels, many gems and human bones. The complete vessel from the Late Iron Age could also be considered (part of) an offering.

#### 4.2.4.3 BEVERWIJK/HEEMSKERK-BROEKPOLDER<sup>82</sup>

12.5 ha were excavated over a period of three years (1999-2001) due to the building of a housing estate at the 'Vinex' location Broekpolder. Five ha has been saved as an archaeological monument. This monument is based on core boring alone which indicated a stacked landscape with use traces. Both at the northern and southern side farmsteads are partly located in the monument, indicating living areas.

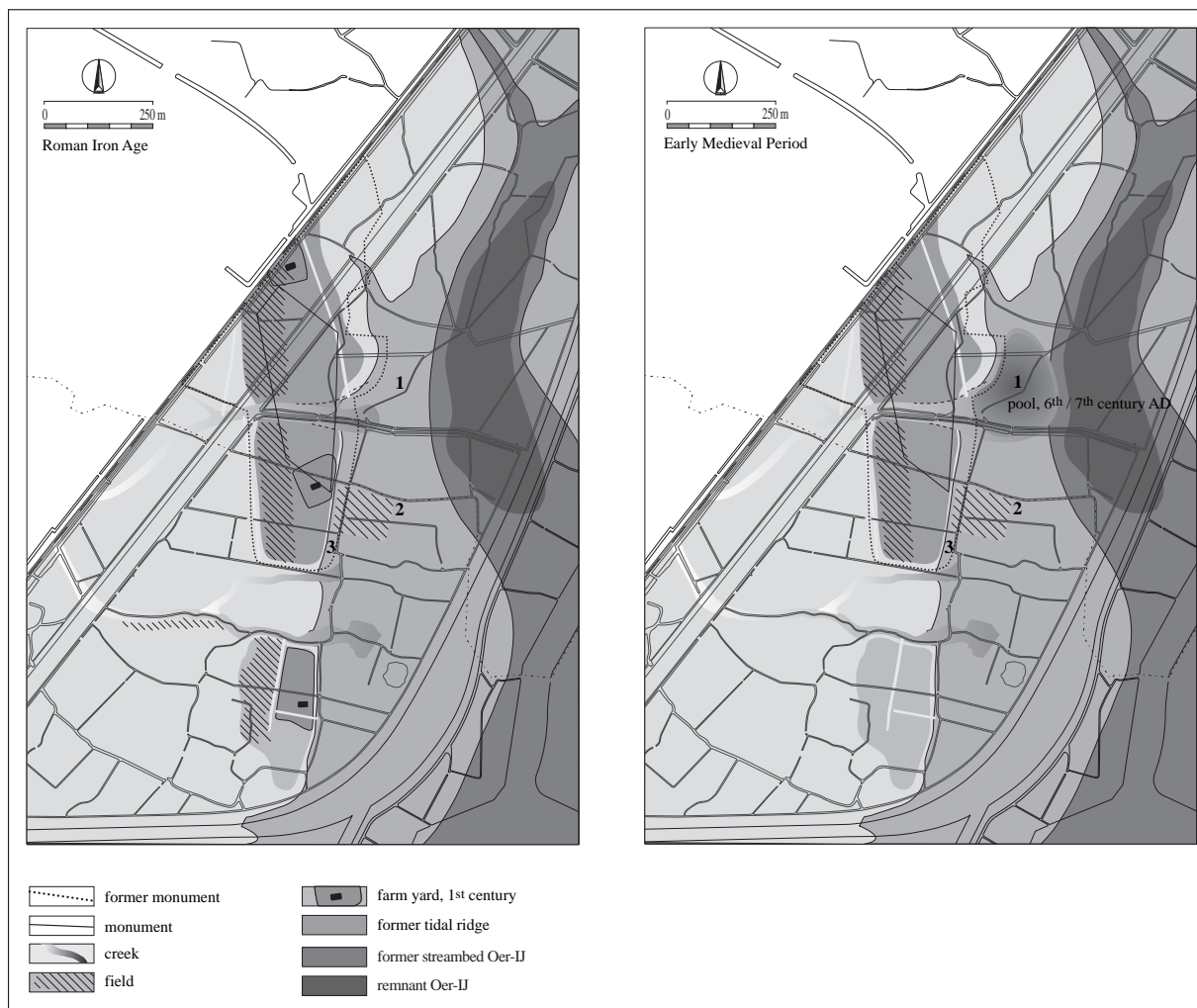


Figure 4.28 Schematic overview of the Broekpolder with the three offering sites indicated by their number, after Offenberg 2003, figure 7.1.

81 Bosman 1997, 47.

82 Therkorn et al. forthcoming.

There is, however, a long stretch in between that is bordered at both the eastern and western side with traces of fields and gullies/ditches. The exact use over time is therefore not known. 70 percent of the excavated area was in the direct vicinity of this monument. The location of the remaining trenches was guided by scientific interest and mainly focused on the low-lying areas.<sup>83</sup> Excavations revealed a stacked landscape with human traces dating back to the Bronze Age up to recent times. Settlements and fields were located on a tidal ridge on the west side of the Oer-IJ. Three locations have ritual depositions in a wet context (figure 4.28) on the east side of the tidal ridge at the transition to the Oer-IJ. These three locations will be the focus here. The locations are numbered from north to south, 1 to 3.

#### 4.2.4.4 BEVERWIJK/HEEMSKERK-BROEKPOLDER-1<sup>84</sup>

The main reason for excavating this specific area was the seven ditches that converged at one point.<sup>85</sup> The area was still one of the wettest spots in the Broekpolder at the time of the excavations and was sometimes even totally submerged in water. Previous research in the Velsbroekpolder had indicated that this type of area could be of interest. Broekpolder-1 was excavated in two seasons. The first season focused on the southern side and the second on the northern side. A modern ditch separates these parts and a ditch runs along the eastern side. Small trenches were excavated on the other side of the eastern ditch in order to determine the extent of the area with artefacts. At the western side of Broekpolder-1 is the archaeological monument.

Broekpolder-1 is situated at the northern side of a creek going through the tidal ridge and the border zone of the remnants of the Oer-IJ. At the tidal ridge directly adjacent to a pool were some gullies and two round gullies of Late to Roman Iron Age and a small area of plough marks (figure 4.29). The low-lying area was flooded over periods of time forming a pool with a maximum extent of about 1.6 ha and a maximum depth of 70 cm. The stratigraphy of the pool consists mainly of two layers: f4112 grey-blue clayey sand forming the bottom of the pool and f4111 light brown clayey sand with sandy wash lenses formed from the Roman Iron Age to the Early Medieval period. The absence of soil horizons or vegetation lenses indicates that there were no extensive dry periods. Due to the slow silting of the pool it was difficult to distinguish layers that were confined to specific areas. Water in the pool came from the creek cutting through the ridge and the overflow from the former streambed of the Oer-IJ during very wet conditions. The botanical evidence indicates that the water in the pool was slow moving to still standing fresh water. There is no evidence for peat accumulation in the pool during the medieval period.

Different types of structuring of the area have taken place. The earliest traces in the pool area are the remains of depressions, probably cattle paths as indicated by some hoof prints. The first deposit consists of the concentration of bones of an infant in a short curved gully at the border zone between the pool and the ridge.<sup>86</sup> This border zone is covered with small gullies. These short gullies are dug and redug consecutively starting from the south. The clear endings of the gullies could indicate openings from the ridge towards the pool. In the pool at least eight stake rows were placed in a (south)south-eastern direction. Broken off points indicate that some of the rows were taken down. Two rows were dated to the Early Medieval period.<sup>87</sup> One row of stakes dated around AD 1700<sup>88</sup> had three pits at the end. In two of them a lower leg of a horse was placed vertical. The depositions cluster along the edge of the pool and the rows of stakes. Over a long period of time depositions have been made into the pool consisting of pottery, bone, wood, stone and metal (figure 4.30). Therkorn et al. date the depositions in the pool to the Early Medieval Period. I am of the opinion that from the deposition of the small infant onward depositions took place as local pottery was present. The pottery was badly preserved but seemed to occur in concentrations. The pool – not fully flooded then – was at that time probably not yet the focus of the ritual depositions. This focus was probably the creek running east-west. As this creek was under a road and part of the archaeological monument it was not excavated. Artefacts from the Roman Iron Age were,

83 Therkorn et al. forthcoming.

84 Therkorn et al. forthcoming, the area will be referred to as Broekpolder-1, here.

85 Therkorn et al. forthcoming.

86 C-14 (KIA 14282) 1879 ± 29 BP: 2σ AD 68-232.

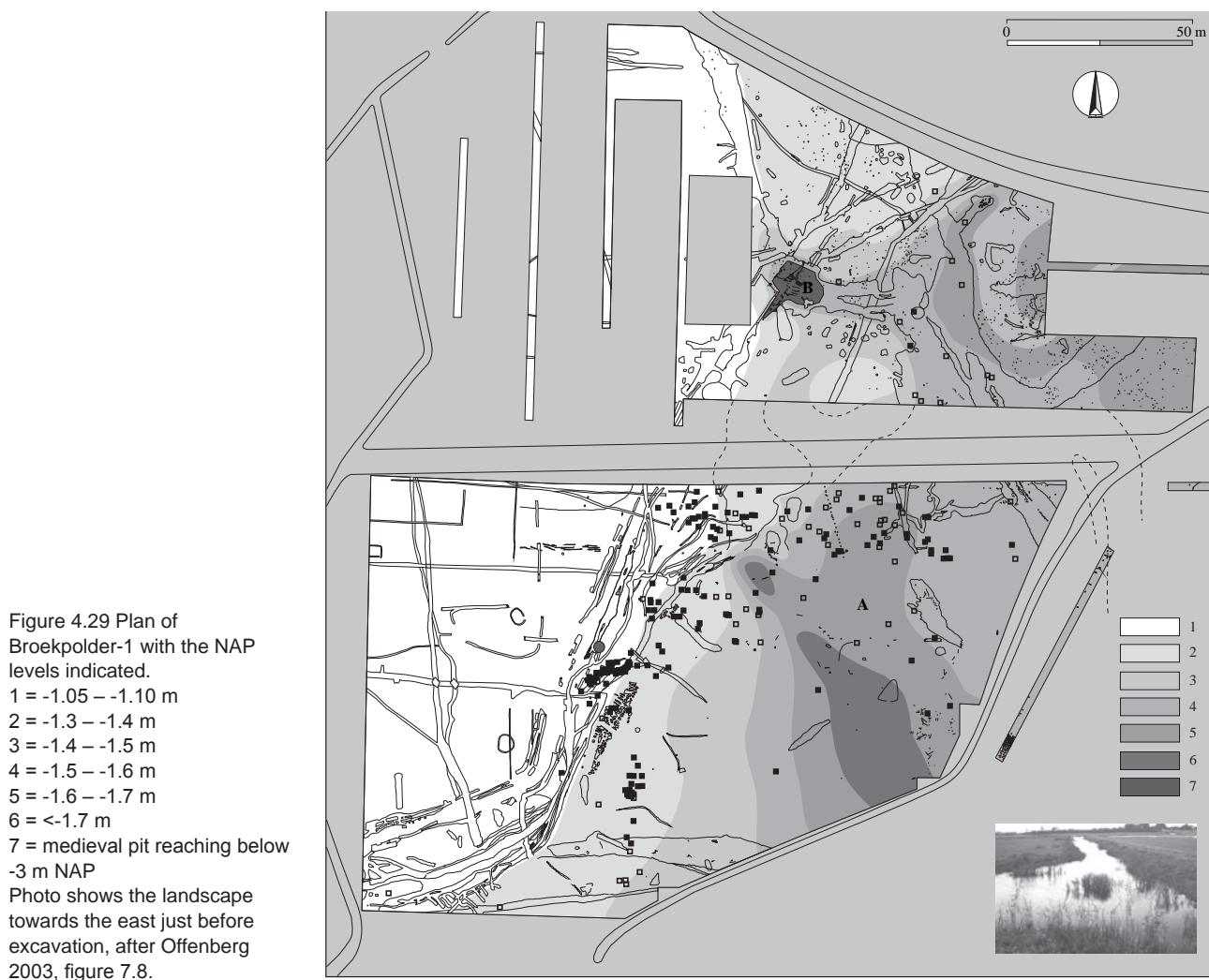
87 C-14 (KIA 9995) 1468 ± 30 BP: 2σ AD 539-652 and (KIA 9998) 1493 ± 30 BP: 2σ AD 533-641.

88 On the basis of stratigraphy in combination with C-14 (KIA10000) 87 ± 32 BP: 2σ AD 1681-1955.

however, found in the mole holes along the road above the creek.<sup>89</sup>

In the northern part of the area a large pit (13.5 x 8.5 m and 1.8 m deep) was dug. The pit is dated to the ninth and tenth century AD. At the bottom of the pit several beams and split trunks of beech, some of at least 4 m, and a sheep/goat tibia were deposited. The pit filled up naturally under wet conditions and 4 stones, 5 sherds and a nail were deposited. At two-thirds from the north the pit was partitioned by a wattle wall supported by posts. The wattle followed the edge of the pit and at the western end was finished with some wooden planks that could have been part of an old building or structure. The northern end was re-dug and immediately back-filled with lumps of clay and sand that did not originate from the immediate surroundings. No artefacts were found in this fill. Over a hundred posts and stakes had been rammed into the north-western half of the pit and adjacent areas and several gullies were dug. The gully leading towards the southwest was lined with close-set post, planks and stakes. Here five stones, four sherds and an ox sacrum were found. The pit and its surrounding area were probably most of the time under water or very wet. The last use of the large pit can be dated by the deposit of a scatter of bones of a horse.<sup>90</sup>

Broekpolder-1 is considered an offering as a distinct selection of artefacts in comparison to the contemporary and somewhat earlier settlement has been placed in a pool, which also has gullies, rows of stakes and a large pit with partitioning.



89 Therkorn personal communication.

90 C-14 (KIA 13675) 1119 ± 26 BP: 2σ AD 886-990.

find	N	worked	unworked
(milk)quartz	61		61
(pegmatite)quartz	1		1
amphibolite	1		1
ash tuff/Bims	1	1	
chert	2	1	1
diorite	1	1	
flint	18	8	10
gneiss	11	4	7
granite	17	5	12
limestone	5		5
mafic rock	1	1	
magmatite	1	1	
metamorphic rock	1		1
pegmatite	6	2	4
porphyrite	1		1
porphyry	1		1
quartz porphyry	1	1	
quartz porphyry/rhyo	3	1	2
quartzite	79	14	65
quartzite slate	1		1
sandstone	93	35	58
schist	3		3
shale	23		23
slate	4	2	2
slate/phyllite	1		1
tephrite	52	50	2
trachyte	5	1	4
tuff	2	1	1
tuff/tephrite	1	1	
tuff/latite	1	1	
silver fir (Abies)	2	2	
maple (Acer)	1	1	
alder (Alnus)	274	141	133
birch (Betula)	11	4	7
cornel (Cornus)	5		5
hazel (Corylus)	13	5	8
spindle tree (Euonymus)	1		1
beech (Fagus)	135	99	36
ash (Fraxinus)	40	33	7
juniper (Juniperus)	7	2	5
privet (Ligustrum v.)	2	1	1
honeysuckle (Lonicera/Ligustrum v)	2	2	
spruce (Picea)	3	1	2
Scotch pine (Pinus s.)	7	5	2

THE WET LOW-LYING OFFERING SITES WITHIN THE OER-IJ AREA

find	N	worked	unworked
crab apple (Pirus malus)	1	1	
apple (Pomo, t. Malus/Crata)	3		3
wild cherry (Prunus a.)	3	1	2
bird cherry (Prunus p.)	1		1
blackthorn (Prunus sp.)	1		1
oak (Quercus)	81	37	44
purging buckthorn (Rhamnus c.)	3	1	2
willow (Salix)	127	30	97
elder (Sambucus n.)	5	4	1
yew (Taxus)	6	5	1
elm (Ulmus)	4	1	3
unidentified	20	1	19
fish	81		
bird	26		
wild	3		
cattle	272		
dog	21		
horse	116		
human	8		
large mammal	129		
medium mammal	44		
goat/sheep	90		
frog	1		
pig	38		
unident.	51		
clay other	132		
pottery	1850		
bronze	50	20 ornament, 1 coin, 2 fitting/plate, 15 nail/pin, 1 object, 11 unidentified	
copper	2	1 coin, 1 fitting	
iron	220	150 nail, 2 blade, 4 chain, 3 ornament, 2 slag, 15 horseshoe, 13 plate/strip, 1 point, 30 unidentified	
lead	3	1 plate, 1 weight, 1 melted	
metal	54	13 ornament, 6 nail, 1 fishhook, 3 knob, 26 slag, 5 unidentified	
silver	3	2 coin, 1 unidentified	
cinder	1		
glas	1		
sintel	1		
unidentified	3		
total	4356		

Figure 4.30 List of all the artefacts found at Broekpolder-1.

4.2.4.5 BEVERWIJK/HEEMSKERK-BROEKPOLDER-2<sup>91</sup>

Broekpolder-2 is situated about 230 m south-south-east of Broekpolder-1. East of the ridge in the low-lying area the first traces of use are cattle paths going along the streambed of the remnants of the Oer-IJ. Next, three strip fields are made from the eastern edge of the ridge extending 120 m into the low-lying area. The fields were marked by gullies. The main feature was a double gully with a low bank in between. Up to eight cm in height were still present at the time of excavation. The gully/bank led from the ridge towards the east and on the eastern side at right angles splits into two directions (figure 4.31). The southern extension ended after 29 m. The northern extension could be followed for about 170 m and it probably ended on the southern side of the creek that later ran into pool at Broekpolder-1. The northern end was not straight and curved through the landscape. This field system is dated to AD 26-128.<sup>92</sup> From the east of the gully/bank some material was dug and deposited on the fields. This activity left a small depression. At a later date a stake row of at least 25 stakes, is placed a few metres east of the gully bank from the height of the junction into a northern direction.<sup>93</sup> This stake row is stratigraphically older than the natural sedimentation to the east from which a number of finds were excavated. The sedimentation had taken place under wet conditions. A bronze fibula<sup>94</sup>, an iron spike<sup>95</sup>, two corroded metal objects, 6 bones, a piece of flint and 99 pieces of wood were deposited in the water (figure 4.32). The wood consisted mainly of branches with the bark and side twigs taken off. One of the branches is dated to AD 260-431.<sup>96</sup> Between the stake row and the gully/bank a semicircle of 2.5 m was made out of small sticks placed 25 cm apart. This feature is contemporary with the deposits. There are no later traces of use in this specific area.

This is considered an offering as a selection of different species of wood was placed, sometimes in specific configurations in the water. And some metal artefacts were placed in a small area in the water.



Figure 4.31 Plan of Broekpolder-2. The offering site is situated east of the small embankment.

a = cow paths  
 b = gullies of embankment  
 c = later pits  
 d = wooden posts  
 e = loose wooden sticks and pieces  
 After Therkorn et al. forthcoming.

91 Therkorn et al. forthcoming, the area will be referred to as Broekpolder-2, here.

92 C-14 (KIA 10005) 1916 ± 28 BP: 2σ AD 26-132 and (KIA 12279) 1935 ± 27 BP: 2σ AD 4-128.

93 C-14 (KIA 10004) 1784 ± 37BP: 1σ AD 210-270 (32.2%) AD 280-330 (22.6%), 2σ AD 131-377.

94 Complete fibula dated to the first to second century AD.

95 The Iron spike probably has an early medieval date, indicating a long use of this area.

96 C-14 (KIA 10003) 1669 ± 31 BP: 1σ AD 340-415 (68.2%), 2σ AD 250-440.

find	N	worked	unworked
silver fir ( <i>Abies</i> )	2	1	1
maple ( <i>Acer</i> )	1	0	1
alder ( <i>Alnus</i> )	13	4	9
cornel ( <i>Cornus</i> )	3	1	2
hazel ( <i>Corylus</i> )	12	4	8
ash ( <i>Fraxinus</i> )	7	4	3
ash ( <i>Fraxinus exc.</i> )	1	1	0
indet.	15	2	11
juniper ( <i>Juniperus</i> )	2	1	1
spruce/larch ( <i>Picea/Larix</i> )	1	0	1
pine ( <i>Pinus</i> )	9	0	1
Scotch pine ( <i>Pinus s.</i> )	2	2	0
applelike ( <i>Pomo</i> )	1	1	0
poplar ( <i>Populus?</i> )	1	0	1
prunus ( <i>Prunus?</i> )	2	0	2
oak ( <i>Quercus</i> )	33	20	13
purging buckthorn ( <i>Rhamnus</i> )	1	0	1
willow ( <i>Salix</i> )	43	19	24
elm ( <i>Ulmus</i> )	1	1	0
viburnum ( <i>Viburnum</i> )	2	1	1
pottery	37		
cow	5	3 body, 2 leg	
dog	1	1 leg	
horse	2	1 leg, 1 body	
large mammel	3	1 leg, 1 head, 1 indet	
flint	1	flake	
bronze fibula	1		
iron nail	1		
iron object	2		
metal object	1		
total	206		

Figure 4.32 List of all artefacts from Broekpolder-2.

4.2.4.6 BEVERWIJK/HEEMSKERK-BROEKPOLDER-3<sup>97</sup>

Broekpolder-3 lies at the east flank of the tidal ridge. It consists of feature 683, a marshy layer dated to the Roman Iron Age (figure 4.33). The bone assemblage (119 bones) includes human, cattle, dog, horse, sheep/goat, and pig bones. Leg/foot and head elements are over represented (82 bones). Besides 30 unidentified bones, only three bones are ribs and four are parts of the pelvis. Vertebrae are absent in this marshy layer. Five species of wood in both worked and unworked form were found, consisting of alder, juniper, spruce/larch, Scotch pine and willow. Nearly 200 sherds were in the layer of which eight were exposed to high temperatures. Sixteen stones including flint and two parts of quern stones were present. No metal was found. During the Early Medieval period some paths with wood remains are in this area.

This is considered an offering as a specific selection of bone, including human bone (2), with an emphasis on skull and leg bones, a selection of wood, stones and relatively few sherds are placed in a marshy environment.

97 Therkorn et al. forthcoming, the area will be referred to as Broekpolder-3, here.

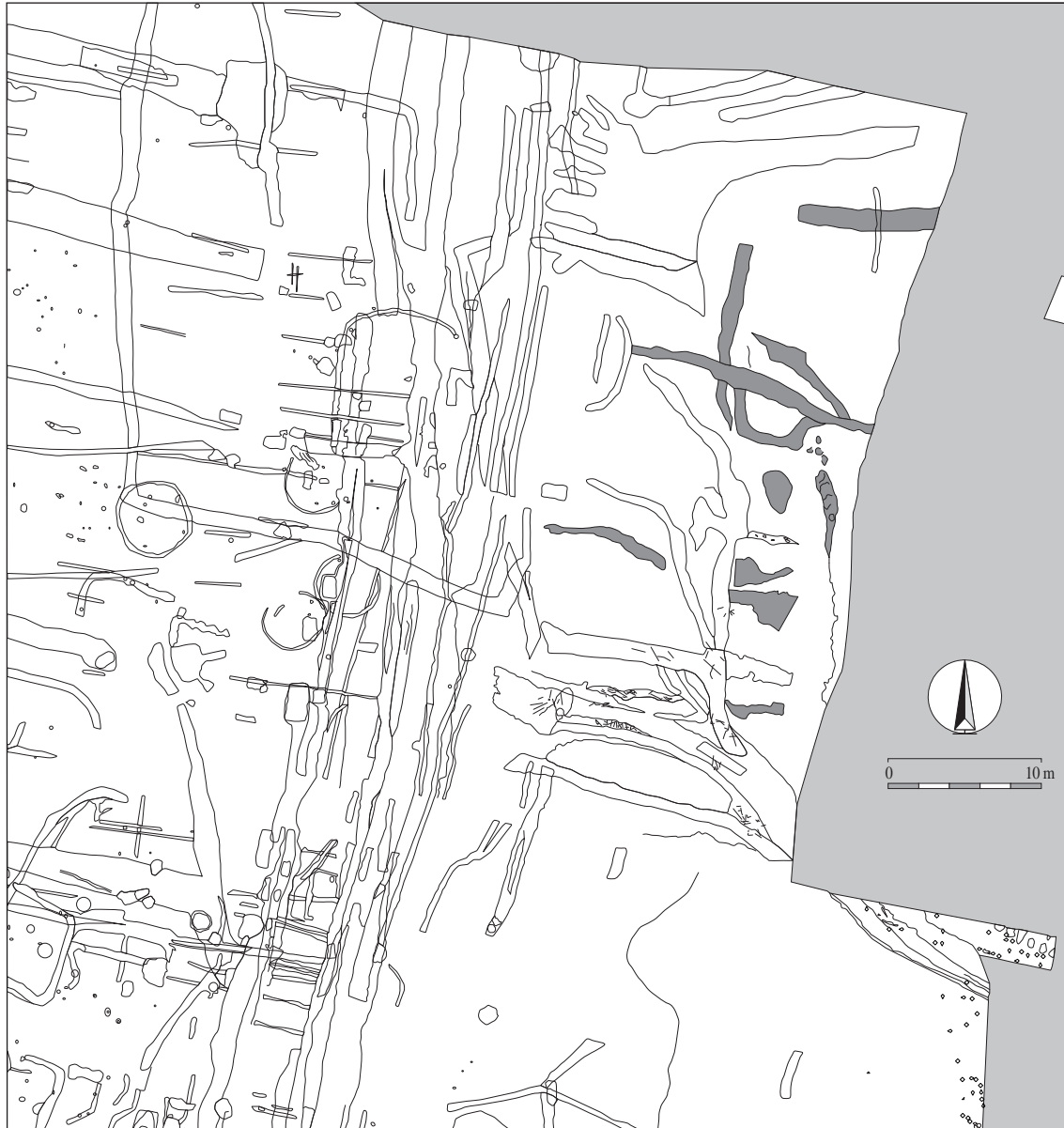


Figure 4.33 Map of Broekpolder-3. The offerings are deposited in the dark coloured features, after original field drawing.

#### 4.3 OFFERINGS IN THE LANDSCAPE

In the previous section the twenty-two sites in wet low-lying areas with offerings of the Oer-IJ area have been described. In chapter 2 the offering sites of North Germany, Denmark and South Sweden were analysed through the themes of what, when, where, who and to whom. These themes are still important but are approached in a different way with the aim of achieving a more coherent view of the offerings within the landscape. As a starting point the different practices or absence of practices in the wet low-lying areas and the surrounding landscape will be mapped. This is done so that possible preferences and rejections of specific parts of the landscape become visible. The time dimension is added to see whether these preferences and rejections change through time. Furthermore the sequence of use is analysed so that possible patterns in long-term cycles of land-use can come to the fore. This is done in combination with the time frame of the offerings to see if there is a relation between the sequence of land-use and the duration of the practice of offering at a specific place. The organisation of the landscape will also be used to put forward the likely performers of the offerings. Then the materiality of the depositions will be viewed in order to analyse their connection to the landscape and other practices. Followed by a comparison between offerings in wet low-lying areas and the ritual practices in settlements as these practices are performed by the same people, who held a worldview that encompassed

the entire landscape. Finally a land-use model for the Oer-IJ area with an emphasis on the wet low-lying areas will be constructed.

#### 4.3.1 WHAT AREAS WERE USED FOR OFFERINGS?

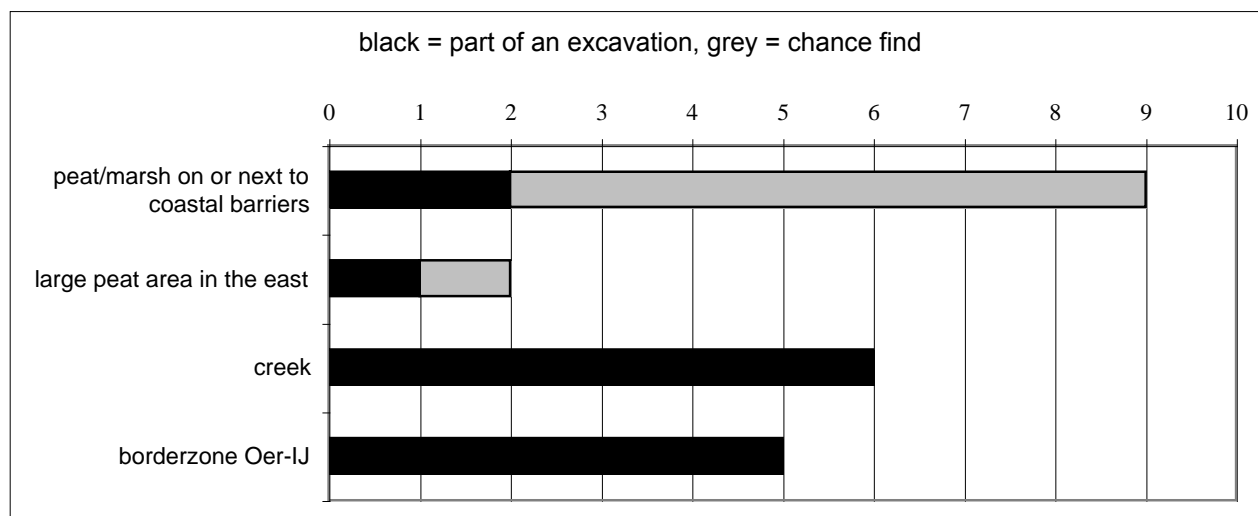


Figure 4.34 Number of offering sites per landscape type.

The offerings are situated in four types of wet low-lying areas (figure 4.34). There seems to be a slight preference for peat/marsh on or next to the (former) coastal barriers as over a third of the offering sites are situated in these areas. But open creeks and the border zone of the Oer-IJ are not far behind as they both contain one in four of the offering sites. The vast expanses of peat in the east of the Oer-IJ area seem to be nearly empty of offerings. The offerings sites that were discovered are all situated at the western edge of this large area close to the settlements and consist of one object. Although this picture of the large peat areas in the east could be distorted by a research bias, surveys have found little to no evidence from the periods before the Middle Ages.<sup>98</sup> In comparison to the offering sites in chapter 2 the number of sites situated in peaty areas is less than expected as in chapter 2, two in three sites were associated with peat.<sup>99</sup> This seems to point to a more diverse placement of offerings in the landscape in the Oer-IJ area. However, if a chronological perspective is taken the diversity diminishes dramatically (figure 4.35). Until the end of the Bronze Age depositions only take place in peat/marsh on or next to the (former) coastal barriers. The use of these places continues into the Roman Iron Age. The Iron Age is the only period in which offerings are made in the large peat area in the east.<sup>100</sup> From the Middle Iron Age onward offerings in creeks occur. And only from the Roman Period are offerings in the border zone of the Oer-IJ known. In other words, through time the offering sites were placed closer to the streambed of the Oer-IJ as it became less active.

The smaller creeks connected to the Oer-IJ, but still at some distance, were first taken into use for offering practices. The creeks with offerings all silted up directly after the depositions were made. It can be assumed that the tidal influence was ending at these places while the Oer-IJ itself was still under tidal influences. After the Oer-IJ was cut off from the sea and the tidal influence ended its borders were used for offerings. At this time the Oer-IJ starts to flow in the opposite direction towards the southeast. To summarize, offerings were made in fresh water in places with a bounded character. The large peat areas further than a kilometre away from the former tidal area and the tidal waters were avoided.

98 For example, H.C.J. Visscher 1987.

99 It is not the case that there is little peat in the Oer-IJ area. If we follow the estimates Van der Sanden (1996, 33-34) makes for Denmark then the Oer-IJ area has a much higher percentage of peat than Denmark.

100 Only depositions that occur within the peat itself are considered here. Depositions in creeks within the peat area are considered as part of a different type of landscape element.

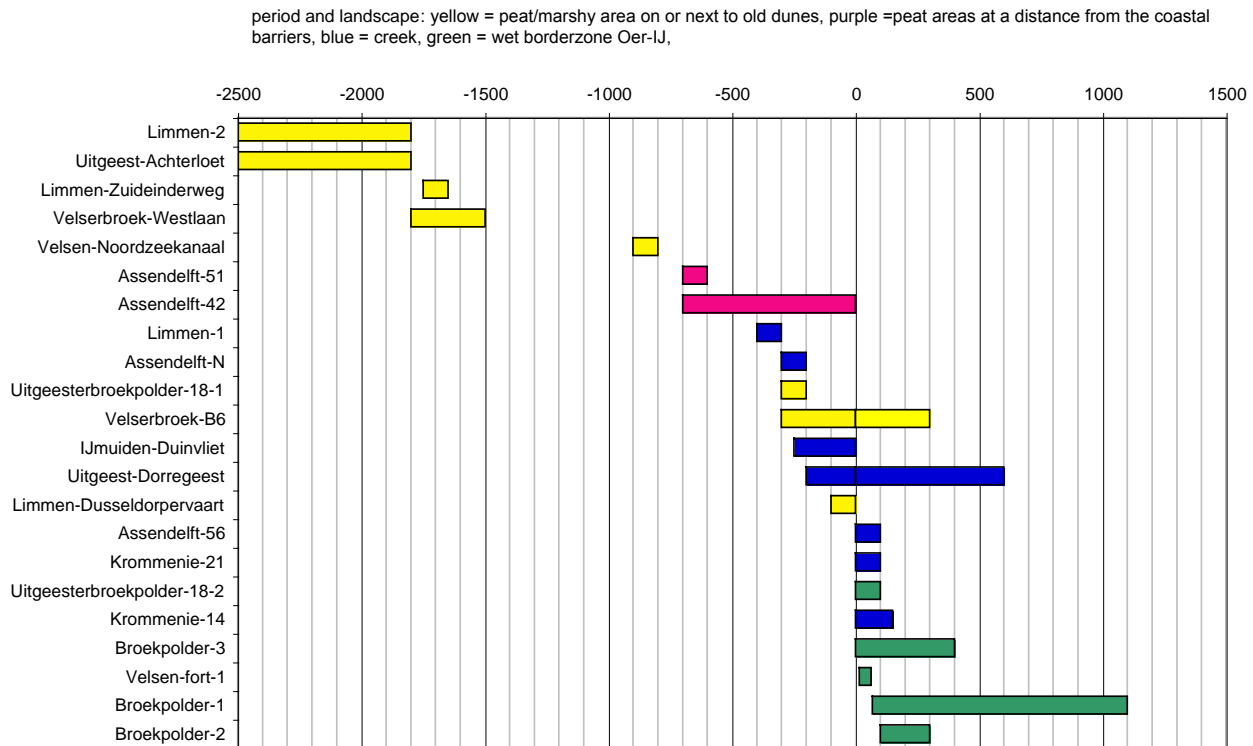


Figure 4.35 Use of specific landscape sites through time of the different offering sites.

#### 4.3.2 OTHER USES OF THE WET LOW-LYING AREAS AND THE DIRECT VICINITY

In order to understand the placement of offerings within the wider landscape it is useful to look at other practices taking place within the same area and the direct vicinity. In this way the degree of exclusion of certain practices, either religious or non-religious, can be determined. The degree of connectedness between different practices that are performed at the same time or sequentially can give insight in the placement of offerings within the landscape.

Fortunately, thirteen offerings in wet low-lying areas are part of larger excavations, which enables a more comprehensive picture of the relation between offerings and other practices than is the case with chance finds. The offering sites that are found during large scale excavations can be used as a framework in which the chance finds might be fitted. The offerings discovered during excavations are, however, not evenly distributed over the different kinds of wet areas. Only two of the eight offering sites in a peaty/marshy area near or next to the former coastal barriers and one of the offerings in the large peat area in the east have been discovered during an excavation. All the sites in the other kinds of wet low-lying areas are part of excavations (figure 4.34). Here the excavated offering sites will be discussed in relation to other practices. The offering sites found by chance will be reviewed in the light of the excavated sites in order to understand their place within the landscape.

To start with the two offering sites found during excavations in the peat on the former coastal barrier, the oldest depositions at Velsbroek-Westlaan in pit 547 belongs to the early phase of use. This deposition is placed after the construction of the barrow. The total of depositions can be separated into at least four episodes of use on the basis of stratigraphy and all are dated within a three hundred year range. When the period of use of the pool and barrow is taken into consideration it is highly likely that contemporary use with the ard marks, other pits and fences must have taken place. Some of the features avoid the pool with pits and the barrow indicating that they were probably of a somewhat later date. The barrow and the houses west of the pool were in use when the depositions in the pool came to an end. About 500 m to the northwest at Velsbroek-B6 the first traces of use are very ephemeral and dated to the Bronze Age. From the Middle to Late Iron Age onwards depositions, monument building and the eventual digging of the channel for depositions take place. At the time of the dug channel directly to the east the constellation horse was laid out using pits. At this time or somewhat later the

area north of the dug channel with the monuments was used for fields, a cart-way and pit alignments. During the Medieval period the area with the horse figure was remarked with a small round mound. And among the last traces are a well and a pit dated to the nineteenth century. The nearest known remains of contemporary prehistoric habitation are 800 m to the west, but probably habitation was also situated closer by on the edge of the excavated area.

The offerings in creeks all seem to be part of the first phases of use of sites. And especially at Assendelft-N and Uitgeesterbroekpolder-18-1, the offerings are made in a place with no other features, such as pits or gullies. If other activities took place they would have been of a transient nature. The creeks silted up shortly after the offerings were made. Some time elapsed before these places were taken into more permanent use. These areas were, however, probably used as grazing grounds in between. At both sites first fields were made followed by houses. At Assendelft-N platforms were constructed on which new houses were built. At Uitgeesterbroekpolder-18-1 the star signs cow and horse were constructed and one of the last uses of the area was offerings at the border of the Oer-IJ, see below.

The two sites, Krommenie-14 and -21, have offerings in creeks that run through the peat. The first phase of both sites consists of an offering in a creek and the construction of an enclosure. These enclosures with no definite function are however different in character. The enclosure at Krommenie-14 is made of close-set alder posts in a trapezoid shape with a rectangular post setting in the inner space. The enclosure at Krommenie-21 has wide set oak posts in a rectangular shape. Both enclosures are at the north(west)ern bank of the creeks. At Krommenie-14 there are no subsequent phases of use and the enclosure was left to rot. Here, however, debris and offerings might be deposited at the same spot. At Krommenie-21 posts were set in the creek after it filled in and considerable depositions of material took place at the bank. It is unclear whether these concentrations of material are settlement debris or represent specific activities.

At Assendelft-56 the creek has filled up with peat. The first use is some general peat-cutting. Later peat-cutting in the southern part of the creek formed a hole, which was used for the offering. Around this time a settlement is created with a house, pits and activity areas. In a final phase of use two platforms are created with on the one hearths and pits and on the other indications for a possible house.

These five sites all seem to be part of a distinct first phase of use. The last site with offerings in a creek, Uitgeest-Dorregeest differs in this respect. Here the creek runs through a former coastal barrier and started to silt up from the Iron Age onward. The first depositions in this creek took place during the Late Iron Age and continued into the Middle Ages. And at the southern bank of the creek the remains of settlements dating to the same period have been found. Probably because of the closeness of the settlement it appears that the creek contains both settlement debris and offerings. In the Roman Iron Age the border of the creek was marked by four human burials and two cattle burials. This seems to be a preferred position; only one other human burial is situated about 25 m away close to two human burials. Other animal burials cluster south of the two human burials. Here in this cluster in the Early Medieval Period also burials of humans take place. De Koning proposes that the burials first take place at the border of the settlement and in a later phase are located in a specific place within the settlement. A pattern also attested for Castricum-Oosterbuurt.<sup>101</sup> At Uitgeest-Dorregeest, however, not only the boundary of the settlement but also the presence of the creek seems to be important. The creek is of course a natural boundary, but it is at the same time a place used for the disposal of debris and the placement of offerings. It is a boundary in the sense that it divides the former coastal barrier, but it is not impenetrable. Here different practices were performed one after the other and again.

Five offering sites are situated in the low-lying areas at the border of the Oer-IJ and date to the period when the Oer-IJ was cut off from the sea and carried fresh water eastward. Of these sites Velsen-Fort-1 has the most built elements as the depositions take place in the harbour with wooden piers next to a Roman fort. The placement of this fort and the harbour on the south bank of the Oer-IJ will be based on a different set of ideas than the other sites. Little is known of previous use of the area as only some sherds inside the fort and a complete local pot in the Oer-IJ streambed were found. At the time of the use of the fort in its harbour depositions of debris and offerings took place. It is possible that some of the human remains in the harbour were deposited there after the Romans left. At this time at least the fort was visited by the local inhabitants for the collection of a variety of materials. There is no evidence for habitation or other land use in later periods. The other sites are situated

101 De Koning 2000, 111, and Hagers and Sier 1999, 88.

in the area where the Oer-IJ has a more or less north-south direction. Three are situated at the west bank and one at the east bank. The most southern site Broekpolder-3 is the least elaborate; here in a marshy layer several artefacts were deposited. Just 25 m to the west on the former tidal ridge many traces of earlier land use, mainly field systems have been found and to the east were some cow paths along the Oer-IJ. Although no contemporary house was discovered, the features are similar to settlement features. In the Early Medieval Period the marshy layer is covered by many paths leading towards the Oer-IJ.

Broekpolder-2 is situated about 125 m towards the northeast and about 125 m east on the edge of the former tidal ridge. Here the first signs of use are cow paths and later strip fields with small embankments. The offerings that took place here are part of the last phase of use of this specific area. 250 m to the north on the other side of a small creek going through the former tidal barrier lays Broekpolder-3.

Next to Broekpolder-3 at the ridge some gullies of a Late Iron Age date are known. In the low-lying area the first signs of use are cow-paths. The offering site has a long (discontinuous) use period. As the offering site lies adjacent to an archaeological monument little can be said about specific contemporary use although a settlement area is expected. Only a few hundred metres to the west the remains of houses from the Roman Iron Age and field systems from the Medieval period are known. Medieval habitation is probably situated a few more hundreds of metres to the west or within the area of the archaeological monument.

Two kilometres to the northeast on the other side of the Oer-IJ lies Uitgeesterbroekpolder-18-2. As shown above at this site already all kinds of land use are taken place when southwest of the fields and star sign horse gullies are dug along the border of the Oer-IJ. Therkorn relates the position of the depositions in water to the Milky Way over which the constellation horse moves from east to west<sup>102</sup>, see also Velsbroek-B6 above and figure 4.36. At the final phase of use when the border zone becomes swampy again offerings are made at this place.

