4 No country for men

Searching for late medieval submerged settlements in the northeastern Zuyder Zee area, the Netherlands

Yftinus T. van Popta*

Abstract
This article focuses on the maritime cultural landscape of the former Zuyder Zee (ad 1170–1932) in the central part of the Netherlands. Since the large-scale reclamations from the sea (1932–1968), many archaeological remains have been discovered, revealing a submerged and eroded late medieval maritime culture, represented by lost islands, drowned settlements, cultivated lands and shipwrecks. Especially the northeastern part of the region, known today as the Noordoostpolder, is testimony to the battles of the Dutch against the water. By examining and combining different datasets from the region, it is possible to give a new interpretation of this late medieval maritime cultural landscape. Spatial distribution and densities of late medieval archaeological remains are analysed and compared to historical data and remote sensing results. This interdisciplinary approach has led to the discovery of the remains of the drowned settlement of Fenehuysen.

Keywords
Submerged settlements, Late Middle Ages, Zuyder Zee, maritime cultural landscape, Fenehuysen, the Netherlands.

Published
2019, European Journal of Archaeology 22.4: 567-587**

* I would like to thank prof. Theo Spek for his supervision and dr. Bas van Geel, dr. Stijn Arnoldussen and an anonymous reviewer for their insightful comments. I am also grateful to Robert McKenzie, Sander Tiebackx, and Harold Broekmans for their support. Finally, I would like to thank the students of the University of Groningen who participated in the Kuinderbos excavation.

** Chapter 4 is a minor revision of this article. Reproduced with permission of the EJA and Cambridge University Press.
Introduction

Up to the early 20th century, the central part of the Netherlands was dominated by the hazardous Zuyder Zee (Southern Sea), a large inlet of the North Sea that reached as far inland as Amsterdam. It served as a transport zone, fishing ground and battlefield (Fig. 4.1). For centuries, the inhabitants of this maritime region were plagued by rapid floods, storm surges and consequential land loss (Van den Biggelaar et al. 2014; Vos 2015: Chapter 2). The Zuyder Zee also brought much prosperity to the Netherlands, as a traffic junction connecting different regions (transport landscape) and as a fishing ground supplying fish for food and trade (resource landscape; Westerdahl 2013; Van Holk 2017a; Chapter 3). At the beginning of the 20th century, the Dutch State decided to build a large dam (Afsluitdijk) that would close off the Zuyder Zee from the North Sea and Wadden Sea. The construction was completed in 1932, and soon after parts of the former Zuyder Zee were reclaimed, cultivated, and populated. This led to the creation of four major polders: Wieringermeer, Noordoostpolder, Eastern Flevoland, and Southern Flevoland, of which the latter three constitute the province of Flevoland. The reclamations dramatically changed the nature and focus of the region, from maritime to terrestrial and from fishing to agriculture (Fig. 4.2). The northeastern part of the former Zuyder Zee, now known as the Noordoostpolder and the study area presented here, clearly illustrates these changes:

the islands and coastal settlements became part of the mainland, leading to a substantial loss of the region’s maritime identity (Geurts 2005: 263, 283).

A close examination of the present-day landscape of the Noordoostpolder shows that it is still possible to gain insights into the maritime past of the region. For example, the former island of Schokland in the southern part of the region is now completely surrounded by land, being an island on dry ground. Schokland was the home of the Schokker community for many centuries, and in its heyday the island was inhabited by more than 600 people who lived on three large artificial mounds (Geurts 2005; Van Hezel & Pol 2008; Van Popta & Aalbersberg 2016). The island suffered from many floods that reduced its size and number of inhabitants. For centuries, the Dutch province of Overijssel spent much money on the island to maintain the coastal defences and support its inhabitants. In the second half of the 19th century, it was decided to evacuate the island as the inhabitants were no longer able to support themselves (Van Hezel & Pol 2008: 201). Today, the island is uninhabited, and only the lighthouse, church, an old quay, and several small fisherman’s cottages remind visitors of the once densely populated mounds.

