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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5. PREDICTING THE POSSIBLE LOCALITIES OF WET LOW-LYING OFFERING SITES IN THE OER-IJ AREA: A VIEW TOWARDS THE FUTURE

A decade ago it was estimated that since 1950 a third of the Dutch soil archive was destroyed due to building activities and intensive agricultural. Since then many new large scale building activities have taken place and intensive agriculture occurs in previous pastoral areas. The Oer-IJ area has not been left untouched by these developments, especially as it is situated in a densely occupied part of the Netherlands with a lot of pressure on all available space. It has become evident that the soil archive needs to be managed and protected. This is true for other countries as well and in 1992 the European Council agreed upon the Convention of Valetta. The Convention of Valetta – better known as Malta – "recommends the preventive policy within the framework of environmental planning procedures for the protection of the archaeological heritage."

The government should ratify the Valetta Convention in 2007. This ratification has, however, been postponed several times, so in the mean time work is carried out in the spirit of Malta. This comes to the fore in the national policy in respect to the policy document Belvedere, which was implemented in 1999. The policy document Belvedere was made with the central purpose that cultural-historic identity is a guiding principal for the environmental planning and national policy will provide suitable conditions for this guiding principal. The Belvedere policy was further embedded in the ‘Vijfde Nota Ruimtelijke Ordening’ in 2001, which makes it a part of mainstream environmental planning.

The Belvedere policy and the specific problems associated with archaeological-historical aspects have led to the ‘NWO-research programme’ ‘Bodemarchief in Behoud en Ontwikkeling’ (BBO) with the specific goal of making a scientific contribution to the current policy issues of embedding the management of archaeological-historical resources into the environmental planning process.

In this chapter predictions will be made concerning the location of possible offering sites in wet low-lying areas. These predictions can be used in archaeological heritage management in the Oer-IJ region. The value of these offering sites as a characterization of the Oer-IJ region and the possible connections to the present day landscape and its users are explored.

5.1 PREDICTIVE MODELLING

As part of the BBO-programme the project ‘Strategic research into, and development of best practice for, predictive modelling on behalf of Dutch Cultural Resource Management’ has taken place. The aim of the project is to ‘evaluate and improve existing methods and techniques for the prediction of archaeological site location’ and to ‘contribute to a firmer embedding of archaeology in planning schemes’. Their report ‘A baseline for predictive modelling in the Netherlands’ is used here as a guide for the development of a predictive model of the wet low-lying areas of the Oer-IJ area and the wider landscape. It will become clear that it cannot be a complete predictive model at this stage, but that it may guide future research in the Oer-IJ area. I will not repeat their arguments here, but focus on the elements that are of importance for the predictive model for the Oer-IJ area.

The minimum definition of predictive modelling as defined by Kohler and Parker still stands: ‘a technique used to predict, at a minimum, the location of archaeological sites or materials in a region, based either on the observed pattern in a sample or on assumptions about human behaviour.’ This can be done from an

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1 Groenewoudt and Bloemers 1997, 119.
2 For example, VINEX-housing projects and two main railroads: Betuwelijn and HSL-lijn.
4 Bloemers 1999, 320.
5 Feddes ed. 1999, 7.
7 The Netherlands Organisation for Scientific Research.
8 Protecting and developing the Dutch archaeological-historical landscape.
9 Bloemers 2001, 2.
academic point of view where the understanding of past human behaviour is the main goal or from an archaeological heritage management perspective in which the prediction of the presence or absence of any sites and their subsequent management is of importance. There is, however, a level of mutual influence. In order for predictive modelling to develop it is important that we understand how people in the past interacted with their environment, which is a scientific goal. Archaeological heritage management will benefit from better predictions as they would be more accurate. Furthermore, the information gained from data collected during an excavation within the archaeological heritage management process can add new data for the testing of the academic models.\textsuperscript{13} As the financial resources and capacity to excavate or preserve all archaeological heritage are limited, choices have to be made. Therefore the archaeological heritage management process can be divided into valuation and selection. In which the former says something about the quality of the archaeological resource, which is evaluated by archaeologists and the latter indicates the selection of the actions that need to be performed made by the proper authorities on the basis of the information given, their policy and other aspects within the environmental planning process.

5.2 PREDICTING OFFERING SITES IN THE LOW-LYING AREAS OF THE OER-IJ AREA

The aim of the predictive model for the Oer-IJ area is to predict the locations with offerings in the wet low-lying parts of the landscape. The predictive model can be used as a tool in archaeological heritage management and at the same time test the scientific model of the Oer-IJ itself. A better scientific model will lead to better predictions and thereby strengthen its usability in cultural heritage management. Questions that need to be answered in relation to the predictive model can have a scientific and/or archaeological heritage management background. These different questions have the advantage that when the predictive model is tested it is easier to estimate what part of the prediction worked or failed and how the model should be modified for further use. For the wet low-lying areas of the Oer-IJ area the following questions have been put forward (figure 5.1). Some of the questions asked here can be answered, but others should be answered by future research.

<table>
<thead>
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<th>Scientific</th>
<th>Archaeological Heritage Management</th>
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<td>2</td>
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<td>What are the indicators from an AHM perspective?</td>
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Figure 5.1 Fourteen questions in relation to the predictive model. The horizontal positions within the table indicates in which area of interest the question belongs.

5.2.1 WHERE ARE THE KNOWN OFFERINGS IN LOW-LYING WET AREAS?

Offerings are made in peat/marshy areas on or next to the old dunes and former coastal barriers, the edge of the

\textsuperscript{13} A view advanced by Groenewoudt and Bloemers 1999, 120.
peat blankets in the east, creeks, and the border zone of the Oer-IJ. These areas, except the first, are, however, not used throughout all periods.\textsuperscript{14} Predictions should therefore be period specific. Salt water also seems to be avoided.

5.2.2 HOW CAN THESE OFFERINGS BE CHARACTERIZED?

The offering sites in wet low-lying areas have a diverse character, ranging from one to hundreds of artefacts. The density of artefacts generally remains, however, low in comparison to settlements.\textsuperscript{15} The offerings consist of a wide range of artefacts that could also be found in settlements, but in different relative amounts. The probability that a site is an offering site increases when there are several artefacts that occur more frequently in offering sites than in settlement debris, such as metal artefacts, complete vessels, stones, selections of wood (from different parts of the landscape) and human bone (especially from the leg, arm and head). Furthermore, the artefacts are mostly situated in natural layers as they are deposited in wet contexts. Indicators for cultural layers, such as small pieces of pottery, daub or charcoal are mostly absent.

5.2.3 IS THERE EVIDENCE FOR OTHER USES OF THE WET LOW-LYING AREAS?

Wet low-lying areas were not used exclusively for offerings. A range of activities could take place. Some of these areas were used for waste disposal.\textsuperscript{16} And in the drier periods these areas could be used as grazing grounds. There is also evidence of peat-cutting in the low-lying areas, such as filled in creeks or the border zone of the Oer-IJ.\textsuperscript{17} These wet areas are attractive to wildlife and therefore they would be used for fishing and hunting birds. The wet low-lying areas were also important for an essential part of the farm buildings, namely the roof. Large quantities of reed had to be gathered when a roof needed to be thatched or maintained. All these different activities show that the people in the Oer-IJ area used the wet low-lying areas in multiple ways. Not all these activities would necessarily have left direct traces, like the reed cutting, but were of importance for their subsistence.

