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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Figure 3.1 Oer-U area with the modern topographical names.
3. DEVELOPMENTS IN THE OER-IJ AREA

3.1 THE OER-IJ AREA

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 km². The region is defined on a geological basis and comprises the Duinkerken-I deposits 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. 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.’

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 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. 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. It was realised that this area had been occupied much longer then 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. 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.\textsuperscript{9} 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.\textsuperscript{10} 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\textsuperscript{11} 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.\textsuperscript{12} 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.’\textsuperscript{13} 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.\textsuperscript{14} 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.\textsuperscript{15} 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.’\textsuperscript{16} 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.\textsuperscript{17} 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.\textsuperscript{18} 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.’\textsuperscript{19} 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.\textsuperscript{20} At that time the ROB was involved in a large excavation on the former coastal barrier of Uitgeest.\textsuperscript{21} The AAC in cooperation with the local AWN-group Velsen was already involved in a long term

\textsuperscript{9} Assendelft-8, -17, -28, -32 and -43 (Van der Leeuw 1987, 1).
\textsuperscript{11} Amsterdam Archaeological Centre, then IPP: Institute for Pre- and Protohistory.
\textsuperscript{12} van der Leeuw 2005, 11.
\textsuperscript{13} van der Leeuw 1987, 2.
\textsuperscript{14} Van der Leeuw 1987, 2.
\textsuperscript{15} Van der Leeuw 1987, 2-3.
\textsuperscript{16} Van der Leeuw 2005, 11.
\textsuperscript{17} Therkorn 2005, 87.
\textsuperscript{18} Brandt et al. 1987.
\textsuperscript{19} Therkorn 2005, 91.
\textsuperscript{20} Therkorn 2005, 90-91.
\textsuperscript{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.\textsuperscript{22}
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.\textsuperscript{23}
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.\textsuperscript{24} 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.\textsuperscript{25}
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.\textsuperscript{26} 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)\textsuperscript{27}

The habitation models of the Oer-IJ area traditionally have a strong link with geology.\textsuperscript{28} And usually the area is divided into distinctive geological zones. For example, the distinction made by Hallewas consisting of: 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).\textsuperscript{29} 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.\textsuperscript{30}

\begin{footnotes}
\item[22] The project took place from 1972 to 1994, Bosman 1997, 8-9 and Morel 1988.
\item[23] Therkorn 2005, 92-93.
\item[26] Therkorn 2005 and see the last section of this chapter.
\item[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.
\item[29] Hallewas 1987.
\item[30] Brandt and Van Gijn 1986.
\item[31] Lange et al. 2004, 38.
\end{footnotes}
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. The geological maps give insight into the location of the diverse landscape units, such as coastal barriers, creek systems, and peat expanses. 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. Vos extended the level of detail on these maps on the basis of geoarchaeological data from the Assendelver Polders. In 2004 these maps were updated with geological and archaeological data from the area. 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

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32 See chapter 8 of the national research agenda archaeology (NOAA), www.noaa.nl (30-10-2006).
33 Zagwijn 1971.
34 Vos 1983.
DEVELOPMENTS IN THE OER-IJ AREA

1:50,000 with the geological map 19W as the main basis. Furthermore, new geo-archaeological data has been used from Castricum-PWN\textsuperscript{36}, the excavations at Limmen-de Krocht\textsuperscript{37}, and the building trenches in Castricum and Akersloot-Klein Dorregeest.\textsuperscript{38} 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 archaeo-
logical sources could be used\textsuperscript{39}, such as the data collected during the construction of the new housing project at Velserbroek during the eighties and nineties.\textsuperscript{40}

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.\textsuperscript{41} 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 oligothrophic peat directly east of the current coastal barrier Assum-Uitgeest.\textsuperscript{42} The existence of oligothropic 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.\textsuperscript{43} The peat formation on older tidal deposits in Noord-Holland\textsuperscript{44} 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.\textsuperscript{45} 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.\textsuperscript{46} 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.