The example of Schokland is one of the most obvious examples of ‘experiencing the maritime past’ of the northeastern Zuyder Zee region. Other appropriate locations in the region are the past maritime cultural centres (see Westerdahl 2013: 738), Urk island and sea-
ports such as Kuinre, Vollenhove, or Blokzijl along the former eastern shore of the Zuyder Zee. These past ‘maritime cultural centres’ are the ‘tip of the iceberg,’ being easily accessible physical evidence of maritime culture. The lower and larger part of the ‘iceberg’ consists of evidence including pottery scatters, field boundaries, or remains of dikes, and of historical maps and charters, place names, folklore, and oral history. The objective of the present article, is to recognize and characterize the submerged and eroded cultural remains, their locations, and their visibility in other sources. The discovery of remains of the drowned late medieval settlement of Fenehuysen (Fene = veen = peat, and huysen = huizen = houses) constitutes the main result.

**Research area: from the Zuyder Zee to the Noordoostpolder**

The Noordoostpolder comprises the northeastern part of the Zuyder Zee region: a large tidal lagoon of the North Sea surrounded by inhabited peatlands. In Roman times, the region was described by Pomponius Mela (Chorographia III, 24) as an area of peatlands with several lakes: Lacus Flevo. During this period, no marine influence affected the region. In the Early Middle Ages, the name of the region changed to Almere (all lakes), referring to even larger bodies of fresh water in the region (see Vos 2015; Van Zijverden 2017). Human interference in the natural landscape, in the form of cultivation and peat reclamation causing subsidence through oxidation and erosion of the peat, is considered the main reason for the landscape changes (Vos 2015: 67). Massive floods in the 12th and 13th century AD eventually breached the remaining peat barrier between North Holland and Frisia that separated the Almere from the Wadden Sea and Vlie, resulting in the Zuyder Zee (Fig. 4.3; e.g. Cohen et al. 2009; Vos 2015: 324; see also Chapter 2). As a consequence, the North Sea started eroding the peatland in the area more often and over larger areas than before (Van den Biggelaar et al. 2014; Vos 2015; Pierik et al. 2016; Chapter 2).

It is commonly accepted that the Zuyder Zee existed since approximately AD 1170 (the year of the cata-
When the Shore becomes the Sea

When the Shore becomes the Sea

strophic All Saints’ Flood) and up to 1932 (building of the Afsluitdijk), but its appearance changed over time. Parts of the peatlands that were mentioned by Mela in the 1st century AD still existed in the Middle Ages. The largest surfaces could be found in the northeastern Zuyder Zee region (Van Popta 2016). Recent research has shown that large parts of these peatlands were cultivated in the Middle Ages, but that people were driven inland by the water (see Chapter 2). Habitation was certainly possible on the island of Urk (a Pleistocene boulder clay outcrop), but probably also in other parts of the research area (Fig. 4.4). However, heavy storm surges in the 13th and 14th centuries flooded and buried most of the medieval peatlands, leaving only small parts of Urk and Schokland exposed. The size of the Zuyder Zee remained more or less stable from the 17th century onwards (also because of the many dikes that were constructed along the shore) until the construction of the Afsluitdijk in 1932. Large-scale reclamations then transformed the eastern part of the sea into land, and thus the province of Flevoland was created.

Approach

The maritime cultural landscape

The analysis of submerged late medieval settlements in the Noordoostpolder region fits the concept of the maritime cultural landscape, as introduced by Scandinavian maritime archaeologist Christer Westerdahl in the late 1980s and early 1990s (Westerdahl 1992; 2013; Duncan 2006). It was conceptualized to bridge the boundaries between the terrestrial and maritime counterparts and relate maritime culture to both. At first, the concept focused only on the physical aspects of maritime culture like shipwrecks, harbours and related structures (Westerdahl 1978). Soon, it was realized that the maritime cultural landscape should be treated as a more holistic concept, also including cognitive data under the following definition: “The whole network of sail-
The notion of a maritime cultural landscape had a deep impact on maritime archaeology worldwide, as attested by numerous studies that followed in its footsteps. However, as Duncan (2006) demonstrates, many studies claim to study the maritime cultural landscape while in fact they only address part of it (in many cases the physical remains), making them archaeological landscape studies rather than maritime cultural landscape studies. Furthermore, it is important to keep in mind that the datasets used are analysed from a modern point of view. Past perceptions may differ: landscapes are multivalent, and perceptions depend on perspective and personal and communal experience (Ingold 1993; Westerdahl 2004; Duncan 2006; see also Chapter 3).