5.2.4 WHAT IS THE RELATION BETWEEN THE OFFERINGS AND OTHER USES OF THE LANDSCAPE?

Offerings were made in distinct but not necessarily separate places. It appears that the offering sites are at a close distance from field and settlements. This is certainly the case with the somewhat larger offering sites with multiple deposits. In a number of cases the offerings precede other uses of the landscape, especially the offerings in creeks. Filled in creeks in areas with later occupation are therefore of interest. When the star pattern Horse is discovered, the area to the southwest is likely to contain offerings in a wet area.\textsuperscript{18}

5.2.5 WHAT IS THE PALAEOGEOGRAPHICAL NATURE OF THE WET LOW-LYING PARTS OF THE LANDSCAPE?

The wet low-lying parts of the landscape are the result of different geological/ecological processes. And the term low-lying is not absolute in the sense that some parts are higher than others but are still considered low-lying. The sea has had a major effect on the region as it was only when the coastal barriers were formed and later the old dunes that the first high-lying areas appeared.\textsuperscript{19} The old beach plain essentially became a low-lying area. It seems a paradox that on the high-lying old dunes wet low-lying areas developed such as peat and marshy pools. This came about because the old dunes had a diverse relief. Small dunes and valleys made it

\textsuperscript{14} See chapter 4 figure 4.48.
\textsuperscript{15} See chapter 4 § 4.7.3.
\textsuperscript{16} For example, Uitgeesterbroekpolder-54. This is considered waste disposal as there is no clear selection or a specific placement of objects recognisable.
\textsuperscript{17} For example, Assendelft-56 and Limmen-de Krocht.
\textsuperscript{18} See chapter 4 figure 4.36.
\textsuperscript{19} See chapter 3 § 3.3.1.
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into a landscape with much variation within a small area. The dune valleys were at most a few metres lower, but this meant that they were much wetter than the dunes. And in these low valleys peat and marsh developed which were sometimes covered by drift sands. The absence or presence of plants, also due to human action such as ploughing, would have been a major influence on the amount of drift sands that were able to cover these low-lying areas.

Other wet low-lying areas are the result of creeks and the Oer-IJ cutting into the landscape. These waterways were under the influence of the sea level, the tidal difference, and the amount of water that needed to be drained of from the dunes and the peat blankets. The former tidal areas and beach plains that were not covered by coastal barriers and/or old dunes slowly filled with peat and formed large peat blankets that eventually rose above the level of the old dunes. These first wet low-lying areas turned into wet high-lying areas. Some of these high peat blankets were then used for peat-cutting, during which new low-lying areas were created.

5.2.6 WHAT WAS THE POSITIONING OF LAND AND WATER IN RELATION TO THE OFFERINGS?

As the offerings sites under study are in wet low-lying areas the positioning of land and water may seem a strange question. But in a dynamic landscape such as the Oer-IJ estuary the borders between land and water can be flexible. The offerings in peat/marshy pools on or near old dunes appear to be close to dry land, when it is possible to reconstruct the landscape. This is either the case because the peat/marshy pool is of a small size and therefore the dry land surrounds it. Or the offerings were placed at the edge or at a short distance from dry land when the peat/marshy area is larger. The offerings in creeks are in some cases close to dry land as the creeks are only a few metres wide with sandy levees. But the creeks going through the peat blankets are surrounded by dryer but still wet land. Here the boundary would be between open water and a wet land. The distinction between wet and dry dissolves when the two offerings in the peat blanket area are considered. Here, however, it could have been that small pits were dug, which created small spots of open water in a wet landscape. Both options should be considered.

The offerings made in the border zone of the Oer-IJ were under the influence of a fluctuating border between wet and dry land. The gully digging along some of the sites indicates that there were wetter and drier periods as digging under water would not be probable. The border between land and water or just of the shore seems to be good places for offerings.

5.2.7 WHAT DID THE PLANT LIFE LOOK LIKE IN THE LOW-LYING WET AREAS WITH OFFERINGS?

Where botanical samples have been taken from the offering sites these indicate the presence of fresh water plants that flourish in stagnate or slow moving open water, such as common water-crowfoot (Ranunculus aquatilis) and duckweed (Lemna sp.). Plants that grow in brackish and/or salt water can be present due to the fact that the creeks in the area cut through saline deposits of soil in which these pollen would be preserved. The offering sites in marshy pools or peat would have plants that are consistent with this environment. However, it is not always clear if the peat was present at the moment of deposition. It could just as well be the case that offerings were made in open water that filled up with peat at a later date. The remains of plants that grow in open fresh water are perhaps the best indicators for suitable environments for offerings.

5.2.8 ARE THE CONCLUSIONS DRAWN FROM CORING AND USED IN THE MODEL RELIABLE?

This question has to be answered in future research that explicitly looks at the results of coring. The presence of sites indicated by coring seems to be somewhat reliable. The nature of the sites is, however less clear. The presumed absence of sites in areas where coring has taken place without finding traces of archaeology, seems to be flawed in the Holocene area. On the one hand due to the depth of the older features, as coring is usually done by hand the depth of the core is usually less than two metre. On the other hand, due to erosion, not all settlements have a (thick) layer of debris, which is one of the main selecting criteria for establishing

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20 Therkorn et al. forthcoming.
the presence of a site by coring. In the past few years several sites have been discovered in the Oer-IJ area after coring had taken place without any positive results.21 There would be a very small chance to find an offering site through coring.22 Due to the lack of a continuous layer of artefacts and the natural environment the artefacts are placed in.

5.2.9 WHAT IS THE PREDICTIVE VALUE OF THE MODEL?

This question can only be answered in future research. At the moment the model is only of a possibilistic nature. This means that only places are predicted were offerings could take place and not, as in a probabilistic model, what the actual chance is of finding an offering site. The number of sites yet discovered are too few to make any quantitative statements. And just as important little research has taken place that establishes the absence of offering sites in wet low-lying areas as these areas have not often been part of excavations.

5.2.10 HOW CAN OFFERINGS IN THE WET LOW-LYING AREAS BE DETECTED?

In order to detect offerings in wet low-lying areas trial trenches have to be dug. As geology is very important in determining where the border between land and water was a trench has to be made at right angles with the presumed former water’s edge. When the geology is understood and fresh water and/or peat was present in the past a trenches along the former water’s edge/peat and in the former water/peat near the edge would enhance the chances of finding offerings. As it has become clear that these offerings were made in proximity of settlements and fields, the starting point should be from known or presumed settlements and fields to the wet low-lying areas. The quality of this latter data will have an impact on the chances of finding offering sites. The presence of finds characteristic for offerings, such as human bone, metal artefacts, stones, wood and/or complete pots, indicates the possible presence of an offering site.

5.2.11 ARE THE OFFERING SITES SUITABLE FOR PRESERVATION AND MANAGEMENT?

Offering sites are suitable for preservation under certain conditions. As the main aspect of the offering site is material, the conditions of the site have to be kept constant. Lowering the water table effects the preservation of the organic material as oxidation processes start to take place. Altering the acidity of or the concentration of chloride in the environment influences the preservation of metal.23 The site would have to be monitored, in order to detect and/or counteract changes in the conditions.

5.2.12 ARE OTHER LAND USES IN THE WET LOW-LYING AREAS SUITABLE FOR PRESERVATION AND MANAGEMENT?

Some uses of the wet-low-lying areas may be worth preserving. Although we have no evidence of this yet, the remains of structures associated with fishing, the control of water, crossings of water, or large boats would be worth preserving. Again as these phenomena are often associated with organic material the water level has to be managed. Furthermore we have little knowledge of prehistoric peat-cutting, but evidence for this practice starts to appear. In order to be able to understand these kinds of traces in the future larger areas need to be preserved. In an area where there is a great pressure on the available land this may not be possible. Other uses of wet-low-lying areas may not be as suitable for preservation as they leave a minimum of traces.

21 For example, Uitgeest-Waldijk.
22 See also, Tol et al. 2004, 21.
5.2.13 CAN SUGGESTIONS BE MADE FOR FUTURE PROSPECTION METHODS?

In order to understand the landscape more fully prospection has to widen its scope to all elements in the landscape. At the moment the detection of settlements remains the main goal of prospection. This leads to a bias towards dry high lying areas at an early moment in the prospecting process. This bias is enlarged when core boring forms the main part of the prospection in the field. In the Holocene area trial trenches should be part of the field prospection in order to find the remains of a broad spectrum of activities. And as the landscape is layered they should not stop at the first sign of archaeological traces. It is essential to assess how many levels of occupation can be distinguished and what their quality is in order to plan the preservation or excavation of the archaeological remains.