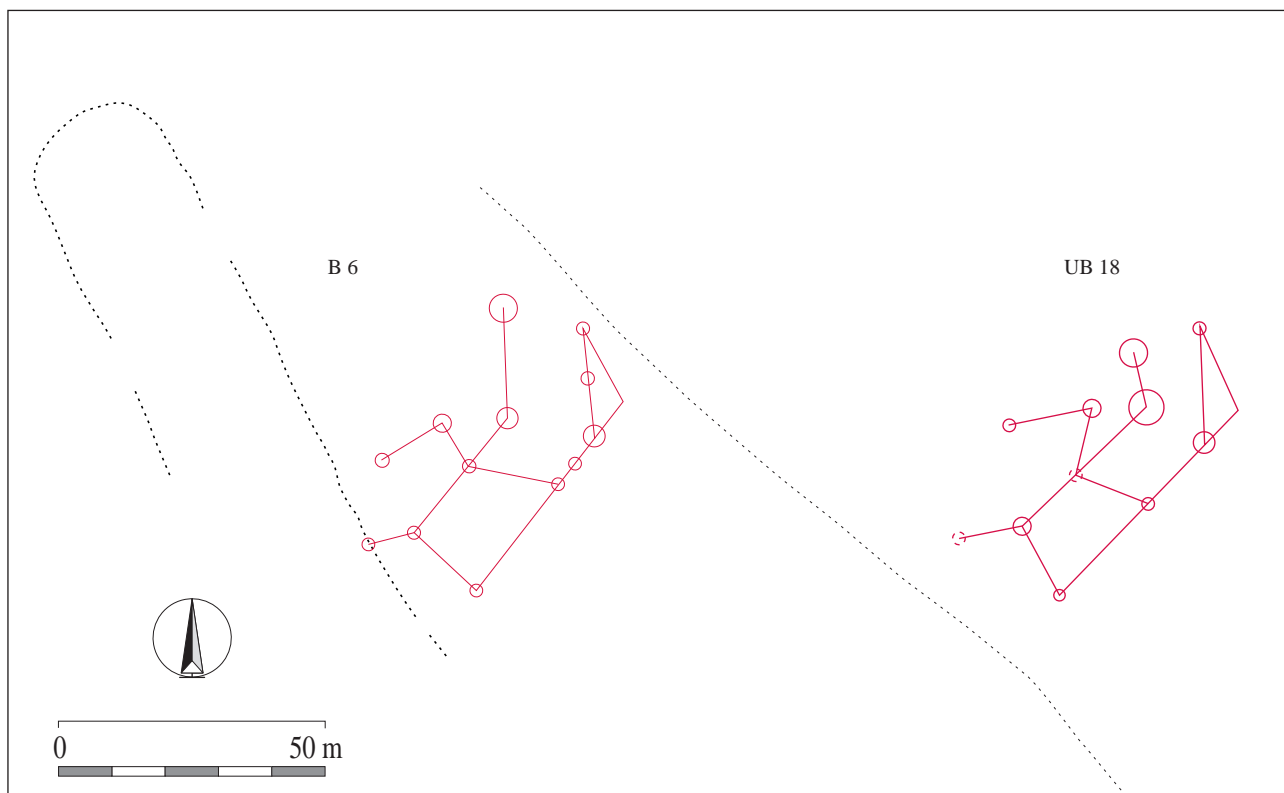


Figure 4.36 The location of the star pattern Horse in relation to the offerings in wet context at Velsbroek-B6 and Uitgeesterbroekpolder-18-2.

To summarize the excavated sites, the offerings in peaty areas in the former beach barrier and creeks all most likely take place during the first phase of use. At Velsbroek-B6 and Broekpolder-1 the first depositions are in natural open water and the last phase consists of a large dug feature, respectively a channel with water and a large pit. The offerings in the border zone of the Oer-IJ are part of the last phases of use, except Broekpolder-3.

102 Therkorn 2004.

Most sites, except two<sup>103</sup>, have the remains of other uses of the landscape in their vicinity. The most common other uses are fields and houses, besides the two enclosures. It seems, however, in most cases that the fields are positioned closer to the offerings than the houses. At two sites the placement of the offerings seems to be connected to the position of the constellation horse in the fields, horse is situated to the northeast of the offerings. The stake row in the pool at Velsbroek-Westlaan also points in a north-easterly direction towards the barrow. And the enclosures are positioned on the north bank of the creeks with depositions. The placement of the fields and houses in relation to the different offerings shows, however, no other pattern, except that they are a short distance from each other. Only three sites have other practices mixed in with the offerings.<sup>104</sup> This means that offerings were made in specific but not necessarily separate or distant places.

It is difficult to determine other practices than offerings which could have been performed at the same place of the offering sites that were discovered by chance and were not part of an excavation. Little to no evidence is available for their direct surroundings and often the focus has solely been on the artefacts. Whether this is due to the absence of other features or due to the disinterest in features such as gullies or posts is difficult to establish. At the few sites where additional information was gathered after the chance discovery of the artefacts no other features were discovered. Of this group the artefacts dating to the earliest periods are the most problematic as they are often the only artefacts or features from a similar date known within a radius of several kilometres.<sup>105</sup> The other offering sites, discovered by chance, have contemporary sites at a distance of around one kilometre, a 10-15 minutes walk. The archaeological remains within this radius are most often plough marks and sherds, some gullies or pits. And only one house is known within this radius of this kind of offering site.<sup>106</sup> At the south-eastern side of the former coastal barriers of Limmen five single depositions are known within a distance of 1300 m, ranging from the Late Neolithic to Medieval times, encompassing nearly half the sites.

To summarize, the lack of data from the offering sites found by chance or within very small excavations allow no statements to be made about other uses in the direct vicinity. However, it seems that the offering sites are situated within viewing and/or easy walking distance of other kinds of sites, such as fields and settlements. If the evidence from the large scale excavations is taken into consideration this assumption is highly probable. There is no evidence that alterations to the landscape have been made at the place of the offerings. And the offering sites seem to appear during the first general periods of use of an area.

#### 4.3.3 TIME

As shown above, fifteen of the offerings are performed during the first phase of use of an area. The duration of the use of the offering sites differs considerably: from a one-time event to a continued use of the same place over centuries (figure 4.37). But even the simplest offering takes more time than just the actual deposition: a vessel has to be made, wood collected, or artefacts have to be curated.

Thirteen offering sites are categorized as used for a short time. At these sites there is no accumulation of material and/or the offerings seem to have been covered by sediments shortly afterwards.

Five sites appear to be used for a longer time, but probably not exceeding one to two human generations.<sup>107</sup> These sites have an accumulation of artefacts and/or discrete events can be discerned, which indicates multiple performances of practices associated with the offerings. Krommenie-14 and Velsen-fort-1 have large structures. At Velsen-fort-1 the different offerings that are spatially separate are probably small-scale events, probably performed by single persons or small groups. The deposition of debris across the harbour was a continuous process, in the sense that there probably was little thought involved and it could be seen as a routine action. At Krommenie-14 the use of the enclosure is unclear and therefore also its frequency of use. Whether the enclosure was kept clean or was built just for a specific event remains unanswered. It could be that the offerings are mixed in with debris or that the debris is also part of the events connected to the offerings. At Broekpolder-

103 Assendelft-N and Uitgeesterbroekpolder-18-1.

104 Krommenie-14, Uitgeest-Dorreegeest and Velsen-Fort 1.

105 Limmen-1, Limmen-2, Limmen-Zuideinderweg, Uitgeest-Achterloet, Velsen-Noordzeekanaal.

106 Assendelft-Q lies 1100 m southwest of the pot found at Assendelft-51.

107 These sites have a larger dating range, but I think this is due to our inability to give more precise dates.

2 some discrete events can be distinguished: the construction of the post row, the construction of the little fence, depositions of wood, and some artefacts. Uitgeesterbroekpolder 18-2 has at least two phases of use, starting with gullies and small pits being dug in which offerings were deposited. As these were covered with silts and the area became swampy new offerings were made. As the site is situated in the border zone of the Oer-IJ the silting up and changing water table could have happened within a relative short period. Broekpolder-3 is less differentiated, only the amount of material seems to point to use over a somewhat longer period than a discrete event.



Figure 4.37 Use periods of the offering sites.

Four offering sites have been used for several centuries. These sites are all situated on or next to natural features that had been dry for hundreds of years, the stable elements in the landscape. The areas in the (direct) vicinity of these sites have also seen other land-uses over a longer period of time, such as settlement, fields and burials. Uitgeest-Dorregeest is situated closest to a settlement and this could well explain the mix of offerings and debris in the creek. The offerings are probably linked to small-scale discrete events, which take place when the need occurs. The deposition of 1200 coins could, however, be related to a group of people exceeding a household. At Velsbroek-Westlaan there are at least four phases of use, based on the stratigraphy and twelve discrete events, when counting the pits and the stake row, taking place within a period of three hundred years. 500m to the northwest lies Velsbroek-B6 at which five phases of use could be established concerning offerings and/or monument building taking place over 500 years. Most of the events would have taken considerable effort and probably exceeded the household and involved the local community. Generation after generation must have been aware of the significance of the place and they have restructured it in their own and at the same time in a traditional way. The offerings in the dug channel would have taken a long time to accumulate and is the result of many small performances. The offerings at Broekpolder-1 are also the result of many small performances. The digging of the gullies would not take much time. It seems that per generation the offerings shifted somewhat towards the northeast. It is, however, much more difficult to distinguish between the different phases of use as over time the same practices were performed again and again at the same spot. Only the large pit at the end of the use of the offering site can be understood as a clear separate phase.

To summarize, most of the offering sites, except the mound and bank at Velsbroek-B6, and the large pit at Broekpolder-1, are the result of small-scale events.<sup>108</sup> The repetition of these events at the same spot led to the stable significance of some of these places and their long-term tradition.

108 If the pallasade at Krommenie-14 is part of the offering site this would also take a considerable effort.

#### 4.3.4 THE USERS OF THE OFFERING SITES

In chapter 1<sup>109</sup> it was shown that for understanding an offering it is important to know who made the offering. This human agent can not be directly inferred during the prehistoric period. In chapter 2 it was suggested that no special human agent was necessary for the performance of these ritual practices.<sup>110</sup> In the Oer-IJ area the nature of the burial practice also leaves little evidence of the actions specific persons were associated with.<sup>111</sup> In order to draw some conclusions on who used these offering sites it is necessary to look at how the local community was organised. The statements on who used the offering sites will have a general character.

On the basis of different lines of research there are some reasons to assume that the offering sites were used by local households and that both women and men participated. To begin with, the offering sites are close to the settlements and have an open character. Most ritual practices taking place would have been visible from some distance as the deposits are made in a fairly open landscape. Seclusion seems not to be an important factor in the location of the offering sites. The lack of built structures that would limit the openness points in the same direction. Furthermore, one of the features of the Oer-IJ area is that the landscape was dotted with single farmsteads with fairly self-sufficient households.<sup>112</sup> There is no substantial evidence on which we can assume what the influence of gender perceptions were on the way the society was organised. The division between jobs inside the house (private) as female and outside the house (public) as male seems not adequate and a mere projection of more recent perceptions.<sup>113</sup> It would therefore be inadequate to propose that only males took part in the outdoor offerings. The single farmsteads do lead one to assume that the work of women and men could not have been totally separated and, although some task division probably existed, a certain amount of equality between the adult members of a family can be suggested. The diversity of the offerings and the lack of emphasis on a specific type of activity may also point to the use of the offering sites by all the members of a household.

As different ritual practices took place in and around the farmstead,<sup>114</sup> which do not point to the need of a separate class of ritual specialist, it can be argued that most people held sufficient knowledge to perform offerings. From this it follows that ritual practices were probably centred on the household as a unit and could involve both women and men.

#### 4.4 THE SYMBOLIC RELATIONS OF THE ELEMENTS OF THE OFFERING SITES

In chapter 1 it was argued that offerings always relate to the everyday world people live in. When the choice is made what to offer, the associations made with use, origin and symbolic relations will play a part. In other words, the biography of the thing offered is important in the decisions made.<sup>115</sup>

Here I will look at different aspects of the things offered and the material used in structuring the place itself. First, I will look at the elements taken from the landscape itself, namely raw materials (natural objects), plants, animals and humans. Then the incorporation of the world outside the Oer-IJ area through the use of imports in the offerings will be discussed. And last, the relation between offerings and the everyday world will be viewed through the use of household objects.

##### 4.4.1 RAW MATERIAL (NATURAL OBJECTS)

In recent years there is a growing interest in raw materials. Not so much for the study of artefact production and exchange networks related to stone axes, metal objects and pottery, but for the (symbolic) qualities these raw materials can obtain within a society.<sup>116</sup> In the United Kingdom this new emphasis on raw materials has

109 § 1.4.2.2, § 1.5 and § 1.5.6.

110 § 2.5.1.

111 § 3.5.3.

112 § 3.5.1 - 3.5.4.

113 Díaz-Andreu 2005, and Nelson 2006.

114 See for example, § 3.5.2, § 4.7.1 and § 4.7.2.

115 Chapter 1 § 1.6.2.

116 For example, Bender 1998, 46-55, Bloch 1995, Jones and MacGregor (eds.) 2002, and Weiner 1992.

led to several studies that not only looked at the form of monuments, especially barrows from the Neolithic and Bronze Age, but also at the materials that were used to create them.<sup>117</sup> The use of specific soils, stones and colours is recognised as an integral part for the understanding of the process of creating the monuments and their meaning. Therkorn shows for North-Holland also the use of soils and their colour in a symbolic manner, especially in pits.<sup>118</sup> She relates the use of light and dark colours of soils in pits to the stars in the night-sky and the seasons.

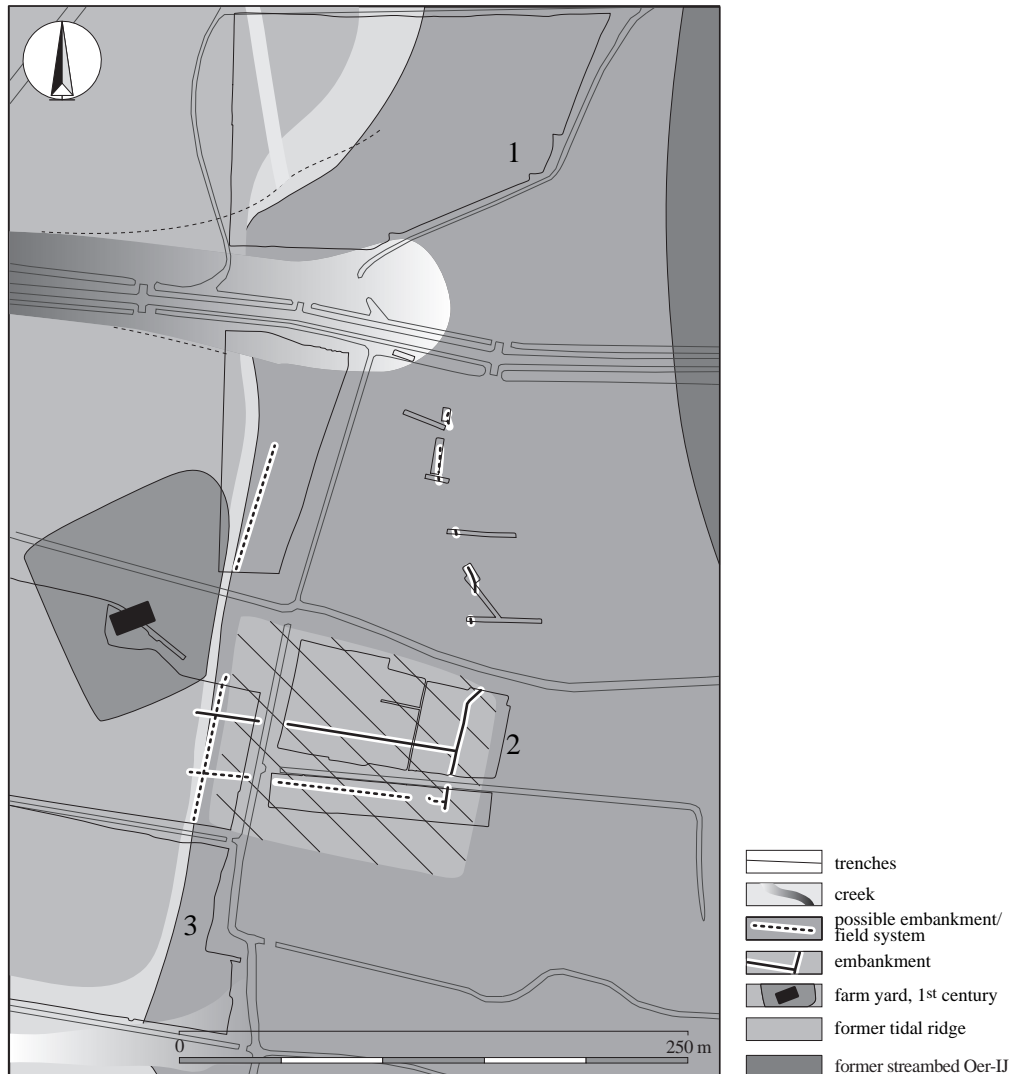


Figure 4.38 Embankment at Broekpolder-2.

In the Oer-IJ area one offering site, Broekpolder-1, has redeposited soil.<sup>119</sup> In half of the large pit (4468) north of the wattle work great lumps were deposited in a short time. This was not a clean soil, but a rough mix up of different sediments. As this soil was totally different from the natural fill south of the wattle work it must have been gathered somewhere else. Why they choose to mix up material is unclear, especially as the general pattern in the Oer-IJ area seems to be a preference for fairly clean soils. Soils were not deposited in water at other sites, but on two occasions soils were used to construct earthworks. At Broekpolder-2 the small embankment was made up of peat turfs covered by white sand<sup>120</sup> (figure 4.38). Wet peat was covered by dry sand/land and the embankment was constructed at the border between wet and dry land. As the sand seemed eroded at some spots it is likely that the embankment was not covered with sods or other material. It therefore must have

117 For example, Bender 1998, 46-55, Owoc 2002, Tilley 2004, and Brittain 2002.

118 Therkorn 2004, 193-197 and figure 64.

119 This action took place during the late phase dated to the ninth and tenth century.

120 This white sand was different from the sediments found in the direct vicinity of the small embankment.

been a marked white feature in the landscape at the time of construction with a straight south side with side branches and a meandering north side, going towards Broekpolder-1. Broekpolder-1 was at that moment still in its earliest phase of use with the creek as its main body of water. The difference between the straight side and the meandering side may have to do with the degree of alteration that took place within the landscape. The straight part of the embankment and its side branches formed strip fields to the west. Although the northern area was not fully excavated and only had some test trenches, the meandering embankment went through a less cultivated part of the landscape maybe following a more natural border. It was east of the cultivated side that the depositions took place. This means that they are more associated with the constructed environment than the nearly unaltered landscape.

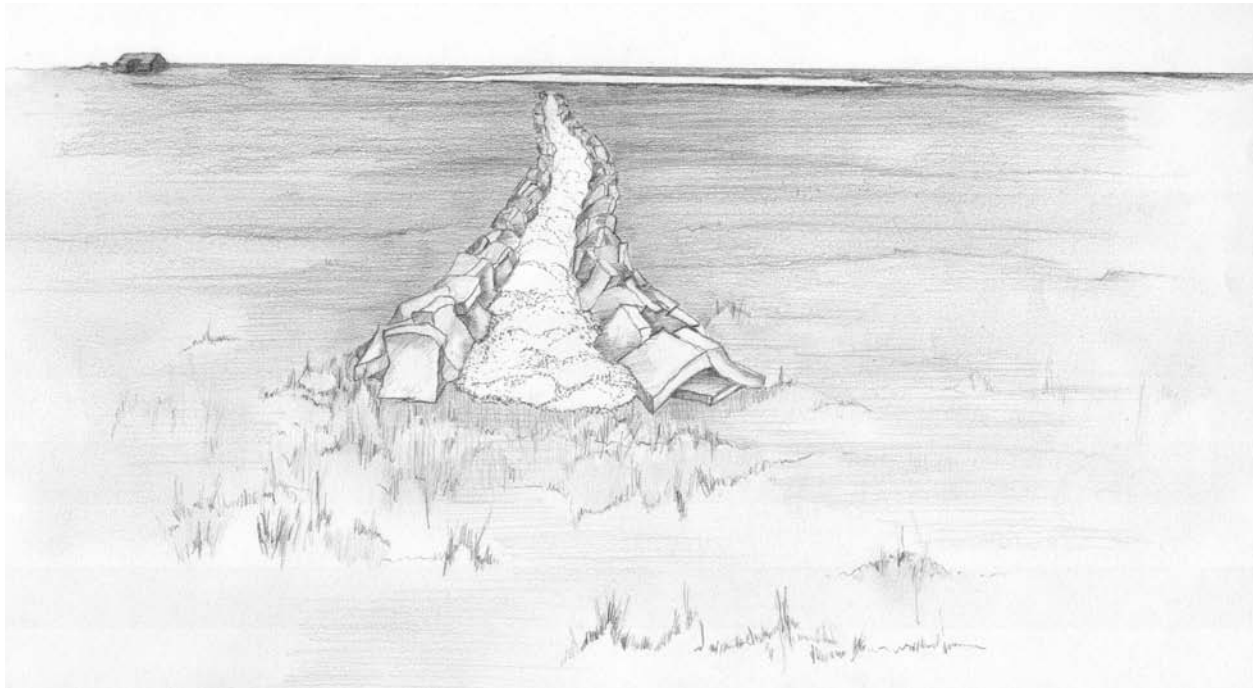


Figure 4.39 Impression of the wavy bank looking towards the dug channel at Velsbroek-B6.

At Velsbroek-B6 a long barrow was created with the soil from its ditches. This layer was covered by oak branches and a final layer of cut reed peat. Here the opposite of the construction of the embankment at Broekpolder-2 had happened.<sup>121</sup> First sand was deposited, which is light in colour here and this is in turn covered by branches and a brown black layer of reed peat. Reed peat could be collected at a close distance. At Velsbroek-B6 the dry land<sup>122</sup> is covered by wet peat. The appearance of this long mound would have been totally different from the embankment at Broekpolder-2. The dark colour would make it look smaller than it actually was. It could be seen in one look and it is relatively straight. The long barrow would merge more into the total landscape than the embankment at Broekpolder-2. This is countered somewhat by the erection of three oak posts at the north-western end. It is concealed and made visible at the same time. After the long barrow was covered due to sedimentation a new embankment of at least 120 m was created. It consists of two small wavy banks of sand covered by sods with the grass side up and the area in between was filled with white sand. The visual impact of this green and white wave through an area that has little plant growth ending in a watery area would be drawing attention (figure 4.39). It would lead the gaze towards the watery area that received many offerings from that time onward. Here the dry and the wet are bound together. At the moment of deposition the same wavy monument would lead the gaze towards the old dune area and its long occupation.

To summarize, the soils and sods used in earthworks created in the Oer-IJ area bind wet and dry parts of the landscape. This was done through the layering of the one on top of the other and/or through a physical connection in the landscape. The colours of the soils and sods were used to visually enhance the earthworks and especially the wavy elements drew the attention towards water in which mostly at a later date offerings were made.

121 Note that Velsbroek-B6 is of an earlier date than Broekpolder-2.

122 The marshy area had dried out and oak grows on relative dry sandy grounds in the Oer-IJ area.

## 4.4.2 PLANT

Over a third of the offering sites contain plants. This is a marked difference with the sites in chapter 2 where one in seven of the offering sites contain plants. The relatively higher number of plant remains in offering sites in the Oer-IJ could be a local preference but it could just as well be related to preservation conditions or the research interest.<sup>123</sup>

The ontological category plant, as described in chapter 1, encloses all plant life, including trees and small herbs that are not made into use-objects. Sticks and poles are included but beams and parts of constructions not. Although this is an arbitrary distinction, it is based on the idea that sticks and poles are used as representations of certain trees/plants as beams and constructions are transformed into tools. The symbolic aspect of certain plant and tree species does not disappear when used in tools, but may constitute other types of relations, extending the symbolic meaning into specific use-areas.

Plants and trees can have meanings associated to specific parts of the landscape where they grow, but they can also have symbolic meanings on the basis of specific qualities related to use and/or mythology. Because of extensive ecological research in the Oer-IJ area, the spectrum of plants and trees and their location is relatively well known. Most of the trees and plants were not evenly distributed throughout the Oer-IJ due to the geological circumstances.<sup>124</sup> Specific types of trees and plants can therefore be connected with different parts of the landscape. The symbolic meaning of plants and trees is less directly manifest, but early written sources, (pre)historic selection and deposition can give us some insight into this aspect. From the written sources it becomes clear that the Germanic people venerated specific trees and forests and used wood in religious practices, such as divination<sup>125</sup> Therkorn has shown for the Oer-IJ area that wood was used in different ritual depositions.<sup>126</sup> In northern mythology the tree 'Yggdrassil' was seen as the centre of the world sometimes harbouring people, and humans were created from and equated with specific types of trees.<sup>127</sup> The many connotations of trees and plants and the general lack of interest for plant remains in archaeological interpretations beyond an ecological view or species list is therefore all the more curious. Especially, as Garthoff-Zwaan already in 1983 showed the potential for this type of research. Therkorn has demonstrated that the people in Noord-Holland were very much concerned with the passing of the seasons, measured in the night-sky.<sup>128</sup> In the daytime landscape this changing of the seasons would be most easily recognised in the changing outlook of most trees and plants. Only evergreens would be defying the passing of the seasons. In the next section the wood in the different offering sites will be discussed. Examples of possible symbolic links with plants, religious practices and CPS-agents are given to indicate the importance of plants in religious views without putting forward conclusions about these symbolic links, but to suggest possibilities for future archaeological research.

In the Oer-IJ area a total of 27 different species of wood/shrub and three herbs were deposited in eight low-lying wet offering sites. Velsbroek-B6 has the largest deposits of the ontological category plant.<sup>129</sup> It may be said that this is the major focus of deposition in the early phases of use. After the deposition of twenty reworked oak (*Quercus*) and alder (*Alnus*) beams, four separate tracks of deposited bundles of juniper (*Juniperus*) branches and sometimes trunks, were pinned down. The largest track is 45 metre long and the tracks are undisturbed, excluding the interpretation of paths. They must have been under water as they were still well preserved when excavated. After this, in a drier phase, a long-barrow was constructed, made up of two ditches, sand, read-peat and a layer of thousands of mainly oak branches. Later oak posts were placed at the north side of the pool, that was redug, and different wood species were deposited, also in the form of objects and pointed stakes of juniper. Both oak and juniper were available in the old dune area. Juniper was very common in the old dunes before 500 BC but was replaced or pushed to the west by forest after this period.<sup>130</sup> Velsbroek-B6 lies at the eastern

123 As noted in chapter 2 not all wood is analysed. It is still not a general practice in Dutch archaeology to record or analyse all wood remains, even from pits.

124 See chapter 3, § 3.4.

125 For examples, de Vries 1956, §200-201, Dowden 2000, 66-77, and Tacitus *Germania* 9, 10, 39, and 40.

126 Therkorn 2004.

127 Davidson 1988 170-173, and 1990, 26-27 and 190-196, and Sturluson 2001 [1220], 115-117.

128 Therkorn 2004, for example, 29-35 and 206-212.

129 Therkorn and Oversteegen 1994.

130 Jelgersma et al. 1970, 127.

edge of the old dunes. The wood comes from the area, which was cultivated, the first. Furthermore, not just any wood was taken from the old dunes. There was a careful selection of juniper and oak, which have specific properties and symbolic relations. Juniper has no clear symbolic connection with a specific CPS-agent in the Germanic world. Juniper is an evergreen tree and this could have symbolic connotations associated with the world tree, besides this juniper has many uses. The needles are aromatic, the berries can be eaten or used as a brown dye. In medieval times the branches and needles were burned to ward off evil and the berries were used as a medicine, against the plague, bites from wild animals and a general antidote.<sup>131</sup> Through its multiple uses it can be envisaged that juniper was seen as an important tree/shrub that could have symbolic relations to different domains. Oak is connected in northern mythology to sacred forests, thunder, the god Donar/Thor and the high-seat pillar that supported the house.<sup>132</sup> Thor was the protector of homes, and the community, land boundaries and the law.<sup>133</sup> In relation to this, it is interesting that the first deposition consists of reworked building material, possibly a former home. The three oak posts erected at a later date at the end of the long mound could relate to the idea of the pillar, known from other ritual places in northern Europe.<sup>134</sup> But here the picture becomes muddled as the long bed contains objects that could be associated with Wodan/Odin, such as spears, and horse and human bone.<sup>135</sup> This makes it apparent that it is not clear-cut to connect specific CPS-agents to material categories. There could be an overlap in associations between CPS-agents and material categories, but also different CPS-agents could be connected to the same place where ritual practices took place.

In the dug channel eleven wooden tenons are deposited of which six are of oak and two of juniper, the others species are: hazel (*Corylus*), willow (*Salix*) and elm (*Ulmus*). Hazel is associated with magical practices, including divination.<sup>136</sup> Willow is associated with infertility and power over others through the use of the branches. And elm is in northern mythology possibly associated with the creation of the first woman.<sup>137</sup> Although the relation between Embla – the first woman – and elm is not firmly established, the first two humans were created from two pieces of wood. Elm is a rare species in archaeological context.<sup>138</sup>

The constellation horse laid out in pits to the northeast of the dug channel Therkorn associated with Wodan/Odin.<sup>139</sup> Here again many pieces of wood were deposited, especially in the form of tenons and standing oak stakes in pits. Of the tenons oak is again the main species (42%), but eleven other species are also present. Although the exact meaning of the use of oak beams, branches, tenons and posts cannot be determined, it can be established that they are part of a wider north European symbolic plane. To conclude, on separate occasions deposits of wood were made that have strong associations with the warding off of evil or misfortune, the well being of the household, and possibly the creation and sheltering of humans.

At Broekpolder-1 twenty-three different species of wood were found. During excavations in the entire Broekpolder a total of 43 species of wood/shrub were discovered. This means that although a wide variety of species were deposited it was still a selection. Just as much as certain species were deposited, others were not. There are six species that are only deposited in the offering site – silver fir (*Abies* s.), spindle tree (*Euonymus* s.), honeysuckle/privet (*Lonicera/Ligustrum* s.), apple-like (*Pomoidae*), and elderberry (*Sambucus*). These – except silver fir that is imported – are species associated with the old dunes. The berries of spindle tree make people throw up. Apple-like trees are fruit bearing, which makes them into a food source, although not as tasty as our modern apple. In Roman texts sticks made of fruit/nut bearing trees are used for foretelling the future.<sup>140</sup> Elderberry has edible berries and is associated with ‘vrouw Holle’ in the Medieval period and its branches were used in magical practices<sup>141</sup> while honeysuckle/privet is an evergreen. Four of the six wood-species that are only found in the offering site have special properties, associated with ritual practices and medicine. This gives

131 Honders 1983, 264 and Schuyf 1997, 41.

132 Davidson 1990, 86-88.

133 Davidson. 1988, 135.

134 For example, in Saxony at Eresburg. Davidson 1988, 21.

135 Davidson 1990 [1964], 140-149.

136 Schuyf 1997, 41.

137 Davidson 1990, 201-202.

138 Groenman-van Waateringe (1988) found elm in the pollen samples but not in the wood species from excavations in the Oer-IJ area. And for example in Beverwijk/Heemskerk Broekpolder less than one percent of the 1876 wood finds were elm and eight of them came from features with an Early Medieval or later date.

139 Therkorn 2004, 109-115.

140 Tacitus *Germania* X.

141 Schuyf 1997, 41.

some insight in their selection. The other wood species are also found in other contexts. This does not exclude that some of the wood in the offering site has special properties. For example, hazel is associated with magical practices including foreseeing the future.<sup>142</sup>

It appears that some wood species were deposited together, indicating another type of selection. cornel/cornelian cherry (*Cornus*) is always found directly north of birch (*Betula*). Only one piece of birch is found without cornel/cornelian cherry in its vicinity.

Broekpolder-2 is second in diversity of wood species and contains seventeen species of wood. Of which only *Viburnum* is not found in Broekpolder-1. Although there are less species of wood, this offering site mainly consists of wood. A post row, a small half circular wattle fence, and many pieces of wood are its main characteristics. Some of the wood seems to be placed in lines, a rectangle or simply placed together. Again there are several fruit bearing species and evergreens. And just like Velsbroek-B6 and Broekpolder-1 this is one of the few sites that contain elm. Cornel/cornelian cherry is also present, but not in combination with birch.

Broekpolder-3 has only five pieces of wood of which three are evergreens.

At Assendelft-56 nine species of wood were deposited in the peat cut above the vessels. These consisted of trees/shrubs associated with wet areas, such as alder (*Alnus*), willow (*Salix*) and especially bog myrtle (*Myrica gale*) and species associated with the dryer areas, such as oak (*Quercus*), birch (*Betula*) and especially juniper (*Juniperus*). Oak could have grown on dry levees but grew probably mainly in the old dunes and juniper had to be gotten from the western part of the old dunes. Again, as at Velsbroek-B6 the selection of woods from the old dunes consists of oak and juniper.

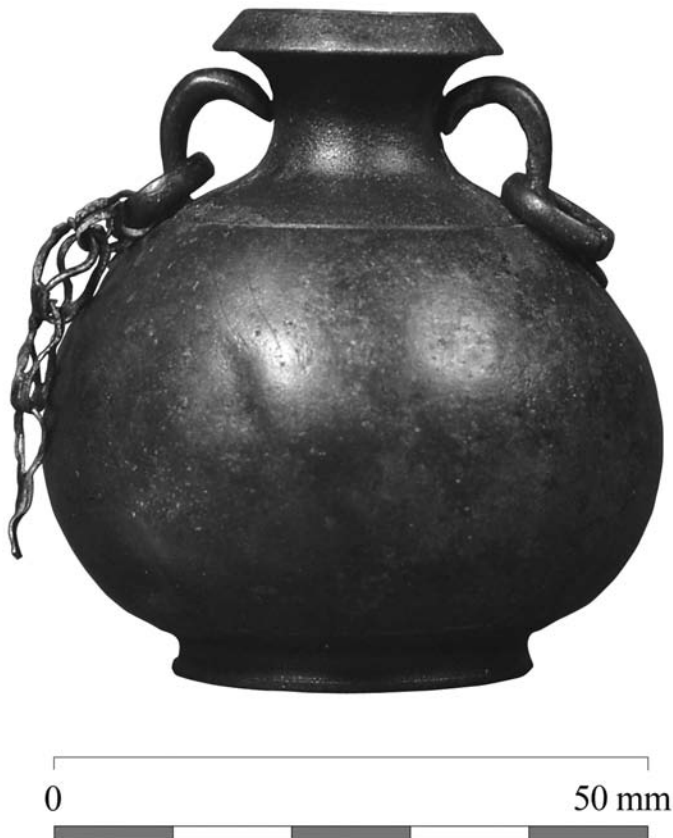


Figure 4.40 Flask with herbs from Uitgeest-Dorreveest, original photo ROB.

At Krommenie-21 oak (*Quercus*) and alder (*Alnus*) were deposited. The oak was mainly formed into tools of which only parts remained. The alder was a branch set in half a vessel. This configuration of an alder branch within half a pot was also made at Assendelft-56 in pit 123, also considered an offering by me. As there are many other species of wood available and complete pots, this must be viewed as a specific recurring set of deposition.<sup>143</sup>

142 Schuyf 1997, 41.

143 See also chapter 2 §2.2.2.1.

At Velsbroek-Westlaan seven different species of wood were deposited in the pits in the marshy pool. Again juniper (*Juniperus*) and oak (*Quercus*) are present, but also the evergreen yew (*Taxus*), the nut/fruit bearing hazel (*Corylus*) and wild cherry (*Prunus avi.*), and species associated with wet conditions alder (*Alnus*), and willow (*Salix*).

At Dorregeest a Roman bronze flask filled with seeds of radish or ramenas (*Raphanus sativus* L.), wild marjoram (*Origanum vulgare* L.), celery (*Apium graveolens* L.) and mallow (*Malva sylvestris* L.) was deposited (figure 4.40).<sup>144</sup> Janneke Buurman examined the seed remains and concludes that they are probably of a non-local Roman origin. She interprets the content as medicine, because of their curing properties that were known during the Roman Period.<sup>145</sup> Although the seeds derive probably from a Roman context, the wild variations of these plants were likely present in the Oer-IJ area and at least marjoram was found at the nearby Early Iron Age site Assendelft-Q.<sup>146</sup> The date of the flask in the second or third century and its pristine condition appear to indicate trade instead of a pick-up, as has been suggested for the earlier Roman metal finds.<sup>147</sup> It can therefore be assumed that the people of Dorregeest obtained the flask with a local medicinal knowledge of the content.<sup>148</sup> The relation between offerings and curing are well known for the Roman Period and are based on traditions going back into the Iron Age.<sup>149</sup> In the creek the remains of wood and plants have been found,<sup>150</sup> that are not published yet and are therefore left out of the discussion. This should make us aware of the fact that wood and plant remains are not a priority in most research and thereby leaving out an important source of information.

To summarize, plant material and especially trees and shrubs were part of the offerings in the Oer-IJ. There is a preference for willow and alder that are associated with wet parts of the landscape and juniper and oak that are associated with the dry parts of the landscape. Of these species oak is known in the religious worldview of the Germanic world as associated with Thor/Donar, thunder, sacred groves and the high seat pillar in the house.<sup>151</sup> For the other three species the associations are less direct but juniper,<sup>152</sup> alder<sup>153</sup> and willow<sup>154</sup> have medicinal and magical properties in medieval sources. Alder also colours orange-red just after felling, like the tree is bleeding.<sup>155</sup> The use of elm in three offering sites stands out because of its rarity in other archaeological contexts. The indicated symbolic links should be researched in a more comprehensive manner in the Netherlands to broaden our perspective, which at the moment mainly has economic aspects and landscape reconstructions in view.

#### 4.4.3 ANIMAL

In the Oer-IJ area just over half of the offering sites (12) contain the ontological category animals. This is about the same percentage as the sites in chapter 2. The mobility of animals makes it more difficult to place them in specific parts of the Oer-IJ area. General associations can be made of fish and water, birds and sky, and mammals and land. In the mythology of northern Europe especially the domestic animals take part, with the exception of the snake, wild boars and birds. Some of the animals are directly associated with specific CPS-agents, such as Odin's horse Sleipnir, Thor's cart drawn by goats<sup>156</sup>, and the siblings Freyr and Freya with a wild boar, respectively named Gullinbursti and Hildisvín.<sup>157</sup> Odin and Freya are both also associated

144 Woltering 1982, 207.

145 Buurman 1988.

146 M. Garthoff-Zwaan 1987, 337.

147 Martin Meffert 1998, 95.

148 Garthoff-Zwaan 1987, 337.

149 For examples, Green 1986, 138-166.

150 Woltering 1982, 206.

151 Davidson 1990, 86-88.

152 Honders 1983, 264 and Schuyf 1997, 41.

153 Honders 1983, 65.

154 Garthoff-Zwaan 1986, 47.

155 Silke Lange personal communication.

156 In one story of Snorri Sturluson, *Gylfaginning* 43. Descriptions of statues of Thor with cart drawn by goats in Davidson 1990, 75-76.

157 Davidson 1990, 142, 74-76 and 98.

with birds. Odin's ravens Huginn (memory) and Muninn (future) are associated with battle and the dead but also with foreseeing.<sup>158</sup> Freya can take on a falcon shape; interestingly she is also associated with divination.<sup>159</sup> Cattle is not directly associated with any CPS-agent, but the cow Audhumla seems to take on this role herself as she plays an important part in the creation of the world.<sup>160</sup> Furthermore, there are some indications that in the Germanic world cattle were seen as a very valuable asset.<sup>161</sup> This value appears to be supported by the archaeological evidence as cattle forms the largest part of the animal remains. It is also thought that the so-called 'woonstalhuis' represents the value of cattle as they are kept under the same roof as humans.<sup>162</sup> Here it has to be remembered that all livestock would probably be sheltered under the roof at one time or another.

Eight of the ten sites without animals are chance finds of recognisable mostly single artefacts. The two sites that have been excavated, Assendelft-56 and Krommenie-21, have deposits that focus on pottery and wood. At these two sites bone is deposited in other artefact concentrations and/or pits. Twelve sites have animals as part of the offerings. In the reports of two sites the deposition of bones are mentioned but are not further explicated and of five sites only part of the set of bones is mentioned.<sup>163</sup> This puts a restraint on what can be put forward, but some suggestions can be made for the sites of which at least some animal remains are published.

When animal bones occur there are always cattle bones present. Horse forms a second large group, overshadowing the species dog, pig and sheep/goat. If we compare these amounts of bone to the bones found in settlements, choices can be analysed.<sup>164</sup> The high number of cattle bones is mirrored in the settlements where they form the largest part of the bone assemblage. The amount of sheep/goat bones in the offerings is, however, lower than expected. Although sheep/goat is an important animal in the animal husbandry as it takes second place after cattle, sheep/goat is not represented in equal amounts in the offerings. It has to be kept in mind that the low number could also be due to the absence of publication of the complete bone assemblages. The under representation of sheep/goat in offerings is, however, probably due to practice as pig bones show a different picture. Pig is only present in settlements in very low numbers, around five percent of the total bone assemblage. In the offerings pig occurs almost as often as sheep/goat.<sup>165</sup> Pig is thus over represented and favoured in offerings. This seems to be in contrast with Jankuhn's analysis of the presence of pig in offerings for northern Europe.<sup>166</sup> He finds that pig is scarcely present in offerings even though it is considered a sacred animal in later periods.<sup>167</sup>

There are two other animals that are over represented in offerings, horse and dog take respectively second and shared third place. This overrepresentation of horse and dog in offerings in comparison to settlements was also established in northern Europe.<sup>168</sup> What is of interest for the Oer-IJ area is that the three species of animal that are most often found in offerings are cattle, horse and dog in a lesser degree. These are the animals that are also represented in the pit-star constellations of cow, horse and greater dog as described by Therkorn for the western Netherlands.<sup>169</sup> These three animals took a special place in the worldview of the people and it is therefore not surprising that they also occur in offerings.

All sites, except Uitgeest-Achterloet<sup>170</sup>, have more than one species of animal in the offerings. The selection consists of a range of animals. This seems to be especially the case at Krommenie-14 Velsbroek-Westlaan and Broekpolder-1. Here are, besides the domestic animals, a selection of wild animals present, including

158 Davidson 1990, 146-147. Translation of the names of the ravens Jarich Oosten personal communication.

159 Davidson 1990, 117.

160 Davidson 1990, 27.

161 For example, Tacitus, *Germania* V.

162 Therkorn 1987a, 102.

163 Respectively Uitgeesterbroekpolder-18-1 and Uitgeest-Dorregeest, and Assendelft-N, Krommenie-14, Uitgeesterbroekpolder-18-2, Velsen-fort-1, and Velsbroek-B6.

164 For examples of bone assemblages from settlements: van Wijngaarden-Bakker 1988, table 4.1, Meffert 1998, 85 and Hagers and Sier 1999 table 8.1 and 8.2.