**Materials**

In this article, datasets from several disciplines (archaeology, landscape history and (palaeo)geography) are combined to retrieve the locations of late medieval submerged settlements. The most important dataset is the Medieval Settlement Database of the Noordoostpolder (MSD; Open Access publication): it contains an overview of all late medieval archaeological objects found in the research area, primarily thousands of pottery sherds, bricks, roof tiles, and animal bones. The data are compiled from the Dutch National Archaeological Database (ARCHIS), the archaeological repository of the province of Flevoland, archaeological distribution maps, and relevant archaeological literature such as the archaeological series ‘Quarterly updates on the Zuyder Zee constructions’ (Ministerie van Verkeer en Waterstaat, 1920–1976). The latter source provides an overview of the earliest archaeological finds in the region encountered during the reclamation works. The precise number of late medieval archaeological objects in the entire region is unknown, as some primary sources do not mention exact numbers. The distribution map made by the archaeologist Van der Heide, drawn in the 1950s, and the oldest distribution map of the region, illustrate late medieval high-density areas, but lack quantities of objects. Furthermore, only part of the ARCHIS database contains exact numbers of archaeological finds; in many cases, no quantitative information is given. It is known that many archaeological sites contain hundreds of late medieval objects and that several archaeological sites contain over 2000 objects (lots NP 14

![Figure 4.4. Reconstruction of the northeastern Zuyder Zee region in medieval times (c. AD 1100). Dark gray represents land (light gray represents submerged land), dotted areas represent traces of habitation, white represents water. 1: Fenehuysen I; 2: Fenehuysen II; 3: Schokland; 4: Urk, 5: Kuinre.](image-url)
and NP 23, based on records in the repository of the province of Flevoland). It is expected that many other archaeological finds have never been recorded because (1) they were found by land owners who simply threw them away, (2) they were considered ‘archaeological noise’ (see below), or (3) they were found in the early days of archaeological research in the Noordoostpolder when a recording system had not yet been developed. In addition, hundreds of archaeological objects are found yearly by amateur archaeologists who search the arable fields after ploughing, indicating that late medieval remains are still present in the soil. To summarize, tens of thousands of late medieval objects have been discovered in the Noordoostpolder and there are many more objects preserved in the former seabed.

Several historical charters were also used, including a copy of a 13th-century charter of the St Odulphus monastery near Stavoren (province of Frisia). This charter describes the possessions of the monastery (chapels and goods) in a region that encompasses the area of study (Mol & Van Vliet 1998; Mol 2011). Several 16th- and 17th-century historical maps (e.g. one of the oldest and quite accurate map of the entire Zuyder Zee region made by Christiaan Sgroten in 1573) provided further evidence about the final stages of land erosion and settlement within the research area (Figs. 4.3 and 4.4). One should, however, keep in mind that these maps depict the research area after the submergence of many late medieval settlements. Finally, modern remote sensing datasets including (historical) aerial photographs, Digital Elevation Models, and satellite images were analysed for archaeological traces such as historic dikes, ditches and mounds.

Method: Localizing and characterizing submerged settlements

The tens of thousands of late medieval objects in the MSD indicate human presence in the Noordoostpolder region, but in a number of cases these have been misjudged to just represent “noise” or “ships’ waste” (see e.g. Teekens & Spoelstra 2009). This meant that late medieval settlement areas remained unrecognized, and as a consequence areas with abundant late medieval archaeological findings in the Noordoostpolder currently lack a protected status. To establish a listing of such sites, pinpointing their location and ranking them so that decisions on protected status and prevention of further damage could be made, the current project determined that several criteria must be met. To label a late medieval ‘settlement area’, first, it has to contain a certain number of objects. It is assumed that most of the archaeological objects originally were contained in common late medieval settlement traces such as ditches, wells and pits that were later on disturbed by marine erosion and ploughing. Nevertheless, all isolated, single objects found in the study area are disregarded: they cannot be interpreted as settlement remains because the once inhabited lands have been highly disturbed by marine erosion, making it likely that small archaeological objects were transported and redeposited. Even though high numbers Second, the number of archaeological objects from a potential settlement site has to be significantly higher (say, factor 10) than the number of objects in the surrounding area. In other words, the site must be visible as a high-density area on an archaeological distribution map. Third, the composition of the archaeological objects representing a submerged settlement should be diverse and not limited to just pottery. There should be a combination of sherds, animal bones, and preferably bricks and/or roof tiles. Especially encountering bricks and roof tiles should be considered a strong indicator of former buildings. It is assumed that regular late medieval houses in the research area were made of wood, and that important buildings such as a church or chapel were mainly constructed from bricks (IJssel and Zuyder Zee clay) and occasionally natural stone (Eifel tufa).