5.2.14 WHAT ARE THE INDICATORS FROM AN AHM PERSPECTIVE?

Preservation of the archaeological remains within the landscape, whether they are visible or not, is one of the main goals of archaeological heritage management under the convention of Valetta. It is therefore not only of importance to assess whether the archaeological remains are in good condition, but also if this good condition can be sustained. In the Oer-IJ area this is of special importance in relation to the organic remains, which give the area its high archaeological value as the presence of organic remains is far less to non-existent in non-wetland sites. From an AHM perspective the presence of organic remains should therefore be seen as valuable. And if the conditions can be controlled the archaeological remains should be preserved. If the conditions cannot be maintained excavation should be advised as these organic remains contain information that cannot be gathered from non-wetland sites. Wetland sites are, however, more expensive to excavate than non-wetland sites as the excavation and analyses of the material is a more specialised and time consuming job. Another element that should be considered is the rarity of the archaeological remains and/or its informative value. Offering sites in wet low-lying areas, especially of the Neolithic and (Roman) Iron Age, are not well known phenomena within Dutch archaeology. Although more knowledge is gained throughout the last few years, the preservation of this type of sites is not yet part of the general practice. This may be partly due to the difficulty of detecting this type of site during prospection and the lack of recognition when this type of site is encountered. Therefore, when the presence of an offering site in wet-low-lying conditions is suspected either by the position and/or the character of the archaeological remains, the preservation of the site within the landscape should be a priority.

5.3 THEMES VAN LEUSEN ET AL.

In the baseline report of Van Leusen et al. six themes are put forward that they perceive as potential directions for future research. In this thesis these themes are explicated in order to make it as clear possible what is done. In this way the predictions can be evaluated in a more straight forward manner.

5.3.1 QUALITY AND QUANTITY OF THE DATA

The Oer-IJ area comprises about 250 km$^2$ of which about 50 km$^2$ is covered by younger dunes and 30 km$^2$ have been researched either by prospection or excavation. The research is mapped on the boundaries of fields and the area is therefore larger than the actual researched square metres. Furthermore due to access problems not all fields within the fieldwalking or core boring area have been evaluated. The 30 km$^2$ is therefore a maximum number.

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25 The younger dunes are a protected environment in which the archaeological remains are covered by metres of sand. Intrusive nature development and water management can, however affect archaeological remains.
26 Lange, Besselsen and Van Londen 2004, compilation of the map information on research and research taken place at a later date.
About 21 km² of the Oer-IJ area has pre- and protohistoric monuments that are listed on the map of archaeological monuments (AMK) as released by the ROB. The size of the archaeological monuments is determined by the present-day field boundaries. The archaeological monuments partly overlap with the researched areas. It has to be remembered that of most of these archaeological monuments the exact nature is not known. Most of them are based on evidence taken from core boring or field observations. Furthermore, they only have limited protected status. The indicated archaeological value of these monuments is, however, in 62 cases high or very high. 80 monuments are valued as settlements of which some with platforms or fields; three monuments are valued as fields; one monument is valued as a grave; four monuments are valued as forts; and one monument has no specific value. The number of visible archaeological monuments is very limited and comprises one burial mound and several raised platforms. Only seven archaeological monuments are really protected from direct destruction by building activities as they are either provincial or state monuments. The provincial government has planned to make two more areas into provincial monuments. The presence of a terrain on the AMK only means that certain measures have to be taken when the land is developed. In essence the cycle of prospection, evaluation and decision-making has to be followed, which can lead to protection or excavation of the site. Besides these monuments nearly the entire Oer-IJ area falls within the middle or high value range on the Indicative Map of Archaeological Values (IKAW). This gives the whole area a nearly similar protection as the archaeological monuments on the AMK, as it is practice that these areas are researched before building activities take place. The northern former coastal barriers falls within areas of high archaeological value, but none of the better protected state or provincial archaeological monuments is situated on these northern former coastal barriers.

<table>
<thead>
<tr>
<th>Period</th>
<th>Number of archaeological monuments (AMK)</th>
<th>Number of find spots</th>
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</thead>
<tbody>
<tr>
<td>Neolithic</td>
<td>8 (9%)</td>
<td>7 (1%)</td>
</tr>
<tr>
<td>Bronze Age</td>
<td>11 (12%)</td>
<td>42 (8%)</td>
</tr>
<tr>
<td>Iron Age</td>
<td>49 (55%)</td>
<td>175 (34%)</td>
</tr>
<tr>
<td>Roman Iron Age</td>
<td>80 (90%)</td>
<td>391 (78%)</td>
</tr>
</tbody>
</table>

Most of the 89 archaeological monuments (AMK) cover multiple periods (figure 5.2). It may seem strange that there are more registered monuments dated to the Neolithic than there are findspots. This is partly due to the lack of publication of some of the findspots from this period, but also due to the nature of some of the archaeological monuments, which are expected to contain Neolithic remains on the basis of geology. The Oer-IJ area has 499 recorded find spots dated to the pre- and/or protohistoric period. This averages to two known find spots per square kilometre. The quality of the data from these findspots differs considerably as

27 Lange, Besselsen and Van Londen 2004, additional maps 1-3 and information from www.kich.nl (14-4-2006).
28 See additional maps 1-4 in Lange, Besselsen and van Londen 2004.
29 There are only two forts expected but the different AMK terrains refer to different fields.
30 Heemskerk-Schepleenberg, this burial mound could be dated to the Roman Iron Age or the Early Medieval Period.
31 Uitgeesterbroekpolder, here several small platforms can be discerned in the landscape.
32 Castricum-Kronenburg (AMK-1866 and 1879, provincial monument), Heemskerk-Broekpolder (AMK-9209), Heemskerk-Schepleenberg (AMK-1391), Krommenie-Woudpolder (AMK-1313), part of the Uitgeesterbroekpolder north of the provincial road (AMK-1316, 1317, 1318), part of Uitgeesterbroekpolder-18 (AMK-1315), and Velsen-fort 2 (AMK-5845).
34 Besides Castricum-Kronenburg, part of the Uitgeesterbroekpolder and Castricum-Bleumerweg have recently become provincial monuments, which includes an agrarian protection. Rob van Eerden personal communication.
35 This map is produced at the State level by the ROB.
36 See appendix 3. This number is based on the Central Archive for Archaeology (Archis), published reports, and the journals Westerheem and Holland: Archeologische kroniek van Noord-Holland. Counted at the end of 2005.
they range from a single sherd to complete excavations of settlements, fields, offering sites and other features covering several hectares and multiple periods. The tendency for the smaller findspots is that they are dated in a wide range, due to the difficulties involved with dating local pottery. The smaller the findspot the more chance there is that the date range is too wide as they are dated to the main period(s). Sixty percent of all the Roman Iron Age findspots consist only of sherds, against ten percent of all the Neolithic and Bronze Age sites. This means that although there are fewer findspots from the older periods, the information from these sites is more diverse than that of most of findspots dated to the Roman Iron Age. The reason for this difference is that Neolithic and Bronze Age findspots are rarely discovered during fieldwalking or core boring, but are usually discovered when the soil is disturbed by digging activities either during excavations or building activities. At the same time most of the (Roman) Iron Age findspots are discovered during fieldwalking and core boring. This bias is enhanced by the location of most of the large fieldwalking and core boring campaigns, which take place in the peat areas and former beach plains that were probably not or less intensively used during the Neolithic and Bronze Age.

As shown in chapter 3 and 4, large scale excavations give the most useful information on the use of the landscape as a whole. And most of the information used to infer the cultural rules underlying the predictions about the use of wet low-lying areas comes from these large scale excavations. The prediction of possible locations where offerings could have taken place in the past is, however, mainly based on evidence from core boring and fieldwalking combined with geomorphogenetic and paleogeological maps. When unchecked the predictions of locations with possible offerings have a strong bias towards areas that have been part of fieldwalking and core boring campaigns.