165 Pig and goat occur respectively four and five in offering sites.

166 See chapter 2 § 2.1.3.

167 Jankuhn 1967a, 145.

168 See chapter 2 § 2.2.3.

169 Therkorn 2004.

170 This is one of the oldest offerings dated to the Late Neolithic/Early Bronze Age.

fish, birds, and small mammals. These animals are associated with water, sky, and land. Although some of the fish and birds at Broekpolder-1 could have died naturally, at Velsbroek-Westlaan this could not be the case. Therefore fish and birds have to be considered as appropriate for offerings. At Broekpolder-1 besides all the domestic animals it seems that a considerable part of the birds and fish are also present. Six different species of fish, including flat fish from the sea or small inlets and nine different birds: ducks, goose, cormorant, crane, swan, and stork are present. The crane, stork and goose are migrating birds, of which goose could be present throughout the year. Crane and stork would have been associated with specific times of the year. The offerings of the different animals, however, did not take place at once. The diversity of species accumulated over time. During a generation at least there must have been knowledge of the previous offerings. When the offering of specific animals was associated with the seasons, the diversity could come into place by offerings made at specific times in the year.

#### 4.4.4 PERSON

Eight of the wet low-lying offering sites contain the ontological category person, once in the shape of a small wooden leg and in the other cases as the deposition of human bones. From the Early Bronze Age until the first part of the Roman Period cemeteries or multiple burials are unknown in the Oer-IJ area. This is the case for the entire western part of the Netherlands. On the higher sandy areas in the south and east of the Netherlands this period is marked by urnfields. These urnfields are seen as a structuring element in the perception and construction of the landscape. The absence of this structuring element in the landscape of the Oer-IJ and the rest of the western Netherlands may be the result of the same cultural rules that prevented the conglomeration of houses into small hamlets. This absence of urnfields does, however, not mean that human remains were not used in a specific manner in the landscape.

In the offering sites, with the exception of the Roman fort Velsen<sup>171</sup>, a specific selection of elements were deposited, namely arm, leg, and head bones. This selection of human bones is similar to the selection of animal bones, but practiced in a stricter manner. Only at Broekpolder-1 the first deposition consists of most of the upper part of a baby skeleton.<sup>172</sup> The divergence from the pattern may be due to the young age of the person and/or the time frame as it is one of the first depositions made in this place. Some of the offering sites have one type of single bone deposited. At Velsbroek-B6 only thighbones are deposited and at Uitgeest-Dorregeest in the creeks two skull fragments were found. Although there is no evidence to suggest what treatment the body received after death, some bones appear to have been kept over a period of time before being deposited. For example, a human kneecap at Broekpolder-1 is dated hundreds of years earlier than the deposits surrounding it.

#### 4.5 IMPORTED MATERIAL IN THE OFFERING SITES

In the offering sites in the Oer-IJ area all different kinds of imported goods are present. These objects refer to the wider world of which they are a part. These objects refer to different peoples and different landscapes. Whether their knowledge of these distant places and people was first hand is difficult to establish, although some travelling can be expected, especially along the rivers<sup>173</sup> and the coast. At least stories would have travelled with the objects.<sup>174</sup> An important element of the biography of these objects would be that their origin lay outside the Oer-IJ area. For specific materials, such as stone and bronze the Oer-IJ area has always been depended on exchange.

171 The human remains in the top fill of the harbour are not dated and could be part of the later Roman Iron Age when clusters of burials re-appear in the area.

172 As ribs were present it seems unlikely that the bigger leg bones have decayed.

173 The canoe in Nigtevegt (about 25 km to the southeast) with pottery from the Oer-IJ area indicates that the waterways were used.

174 Thomas 1999 [1996], 154-155.

## 4.5.1 STONE



Figure 4.41 A white stone and red tile deposited at Broekpolder-1.

Stone is one of the natural objects that do not naturally occur in the Oer-IJ area. Therefore, all stones were imported from at least 50 km away and most from even a greater distance, like the volcanic rock made into quern stones that came from a few hundred kilometre to the southeast. Many stones were imported for the manufacturing of tools from an early date. More striking is the number of unworked stones that have been brought in to be part of the offerings in the low-lying wet sites. Four sites give a total of 419 stones, of which Broekpolder-1 with 398 stones makes up the largest part. Of all the stones only a third is made into and used as a tool, the other 279 stones were offered simply as stones. Three of the four sites are situated in the Broekpolder, the other site is Velsbroek-Westlaan. This means that the stones were deposited in different periods, but the main part took place in the Roman Iron Age and Early Medieval Period in a restricted area, no more than 450 metres apart. This could be defined as a localised practice. The deposition of stones is, however, well known in northern Europe and fits in the practices described in chapter 2.<sup>175</sup> Furthermore in several medieval texts and folklore the worship of specific stones is described.<sup>176</sup> Especially at Broekpolder-1 the effort must have been considerable in bringing these stones to the Oer-IJ area. As the unworked stones comprise 23 different types of rock, these must have come from different sources. The physical qualities of the stones may be an important factor during the choices made to consider them as offerings. The hardness of stones is a quality that is not present in the Oer-IJ area in itself. The Oer-IJ area could be defined as a soft landscape; the ground is soft, local pottery is easily broken, metal can be melted and trees can be chopped down, cut and burned. Stones can be broken, although this would not have been easy, it would only lead to smaller stones. Therefore stones have a durability, a permanence that cannot be found in the natural occurring elements of the landscape. Besides the large amount of unworked stones at Broekpolder-1, 140 stone tools – of which 109 were broken – were offered. Completeness seems not to be a criterion, but at the same time the tools do not need to be broken. Another characteristic of the stones that was of importance could be their colour (figure 4.41). 90 percent of the stones are grey or white. Gerritsen and Therkorn have shown the importance of colour in depositions in the Oer-IJ area for the Roman Iron Age.<sup>177</sup>

175 See chapter 2 § 2.2.2.1.

176 Examples of loose stones De Vries 1956, §198. Examples of large stones De Vries 1956, § 247.

177 Gerritsen 2000, 42-43 and Therkorn 2004, 193-197 and figure 64.

## 4.5.2 POTTERY AND (ROOF)TILES

In the Oer-IJ area the handmade pottery has a style of its own. Van Heeringen has shown that there are influences from the northeast and south, but that a distinctive pottery style can be established.<sup>178</sup> All pottery was produced locally. With the appearance of the Romans at Velsen an influx of Roman pottery came about. This pottery is, however, not found outside the two forts in complete forms and this has led to the pick-up theory.<sup>179</sup> Only after the Romans left the Oer-IJ area complete Roman pottery has entered the local settlements, although in limited numbers.<sup>180</sup> The locally produced pottery remained the most important form in daily use. In seven of the offering sites<sup>181</sup> Roman imports are present. Again we are dealing with small pieces instead of complete objects that fit into the pick-up theory.<sup>182</sup> It is obvious that these Roman sherds were not deposited as pottery in the sense of a vessel with possible contents. The Roman pottery does have some physical qualities that could be important, such as its hardness and colour. The red terra-sigillata and the whitish smooth and rough walled pottery are very striking in appearance when compared to the local pottery. In this sense the same selection criteria as used for the stones at Broekpolder-1 seems to be present when selecting pottery, e.g. hardness and colour. This selection practice is emphasized when the tiles are considered. At Broekpolder-1 and Uitgeest-Dorregeest<sup>183</sup> several Roman tiles were deposited. These tiles are all red and at Broekpolder-1 they were about the same size as the unworked stones (figure 4.41).

## 4.5.3 METAL

Bronze and gold had to be imported into the Oer-IJ area. Iron could be made from bog-iron, but was probably imported as no production sites are known in the area. There is little evidence for imported raw material; it seems that the metal was imported in the form of objects. Crucibles and metal slag from several sites<sup>184</sup> in the Oer-IJ area indicate that metal objects were also produced locally. Nine offering sites ranging from the Late Bronze Age to the Early Medieval Period contain metal objects. A Late Bronze Age bronze axe at Velsen-Noordzeekanaal is in good condition and fits into the pattern of axe depositions as described by Fontijn.<sup>185</sup> The Late Iron Age bronze neck ring at IJmuiden-Duinvlief is the most spectacular object in the sense that no other has been found in the Oer-IJ area and it is in good condition.<sup>186</sup> The deposition of ornaments is known from the sites in chapter 2, but not in combination with a loose human bone. At Krommenie-14 an iron adze was found in the creek, which could have been produced locally. At the other five sites<sup>187</sup> five or more metal objects were recovered, with a total of at least 1740 objects. Although some of these objects could have been made locally, most of them are imported. Although all the different types of metal objects are interesting enough to be discussed here I will focus on the largest group of metal objects: coins, as they can position the Oer-IJ area within the wider world. Furthermore, the deposition of specific coins seems to point to a local tradition in which depictions on the coins were of importance.

The high number of coins is largely due to the single deposit of 1302 coins at Uitgeest-Dorregeest. Four sites contain coins, which is in contrast with the sites in chapter 2, where only six of the 100 sites contained coins. In Northern Europe the coins were part of the equipment of warriors, except at Bad-Pyrmont. This is not the

178 Van Heeringen 1992.

179 See chapter 3 § 3.5.4.

180 Castricum-Oosterbuurt and Uitgeest-Dorregeest are the only known sites with a reasonable amount of Roman pottery that probably entered the settlement in complete form.

181 Broekpolder-1 and -2, Krommenie-14, Uitgeest-Dorregeest, Uitgeesterbroekpolder-18, Velsen-fort-1, and Velsbroek-B6. The exact number of (Roman)sherds is not published for all sites.

182 See chapter 3 § 3.5.4.

183 At Uitgeest-Dorregeest the location of the tiles is not clear, but at least these tiles were thought of as worth picking up and carrying to the site.

184 For example, Assendelft-F, -8 and 17, Beverwijk/Heemskerk-Broekpolder, Castricum-Molendijk and -Oosterbuurt, Driehuis-Westerveld, Krommenie-3, Limmen-Pagelaan, and Uitgeest-Dorregeest.

185 Fontijn 2003, 187. With the difference that sickle depositions are only known from dry contexts in the Oer-IJ area, for example Heiloo-Kromme Laan. The designation of this site as bog hoard by Butler (1990) is not correct (Butler personal communication).

186 Bronze neck rings are also rare in other parts of the Netherlands.

187 Velsen-fort-1 is left out.

case in the Oer-IJ area, here the coins are deposited separately or in a hoard.

Of interest is the deposition of two antoniniani at Broekpolder-1, a coin not well known in Germanic contexts. According to Vons these coins were not accepted as currency beyond the imperial frontiers, due to their lesser silver content and they are therefore scarcely found beyond the frontier.<sup>188</sup> This idea appears to be refuted by the excavation of Castricum-Oosterbuurt, where 41 antoniniani from the end of the first to the end of the third century AD were found. It is an indication that these coins circulated in the Oer-IJ area over a period of time and were considered appropriate for deposition.<sup>189</sup> The question remains if the coins were deposited in the water as currency or in relation to their imagery. The scarceness of coins from most sites dated to the Roman Iron Age suggests that although, their monetary value may have been known, coins were not widely used as currency in the Oer-IJ area. Although not all coins have mythical figures both antoniniani from Broekpolder-1 show mythical figures: Hercules and Aequitas. And of the seventeen coins at Velsbroek-B6 five have depictions of horses with mythical figures, four of sitting goddesses, one of Europe and a Bull, one of Victoria and two with altars.<sup>190</sup> When we compare the coins in the offering sites with the coins at Velsen-fort-1<sup>191</sup> it becomes clear that there is a marked difference. For example the main group of coins at Velsen has an altar or the mark of a minter depicted, whereas this is the smallest group of coins in the offerings. At the same time three coins at Velsbroek-B6 depict two brothers on horses, whereas only one of the same type is found at Velsen-fort-1. Furthermore, in the offerings is the relative amount of silver coins in relation to copper coins higher than in Velsen-fort-1; at Broekpolder-1 and Velsbroek-B6 1:1.5 and at Velsen-fort-1<sup>192</sup> 1:5.2.<sup>193</sup> This leaves aside the 1302 silver denarii at Uitgeest-Dorreveest.<sup>194</sup> When we look at the offerings of coins outside the Oer-IJ, the preference for silver coins is similar to Bad-Pyrmont outside the Roman provinces and dissimilar to the temple of Empel, Coventina's well or Bath inside the Roman provinces.<sup>195</sup>

To summarize, although the people in the Oer-IJ area were probably aware of the monetary use of coins from at least the second century AD onward as reflected at Castricum-Oosterbuurt, they used coins in a selective manner, which favoured silver and certain mythical depictions. The practice involved with the single coins does not fit in the northern European tradition nor the Roman provincial tradition, but appears to be connected to its place outside the Roman Empire yet at the same time close enough for selective practices.

#### 4.6 HOUSEHOLD/AGRICULTURAL TOOLS AND THEIR RELATION TO EVERYDAY LIFE

In chapter 1 it was explained that offerings relate to the everyday world, that they have effects in the real world.<sup>196</sup> These relations are of a symbolic nature. Therefore, these relations can be less than straightforward. It can, however, be assumed that household/agricultural tools used in offerings in some way refer to their everyday use. At the same time as these tools are used in everyday life there will be a link with the offering practice and the place of these tools in their worldview. These links can express themselves in aspects, such as where and/or at what time to perform certain task, where to store objects, or who should perform a task. Probably not all elements of daily life would have the same significance in religious practices and therefore it is interesting to analyse which elements were chosen to be deposited in wet low-lying areas.

Nearly all the offering sites (20 of 22) contain household/agricultural tools. This is 91 percent of the sites, whereas 75 percent of the sites of chapter 2 contained these kinds of tools. As the percentage of the ontological

188 Vons 1987, 146 and 150.

189 The deposition of coins in Broekpolder-1 could date to the Early Middle Ages.

190 For the coins of Velsbroek B6: Bosman 1997, 286-287.

191 Bosman 1997, 256-267.

192 Bosman 1997, table 5.

193 Normal relative amount for Roman settlements is silver:copper 1: 3 to 1:35, Bosman 1997, 250.

194 Of the 1186 coins that could be identified less than 10 coins pictured the head of an emperor. Most coins depicted mythical standing or seated figures.

195 Bad-Pyrmont 3 silver coins (Müller 2002, 83) Bath 12000 coins mainly of small denominations (Cunliffe 1985, 12) or Coventina's well over 16000 coins mostly of bronze (Allason-Jones and McKay 1985, 69), at Empel (southern Netherlands) the Pre-Roman first phase consists of especially gold and silver coins (60 of 72), whereas the Roman second phase consists purely of 738 bronze coins (Roymans, 1994, 113).

196 See chapter 1 §1.5.1.

category tool found in sites of the Oer-IJ area and the sites in chapter 2 is equivalent, there must be a marked difference in the composition of the ontological category tool between both areas. This difference is partly due to the inclusion of older sites<sup>197</sup> with single axes in the Oer-IJ area. Sites with single axes are also present in Northern Europe, but were not included because the Bronze Age has a very specific, but large field of study concerned mainly with bronzes.<sup>198</sup> The main difference between sites of the Oer-IJ area and chapter 2, however, is the number of sites in chapter 2 with weapons sometimes in combination with other tools besides household tools, and the number of sites with structures and other ontological categories besides tool. Furthermore, although in both areas sites with only ornaments in the ontological category tool occur, this is the case for one site in the Oer-IJ area and eight of the sites of chapter 2. And finally, in the Oer-IJ area household/agricultural tools appear as single deposits, something that is absent in the sites of chapter 2.<sup>199</sup> For the Oer-IJ area four types of household/agricultural tools, namely pottery, axes, quern stones, and nails will be discussed.

In the Oer-IJ area the group of single deposits comprises just under a third of the sites with household/agricultural tools counting, three pots, two axes and one quern stone. These were all chance finds. The axes are ambivalent as they can be used both as a weapon and for woodworking. As there is no evidence for violence in the Oer-IJ area<sup>200</sup> contemporary to the axes, but there is evidence for woodworking, it is plausible to see the axes as household/agricultural tools. As was shown above in the paragraph on plants, trees were important in the people's worldview. The actual cutting down of trees for building houses or clearing areas for fields, could have had specific meanings. Especially alder would have a dramatic effect as it bleeds red liquid when cut. The offering of the tool associated with this activity is therefore not surprising. At two other sites wood working tools have been deposited. At Krommenie-14, an adze is placed next to a wooden enclosure and at Velsbroek-B6 a chisel is placed in the filled up pool about 15 metre from the long mound. Velsbroek-B6 has as one of its main features the deposition of large amounts of wood.

The pottery and the quern stone are associated with work inside or near the house, mostly food preparation and storage of produces. Only one of the pots is incomplete, as the legs are taken off.<sup>201</sup> The other pots and quern stone are fully functional.

Pottery is the most offered type of household/agricultural tool that is present in sixteen of the offering sites. A total of at least seven complete vessels, five near complete vessels and seven sites with only sherds<sup>202</sup> makes it clear that the pottery used in offerings could be handled in varied ways. The complete vessels possibly held some sort of food, but little analyses on this aspect have taken place at the offering sites. Abbink 1999 has analysed the residue on pottery for Uitgeest-Dorregeest mainly from outside the creek. The pottery she associated with ritual use had no residues. Abrasive traces on the inside of some of these vessels appear to point in the direction of solid contents.<sup>203</sup> Abbink also points to the use of reddish brown pigment on some vessels, applied after firing, and she associates this with a possible symbolic value.<sup>204</sup> The vessel from Limmen-Dusseldorpervaart appears to have some streaks of pigment at the bottom (figure 4.13).

For several vessels the everyday usability seemed not to be the main point of interest, as these vessels are partly broken before deposition. In these occasions it can be imagined that vessels had symbolic meanings referring to other things than purely their use. As suggested in chapter 1 broken object can bring people, objects and places together.<sup>205</sup> And possibly different parts had different symbolic meanings, like the broken of legs of the bowl from Assendelft-51. Several researchers make a link between the use of sherds or fragmented objects in ritual contexts and regeneration and the life-cycles.<sup>206</sup> In this perspective sherds are not just viewed as the end of a vessel, but also as the beginning of a new vessel as sherds can be used as grog. Furthermore, clay for pottery is taken from the (wet) landscape and the returning of sherds to the landscape can be viewed as an act of replenishing.

197 The sites in chapter 2 date to the (Roman) Iron Age and Migration Period, whereas the sites in the Oer-IJ area also include the Late Neolithic and Bronze Age.

198 For example, Levy's (1982) study of ritual hoard finds.

199 Single axes not counted.

200 With the exception of human remains at Velsen-fort-1.

201 Assendelft-51, this is a rare type of pottery.

202 Assendelft-N and especially, Uitgeest-Dorregeest could have several complete pots.

203 Abbink 1999, especially §8.13.4.

204 Abbink 1999, 294.

205 § 1.6.

206 Brück 2006, Fowler 2004, and Hill 1995.

Five offering sites contain quern stones of which two sites have complete ones, including the upper part of the quern stones. These stones are used to grind the wheat into flour and in this way form a necessary link transforming the grains into the main ingredient for bread. As these quern stones are heavy it is unlikely that they were moved around a lot. The grinding of the grains would have been a labour-intensive task, which kept a person bound to a specific place in a specific posture for quite some time each day. It seems unlikely that this aspect would not be of influence when the quern stones were finally deposited in the water.

Another group of household/agricultural tools deposited in water are nails. These nails do not seem to be attached to something, but are deposited as objects in themselves. Nails are used to bind things together, just like tenons that were also found in two offering sites. Therkorn shows in her study the importance of binding in northern mythology and material.<sup>207</sup> Schuyf names certain nail-trees (spijkerbomen) and nail offerings for the more modern times.<sup>208</sup> The use of nails here is associated with healing powers. The general symbolism seems to be associated with attaching something permanently, whether this is a sickness or a promise, in the hope that a CPS-agent will help with the healing process or the enforcement of a promise.

It is striking that in none of the offering sites tools are placed which are directly related to agricultural use, such as ploughshares or harrows. In the sites of chapter 2 agricultural tools do appear.<sup>209</sup> These tools are used in the Oer-IJ area as the many plough marks and some finds show, but seem not to be considered suitable as offerings in the wet low-lying areas.<sup>210</sup> It could be that ritual practices directly associated with agriculture took place on the fields and are therefore absent from the low-lying areas where no remains of fields are known.<sup>211</sup>

#### 4.7 COMPARISON OF THE OFFERINGS IN WET LOW-LYING AREAS AND THE HIGHER PARTS OF THE LANDSCAPE

Ritual practices did not only take place in the wet low-lying parts of the Oer-IJ area. In the settlements and fields a diversity of ritual practices took place, such as house-offerings, offerings in pits and wells and the marking of space with pits and gullies. As the number of finds indicating ritual practices outside the wet low-lying areas is quite large, only those aspects will be considered that are directly related to the topics discussed above.

##### 4.7.1 CREATED WATER WITHIN SETTLEMENTS

Water is not only present in the low-lying areas, however, in the higher parts of the landscape the accessibility of the water is often created by humans. In some of the created water offerings are made, which indicates that water in itself was a suitable element for offerings. Something that could also be seen at Velsbroek-B6 where the main offerings were deposited in a dug channel. Wells and pits were favoured for offerings.

207 Therkorn 2004, §6.4.2.

208 Schuyf 1997, 81-85.

209 See § 2.2.1.

210 700 m west of Velsbroek-B6 at Santpoort-Spanjaardberg a plough share was found and 700 m north of Uitgeest-Dorregeest a harrow was found in a well.

211 For example, Heiloo-Kromme Laan, § 3.5.1 and §4.7.2.



Figure 4.42 Well made of a potstack with the pedestal bowl found inside at Castricum-Rietkamp, after Mooij 1996 figures p. 21.

For example, at Castricum-Molendijk a spindle whorl and some pieces of wood were placed near the bottom of a well made of six stacked vessels.<sup>212</sup> At nearby Castricum-Rietkamp a well made of a three bottomless vessels had an offering placed in the lower vessel, consisting of some, sherds, bones (including bird) and a complete pedestal bowl (figure 4.42).<sup>213</sup> The pedestal bowl was just small enough to be placed in the lower vessel though the hole in the bottom of the upper vessel, which points to deliberate placement. Abbink associates the pedestal bowl with ceremonial use.<sup>214</sup> She also notes for Uitgeest-Dorreegeest that when wells contain pottery they are mostly (near) complete vessels, including pedestal bowls.<sup>215</sup> Of the pits it is more difficult to establish whether they were dug with the purpose of drawing water. For example at Broekpolder it seems that most of the large pits were closed fairly quickly after offerings were deposited, as there are no signs of sedimentation due to water.<sup>216</sup> The excellent preservation of organic material shows that these pits were under the water level. There are, however, a few pits that clearly show signs of still standing water while the pit was still open.

212 Mooij 1979, 17.

213 Mooij 1996, 21.

214 Abbink 1999, 313.

215 Abbink 1999, 66.

216 Therkorn et al. forthcoming.

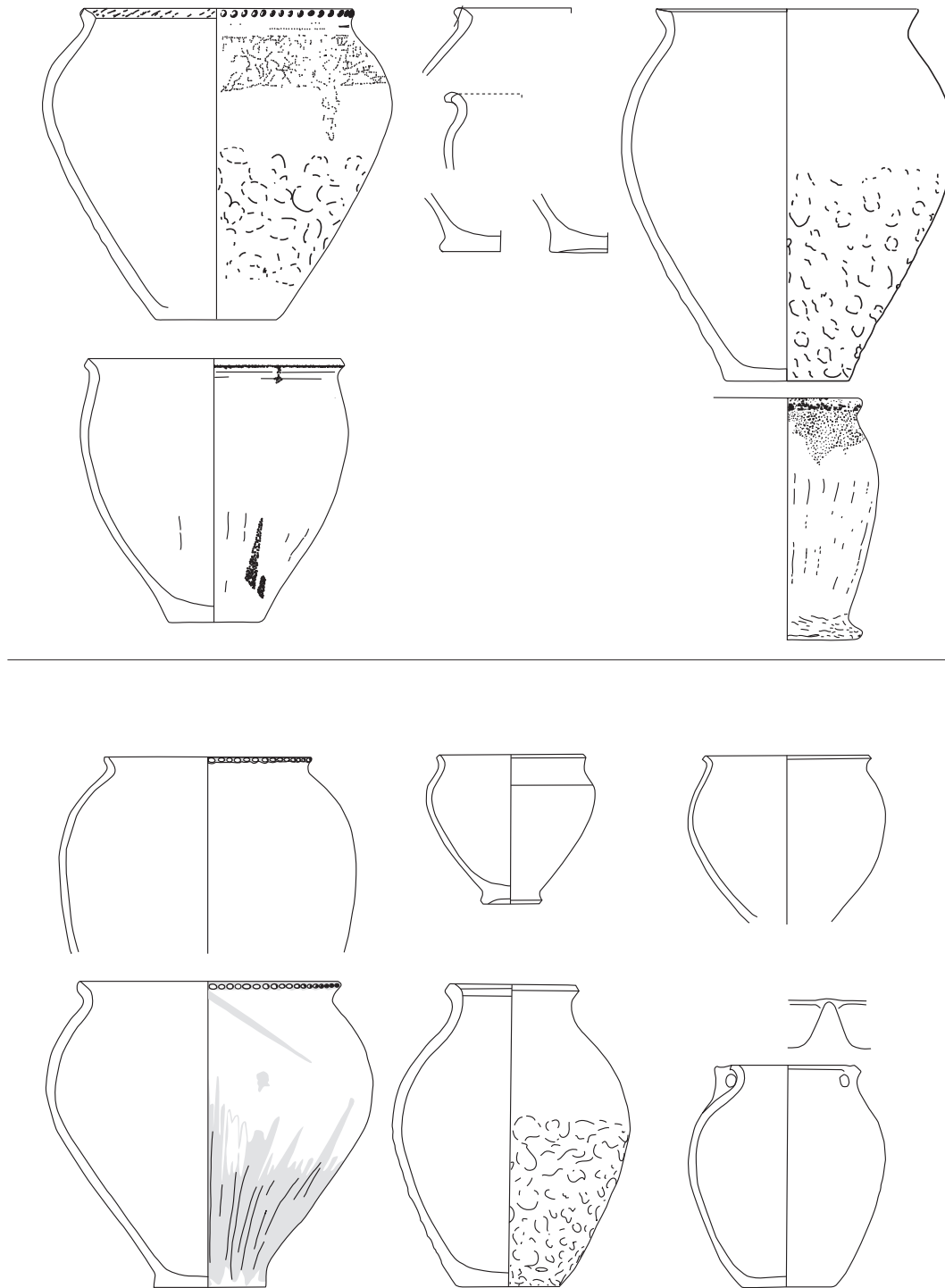


Figure 4.43 Some of the pottery from the pits of Assendelft-8.

At Assendelft-8<sup>217</sup> a 60 cm deep pit contained gyttja-like material. In the pit a complete vessel was placed at the bottom with two articulating calcinated cattle foot bones and some straw/grass and the upper half of a vessel was in the top fill. The pit was covered by eight birch stakes that were partly burned. Next to it was another pit with an unusual feature. At the bottom of the pit a cistern of unbaked clay was made, above it several (near) complete vessels were deposited. Some had the bottom deliberately removed and/or the remains of a brownish paint applied. Besides the vessels, bone, wood, three fragments of a quern stone, and a whetstone were deposited.

217 Stuurman 1978.

The high number of complete or near complete vessels in wells and pits shows a different emphasis than the offerings in wet low-lying areas (figure 4.43). Of the 16 sites with pottery only six had complete vessels, usually not more than one or two. The larger sites of Broekpolder-1 and Velsbroek-B6 altogether lack complete vessels. Furthermore, in some of the pits with offerings at Broekpolder small animals were deposited.<sup>218</sup> The remains of complete animals are nearly absent in the wet low-lying offering sites, except for the later phase of Broekpolder-1. The spectrum of the offerings in higher parts of the landscape seems to follow the same pattern as the offerings in wet low-lying areas, with the exceptions mentioned above.

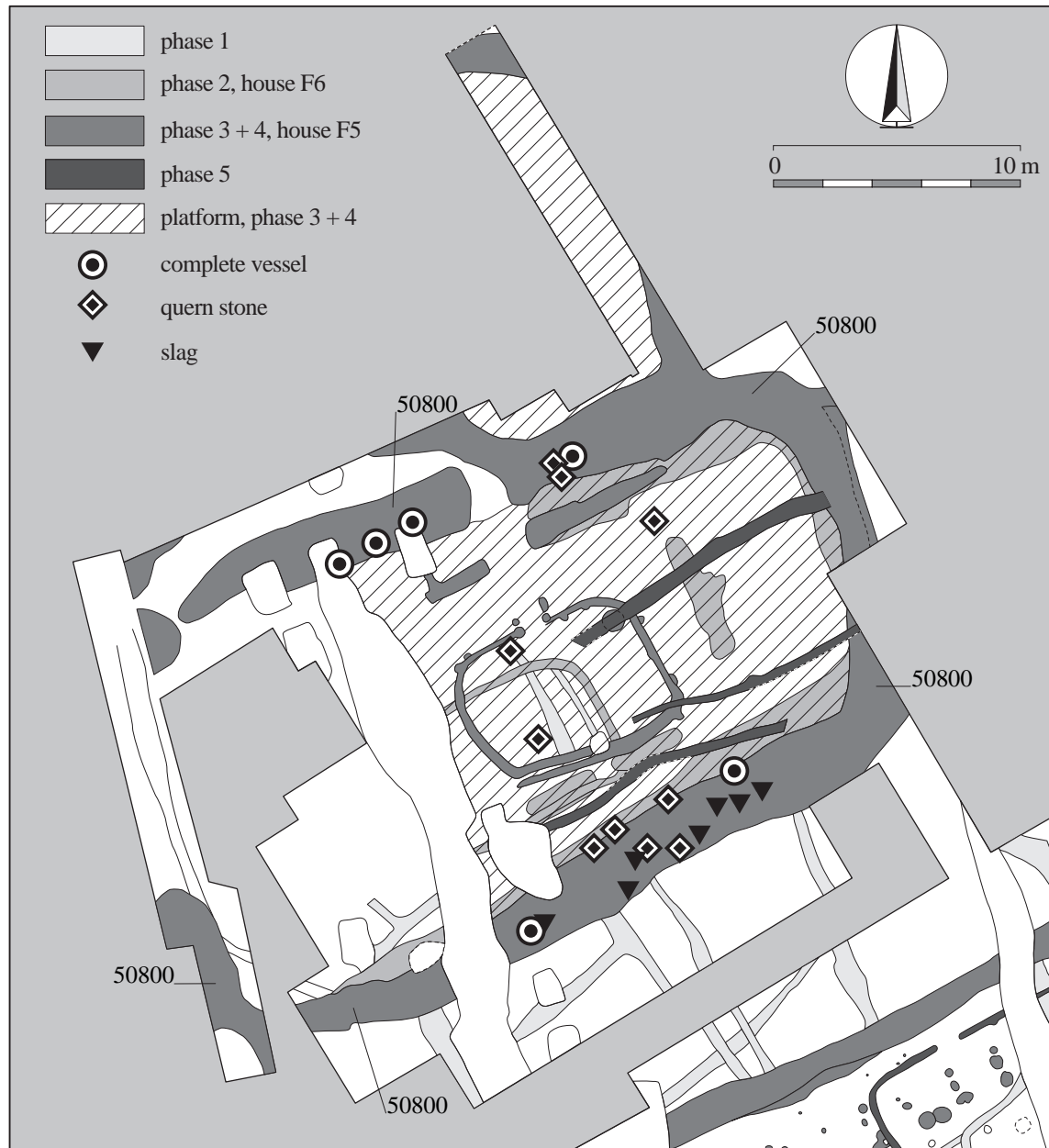


Figure 4.44 Assendelft-F ditch 50800 with a selection of artefacts, after Therkorn and Abbink 1987, figure 8.24 and Meffert 1998, figure 14 and 15.

Offerings in ditches seem to be rarer but do occur, for example at Assendelft-F (figure 4.44). This ditch, which probably held some water, had many finds, including six complete vessels, several fragments of quern stones, slag, a crucible and import pottery and metal objects.<sup>219</sup> 1300 m to the east at Assendelft-27 is another ditch with ritual depositions near the perimeter (figure 4.45). In this ditch posts and wattle of a five-sided

218 Therkorn et al. forthcoming.

219 Van Beek 1983 and Meffert 1998, figure 14 and 15.

livestock enclosure were set.<sup>220</sup> The ditch held water at different times. Forty-three possible anthropomorphic figures were placed in the ditch with their head down (figure 4.46). Besides bones, sherd, and clay a number of imported objects were deposited, including amber beads, a Roman bottom of a vessel, cut horse trappings, glass fragments and a samian sherd.

The number of Roman imports sets these ditches apart from the wells and pits discussed above and places them closer to the larger offering sites in wet low-lying areas. The anthropomorphic figures are unknown in Oer-IJ area, but similar figures are known in the Germanic world at Oberdorla (figure 4.46).

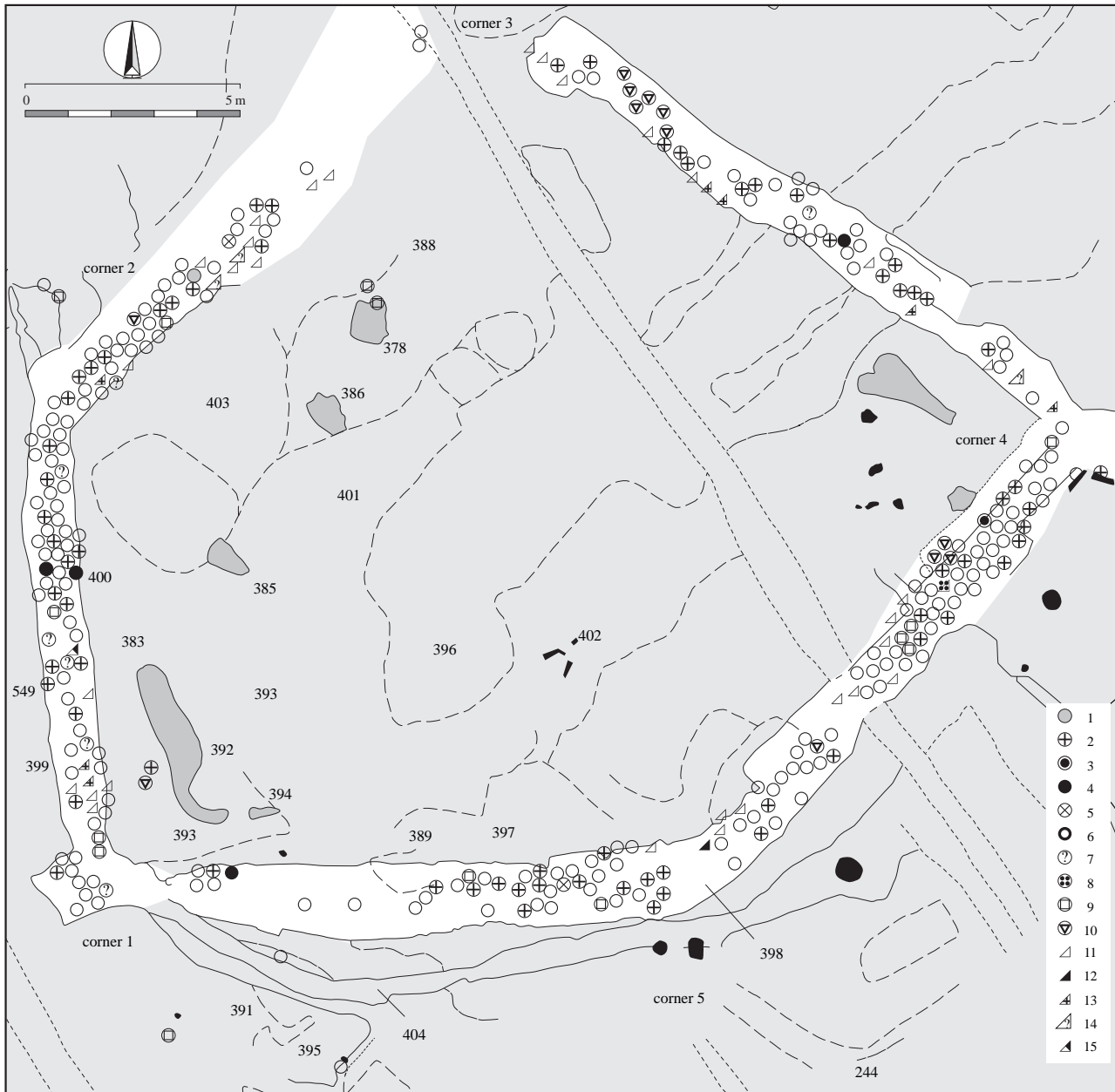


Figure 4.45 Assendelft-27 five-sided enclosure with the wood species specified. 1 = maple, 2 = alder, 3 = birch, 4 = hazel, 5 = beech, 6 = ash, 7 = indeterminable, 8 = crab apple figure, 9 = oak, 10 = willow, 11 = ash figure, 12 = oak figure, 13 = alder figure, 14 = indeterminable figure, 15 = birch figure, after Therhorn et al. 2006, figure 20 and 26.

220 Therhorn, Besselsen and Oversteegen 2006, 42-45.

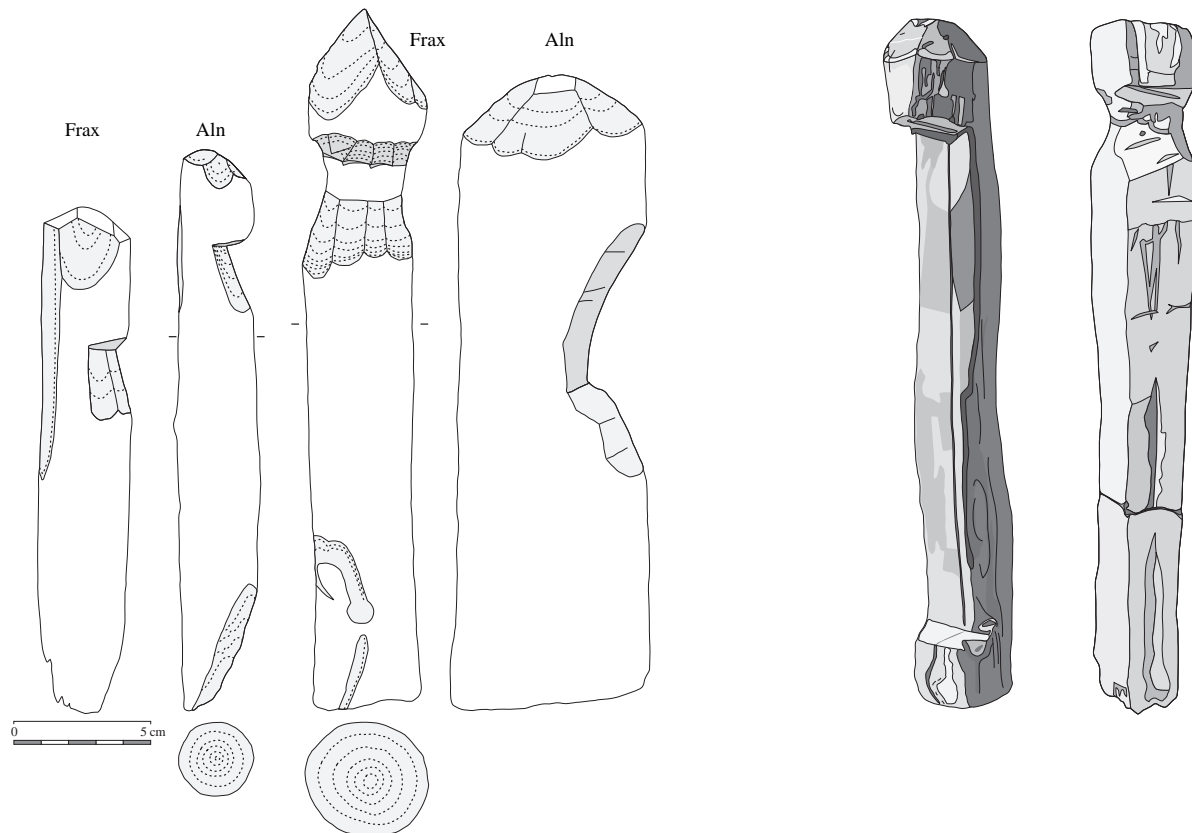


Figure 4.46 Anthropomorphic wooden figures from Assendelft-27 (4 on the left) and Oberdorla (Germany). At Oberdorla the range of anthropomorphic figures ranges from the simplest forms, as at Assendelft 27 to carved human forms with faces, arms and breasts, after Therkorn et al. 2006 p.105-106, Behm-Blancke 2003, Fototafel 44.

#### 4.7.2 DRY CONTEXTS

Another type of offering associated with settlements is the so-called house-offering. These are offerings associated with the building and/or use of the house and are found in all parts of the Oer-IJ from the Late Bronze Age onward. Most of the depositions in small pits or postholes consist of complete pots, but a golden Celtic coin, grain, a wooden bowl, and a human femur are also known.<sup>221</sup> The grain is exceptional when the other offerings are considered. The position in a dry house near or on fields may explain the use of grain in the house-offering. To the north of the Oer-IJ area a pit with about 10 kg of emmer wheat was discovered near a house.<sup>222</sup> This pit is associated with the star patterns Dog and Kneeler<sup>223</sup> which are not yet known in the Oer-IJ area.

Although the offerings in the wet-low-lying areas seem to encompass the whole spectrum of finds associated with other parts of the landscape, the grain but also sickles are absent from them. Sickles are found especially in the municipality of Heiloo, where a deposit of five sickles placed in a row in a field is the most elaborate and best known.<sup>224</sup> These sickles were probably not used for cutting grain, but for cutting sods for the preparation of fields.<sup>225</sup> These deposits seem to support the idea that offerings that use specific agricultural tools or products were not made in the wet-low-lying areas, but on the drier parts of the landscape.<sup>226</sup>

221 Examples of pots Assendelft-D, -G, -F, and -Q, Castricum-Oosterbuurt, Krommenie-3, and Velsen-Hoogovens, coin at Castricum-Oosterbuurt, grain at Velsen-Hoogovens, bowl at Assendelft-K, and a human femur at Assendelft-N.

222 Schagen-Muggenburg-1, Therkorn 2004, p.37.

223 Therkorn 2004, figure 31b.

224 The four stone and one bronze sickles were found at Heiloo-Kromme Laan and several other (fragments of) sickles were found in the surrounding area (de Ridder 1995).