This three-step-methodology led to the creation of a map that indicates the presence of all archaeologically recorded late medieval settlement areas (see below). The settlement areas on this map were compared to historical sources (such as charters and maps) that provide information on their existence and location. Furthermore, remote sensing techniques were applied to possible site locations to document physical remains, and finally an archaeological excavation was conducted at one settlement location with clear archaeological and historical traces.

Results: submerged settlements

Rediscovered settlement locations

In order to identify the location of late medieval submerged settlements, all registered late medieval archaeological findspots in the Noordoostpolder with a minimum number of six objects (therefore excluding isolated finds) were selected from the MSD. The density of the archaeological objects from the MSD was then analysed in ArcGIS, using Kernel Density and Point Density to highlight areas with a high findspot density (Fig. 4.5). Most of the archaeological findspots contain at least some late medieval pottery, typically late medieval wares like Globular pottery, Pingsdorf ware, Paffrath pottery, Andenne ware and Proto-stoneware (Bartels 2011). The majority of these sherds date between the 12th and 14th century, which implies that the settlements were built from AD 1100 onwards and were abandoned in the 14th century (though a more thorough study of these dates would be desirable). As said, it is
Figure 4.5. Combined archaeological density and distribution map, based on the content of the MSD database.

Figure 4.6. Distribution map of archaeological finds, only showing sites that contain at least two object categories.
the combination of materials that provides the strongest indication of the presence of a late medieval settlement. Therefore, an overview was made of the sites that contain at least two object categories, removing all sites that contain only one object category (Fig. 4.6).

There are seven potential settlement clusters that meet the criteria of a high-density area with a varied composition of archaeological material (see Fig. 4.6). Three of these areas were well-known before this study: they are the islands of Urk (1) and Schokland (2), and the former coastal town of Kuinre (3). Note that Urk is underrepresented in Figure 4.5 as the location of the late medieval settlement is expected to have been further to the west: this part of the former island is still submerged and therefore lacks detailed archaeological data. Four settlement areas in the research area represent previously unknown locations of late medieval settlements. Two of them (4 and 5) are located in the direct vicinity of Kuinre, while the other two are to the north of Urk and Schokland (6 and 7).

**St. Odulphus monastery Charter**

For attaching medieval historical names to the archaeologically rediscovered settlement locations, a copy of the 13th-century St. Odulphus monastery charter is of great importance, as it mentions the names of almost 30 chapels and goods (settlements) in a clear geographical order (Fig. 4.7). Many of these names refer to still existing settlements, except for Nagele, Marcnesse and Fenehuysen, which should be located within the study area according to the geographical order. The charter does not mention the exact location of these settlements, hence the oldest historical maps of the study area needed to be checked. The name Fenehuysen, meaning ‘houses on peat’, appears on several historical maps of the Zuyder Zee region (the oldest dates to 1573). The settlement is shown in these maps along the coast of the Zuyder Zee, to the north-west of Kuinre. This location corresponds to archaeological settlement area 5. Interestingly, a 17th-century map mentions the name Veenhuijsen (a corruption of Fenehuysen) twice: one location corresponds to settlement area 5 along the coast, the second is written on the waters south of Kuinre. Above this name, there is a small icon of a building (probably a church tower) sticking out of the water. It seems that the map maker intentionally wanted to illustrate a submerged settlement, but the question remains whether the depiction and toponym are correct. From an archaeological point-of-view, the depicted location corresponds closely to settlement area 4, lying on the south-eastern tip of a large peatland peninsula in the northeastern part of the research area. Due to intensive marine erosion, modern ploughing, and peat compaction, no in situ physical evidence is expected on the present-day location of the site. Based on pottery finds, it is estimated that this settlement submerged before AD 1400 and that its inhabitants probably moved further inland. So, the location of the submerged church tower (suggesting a drowned settlement) on the historical map is definitely correct. The question remains whether the toponym ‘Fenehuysen’ is also correct. If so, the location would represent a former location of Fenehuysen; to keep things clear, this location is referred to as Fenehuysen I — the location along the coast to the northwest of Kuinre (area 5) is referred to as Fenehuysen II. The names Nagele and Marcnesse
are not mentioned on any of the historical maps, but it is possible that they belong to settlement areas north of Urk and Schokland (areas 6 and 7).