5.3.2 ENVIRONMENTAL INPUT FACTORS

The Oer-IJ area is a dynamic landscape and therefore the environmental input is essential. Palaeogeographical and geomorphogenetic maps of different periods of time have to be made in order to understand the landscape and its possible uses. Each period should have its own predictive map as the environment changes through time. The palaeogeographical maps are reconstructions of the landscape and are essential for predicting phenomena in specific periods. The geomorphogenetic map shows how the Late and Roman Iron Age landscape was formed as it is present under the topsoil together with modern large built up areas and main roads. This map is important for the predictions relating to the later periods and to estimate the possibility of survival of the predicted archaeology from all periods.

In a Holocene landscape such as the Oer-IJ area there is a large diversity of landscape elements that influence the potential use of each place. As this diversity appears at a relatively small scale, not only specific geological units, but also the combination of different geological units within a short distance of each other may influence the locational choices made. The geological maps should not be seen purely as a representation of the natural background, as it has become clear that people in the Oer-IJ area altered their landscape on an impressive scale. In the estuary landscape there are different types of water and it is important to reconstruct the character of the water. Not only whether it is tidal, flowing or standing water, but also whether it is salt, brackish or fresh water. The characteristics of the water are especially important for the predictions of locations suitable for offerings in the Oer-IJ area.

37 262 known sites consist only of sherds gathered during fieldwalking or coring.
38 I do not go into the debate about the date of a sherd and its relation to the date of the site as this goes too far for the type of evidence that comes from coring and fieldwalking.
39 For Example, Ruilverkaveling Limmen-Heiloo (Ravesloot and Perk 1987), Ruilverkaveling Uitgeest (Ravesloot 1989) and the fieldwalking activities of the AWN-group Zaanstreek.
40 As shown in chapter 3 and 4, the position of the border of the oligotrophic peat is probably the result of peat-cutting, instead of natural processes.
41 See §5.2.1.
5.3.3 INCLUSION OF SOCIO-CULTURAL FACTORS

Van Leusen et al. state that ‘– any activity resulting in recognisable archaeological remains is normally performed within the context of a fully developed and continually changing, physio-cognitive landscape.’ This statement is relevant for the Oer-IJ area as it is partly true and partly points to the exceptional situation of the area. Usually archaeological narratives about prehistory do not have a clear beginning. We can add another period and start earlier in time. What makes the Oer-IJ area exceptional is that we cannot speak of a fully developed landscape at all moments in time as the narrative starts around 2500 BC. This does not mean that people’s cognitive perception of the landscape would have been underdeveloped or absent. The landscape elements in itself would have been familiar, but these would not all have had man-made physical alterations, such as houses or fields. These socio-cultural elements would be absent. And this process of new land coming into being would last throughout prehistory. But even once the land was taken into use, drift sands sedimentation and erosion would erase or obscure the man-made elements in the landscape. This gives us the opportunity to look at how people used land with no socio-cultural elements in combination with subsequent use when these areas are developing. This could tell us something about people’s preferences and perceptions as choices have to be made when new areas are developed that are not as dependent on the existing physical elements such as, houses and fields, but that should fit within the socio-cultural rules of the community. If these socio-cultural rules would become clear to us, predictions would be made more on perceptions of the landscape then just on an extrapolation of known archaeological findspots. Or in the words of Van Leusen et al.: ‘Rather than the quality of the physical and cognitive map layers themselves, it may therefore be that the quality of the sociological-behavioural rules governing the actions and reactions of a society will become paramount in future predictive models, which will then become based on simulations rather than on locational analysis.’

It will be important to elaborate on the complex-type as it is now used. For example, when the AMK-monuments in the Oer-IJ area are considered 76 percent is defined as settlement of undetermined nature and all the platforms are described as a settlement ‘terp’ even though these platforms are used in a multiple way. During prospection all findspots with more than five sherds seem to be evaluated as settlements. Other uses, like fields are defined only occasionally. For predictions it is on the one hand important that the evaluation is as specified as possible, but on the other hand the lumping together of all findspots into settlements gives a very undifferentiated picture of the landscape and may lead to disappointment when no actual houses are found during later excavations. Another downside to describing most findspots as settlements from a landscape perspective is that the findspots are generally seen as having a distinct size and that this is all that needs to be protected or excavated. As Therkorn states: ‘Sites’ or ‘off-sites’ are really not proper designations within this region. None of the excavated areas, however large, have encompassed all recoverable features for any one ‘period’.’ If the focus remains on settlements we get more information on houses, but we have a less clear idea on how they are placed in the landscape in relation to other activities. The perception of the landscape remains one-dimensional in this way and it makes it more difficult in the future to predict the entire use of the landscape.

5.3.4 HIGHER SPATIAL TEMPORAL RESOLUTION

The small scale differences in the landscape of the Oer-IJ area asks for a high spatial resolution when predictive maps are made. The new geomorphogenetic or geolandscape map made of the Oer-IJ area as part of this study has 34 different units of description. In order for the map to have enough detailed information a scale of 1:15,000 is advisable at least at the stage of construction. Due to the size of an area the map can be printed on a higher map scale (A3-size). At a higher map scale the geomorphogenetic units could be less clear and the findspots that are plotted on the map could start to cluster. At a map scale of 1:15,000 it becomes difficult to put the entire Oer-IJ at one map and therefore a cut out of the most important area for prediction and possible preservation of sites has been made. This cut out is made on the basis that nearly the complete area south of

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42 Van Leusen et al. 2005, 58.
43 Van Leusen et al. 2005, 58.
44 A ‘terp’ is a man-made mound used for habitation.
45 Therkorn and Abbink 1987, for example table 8.1.
46 Therkorn forthcoming, ‘Marking while taking land into use’.

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the Noordzeekanaal is built up and the younger dunes cover the western part of the Oer-IJ.\textsuperscript{47} The geolandscape map shows the landscape of the Oer-IJ area around the beginning of the Roman Iron Age. It would, however, be very costly to produce a map with high spatial resolution for every period. For the Oer-IJ area this would mean at least five different maps. Therefore, choices have to be made. Cost-efficiently the best choice appears to be the addition of two palaeogeographical maps to the already existing four\textsuperscript{48}, which are less detailed and can be printed on a higher map scale (1:50,000 or A4-size). On these maps the entire Oer-IJ area can be shown. The number of findspots on these maps from earlier periods is also less high, which leads to less clustering than the Roman Iron Age findspots. Predictions made on the basis of the palaeogeographical maps above the Noordzeekanaal can be checked against the geolandscape map.

The IKAW at the moment gives one map for all periods without differentiating between the expected periods or what to expect. Van Leusen et al. argue that ‘tailor-made policy advice will entail the need for higher temporal resolution (for example, when deciding which type of prospection will have to be carried out, ...).’\textsuperscript{49} This needs to be done in combination with a further development of the complex types in order not only to know from which period the remains are but also what to expect.\textsuperscript{50} On a municipal level this higher spatio-temporal resolution is achievable as the area under development is much more restricted. But as long as there is no accurate information on the findspots it will be necessary to do intrusive research such as trenching, before decisions can be made on protection and development.

5.3.5 SPATIAL STATISTICS

Van Leusen et al. are cautious about using statistics in the sense that the used statistics should be appropriate for the task at hand, as it may lead to misunderstandings by the end-users of predictive maps.\textsuperscript{51} Van Leusen and Verhagen have commented\textsuperscript{52} that at this stage it is not necessary to use spatial statistics in the research at hand as the number of offering sites in wet low-lying areas per period is small. According to them it is more important to be explicit about the rules that are used in the prediction and the data on which these predictions are based. Therefore at this moment in time a possibilistic model is less problematic as it only indicates the areas where offerings in wet low-lying areas can take place instead of what the actual chance is of finding one.