\textsuperscript{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.
\textsuperscript{37} Dijkstra et al. 2006.
\textsuperscript{38} Vos 2005.
\textsuperscript{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.
\textsuperscript{40} Municipal archaeologist W. Bosman has collected this data and integration of this data would strongly enhance the reconstruction south of the Noordzeekanaal.
\textsuperscript{41} Van der Valk 1992.
\textsuperscript{42} The date of the oligothrophic peat is based on the stratigraphic position of this layer at the base of the ‘Holland-veen’. Absolute dates of this oligothrophic peat are absent.
\textsuperscript{43} Westerhoff et al. 1987.
\textsuperscript{44} These tidal deposits are part of the ‘Deposit of Wormer’ (formerly Calais).
\textsuperscript{45} Beets and Van der Spek 2000, and Vos and Kiden 2005.
\textsuperscript{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 Castricummerpolder. 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.

At this time marine activity increased also in the Velserbroekpolder and the southwestern part of the Assendelverpolder. This increase in marine activity is shown by a clay layer that was deposited on the underlying peat. The increase in marine activity in the Velserbroekpolder and Assendelverpolder 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 oligothrophic 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 Assendelver polder 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 Velserbroekpolder and Assendelverpolder. At the same time locally oligotrophic peat developed along the Oer-IJ, for example around Assendelft-Q. 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 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 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. 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 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.

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 Castricummerpolder. The northern tidal creek in the Castricummerpolder gained in importance during the next phase.

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

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.
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.
CHAPTER 3

In the Oer-IJ estuary marine activity increases from 650 BC to 550 BC. In the Uitgeesterbroekpolder and the Assendelverpolder 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.\(^{57}\) 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-Dorregeest. Underneath the railroad at Uitgeest a canoe was discovered in one of these creeks.\(^{58}\) 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).

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\(^{59}\) and the mean low tide (MLT) lowered. The maximum water level of spring tides rose as well\(^{60}\) (figure 3.6).

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

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\(^{57}\) 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.


\(^{59}\) 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 Assendelverpolders. 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. ‘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. The covered peat, situated at the southern end of the coastal barrier, is dated at Limmen-de Krocht to the period 1800-600 BC. The drift sands must have developed later then 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 Assendelverpolder the creeks started to fill in. In the next period the silting up of the Oer-IJ area continued. Around 200 BC the creeks of the Uitgeesterbroekpolder and Assendelverpolder 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 Castricummerpolder 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

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. 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.\(^{66}\)

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 Castricummerpolder 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.\(^{67}\)

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.\(^{68}\) 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’).

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\(^{66}\) 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 130-40.

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. 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

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the western Netherlands the domesticated animals are: cattle, sheep, goat, pig, horse and dog.\textsuperscript{70} 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.\textsuperscript{71} The remains of sea mammals are also present throughout the Oer-IJ area in low numbers. The species include whale\textsuperscript{72}, dolphin\textsuperscript{73} and seal\textsuperscript{74} 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.\textsuperscript{75} Many birds would have been present in the food-rich estuary and wetlands of which the crane\textsuperscript{76}, the white-tailed eagle and the Dalmatian pelican\textsuperscript{77} 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.\textsuperscript{78} 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.\textsuperscript{79} Zagwijn reconstructed the development of vegetation using three main types of vegetation: forest, shrubs, and grassland (figure 3.12).\textsuperscript{80} 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.\textsuperscript{81} During the Late Bronze Age and Early Iron Age at Velsen there are two local peaks in the amount of juniper.\textsuperscript{82} 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

\begin{itemize}
  \item Van Wijngaarden-Bakker 1988, 154.
  \item 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.
  \item 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).
  \item Beverwijk/Heemskerk-Broekpolder (Therkorn et al. forthcoming), Velsen-Hoogovens (Van Wijngaarden-Bakker 1988, 173).
  \item Velsen-Fort-1 (Van Wijngaarden-Bakker 1988, table 4.14).
  \item Van Wijngaarden-Bakker 1988, 172-174. The wild animals from Velsen-Fort-1 are left out because their origin is less clear.
  \item Beverwijk/Heemskerk-Broekpolder (Therkorn et al. forthcoming) and Castricum-Oosterbuurt (Hagers and Sier 1999, table 8.7).
  \item Assendelft-F (Van Wijngaarden-Bakker 1988, table 4.11).
  \item Ilmuiden-Spuisluis, Velsen-Noordzeekanaal and Velsen-Hoogovens (Jelgersma et al. 1970).
  \item Zagwijn 1997, 96.
  \item Zagwijn 1997, a.o. fig.1, p. 94 and 103.
  \item Zagwijn 1997, 103.
  \item Jelgersma et al. 1970, fig 27 and 30.
\end{itemize}
by juniper. 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.