225 Van Gijn 1992.

226 See also § 4.6.

## 4.7.3 RELATIVE AMOUNTS OF OBJECTS BETWEEN DIFFERENT CONTEXTS

As the differences in spectrum of finds in the different parts of the landscape do not differ much, how can the offerings be separated from other practices? An opportunity to investigate this problem has arisen at Beverwijk/Heemskerk-Broekpolder where extensive excavations covered both settlements and offering sites. Although the northern settlement is somewhat younger than the offering site Broekpolder-1 their close proximity (300 m), similar size, and partial overlap in time makes them suitable for comparison.<sup>227</sup> First of all, when just the number of artefacts is taken into consideration it becomes clear that the settlement has at least three times as much artefacts than the offering site.<sup>228</sup> This is a minimum difference as due to time pressure and research choices not all sherds were collected from the gullies in the settlement.<sup>229</sup> As archaeologists define one of the main characters of offering sites as their artefacts it is important to realise that the number of artefacts is relatively low.<sup>230</sup> When the distribution of the different artefact categories, such as wood and metal, in the settlement and offering site are analysed a striking difference comes to the fore (figure 4.47). Around 90 percent of all the wood, metal and stone, but only around twenty percent of the clay objects and bones, and less than ten percent of other objects come from the offering site. If the category clay objects is differentiated more an even greater difference appears. All the spindle whorls, loom-weight<sup>231</sup> and oven material come from the settlement. Of the Roman imports, 35 of the 39 (roof)tiles and 140 of the 162 sherds are from the offering site. Especially, the Roman sherds show a divergent pattern. In the offering site 7.5 percent of all sherds are Roman against 0.2 percent in the settlement. It is probably not the case that the settlement has so few Roman sherds because they ended up in the offering site. Other settlements in the Oer-IJ area show a similar amount of less than half a percent Roman sherds.<sup>232</sup> It seems to be the case that the offering site has an above average amount of Roman sherds. As explained in chapter 3 the sherds were most likely used at a later date, sometimes centuries later, than their production and a direct consumption date would suggest.

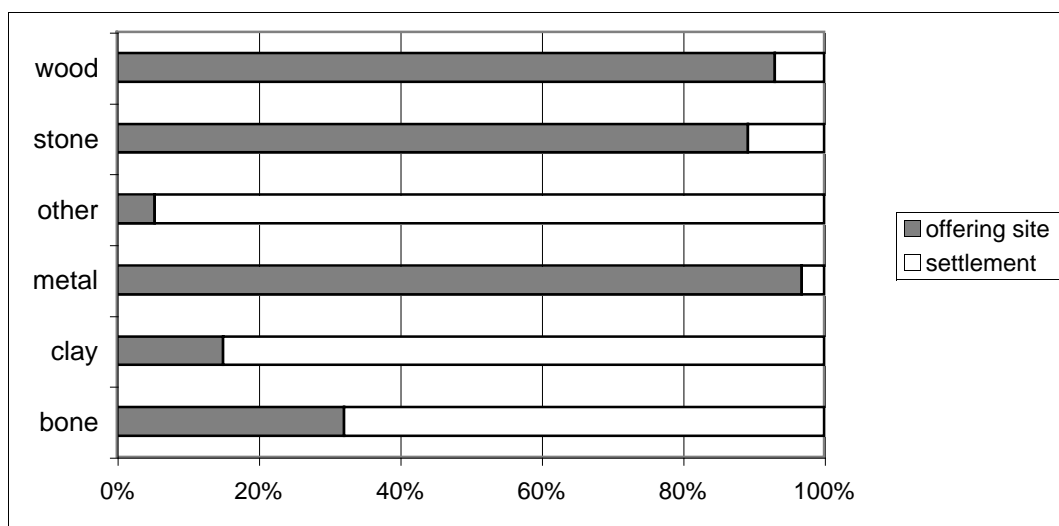


Figure 4.47 The relative amounts of the different artefact types of Broekpolder-1 and trench 49 with Roman Iron Age settlement remains, after Kok 2005, figure 8.3.

The pattern for metal objects to be deposited in fewer numbers outside the wet low-lying areas that are used for offerings can be found in other sites. For example, all but one of the thirteen fibula found at Uitgeesterbroekpolder-18 were found in the low-lying area<sup>233</sup> and De Koning remarks that nearly all the metal objects from Uitgeest-

227 The settlement is dated in the Roman Iron Age and Broekpolder-1 has especially depositions from the Early Middle Ages. Jan de Koning (specialist of the Early Middle Ages) commented, however that the known settlement assemblages of the Roman and Medieval Period in the Oer-IJ area are very similar.

228 The number of artefacts from the settlement is 13249 and from Broekpolder-1 is 4356 artefacts.

229 Kok 2005, 73-74.

230 See for example the categorizations in chapter 2 of Becker, Behm-Blancke, Geißlinger, Jankuhn and Stjernquist.

231 A possible loomweight made of stone was found in the offering site, but here the property stone may have been of more importance than the former use.

232 Kok 2005, 74.

233 Gerritsen 2000, 32.

Dorregeest came from the creek.<sup>234</sup> Again some of the Roman imports would have been deposited at a later date than their initial use.

The main points are that the amount of material is far less in the offering sites than the settlement, the spectrum of finds is similar but the relative distribution of the artefact categories is different, and specific agricultural tools and products are deposited in the higher parts of the landscape.

The dug features forming star-constellations have a close spatial association with the offerings in wet low-lying areas, as both at Uitgeesterbroekpolder-18-2 and Velsbroek-B6 the pattern horse is situated on the north-eastern side. The pits of the horse pattern mostly contain wood and bone, and at Uitgeesterbroekpolder-18-2 the pits and gullies often have no recoverable finds.<sup>235</sup> The emphasis on bones in the pits is more pronounced than in the wet low-lying areas, as they form the main part of the deposit. The selection of bones deposited, however, follows a similar pattern with an emphasis on leg and skull bones. This is especially true for Velsbroek-B6 where the only human bone in a pit is a thighbone, just like the deposits in the pool and near the long mound. Here the same emphasis in depositions seems to have been made as for the wet offering sites. In this way these elements are closely tied together in more than just a spatial sense.

#### 4.7.4 STABILITY OF LOCATION USE

The time aspect of some of the offering sites in the wet low-lying areas is very interesting due to their length of use in comparison to the settlements. In chapter 3 it was shown that from the Early Iron Age onwards the single farmsteads that are never built at the same spot form the main spatial component in the settlement structure. During the Roman Iron Age the successive farmsteads are built more often close together but overlap is rare. Although the orientation of the houses is fairly similar, the position of the houses is changing through time. Some of the offering sites are used for a long period of time and could have become focal points in the landscape. Particularly Velsbroek-B6 and Broekpolder-1 that were used over centuries mainly for ritual purposes, but also at Uitgeest-Dorregeest offerings continue over the centuries and the southeast side of Limmen is used for millennia.<sup>236</sup> In the Oer-IJ area the transition towards the Early Medieval Period is not well known. It is therefore, intriguing that the main traces of use from this period are from Uitgeest-Dorregeest and Broekpolder-1. These were the stable places in a changing world.

#### 4.7.5 SUMMARY

Although the above account of practices associated with fields and settlements is fragmented and incomplete, it becomes clear that the people of the Oer-IJ performed ritual practices in a range of parts of the landscape. Everyday life was imbued with the religious worldview they held as movement through the landscape and different tasks of the day led them along places at which ritual practices took place. They were reminded of how objects, animals, and plants were intertwined with specific practices both of a ritual and an everyday nature. The passing of the time was visible in the plants, (wild) animals, the position of the sun on the houses, specific tasks at hand and was marked in the star-patterns while specific events were emphasised in offerings made in different parts of the landscape.

Narratives were constructed binding the different, activities and parts of the landscape.

234 De Koning 2000, 32.

235 Therkorn 2004, 111-112 and 121.

236 At Limmen the single offerings are not in the same spot but close together and range from the Late Neolithic into the Late Medieval Period.

#### 4.8 AN ARCHAEOLOGICAL LAND-USE MODEL OF THE WET LOW-LYING OFFERING SITES IN THE OER-IJ AREA

As explained in the introduction to this chapter a land-use model including the low-lying areas of the Oer-IJ area is important for the conservation and management of the sites in these areas. Here an archaeological land-use model will be presented. In the next chapter this land-use model will be analysed in relation to predictive modelling and policy. In chapter 3 the main archaeological models of the Oer-IJ area have been discussed. These models relate, especially to the habitation and therefore the focus here will be the wet low-lying offering sites.

It was established that the wet low-lying sites all lie within easy walking distance of fields and settlements. Fields appear to be closer by than settlements in the border zones of the Oer-IJ and peat/marshy areas. This could be due to the general pattern that farmsteads are built on the higher grounds with the fields on the flanks next to the wet low-lying areas. As the creek at Uitgeest-Dorregeest cuts through the high area it is not surprising that the settlement is closer here. The location of the fields in relation to the wet low-lying offering sites has no special orientation. Only when the star pattern Horse is present in the fields, the fields are situated to the northeast of the offering site (figure 4.36).

In figure 4.48 a combination of characteristics of the wet low-lying offering sites in the Oer-IJ area are set against time and landscape. Several trends become visible, which appear partly to be related to the different wet elements of the landscape and partly to be related to time.

Until the Roman Iron Age all offering sites are part of the first phase of use of a place. There are two main reasons why this could be the case. The offerings can be made at a place at some distance from the settlement and fields, outside the range of daily activities. The absence of other uses locates these finds in the first phase of use of a place. This reason appears to apply to some of the small depositions of a single to a few objects. Another possibility is that a place became useable, incorporated into the everyday world, after initial offerings were made. Especially the offerings made in creeks seem to be part of this pattern, but also some of the larger depositions. The depositions in the creeks were made at the time when the creeks started to lose their water flow and the surrounding landscape started to stabilize. The larger depositions, which take place in the first phase of use, are the sites that are a focus for ritual activity over a longer period of time. In this way they become a structuring element within the landscape to which people return over a period of time to perform similar ritual actions. At these places the water also seems to become a less prominent part of the landscape.<sup>237</sup>

The offering sites that are not directly linked to the first phase of use of that specific place all date to the Roman Iron Age. The sites are situated in the border zone of the Oer-IJ, and have a medium to long period of use. A simple explanation would be that due to two millennia of habitation there were no empty spots left close to the Oer-IJ. The border zone of the Oer-IJ has a very dynamic character; from tidal salt water, with sometimes strong eroding effects, it turned into a shallow fresh water lake reversing its flow from west to east. The border zones were becoming increasingly wet. Here the growing wetness may have led the people to see these areas as suitable places for offerings to which they could return over time when the need arose. The continuous use of the offering sites when all other activities in the direct vicinity diminished makes these places into spots that people have to return to passing older areas of activities. The degree of wetness was influenced by the seasons and could have an effect on the moments the offerings were performed.

Until the Roman Iron Age single depositions are known from peat either at a distance or close to the (former) coastal barriers. From the Middle Iron Age onward the offerings consist of a combination of objects. The offering of a combination of objects also took place during the Late Neolithic into the Middle Bronze Age. It is unclear why these combined offerings are unknown from the Late Bronze and Early Iron Age as offerings in settlements in the Oer-IJ area show that different objects were used. The number of offering sites in the wet low-lying parts of the landscape from this period is small; two to three at most. It could be that during this period ritual activities focused on the fields and farmsteads as evidenced by several sites.<sup>238</sup> The reason for this shift in attention is unclear as in all periods offerings in both the wet low-lying areas and the fields and settlements are known.

237 At Velsbroek-B6 a channel had to be dug in the last phase of use to create open water. And the open water at Velsbroek-Westlaan had turned into a marshy area.

238 For example, Assendelft-Q, Heiloo-Kromme Laan and Velsbroek-Hofgeest.

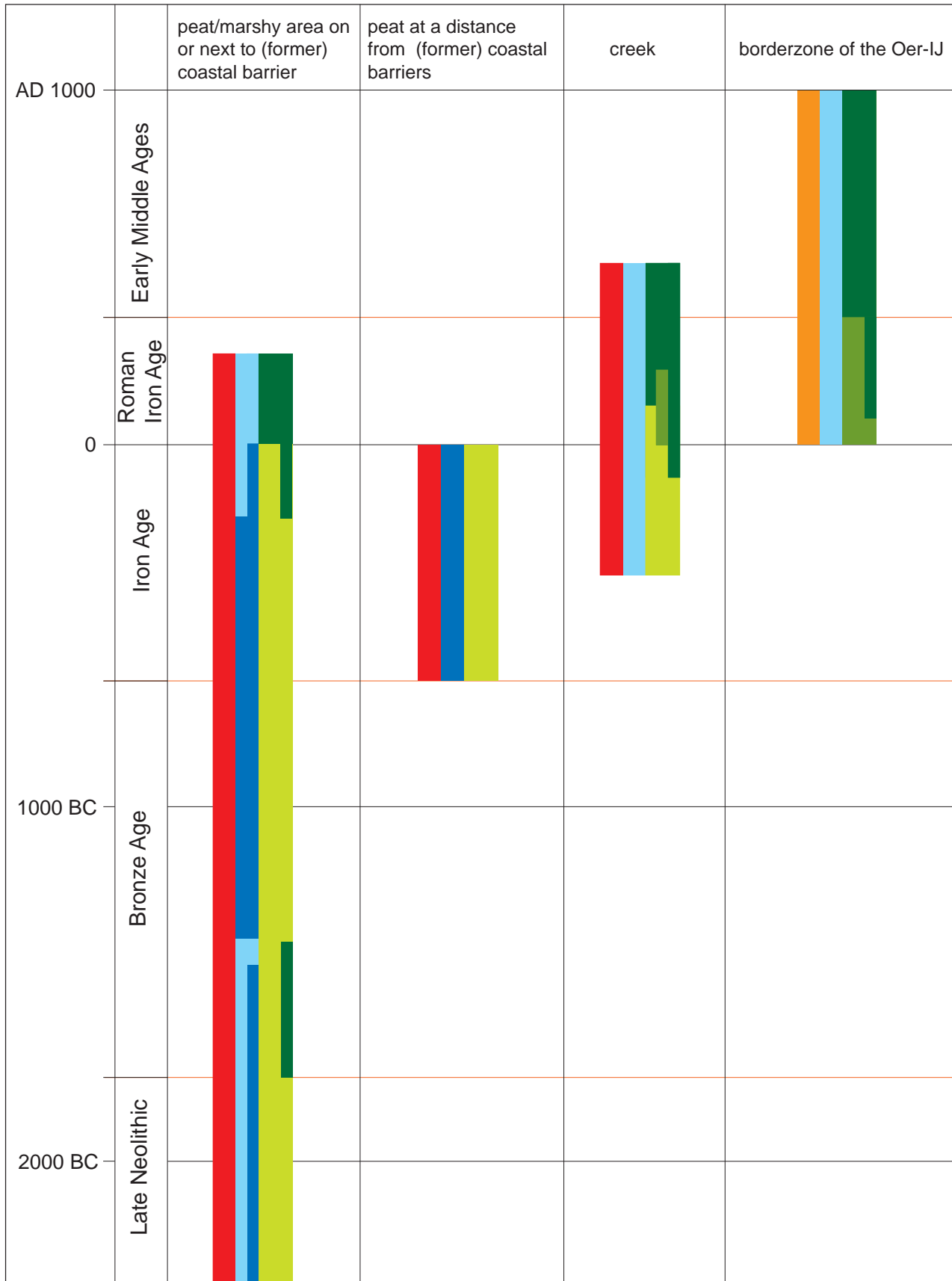


Figure 4.48 Model of the offering sites in the Oer-IJ area. Left bar: red means depositions in first phase of use, and orange means deposition in a later phase. Middle bar: dark blue means a single object deposited, and light blue means a combination of objects deposited. Right bar: light green means short use period, green bar means medium use period, dark green means long use period.

Increased marine activity cannot explain the lack of combined offerings as this only starts in the Early Iron Age. However, the re-appearance of combined offerings in the Middle Iron Age coincides with the decrease of marine influences. This decrease could have broadened the possibilities, as there is a clear preference for fresh water to put the offerings in.

As stated a wide range of objects could be considered suitable for offering in the wet low-lying areas during most of the periods under study. The difference between the objects in the settlements and offering sites is mainly one of relative amounts instead of specific items. Even though there is no exclusive selection, a preference for specific types of objects can be shown. Of the animals cattle, horse, and dog are preferred and especially the head and leg elements. This preference for legs and heads is even more particular when human bones are placed in the offering sites. Hard, red and white imported objects, such as stone, pottery, and (roof)tiles are placed in the offering sites. In this way foreign materials with qualities, which are of importance in a local context, are incorporated into the landscape. Different species of wood are selected from different part of the landscape binding the wet and dry areas of the Oer-IJ area in the offerings made. The binding of wet and dry parts of the landscape also takes place in the long mound and low embankment where sand, wood and peat/sods are layered one on top of the other. Through the use of specific colours, elements from the different parts of the landscape, specific body parts, and animals complex narratives were constructed in the wet low-lying offering sites.





## 5. PREDICTING THE POSSIBLE LOCALITIES OF WET LOW-LYING OFFERING SITES IN THE OER-IJ AREA: A VIEW TOWARDS THE FUTURE

A decade ago it was estimated that since 1950 a third of the Dutch soil archive was destroyed due to building activities and intensive agricultural.<sup>1</sup> Since then many new large scale building activities have taken place<sup>2</sup> and intensive agriculture occurs in previous pastoral areas<sup>3</sup>. The Oer-IJ area has not been left untouched by these developments, especially as it is situated in a densely occupied part of the Netherlands with a lot of pressure on all available space. It has become evident that the soil archive needs to be managed and protected. This is true for other countries as well and in 1992 the European Council agreed upon the Convention of Valetta. The Convention of Valetta – better known as Malta – ‘recommends the preventive policy within the framework of environmental planning procedures for the protection of the archaeological heritage.’<sup>4</sup>

The government should ratify the Valetta Convention in 2007. This ratification has, however, been postponed several times, so in the mean time work is carried out in the spirit of Malta. This comes to the fore in the national policy in respect to the policy document Belvedere, which was implemented in 1999. The policy document Belvedere was made with the central purpose that cultural-historic identity is a guiding principal for the environmental planning and national policy will provide suitable conditions for this guiding principal.<sup>5</sup> The Belvedere policy was further embedded in the ‘Vijfde Nota Ruimtelijke Ordening’<sup>6</sup> in 2001, which makes it a part of mainstream environmental planning.

The Belvedere policy and the specific problems associated with archaeological-historical aspects have led to the ‘NWO<sup>7</sup>-research programme’ ‘Bodemarchief in Behoud en Ontwikkeling’<sup>8</sup> (BBO) with the specific goal of making a scientific contribution to the current policy issues of embedding the management of archaeological-historical resources into the environmental planning process.<sup>9</sup>

In this chapter predictions will be made concerning the location of possible offering sites in wet low-lying areas. These predictions can be used in archaeological heritage management in the Oer-IJ region. The value of these offering sites as a characterization of the Oer-IJ region and the possible connections to the present day landscape and its users are explored.

### 5.1 PREDICTIVE MODELLING

As part of the BBO-programme the project ‘Strategic research into, and development of best practice for, predictive modelling on behalf of Dutch Cultural Resource Management’ has taken place. The aim of the project is to ‘evaluate and improve existing methods and techniques for the prediction of archaeological site location’ and to ‘contribute to a firmer embedding of archaeology in planning schemes’.<sup>10</sup> Their report ‘A baseline for predictive modelling in the Netherlands’<sup>11</sup> is used here as a guide for the development of a predictive model of the wet low-lying areas of the Oer-IJ area and the wider landscape. It will become clear that it cannot be a complete predictive model at this stage, but that it may guide future research in the Oer-IJ area. I will not repeat their arguments here, but focus on the elements that are of importance for the predictive model for the Oer-IJ area.

The minimum definition of predictive modelling as defined by Kohler and Parker still stands: ‘a technique used to predict, at a minimum, the location of archaeological sites or materials in a region, based either on the observed pattern in a sample or on assumptions about human behaviour.’<sup>12</sup> This can be done from an

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1 Groenewoudt and Bloemers 1997, 119.

2 For example, VINEX-housing projects and two main railroads: Betuwelijn and HSL-lijn.

3 Van Eerden 2004, 17.

4 Bloemers 1999, 320.

5 Feddes ed. 1999, 7.

6 Translation: Fifth Policy Document on Town and Country Planning; Key Planning Decisions.

7 The Netherlands Organisation for Scientific Research.

8 Protecting and developing the Dutch archaeological-historical landscape.

9 Bloemers 2001, 2.

10 Kamermans et al. 2005, 19.

11 van Leusen et al. 2005.

12 Parker and Kohler 1986 cited in van Leusen et al. 2005, 26.

academic point of view where the understanding of past human behaviour is the main goal or from an archaeological heritage management perspective in which the prediction of the presence or absence of any sites and their subsequent management is of importance. There is, however, a level of mutual influence. In order for predictive modelling to develop it is important that we understand how people in the past interacted with their environment, which is a scientific goal. Archaeological heritage management will benefit from better predictions as they would be more accurate. Furthermore, the information gained from data collected during an excavation within the archaeological heritage management process can add new data for the testing of the academic models.<sup>13</sup> As the financial resources and capacity to excavate or preserve all archaeological heritage are limited, choices have to be made. Therefore the archaeological heritage management process can be divided into valuation and selection. In which the former says something about the quality of the archaeological resource, which is evaluated by archaeologists and the latter indicates the selection of the actions that need to be performed made by the proper authorities on the basis of the information given, their policy and other aspects within the environmental planning process.

## 5.2 PREDICTING OFFERING SITES IN THE LOW-LYING AREAS OF THE OER-IJ AREA

The aim of the predictive model for the Oer-IJ area is to predict the locations with offerings in the wet low-lying parts of the landscape. The predictive model can be used as a tool in archaeological heritage management and at the same time test the scientific model of the Oer-IJ itself. A better scientific model will lead to better predictions and thereby strengthen its usability in cultural heritage management. Questions that need to be answered in relation to the predictive model can have a scientific and/or archaeological heritage management background. These different questions have the advantage that when the predictive model is tested it is easier to estimate what part of the prediction worked or failed and how the model should be modified for further use. For the wet low-lying areas of the Oer-IJ area the following questions have been put forward (figure 5.1). Some of the questions asked here can be answered, but others should be answered by future research.

	Scientific	Archaeological Heritage Management
1	Where are the known offerings in low-lying wet areas?	
2	How can these offerings be characterized?	
3	Is there evidence for other uses of the wet low-lying areas?	
4	What is the relation between the offerings and other uses of the landscape?	
5	What is the palaeogeographical nature of the wet low-lying parts of the landscape?	
6	What was the positioning of land and water in relation to the offerings?	
7	What did the plant life look like in the low-lying wet areas with offerings?	
8	Are the conclusions drawn from coring and used in the model reliable?	
9	What is the predictive value of the model?	
10	How can offerings in the wet low-lying areas be detected?	
11	Are the offering sites suitable for preservation and management?	
12	Are other land uses in the wet low-lying areas suitable for preservation and management?	
13	Can suggestions be made for future prospection methods?	
14	What are the indicators from an AHM perspective?	

Figure 5.1 Fourteen questions in relation to the predictive model. The horizontal positions within the table indicates in which area of interest the question belongs.

### 5.2.1 WHERE ARE THE KNOWN OFFERINGS IN LOW-LYING WET AREAS?

Offerings are made in peat/marshy areas on or next to the old dunes and former coastal barriers, the edge of the

<sup>13</sup> A view advanced by Groenewoudt and Bloemers 1999, 120.

peat blankets in the east, creeks, and the border zone of the Oer-IJ. These areas, except the first, are, however, not used throughout all periods.<sup>14</sup> Predictions should therefore be period specific. Salt water also seems to be avoided.

#### 5.2.2 HOW CAN THESE OFFERINGS BE CHARACTERIZED?

The offering sites in wet low-lying areas have a diverse character, ranging from one to hundreds of artefacts. The density of artefacts generally remains, however, low in comparison to settlements.<sup>15</sup> The offerings consist of a wide range of artefacts that could also be found in settlements, but in different relative amounts. The probability that a site is an offering site increases when there are several artefacts that occur more frequently in offering sites than in settlement debris, such as metal artefacts, complete vessels, stones, selections of wood (from different parts of the landscape) and human bone (especially from the leg, arm and head). Furthermore, the artefacts are mostly situated in natural layers as they are deposited in wet contexts. Indicators for cultural layers, such as small pieces of pottery, daub or charcoal are mostly absent.

#### 5.2.3 IS THERE EVIDENCE FOR OTHER USES OF THE WET LOW-LYING AREAS?

Wet low-lying areas were not used exclusively for offerings. A range of activities could take place. Some of these areas were used for waste disposal.<sup>16</sup> And in the drier periods these areas could be used as grazing grounds. There is also evidence of peat-cutting in the low-lying areas, such as filled in creeks or the border zone of the Oer-IJ.<sup>17</sup> These wet areas are attractive to wildlife and therefore they would be used for fishing and hunting birds. The wet low-lying areas were also important for an essential part of the farm buildings, namely the roof. Large quantities of reed had to be gathered when a roof needed to be thatched or maintained. All these different activities show that the people in the Oer-IJ area used the wet low-lying areas in multiple ways. Not all these activities would necessarily have left direct traces, like the reed cutting, but were of importance for their subsistence.

#### 5.2.4 WHAT IS THE RELATION BETWEEN THE OFFERINGS AND OTHER USES OF THE LANDSCAPE?

Offerings were made in distinct but not necessarily separate places. It appears that the offering sites are at a close distance from field and settlements. This is certainly the case with the somewhat larger offering sites with multiple deposits. In a number of cases the offerings precede other uses of the landscape, especially the offerings in creeks. Filled in creeks in areas with later occupation are therefore of interest. When the star pattern Horse is discovered, the area to the southwest is likely to contain offerings in a wet area.<sup>18</sup>

#### 5.2.5 WHAT IS THE PALAEOGEOGRAPHICAL NATURE OF THE WET LOW-LYING PARTS OF THE LANDSCAPE?

The wet low-lying parts of the landscape are the result of different geological/ecological processes. And the term low-lying is not absolute in the sense that some parts are higher than others but are still considered low-lying. The sea has had a major effect on the region as it was only when the coastal barriers were formed and later the old dunes that the first high-lying areas appeared.<sup>19</sup> The old beach plain essentially became a low-lying area. It seems a paradox that on the high-lying old dunes wet low-lying areas developed such as peat and marshy pools. This came about because the old dunes had a diverse relief. Small dunes and valleys made it

14 See chapter 4 figure 4.48.

15 See chapter 4 § 4.7.3.

16 For example, Uitgeesterbroekpolder-54. This is considered waste disposal as there is no clear selection or a specific placement of objects recognisable.

17 For example, Assendelft-56 and Limmen-de Krocht.

18 See chapter 4 figure 4.36.

19 See chapter 3 § 3.3.1.

into a landscape with much variation within a small area. The dune valleys were at most a few metres lower, but this meant that they were much wetter than the dunes. And in these low valleys peat and marsh developed which were sometimes covered by drift sands. The absence or presence of plants, also due to human action such as ploughing, would have been a major influence on the amount of drift sands that were able to cover these low-lying areas.

Other wet low-lying areas are the result of creeks and the Oer-IJ cutting into the landscape. These waterways were under the influence of the sea level, the tidal difference, and the amount of water that needed to be drained off from the dunes and the peat blankets. The former tidal areas and beach plains that were not covered by coastal barriers and/or old dunes slowly filled with peat and formed large peat blankets that eventually rose above the level of the old dunes. These first wet low-lying areas turned into wet high-lying areas. Some of these high peat blankets were then used for peat-cutting, during which new low-lying areas were created.

#### 5.2.6 WHAT WAS THE POSITIONING OF LAND AND WATER IN RELATION TO THE OFFERINGS?

As the offerings sites under study are in wet low-lying areas the positioning of land and water may seem a strange question. But in a dynamic landscape such as the Oer-IJ estuary the borders between land and water can be flexible. The offerings in peat/marshy pools on or near old dunes appear to be close to dry land, when it is possible to reconstruct the landscape. This is either the case because the peat/marshy pool is of a small size and therefore the dry land surrounds it. Or the offerings were placed at the edge or at a short distance from dry land when the peat/marshy area is larger. The offerings in creeks are in some cases close to dry land as the creeks are only a few metres wide with sandy levees. But the creeks going through the peat blankets are surrounded by dryer but still wet land. Here the boundary would be between open water and a wet land. The distinction between wet and dry dissolves when the two offerings in the peat blanket area are considered. Here, however, it could have been that small pits were dug, which created small spots of open water in a wet landscape. Both options should be considered.

The offerings made in the border zone of the Oer-IJ were under the influence of a fluctuating border between wet and dry land. The gully digging along some of the sites indicates that there were wetter and drier periods as digging under water would not be probable. The border between land and water or just of the shore seems to be good places for offerings.

#### 5.2.7 WHAT DID THE PLANT LIFE LOOK LIKE IN THE LOW-LYING WET AREAS WITH OFFERINGS?

Where botanical samples have been taken from the offering sites these indicate the presence of fresh water plants that flourish in stagnate or slow moving open water, such as common water-crowfoot (*Ranunculus aquatilis*) and duckweed (*Lemna* sp.).<sup>20</sup> Plants that grow in brackish and/or salt water can be present due to the fact that the creeks in the area cut through saline deposits of soil in which these pollen would be preserved. The offering sites in marshy pools or peat would have plants that are consistent with this environment. However, it is not always clear if the peat was present at the moment of deposition. It could just as well be the case that offerings were made in open water that filled up with peat at a later date. The remains of plants that grow in open fresh water are perhaps the best indicators for suitable environments for offerings.

#### 5.2.8 ARE THE CONCLUSIONS DRAWN FROM CORING AND USED IN THE MODEL RELIABLE?

This question has to be answered in future research that explicitly looks at the results of coring. The presence of sites indicated by coring seems to be somewhat reliable. The nature of the sites is, however less clear. The presumed absence of sites in areas where coring has taken place without finding traces of archaeology, seems to be flawed in the Holocene area. On the one hand due to the depth of the older features, as coring is usually done by hand the depth of the core is usually less than two metre. On the other hand, due to erosion, not all settlements have a (thick) layer of debris, which is one of the main selecting criteria for establishing

<sup>20</sup> Therkorn et al. forthcoming.

the presence of a site by coring. In the past few years several sites have been discovered in the Oer-IJ area after coring had taken place without any positive results.<sup>21</sup> There would be a very small chance to find an offering site through coring.<sup>22</sup> Due to the lack of a continuous layer of artefacts and the natural environment the artefacts are placed in.

#### 5.2.9 WHAT IS THE PREDICTIVE VALUE OF THE MODEL?

This question can only be answered in future research. At the moment the model is only of a possibilistic nature. This means that only places are predicted where offerings could take place and not, as in a probabilistic model, what the actual chance is of finding an offering site. The number of sites yet discovered are too few to make any quantitative statements. And just as important little research has taken place that establishes the absence of offering sites in wet low-lying areas as these areas have not often been part of excavations.

#### 5.2.10 HOW CAN OFFERINGS IN THE WET LOW-LYING AREAS BE DETECTED?

In order to detect offerings in wet low-lying areas trial trenches have to be dug. As geology is very important in determining where the border between land and water was a trench has to be made at right angles with the presumed former water's edge. When the geology is understood and fresh water and/or peat was present in the past a trench along the former water's edge/peat and in the former water/peat near the edge would enhance the chances of finding offerings. As it has become clear that these offerings were made in proximity of settlements and fields, the starting point should be from known or presumed settlements and fields to the wet low-lying areas. The quality of this latter data will have an impact on the chances of finding offering sites. The presence of finds characteristic for offerings, such as human bone, metal artefacts, stones, wood and/or complete pots, indicates the possible presence of an offering site.

#### 5.2.11 ARE THE OFFERING SITES SUITABLE FOR PRESERVATION AND MANAGEMENT?

Offering sites are suitable for preservation under certain conditions. As the main aspect of the offering site is material, the conditions of the site have to be kept constant. Lowering the water table effects the preservation of the organic material as oxidation processes start to take place. Altering the acidity of or the concentration of chloride in the environment influences the preservation of metal.<sup>23</sup> The site would have to be monitored, in order to detect and/or counteract changes in the conditions.

#### 5.2.12 ARE OTHER LAND USES IN THE WET LOW-LYING AREAS SUITABLE FOR PRESERVATION AND MANAGEMENT?

Some uses of the wetlow-lying areas may be worth preserving. Although we have no evidence of this yet, the remains of structures associated with fishing, the control of water, crossings of water, or large boats would be worth preserving. Again as these phenomena are often associated with organic material the water level has to be managed. Furthermore we have little knowledge of prehistoric peat-cutting, but evidence for this practice starts to appear. In order to be able to understand these kinds of traces in the future larger areas need to be preserved. In an area where there is a great pressure on the available land this may not be possible. Other uses of wet-low-lying areas may not be as suitable for preservation as they leave a minimum of traces.

21 For example, Uitgeest-Waldijk.

22 See also, Tol et al. 2004, 21.

23 Smit 2002, 113.

## 5.2.13 CAN SUGGESTIONS BE MADE FOR FUTURE PROSPECTION METHODS?

In order to understand the landscape more fully prospection has to widen its scope to all elements in the landscape. At the moment the detection of settlements remains the main goal of prospection. This leads to a bias towards dry high lying areas at an early moment in the prospecting process. This bias is enlarged when core boring forms the main part of the prospection in the field. In the Holocene area trial trenches should be part of the field prospection in order to find the remains of a broad spectrum of activities. And as the landscape is layered they should not stop at the first sign of archaeological traces. It is essential to assess how many levels of occupation can be distinguished and what their quality is in order to plan the preservation or excavation of the archaeological remains.

## 5.2.14 WHAT ARE THE INDICATORS FROM AN AHM PERSPECTIVE?

Preservation of the archaeological remains within the landscape, whether they are visible or not, is one of the main goals of archaeological heritage management under the convention of Valetta. It is therefore not only of importance to assess whether the archaeological remains are in good condition, but also if this good condition can be sustained. In the Oer-IJ area this is of special importance in relation to the organic remains, which give the area its high archaeological value as the presence of organic remains is far less to non-existent in non-wetland sites. From an AHM perspective the presence of organic remains should therefore be seen as valuable. And if the conditions can be controlled the archaeological remains should be preserved. If the conditions cannot be maintained excavation should be advised as these organic remains contain information that cannot be gathered from non-wetland sites. Wetland sites are, however, more expensive to excavate than non-wetland sites as the excavation and analyses of the material is a more specialised and time consuming job.

Another element that should be considered is the rarity of the archaeological remains and/or its informative value. Offering sites in wet low-lying areas, especially of the Neolithic and (Roman) Iron Age, are not well known phenomena within Dutch archaeology. Although more knowledge is gained throughout the last few years, the preservation of this type of sites is not yet part of the general practice. This may be partly due to the difficulty of detecting this type of site during prospection and the lack of recognition when this type of site is encountered. Therefore, when the presence of an offering site in wet-low-lying conditions is suspected either by the position and/or the character of the archaeological remains, the preservation of the site within the landscape should be a priority.

## 5.3 THEMES VAN LEUSEN ET AL.

In the baseline report of Van Leusen et al. six themes are put forward that they perceive as potential directions for future research.<sup>24</sup> In this thesis these themes are explicated in order to make it as clear possible what is done. In this way the predictions can be evaluated in a more straight forward manner.

## 5.3.1 QUALITY AND QUANTITY OF THE DATA

The Oer-IJ area comprises about 250 km<sup>2</sup> of which about 50 km<sup>2</sup> is covered by younger dunes<sup>25</sup> and 30 km<sup>2</sup> have been researched either by prospection or excavation.<sup>26</sup> The research is mapped on the boundaries of fields and the area is therefore larger than the actual researched square metres. Furthermore due to access problems not all fields within the fieldwalking or core boring area have been evaluated. The 30 km<sup>2</sup> is therefore a maximum number.

<sup>24</sup> Van Leusen et al. 2005, 69.

<sup>25</sup> The younger dunes are a protected environment in which the archaeological remains are covered by metres of sand. Intrusive nature development and water management can, however affect archaeological remains.

<sup>26</sup> Lange, Besselsen and Van Londen 2004, compilation of the map information on research and research taken place at a later date.

About 21 km<sup>2</sup> of the Oer-IJ area has pre- and protohistoric monuments that are listed on the map of archaeological monuments (AMK) as released by the ROB.<sup>27</sup> The size of the archaeological monuments is determined by the present-day field boundaries. The archaeological monuments partly overlap with the researched areas.<sup>28</sup> It has to be remembered that of most of these archaeological monuments the exact nature is not known. Most of them are based on evidence taken from core boring or field observations. Furthermore, they only have limited protected status. The indicated archaeological value of these monuments is, however, in 62 cases high or very high. 80 monuments are valued as settlements of which some with platforms or fields; three monuments are valued as fields; one monument is valued as a grave; four monuments are valued as forts<sup>29</sup>; and one monument has no specific value. The number of visible archaeological monuments is very limited and comprises one burial mound<sup>30</sup> and several raised platforms.<sup>31</sup> Only seven archaeological monuments are really protected from direct destruction by building activities as they are either provincial or state monuments.<sup>32</sup> State monuments are, however, usually not protected from agrarian activities. At the provincial level a policy is being developed that should also protect a number of monuments from the AMK from destruction by normal agrarian activities.<sup>33</sup> The provincial government has planned to make two more areas into provincial monuments.<sup>34</sup> In general the presence of a terrain on the AMK only means that certain measures have to be taken when the land is developed. In essence the cycle of prospection, evaluation and decision-making has to be followed, which can lead to protection or excavation of the site. Besides these monuments nearly the entire Oer-IJ area falls within the middle or high value range on the Indicative Map of Archaeological Values (IKAW).<sup>35</sup> This gives the whole area a nearly similar protection as the archaeological monuments on the AMK, as it is practice that these areas are researched before building activities take place. The northern former coastal barriers falls within areas of high archaeological value, but none of the better protected state or provincial archaeological monuments is situated on these northern former coastal barriers.

Period	Number of archaeological monuments (AMK)	Number of find spots
Neolithic	8 (9%)	7 (1%)
Bronze Age	11 (12%)	42 (8%)
Iron Age	49 (55%)	175 (34%)
Roman Iron Age	80 (90%)	391 (78%)

Figure 5.2 The number of archaeological monuments (AMK) and the number of findspots per period. In brackets the percentage the period takes in relation to the total number of monuments and findspots respectively. As monuments and findspots can contain more than one period the total percentage is above 100.

Most of the 89 archaeological monuments (AMK) cover multiple periods (figure 5.2). It may seem strange that there are more registered monuments dated to the Neolithic than there are findspots. This is partly due to the lack of publication of some of the findspots from this period, but also due to the nature of some of the archaeological monuments, which are expected to contain Neolithic remains on the basis of geology. The Oer-IJ area has 499 recorded find spots dated to the pre- and/or protohistoric period.<sup>36</sup> This averages to two known find spots per square kilometre. The quality of the data from these findspots differs considerably as

27 Lange, Besselsen and Van Londen 2004, additional maps 1-3 and information from [www.kich.nl](http://www.kich.nl) (14-4-2006).

28 See additional maps 1-4 in Lange, Besselsen and van Londen 2004.

29 There are only two forts expected but the different AMK terrains refer to different fields.

30 Heemskerk-Schepelenberg, this burial mound could be dated to the Roman Iron Age or the Early Medieval Period.

31 Uitgeesterbroekpolder. Here several small platforms can be discerned in the landscape.

32 Castricum-Kronenburg (AMK-1866 and 1879, provincial monument), Heemskerk-Broekpolder (AMK-9209), Heemskerk-Schepelenberg (AMK-1391), Krommenie-Woudpolder (AMK-1319), part of the Uitgeesterbroekpolder north of the provincial road (AMK-1316, 1317, 1318), part of Uitgeesterbroekpolder-18 (AMK-1315), and Velsen-fort 2 (AMK-5845).

33 Van Eerden 2004.

34 Besides Castricum-Kronenburg, part of the Uitgeesterbroekpolder and Castricum-Bleumerweg have recently become provincial monuments, which includes an agrarian protection. Rob van Eerden personal communication.

35 This map is produced at the State level by the ROB.

36 See appendix 3. This number is based on the Central Archive for Archaeology (Archis), published reports, and the journals *Westerheem* and *Holland: Archeologische kroniek van Noord-Holland*. Counted at the end of 2005.

they range from a single sherd to complete excavations of settlements, fields, offering sites and other features covering several hectares and multiple periods.<sup>37</sup> The tendency for the smaller findspots is that they are dated in a wide range, due to the difficulties involved with dating local pottery.<sup>38</sup> The smaller the findspot the more chance there is that the date range is too wide as they are dated to the main period(s). Sixty percent of all the Roman Iron Age findspots consist only of sherds, against ten percent of all the Neolithic and Bronze Age sites. This means that although there are fewer findspots from the older periods, the information from these sites is more diverse than that of most of findspots dated to the Roman Iron Age. The reason for this difference is that Neolithic and Bronze Age findspots are rarely discovered during fieldwalking or core boring, but are usually discovered when the soil is disturbed by digging activities either during excavations or building activities. At the same time most of the (Roman) Iron Age findspots are discovered during fieldwalking and core boring. This bias is enhanced by the location of most of the large fieldwalking and core boring campaigns<sup>39</sup>, which take place in the peat areas and former beach plains that were probably not or less intensively used during the Neolithic and Bronze Age.

As shown in chapter 3 and 4, large scale excavations give the most useful information on the use of the landscape as a whole. And most of the information used to infer the cultural rules underlying the predictions about the use of wet low-lying areas comes from these large scale excavations. The prediction of possible locations where offerings could have taken place in the past is, however, mainly based on evidence from core boring and fieldwalking combined with geomorphogenetic and paleogeological maps. When unchecked the predictions of locations with possible offerings have a strong bias towards areas that have been part of fieldwalking and core boring campaigns.

### 5.3.2 ENVIRONMENTAL INPUT FACTORS

The Oer-IJ area is a dynamic landscape and therefore the environmental input is essential. Palaeogeographical and geomorphogenetic maps of different periods of time have to be made in order to understand the landscape and its possible uses. Each period should have its own predictive map as the environment changes through time. The palaeogeographical maps are reconstructions of the landscape and are essential for predicting phenomena in specific periods. The geomorphogenetic map shows how the Late and Roman Iron Age landscape was formed as it is present under the topsoil together with modern large built up areas and main roads. This map is important for the predictions relating to the later periods and to estimate the possibility of survival of the predicted archaeology from all periods.

In a Holocene landscape such as the Oer-IJ area there is a large diversity of landscape elements that influence the potential use of each place. As this diversity appears at a relatively small scale, not only specific geological units, but also the combination of different geological units within a short distance of each other may influence the locational choices made. The geological maps should not be seen purely as a representation of the natural background, as it has become clear that people in the Oer-IJ area altered their landscape on an impressive scale.<sup>40</sup> In the estuary landscape there are different types of water and it is important to reconstruct the character of the water. Not only whether it is tidal, flowing or standing water, but also whether it is salt, brackish or fresh water. The characteristics of the water are especially important for the predictions of locations suitable for offerings in the Oer-IJ area.<sup>41</sup>

37 262 known sites consist only of sherds gathered during fieldwalking or coring.

38 I do not go into the debate about the date of a sherd and its relation to the date of the site as this goes too far for the type of evidence that comes from coring and fieldwalking.