5.3.6 TESTING

The strength of a predictive model lies in its ability to withstand testing in a controlled manner. This means that the aims and the assumptions of the model have to be clear. In case of a wrong predictions it can than be evaluated along the aims and assumptions where the model is wrong or inaccurate. And modifications can be made to the model accordingly. A great concern about predictive modelling is that ‘... no properly designed and controlled experiments for testing predictive models have ever taken place in the Netherlands.’\textsuperscript{53} In essence we have no idea if the predictions we make are either good or bad. Testing predictive models in an area as densely occupied as the Netherlands is, however, no minor feat. This research has experienced some serious drawbacks in the testing phase. In order to test the model specific areas were selected where trial trenches would be made with a mechanic digger. The owners of the land were, however, non-cooperative as it would mean damage to their land and there were insufficient funds to compensate for all the damage and lost income. Besides, the farmers were very proud of the land and were not eager to let anyone disturb the grass. Furthermore, they were afraid that the discovery of archaeological remains would hinder their agricultural activities in the future. An

\begin{enumerate}
\item The map is, however, still so large that it only has been used during the research itself. The map that accompanies this thesis is printed on a A3-paper size.
\item Four paleogeographical maps of the Oer-IJ area have been made as part of the AKI (Archaeological Knowledge Inventory) of which three belong to the period under study, Lange et al. 2004.
\item Van Leusen et al. 2005, 70.
\item Van Leusen et al. 2005, 70.
\item Van Leusen et al. 2005, 71.
\item Personal communication at the BBO-workshop ‘Archeologische voorspelling en risicobeheersing’ 1-2 march 2006.
\item Van Leusen et al. 2005, 35.
\end{enumerate}
assurance from the provincial authorities that this would not be the case was not accepted. It soon became clear
that even secondary chosen areas were not available for testing.

Therefore the testing of the model should take place within the normal AMZ-archaeology. This was picked up
by the provincial authority who requested that attention should be paid to possible offerings in wet low-lying
parts of the landscape at Uitgeest-Waldijk which was explicated in the Program of Demands (PvE). The
excavation was, however, not close enough to the Oer-IJ system and a broad ditch prevented further research
in that direction.

The excavations at Limmen-de Krocht were taking place during the realisation that a regular test phase would
be impossible. Here a small trench was made in the direction of the main streambed of the Oer-IJ in order
to understand the geology and at the same time look for any evidence of use of the border zone of the Oer-IJ.
Again the border of the Oer-IJ was further of than expected, but at least the remnants of prehistoric peat-
cuttings could be observed (figure 5.3). Two prehistoric wooden stakes were also observed, but the depth of
the trench and the rising water prevented a thorough examination. The area to the (south)west seems to be a
promising location for future research into the wet low-lying parts of the landscape.

Archaeologists (both professional and volunteers) working in the area and familiar with the subject of this

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54 RAAP-PvE regio West-Nederland, Programma van Eisen Opgraving Plangebied Waldijk Gemeente Uitgeest
2005, 8-9.

55 The excavation was performed by the AAC/projectenbureau. At that moment I was part of a team that gave the
field course to students of the University of Amsterdam at Limmen-de Krocht.
thesis have also made contributions by informing me when they knew of a possible locations for offerings.\footnote{Especially, the local AWN-group ‘Oer-IJ’, Wim Bosman and Silke Lange.}

5.4 PREDICTIVE MODELS CONCERNING WET LOW-LYING OFFERING SITES IN THE OER-IJ AREA.

The aim of the predictive model for the Oer-IJ area is to predict the locations of offering sites in the wet low-lying parts of the landscape. First the predictions based on the palaeogeographical maps in combination with cultural rules are given (§ 5.4.1-5.4.5). Followed by a combined map of these predictions (§ 5.4.6) Then the predictions based on the geolandscape map in combination with known sites is given (§ 5.4.7). And finally (§ 5.4.8), some predictions are made that are based on specific archaeological phenomena that should guide research strategies during archaeological excavations where these phenomena are encountered.

5.4.1 ASSUMPTIONS

The assumptions made in the predictive model are the following:

1. Human activities are patterned in various ways and scales.\footnote{Van Leusen 2005, 32.}
   This assumption is applicable to all predictive models. The theoretical background that it is based upon influences the nature of the various ways and scales. Here a dynamic theoretical framework of structuration theory is used in which ‘History is the structuration of events in time and space through the continual interplay of agency and structure: the interconnection of the mundane nature of day-to-day life with institutional forms stretching over immense spans of time and space.’\footnote{Giddens 1995, 362.} Because there is a constant movement between agency and structure this is not a deterministic model as it involves the decisions of actors, but at the same time allows for patterns to exist as the actors manoeuvre within the rules of social life. These rules of social life can be regarded as ‘techniques or generalizable procedures applied in the enactment/reproduction of social practices.’\footnote{Giddens 1995, 21.} It is these social rules that need to be studied so that predictions can be made that can be used in the understanding of past communities and their spatial expression. It is these spatial expressions that point towards the localization of actions in the landscape. Here the term regionalization can be of use as it refers ‘to the zoning of time-space in relation to routinized social practices.’\footnote{Giddens 1995, 119.} In other words, social practice is not just based on what is proper to do but also on where it is proper to act in a certain way.

2. Offerings were not made in salt water.
   On the basis of the known offering sites it is assumed that offerings were not made in salt water.\footnote{See chapter 4 § 4.3.1.} These avoided places are also the waters under tidal influence. This assumption on the avoidance of salt water seems to be strengthened by the broadening of the use of the landscape through time as the amount of salt water in the estuary diminishes. Offering sites appear in new wet low-lying parts of the landscape as soon as the water turns from salt or brackish to fresh. As the location of salt or fresh water changes through time, the predictions are also changing through time. New parts of the landscape are added time after time, while the old areas stay in use.

3. The wet low-lying offering sites were in close distance to settlements and fields.
   The assumption that offering sites were in close distance to settlements and fields is based on the known sites from larger excavations. The fields seem to be situated between the settlement and the offering sites. This is probably due to the relief of the landscape with the settlements at the highest and driest parts, the field at the flanks, and the offering sites in the wet lower parts.\footnote{See chapter 4 § 4.8.} The offering sites remain, however, in sight and easy walking distance of the settlements. Offering sites can be directly next to settlements depending on the local
landscape. When in the fields the star pattern Horse is expressed in pits and/or gullies an offering site can be expected southwest of it.\textsuperscript{63}

4. The wet low-lying offering sites seem to be associated with barrows and embankments. There appears to be an association between wet low-lying offering sites and earthworks such as barrows and especially embankments. This association is not just nearness in space, but the earthworks and offering sites seem to refer to each other.\textsuperscript{64} This can be done either through stake rows or the direction of the embankment. Wet low-lying areas near the earthworks should therefore be expected to contain offerings.

5. Although anything could be considered an offering, there are certain preferences. The diverse character of the different offering sites makes it clear that a broad range of items were considered suitable for offerings. Certain patterns in the artefact distribution do suggest certain preferences when offerings are made.\textsuperscript{65} When these preferred items are encountered it becomes more likely that an offering site is present. These preferred items are: human bone (specific from head, leg and arm), metal artefacts, complete vessels, a selection of wood (from different parts of the landscape), and stones. The likelihood of there being an offering site becomes stronger when these items are recovered from a natural layer.