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. Orache was also present in the salt marshes. The former tidal flats are diverse as they contain brackish and freshwater conditions. These conditions would

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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.\textsuperscript{85} 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.\textsuperscript{86} 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.\textsuperscript{87} This is a rich biotope that can be attractive for people when they know how to utilize the potential of the environment.\textsuperscript{88} 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\textsuperscript{89} 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’\textsuperscript{90} 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.\textsuperscript{91} Furthermore, although history is created through intentional action it is not an intended project.\textsuperscript{92}

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.\textsuperscript{93} 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.\textsuperscript{94} 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

\textsuperscript{85} Brandt and Van der Leeuw 1987, 208.
\textsuperscript{86} Therkorn et al. 1984, 354.
\textsuperscript{87} Groenman-van Waateringe 1983, 39.
\textsuperscript{88} Groenman-van Waateringe 1983.
\textsuperscript{89} History as described by Giddens (1995) as the structuration of events in time and space through the continual interplay of agency and structure.
\textsuperscript{90} As mentioned in Vitelli 1998, following Wilson and van der Leeuw.
\textsuperscript{91} Giddens. 1995, 19.
\textsuperscript{92} Giddens. 1995, 27.
\textsuperscript{93} Peter Vos personal communication.
\textsuperscript{94} Spaarnwoude-Slapersdijk/Surplas (Ten Anscher press release 11-04-1990).
Middle Neolithic as indicated by the Vlaardingen sherds near Velserbroek,\(^95\) were inhabited from the Late Neolithic onward.\(^96\) 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).\(^97\) Several sites of the earlier ‘Single Grave Culture’ are known about twenty kilometres to the northeast of Klein-Dorregeest at the Groetpolder. The geological

\(^95\) Velserbroek-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. The existence of fields was viewed as one of the indications for the permanent settlements and it can therefore be assumed that a permanent settlement should also be close by at Klein-Dorregeest.

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, 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 where four more barrows are situated. The combination of roads and barrows is known from other areas. 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. The dating of the other three barrows is less certain but they are at least later than A. 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, fields, fences and a cattle enclosure, 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.

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

The existence of fields was viewed as one of the indications for the permanent settlements and it can therefore be assumed that a permanent settlement should also be close by at Klein-Dorregeest.

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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.
103 Woltering 1979, 254.
104 Barrow D was partly destroyed.
107 Velserbroek-area-2 (Therkorn 1987c).
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 m² 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. The oldest deposit a bull’s head with a basket pinned on its horn could be earlier or contemporary with the barrow. 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). At the end of the Middle Bronze Age at Westlaan a few hundred metres west of the marshy pool a barrow and a farmstead

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108 See chapter 4, section Velserbroek-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). 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 Velserbroek-Westlaan. The dark shape is the remnant of the so-called warrior grave underneath a completely destroyed barrow, after original field drawing.](image)

In the Late Bronze Age south of Hofgeest a farmstead was built with probably a (re)building phases (figure 3.17). 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

113 Velserbroek-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). 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 Velserbroek-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). 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

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114 Fontijn 2003, 228.
the Bovenkarspel Pottery Style Group. 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. That the land was worked is also evident from several flint sickles found in the municipality Heiloo (figure 3.20). A ritual deposition at Heiloo-Kromme Laan consists of one bronze and four flint sickles in a row on dry land. Analysis of the flint sickles showed that they were most likely used for cutting sods instead of grain. 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.

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

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

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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 = Velserbroek-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. 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. When the farmstead was abandoned it was partly dismantled. The roof supports were cut down, which means that the roof had to been taken of after the use of the farmstead. 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

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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. 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. 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.

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.
It was assumed that the presence of peat cushions determined the spacing and possibilities for habitation in the Early Iron Age. Additional research in the Assendelver polders 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. The burning of other fuels than wood is also suggested by the absence of wood destroying insects. These fuel aspects could have made the peat a favourable place for settling.