Further examination of the four unknown settlement areas through the analysis of remote sensing datasets (aerial photographs, satellite images, and LiDAR data) did not reveal new evidence for three locations (4, 6, and 7). Extensive ploughing has levelled the former seabed and thoroughly disturbed the archaeological remains, leaving only dense scatters of archaeological objects on the surface in these areas. However, settlement area 5, that of Fenehuysen II, had been turned into forest directly after the reclamations, leaving the former seabed largely intact. Therefore, this settlement area was considered most suitable for further in-depth research.

Finding Fenehuysen II within area 5: interdisciplinary evidence

The accuracy of the location Fenehuysen II (area 5) can be further improved because it is depicted on several 16th-century maps near the northeastern shore of the Zuyder Zee in an area that is nowadays covered by the Kuinre Forest. In the MSD, no clear concentrations of late medieval archaeological objects are known from the forested parcels, but this could also be the result of limited soil disturbance since the reclamations compared to the rest of the Noordoostpolder. Other datasets were consulted for evidence of medieval habitation and land cultivation. The first category of evidence came from the analysis of aerial photographs. The oldest consulted were made by the Royal Air Force (RAF) during the Second World War; they show the area after the reclamations but before forestation. Some northwest-southeast oriented linear discolorations are visible on these photographs, stretching along a part of the eastern shore of the Zuyder Zee that includes settlement area 5. More recent aerial photographs did not add to this, as they only depict the treetops of the forest. But more advanced remote sensing methods allow us to create Digital Elevation Models (DEMs) of the forest soil by using LiDAR (Airborne Light Detection and Ranging; Davis 2008). Detailed LiDAR footage of the Kuinre Forest soil not only confirmed the presence of the linear structures that were spotted on the aerial photographs of the RAF but also revealed far more of these structures on the forest soil, which modern aerial photographs and satellite images could not detect.

Further analysis of the LiDAR data revealed that one particular area of the forest contains a dense network of linear and rectangular structures with a slightly higher elevation than the surroundings (a difference of c. 30–50
cm in height). These traces had not been noticed before and were therefore of interest for further archaeological research (Fig. 4.8). What exactly do they represent, and would an archaeological excavation reveal the remains of Fenehuyse II?

**Archaeological excavation**

In May and June 2017, archaeological investigations by the University of Groningen were conducted in the area with dense linear structures in the Kuinre Forest (Van Popta 2019b). The excavation consisted of eight test trenches, varying in length from 2 to 8 m, dug through a selection of linear structures. The purpose was to analyse and document their sections. In addition, over 30 cores were taken throughout the excavation area to obtain information on the natural stratigraphy and to compare the natural stratigraphy with sections of the linear structures. GPS and a Total Station were used for locating the linear structures, although many could be spotted with the naked eye. All trenches were dug through the Holocene sediments into the Pleistocene subsoil. In general, the Holocene substrata of this region consists of a thick layer of peat (the top dates to the Middle Ages), covered by different layers of sandy and clayey sediments from the Zuyder Zee phase (Late Middle Ages to c. AD 1942; Wiggers 1955).

Studying the sections of the eight test trenches clearly revealed the nature of the linear structures: they represent a network of ditches that were dug into the peat before the area was overtaken by the Zuyder Zee. The linear structures, nowadays slightly higher than their surroundings, represent the lowest parts of the organic clayey sediments once deposited (Fig. 4.9 and 4.10). During the Zuyder Zee phase, major parts of the peatlands in the study area were flooded and/or washed away. From the natural stratigraphy in the excavation area it was evident that the lower parts of the peatlands have survived, i.e. the Zuyder Zee has only washed away the top of the peat layer. It also meant that the exact dimensions of the ditches could not be documented as only the deepest parts were preserved. After the Zuyder Zee had taken hold of the area, marine sediments were deposited on top of the remaining peat and the clayey fill (fresh water deposits) of the ditches.
After the reclamation of the northeastern Zuyder Zee, a continuous process of dehydration and oxidation of the former seabed started. It caused soil compaction, especially for the layers of peat that remained after the marine phase in the region. The weight of the clayey fill of the ditches had already compacted the underlying peat before and during the Zuyder Zee phase, creating a clear contrast between the ditches (limited compaction) and their surroundings (more substantial compaction). As a result, an inversion of relief occurred: the ditches became visible on LiDAR as small elevations in the landscape. Several larger main ditches can be distin-
gushed from other minor ditches in a network, based on their greater width (5–6 m versus 2–3 m) and northwest-southeast-orientation. Interestingly, these larger ditches have the same orientation as an inland ditch network visible on historical maps and LiDAR data (Fig. 4.11).