5.4.2 DATA

The predictions are based on different types of data, such as maps and known archaeological remains. The maps consist of five palaeogeographical maps, a geomorphogenetic map, and the modern topographic maps. The IKAW is too undifferentiated to be able to use it for specific predictions and is therefore not used here. Five palaeogeographical maps are made by Peter Vos and represent different time-slices: 2500, 1500, 1000, 500 BC, and 0. Three of these maps are updated versions of the maps from the AKI.\textsuperscript{66} Two maps – 1500 BC and 500 BC – are newly made as it was felt that the time slices were to far apart. With these new maps every major period is represented. The palaeogeographical maps are made on a map scale of 1:50,000, but due to their general character are printed at a higher map scale, which fits on A4 paper-size.\textsuperscript{67} Predictions for the earlier periods – Late Neolithic to Early Iron Age – are made on the base of these palaeogeographical maps. The predictions for the Middle to Roman Iron Age are made on the basis of the palaeogeographical map in combination with the geomorphogenetic map, newly made by Peter Vos. The geomorphogenetic map reconstructs the formation of the landscape during the Late Iron Age as it is still largely present underneath the topsoil. This map is made on a scale of 1:15,000 in order for the details related to water to become readable and the archaeological remains to stand out clearly.\textsuperscript{68} In relation to costs and benefits it was decided that only the area above the Noordzeekanaal and east of the young dunes is placed on the map. The area south of the Noordzeekanaal is largely built up and would therefore give little extra information in respect of the palaeogeographical maps. The younger dunes are a protected area of natural interest and cover the old landscape with several metres of sand. The predictions made for the earlier periods will be held against the geomorphogenetic map as this will enable to evaluate the possible preservation of the archaeological remains. The modern topographic map of scale 1:25,000 will be used for the same purpose. For the unbuilt areas of the municipal of Castricum an archaeological prediction has been made for the Late and Roman Iron Age.\textsuperscript{69} This prediction focuses on settlements and even points to the near impossibility of predicting offerings and thereby leaves this area of past practice unexamined.\textsuperscript{70} As information on settlements is used for the prediction of offering sites in wet low-lying areas this map will be used only to see if archaeological data is missing from the geolandscape map constructed for this research.

\textsuperscript{63} See chapter 4 § 4.3.2.
\textsuperscript{64} See chapter 4 § 4.4.1.
\textsuperscript{65} See chapter 4 § 4.7.
\textsuperscript{66} Lange et al. 2004, figure 3a-d.
\textsuperscript{67} This enables the maps to be printed on normal pages within the book which reduces the chance of loss. The level of detail allows this size without reducing the information value.
\textsuperscript{68} The map is printed at a A3 paper size.
\textsuperscript{69} Soonius et al. 2005.
\textsuperscript{70} Soonius et al. 2005, 13.
For the characterization of the offering sites in wet low-lying areas the information from chapter 4 is used. As for the earlier periods all the known sites are relatively few and although, excavations give the best information on the type and date of a site, the sites are mostly in areas that are or were under development. Possible offering sites in the vicinity are either destroyed or covered by buildings and roads. Therefore the predictions are made on the basis of the landscape.

For the Late and Roman Iron Age more findspots are known and a more detailed geolandscape map is constructed. To predict the location of offering sites that may still be intact or accessible the less well known findspots have to be used. These are the archaeological findspots known through fieldwalking or core boring. A strong bias to researched fields can not be avoided. The main types of data are the presence of cultural layers, artefacts, or visible remains of the old landscape in the present day landscape. The prediction based on the palaeogeographical map may counter some of these effects. In the future in can be tested whether the predictive map based on a landscape reconstruction without sites gives just as useful and correct predictions as the predictive map based on geology and known findspots.

On the basis of the five assumptions given above, the character of the known offering sites, and the different palaeogeographical maps predictions are made concerning the possible location of offering sites in wet low-lying parts of the landscape during different periods. On the palaeogeographical maps the different areas that are expected to contain offerings in wet low-lying areas are shaded grey. These shades are different for specific predictive elements. The darkness of the shading increases when different predictive elements are found in the same area. The old dune areas are shaded 10 percent grey as these parts of the landscape may contain small low-lying wet areas with possibly offerings. The exact location of these small wet low-lying areas is not known. The peat areas between the coastal barriers have a 10 percent shade as again there are probably offerings but their location is less precise. The edge between dry and wet (fresh water) parts of the landscape are given a 25 percent shading as these areas seem to be favoured through time. And the fresh open water is also given a 25 percent shading as these landscape elements seem to contain more offerings.

5.4.3 LATE NEOLITHIC TO BRONZE AGE (2500-800 BC)

A period of 1700 years may not seem like a high time resolution, but the amount of data available at the moment allows not for a useful partitioning of this period in regard of making predictions on offering sites in wet low-lying areas. From this period there are five known offering sites in wet low-lying parts of the landscape. 41 archaeological findspots have the remains of other activities, such as burial mounds, pits, farmsteads, and fields.71 The findspots are mainly situated on the (former) beach barriers and old dunes.72 No archaeological remains are known from the peat in the eastern part of the Oer-IJ area. In this period the geological developments in the Oer-IJ area are forming the main elements in the landscape. The mouth of the estuary is still very large. In this part of the Oer-IJ area no archaeological remains are to be expected, due to erosion and the absence of activities that leave substantial archaeological traces. As the landscape changes are more extensive than the changes in the archaeological patterns, three palaeogeographical maps were made in order to refine the predictions. For the Neolithic and Bronze Age the offerings are expected to be situated in the wet low-lying areas on or at the edge of the (former) coastal barriers and old dunes (figure 5.4, 5.5 and 5.6).73

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71 Seven findspots have a Late Neolithic date.
72 Except an axe and the recently excavated wooden cirkle at Heiloo-Maalwater, both situated in the beach plain.
73 See § 4.3.1.
Figure 5.4 Prediction of probable locations of offering sites around 2500 BC.
Figure 5.5 Prediction of probable locations of offering sites around 1500 BC.
Figure 5.6 Prediction of probable locations of offering sites around 1000 BC.
5.4.4 EARLY AND MIDDLE IRON AGE (800-250 BC)

Six offering sites in wet low-lying areas are known from this period. 80 archaeological findspots with the remains of other activities are dated to the Early Iron Age and/or Middle Iron Age. These archaeological remains are mainly farmsteads, fields and pits. Only one burial is known from this period. The findspots are present in all parts of the Oer-IJ area, except the tidal area, but the information for the northern part is very limited. Due to the large time gap between the existing palaeogeographical maps within a period of geological important formations, a new palaeogeographical map was made for the period dating around 500 BC.

The Early Iron Age has the least known offerings in wet-low-lying contexts. The two sites ascribed to this period are non-typical as they are situated in the reed peat area east of the Oer-IJ. They are both incidental finds of which one – Assendelft-42 – is probably younger. Offerings in parts of the landscape that came into use would, however, fit the pattern and can be expected in the peat east of the Oer-IJ as this area is taken into extensive use for the first time. As other elements of the ritual repertoire, such as depositions in pits (sometimes forming star patterns) and house offerings, are known from the Oer-IJ area, it is unlikely that depositions in wet low-lying contexts did not occur. Unfortunately a possible location of such an offering in connection with a star pattern was inaccessible for research in Velserbroek-Hofgeest. Offerings are expected in the wet low-lying areas on or at the edge of the (former) coastal barriers and old dunes as a continuation of this practice can be postulated for the Early Iron Age as this practice continues in the later periods.

During the Middle Iron Age the smaller creeks start to carry fresh water and slowly silt up. At that time creeks begin to get used for offerings. These depositions precede the use of these places as fields and habitation. Offerings in creeks in the Middle Iron Age are therefore at the moment best predicted by later use at the same spot. As the palaeogeographical map shows the active marine phase only the creeks away from the mudflats have been given a grey shading. The palaeogeographical map of 0 can in this case be used additionally.

During the Middle Iron Age offerings are also made in the wet low-lying areas on the old dunes and peat next to the old dunes. In the tidal area between the former beach barrier of Uitgeest and the coastal dunes no offering sites of Early and Middle Iron Age date are expected (figure 5.7).

5.4.5 LATE IRON AGE AND ROMAN IRON AGE (250 BC-AD 450)

As it is often difficult to distinguish Late Iron Age from Roman Iron Age finds, when there are no imported artefacts, the predictions for these periods are taken together. From this period 13 offering sites are known. There are 446 archaeological findspots with the remains of other activities of which 146 and 391 have a Late Iron Age and/or Roman Iron Age date, respectively. These other activities mainly consist of houses, fields, gullies, pits and some burials. Of these 446 archaeological findspots 56 and 235 findspots, dated to the Late Iron Age and Roman Iron Age respectively, consist only of sherd chains. These sherd chains were mainly found during field walking and/or coring. The 446 findspots are situated all over the Oer-IJ area.