39 For Example, Ruilverkaveling Limmen-Heiloo (Ravesloot and Perk 1987), Ruilverkaveling Uitgeest (Ravesloot 1989) and the fieldwalking activities of the AWN-group Zaanstreek.

40 As shown in chapter 3 and 4, the position of the border of the oligotrophic peat is probably the result of peat-cutting, instead of natural processes.

41 See §5.2.1.

## 5.3.3 INCLUSION OF SOCIO-CULTURAL FACTORS

Van Leusen et al. state that ‘– any activity resulting in recognisable archaeological remains is normally performed within the context of a fully developed and continually changing, physio-cognitive landscape.’<sup>42</sup> This statement is relevant for the Oer-IJ area as it is partly true and partly points to the exceptional situation of the area. Usually archaeological narratives about prehistory do not have a clear beginning. We can add another period and start earlier in time. What makes the Oer-IJ area exceptional is that we cannot speak of a fully developed landscape at all moments in time as the narrative starts around 2500 BC. This does not mean that people’s cognitive perception of the landscape would have been underdeveloped or absent. The landscape elements in itself would have been familiar, but these would not all have had man-made physical alterations, such as houses or fields. These socio-cultural elements would be absent. And this process of new land coming into being would last throughout prehistory. But even once the land was taken into use, drift sands sedimentation and erosion would erase or obscure the man-made elements in the landscape. This gives us the opportunity to look at how people used land with no socio-cultural elements in combination with subsequent use when these areas are developing. This could tell us something about people’s preferences and perceptions as choices have to be made when new areas are developed that are not as dependent on the existing physical elements such as, houses and fields, but that should fit within the socio-cultural rules of the community. If these socio-cultural rules would become clear to us, predictions would be made more on perceptions of the landscape than just on an extrapolation of known archaeological findspots. Or in the words of Van Leusen et al.: ‘Rather than the quality of the physical and cognitive map layers themselves, it may therefore be that the quality of the sociological-behavioural rules governing the actions and reactions of a society will become paramount in future predictive models, which will then become based on simulations rather than on locational analysis.’<sup>43</sup> It will be important to elaborate on the complex-type as it is now used. For example, when the AMK-monuments in the Oer-IJ area are considered 76 percent is defined as settlement of undetermined nature and all the platforms are described as a settlement ‘terp’<sup>44</sup> even though these platforms are used in a multiple way.<sup>45</sup> During prospection all findspots with more than five sherds seem to be evaluated as settlements. Other uses, like fields are defined only occasionally. For predictions it is on the one hand important that the evaluation is as specified as possible, but on the other hand the lumping together of all findspots into settlements gives a very undifferentiated picture of the landscape and may lead to disappointment when no actual houses are found during later excavations. Another downside to describing most findspots as settlements from a landscape perspective is that the findspots are generally seen as having a distinct size and that this is all that needs to be protected or excavated. As Therkorn states: ‘“Sites’ or ‘off-sites’ are really not proper designations within this region. None of the excavated areas, however large, have encompassed all recoverable features for any one ‘period’.’<sup>46</sup> If the focus remains on settlements we get more information on houses, but we have a less clear idea on how they are placed in the landscape in relation to other activities. The perception of the landscape remains one-dimensional in this way and it makes it more difficult in the future to predict the entire use of the landscape.

## 5.3.4 HIGHER SPATIAL TEMPORAL RESOLUTION

The small scale differences in the landscape of the Oer-IJ area asks for a high spatial resolution when predictive maps are made. The new geomorphogenetic or geolandscape map made of the Oer-IJ area as part of this study has 34 different units of description. In order for the map to have enough detailed information a scale of 1:15,000 is advisable at least at the stage of construction. Due to the size of an area the map can be printed on a higher map scale (A3-size). At a higher map scale the geomorphogenetic units could be less clear and the findspots that are plotted on the map could start to cluster. At a map scale of 1:15,000 it becomes difficult to put the entire Oer-IJ at one map and therefore a cut out of the most important area for prediction and possible preservation of sites has been made. This cut out is made on the basis that nearly the complete area south of

42 Van Leusen et al. 2005, 58.

43 Van Leusen et al. 2005, 58.

44 A terp is a man-made mound used for habitation.

45 Therkorn and Abbink 1987, for example table 8.1.

46 Therkorn forthcoming, ‘Marking while taking land into use’.

the Noordzeekanaal is built up and the younger dunes cover the western part of the Oer-IJ.<sup>47</sup> The geolandscape map shows the landscape of the Oer-IJ area around the beginning of the Roman Iron Age. It would, however, be very costly to produce a map with high spatial resolution for every period. For the Oer-IJ area this would mean at least five different maps. Therefore, choices have to be made. Cost-efficiently the best choice appears to be the addition of two palaeogeographical maps to the already existing four<sup>48</sup>, which are less detailed and can be printed on a higher map scale (1:50,000 or A4-size). On these maps the entire Oer-IJ area can be shown. The number of findspots on these maps from earlier periods is also less high, which leads to less clustering than the Roman Iron Age findspots. Predictions made on the basis of the palaeogeographical maps above the Noordzeekanaal can be checked against the geolandscape map.

The IKAW at the moment gives one map for all periods without differentiating between the expected periods or what to expect. Van Leusen et al. argue that ‘tailor-made policy advice will entail the need for higher temporal resolution (for example, when deciding which type of prospection will have to be carried out, ...)’.<sup>49</sup> This needs to be done in combination with a further development of the complex types in order not only to know from which period the remains are but also what to expect.<sup>50</sup> On a municipal level this higher spatio-temporal resolution is achievable as the area under development is much more restricted. But as long as there is no accurate information on the findspots it will be necessary to do intrusive research such as trenching, before decisions can be made on protection and development.

### 5.3.5 SPATIAL STATISTICS

Van Leusen et al. are cautious about using statistics in the sense that the used statistics should be appropriate for the task at hand, as it may lead to misunderstandings by the end-users of predictive maps.<sup>51</sup> Van Leusen and Verhagen have commented<sup>52</sup> that at this stage it is not necessary to use spatial statistics in the research at hand as the number of offering sites in wet low-lying areas per period is small. According to them it is more important to be explicit about the rules that are used in the prediction and the data on which these predictions are based. Therefore at this moment in time a possibilistic model is less problematic as it only indicates the areas where offerings in wet low-lying areas can take place instead of what the actual chance is of finding one.

### 5.3.6 TESTING

The strength of a predictive model lies in its ability to withstand testing in a controlled manner. This means that the aims and the assumptions of the model have to be clear. In case of a wrong predictions it can than be evaluated along the aims and assumptions where the model is wrong or inaccurate. And modifications can be made to the model accordingly. A great concern about predictive modelling is that ‘... no properly designed and controlled experiments for testing predictive models have ever taken place in the Netherlands.’<sup>53</sup> In essence we have no idea if the predictions we make are either good or bad. Testing predictive models in an area as densely occupied as the Netherlands is, however, no minor feat. This research has experienced some serious drawbacks in the testing phase. In order to test the model specific areas were selected where trial trenches would be made with a mechanic digger. The owners of the land were, however, non-cooperative as it would mean damage to their land and there were insufficient funds to compensate for all the damage and lost income. Besides, the farmers were very proud of the land and were not eager to let anyone disturb the grass. Furthermore, they were afraid that the discovery of archaeological remains would hinder their agricultural activities in the future. An

47 The map is, however, still so large that it only has been used during the research itself. The map that accompanies this thesis is printed on a A3-paper size.

48 Four paleogeographical maps of the Oer-IJ area have been made as part of the AKI (Archaeological Knowledge Inventory) of which three belong to the period under study, Lange et al. 2004.

49 Van Leusen et al. 2005, 70.

50 Van Leusen et al. 2005, 70.

51 Van Leusen et al. 2005, 71.

52 Personal communication at the BBO-workshop ‘Archeologische voorspelling en risicobeheersing’ 1-2 march 2006.

53 Van Leusen et al. 2005, 35.

assurance from the provincial authorities that this would not be the case was not accepted. It soon became clear that even secondary chosen areas were not available for testing.

Therefore the testing of the model should take place within the normal AMZ-archaeology. This was picked up by the provincial authority who requested that attention should be paid to possible offerings in wet low-lying parts of the landscape at Uitgeest-Waldijk which was explicated in the Program of Demands (PvE).<sup>54</sup> The excavation was, however, not close enough to the Oer-IJ system and a broad ditch prevented further research in that direction.



Figure 5.3 Evidence for prehistoric peat-cutting at Limmen-De Krocht.

The excavations at Limmen-de Krocht were taking place during the realisation that a regular test phase would be impossible.<sup>55</sup> Here a small trench was made in the direction of the main streambed of the Oer-IJ in order to understand the geology and at the same time look for any evidence of use of the border zone of the Oer-IJ. Again the border of the Oer-IJ was further of than expected, but at least the remnants of prehistoric peat-cuttings could be observed (figure 5.3). Two prehistoric wooden stakes were also observed, but the depth of the trench and the rising water prevented a thorough examination. The area to the (south)west seems to be a promising location for future research into the wet low-lying parts of the landscape.

Archaeologists (both professional and volunteers) working in the area and familiar with the subject of this

54 RAAP-PvE regio West-Nederland, Programma van Eisen Opgraving Plangebied Waldijk Gemeente Uitgeest 2005, 8-9.

55 The excavation was performed by the AAC/projectenbureau. At that moment I was part of a team that gave the field course to students of the University of Amsterdam at Limmen-de Krocht.

thesis have also made contributions by informing me when they knew of a possible locations for offerings.<sup>56</sup>

#### 5.4 PREDICTIVE MODELS CONCERNING WET LOW-LYING OFFERING SITES IN THE OER-IJ AREA.

The aim of the predictive model for the Oer-IJ area is to predict the locations of offering sites in the wet low-lying parts of the landscape. First the predictions based on the palaeogeographical maps in combination with cultural rules are given (§ 5.4.1-5.4.5). Followed by a combined map of these predictions (§ 5.4.6) Then the predictions based on the geolandscape map in combination with known sites is given (§ 5.4.7). And finally (§ 5.4.8), some predictions are made that are based on specific archaeological phenomena that should guide research strategies during archaeological excavations where these phenomena are encountered.

##### 5.4.1 ASSUMPTIONS

The assumptions made in the predictive model are the following:

###### 1. Human activities are patterned in various ways and scales.<sup>57</sup>

This assumption is applicable to all predictive models. The theoretical background that it is based upon influences the nature of the various ways and scales. Here a dynamic theoretical framework of structuration theory is used in which ‘History is the structuration of events in time and space through the continual interplay of agency and structure: the interconnection of the mundane nature of day-to-day life with institutional forms stretching over immense spans of time and space.’<sup>58</sup> Because there is a constant movement between agency and structure this is not a deterministic model as it involves the decisions of actors, but at the same time allows for patterns to exist as the actors manoeuvre within the rules of social life. These rules of social life can be regarded as ‘techniques or generalizable procedures applied in the enactment/reproduction of social practices.’<sup>59</sup> It is these social rules that need to be studied so that predictions can be made that can be used in the understanding of past communities and their spatial expression. It is these spatial expressions that point towards the localization of actions in the landscape. Here the term regionalization can be of use as it refers ‘to the zoning of time-space in relation to routinized social practices.’<sup>60</sup> In other words, social practice is not just based on what is proper to do but also on where it is proper to act in a certain way.

###### 2. Offerings were not made in salt water.

On the basis of the known offering sites it is assumed that offerings were not made in salt water.<sup>61</sup> These avoided places are also the waters under tidal influence. This assumption on the avoidance of salt water seems to be strengthened by the broadening of the use of the landscape through time as the amount of salt water in the estuary diminishes. Offering sites appear in new wet low-lying parts of the landscape as soon as the water turns from salt or brackish to fresh. As the location of salt or fresh water changes through time, the predictions are also changing through time. New parts of the landscape are added time after time, while the old areas stay in use.

###### 3. The wet low-lying offering sites were in close distance to settlements and fields.

The assumption that offering sites were in close distance to settlements and fields is based on the known sites from larger excavations. The fields seem to be situated between the settlement and the offering sites. This is probably due to the relief of the landscape with the settlements at the highest and driest parts, the field at the flanks, and the offering sites in the wet lower parts.<sup>62</sup> The offering sites remain, however, in sight and easy walking distance of the settlements. Offering sites can be directly next to settlements depending on the local

56 Especially, the local AWN-group ‘Oer-IJ’, Wim Bosman and Silke Lange.

57 Van Leusen 2005, 32.

58 Giddens 1995, 362.

59 Giddens 1995, 21.

60 Giddens 1995, 119.

61 See chapter 4 § 4.3.1.

62 See chapter 4 § 4.8.

landscape. When in the fields the star pattern Horse is expressed in pits and/or gullies an offering site can be expected southwest of it.<sup>63</sup>

4. The wet low-lying offering sites seem to be associated with barrows and embankments.

There appears to be an association between wet low-lying offering sites and earthworks such as barrows and especially embankments. This association is not just nearness in space, but the earthworks and offering sites seem to refer to each other.<sup>64</sup> This can be done either through stake rows or the direction of the embankment. Wet low-lying areas near the earthworks should therefore be expected to contain offerings.

5. Although anything could be considered an offering, there are certain preferences.

The diverse character of the different offering sites makes it clear that a broad range of items were considered suitable for offerings. Certain patterns in the artefact distribution do suggest certain preferences when offerings are made.<sup>65</sup> When these preferred items are encountered it becomes more likely that an offering site is present. These preferred items are: human bone (specific from head, leg and arm), metal artefacts, complete vessels, a selection of wood (from different parts of the landscape), and stones. The likelihood of there being an offering site becomes stronger when these items are recovered from a natural layer.

#### 5.4.2 DATA

The predictions are based on different types of data, such as maps and known archaeological remains.

The maps consist of five palaeogeographical maps, a geomorphogenetic map, and the modern topographic maps. The IKAW is too undifferentiated to be able to use it for specific predictions and is therefore not used here. Five palaeogeographical maps are made by Peter Vos and represent different time-slices: 2500, 1500, 1000, 500 BC, and 0. Three of these maps are updated versions of the maps from the AKI.<sup>66</sup> Two maps – 1500 BC and 500 BC – are newly made as it was felt that the time slices were too far apart. With these new maps every major period is represented. The palaeogeographical maps are made on a map scale of 1:50,000, but due to their general character are printed at a higher map scale, which fits on A4 paper-size.<sup>67</sup> Predictions for the earlier periods – Late Neolithic to Early Iron Age – are made on the basis of these palaeogeographical maps. The predictions for the Middle to Roman Iron Age are made on the basis of the palaeogeographical map in combination with the geomorphogenetic map, newly made by Peter Vos. The geomorphogenetic map reconstructs the formation of the landscape during the Late Iron Age as it is still largely present underneath the topsoil. This map is made on a scale of 1:15,000 in order for the details related to water to become readable and the archaeological remains to stand out clearly.<sup>68</sup> In relation to costs and benefits it was decided that only the area above the Noordzeekanaal and east of the young dunes is placed on the map. The area south of the Noordzeekanaal is largely built up and would therefore give little extra information in respect of the palaeogeographical maps. The younger dunes are a protected area of natural interest and cover the old landscape with several metres of sand. The predictions made for the earlier periods will be held against the geomorphogenetic map as this will enable to evaluate the possible preservation of the archaeological remains. The modern topographic map of scale 1:25,000 will be used for the same purpose. For the unbuilt areas of the municipal of Castricum an archaeological prediction has been made for the Late and Roman Iron Age.<sup>69</sup> This prediction focuses on settlements and even points to the near impossibility of predicting offerings and thereby leaves this area of past practice unexamined.<sup>70</sup> As information on settlements is used for the prediction of offering sites in wet low-lying areas this map will be used only to see if archaeological data is missing from the geolandscape map constructed for this research.

63 See chapter 4 § 4.3.2.

64 See chapter 4 § 4.4.1.

65 See chapter 4 § 4.7.

66 Lange et al. 2004, figure 3a-d.

67 This enables the maps to be printed on normal pages within the book which reduces the chance of loss. The level of detail allows this size without reducing the information value.

68 The map is printed at a A3 paper size.

69 Soonius et al. 2005.

70 Soonius et al. 2005, 13.

For the characterization of the offering sites in wet low-lying areas the information from chapter 4 is used. As for the earlier periods all the known sites are relatively few and although, excavations give the best information on the type and date of a site, the sites are mostly in areas that are or were under development. Possible offering sites in the vicinity are either destroyed or covered by buildings and roads. Therefore the predictions are made on the basis of the landscape.

For the Late and Roman Iron Age more findspots are known and a more detailed geolandscape map is constructed. To predict the location of offering sites that may still be intact or accessible the less well known findspots have to be used. These are the archaeological findspots known through fieldwalking or core boring. A strong bias to researched fields can not be avoided. The main types of data are the presence of cultural layers, artefacts, or visible remains of the old landscape in the present day landscape. The prediction based on the palaeogeographical map may counter some of these effects. In the future it can be tested whether the predictive map based on a landscape reconstruction without sites gives just as useful and correct predictions as the predictive map based on geology and known findspots.

On the basis of the five assumptions given above, the character of the known offering sites, and the different palaeogeographical maps predictions are made concerning the possible location of offering sites in wet low-lying parts of the landscape during different periods. On the palaeogeographical maps the different areas that are expected to contain offerings in wet low-lying areas are shaded grey. These shades are different for specific predictive elements. The darkness of the shading increases when different predictive elements are found in the same area. The old dune areas are shaded 10 percent grey as these parts of the landscape may contain small low-lying wet areas with possibly offerings. The exact location of these small wet low-lying areas is not known. The peat areas between the coastal barriers have a 10 percent shade as again there are probably offerings but their location is less precise. The edge between dry and wet (fresh water) parts of the landscape are given a 25 percent shading as these areas seem to be favoured through time. And the fresh open water is also given a 25 percent shading as these landscape elements seem to contain more offerings.

#### 5.4.3 LATE NEOLITHIC TO BRONZE AGE (2500-800 BC)

A period of 1700 years may not seem like a high time resolution, but the amount of data available at the moment allows not for a useful partitioning of this period in regard of making predictions on offering sites in wet low-lying areas. From this period there are five known offering sites in wet low-lying parts of the landscape. 41 archaeological findspots have the remains of other activities, such as burial mounds, pits, farmsteads, and fields.<sup>71</sup> The findspots are mainly situated on the (former) beach barriers and old dunes.<sup>72</sup> No archaeological remains are known from the peat in the eastern part of the Oer-IJ area. In this period the geological developments in the Oer-IJ area are forming the main elements in the landscape. The mouth of the estuary is still very large. In this part of the Oer-IJ area no archaeological remains are to be expected, due to erosion and the absence of activities that leave substantial archaeological traces. As the landscape changes are more extensive than the changes in the archaeological patterns, three palaeogeographical maps were made in order to refine the predictions. For the Neolithic and Bronze Age the offerings are expected to be situated in the wet low-lying areas on or at the edge of the (former) coastal barriers and old dunes (figure 5.4, 5.5 and 5.6).<sup>73</sup>

71 Seven findspots have a Late Neolithic date.

72 Except an axe and the recently excavated wooden circle at Heiloo-Maalwater, both situated in the beach plain.

73 See § 4.3.1.

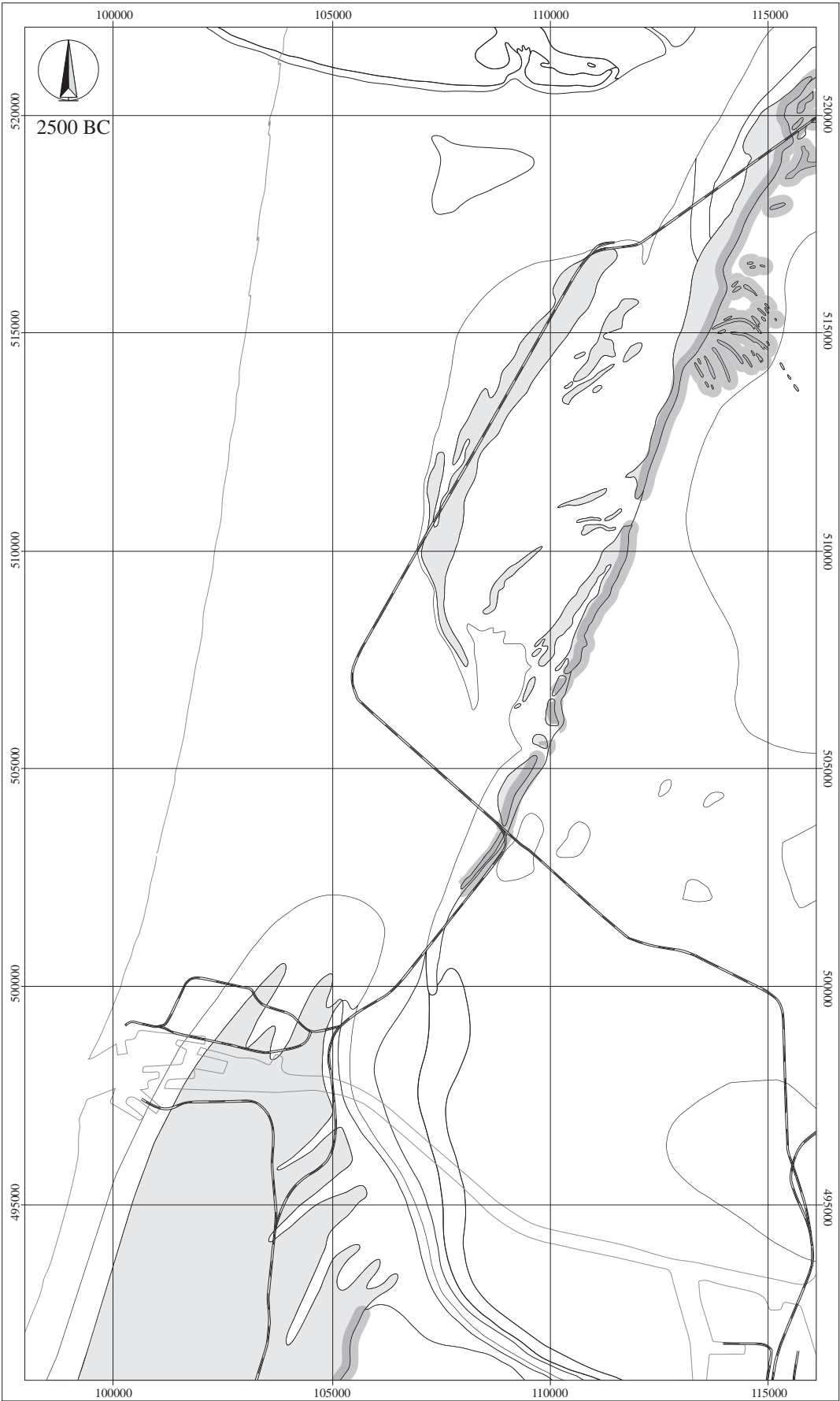


Figure 5.4 Prediction of probable locations of offering sites around 2500 BC.

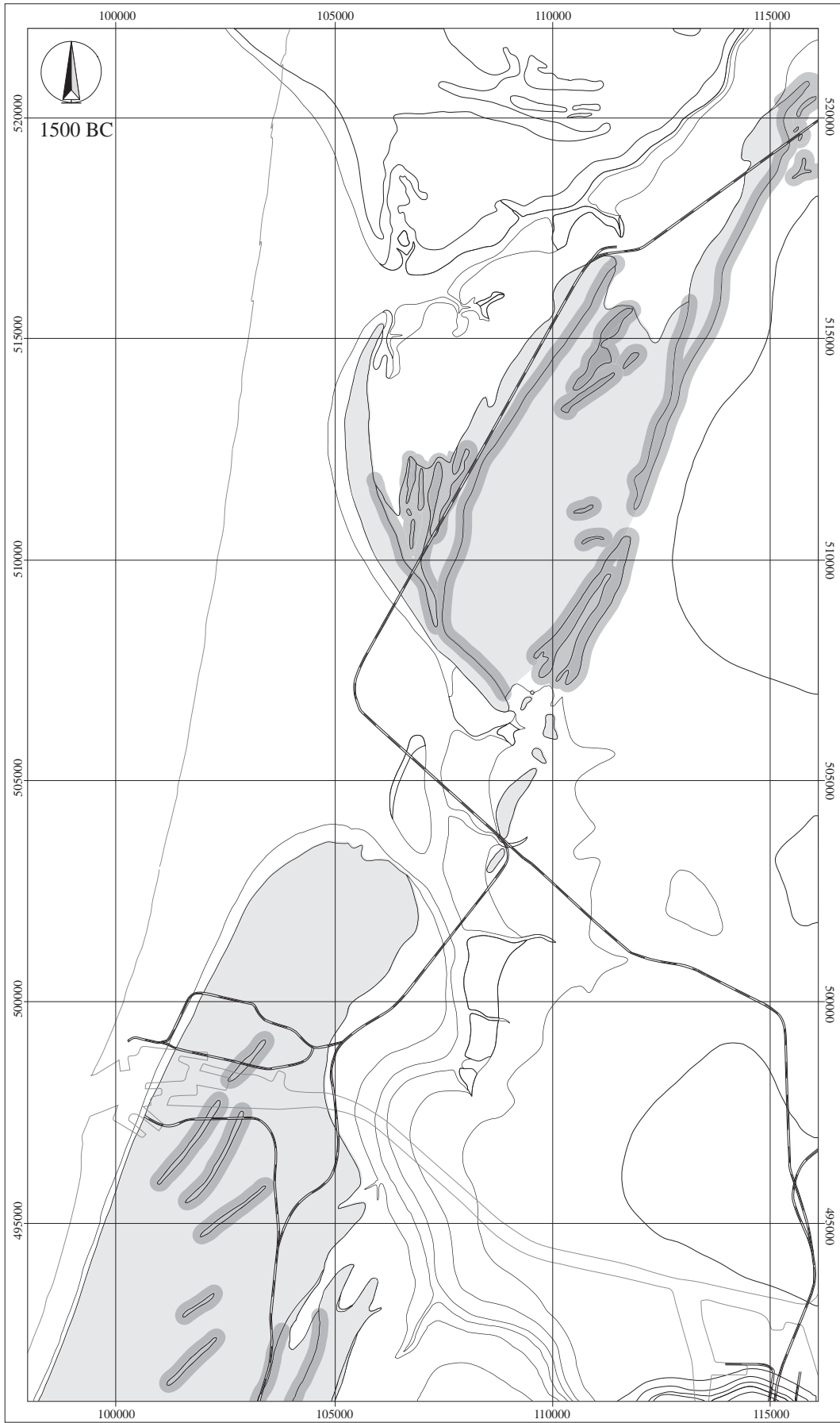


Figure 5.5 Prediction of probable locations of offering sites around 1500 BC.

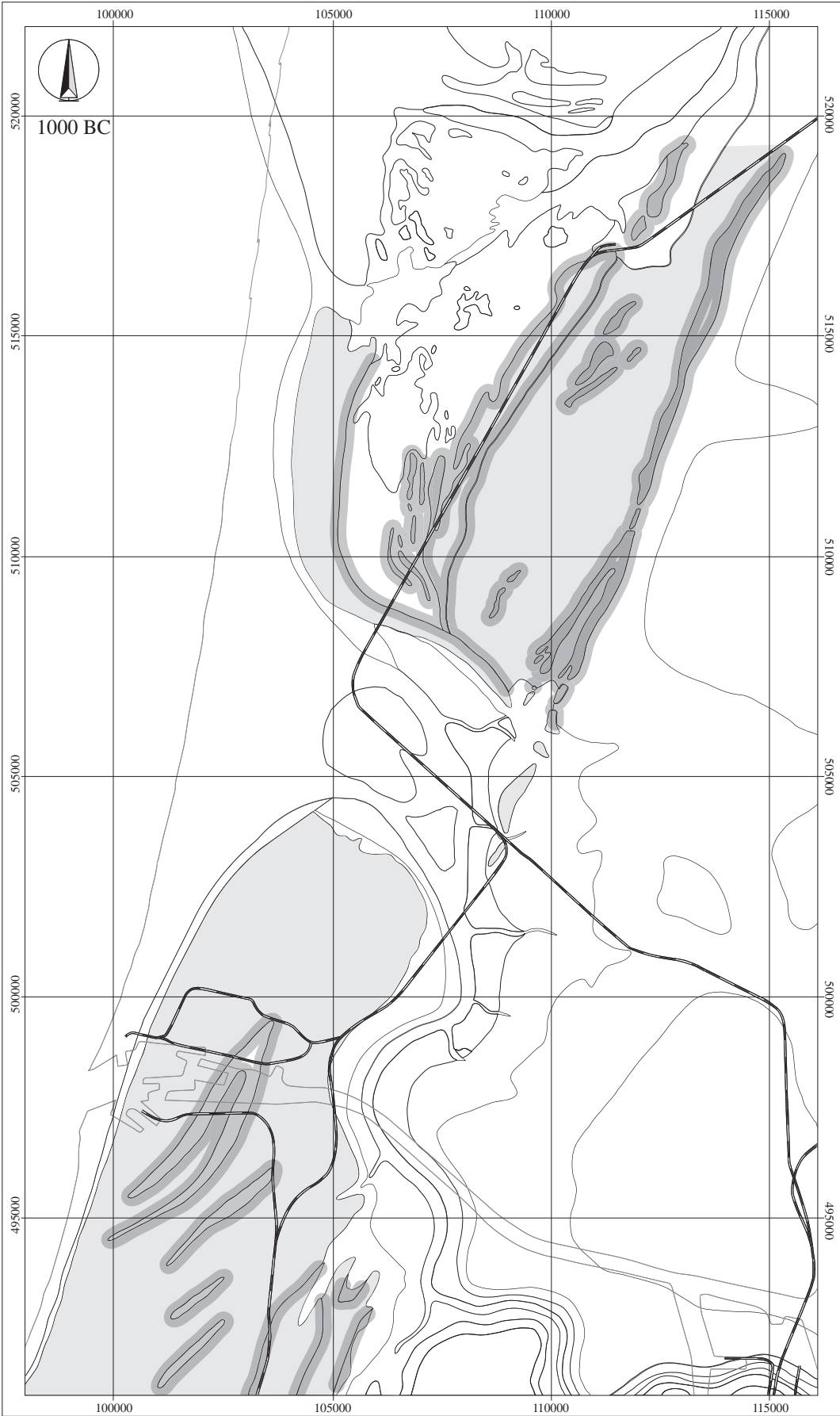


Figure 5.6 Prediction of probable locations of offering sites around 1000 BC.

## 5.4.4 EARLY AND MIDDLE IRON AGE (800-250 BC)

Six offering sites in wet low-lying areas are known from this period. 80 archaeological findspots with the remains of other activities are dated to the Early Iron Age and/or Middle Iron Age<sup>74</sup> These archaeological remains are mainly farmsteads, fields and pits. Only one burial is known from this period. The findspots are present in all parts of the Oer-IJ area, except the tidal area, but the information for the northern part is very limited.<sup>75</sup> Due to the large time gap between the existing palaeogeographical maps<sup>76</sup> within a period of geological important formations, a new palaeogeographical map was made for the period dating around 500 BC.

The Early Iron Age has the least known offerings in wet-low-lying contexts. The two sites ascribed to this period are non-typical as they are situated in the reed peat area east of the Oer-IJ. They are both incidental finds of which one – Assendelft-42 – is probably younger. Offerings in parts of the landscape that came into use would, however, fit the pattern and can be expected in the peat east of the Oer-IJ as this area is taken into extensive use for the first time. As other elements of the ritual repertoire, such as depositions in pits (sometimes forming star patterns) and house offerings, are known from the Oer-IJ area,<sup>77</sup> it is unlikely that depositions in wet low-lying contexts did not occur. Unfortunately a possible location of such an offering in connection with a star pattern was inaccessible for research in Velsbroek-Hofgeest.<sup>78</sup> Offerings are expected in the wet low-lying areas on or at the edge of the (former) coastal barriers and old dunes as a continuation of this practice can be postulated for the Early Iron Age<sup>79</sup> as this practice continues in the later periods.

During the Middle Iron Age the smaller creeks start to carry fresh water and slowly silt up. At that time creeks begin to get used for offerings. These depositions precede the use of these places as fields and habitation.<sup>80</sup> Offerings in creeks in the Middle Iron Age are therefore at the moment best predicted by later use at the same spot. As the palaeogeographical map shows the active marine phase only the creeks away from the mudflats have been given a grey shading. The palaeogeographical map of 0 can in this case be used additionally.

During the Middle Iron Age offerings are also made in the wet low-lying areas on the old dunes and peat next to the old dunes. In the tidal area between the former beach barrier of Uitgeest and the coastal dunes no offering sites of Early and Middle Iron Age date are expected (figure 5.7).

## 5.4.5 LATE IRON AGE AND ROMAN IRON AGE (250 BC-AD 450)

As it is often difficult to distinguish Late Iron Age from Roman Iron Age finds, when there are no imported artefacts, the predictions for these periods are taken together. From this period 13 offering sites are known. There are 446 archaeological findspots with the remains of other activities of which 146 and 391 have a Late Iron Age and/or Roman Iron Age date, respectively. These other activities mainly consist of houses, fields, gullies, pits and some burials. Of these 446 archaeological findspots 56 and 235 findspots, dated to the Late Iron Age and Roman Iron Age respectively, consist only of sherds. These sherds were mainly found during field walking and/or coring. The 446 findspots are situated all over the Oer-IJ area.

The Late Iron Age offerings follow the same pattern as the Middle Iron Age sites and therefore a similar prediction can be made of offerings in creeks before permanent use of the locality. However, the area between the former coastal barrier of Uitgeest and the coastal dunes is now probably in use. The (remnants of) small creeks running through this area also have the potential of containing offerings. This becomes even more probable when the mouth of the estuary is blocked off from the sea and water conditions turn to fresh water during the final part of the Late Iron Age.

74 Of the 81 findspots 63 contain Early Iron Age traces and/or 61 contain Middle Iron Age traces.

75 No large scale excavations concerning this period have taken place at the municipals Akersloot, Castricum, Heiloo and Limmen.

76 Lange et al. 2004, the paleogeographical maps consist of figure 3b 1000 BC and figure 3c AD 100.

77 See § 3.5.2.

78 Therkorn 2004, 137.

79 Limmen-1 could date to the Early Iron Age.

80 See § 4.3.2.

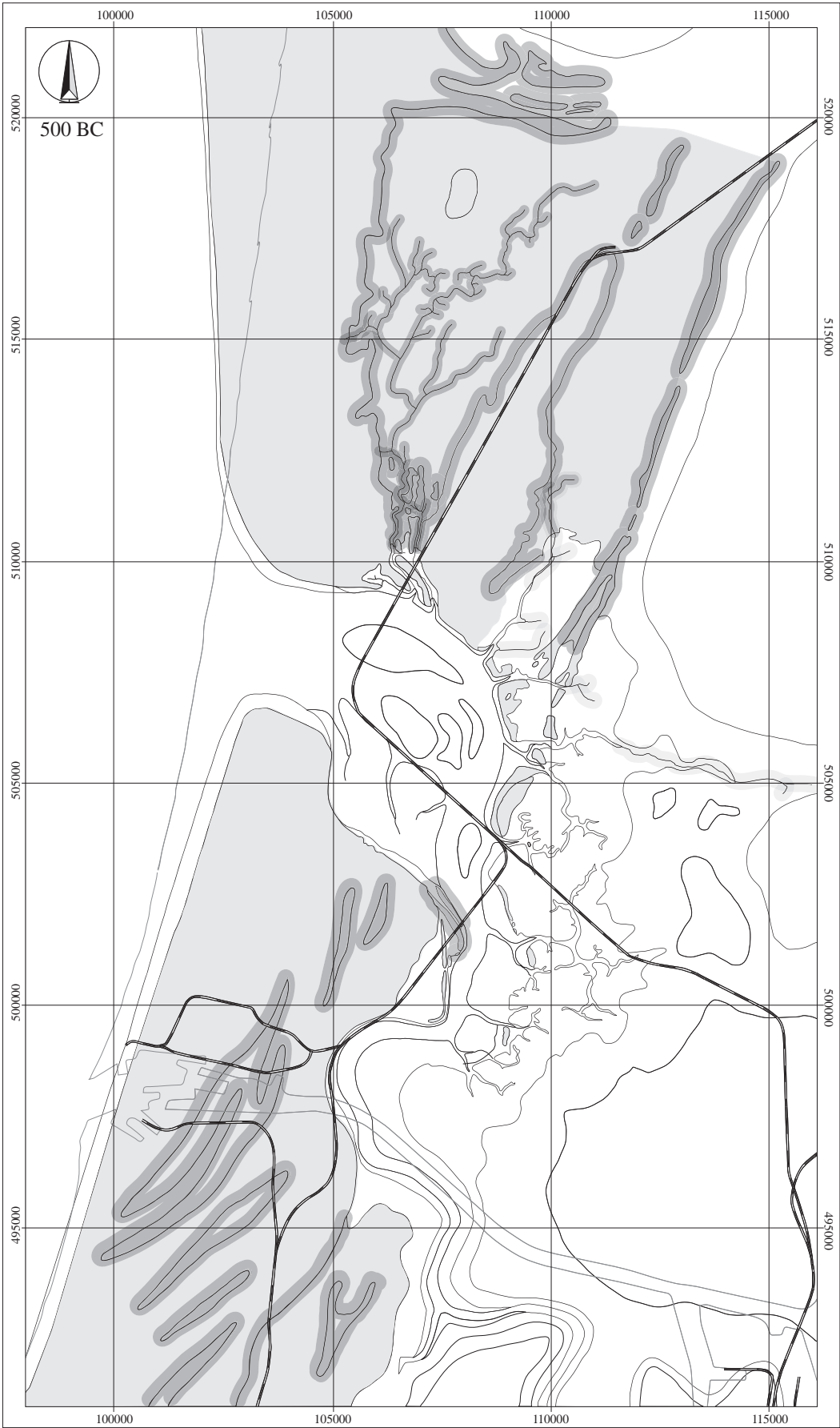


Figure 5.7 Prediction of probable locations of offering sites around 500 BC.

After the tidal influence has completely vanished and the remnants of the Oer-IJ carry fresh water, in the border zones of these wet areas offerings are placed. The offerings are close to fields and settlements.<sup>81</sup> In the area between settlements and the border zone of the remnants of the Oer-IJ offerings dated to the Roman Iron Age can be expected. The creeks are also used for offerings and in the Roman Iron Age the creeks in the peat area towards the east are used as well. Offerings in creeks can be expected for the entire region in the Roman Iron Age (figure 5.8).

Some of the larger offering sites that are used in the Roman Iron Age have a continuation of use in the Early Medieval Period.<sup>82</sup> These long-used offering sites seem to be a stable feature in the less well-known transition towards the Early Medieval Period. Archaeological findspots with both Roman Iron Age and Early Medieval material in the vicinity of water may therefore indicate the possible presence of an offering site.

#### 5.4.6 MULTI-PERIOD PREDICTION FOR THE OER-IJ AREA

The predictions made above per time period can be combined into one map that is less precise, but is easier to interpret for the user of these kinds of maps. Figure 5.9 shows the combined predictive map on which the colours indicate a specific type of prediction. Here the different coloured areas will be discussed and it will become clear that the colours do not represent a scale of less to more probability of encountering an offering site as on most predictive maps, but the colours stand for specific expectations.

Green areas are expected to contain small wet low-lying areas due to the morphology with small shifting dunes and valleys that are not exactly located yet. In these small wet areas offerings from all periods can be expected.

Dark blue areas are known wet areas near or between the old dunes and former coastal barriers. In these areas offering sites from all periods can be expected.

Light blue areas are wet areas with a greater circumference, but still between dry land. Offering sites can be expected from all periods, but the size of the area reduces the chance of finding an offering site somewhat. The borders are the most likely areas, but they shift through time.

Light purple areas border the Oer-IJ and offerings are expected to be present from the end of the Late Iron Age onward.

Purple areas represent the Oer-IJ. Offering sites can be expected from the end of the Late Iron Age onward.

Bright Pink areas represent creeks and creek systems. From the Middle Iron Age onward offering sites can be expected here, especially when other uses of specific places are known.

Red areas are creeks in peaty areas. Here offering sites can be expected from the Middle Iron Age onward.

This map should be used as an initial indication of where offering sites can be expected. For specific areas the separate maps should be used to give a more detailed prediction. The large peat area in the east of the Oer-IJ is not included in the predictions because of its relative scant information on offering sites. This does, however, not mean that there are no offering sites present. The manner of prediction is just not sufficient to make valid assumptions.

#### 5.4.7 GEOLANDSCAPE AND SITE BASED PREDICTION FOR THE OER-IJ AREA

Predictions made for the geolandscape map have a different character than the predictions for the palaeogeographical maps. This map shows not the reconstructed palaeolandscapes but the geological elements that are still present directly underneath the top layer of soil. The level of detail on the geolandscape map is much higher as the map is constructed at a scale of 1:15,000. The predictions on the geolandscape map are based on known findspots. All known findspots are put on the map with a site number. Appendix 3 shows the corresponding site name, general character of the site, period of use and coordinates. The general character of the site is defined as only sherds, archaeological elements other than sherds (but may include sherds), and offering sites. When the findspot is defined in any other way than just pottery, like an arable layer or sherds and wood, a larger black open circle is placed around the site number.