Figure 3.23 Schematic plan of the main features at Velserbroek-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. 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.

More recent excavations have established the presence of fields on the peat, which would heighten the agricultural potential. Furthermore, it can be assumed that the people in the peat area used the levee systems

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130 Therkorn, Besselsen and Oversteegen 2006.
131 Therkorn et al. 1984, 370.
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. 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 live 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. 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’, 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.

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 Velserbroek-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). The constellation of horse and cow were laid out, respectively on the arable fields and on the pastures. 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. Velserbroek-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.

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

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136 Therkorn and Abbink 1987, 140.
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. 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. 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. Although briquetage pottery for the production of salt is found in the area, including site Q, 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. The absence of evidence for occupation in most parts of the Oer-IJ area is ascribed to deteriorating conditions with many storm floods. 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

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

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143 Van Heeringen 1992, 302.
144 Van Heeringen 1992, 268.
146 Other sites are Assendelft-39 and Velserbroek-Hofgeest (Van Heeringen 1992, 324).
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. 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. 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. The practice of selecting human bones, curating and placing them in specific contexts is well known for prehistoric societies in Britain and Scandinavia. 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. This indicates at least a varied treatment of the dead within the Oer-IJ area.

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 Utgeesterbroekpolder-16. These sites Brandt et al. 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.

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. Both farmsteads contain ritual deposits, respectively a pot with cremated bone and a pit with a wooden bowl. These deposits are interpreted as house offerings, a

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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).
156 Meffert (1998, 71) calls this short-distance trans humance.
158 Therkorn 1987b, 181.
CHAPTER 3

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.

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 quality159 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). 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.

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.\textsuperscript{161}

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.\textsuperscript{162} However, little Roman material appears to have entered the local settlements. Until recently only small sherd were sporadically found in settlements. In first instance these sherd were viewed as some form of primitive money.\textsuperscript{163} This idea was soon regarded as improbable. Further research showed that the Roman sherd did not form complete objects and could not be fitted to other sherd in the same settlement. Strangely enough Roman sherd 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.

\textsuperscript{161} Fort 1 dated AD 15 - 30. Fort 2 dated AD 40-50 (Bosman 1997, 321).
\textsuperscript{162} Bosman 1997, 87.
\textsuperscript{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.\footnote{Kok 2005, Vons and Bosman 1988, and Meffert 1998.} 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.\footnote{Vons and Bosman 1988.}

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.\footnote{Therkorn 1987b, 206.} 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.\footnote{Meffert (1998, 71) uses the term short-distance trans humance.} Hiddink objects to the habitational 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.\footnote{Hiddink 1999, especially 100-108.} Furthermore, the distance between the different types of houses is only a...
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. 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.

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. 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

DEVELOPMENTS IN THE OER-IJ AREA

tidal flats in between the levees. The extent of the habitational area appears to be bordered at the east, where the oligothrophic 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. 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. 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. At the small sites there was never a second farmstead. But the farmsteads could be covered by a low mound, just as the larger sites. The larger sites had successive farmsteads but these would be in the same plot. The different farmsteads would remain spatially separated even through time.

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.

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. 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.

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.

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. De Koning sees a similar association between the second/third century inhumations and the settlement boundaries in Uitgeest-Dorregeest. Here also four later inhumations occurred which are buried within a small part of the settlement where also four animal burials were situated. Hagers and Sier propose that the small cemetery is part of a generally more formalized way of organizing the landscape. Although cemeteries are missing from the earlier periods, Therkorn has shown

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171 For example, Assendelft-P (Hallewas 1987, fig 2.4b).
173 Brandt and Van Gijn 1986, 72.
175 Assendelft-B and -D (small sites), Assendelft- F, -N and -P (large sites) (Therkorn and Abbink, 1987).
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).
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. \(^{186}\) 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).](image)

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 been small spots where habitation was still possible until the end of the Roman Iron Age. \(^{187}\) 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. \(^{188}\) 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

\[^{186}\text{Therkorn 2004.}\]
\[^{187}\text{The absence of sites from this period could also be due to dating difficulties. Dating with Roman imports in a local context usually gives dates which are too early.}\]
\[^{188}\text{Therkorn 2004.}\]
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.