The Late Iron Age offerings follow the same pattern as the Middle Iron Age sites and therefore a similar prediction can be made of offerings in creeks before permanent use of the locality. However, the area between the former coastal barrier of Uitgeest and the coastal dunes is now probably in use. The (remnants of) small creeks running through this area also have the potential of containing offerings. This becomes even more probable when the mouth of the estuary is blocked off from the sea and water conditions turn to fresh water during the final part of the Late Iron Age.

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74 Of the 81 findspots 63 contain Early Iron Age traces and/or 61 contain Middle Iron Age traces.
75 No large scale excavations concerning this period have taken place at the municipals Akersloot, Castricum, Heiloo and Limmen.
76 Lange et al. 2004, the paleogeographical maps consist of figure 3b 1000 BC and figure 3c AD 100.
77 See § 3.5.2.
78 Therkorn 2004, 137.
79 Limmen-1 could date to the Early Iron Age.
80 See § 4.3.2.
Figure 5.7 Prediction of probable locations of offering sites around 500 BC.
CHAPTER 5

After the tidal influence has completely vanished and the remnants of the Oer-IJ carry fresh water, in the border zones of these wet areas offerings are placed. The offerings are close to fields and settlements. In the area between settlements and the border zone of the remnants of the Oer-IJ offerings dated to the Roman Iron Age can be expected. The creeks are also used for offerings and in the Roman Iron Age the creeks in the peat area towards the east are used as well. Offerings in creeks can be expected for the entire region in the Roman Iron Age (figure 5.8).

Some of the larger offering sites that are used in the Roman Iron Age have a continuation of use in the Early Medieval Period. These long-used offering sites seem to be a stable feature in the less well-known transition towards the Early Medieval Period. Archaeological findspots with both Roman Iron Age and Early Medieval material in the vicinity of water may therefore indicate the possible presence of an offering site.

5.4.6 MULTI-PERIOD PREDICTION FOR THE OER-IJ AREA

The predictions made above per time period can be combined into one map that is less precise, but is easier to interpret for the user of these kinds of maps. Figure 5.9 shows the combined predictive map on which the colours indicate a specific type of prediction. Here the different coloured areas will be discussed and it will become clear that the colours do not represent a scale of less to more probability of encountering an offering site as on most predictive maps, but the colours stand for specific expectations.

Green areas are expected to contain small wet low-lying areas due to the morphology with small shifting dunes and valleys that are not exactly located yet. In these small wet areas offerings from all periods can be expected.

Dark blue areas are known wet areas near or between the old dunes and former coastal barriers. In these areas offering sites from all periods can be expected.

Light blue areas are wet areas with a greater circumference, but still between dry land. Offering sites can be expected from all periods, but the size of the area reduces the chance of finding an offering site somewhat. The borders are the most likely areas, but they shift through time.

Light purple areas border the Oer-IJ and offerings are expected to be present from the end of the Late Iron Age onward.

Purple areas represent the Oer-IJ. Offering sites can be expected from the end of the Late Iron Age onward.

Bright Pink areas represent creeks and creek systems. From the Middle Iron Age onward offering sites can be expected here, especially when other uses of specific places are known.

Red areas are creeks in peaty areas. Here offering sites can be expected from the Middle Iron Age onward. This map should be used as an initial indication of where offering sites can be expected. For specific areas the separate maps should be used to give a more detailed prediction. The large peat area in the east of the Oer-IJ is not included in the predictions because of its relative scant information on offering sites. This does, however, not mean that there are no offering sites present. The manner of prediction is just not sufficient to make valid assumptions.

5.4.7 GEOLANDSCAPE AND SITE BASED PREDICTION FOR THE OER-IJ AREA

Predictions made for the geolandscape map have a different character than the predictions for the palaeogeographical maps. This map shows not the reconstructed palaeolandscapes but the geological elements that are still present directly underneath the top layer of soil. The level of detail on the geolandscape map is much higher as the map is constructed at a scale of 1:15,000. The predictions on the geolandscape map are based on known findspots. All known findspots are put on the map with a site number. Appendix 3 shows the corresponding site name, general character of the site, period of use and coordinates. The general character of the site is defined as only sherds, archaeological elements other than sherds (but may include sherds), and offering sites. When the findspot is defined in any other way than just pottery, like an arable layer or sherds and wood, a larger black open circle is placed around the site number.

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81 See § 4.3.2.
82 For example, Broekpolder-1 and Uitgeest-Dorregeest.

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Figure 5.8 Prediction of probable locations of offering sites around 0.
Figure 5.9 Combined predictions of offering sites within the Oer-IJ area. The colors are explained in the text.
This circle has a diameter of 250 m. When this black open circle coincides with open water the circle is shaded 20 percent grey. Where more circles overlap the darkness increases just as the probability increases that an offering site in a wet low-lying area is present (fold out map 1). When under pressure by new developments these dark circled areas should be investigated with the aim to establish the existence of an offering site and, if present, its subsequent conservation or excavation.

5.4.8 NON-PERIOD SPECIFIC AND NON-MAP BASED PREDICTIONS

Some predictions in the Oer-IJ area are not so-much linked to a specific period, but seem to indicate cultural traditions within the Oer-IJ area. These predictions are associated with specific archaeological phenomena. Although sites with these phenomena can be plotted on a map, the low number of sites does not allow for a prediction to be made. Therefore no predictive map has been constructed. When these phenomena are recognised during archaeological excavations it should guide the research as possible offering sites can be expected in the vicinity. Two of these cultural traditions come to the fore.

First, there appears to be a relation between earthworks, such as mounds and small embankments, and offerings in wet low-lying areas. When these earthworks are discovered offerings can be expected in the vicinity, especially in the low areas. If there are new building activities in IJmuiden-Rijn/Vechtstraat, this would be a good place to test this hypothesis. Here a possible small embankment led to a low-lying peaty area in the south (figure 5.10). The low-lying peaty area lies, however, under houses but at a considerable depth.

Second, there appears to be a connection between pits forming star constellations and offerings in wet low-lying areas. Especially, the star constellation horse appears to have a spatial relation with the offerings in wet low-lying areas. When the constellation horse is found a wet low-lying offering site can be expected towards the southwest.

Figure 5.10 Remnants of a possible embankment at IJmuiden-Rijn/Vechtstraat.

5.5 POLICY AND PREDICTION

Not only many changes have taken place within archaeology over the last decade, but also the location of political responsibilities has shifted. A process of decentralization is taking place, which places much of the
responsibilities with local governments at the level of the municipal. The policy at the lower levels still has to fit into the higher levels, but there is a considerable freedom of policy at the local level. The changes are taken place rapidly and the BBO-project Oer-IJ has focussed mainly at the provincial level as this was the most important player at that moment. The provincial policy concerning cultural heritage management is still a large influence and takes responsibility, especially in the conservation issues as it is developing provincial archaeological monuments and the integration of cultural heritage management in the environmental planning process. In the future, however, most direct decisions concerning archaeological heritage management of specific locations will be taken at the local level. The provincial government will mainly intervene when at the municipal level no policy for heritage management is developed. Some municipalities do postpone very specific policies on archaeology until the responsibilities are better defined and the Convention of Valletta is implemented and integrated into the Dutch law system. Work is, however, carried out in the spirit of the Belvedere policy. Most of the municipalities in the Oer-IJ area realise they have to deal with the new responsibility and take an active approach. The approaches range from special cultural heritage committees, municipal archaeologists, archaeological advisors, cultural heritage policies, and archaeological predictive modelling. In the policies on heritage management the importance of the maintenance or developing of the characteristics and the cultural-historic identity of an area is seen as important. In this way the process of uniformisation of the landscape can be reduced and local identities can be enhanced. It is felt that the quality of living will be better when people are aware of the history of the area they live in. For the historic period often specific buildings or infrastructural elements are specified as characteristic for the area and of cultural-historic importance. This is much more difficult for the less visible pre- and protohistoric period and usually not a characteristic, but the importance of knowledge of the habitational development of the area is mentioned. However, the historic built-up areas on the former coastal barriers are projected further back into prehistory even though there is enough evidence to suggest otherwise for the Iron Age and as suggested in predictions made for the area. This discrepancy is probably due to the invisibility of prehistoric remains in combination with the absence of large excavations in the area between the former coastal barriers. Furthermore, the municipalities are just starting with an active policy on cultural heritage management that includes archaeology. It will take some getting used to for working with the invisible and predictions, especially when the characteristics of a region are in question.