81 See § 4.3.2.

82 For example, Broekpolder-1 and Uitgeest-Dorregeest.

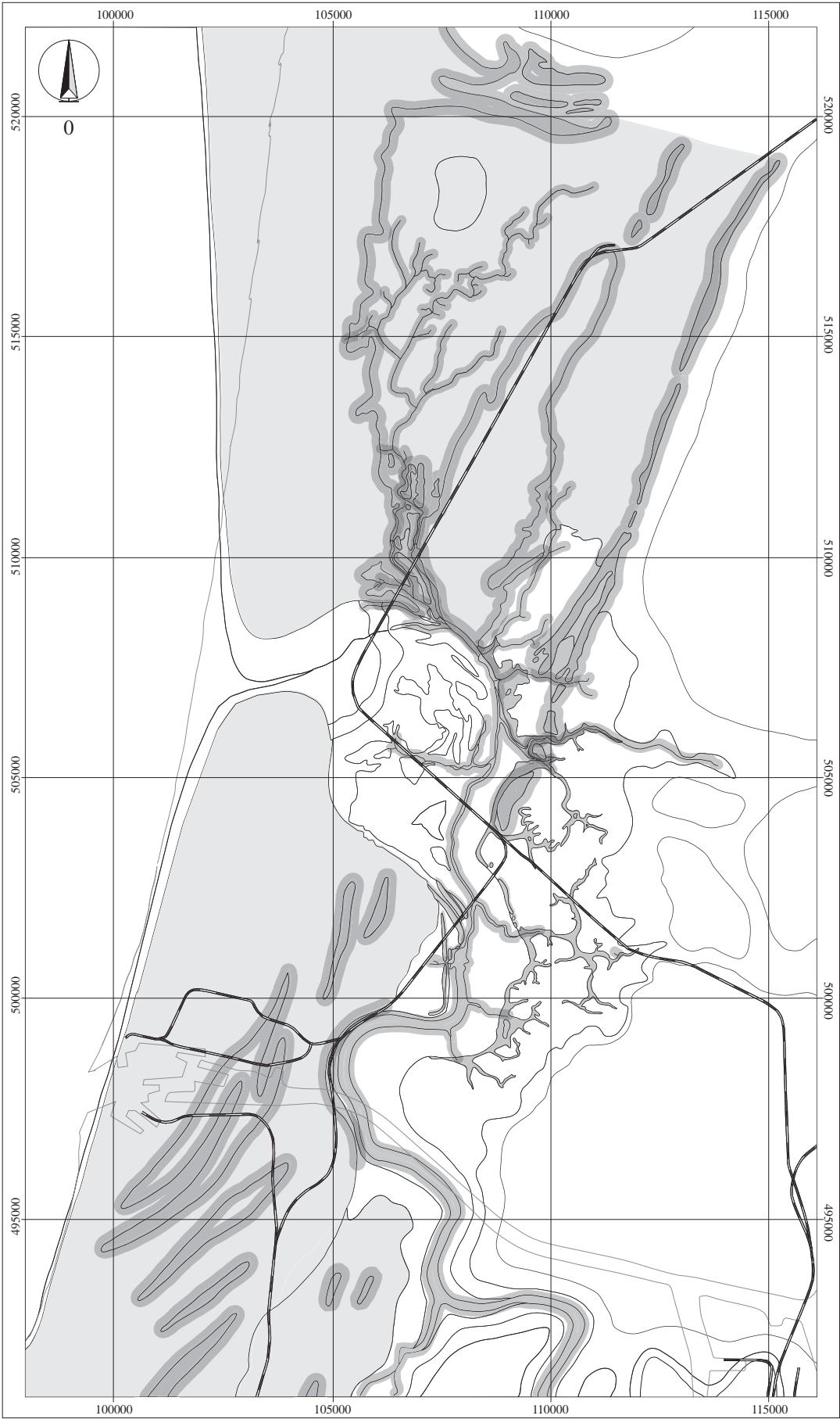


Figure 5.8 Prediction of probable locations of offering sites around 0.

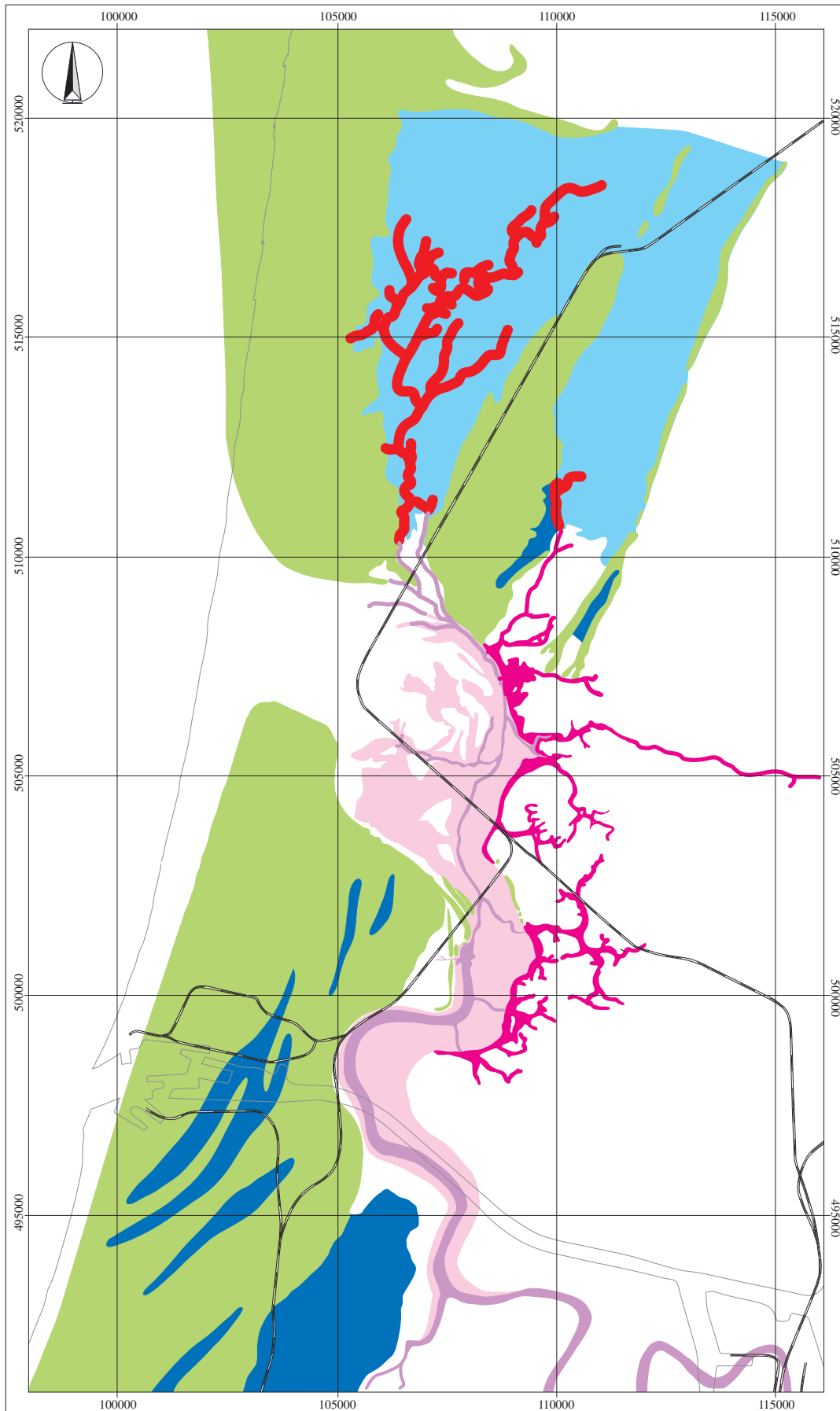


Figure 5.9 Combined predictions of offering sites within the Oer-IJ area. The colors are explained in the text.

This circle has a diameter of 250 m. When this black open circle coincides with open water the circle is shaded 20 percent grey. Where more circles overlap the darkness increases just as the probability increases that an offering site in a wet low-lying area is present (fold out map 1).<sup>83</sup> When under pressure by new developments these dark circled areas should be investigated with the aim to establish the existence of an offering site and, if present, its subsequent conservation or excavation.

#### 5.4.8 NON-PERIOD SPECIFIC AND NON-MAP BASED PREDICTIONS

Some predictions in the Oer-IJ area are not so-much linked to a specific period, but seem to indicate cultural traditions within the Oer-IJ area. These predictions are associated with specific archaeological phenomena. Although sites with these phenomena can be plotted on a map, the low number of sites does not allow for a prediction to be made. Therefore no predictive map has been constructed. When these phenomena are recognised during archaeological excavations it should guide the research as possible offering sites can be expected in the vicinity. Two of these cultural traditions come to the fore.

First, there appears to be a relation between earthworks, such as mounds and small embankments, and offerings in wet low-lying areas.<sup>84</sup> When these earthworks are discovered offerings can be expected in the vicinity, especially in the low areas. If there are new building activities in IJmuiden-Rijn/Vechtstraat, this would be a good place to test this hypothesis. Here a possible small embankment led to a low-lying peaty area in the south (figure 5.10).<sup>85</sup> The low-lying peaty area lies, however, under houses but at a considerable depth.

Second, there appears to be a connection between pits forming star constellations and offerings in wet low-lying areas. Especially, the star constellation horse appears to have a spatial relation with the offerings in wet low-lying areas. When the constellation horse is found a wet low-lying offering site can be expected towards the southwest.<sup>86</sup>

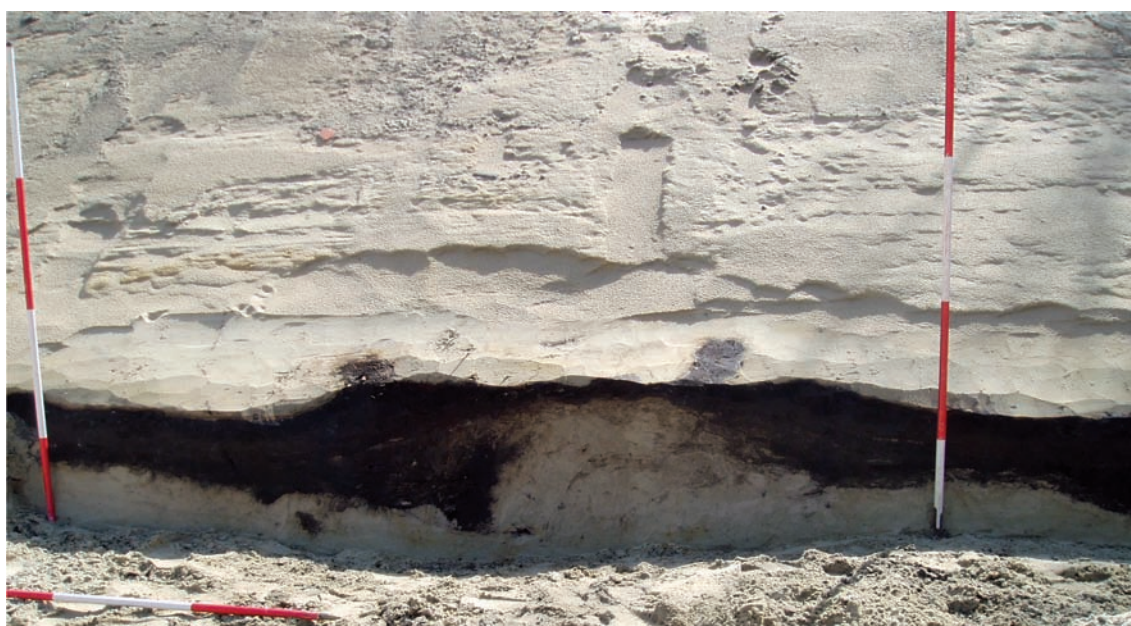


Figure 5.10 Remnants of a possible embankment at IJmuiden-Rijn/Vechtstraat.

## 5.5 POLICY AND PREDICTION

Not only many changes have taken place within archaeology over the last decade, but also the location of political responsibilities has shifted. A process of decentralization is taking place, which places much of the

83 The geolandscape map with predictions is enclosed in the backcover as fold out map 1.

84 See § 4.3.2, and §4.4.1 raw material (natural objects).

85 Wim Bosman personal communication. He showed the site to the author on 1-4-2006.

86 See § 4.3.2 and figure 4.36.

responsibilities with local governments at the level of the municipal. The policy at the lower levels still has to fit into the higher levels, but there is a considerable freedom of policy at the local level. The changes are taken place rapidly and the BBO-project Oer-IJ has focussed mainly at the provincial level as this was the most important player at that moment. The provincial policy concerning cultural heritage management is still a large influence and takes responsibility, especially in the conservation issues as it is developing provincial archaeological monuments and the integration of cultural heritage management in the environmental planning process. In the future, however, most direct decisions concerning archaeological heritage management of specific locations will be taken at the local level. The provincial government will mainly intervene when at the municipal level no policy for heritage management is developed.<sup>87</sup> Some municipals do postpone very specific policies on archaeology until the responsibilities are better defined and the Convention of Valetta is implemented and integrated into the Dutch law system.<sup>88</sup> Work is, however, carried out in the spirit of the Belvedere policy. Most of the municipals in the Oer-IJ area realise they have to deal with the new responsibility and take an active approach. The approaches range from special cultural heritage committees, municipal archaeologists, archaeological advisors, cultural heritage policies, and archaeological predictive modelling. In the policies on heritage management the importance of the maintenance or developing of the characteristics and the cultural-historic identity of an area is seen as important.<sup>89</sup> In this way the process of uniformification of the landscape can be reduced and local identities can be enhanced. It is felt that the quality of living will be better when people are aware of the history of the area they live in. For the historic period often specific buildings or infrastructural elements are specified as characteristic for the area and of cultural-historic importance. This is much more difficult for the less visible pre- and protohistoric period and usually not a characteristic, but the importance of knowledge of the habitational development of the area is mentioned.<sup>90</sup> However, the historic built-up areas on the former coastal barriers are projected further back into prehistory<sup>91</sup> even though there is enough evidence to suggest otherwise for the Iron Age and as suggested in predictions made for the area.<sup>92</sup> This discrepancy is probably due to the invisibility of prehistoric remains in combination with the absence of large excavations in the area between the former coastal barriers. Furthermore, the municipals are just starting with an active policy on cultural heritage management that includes archaeology. It will take some getting used to for working with the invisible and predictions, especially when the characteristics of a region are in question.

This thesis does not pretend to solve the question of identity and characterization of the Oer-IJ region. This has to be dealt with at the local governmental level of both municipal and province. The emphasis on settlements in the predictive models put forward so far<sup>93</sup> limits the choice of local governments to placing an emphasis on the habitational history of their region. Other aspects of life are less prominent in these models, although these other aspects, such as ritual and landscape perception may give more flavour to the picture presented of the pre- and protohistoric people living in the region. This thesis predominantly deals with offerings in wet low-lying areas from the pre- and protohistoric period and can therefore only deal with this part of the characterization of the area. In the next section examples are given of how a connection can be made between present day and prehistoric practices and places.

#### 5.5.1 EXAMPLE 1: THREE CHRISTIAN HOLY WELLS

From a cultural-religious perspective the Oer-IJ area is nowadays special as it contains three holy wells within a relatively small region one in Egmond-Binnen and two in Heiloo (figure 5.11).

87 Beleidsnota cultuurhistorie gemeente Castricum 2004, 25.

88 For example, the policy document 'Beverwijk bruist 2005-2008', 14-15. Or the absence of a local policy in the municipal Uitgeest.

89 For example 'Beleidsnota cultuurhistorie gemeente Castricum 2004, 13 and Heiloo, nota cultuurhistorische waarde 2001, 9.

90 For example 'Beleidsnota cultuurhistorie gemeente Castricum 2004, 18 and Heiloo, nota cultuurhistorische waarde 2001, 4.

91 For example 'Beleidsnota cultuurhistorie gemeente Castricum 2004, 18.

92 Soonius et al. 2005.

93 For example, IKAW and Soonius et al. 2005.



Figure 5.11 Three christian holy wells and their position in relation to the landscape as reconstructed for AD 1000. Left 'Adelbertus-put', top-right 'Wilibrordus-put', and bottom-right 'Runxput'.

These are respectively the ‘Adelbertus-put’, the ‘Willibrordus-put’, and the ‘Runxput’ locally better known as the ‘small well at Heiloo’. The wells all date back to the (early) medieval period. The ‘Runxput’ is nowadays the most important well, with regional, national and international pilgrimages taking place regularly.<sup>94</sup> Although it is a catholic holy well in recent times non-catholics, tourists and other visitors looking for spiritual places have come to visit the ‘Runxput’. Visits by non-catholics has been a trait of the ‘Runxput’ for a long time. For example in 1713, after the place has become somewhat of a ruin the well suddenly has a renewed flow of water. At that time there is an outbreak of rinderpest and both catholic and protestant farmers from Noord-Holland visit the well, as the water is still thought to have healing properties.<sup>95</sup>

There is no direct link between these three holy wells and the (pre)historic offerings in wet low-lying places as discussed in chapter 4. The regional tradition of placing offerings in watery places was probably still practiced when the first christian holy wells were taken into use.<sup>96</sup> The christian wells have no evidence of offerings made into the water and are used in a different way. The water from at least the ‘Adelbertus-put’ and ‘Runxput’ are said to have healing properties and people drink the water (figure 5.12).<sup>97</sup> The official catholic church view regarding the ‘Runxput’ is, however, that not the water in itself has healing properties, but it is the combination of water and faith in god.<sup>98</sup> The importance of water within the religious worldview of the people of the Oer-IJ area in different forms can, however, be assumed for a long time.



Figure 5.12 Water taken from the ‘Runxput’ with the cup used for drinking the water as it is still practiced.

The three christian wells are places in the landscape that are connected to local narratives. These narratives relate to the origin of the wells and why they are located in these specific places. The area is also placed in its broader context as these narratives relate to christian conversion, sailors at sea, and Vikings and saints. The

94 Thiers 2005, chapter 6.

95 Frijhoff 1986, 91.

96 For example, the last phase of use of Broekpolder-1 is dated to the end of the early medieval period.

97 Mostert 2002, 179, and Thiers 2005, 183.

98 Thiers 2005, 182-183.

visits, pilgrimages and processions that are made to the wells have made them into focal points in the landscape with other religious buildings in the direct vicinity. The train platform in Heiloo next to the ‘Runxput’ and the ‘procession’ road between the ‘Adelbertusput’ and the abbey at Egmond-Binnen are physical manifestations of the people that have come to these places. Especially for the pilgrims not only the place itself, but also the route and journey leading to the wells are of importance. With anticipation growing as the well comes in close range.

#### 5.5.2 EXAMPLE 2: VINEX LOCATION BROEKPOLDER, PROJECT ‘WATEROFFERS’

At the Vinex location Broekpolder there is a modern interpretation of the proto-historic offering sites created in the ‘offersingel’ a modern stretch of water.<sup>99</sup> Here they have tried to link the importance of star constellations in the ordering of the landscape with offerings in water. They have done this by placing led lights in the shape of four star constellations at islands in the water that light up during the night (figure 5.13). The islands are at the same time indicators for the water level. The new inhabitants of the Broekpolder have all received a white ‘offerstone’ with a spiral design on it that is inspired by a bronze ornament found during excavation of Broekpolder-1. From a scientific perspective some remarks can be made. For example, the star constellation chosen by the artists were not the ones that were discovered during excavations in the Oer-IJ region nor were the star constellations situated in water and a characteristic of the stones was their unworked appearance. Archaeologists should, however not expect artists to reproduce an archaeological view. New focal points are created within a newly developed suburban area that refer to a past that is no longer visible in the landscape. It would be more interesting to see if the people living in the area are interested in these artworks and start to ask questions about their meaning or if local people see the area and the artworks different when they know about the background of these works. It is, however, important that at those moments besides the artistic interpretation also the archaeological narrative is brought to the front; otherwise people will be given the wrong idea about the pre- and protohistoric people and their ordering of the landscape.



Figure 5.13 Island representing ‘Water snake’ at the ‘vinex’-location Broekpolder. The grassy area on the left is the edge of the archaeological monument.

99 The art project ‘Wateroffers’ of Paul de Kort and Marcel Eekhout.

## 5.5.3 CONCLUDING REMARKS

All the local policies indicated that the characterization and identity of the region is of utmost importance when creating cultural-historical policies. For the pre- and protohistoric period these characterizations are less well defined, especially due to a lack of immediate visibility. Habitation history, although important, is in this case not a very appealing concept. Attention to the ritual use of the landscape can evoke the idea that the landscape people live in is more than a utilitarian background. The examples above show that although the pre- and protohistoric offering sites in wet low-lying areas may be near invisible, connections can be made with places in the present-day landscape. Whether these are historic places, such as the wells or newly created spaces, such as the 'offersingel' does not diminish the idea that both kind of places can make people aware of a specific aspect of their regional cultural history. It creates an image of the people from the past which goes beyond the point of poor farmers who were just managing to get by and who only focussed on producing food.

The excellent preservation of archaeological remains in the Oer-IJ region is one of the reasons that these rituals from the past could be reconstructed. And present-day inhabitants could be made aware of the quality of the archaeology on which they live. When new policies are developed or decisions are being made concerning archaeological heritage management it may be useful to think more about the characterization of the region also when the early periods are considered. Elements such as offering sites may be more difficult to detect or predict but this is not impossible. The detection of offering sites asks for a new approach in the early stages of research that may be a bit more costly (e.g. trenching instead of core boring) but the possible results can appeal to a wider public. When making this choice reference can be made to the elements visible in the landscape, but also to the more difficult to detect remains of old creeks and the Oer-IJ itself. The predictions made in this thesis can be used as a guideline and through testing the model on the questions asked and assumptions made in this chapter our knowledge of the ritual practices associated with offerings in water can be enlarged and the present-day perception of the landscape can be enhanced.



#### ACHTERGROND VAN HET ONDERZOEK

Dit promotieonderzoek is onderdeel van het NWO<sup>1</sup>-Stimuleringsprogramma ‘Bodemarchief in Behoud en Ontwikkeling’ (BBO) met als doel ‘een wetenschappelijke bijdrage te leveren aan het actuele beleidsvraagstuk van de inpassing van archeologisch-historische waarden in de ruimtelijke ontwikkeling.’<sup>2</sup> Het BBO-programma hanteert twee sleutelbegrippen, ‘de culturele biografie van het landschap’ en ‘denken en doen.’ Het begrip ‘de culturele biografie van het landschap’ is gekozen om vorm te geven aan de interne integratie van de verschillende cultuur-historische waarden zoals die bestudeerd worden vanuit archeologie, historische geografie en architectuurgeschiedenis. De culturele biografie van het landschap wordt ook gezien als een verbindend begrip tussen cultuurhistorie en ruimtelijke ordening. Het begrip ‘denken en doen’ is gerelateerd aan actieonderzoek, waarbij onderzoek en beleid in wisselwerking worden bestudeerd.

Binnen het BBO-programma vinden vier gebiedsgerichte projecten plaats verspreid over verschillende delen van Nederland. Het hier relevante project ‘Van Oer-IJ estuarium tot metropolitaan kustlandschap: het vaststellen en beschermen van archeologisch-historische bronnen van 4000 jaar leven tussen land en water’ is een van die gebiedsgerichte studies (Oer-IJ project).

Het Oer-IJ gebied ligt tussen de Noordzeekust en de moderne steden Alkmaar, Amsterdam en Haarlem (figuur 1.1). Het Oer-IJ project omvat drie onderzoekstrategieën: archeologisch-historische studies naar de bewoningsontwikkeling van het gebied vanaf 2000 v. Chr. en het opstellen van bewoning- en landgebruikmodellen en voorspellende kaarten; actieonderzoek naar de applicatie van het concept van de culturele biografie van het landschap binnen archeologische monumentenzorg in de regio; en een toegepast onderzoek dat de fysieke kwaliteit van archeologische monumenten vaststelt en methodes ontwikkelt voor het monitoren ervan in de toekomst. De archeologisch-historische studies leveren de bouwstenen voor de culturele biografie, waarbij als verbindend element voor het thema ‘water’ is gekozen. Dit proefschrift is één van de archeologisch-historische studies en is gericht op de pre- en protohistorie van het gebied. Gerard Alders bestudeerde de regio vanaf de vroege middeleeuwen, Heleen van Londen is verantwoordelijk voor de culturele biografie van het landschap en het actieonderzoek en Liesbeth Theunissen voert het toegepaste onderzoek uit.

#### DOEL VAN HET ONDERZOEK.

Gedurende de laatste twee decennia zijn bij verschillende grootschalige opgravingen in de Oer-IJ regio resten ontdekt die geïnterpreteerd zijn als de overblijfselen van offers in natte delen van het landschap. Dit type vindplaats is echter nog geen expliciet deel van de archeologische monumentenzorg. Dit is deels te wijten aan het ontbreken van dit type vindplaatsen in bewoning- en landgebruikmodellen en de daaruit volgende voorspellingsmodellen van de regio, die een belangrijk gereedschap zijn binnen de archeologische monumentenzorg. Daarnaast zijn in het Holocene gebied, vanwege de nadruk op nederzettingen, voorspellingsmodellen vooral gericht op de hogere delen van het landschap. Hierdoor heeft gebruik van de natte lage delen van het landschap minder kans op ontdekking. Daarnaast schenkt de Nederlandse archeologie weinig aandacht aan religie en rituele praktijken.

Het doel van dit onderzoek is het analyseren van de offerplaatsen in de natte lage delen van het landschap in de Oer-IJ regio vanuit een landschapsperspectief, om deze offerplaatsen vervolgens in een landgebruik- en voorspellingsmodel een plaats te geven. Het is de hoop van de onderzoeker dat deze modellen vervolgens gebruikt worden binnen de archeologische monumentenzorg en daarnaast kunnen dienen als bouwstenen voor de karakterisering van de Oer-IJ regio.

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1 Nederlandse Organisatie voor Wetenschappelijk Onderzoek.

2 Bloemers 2001, 1.

## HOOFDSTUK 1

In dit hoofdstuk wordt het theoretisch kader uiteengezet aan de hand van drie perspectieven, respectievelijk het cognitieve, het sociale en het landschappelijke. Het cognitieve perspectief is gekozen vanwege de heldere definities en verklaringen van ritueel en religie zonder een specifieke culturele invulling. Het sociale perspectief beschouwt religie als een sociaal fenomeen en bekijkt religieuze praktijken als actie die ingebed is in de bredere sociale wereld. Aangezien handelingen plaats innemen en offerplaatsen in relatie tot het landschap worden onderzocht volgt een landschaps-perspectief, dat beide andere perspectieven integreert. Deze landschapsbenadering stuurt de archeologische interpretatie en voorspellingskaarten.

Religie wordt gedefinieerd als een symbolisch-cultureel systeem van rituele handelingen ondersteund door een uitgebreid en overwegend gedeeld conceptueel beeld dat cultureel gepostuleerde supermenselijke actoren (CPS-actor) omvat.<sup>3</sup> Religieuze rituelen worden beschouwd als acties waarbinnen CPS-actoren een rol spelen en die een verandering te weeg brengen in de religieuze wereld.<sup>4</sup> Volgens Boyer<sup>5</sup> hebben mensen onbewust, intuïtieve aannames met betrekking tot de eigenschappen van dingen gebaseerd op de ontologische categorie waartoe zij behoren. Daarnaast is het aantal ontologische categorieën beperkt tot dier, persoon, door de mens gemaakt object, natuurlijk object, en plant. Een kenmerk van CPS-actoren is dat zij de grenzen van de ontologische categorieën overschrijden. Het zijn sociale personen met specifieke kenmerken, die om een specifieke sociale interactie vragen. Religieuze rituelen, zoals het offer, worden net zoals alle andere sociale acties geanalyseerd binnen het kader van Giddens' concept van de dualiteit van structuur, waarbij acties de sociale instituten onderhouden en de sociale instituten acties beïnvloeden. Het offer is een actie waarbij er een uitwisseling plaatsvindt tussen personen en CPS-actoren. Het offer wordt onderzocht via de verschillende elementen (thema's) waaruit het bestaat (figuur 1.2), met een nadruk op de archeologisch componenten. Deze thema's zijn tijd, plaats, het geofferde, gebeurtenis, persoon en CPS-actor.

Het landschapsperspectief zorgt er niet alleen voor dat er goed naar de locatie van offerplaatsen wordt gekeken, maar relateert het offer ook aan de bredere sociale wereld. Dit gebeurt op drie ruimtelijke niveaus. Op het niveau van de offerplaats wordt er gekeken naar het type landschapselement waarin de offers zijn geplaatst, maar ook de plaatsing van de offers op zich. Daarbij wordt er van uit gegaan dat het samen of apart plaatsen van objecten ons kunnen informeren over betekenisvolle relaties. Op het niveau van de regio worden er vergelijkingen gemaakt tussen de objecten in en buiten de offerplaats om selecties vast te kunnen stellen. Daarnaast wordt er gekeken of er specifieke locaties binnen de regio zijn waar objecten vandaan komen om eventuele verbindingen binnen het landschap vast te kunnen stellen. Tevens wordt er gekeken naar de ruimtelijke relatie tussen offers en andere (niet-rituele) handelingen. Daarbij kunnen connecties tussen verschillende dagelijkse handelingen van belang zijn. Het laatste niveau overstijgt de regio waarbij het van belang is dat kennis van andere landschappen kan beïnvloeden hoe mensen hun landschap ervaren. Hier zal de nadruk liggen op de betekenis van geïmporteerde objecten en hun eigenschappen en hoe zij in het offer gebruikt worden.

## HOOFDSTUK 2

In navolging van het idee dat het karakter van offers niet van te voren kan worden bepaald, wordt in dit hoofdstuk een overzicht gegeven van offerplaatsen in natte delen van het landschap van Noordwest-Europa, met name Noord-Duitsland, Denemarken en Zuid-Zweden. Er is voor dit gebied gekozen omdat hier een langdurige onderzoekstraditie, inclusief opgravingen, naar offerplaatsen bestaat en het Oer-IJ aan de westelijke rand van het Germaanse gebied ligt. Honderd offerplaatsen die in de belangrijkste literatuur als zodanig worden omschreven zijn onderzocht en zijn aan de hand van de thema's zoals uiteengezet in hoofdstuk 1 geanalyseerd. De meest gebruikte classificaties van offerplaatsen zijn uiteengezet en geëvalueerd. Classificaties aan de hand van typische vindplaatsen zijn problematisch en een andere aanpak is gevolgd in dit hoofdstuk met gebruikmaking van de ontologische categorieën. Hoewel enkele algemene trends konden worden vastgesteld, blijkt dat elke offerplaats een unieke combinatie van eigenschappen heeft.

In de literatuur is meer aandacht voor metalen objecten dan voor organische objecten. En in het algemeen

3 Lawson en McCauley 1996, 96, vertaald door de auteur.

4 McCauley en Lawson 2002, 13, vertaald door de auteur.

5 Boyer 2000.

krijgen de objecten meer aandacht dan de landschappelijke context waarbinnen zij gevonden zijn. Dit is deels vanwege het (kleinschalige) karakter van de meeste opgravingen welke op de vondstdeposities gericht is.

### HOOFDSTUK 3

In dit hoofdstuk wordt een algemeen beeld van het Oer-IJ gebied gegeven. Om het huidige onderzoek te plaatsen wordt de onderzoeksgeschiedenis van het gebied uiteengezet. Vervolgens worden de geologische en ecologische ontwikkelingen geschetst. Er is extra aandacht voor de geologie en de ecologie omdat deze de basis vormen voor de gereconstrueerde landschappen uit het verleden. De voorspellingen uit hoofdstuk 5 zullen hier deels op gebaseerd zijn. Daarom heeft Peter Vos zes nieuwe paleogeografische kaarten en één geolandschapskaart gemaakt en de geologische ontwikkeling van het gebied beschreven. Deze bijdrage is door de auteur van dit proefschrift vertaald en integraal in het proefschrift opgenomen. Uit hoofdstuk 1 volgt dat offers deel uitmaken van de sociale leefwereld van mensen. Voor een goed begrip van de offerplaatsen wordt een sociaal-culturele ontwikkeling van het Oer-IJ gebied gegeven, zodat de offerplaatsen in hun sociaal-culturele context geplaatst kunnen worden.

### HOOFDSTUK 4

In dit hoofdstuk worden offerplaatsen in de lage natte delen van het Oer-IJ gebied besproken. Alle 499 uit de literatuur bekende vindplaatsen in het gebied zijn geanalyseerd aan de hand van de criteria: locatie, plaatsing, tijd, en overeenkomsten en verschillen met andere vondstcomplexen. Op basis hiervan zijn 22 locaties als offerplaatsen geïnterpreteerd. Een offerplaats wordt beschouwd als een plek waar een offer heeft plaatsgevonden. In hoofdstuk 2 werd het als problematisch gezien dat de offerplaatsen niet regelmatig in relatie tot het bredere landschap werden beschouwd. Om dit verband direct zichtbaar te maken zijn de 22 offerplaatsen in relatie tot hun plaats in het landschap in vier groepen gedeeld. De vier groepen zijn: veen/moerasgebieden op of direct naast (voormalige) strandwallen, grote veengebieden ten oosten van het Oer-IJ, kreken, en de randzone van het Oer-IJ. De offerplaatsen worden kort besproken, waarbij de reden om het een offerplaats te noemen wordt gegeven. Daarna worden de offerplaatsen aan de hand van de thema's uit hoofdstuk 1 benaderd en wordt een model gevormd (figuur 4.48).

Er wordt aangetoond dat de locatiekeuze van de offerplaatsen door de tijd heen verandert. Deze keuze hangt waarschijnlijk samen met het idee dat er in zoet water geofferd diende te worden. Daarnaast lijkt er een voorkeur te bestaan voor de natte delen van het landschap die een zichtbare begrenzing hebben. In de vroege perioden vinden de offers plaats in gebieden die nog geen gebouwen bevatten. Pas in de Romeinse ijzertijd vinden offers plaats in gebieden die al ontgonnen zijn. In de vroege periode is het merendeel van de offers enkelvoudig en betreft een korte tijdsspanne. Vanaf de midden ijzertijd bevatten de meeste offerplaatsen meerdere vondst-categorieën en worden ze ook langere tijd gebruikt. Op basis van de sociale structuur, de locatie van de offerplaatsen, de offers op zich, en het ontbreken van de noodzaak voor rituele specialisten lijkt het aannemelijk dat alle leden van een huishouden gebruik maakten van de offerplaatsen. Er is geen standaard offer in het Oer-IJ gebied. Er kan wel een voorkeur worden vastgesteld voor hoofd- en pootelementen van dieren en dan vooral van paard, hond en koe, losse menselijk botten met een uitgesproken voorkeur voor delen van het hoofd en ledematen, hard rode en witte objecten van buiten het Oer-IJ zoals stenen en Romeins aardewerk en tegels, verschillende soorten hout uit verschillende delen van het landschap, en verschillende grondsoorten voor het maken van aarden wallen. Door het gebruik van specifieke kleuren, elementen uit verschillende delen van het landschap en specifieke lichaamsdelen van mens en dier werden in de natte offerplaatsen van het Oer-IJ gebied complexe verhalen geconstrueerd.

### HOOFDSTUK 5

In dit hoofdstuk worden kwalitatieve voorspellingen gedaan met betrekking tot de locatie van offerplaatsen in natte context met de hoop dat deze opgenomen worden in het proces van archeologische monumentenzorg in de regio. Veertien vragen zijn geformuleerd die betrekking hebben op het voorspellingsmodel en zijn

toepassing. De vragen en antwoorden kunnen helpen bij het uitvoeren en evalueren van het voorspellingsmodel in de toekomst. Daarnaast wordt gebruik gemaakt van het basisrapport over voorspellingsmodellen van Van Leusen ea.<sup>6</sup> dat is ontwikkeld binnen het BBO-programma. De zes thema's die zij bespreken met betrekking tot het verbeteren van voorspellingsmodellen worden gevolgd. Dit betekent dat er wordt ingegaan op: de kwaliteit en kwantiteit van de data, landschappelijke factoren, het gebruiken van sociaal-culturele factoren, hoge ruimtelijke resolutie, ruimtelijke statistiek, en het testen. De laatste twee thema's zullen vooral in de toekomst moeten worden uitgewerkt.

Voor het voorspellingsmodel van het Oer-IJ zijn vijf aannames opgesteld.

1. Menselijk gedrag vertoont op verschillende schalen en op verschillende manieren patronen.
2. Er werden gedurende de onderzochte periode geen offers in zout water geplaatst.
3. De offerplaatsen gedurende de onderzochte periode liggen dicht bij velden en nederzettingen.
4. Er lijkt gedurende de onderzochte periode een associatie te zijn tussen grafheuvels, aardwerken en offerplaatsen.
5. Ook al kan alles een offer zijn, toch blijken er bepaalde voorkeuren te zijn.

Er worden twee type voorspellingsmodellen gemaakt. Het eerste type is gebaseerd op sociaal-culturele regels in relatie tot het landschap. Op vijf diachrone paleogeografische kaarten (figuur 5.4-5.8) worden in grijs tinten zones aangegeven waarbinnen offerplaatsen verwacht worden. Deze worden samengebracht in een kleurenkaart (figuur 5.9) waarbij elke kleur een specifieke verwachting aangeeft in plaats van een graad van verwachting. Het tweede type voorspellingsmodel gaat uit van de locatie van bekende vindplaatsen in combinatie met de nog aanwezige landschapelementen die onder de bouwvoor kunnen worden aangetroffen. Hiervoor is een geolandschapskaart (losse kaart 1) ontwikkeld waarbij een nadruk op oude waterlopen is gelegd. De kaart omvat niet de duinen, aangezien deze beschermd zijn, en ook niet het zuidelijk deel van het Oer-IJ gebied dat door bebouwing grotendeels verstoord is. Alle vindplaatsen zijn aangegeven door een stip met een nummer. Als de vindplaats meer of andere zaken omvat dan enkele scherven aardewerk wordt een open cirkel met een doorsnede van 250 meter om de stip geplaatst. Als binnen deze cirkel (oude) waterlopen voorkomen wordt de cirkel grijs gemaakt. Waar meer cirkels elkaar overlappen wordt de grijs tint donkerder en de kans op een mogelijke offerplaats groter.

Als afsluiting worden nog twee voorbeelden gegeven van de inrichting van het huidige landschap, waarbij een verbinding gemaakt kan worden tussen het heden, (prehistorische) handelingen en offerplaatsen.

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6 Van Leusen ea. 2006.

## ENGLISH SUMMARY

### BACKGROUND OF THE RESEARCH

This thesis is part of the NWO<sup>1</sup> stimulation programme ‘Protecting and developing the Dutch archaeological-historical landscape’ with the aim to make a scientific contribution to the present-day policy issue of embedding archaeological-historical values within the environmental planning process.<sup>2</sup> Two key concepts within the programme are ‘the biography of landscape’ and ‘thinking and doing’. The concept biography of the landscape is chosen for its capacity to form internal integration between the different cultural-historical values as they are studied within archaeology, historical geography and architectural history. The biography of the landscape is also seen as a bridging concept between cultural history and the environmental planners. The concept of thinking and doing is related to action research in which the collaboration between policy making and research is studied.

Within the programme four regional projects are initiated that are situated across different parts of the Netherlands. The here relevant project ‘From Oer-IJ estuary to metropolitan coastal landscape: assessing and preserving archaeological-historical resources from 4000 years living between land and water’ (Oer-IJ project) is one of the regional studies.

The Oer-IJ area is situated between the Noordzee coast and the modern cities of Alkmaar, Amsterdam and Haarlem (figure 1.1). The Oer-IJ project has three research strategies: archaeological-historical studies into the developments of the area from 2000 BC onward and the formulation of habitational/land use models and predictive maps; action research into the application of the concept of the cultural biography of landscape within archaeological heritage management of the region; and applied research that assesses the physical quality of an archaeological monument and how this can be monitored in the future. The archaeological-historical studies will produce the characteristics for the cultural biography with ‘water’ as a binding theme. This thesis is one of the archaeological-historical studies and focuses on the pre- and protohistory of the area. Gerard Alders studies the region from the Early Medieval Period onwards, Heleen van Londen is responsible for the cultural biography of the landscape and action research, and Liesbeth Theunissen has undertaken the applied research.

### AIM OF THE RESEARCH

During the last two decades several large scale sites that have been excavated in the Oer-IJ region are interpreted as containing offerings in watery places. This kind of site has not yet been made explicitly part of the archaeological heritage management process. This absence is partly due to the lack of integration of these sites into the habitational/land use models of the Oer-IJ region and the consequential absence in predictive models and maps that are an important tool in archaeological heritage management. Furthermore, the emphasis on settlements in predictive models of the Holocene area has led to a focus on the higher parts of the landscape, which minimizes the change of discovery of use of the wet lower lying parts of the landscape. Moreover, there is little attention for religion and religious practices in Dutch archaeology.

The aim of this research is to analyse all the offering sites in wet low-lying areas in the Oer-IJ region from a landscape perspective. In order to integrate offering sites in wet low-lying parts of the landscape into a wider land use model and subsequently place them in a predictive model. It is the hope of the researcher that the result of the analyses and the predictive model will be used in the archaeological management process and as building blocks for the characterization of the Oer-IJ region.

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1 Netherlands Organisation for Scientific Research.

2 Bloemers 2001, 1.

## CHAPTER 1

This chapter describes the theoretical background following three perspectives, respectively a cognitive, a social and a landscape perspective. The cognitive perspective is chosen for its clear definitions and explanations of ritual and religion without a specific cultural infill. The social perspective views religion as a social phenomenon and studies religious practices as actions that are embedded in the social world. As actions take up place and offering sites are studied in relation to the landscape a landscape perspective is used that integrates the other perspectives. The landscape approach guides the archaeological interpretations and predictive maps.

Religion is defined as “a symbolic-cultural system of ritual acts accompanied by an extensive and largely shared conceptual scheme that includes culturally postulated superhuman agents.”<sup>3</sup> Religious rituals are defined as actions in which CPS-actors have a role and that lead to a change in the religious world. According to Boyer<sup>4</sup> people have intuitive assumptions about the characteristics of things based on the ontological category to which they belong. Moreover, the number of ontological categories is limited to animal, person, tool (man-made object), natural object, and plant. A characteristic of CPS-actors is that they transgress the ontological categories. CPS-actors are social persona with specific attributes that demand specific social interaction. Religious rituals, such as offerings, are analysed as any other social action within the framework of Giddens’ concept of the ‘duality of structure’ in which actions constitute social institutes and social institutes influence actions. An offering is an action that consists of an exchange between persons and CPS-actors. Offerings are analysed in relation to several elements (themes) that make up an offering with an emphasis on the archaeological components. The themes are: time, locality, the offering, the event, person, and CPS-actor.

The landscape approach not only analyses the location of the offering sites, but also relates the offering to the broader social world. This will take place at three spatial levels. At the level of the offering site the specific landscape elements in which the offerings take place will be studied and the placement of objects within the offering sites. It is assumed that the together or separate placement of objects can inform us about meaningful relations. At the level of the region objects inside and outside the offering sites will be studied to determine selections. Furthermore, the specific location within the region from which objects can be taken will be analysed to establish if there are possible connections within the landscape. Besides the spatial relations between offerings and other (non)ritual practices will be analysed, where, especially, the relations with everyday practices can be important for the interpretation. The last level exceeds the region; here it is important that knowledge of other landscapes can influence how people experience their own landscape. The emphasis will be on the meaning of imported objects and their characteristics and the way in which they are used within offerings.

## CHAPTER 2

Following the idea that the characteristics of specific offerings cannot be determined in advance, in this chapter an overview will be given of offering sites in wet parts of the landscape of Northwest Europe, and particular North-Germany, Denmark and South-Sweden. This region is chosen as it has a long research tradition, including excavations, into offering sites and the Oer-IJ is situated at the western edge of the Germanic world. Hundred offering sites, which are described in the main literature as such, are analysed according to the themes as given in chapter 1. The most used classifications of offering sites are described and evaluated. These classifications based on type-sites are problematic and a different approach is taken up in this chapter which uses the ontological categories. Although some trends could be established, each offering site has a unique combination of characteristics.

In the literature there is a stronger emphasis on metal objects than on organic objects. And in general objects receive more attention than the landscape contexts in which they are found. This bias is partly due to the (small scale) character of most excavations that are focusing at artefact depositions.

3 McCauley and Lawson 2002, 13.

4 Boyer 2000.

## CHAPTER 3

In this chapter a general background of the Oer-IJ is given. The research history of the Oer-IJ area is described in order to place the present study in its wider context. Furthermore the geological and ecological developments are given. The emphasis on geology and ecology is necessary as they are the base for the reconstructed landscapes of the past on which the predictions in chapter 5 will be based. Therefore Peter Vos has made six new palaeogeographical maps and a geolandscape map and he has described the geological development of the area. This contribution is translated by the author of this thesis and placed integral into the thesis. From chapter 1 it follows that offerings are part of the socially lived world of people. For a better understanding of offering sites the socio-cultural development of the Oer-IJ area is given, in this way offering sites can be placed within their socio-cultural context.

## CHAPTER 4

In this chapter the offering sites in the low-lying parts of the Oer-IJ region are studied. All 499 known sites from the literature are analysed according to the criteria, locality, place(ment), time and similarities and difference with other find complexes. On the basis of this analysis 22 locations are interpreted as offering sites. An offering site is a location where an offering took place. In chapter 2 the infrequent study of the connections between offering sites and the wider landscape is seen as problematic. In order to overcome this problem the 22 offering sites in the Oer-IJ area are divided into four groups on the basis of their location within the landscape. These four groups are: peaty/marshy areas on or next to (former) coastal barriers, large peat areas in the eastern part of the Oer-IJ area, creeks, and low-lying parts on the side of the Oer-IJ streambed. A short description of the offering sites is given, including the reason for defining it as an offering site. Next the offering sites will be analysed according to the themes as described in chapter 1 and an archaeological model is formed (figure 4.48).

It will be shown that the choice of location of the offering sites changes through time. This change is probably related to the idea that offerings need to take place in fresh water. Furthermore there seems to be a preference for the wet parts of the landscape that have a visible limit. In the early periods offerings take place in areas that have no buildings in it. Only in the Roman Iron Age offerings start to take place in areas that are already cultivated to some extent. During the early periods most of the offerings are singular and cover a small time span. From the Middle Iron Age onward most offering sites contain different types of object and the sites are used over a longer time span. On the basis of the social structure, the location of offering sites, the characteristic of the offerings, and the lack of a need for ritual specialist it seems likely that all members of a household used the offering sites. There is no standard offering in the Oer-IJ area. However, there seems to be a preference for: head and leg elements of animals, especially of horse, dog and cattle; loose human bones with a more strict selection of bones from the head and extremities; hard, red and white objects from outside the Oer-IJ area, like stones and Roman pottery and tiles; wood from different parts of the landscape within the Oer-IJ area; and different types of soils for the shaping of earthen works. Through the use of specific colours, elements from different parts of the landscape, and specific parts of humans and animals in the wet offering sites of the Oer-IJ area complex narratives were constructed.

## CHAPTER 5

In this chapter qualitative predictions about the location of offering sites in wet parts of the landscape are made with the hope that they will be implemented in the archaeological heritage management of the region. Fourteen questions are formulated that are related to the predictive model and its application. These questions and their answers could help with the use and evaluation of the predictive model in the future. The base report of Van Leusen et al.,<sup>5</sup> produced within the NWO programme, is used as a guideline. The six themes they discuss in order to develop the quality of predictive models are followed within this chapter. This means that the following aspects will be gone into: quality and quantity of the data, landscape factors, the use of socio-

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cultural factors, high spatial resolution, spatial statistics, and testing. The last two themes will have to be dealt with in future research.

Five assumptions have been made in relation to the predictive model of the Oer-IJ.

1. Human activities are patterned in various ways and scales.
2. During the period under study offerings were not made in salt water.
3. During the period under study the offering sites were situated near fields and settlements.
4. During the period under study there appears to be an association between barrows and embankments and offering sites.
5. Although during the period under study anything could be considered an offering, there are certain preferences.

Two types of predictive models were made. The first type is based on socio-cultural rules in relation to the landscape. On five diachronic palaeogeographical maps (figure 5.4-5.8) zones where offering sites are expected are shaded in grey tones. These maps are brought together in a colour map (figure 5.9) where each colour indicates a specific prediction instead of a quantitative scale of expectation. The second type of predictive model takes at its starting point known archaeological sites and the landscape elements that are still present directly underneath the topsoil. A geolandscape map (fold out map 1) is developed with an emphasis on old water ways. This map does not include the dunes as they are a protected area and the southern part of the Oer-IJ area as it is largely covered by built-up areas. Each archaeological site is represented on the map with a dot and a number. When the site contains more or other archaeological elements than pottery sherds an open circle with a diameter of 250 m is drawn around the site. If within the circle a(n) (old) water way exists the circle is filled in with a grey colour. Where grey circles overlap the colour darkens and the change to find a possible offering site increases.

The chapter closes with two examples of the design/lay-out of the present-day landscape in which a connection could be made between the present, (prehistoric) practices and offering sites.

First edition between brackets.

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## A GEOLANDSCAPE MAP (A CONTRIBUTION BY PETER VOS)<sup>1</sup>

On a geolandscape map the different geological landscapes at the surface are represented. Geological landscapes are the genetic environments in which sediments are formed, like dunes, coastal plains, mud flats and tidal creeks in salt marshes. The geolandscape map shows the last period of active sedimentation in an area. In the Oer-IJ area wind and water transport the sediments that build up the geological landscape units. These units on the geolandscape map are not necessarily formed during the same sedimentation phase. For example, the eastern coastal barriers were formed at an earlier date than the western coastal barriers. In the legend accompanying the map the different time periods which formed the different geolandscape units will be described.

The geolandscape map has strong relations with the geomorphological map. But with the first the sedimentary environments that appear at the surface are of central importance and with the latter the shape of the landscape is mapped. However, the geomorphological map plays an important role in the construction of the geolandscape map as the shape of the landscape often follows the boundaries between different geolandscape units, like creek levees or intertidal flats. For this reason the AHN<sup>2</sup> data plays an important role for the delineation of the different sedimentary deposits that are morphological visible. The borders between landscape units that are not as morphological visible, like the border between tidal area and the peat area, are determined on the basis of geological and soil maps of the area.

Another important source of information in regard of the dating of the geolandscape at different depths are the large scale excavations, like Assendelver Polders (1980-1983) and Broekpolder (1998-2000). These excavations are key sites from which the direct surroundings are interpreted in combination with the AHN, and geological and soil maps.

A final role in the construction of the geolandscape is expert judgement. Especially in the areas where the surface morphology is disturbed by (sub)recent building activities, the borders between the different geolandscape units are determined on the basis of insight into the Oer-IJ area.

### THE GEOLANDSCAPE MAP AREA

The tidal area of the former Oer-IJ estuary lies central on the geolandscape map. The map covers the area north of the Noordzeekanaal, between the coordinates 104.5/493, 115/493, 104.5/512.5 and 115/512.5. The area borders in the west with the Younger Dunes, in the north- and south-west with the former coastal barriers, and in the east with the large peat area of the Zaanstreek.

In comparison to the mouth of the river Rijn and Maas near Rotterdam and the Waddenzee and tidal area of North Netherland, the Oer-IJ estuary is a relatively small tidal system. The distances between the different main geolandscape elements are short, and range from a few hundred meters to some kilometres.

### GEOLANDSCAPE ELEMENTS IN THE OER-IJ AREA.

The categorization of the geolandscape units of the Oer-IJ area depends primary on the palaeo-tidal levels, particularly the paleo-tidal levels during the last phase of sedimentation when the landscape units established their final form and position.

Terrestrial landscapes develop above the maximum storm flood level. In the Oer-IJ area terrestrial landscapes are the dunes and the peat area that did not flood during periods of extreme high water levels (EHW).<sup>3</sup>

Tidal landscapes are flooded during high tide. These landscapes can be divided on the basis of the frequency of the flooding. Subtidal landscapes are situated below the water level during mean low tide (MLT). The Noordzee, the tidal inlet, and the large tidal channels, which are permanently under water, are subtidal landscape units. The intertidal landscapes are situated between mean low tide (MLT) and mean high tide (MHT). The sandy

1 This text is a translation by the author of a Dutch text written by Peter Vos specifically for this thesis.

2 Actueel Hoogtebestand Nederland = Current record of heights of the Netherlands.

3 According to Vos and Van Heeringen (1997) extreme high water levels are the maximum water levels achieved during storm floods once every 20 year.

and clayey mud flats are intertidal landscape units. The supratidal landscapes are above mean high tide (MHT) and are only flooded during spring tide and storm floods. The tidal flats, saltmarsh basins, saltmarsh creeks and levees, and tidal ridges are supratidal landscape units.

The coastal barrier and beach plain landscape comprises the coastal barriers and the lower areas between them. Sandy beaches and sandy beach plains, with or without sparse plantgrowth, develop along the coast in the tidal zone between MLT and EHW. The coastal barriers are elongated little developed rises of the ground that consist mainly of sand. These barriers are shaped by the undulation in the coastal zone. In many cases low dunes (Older Dunes)<sup>4</sup> were formed on top of the coastal barriers of which the top is situated above EHW. The dune landscape consists of the dunes with a strong relief (Younger Dunes),<sup>5</sup> which started to form during the Early Medieval Period.

During the prehistoric period the surface of the peat landscape was much higher – some meters above NAP – than nowadays.<sup>6</sup> Anthropogenic peat cutting and drainage that took place from the Middle Ages onward, has caused the peat surface to subside to 1 or 2 metre below NAP. Due to the high surface during the prehistoric period, the central peat area was not flooded. Only the edges of the peat were flooded during periods of marine high activity.

On the Geolandscape map the following main landscapes are defined.

- I. Dunes, coastal barriers and beach plain landscape.
- II. Tidal landscapes of the Oer-IJ area
- III. Peat landscapes
- IV. Other landscapes.

#### I. DUNES, COASTAL BARRIERS AND BEACH PLAIN LANDSCAPE

The dunes, coastal barriers and beach plain landscape comprises all the landscape units where coastal or dune sediments are situated near or at the surface. The coastal barrier and beach plain landscape is formed before the Iron Age and lies between Uitgeest-Dorregeest and Limmen; and near Heemskerk and Beverwijk. Geographically this Neolithic-Bronze Age landscape lies to the north and southwest of the Oer-IJ channel. On the west side of the map area the tidal- and coastal barrier and beach plain landscape near Beverwijk/Heemskerk and Limmen are covered by Younger Dunes.

#### II. TIDAL LANDSCAPES OF THE OER-IJ AREA

The tidal landscape lies around the line Castricum-Assum-Wijkertunnel. The Oer-IJ estuary started to silt up at the end of the Middle Iron Age (300-200 BC). The landscape units on the map are formed during this period. The tidal landscape is divided into former mud flats and former salt marsh/tidal area. The former mud flats lie in the Castricumerpolders and the former salt marsh are situated in the Broekpolder (dune side), and the Assendelver Polders and Uitgeesterbroekpolders (peat side). The tidal area on the dune side has its base on sandy sediments, whereas the tidal area on the peat side are situated on a thick peat layer and are therefore prone to subsidence. Drainage has caused the salt marsh clay on the peat to subside just as the peat area itself and lies at a height of 1-2 m below NAP whereas the the top of the tidal area on the dune side lie above NAP. At locations in the peat area the base on which the salt marshes formed is heterogeneous, like thick sandy channel deposits next to clayey tidal flats, differential subsidence has taken place. The relative thick sandy tidal channel deposits – when the channel has cut into the deposits of the formation of Wormer – has subsided less due to drainage than the adjacent clay on peat areas. This difference in subsidence causes the channel and levee deposits to lie higher than the adjacent salt marsh deposits. These channel ridges are also named ‘inversion

4 Following Jelgersma et al. (1970) these low dunes are named Older Dunes.

5 Following Jelgersma et al. (1970) these high dunes are named Younger Dunes.

6 Vos 1983.

ridges' as the relief is inverted after the land dried up and the channels (low) have become ridges (high). The tidal landscape on peat is therefore also named inversion landscape. Where the tidal flats were situated on sand (dune side) this inversion of relief did not take place. The silted up tidal creeks are still recognisable as low parts of the landscape. The same applies to the tidal channels in the Castricumerpolders.

### III. PEAT LANDSCAPES

The peat landscapes are situated on the east side of the map, near Assendelft, Krommenie and Marken-Binnen. Locally the peat is covered with a thin layer (0-30 cm) of Medieval clay. The peat layer is usually 1.5 to 2 metres thick. Peat formation started around 2500BC in this area and ended during the Late Medieval large peat reclamations. Drainage after peat reclamation has led to the strong subsidence of the peat and the surface of the peat has disappeared due to oxidization.

### IV. OTHER LANDSCAPES

The other landscapes on the map are reclamation areas, lakes and canals (water), historic structures, and (sub)recent built areas, like infrastructure and built up areas. These landscape units are (in)directly man-made from the Late Middle Ages until recent.

### SOURCES FOR THE CONSTRUCTION OF THE MAP

The geolandscape map is constructed on the base of existing geologic and soil map, and the AHN. From these sources the following geolandscape units are used.

-AHN recorded in 2004 with a vertical resolution of 5x5m and a height precision of 5cm. Used are the morphological patterns in the inter tidal area, tidal ridges, inversion ridges in the tidal area, and the (sub)recent infrastructure (hatched on map).

- Geological map 19W, scale 1:50,000, Westerhoff et al. 1987. Used are the border between tidal area and peat landscape in the Uitgeesterbroekpolders, peat in the subsurface of the beach plain landscape, and the border between the tidal area and the coastal barriers and dune area.

-Simplified geological map of Haarlem and surroundings, scale 1:50,000, Blokzijl et al. 1995.

Used is the border between the tidal area and the coastal barrier and dune landscape on map 25W.

-Geological map of the Assendelver Polders, Vos 1983. Used is the border between tidal area and peat landscape in the Assendelver Polders.

-Soil map of Noord-Kennemerland, southern sheet, scale 1:25,000, De Roo 1953. Used is the border of the coastal barriers between Limmen and Dorregeest.

-Soil inventory map, Province of Noord-Holland, southern sheet, scale 1: 50,000, Pons and Kloosterhuis 1953/54. Used are the peat characterisations in the peat area of Krommenie and Assendelft.

-Geomorphological map of the Netherlands, sheet Alkmaar (19) and Lelystad (20), scale 1:50,000, 'Stichting voor Bodemkartering' 1979. Used are the shapes of the dunes.

-Paleogeographical maps of the Oer-IJ estuary 2500 BC, 1000BC, 100AD and 900AD, scale 1:50,000, Vos and Soonius 2004. Used to determine the origin of the deposits occurring at the surface.

-Archaeological map of the Netherlands, sheet Hollands Noorderkwartier, about 1350AD, scale 1:50,000, ROB 1987. Used are the reconstructed dykes of 1350 AD.

Topographical map of the Netherlands sheets Castricum 19C and Haarlem 25A, scale 1:25000. Used for the (sub)recent built areas (hatched on map).

## LITHOSTRATIGRAPHY OF THE OER-IJ REGION

The holocene lithological layers that occur in the Oer-IJ region are analysed according to the new lithostratigraphical classification of Nederland as proposed by 'TNO Bouw en Ondergrond'.<sup>7</sup> This new stratigraphical classification replaces the old classification of the former RGD.<sup>8</sup>

According to the new lithostratigraphical classification of TNO all peat layers are part of the 'Formation of Nieuwkoop' (formerly part of the 'Westland Formation'). The peat layer at the base of the holocene deposits and on top of the pleistocene deposits is named 'Basisveen' and the layers of peat within the holocene deposits are named 'Hollandveen'.

The marine Holocene sedimentary deposits in the Dutch coastal plain are part of the 'Formation of Naaldwijk' (Formerly 'Westland Formation'). The coastal dunes, beach barriers and coastal plain deposits are also part of the 'Formation of Naaldwijk'. Within this formation the coastal dunes are part of the 'Deposit of Schoorl' (former Older and Younger Dunes) and the coastal plain deposits are part of the 'Deposit of Zandvoort' (formerly beach sands). The marine clay deposits above the 'Hollandveen' are named the 'Deposit of Walcheren' (formerly Deposits of Duinkerke) and the bluegray clay underneath the thick 'Hollandveen' layers are part of the 'Deposit of Wormer' (formerly Deposit of Calais)

The new lithostratigraphic classification does not make a stratigraphic difference between trans- and regression phases within the marine Holocene sedimentary deposits. This was done to avoid a mixing of lithostratigraphy (a classification based on a lithological characterization of sediment) and chronostratigraphy (a classification based on periodization, including transgression phases). With the abandonment of trans- and regression phases the deposits of Calais I-IV and Duinkerke 0-III are no longer in use.

Although the old RGD classification has been replaced, on the level of the layer no alternative stratigraphy has been developed. In this thesis for the Oer-IJ area a new lithostratigraphic classification on the level of the layer is proposed. This classification at the level of the layer is an addition to the Lithostratigraphic classification of Mulder et al. 2003. The only layer described by Mulder et al., that applies to the upper deposits in the Oer-IJ region, is the marine cover deposited during the Middle Ages, the so-called 'Layer of IJse' (part of the 'Deposit of Walcheren').

The classification at the level of the layer is informal in the sense that it has not been published before. The new stratigraphic classification of the Oer-IJ, as written below, will be used for describing the legend units on the geolandscape map.

## FORMATION OF NAALDWIJK

## DEPOSIT OF SCHOORL

The Holocene coastal dune sedimentary deposits are part of the 'Deposit of Schoorl'. Following the geo-archaeological map of Den Haag-Rijswijk<sup>9</sup>, the dunes on the elongated coastal barriers (formerly Old Dunes) are part of the 'layer (or sands) of Voorburg', and the dunes with strong relief (formerly Younger Dunes) are part of the 'layer (or sands) of Den Haag'. The dune sands of the 'layer of Voorburg' receive a subname per coastal barrier system. The dune sands on the coastal barrier of Uitgeest-Dorregeest are named the 'sands of Dorregeest'

## DEPOSIT OF ZANDVOORT

Following the geo-archaeological map of Den Haag-Rijswijk<sup>10</sup>, the beach plain sedimentary deposits (formerly beach sands) are part of the 'layer (or sands) of Rijswijk'. Within the 'layer of Rijswijk' different sub-layers

7 De Mulder et al. 2003 TNO bouw en ondergrond translates as TNO building and ground.

8 Zagwijn and Van Staaldunin 1975, RGD = State Geological Service.

9 Vos 2005.

10 Vos 2005.

can be distinguished. In the area Castricum-Zanderij the shell rich washover deposits in the top of the beach plain sedimentary deposits is such a sub-layer. These so-called storm flood deposits are named the ‘Zanderij deposits’.

## DEPOSIT OF WALCHEREN

### IJ-LAKE DEPOSITS

The ‘IJ-lake deposits’ are part of the ‘Deposit of Walcheren’ and include all fresh and brackish water sedimentary deposits that are formed in the former IJ-lake and the Crommenije. Also included are the flood deposits from these lakes and waterways within the peat area of Assendelft and the Uitgeesterbroekpolder. The ‘IJ-lake deposits’ are formed from the Roman Iron Age (after the permanent closing of the tidal inlet near Castricum) until the New Period. The influence of the sea was limited to the hinterland of the Oer-IJ region through the Zuiderzee and the stream the Rekere near Alkmaar. Within the ‘IJ-lake deposits’ several sub-layers can be defined: ‘IJ-clay grounds’, ‘pikclay’, and ‘del grounds’. For these sub-layers the old names as given by De Roo (1953) are used.

### IJ-CLAY GROUNDS

The IJ-clay grounds sublayer consists of heavy, sticky clay that are in most cases humic to strongly humic. The clays can be calcareous and/or contain shell fragments. The name IJ-clay grounds is taken from De Roo (1953). In the old RGD classification these clays are part of the Duinkerke III deposits.<sup>11</sup>

### PIKCLAY

The ‘Pikclay’ sublayer consists of heavy clay that are deposited on top of the Oer-IJ deposits and or the ‘Hollandveen’ (layer or oxidization level). The clays are usually non-calcareous. In the Assendelfter Polders and Uitgeesterbroekpolders the clays are lightly humic, but lateral where the layer turns to peat it becomes strongly humic (peaty). In the Castricumerpolder the layer is more calcareous and usually more sandy. In the old classification this layer is named Pikclay<sup>12</sup> or Duinkerke III deposits. According to the new classification<sup>13</sup> ‘Pikclay’ belongs to the ‘Layer of IJe’. This name is not used here, as the lithostratigraphic unit is viewed as a sublayer instead of a layer. The reason for this choice of naming is that the sublayer ‘Pikclay’ is genetically part of the IJ-lake/lagoon system and all deposits belonging to this system are viewed as ‘IJ-lake deposits’.

### DEL GROUNDS

The sublayer ‘Del grounds’ consists of light clays with occasionally strong humic (peaty) levels. Sometimes the sublayer has thin sandy layers. The sedimentary deposits can be both calcareous or non-calcareous. These sedimentary deposits have developed in the lower parts of the landscape that are the remains of channels. These low lying parts of the landscape mainly occur in the Castricumerpolder. The ‘Del grounds’ were in the RGD classification part of the Duinkerke III deposits.

11 Westerhof et al. 1987.

12 De Roo 1953.

13 De Mulder et al. 2003.

## OER-IJ DEPOSIT

The layer 'Oer-IJ deposits' consists of all the brackish and marine tidal sedimentary deposits that originate from the tidal inlet and tidal channels of the Oer-IJ. The Oer-IJ tidal system developed from the tidal inlet of Haarlem around 3000-2500 BC. Until the definitive closure of the tidal inlet of the Oer-IJ in the Late Iron Age marine sedimentary deposits have been deposited within the former tidal system. Several sublayers of the 'Oer-IJ deposits' appear on or near the surface of the mapped area. These are the sublayers 'Castricumerpolder layer', 'Broekpolder layer', 'Uitgeesterbroekpolder layer', and 'Ostracode layer'.

## CASTRICUMERPOLDER LAYER

The sublayer 'Castricumerpolder layer' consists of sandy deposits, of which the grain size is medium and the larger part is very fine sand. The sandy deposits are calcareous and contain different amounts of clay. The soil can range from sand, light loamy and clay to light sandy. The top of the layer is often relatively homogeneous (low on sedimentary structures or clay lenses). At a larger depth (>1m) the amount of sedimentary structures, like clay lenses and shell(layers) increases. Marine shells can be loose entities or can occur in their natural/growth position. At an even larger depth peat detritus layers or dislocated pieces of peat can be found. The grain size can also increase at a larger depth. These are mainly the mud flat and channel deposits of the Oer-IJ. In older classifications these deposits are named 'stream ridge and stream channel grounds'<sup>14</sup> or Duinkerke I/0.<sup>15</sup>

## BROEKPOLDER LAYER

The 'Broekpolder layer' consists of sandy clays, usually lightly humic and layered with thin winding layers of sand. The clays are usually calcareous and marine shell fragments can occur but never in their natural/growth position. The largest part of this unit lies in the transition zone from the coastal barrier and dune sands of Beverwijk/Heemskerk and Uitgeest towards the central part of the Oer-IJ estuary. They are the former tidal deposits that developed along the edges of the coastal barriers and dunes. In the old classifications these deposits are named 'beach barrier wash-over grounds' and 'beach barrier grounds'<sup>16</sup> or Duinkerke I/0.<sup>17</sup>

## UITGEESTERBROEKPOLDER LAYER

The 'Uitgeesterbroek layer' consists of clayey sedimentary deposits (clay, light to strong loamy) that can be both calcareous and non-calcareous. The clays contain thin sandy layers and are calcareous in or near creek deposits. The layer is usually lightly humic, but where the layer transforms into peat laterally, it can become strongly humic and peaty. The lateral clay deposits – thinner than 40cm – are usually non-calcareous and have the remnants of many reed roots. The layer lies between the 'Pikclay' above and the 'Hollandveen' below. The sedimentary deposits is mainly formed within a tidal environment. On the grounds of development the unit can be divided into following environments, creek, former tidal channel, levee, and tidal basin. In the classification of De Roo this layer is named loam, light clay or peaty clay and in the RGD classification it is named Duinkerke I/0.

## OSTRACODE LAYER

The 'Ostracode layer' (or Ostracode clay) consists of humic to strong humic clays with many ostracodes. Besides ostracodes the layer can contain many molluscs, like *Cardium glaucum* and *Hydrobia*.

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14 De Roo 1953.

15 Westerhoff et al. 1987.

16 De Roo 1953.

17 Westerhoff et al. 1987.

are often concentrated in layers. There are nearly no roots in the 'Ostracode layer'. The layer is situated between the 'Uitgeesterbroekpolder layer' above and the 'Hollandveen' below. The layer is present as basin like structures in the Assendelver Polders and Uitgeesterbroekpolders. Possibly they are the remnants of old drainage channels in peat that were under the influence of the tides. De Roo does not mention this layer (to deep) and in the RGD classification it was named as a Duinkerke 0 deposit.

#### DEPOSIT OF WORMER

Where the Oer-IJ tidal channels have cut into the surface, the Oer-IJ Deposits are situated on top of the 'Deposit of Wormer'. The top of this deposit, underneath the 'Hollandveen' consists of a bluegray clay (also known as old blue sea clay). The top of the deposit is heavy clay to medium loam, calcareous, and medium to heavy rooted. Towards the bottom the deposit usually gets sandier, calcareous and layered with clay with sand or sand with clay. The roots decline steeply at this depth. These are old marine deposits dated before 4500 BP.

#### HOLLANDVEEN

In the Oer-IJ area the 'Hollandveen' consists of different peat layers. All these locally occurring peat layers have not yet received a name. Two layers have been named. The so-called 'oxidization layer, a dark peaty layer between the 'Pikclay and the Oer-IJ deposits and the thick peat layer of the 'Deposit of Walcheren' and 'Hollandveen'. The other named layer is 'Hollandveen' or the 'Deposit of Wormer'. The other non-named peat layers are viewed as 'Hollandveensplit'.

#### ANTHROPOGENIC LAYER

The layers influenced by human action at site locations are not named and are classified as 'Anthropogenic layer'. When a profile is described these layers have received a feature number, just like the natural layers.

#### LEGEND OF THE GEOLANDSCAPE MAP

In this section the different geolandscape legend units will be discussed. Of each legend unit the composition of the soil (lithostratigraphy), the spatial variation, and the morphology (relief) will be described. The geolandscape are divided into three levels:

1. Main landscapes of the first level that are indicated with Roman numerals. For example, unit II. – Tidal landscape.
2. Landscapes of a second level, which are indicated with a arabic number. For example, unit II.5 – Intertidal landscape.
3. Landscapes of a third level, which are indicated with a small letter. For example, unit II.5b – mudflats, middle height plates.

The landscapes of the first and second level are always mapped even when the surface morphology has been disturbed or completely altered by human actions. The third level landscapes are not shown for the disturbed areas as they are mainly mapped on the basis of relief characteristics which are no longer mapable using the AHN. This concerns the built-up areas and large infrastructure, like (rail)roads. The third level landscapes that are not mapable are classified as undifferentiated and are marked with an 'x'. The disturbed areas that are larger than a single house are hatched at the map, but the color of the landscape units at the first and second level remains visible.

Besides the geolandscape units, all archaeological findspots used in this thesis are marked on the map with a number. This number relates to the table in appendix 3 in which the name of the findspot, its general date and a characterisation is given. The characteristic are: other finds than/ or besides sherds, only sherds, and offering sites (with other finds). These findspots are used for the generation of predictions.

MAIN GEOLANDSCAPE UNIT I: DUNES, COASTAL BARRIER AND COASTAL PLAIN LANDSCAPE.

Main geolandscape unit I comprises all the landscapes that are formed at or near the coastline due to the breaking of the waves onto the coast (beaches) or the windblown sands of the beaches (dunes) The landscape consists of elongated sand ridges and the sandy plains in between that are shaped by water and wind.

GEOLANDSCAPE UNIT I.1 COASTAL DUNE LANDSCAPE

The coastal dune landscape consists of the rich in relief dunes at the coast, including the accompanying plains and low-lying areas. The dune relief ranges from a few to tens of metres. The relief rich dune landscape lies above 1m NAP and is formed from the Early Medieval Period onward. The dune sands belong to the 'Deposit of Schoorl'. Following the geomorphological map,<sup>18</sup> the coastal dunes are divided into two types: high coastal dunes, and low coastal dunes.

I.1a: High coastal dunes with accompanying plains and low-lying areas.

Higher coastal dunes with a relief larger than 5 metres and the accompanying plains and low-lying areas.

I.1b: Low coastal dunes with accompanying plains and low-lying areas.

Low coastal dunes with a relief between 1,5 and 5 metres and the accompanying plains and low-lying areas.

GEOLANDSCAPE UNIT I.2: COASTAL BARRIER LANDSCAPE.

The coastal barrier landscape consists of elongated elevation with a low gradient. The coastal barrier landscape in the Oer-IJ area has come into existence during the Late Neolithic and Middle Bronze Age.

I.2a: Coastal barriers

Coastal barriers are elongated low ridges that are shaped by a combination of undulation and wind. The base of the coastal barriers consists of partly aquatic sands and the top consists of dune sands. The dune sand are part of the 'Deposit of Schoorl' and the beach sands below belong to the 'Deposit of Zandvoort'.

I.2b: Ridges on coastal barriers.

Ridges on coastal barriers are isolated high ridges with a low gradient and little relief on top of the coastal barriers. The sands that make up these low ridges on coastal barriers are dune sands that belong to the 'Deposit of Schoorl'.

GEOLANDSCAPE UNIT I.3 COASTAL PLAIN LANDSCAPE

The coastal plain landscape consists of the flat terrain between the coastal barriers. In these plains peat has developed that is largely gone due to medieval and subrecent peat reclamation. The sedimentary deposits of the coastal plain landscape are part of the 'Deposit of Zandvoort'. Locally – especially in the low-lying parts – the sedimentary deposits of the coastal plain landscape can be covered with a thin layer of 10 - 40cm medieval clay (Pikclay).

I.3a: Coastal plain landscape – high.

The relatively high parts within the coastal plain landscape.

I.3b: Coastal plain landscape – middle high.

The areas between the highest and lowest parts of the coastal plain landscape.

I.3c: Coastal plain landscape – low

The relatively lowest parts of the coastal plain landscape.

I.3x: Coastal plain landscape – undifferentiated

The parts of the coastal plain landscape of which the surface morphology has become invisible due to (sub)recent building activities.

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18 STIBOKA 1979.

#### GEOLANDSCAPE UNIT I.4 DRIFTSAND COVERED COASTAL BARRIERS AND COASTAL PLAIN LANDSCAPE

The driftsand covered coastal barriers and coastal plain landscape is that part of the coastal landscape that has been covered by a relatively thick layer of 0,5-2 metres driftsand. Between this cover and the lower coastal plain sedimentary deposits often a peat layer is formed.

I.4a: Driftsand covered coastal barriers and coastal plain landscape with a peat layer underneath.

The coastal barriers and coastal plain landscape that is covered with a layer of dune sand. Between this wind blown sand layer and the coastal plain deposits a peat layer exists.

I.4b: Driftsand covered coastal barriers and coastal plain landscape without a peat layer underneath

The coastal barriers and coastal plain landscape that is covered with a layer of dune sand, but has no peat layer.

#### MAIN GEOLANDSCAPE UNIT II: TIDAL LANDSCAPE OF THE OER-IJ AREA

The main geolandscape unit II comprises all the landscapes that are formed by the Oer-IJ tidal system. The sedimentary deposits of this geolandscape unit are part of the 'Oer-IJ Deposit'. The 'Oer-Deposit' is often covered with a thin layer of medieval alluvial clay (Pikclay). Between the 'Pikclay' and the 'Oer-IJ Deposit' there are often the remains of a post-Roman peat layer (black crumbly peat remains), the so-called 'oxidization level'. The 'Pikclay' has covered the 'Oer-IJ Deposit' like a blanket. In this way the shape of the relief of the tidal landscape of the Oer-IJ has remained visible on the AHN.

#### GEOLANDSCAPE UNIT II.5: INTERTIDAL LANDSCAPE

The intertidal landscape comprises all the landscapes that are formed within the Oer-IJ intertidal system. The former mud flats and the silted up tidal channels that were formed in the Castricumerpolder are part of this landscape unit. De Roo named this landscape unit the 'inner-delta'.<sup>19</sup> The channel and mud flat sands of this landscape are part of the 'Castricumerpolder layer'.

II.5a: Mud flat landscape, high flats.

The highest mud flats within the former intertidal area.

II.5b: Mud flat landscape, medium high plates

The medium high flats within the former intertidal area.

II.5c: Mud flat landscape, low plain

The lower plains within the former intertidal area

II.5d: Mud flat landscape, low basins

The low depressions within the former intertidal area. These depressions are often the remnants of old silted up large tidal channels.

II.5x: Mud flat landscape, undifferentiated.

Part of the former intertidal area of which the surface morphology is no longer visible due to (sub)recent building activities.

#### GEOLANDSCAPE UNIT II.6: SUPRA-TIDAL LANDSCAPE ON A THICK DEPOSIT OF TIDAL AND COASTAL PLAIN SEDIMENTARY DEPOSITS (GROUNDED SALT MARSH LANDSCAPE).

The supra-tidal landscape consists of those landscapes that are formed between the MLT and EHW level of the Oer-IJ during the Late Iron Age. These are the salt marsh areas that were only flooded during spring tide or stormfloods. This geolandscape has had no inversion of the relief due to differential subsidence and is therefore also named grounded salt marsh landscape. In this area the tidal channels are often still visible in the landscape as low-lying areas and depressions. The tidal sedimentary deposits in the grounded salt marsh landscape,

<sup>19</sup> De Roo 1953, in Dutch 'binnendelta'.

adjacent to the dunes and coastal barriers, is often sandy and consist of clay layered with crinkly sand layers. The deposits of the salt mash facies of the grounded salt mash landscape are part of the 'Broekpolder layer'.

#### II.6a: Salt marsh ridges

Salt marsh ridges are elongated elavations that are situated at the edge of the former intertidal landscape. These relatively sandy ridges ae formed during spring tide and stormfloods as during the flooding of the salt marsh the relatively coarse sediments (sand and silt) were first deposited.

#### II.6b: Salt marsh heights

Relatively heigh parts of the tidal landscape that are usually adjeacent to the salt marsh ridges.

#### II.6c: Salt marsh plain

The salt marsh plain consists of the reletavily flat low-lying parts of the tidal landscape.

#### II.6d: Salt marsh basin

The salt marsh basins are isolated depressions in the salt marsh landscape. Often they are the remnants of silted up tidal channels. The recognisable continuous former channels are indicated with a line within this landscape unit.

#### II.6x: Grounded salt marsh landscape, undifferentiated

The parts of the grounded salt marsh landscape of which the surface morphology is no longer visible due to (sub)recent building activities.

### GEOLANDSCAPE UNIT II.7: SUPRA-TIDAL LANDSCAPE ON PEAT (TIDAL INVERSION LANDSCAPE)

On the eastern peat side of the Oer-IJ the tidal sedimentary deposits are formed on top of a thick (1,5-2m) peat layer. The tidal Oer-IJ deposits on the peat have strongly subsided due to the drainage of the Assendelver Polders and Uitgeesterbroekpolders. This tidal landscape on peat is also named inversion landscape as the sandy creek fills have subsided less than the adjacent tidal cover deposits on peat. The old tidal channels are now recognisable as creek ridges (inversion ridges) int he landscape. The tidal sedimentary deposits in the inversion landscape, adjacent to the peat area, consists mainly of heavy and humic clays. These clayey deposits of the inversion landscape are part of the 'Uitgeesterbroekpolder layer'.

#### II.7a: Tidal ridges

Tidal ridges are elongated elavations that are situated at the edge of the former intertidal landscape.

#### II.7b: Salt marsh heights

Relatively heigh parts of the tidal landscape that are usually adjeacent to the tidal ridges.

#### II.7c: creek ridges (inversion ridges)

The inversion ridges are wavy elongated elavations that were formed as the relative sandy fill of the tidal creeks subsided less than the adjacent tidal deposits. On these inverion ridges the tidal levees with the former channel in between are still recognisable. The tidal levees are formed in a similar manner to the tidal ridges. During spring tide and storm floods the salt marsh was flooded from the tidal creeks. The relative coarse sediments (sand and silt) that were transpoted through the creeks were first deposited along the creeks and formed low ridges on either side of the creeks.

#### II.7d: Salt marsh plain

The salt marsh plain consists of the reletavily flat low-lying parts of the tidal landscape.

#### II.7x: salt marsh landscape on peat, undifferentiated

The parts of the salt marsh on peat landscape of which the surface morphology is no longer visible due to (sub)recent building activities.

### GEOLANDSCAPE UNIT II.8: DRIFTSAND ON TIDAL LANDSCAPE

At some places the tidal landscape is blown over with a relatively thin layer of dune driftsands (0,5-2 m). Near Castricum this is the transitional zone between the higher dune landscape and the intertidal landscape. This geolandscape is situated between the 0 and 2 metres +NAP. The driftsand cover is part of the 'Deposit of Schoorl'. The cover of driftsands is blown in from the higher dune landscape during the Early Middle Ages.

## MAIN GEOLANDSCAPE UNIT III: PEAT LANDSCAPE

The peat landscape consist of the area with peat at the surface or under a thin layer of medieval clay (Pikclay). Within the Oer-IJ region three peat landscapes occur : Eutrophic reed peat, eutrophic and mesotrophic woodpeat, and oligotrophic heath- and sphagnum peat.<sup>20</sup> Reed peat is mainly present along the salt marsh area of the Oer-IJ and along the river Zaan. Oligotrophic peat forms large islands within the reed peat landscape. At some spots a peat type with many twigs and fine wood, like birch, is dicovered between the reed peat and the heath- and sphagnum peat. This woodpeat is formed under eutrophic to mesotrophic environmental conditions.

## GEOLANDSCAPE UNIT III.9: REED PEAT LANDSCAPE.

Euthrophic peat that mainly consists of the remains of reed. This peat is formed under nutrient rich to medium conditions in a wet environment.

## GEOLANDSCAPE UNIT III.10: BIRCH-, BOG MYRTLE- AND SEDGE PEAT LANDSCAPE

Eutrophic to mesothropic peat consisting of sedge, twigs and fine wood, like birch. This peat is formed under nutrient rich to medium conditions in a wet environment.

## GEOLANDSCAPE UNIT III.11: SPAGHNUM- AND HEATH PEAT LANDSCAPE.

Oligotrophic peat that consists of twigs of heath, sphagnum and rush. Oligotrophic peat is formed under nutrient poor wet conditions. This peat depends for its water on nutrient poor rain water. Oligotrophic peat consist of sphagnum peat, and heath-and rush peat.

## MAIN LANDSCAPE UNIT IV: OTHER LANDSCAPE ELEMENTS

The other landscape elements are those parts of the landscape that are of importance for the general view of the landscape but, which are formed from the Middle Ages onward through human action.

## GEOLANDSCAPE UNIT IV.12: RECLAIMED LAND

The reclaimed lands are the former lakes that have been reclaimed by humans since the 16th century.

IV.12a: Deep lake bottoms.

Deep reclaimed land that are completely cleared of peat and the bootom of the lake consists of the 'Deposit of Wormer'.

IV.12b: Deep lake bottoms with peat remains.

Reclaimed lakes with peat remains at the surface.

IV.12c: Undeep lake bottoms and dammed areas.

Reclaimed shallow lakes, for example, 'de Crommenije'.

## GEOLANDSCAPE UNIT IV.13: LAKES AND CANALS.

The larger water surfaces of lakes and canals are mapped as water. The smaller water surfaces of ditches are not mapped.

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20 Pons and Kloosterhuis 1953/54.

GEOLANDSCAPE UNIT IV.14: HISTORIC AND SUBRECENT ANTHROPOGENIC LANDSCAPE ELEMENTS.

The larger important buildings from the Late Medieval Period and Subrecent Period are mapped separately.

IV.14a: Castle remains 'Oud Haarlem'.

IV.14b: Castle gardens 'Marquette'.

IV.14c: The World Heritage Monument 'Hollandse waterlinie'.

GEOLANDSCAPE UNIT IV.15: DYKES

Dyke that separates the 'Noord-Hollandsch Kanaal' from the 'Alkmaardermeer'.

GEOLANDSCAPE IV.16: BUILT-UP AREA AND LARGE INFRASTRUCTURE.