This thesis does not pretend to solve the question of identity and characterization of the Oer-IJ region. This has to be dealt with at the local governmental level of both municipal and province. The emphasis on settlements in the predictive models put forward so far limits the choice of local governments to placing an emphasis on the habitational history of their region. Other aspects of life are less prominent in these models, although these other aspects, such as ritual and landscape perception may give more flavour to the picture presented of the pre- and protohistoric people living in the region. This thesis predominantly deals with offerings in wet low-lying areas from the pre- and protohistoric period and can therefore only deal with this part of the characterization of the area. In the next section examples are given of how a connection can be made between present day and prehistoric practices and places.

5.5.1 EXAMPLE 1: THREE CHRISTIAN HOLY WELLS

From a cultural-religious perspective the Oer-IJ area is nowadays special as it contains three holy wells within a relatively small region one in Egmond-Binnen and two in Heiloo (figure 5.11).

87 Beleidsnota cultuurhistorie gemeente Castricum 2004, 25.
88 For example, the policy document ‘Beverwijk bruist 2005-2008’, 14-15. Or the absence of a local policy in the municipal Uitgeest.
89 For example ‘Beleidsnota cultuurhistorie gemeente Castricum 2004, 13 and Heiloo, nota cultuurhistorische waarde 2001, 9.
90 For example ‘Beleidsnota cultuurhistorie gemeente Castricum 2004, 18 and Heiloo, nota cultuurhistorische waarde 2001, 4.
93 For example, IKAW and Soonius et al. 2005.
Figure 5.11 Three Christian holy wells and their position in relation to the landscape as reconstructed for AD 1000. Left 'Adelbertus-put', top-right 'Willibrordus-put', and bottom-right 'Runxput'.
These are respectively the ‘Adelbertus-put’, the ‘Willibrordus-put’, and the ‘Runxput’ locally better known as the ‘small well at Heiloo’. The wells all date back to the (early) medieval period. The ‘Runxput’ is nowadays the most important well, with regional, national and international pilgrimages taking place regularly.\textsuperscript{94} Although it is a catholic holy well in recent times non-catholics, tourists and other visitors looking for spiritual places have come to visit the ‘Runxput’. Visits by non-catholics has been a trait of the ‘Runxput’ for a long time. For example in 1713, after the place has become somewhat of a ruin the well suddenly has a renewed flow of water. At that time there is an outbreak of rinderpest and both catholic and protestant farmers from Noord-Holland visit the well, as the water is still thought to have healing properties.\textsuperscript{95} There is no direct link between these three holy wells and the (pre)historic offerings in wet low-lying places as discussed in chapter 4. The regional tradition of placing offerings in watery places was probably still practiced when the first christian holy wells were taken into use.\textsuperscript{96} The christian wells have no evidence of offerings made into the water and are used in a different way. The water from at least the ‘Adelbertus-put’ and ‘Runxput’ are said to have healing properties and people drink the water (figure 5.12).\textsuperscript{97} The official catholic church view regarding the ‘Runxput’ is, however, that not the water in itself has healing properties, but it is the combination of water and faith in god.\textsuperscript{98} The importance of water within the religious worldview of the people of the Oer-IJ area in different forms can, however, be assumed for a long time.

\textsuperscript{94} Thiers 2005, chapter 6.
\textsuperscript{95} Frijhoff 1986, 91.
\textsuperscript{96} For example, the last phase of use of Broekpolder-1 is dated to the end of the early medieval period.
\textsuperscript{97} Mostert 2002, 179, and Thiers 2005, 183.
\textsuperscript{98} Thiers 2005, 182-183.
visits, pilgrimages and processions that are made to the wells have made them into focal points in the landscape with other religious buildings in the direct vicinity. The train platform in Heiloo next to the ‘Runxput’ and the ‘procession’ road between the ‘Adelbertusput’ and the abbey at Egmond-Binnen are physical manifestations of the people that have come to these places. Especially for the pilgrims not only the place itself, but also the route and journey leading to the wells are of importance. With anticipation growing as the well comes in close range.

5.5.2 EXAMPLE 2: VINEX LOCATION BROEKPOOLDER, PROJECT ‘WATEROFFERS’

At the Vinex location Broekpolder there is a modern interpretation of the proto-historic offering sites created in the ‘offersingel’ a modern stretch of water. Here they have tried to link the importance of star constellations in the ordering of the landscape with offerings in water. They have done this by placing led lights in the shape of four star constellations at islands in the water that light up during the night (figure 5.13). The islands are at the same time indicators for the water level. The new inhabitants of the Broekpolder have all received a white ‘offerstone’ with a spiral design on it that is inspired by a bronze ornament found during excavation of Broekpolder-1. From a scientific perspective some remarks can be made. For example, the star constellation chosen by the artists were not the ones that were discovered during excavations in the Oer-IJ region nor were the star constellations situated in water and a characteristic of the stones was their unworked appearance. Archaeologists should, however not expect artists to reproduce an archaeological view. New focal points are created within a newly developed suburban area that refer to a past that is no longer visible in the landscape. It would be more interesting to see if the people living in the area are interested in these artworks and start to ask questions about their meaning or if local people see the area and the artworks different when they know about the background of these works. It is, however, important that at those moments besides the artistic interpretation also the archaeological narrative is brought to the front; otherwise people will be given the wrong idea about the pre- and protohistoric people and their ordering of the landscape.

Figure 5.13 Island representing ‘Water snake’ at the ‘vinex’-location Broekpolder. The grassy area on the left is the edge of the archaeological monument.

99 The art project ‘Wateroffers’ of Paul de Kort and Marcel Eekhout.
5.5.3 CONCLUDING REMARKS

All the local policies indicated that the characterization and identity of the region is of utmost importance when creating cultural-historical policies. For the pre- and protohistoric period these characterizations are less well defined, especially due to a lack of immediate visibility. Habitation history, although important, is in this case not a very appealing concept. Attention to the ritual use of the landscape can evoke the idea that the landscape people live in is more than a utilitarian background. The examples above show that although the pre- and protohistoric offering sites in wet low-lying areas may be near invisible, connections can be made with places in the present-day landscape. Whether these are historic places, such as the wells or newly created spaces, such as the ‘offersingel’ does not diminish the idea that both kind of places can make people aware of a specific aspect of their regional cultural history. It creates an image of the people from the past which goes beyond the point of poor farmers who were just managing to get by and who only focussed on producing food.

The excellent preservation of archaeological remains in the Oer-IJ region is one of the reasons that these rituals from the past could be reconstructed. And present-day inhabitants could be made aware of the quality of the archaeology on which they live. When new policies are developed or decisions are being made concerning archaeological heritage management it may be useful to think more about the characterization of the region also when the early periods are considered. Elements such as offering sites may be more difficult to detect or predict but this is not impossible. The detection of offering sites asks for a new approach in the early stages of research that may be a bit more costly (e.g. trenching instead of core boring) but the possible results can appeal to a wider public. When making this choice reference can be made to the elements visible in the landscape, but also to the more difficult to detect remains of old creeks and the Oer-IJ itself. The predictions made in this thesis can be used as a guideline and through testing the model on the questions asked and assumptions made in this chapter our knowledge of the ritual practices associated with offerings in water can be enlarged and the present-day perception of the landscape can be enhanced.