The built-up areas and large infrastructure are hatched at the map. The morphological characteristics of these areas are no longer visible. The main geolandscape units are, however, distinguished and have received the main color on the map of the geolandscape unit they belong to.



nr	sitename	type	begin period	end period	x-coordinate	y-coordinate
1	Akersloot-1	2	AD 70	AD 270	111000	508000
2	Akersloot-Akersloterbrug	2	0	AD 400	109600	507400
3	Akersloot-Breedelaan 4	2	1000 BC	900 BC	110300	508390
4	Akersloot-Hoge Geest	2	800 BC	AD 1500	110810	508970
5	Akersloot-Klein Dorregeest	2	2450 BC	2000 BC	110270	507030
6	Akersloot-Koningsweg	1	200 BC	AD 400	110520	507680
7	Akersloot-LHJ049	1	0	AD 450	111211	509762
8	Akersloot-LHK016	1	0	AD 450	111065	506984
9	Akersloot-LHK017	1	0	AD 450	110724	506687
10	Akersloot-LHK019	1	0	AD 450	110718	506729
11	Akersloot-LHK021	1	0	AD 450	110793	506877
12	Akersloot-LHK037	1	0	AD 450	111047	508223
13	Akersloot-Limmerpolder	1	0	AD 400	109600	507500
14	Akersloot-Motel	1	0	AD 400	109900	506900
15	Akersloot-Schouw	2	0	AD 450	111600	509720
16	Akersloot-Sluisbuurt	1	0	AD 500	110420	507130
17	Akersloot-Starting	2	2000 BC	1800 BC	109750	507450
18	Akersloot-Startingerweg 15	2	250 BC	AD 450	110280	508230
19	Assendelft-1	2	0	AD 250	108725	499250
20	Assendelft-10	1	AD 50	AD 150	110400	498820
21	Assendelft-11	1	AD 25	AD 150	111190	499710
22	Assendelft-12	2	800 BC	AD 450	111300	499700
23	Assendelft-13	1	0	AD 270	110620	498930
24	Assendelft-14	1	0	AD 270	110720	499060
25	Assendelft-17	2	AD 50	AD 150	112190	500810
26	Assendelft-2	1	0	AD 250	110100	498440
27	Assendelft-20	1	0	AD 70	109660	497900
28	Assendelft-23	1	0	AD 70	109460	497500
29	Assendelft-24	1	0	AD 70	108880	497340
30	Assendelft-26	1	0	AD 70	110500	500130
31	Assendelft-27	2	AD 50	AD 400	112150	500700
32	Assendelft-28	2	AD 100	AD 150	112313	500863
33	Assendelft-29	2	800 BC	AD 450	111030	499460
34	Assendelft-3	2	250 BC	150 BC	110480	499300
35	Assendelft-30	2	0	AD 70	110390	500370
36	Assendelft-31	1	0	AD 70	109350	499500
37	Assendelft-32	2	200 BC	100 BC	110320	498890
38	Assendelft-33	2	0	AD 270	110080	498870
39	Assendelft-34	1	0	AD 70	109440	499520
40	Assendelft-35	1	0	AD 70	109610	499620
41	Assendelft-36	1	0	AD 270	110000	498740
42	Assendelft-37	1	0	AD 270	110200	498890
43	Assendelft-38	1	0	AD 70	109710	498280
44	Assendelft-39	2	700 BC	600 BC	108580	496000
45	Assendelft-40	1	0	AD 70	109730	498230
46	Assendelft-41	2	300 BC	200 BC	110900	499420
47	Assendelft-42	3	700 BC	AD 400	108580	495850
48	Assendelft-43	2	700 BC	600 BC	108620	495675

nr	sitename	type	begin period	end period	x-coordinate	y-coordinate
49	Assendelft-49	2	250 BC	AD 250	112054	500436
50	Assendelft-51	3	700 BC	600 BC	110090	498390
51	Assendelft-52	2	200 BC	100 BC	110320	498890
52	Assendelft-54	2	800 BC	AD 450	110180	499250
53	Assendelft-55	2	700 BC	600 BC	110660	499100
54	Assendelft-56	3	AD 50	AD 250	111750	500100
55	Assendelft-58	1	250 BC	150 BC	110510	499180
56	Assendelft-61	1	0	AD 250	109040	497670
57	Assendelft-62	1	300 BC	200 BC	109150	497600
58	Assendelft-63	1	0	AD 250	109200	497060
59	Assendelft-64	2	0	AD 250	109740	498080
60	Assendelft-65	1	0	AD 250	109730	497780
61	Assendelft-66	2	200 BC	100 BC	109330	497500
62	Assendelft-68	1	250 BC	AD 250	112000	500400
63	Assendelft-74-9402	2	800 BC	0	110380	499250
64	Assendelft-8	2	AD 75	AD 250	112238	500810
65	Assendelft-B	2	0	AD 100	109260	499460
66	Assendelft-C	2	0	AD 100	109570	499510
67	Assendelft-D	2	0	AD 100	111270	500950
68	Assendelft-E	2	0	AD 400	111090	501020
69	Assendelft-F	2	0	AD 100	110820	500860
70	Assendelft-G	2	0	AD 100	110150	500870
71	Assendelft-H	2	0	AD 100	109220	500320
72	Assendelft-J-4	2	200 BC	100 BC	110300	499030
73	Assendelft-K	2	300 BC	200 BC	111070	498780
74	Assendelft-L	2	300 BC	200 BC	108460	493700
75	Assendelft-M	2	250 BC	0	108650	493830
76	Assendelft-N	3	400 BC	AD 300	109040	499470
77	Assendelft-O	2	700 BC	0	110140	498580
78	Assendelft-P	2	0	AD 300	109050	499170
79	Assendelft-Q-60	2	700 BC	600 BC	109110	497770
80	Assendelft-R	2	AD 150	AD 200	110220	498570
81	Assendelft-S	2	0	AD 150	109120	498890
82	Assendelft-a	1	800 BC	0	110720	500200
83	Assendelft-b	1	250 BC	AD 70	113470	498690
84	Assendelft-Buitenhuizen	1	0	AD 70	109340	494580
85	Assendelft-Busch	1	0	AD 70	111560	501830
86	Assendelft-c	1	800 BC	0	111420	499710
87	Assendelft-Communicatieweg	2	800 BC	AD 70	110000	500000
88	Assendelft-d	1	800 BC	0	111400	499660
89	Assendelft-De Kil	1	0	AD 70	108750	499725
90	Assendelft-Eduard Hoeve	1	800 BC	0	110120	498400
91	Assendelft-Noorder IJ en Zeedijk	1	800 BC	0	108475	495865
92	Assendelft-Polder Wijkermeer	1	0	AD 450	107000	497000
93	Assendelft-Zevenmaat/Genieweg	1	800 BC	0	109800	498000
94	Assendelft-Zuidkant Vliet	1	800 BC	0	109700	496800
95	Beverwijk-a	2	10 BC	AD 10	105000	500000
96	Beverwijk-Alkmaarse weg	1	0	AD 400	105626	501075

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nr	sitename	type	begin period	end period	x-coordinate	y-coordinate
97	Beverwijk-Arendsweg/Galgenweg	2	0	AD 450	105370	500300
98	Beverwijk-Aurora	1	250 BC	AD 450	108100	498440
99	Beverwijk-Hofland	2	1500 BC	1100 BC	106375	501250
100	Beverwijk-Hoflanderweg	2	1000 BC	800 BC	106000	500550
101	Beverwijk-Kerkstraat	2	800 BC	0	105450	500000
102	Beverwijk-Laan der Nederlanden	2	800 BC	0	106250	501000
103	Beverwijk-Luxemburglaan	2	800 BC	0	106475	501275
104	Beverwijk-Overbosch	2	1100 BC	0	105990	500565
105	Beverwijk-Peperstraat	2	800 BC	0	105525	499875
106	Beverwijk-Polder Buitenlanden	2	250 BC	AD 400	107420	499250
107	Beverwijk-Princesselaan	2	750 BC	650 BC	105150	499475
108	Beverwijk-Raamveld	1	0	AD 450	105550	500520
109	Beverwijk-Sint Aagtendijk	2	800 BC	AD 450	107550	499120
110	Beverwijk-Spaarndamlaan	1	750 BC	650 BC	105000	499500
111	Beverwijk-Touwslagersstraat	2	800 BC	0	105350	499800
112	Beverwijk-W. Alexanderplantsoen	2	3000 BC	0	106000	500550
113	Beverwijk-Westerhout	2	0	AD 70	103940	499650
114	Beverwijk-Westerwijk	2	0	AD 70	103650	499080
115	Beverwijk-Wijkeroog	2	0	AD 70	104270	499420
116	Beverwijk-Wilgenhoflaan	2	700 BC	0	105250	500400
117	Bloemendaal-Brederodelaan	1	800 BC	0	102640	492210
118	Castricum-1	2	0	AD 400	105850	510150
119	Castricum-Bakkum	1	0	AD 450	105450	508770
120	Castricum-Breedeweg	2	250 BC	AD 400	106350	506520
121	Castricum-Castricumerpolder	2	250 BC	AD 400	108000	505000
122	Castricum-Castricumerpolder-1	2	250 BC	AD 400	107750	505200
123	Castricum-Castricumerpolder-2	2	200 BC	AD 450	106900	505150
124	Castricum-Castricumerpolder-3	2	0	AD 450	108465	506142
125	Castricum-Cieweg	2	0	AD 400	106600	506600
126	Castricum-Cronenburg	2	250 BC	AD 450	107015	505634
127	Castricum-De Achterweid bij de Vischkom	1	0	AD 450	107411	505973
128	Castricum-de Brabantse Landbouw	2	500 BC	250 BC	103320	506470
129	Castricum-de Goudtuinen	2	150 BC	AD 450	106910	505580
130	Castricum-de Loet	1	150 BC	AD 450	106860	505960
131	Castricum-De Oostven	2	0	AD 500	107060	505270
132	Castricum-de Rustende Jager	2	250 BC	AD 70	105910	506860
133	Castricum-de Voorweid	1	250 BC	AD 450	107050	506170
134	Castricum-de Werven/Lange Akkers	1	0	AD 500	106900	505830
135	Castricum-De Wildernis	1	0	AD 450	103650	505650
136	Castricum-de Zuiderteelik	1	150 BC	AD 450	107220	506170
137	Castricum-Doornduijn-2	2	AD 25	AD 50	105250	510060
138	Castricum-Doornduyn	1	250 BC	AD 400	105650	510030
139	Castricum-Dorpstraat	2	0	AD 250	106100	506900
140	Castricum-Heemstede	2	0	AD 450	106970	505300
141	Castricum-Heemstederweg	2	250 BC	AD 450	106850	505900
142	Castricum-Het Binnen en het Nieuw-land	2	0	AD 500	106920	505250

nr	sitename	type	begin period	end period	x-coordinate	y-coordinate
143	Castricum-het Langeveld/Holkamp	2	0	AD 500	107890	505490
144	Castricum-Kitman en Droonen	2	0	AD 500	108180	506230
145	Castricum-Korendijk	2	250 BC	AD 400	106050	505080
146	Castricum-LHA016	1	0	AD 450	106066	505079
147	Castricum-LHA020	1	0	AD 450	105255	505121
148	Castricum-LHA021	1	0	AD 450	105471	505230
149	Castricum-LHA022	1	0	AD 450	105341	505452
150	Castricum-LHA023	1	0	AD 450	105533	505534
151	Castricum-LHA035	1	0	AD 450	105833	505382
152	Castricum-LHB004	1	0	AD 450	107610	505116
153	Castricum-LHB006	1	0	AD 450	107573	505151
154	Castricum-LHB014	1	0	AD 450	107881	505533
155	Castricum-LHB023	1	0	AD 450	107900	505433
156	Castricum-LHB025	1	0	AD 450	107684	505434
157	Castricum-LHB028	1	0	AD 450	107839	505108
158	Castricum-LHB029	1	0	AD 450	107749	506116
159	Castricum-LHB030	1	0	AD 450	107789	506050
160	Castricum-LHB031	1	0	AD 450	107787	505997
161	Castricum-LHB032	1	0	AD 450	107443	505953
162	Castricum-LHB035	1	0	AD 450	108548	505771
163	Castricum-LHB037	1	0	AD 450	108134	505841
164	Castricum-LHB042	1	0	AD 450	108471	506234
165	Castricum-LHB045	1	0	AD 450	108068	505898
166	Castricum-LHB046	1	0	AD 450	108101	505876
167	Castricum-LHB047	1	0	AD 450	108105	505920
168	Castricum-LHB050	1	0	AD 450	108159	505953
169	Castricum-LHB052	1	0	AD 450	108581	506480
170	Castricum-LHB056	1	0	AD 450	108258	506520
171	Castricum-LHE022	1	0	AD 450	106855	508439
172	Castricum-LHF043	1	0	AD 450	106566	511755
173	Castricum-LHF044	1	0	AD 450	106594	511719
174	Castricum-LHF045	1	0	AD 450	106655	511674
175	Castricum-LHL018	1	0	AD 450	107619	506529
176	Castricum-LHL026	1	0	AD 450	107128	506252
177	Castricum-LHL032	1	0	AD 450	107572	506555
178	Castricum-LHL034	1	0	AD 450	107725	506448
179	Castricum-Molendijk	2	0	AD 400	106500	506670
180	Castricum-Nespolder	2	0	AD 450	108200	506150
181	Castricum-Oosterbuurt	2	AD 75	AD 1300	106925	506350
182	Castricum-Rietkamp	2	0	AD 400	106750	506450
183	Castricum-Wei van Brasser	2	800 BC	AD 800	103730	509620
184	Castricum-Zanderij	2	250 BC	AD 450	105400	507400
185	De Woude-Oostwouderpolder	2	250 BC	AD 450	113740	506640
186	Driehuis-Driehuizerkerkweg	2	1100 BC	500 BC	104090	496140
187	Driehuis-Duin en Kruidberg	1	1000 BC	900 BC	102150	495050
188	Driehuis-Hofgeest	2	250 BC	AD 70	105950	495540
189	Driehuis-Lievendaal	1	0	AD 70	104360	496820
190	Driehuis-Middeloo	2	1100 BC	500 BC	104650	495700

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nr	sitename	type	begin period	end period	x-coordinate	y-coordinate
191	Driehuis-Nabij Waterland	2	2450 BC	1500 BC	105170	496720
192	Driehuis-Schoonenberg	2	1000 BC	900 BC	103760	496320
193	Driehuis-'t Helletje	1	0	AD 70	104290	495850
194	Driehuis-'t Molenvelt	1	0	AD 70	103410	494900
195	Driehuis-van Lenneplaan	2	1000 BC	650 BC	104350	495900
196	Driehuis-Waterloolaan	2	0	AD 70	104050	495970
197	Driehuis-Westerveld	2	1000 BC	900 BC	103400	495000
198	Egmond-Binnen-Abdij	2	0	AD 300	105690	512140
199	Egmond-Binnen-Haagdoornlaan	1	0	AD 450	105200	512100
200	Egmond-Binnen-Limmerweg	1	250 BC	AD 450	105930	511590
201	Egmond-Binnen-Randweg	2	0	AD 450	105140	512200
202	Egmond-Binnen-Abdijlaan	2	2850 BC	2450 BC	105660	512420
203	Heemkerk-Startstraat	1	0	AD 450	106380	502600
204	Heemskerk-Assumburg	2	400 BC	300 BC	107275	502175
205	Heemskerk-Beneluxlaan	1	250 BC	AD 450	107010	501520
206	Heemskerk-Beyerlust	2	800 BC	AD 450	106650	502150
207	Heemskerk-Bollanderbeek	1	250 BC	AD 450	105920	503190
208	Beverwijk/Heemskerk-Broekpolder	3	1700 BC	AD 2000	107540	501000
209	Heemskerk-De Akkermaat	1	250 BC	0	108070	501950
210	Heemskerk-Duitslandlaan	2	1000 BC	700 BC	106450	501620
211	Heemskerk-Euratomsingel	1	0	AD 450	107211	501541
212	Heemskerk-Heemskerkernoordbroekpolder	2	AD 322	AD 322	107000	504000
213	Heemskerk-Hoflaan	1	0	AD 450	107180	501880
214	Heemskerk-Hoogdorperweg	2	1000 BC	AD 450	106600	501500
215	Heemskerk-J. Sijmansweid	2	0	AD 500	105940	504850
216	Heemskerk-Jan Ligthartstraat	2	1100 BC	250 BC	106440	501640
217	Heemskerk-Kerkweg	2	500 BC	AD 270	106320	502820
218	Heemskerk-Lessestraat	2	800 BC	AD 450	107100	501150
219	Heemskerk-LHA014	1	0	AD 450	107280	504313
220	Heemskerk-LHA017	1	0	AD 450	105157	504958
221	Heemskerk-LHA018	1	0	AD 450	105175	504981
222	Heemskerk-LHA019	1	0	AD 450	105165	504919
223	Heemskerk-LHA024	1	0	AD 450	105943	504851
224	Heemskerk-LHA027	1	0	AD 450	105908	504905
225	Heemskerk-LHA028	1	0	AD 450	105123	504983
226	Heemskerk-Luxemburglaan	2	800 BC	0	106500	501250
227	Heemskerk-Meerestein	2	800 BC	500 BC	106875	501050
228	Heemskerk-Oosterweg	1	0	AD 400	105450	503650
229	Heemskerk-Oud Haerlem	1	250 BC	AD 450	107540	501640
230	Heemskerk-Schepelenberg	2	0	AD 400	105010	503560
231	Heemskerk-Tolweg	1	0	AD 400	107775	502725
232	Heemskerk-Van Assendelftstraat-1	2	1000 BC	800 BC	106460	502750
233	Heemskerk-Van Assendelftstraat-2	2	800 BC	700 BC	106600	502650
234	Heemskerk-Van Heemskerckstraat 98	1	0	AD 150	105860	502060
235	Heemskerk-Waterakkers	2	250 BC	AD 400	105700	502200
236	Heemskerk-Wildernis	2	300 BC	200 BC	103650	505500
237	Heemskerk-Zuidbroekpolder	2	0	AD 400	107475	501175

nr	sitename	type	begin period	end period	x-coordinate	y-coordinate
238	Heemstede-Groenendaal	2	250 BC	150 BC	102300	483150
239	Heiloo-Hoogeweg	1	0	AD 450	107790	511000
240	Heiloo-Kapellaan	1	0	AD 450	108070	510890
241	Heiloo-Kromme Laan	2	1100 BC	700 BC	108290	511590
242	Heiloo-LHF008	1	0	AD 450	106726	511212
243	Heiloo-LHF013	1	0	AD 450	107140	511268
244	Heiloo-LHF025	1	0	AD 450	106849	510939
245	Heiloo-LHF039	1	0	AD 450	106656	512008
246	Heiloo-LHF048	1	0	AD 450	106590	512122
247	Heiloo-LHF050	1	0	AD 450	107402	511417
248	Heiloo-LHH031	1	250 BC	0	109072	510787
249	Heiloo-Maalwater	2	2000 BC	1000 BC	108400	513950
250	Heiloo-Oosterzijpolder	2	0	AD 450	110400	510950
251	Heiloo-Oosterzijweg	2	800 BC	500 BC	109000	512070
252	Heiloo-sportveld	1	1100 BC	500 BC	107600	512200
253	Heiloo-'t Alternatief	1	800 BC	AD 1000	109250	512020
254	Heiloo-Vennewaterspolder	2	1100 BC	700 BC	107290	511590
255	Heiloo-Vennewatersweg-Krommelaan	2	1200 BC	AD 1500	108000	511500
256	Heiloo-Vlooiendijk	2	1100 BC	500 BC	107250	511750
257	Heiloo-Zandzoomgebied	2	800 BC	AD 450	107000	511700
258	IJmuiden-a	2	0	AD 450	102000	495000
259	IJmuiden-Dennenstraat	2	0	AD 70	103440	496720
260	IJmuiden-Duinvlief	3	250 BC	0	102910	497730
261	IJmuiden-Haringhaven	2	0	AD 70	100700	496800
262	IJmuiden-Heerenduinen	2	0	AD 70	102500	495500
263	IJmuiden-Rijn/Vechtstraat	2	2000 BC	AD 450	102375	496750
264	IJmuiden-Vissershaven	1	AD 70	AD 150	100500	497400
265	Krommenie-13	1	0	AD 70	112550	501940
266	Krommenie-14 ('t Hain)	3	0	AD 200	111500	501860
267	Krommenie-2	2	AD 25	AD 150	112580	502260
268	Krommenie-21	3	0	AD 100	111940	502950
269	Krommenie-3	2	0	AD 100	112630	502080
270	Krommenie-5	2	250 BC	AD 270	111920	500290
271	Krommenie-6	2	0	AD 450	112610	501860
272	Krommenie-6?	2	250 BC	AD 270	112100	500600
273	Krommenie-7	1	AD 25	AD 150	112040	500710
274	Krommenie-8-Heiligeweg	2	150 BC	AD 150	112430	501840
275	Krommenie-9	1	AD 25	AD 150	111660	500250
276	Krommeniedijk-Den Draijkiksloot	1	0	AD 450	112500	503800
277	Krommeniedijk-Kuilsloot	1	0	AD 450	112800	503750
278	Krommeniedijk-Lage Dijk	1	0	AD 450	110900	502900
279	Krommeniedijk-Woudpolder-145	2	0	AD 400	112400	504700
280	Krommenie-Indijk	1	0	AD 450	112320	502950
281	Krommenie-Klein Veldhuis	1	AD 25	AD 150	110130	501440
282	Krommenie-Station	2	800 BC	AD 400	112250	501000
283	Krommenie-Woudpolder	2	500 BC	AD 450	110000	503000
284	Limmen-1	3	400 BC	300 BC	108490	508620
285	Limmen-2	3	2500 BC	1800 BC	107970	508420

## APPENDIX 3

nr	sitename	type	begin period	end period	x-coordinate	y-coordinate
286	Limmen-2de stuk	1	0	AD 450	110092	508371
287	Limmen-Achterweg	1	0	AD 450	108500	508600
288	Limmen-Blauwe hek	1	0	AD 450	108595	508728
289	Limmen-Brasserweid	1	0	AD 450	108807	507260
290	Limmen-de Dieweid	1	150 BC	50 BC	109880	510060
291	Limmen-de Krocht	2	250 BC	AD 1500	107650	508500
292	Limmen-Dusseldorpervaart	3	100 BC	0	108820	509400
293	Limmen-Guurtestuk	2	0	AD 500	109430	507770
294	Limmen-Hoge Geest/Bisschopsweid	2	0	AD 450	108914	509047
295	Limmen-Kapelweg	2	0	AD 400	107470	509770
296	Limmen-Kees Zoon	2	0	AD 500	109280	507710
297	Limmen-Kerkenes	1	0	AD 450	108968	507470
298	Limmen-Koeke Bakker	2	0	AD 500	110310	511040
299	Limmen-Kooiweid	2	0	AD 450	109908	510344
300	Limmen-LHC001	1	0	AD 450	109244	507227
301	Limmen-LHC003	1	0	AD 450	109200	507071
302	Limmen-LHC005	1	0	AD 450	109482	507532
303	Limmen-LHC020	1	0	AD 450	108856	507181
304	Limmen-LHC028	1	0	AD 450	109668	506572
305	Limmen-LHD001	1	0	AD 450	108743	506983
306	Limmen-LHD002	1	0	AD 450	108757	506832
307	Limmen-LHD006	1	0	AD 450	108544	507445
308	Limmen-LHD007	1	0	AD 450	108569	507416
309	Limmen-LHD008	1	0	AD 450	108563	507236
310	Limmen-LHD009	1	0	AD 450	108339	507704
311	Limmen-LHD010	1	250 BC	AD 450	108396	507664
312	Limmen-LHD012	1	0	AD 450	108780	506772
313	Limmen-LHD016	1	0	AD 450	108441	507625
314	Limmen-LHD018	1	0	AD 450	108799	506765
315	Limmen-LHD021	1	0	AD 450	108508	507441
316	Limmen-LHD022	1	0	AD 450	108550	507707
317	Limmen-LHD027	1	0	AD 450	108161	507906
318	Limmen-LHD028	1	250 BC	AD 450	108361	507722
319	Limmen-LHD031	1	0	AD 450	108117	508067
320	Limmen-LHD033	1	0	AD 450	107899	508195
321	Limmen-LHD039	1	0	AD 450	107961	508105
322	Limmen-LHD042	1	0	AD 450	108418	507863
323	Limmen-LHD044	1	0	AD 450	108563	508060
324	Limmen-LHD054	1	0	AD 450	108672	508572
325	Limmen-LHD055	1	0	AD 450	108660	507063
326	Limmen-LHD056	1	0	AD 450	108568	507050
327	Limmen-LHD086	1	0	AD 450	108055	508144
328	Limmen-LHG002	1	0	AD 450	108743	508788
329	Limmen-LHG004	1	0	AD 450	109070	509286
330	Limmen-LHG005	1	0	AD 450	108977	509087
331	Limmen-LHG006	1	0	AD 450	108795	509942
332	Limmen-LHG007	1	0	AD 450	109358	509080
333	Limmen-LHG008	1	0	AD 450	109349	509047

nr	sitename	type	begin period	end period	x-coordinate	y-coordinate
334	Limmen-LHG010	1	0	AD 450	108992	508724
335	Limmen-LHG011	1	0	AD 450	108920	508733
336	Limmen-LHG012	1	0	AD 450	108847	508764
337	Limmen-LHG013	1	0	AD 450	108870	508650
338	Limmen-LHG016	1	0	AD 450	109180	508447
339	Limmen-LHG020	1	0	AD 450	109230	508361
340	Limmen-LHG023	1	0	AD 450	109076	508241
341	Limmen-LHG024	1	0	AD 450	109136	508221
342	Limmen-LHG025	1	0	AD 450	109080	508120
343	Limmen-LHG045	1	0	AD 450	110331	508936
344	Limmen-LHG055	1	0	AD 450	109711	508422
345	Limmen-LHG056	1	0	AD 450	109798	508372
346	Limmen-LHG058	1	250 BC	AD 450	109786	508108
347	Limmen-LHG063	1	0	AD 450	109023	509051
348	Limmen-LHG074	1	0	AD 450	108837	508896
349	Limmen-LHH008	1	0	AD 450	109122	510194
350	Limmen-LHH009	1	0	AD 450	109266	510274
351	Limmen-LHH016	1	0	AD 450	109513	510896
352	Limmen-LHH020	1	0	AD 450	109673	509952
353	Limmen-LHH029	1	0	AD 450	109673	509952
354	Limmen-LHJ003	1	0	AD 450	110204	509660
355	Limmen-Limmerpolder	2	0	AD 270	109650	510600
356	Limmen-Limmerpolder2	2	200 BC	AD 500	108800	507350
357	Limmen-Negen morgen	1	0	AD 450	108876	507601
358	Limmen-Omloop	2	0	AD 400	107800	509200
359	Limmen-Ossemeerven	2	0	AD 500	109450	507850
360	Limmen-Pagelaan	2	0	AD 270	107270	510100
361	Limmen-Uitgeesterweg	1	250 BC	AD 450	107930	508180
362	Limmen-Uitgeesterweg?	2	250 BC	0	108250	508800
363	Limmen-Uitgeesterweg-2	1	250 BC	AD 450	108696	507391
364	Limmen-Uitgeesterweg-3	1	250 BC	AD 450	108882	507196
365	Limmen-Uitgeesterzijweg	2	250 BC	AD 400	108000	508300
366	Limmen-Weidje aan de weg	1	0	AD 500	108620	507310
367	Limmen-Zes morgen	2	0	AD 450	109064	507887
368	Limmen-Zuideinderweg	3	1800 BC	1600 BC	108300	508380
369	Limmen-Zuidkerkelaan	2	250 BC	AD 150	107960	508690
370	Santpoort-Auspicius et Telis	2	0	AD 70	104600	495300
371	Santpoort-Biezenweg	2	AD 12	AD 25	104750	495370
372	Santpoort-Duin en Kruidberg	1	0	AD 200	103000	494300
373	Santpoort-Hagelingerweg	2	300 BC	200 BC	104400	494750
374	Santpoort-Het Terras	1	0	AD 70	103700	493750
375	Santpoort-Ruine van Brederode	1	0	AD 70	102980	493330
376	Santpoort-Spanjaardsberg	2	400 BC	0	104010	494460
377	Santpoort-Spekkenweg	1	0	AD 70	104530	494950
378	Santpoort-W. Danielslaan	1	0	AD 70	103700	493500
379	Spaarndam	1	300 BC	100 BC	107450	492550
380	Spaarndam-a	1	0	AD 450	107630	492730
381	Spaarndam-Zuidspaarndammerpolder	2	0	AD 70	107650	492700

## APPENDIX 3

nr	sitename	type	begin period	end period	x-coordinate	y-coordinate
382	Uitgeest	2	250 BC	AD 450	110000	502000
383	Uitgeest-6	1	250 BC	AD 400	107800	503550
384	Uitgeest-7	1	250 BC	AD 400	107860	503890
385	Uitgeest-a	1	0	AD 450	109980	505340
386	Uitgeest-Achterloet	3	2850 BC	1800 BC	109310	504930
387	Uitgeest-Assum	1	250 BC	AD 400	108470	503120
388	Uitgeest-Beatrixlaan 16	2	0	AD 400	108830	504520
389	Uitgeest-Benes	2	250 BC	AD 400	108940	505740
390	Uitgeest-Busch en Dam-1	2	250 BC	AD 70	110050	502700
391	Uitgeest-Busch en Dam-2	2	250 BC	AD 400	109550	501350
392	Uitgeest-De Groene Driehoek-1	2	250 BC	AD 70	108850	502760
393	Uitgeest-De Groene Driehoek-2	1	250 BC	AD 70	108950	503550
394	Uitgeest-De Groene Driehoek-3	2	0	AD 450	109125	503250
395	Uitgeest-De Groene Driehoek-4	2	0	AD 450	108866	502746
396	Uitgeest-De Kleis	2	610 BC	600 BC	108780	503660
397	Uitgeest-De Koog	2	0	AD 270	108950	505880
398	Uitgeest-Dijkland	2	0	AD 500	110540	505340
399	Uitgeest-Dorregeest	3	250 BC	AD 1000	109550	505800
400	Uitgeest-Dorregeest-2	2	0	AD 400	109850	506350
401	Uitgeest-Groot Veldhuis	2	0	AD 70	109500	501320
402	Uitgeest-Koogdijk	1	250 BC	AD 450	107780	503320
403	Uitgeest-LHB059	1	0	AD 450	109142	505748
404	Uitgeest-LHB064	1	0	AD 450	108751	505568
405	Uitgeest-LHK026	1	0	AD 450	110212	506799
406	Uitgeest-Middelweg	1	800 BC	0	109400	504600
407	Uitgeest-molen de Dog	2	200 BC	AD 900	109300	505500
408	Uitgeest-Polder de Zien	2	AD 70	AD 150	108260	503920
409	Uitgeest-Polder Noorderbuitendijken	2	0	AD 400	109000	500900
410	Uitgeest-Rijksweg	2	0	AD 450	109800	505700
411	Uitgeest-Rijksweg 9	1	250 BC	AD 450	109650	504430
412	Uitgeest-Rijksweg 6	2	0	AD 400	109600	505900
413	Uitgeest-terp 100	2	250 BC	AD 400	110560	503650
414	Uitgeest-terp 101	2	250 BC	AD 400	110565	503655
415	Uitgeest-UBA017	1	0	AD 450	110330	503170
416	Uitgeest-UBA027	1	250 BC	AD 450	110300	503120
417	Uitgeest-UBA069	1	0	AD 450	110830	503690
418	Uitgeest-UBA083	1	250 BC	AD 450	109090	501770
419	Uitgeest-UBA087	1	0	AD 450	109080	501760
420	Uitgeest-UBA123	1	0	AD 450	111120	503310
421	Uitgeest-UBA124	1	0	AD 450	111450	503350
422	Uitgeest-UBA126	1	0	AD 450	111350	503360
423	Uitgeest-UBA140	1	0	AD 450	110320	503630
424	Uitgeest-UBA141	1	0	AD 450	110360	503710
425	Uitgeest-UBA144	1	0	AD 450	108920	502490
426	Uitgeest-UBA145	2	0	AD 450	108930	502430
427	Uitgeest-UBA147	1	0	AD 450	108820	502440
428	Uitgeest-UBA149	1	250 BC	AD 450	108900	502350
429	Uitgeest-UBA152	1	0	AD 450	108950	502250

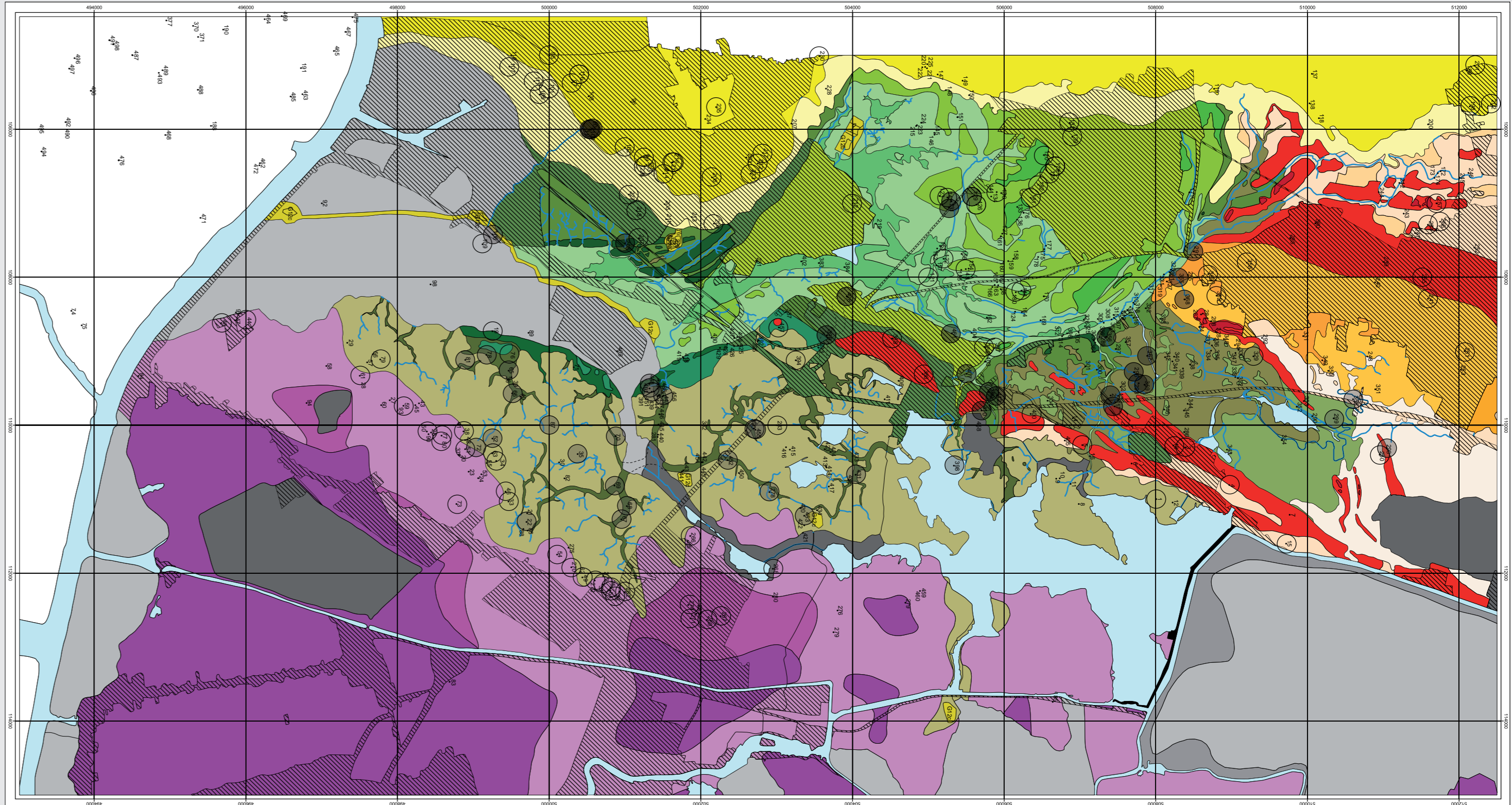
nr	sitename	type	begin period	end period	x-coordinate	y-coordinate
430	Uitgeest-UBA153	1	250 BC	0	108820	502140
431	Uitgeest-UBA203	2	0	AD 450	110670	504040
432	Uitgeest-UBA205	1	0	AD 450	110740	503940
433	Uitgeest-UBA207	1	0	AD 450	110420	504000
434	Uitgeest-UBA210	1	0	AD 450	111150	503530
435	Uitgeest-UBA211	1	250 BC	AD 450	109990	501440
436	Uitgeest-UBA221	1	250 BC	AD 450	109560	501500
437	Uitgeest-UBA222	1	250 BC	AD 450	109590	501450
438	Uitgeest-UBA225	1	250 BC	AD 450	109500	501420
439	Uitgeest-UBA233	1	0	AD 450	109610	501430
440	Uitgeest-UBA238	1	0	AD 450	110160	501430
441	Uitgeest-UBA244	1	0	AD 450	110620	501750
442	Uitgeest-UBA250	1	250 BC	AD 450	110500	502010
443	Uitgeest-UBA254	1	0	AD 450	110610	501770
444	Uitgeest-Uitgeesterbroekpolder-1	2	250 BC	AD 70	109600	501440
445	Uitgeest-Uitgeesterbroekpolder-10	1	150 BC	50 BC	110630	502000
446	Uitgeest-Uitgeesterbroekpolder-14	1	150 BC	50 BC	109850	501450
447	Uitgeest-Uitgeesterbroekpolder-15	2	0	AD 400	109600	501500
448	Uitgeest-Uitgeesterbroekpolder-16	2	400 BC	300 BC	109440	501320
449	Uitgeest-Uitgeesterbroekpolder-18	3	200 BC	AD 150	108810	502480
450	Uitgeest-Uitgeesterbroekpolder-19	1	0	AD 450	110650	502500
451	Uitgeest-Uitgeesterbroekpolder-2	2	200 BC	50 BC	109550	501350
452	Uitgeest-Uitgeesterbroekpolder-3	1	150 BC	50 BC	110470	502350
453	Uitgeest-Uitgeesterbroekpolder-54	2	AD 50	AD 100	111225	503362
454	Uitgeest-Uitgeesterbroekpolder-a	1	0	AD 450	110500	502020
455	Uitgeest-Uitgeesterbroekpolder-b	2	0	AD 450	110060	502720
456	Uitgeest-Veldhuis	2	250 BC	AD 450	109600	501500
457	Uitgeest-Waldijk	2	1200 BC	AD 450	108680	503025
458	Uitgeest-Weid/Dielofsmeerpolder	2	0	AD 450	110000	505630
459	Uitgeest-Woudpolder-4	2	0	AD 400	112240	504890
460	Uitgeest-Woudpolder-5	2	0	AD 400	112240	504890
461	Uitgeest-Ziendijk	2	0	AD 450	108760	505300
462	Velsen-fort-1	3	AD 15	AD 30	106460	496180
463	Velsen-fort-2	2	AD 40	AD 50	105530	496750
464	Velsen-Beeckestein	2	0	AD 70	104510	496250
465	Velsen-Brandweerkazerne	1	0	AD 70	104940	497160
466	Velsen-Duin en Kruidbergerweg	1	250 BC	AD 270	103500	494000
467	Velsen-Engelmunduskerk	2	400 BC	200 BC	104680	497310
468	Velsen-gassleuf	2	800 BC	AD 450	106080	494940
469	Velsen-Hoogergeest	2	0	AD 70	104470	496470
470	Velsen-Hoogovens	2	400 BC	AD 200	103550	499160
471	Velsen-Noordspaarndammerpolder-a	1	0	AD 70	107200	495400
472	Velsen-Noordspaarndammerpolder-b	1	0	AD 70	106460	496180
473	Velsen-Noordzeekanaal	3	800 BC	800 BC	102000	497600
474	Velsen-Noordzeekanaal 1	2	1100 BC	800 BC	104300	497500
475	Velsen-Noordzeekanaal 2	1	0	AD 70	104400	497500
476	Velsen-Olieleiding	1	800 BC	0	106420	494320
477	Velsen-PEN/Noorderweg	2	1000 BC	500 BC	103780	498520

## APPENDIX 3

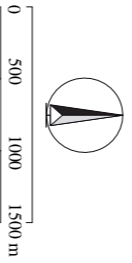
nr	sitename	type	begin period	end period	x-coordinate	y-coordinate
478	Velsen-PENkabel/Noordzeekanaal	2	1600 BC	1100 BC	104100	497500
479	Velsen-Pers terrein	1	0	AD 450	103560	498500
480	Velsen-Rooswijk	2	250 BC	AD 300	103660	498980
481	Velsen-Schoonenberg	2	800 BC	0	104000	496500
482	Velsen-Spuikanaal	2	300 BC	200 BC	102250	498400
483	Velsen-Stationsweg	2	2000 BC	900 BC	104400	497500
484	Velsen-Thorbeckelaan	2	200 BC	100 BC	103840	497100
485	Velsen-Zuidersheg	2	0	AD 70	105560	496590
486	Velserbroek-area-2	2	2000 BC	1200 BC	105480	493955
487	Velserbroek-Broekerwerf	2	250 BC	AD 450	105000	494500
488	Velserbroek-Hofgeesterweg-1	2	2000 BC	AD 400	105470	495365
489	Velserbroek-Hofgeesterweg-2	2	650 BC	600 BC	105200	494900
490	Velserbroekpolder-2	2	2000 BC	0	106000	493600
491	Velserbroekpolder-B6	3	2000 BC	AD 400	104797	494199
492	Velserbroekpolder-plandeel H	2	1100 BC	0	105900	493620
493	Velserbroek-Rugbyveld	2	2000 BC	800 BC	105240	494850
494	Velserbroek-Surfplas	1	3400 BC	2450 BC	106300	493300
495	Velserbroek-Verdolgen Landen	2	800 BC	0	106000	493260
496	Velserbroek-Westlaan-2	2	1400 BC	1100 BC	105040	493740
497	Velserbroek-Westlaan	3	2000 BC	800 BC	105180	493670
498	Velserbroek-Zadelmakerstraat	2	1100 BC	AD 300	104850	494250
499	Wijk aan Zee-Dorpsweide	2	0	AD 450	101525	500800

Appendix 3 Type: 1 = only sherds, 2 = sherds and/or other archaeological indicators, and 3 = offering site.





- I: Dunes, coastal barrier and coastal plain landscape
  - I.1: Coastal dune landscape
    - I.1a: High coastal dunes with accompanying plains and low-lying areas
    - I.1b: Low coastal dunes with accompanying plains and low-lying areas
  - I.2: Coastal barrier landscape
    - I.2a: Coastal barriers
    - I.2b: Ridges on coastal barriers
    - I.3: Driftsand covered coastal barriers and coastal plain landscape
    - I.3a: Driftsand covered coastal barriers and coastal plain landscape with a peat layer underneath
    - I.3b: Driftsand covered coastal barriers and coastal plain landscape without a peat layer underneath
    - I.3c: Driftsand covered coastal barriers and coastal plain landscape
  - I.4: Coastal plain landscape
    - I.4a: Coastal plain landscape – high middle high
    - I.4b: Coastal plain landscape – low
    - I.4c: Coastal plain landscape – low undifferentiated
    - I.4x: Coastal plain landscape – undifferentiated
  - II: Tidal landscape of the Oer-IJ
    - II.5: Inertial landscape
    - II.5a: Mud flat landscape, high/flat pates
    - II.5b: Mud flat landscape, low plain
    - II.5d: Mud flat landscape, low basins
    - II.5x: Mud flat landscape, undifferentiated
  - II.6: Supratidal landscape on a thick deposit of tidal and coastal plain sedimentary deposits
    - II.6a: Salt marsh ridges
    - II.6b: Salt marsh heights
    - II.6c: Salt marsh plain
    - II.6d: Salt marsh basin
    - II.6x: Grounded salt marsh landscape, undifferentiated
  - II.7: Supratidal landscape on peat
    - II.7a: Tidal ridges
    - II.7b: Salt marsh heights
    - II.7c: creek ridges (inversion ridges)
    - II.7d: Salt marsh plain
    - II.7e: salt marsh landscape on peat, undifferentiated
  - II.8: Driftsand on tidal landscape
    - II.8: Peat landscape
    - II.9: Reed peat landscape
    - II.10: Birch-, bog myrtle- and sedge peat landscape
    - II.11: Sphagnum- and heath peat landscape
  - IV: Other landscape elements
    - IV.12: Reclaimed land
    - IV.12a: Deep lake bottoms
    - IV.12b: Deep lake bottoms with peat remains
    - IV.12c: Outdeep lake bottoms and damaged areas
    - IV.13: Lakes and canals
    - IV.14: Historic and subsequent anthropogenic landscape elements
      - IV.14a: Castle remains 'Oud Haarlem'
      - IV.14b: Castle gardens 'Margaret'
      - IV.14c: The World Heritage Monument 'Hollandsche waterlinie'
      - IV.15: Dykes
      - IV.16: Built-up area and large infrastructure
    - IV.15: Non mapped area
- 27: site number, see appendix 3 for description
- findsip defined in any other way than just pottery
- findsip defined in any other way than just pottery, considering with water



Dune		
Tidal channel/Noordzee		
Oligotrophic peat		
Beach plain		
Eutrophic/mesotrophic peat		
Former saltmarsh area		
Former saltmarsh ridge		
Former mudflats		
Former mudflat heights		
Saltmarsh		
Mudflats		
Saltmarsh ridges and inversion ridges		