It suggests that the ditches in the excavation area were part of a larger system of field boundaries that served to drain the peatlands, on which Fenehuysen II was built. Although no intact remains of the settlement have yet been found, several rectangular areas (measuring c. 30 × 15 m) surrounded by small ditches have. There is a good chance that these represent small medieval farmsteads with space for a single house and/or barn. The clayey substrate of numerous ditches contained large amounts of archaeological material, consisting of yellow and red bricks, pottery and stoneware sherds, animal bones with butchery marks, burnt daub, peat bricks, and rye (Secale cereale) pollen (Fig. 4.12). The presence of the latter indicates that rye, one of the most frequently grown medieval cereals in the Netherlands, was also grown on the peaty soils near Fenehuysen II (Van Geel et al. 1983; Behre 1992; Ettema 2005). The assemblage clearly refers to the leftovers of a settlement as described in the methods section above. It is assumed that the objects were either deposited in the ditches on purpose (waste) or deposited in the ditches by the eroding force of storm floods. As the test trenches only targeted the ditches, no information is available for the small areas enclosed by the ditches. Several other ditches with almost no archaeological objects must represent ditches that were further away from the farmsteads. Clearly, more archaeological research is required to find out whether in situ settlement structures, presumably belonging to Fenehuysen II, are still present. As the top of the peat was washed away by the Zuyder Zee, it is unlikely that small terps (artificial mounds of clay and peat on top of the natural peat) and the foundations of houses survive in situ. Only the deepest parts of features like wells and pits might still be present. Archaeological research has shown that in some parts of the northeastern Zuyder Zee region people lived on the small mounds (Schokland island) and protected themselves against the water by constructing dikes. It remains unclear whether this also goes for Fenehuysen II: some dike remains (discolorations on aerial photographs) have been found to the north-west of the former settlement, but there is no proof for mound remains (see Van Popta 2017a).

The main category of archaeological objects from the ditch fills is that of pottery sherds and bricks. The earliest identified sherds date to the 12th and 13th century (Globular pottery, Paffrath pottery), while the latest sherds date to the 17th century (redware, early stoneware). No intact objects were found, but many sherds belong to jars and plates and the majority of the material dates to the 16th and 17th century. The bricks are either yellow or red and some have a rounded surface owed to water erosion. These bricks, together with fragments of burnt daub, are likely to represent the remains of buildings. The ditches also contained a relatively large number of animal bones. Many bones, mainly belonging to cattle of different ages, had clear butchery marks, indicating that they are consumption waste. Altogether, the assemblage in the ditches represents the remains of a settlement that was threatened by marine erosion. As only small parts of the ditches have been examined, many more objects remain in the clayey fill of the ditches.

**Fenehuysen I, II and III: a shifting settlement?**

The archaeology of the submerged settlement Fenehuysen highlights the dynamic nature of the north-eastern Zuyder Zee region and the erosive force of the Zuyder Zee. 17th-century historical maps confirm that the Fenehuysen II settlement at that time lay along the actively eroding Zuyder Zee coast (in area 5, northwest of Kuinre, Figs. 4.8-11). This settlement is estimated to have been densely inhabited between AD 1500 and 1700, based on the ages of pottery sherds and stoneware fragments, although first signs of habitation date back to the 14th century. The settlement was likely abandoned in the 2nd half of the 17th century and the inhabitants of Fenehuysen II started living behind the dike at Fenehuysen III. This is illustrated on 18th- and 19th-century maps. During this period, the word Fenehuysen was still used as a place-name, but its appearance must have been that of a hamlet: a couple of farms spread in the landscape. Historical archives mention the existence of five farms in 1763 and one remaining farm in 1793 (Kamman 1985: 80). The topographical maps of 1850 and thereafter no longer mention the name Fenehuysen, although the descriptions Achterveen (behind peat, just onshore) and Veenhoek (peat corner, just offshore) have been used in the vicinity of Fenehuysen III (for toponyms, see the Topographical Military Map of 1850 and the Bonnebladen maps of the 19th–20th century). Now, all that remains of Fenehuysen III is a small circular elevation in the fields, also visible on 19th-century maps. This site has not yet been archaeologically examined, although local people claim to have found sherds and bricks on the surface. Archaeological investigations on this site may indeed reveal the final remains of Fenehuysen.

Clearly, Fenehuysen II in name and location must also have had a predecessor as it is mentioned in charters that are far older than the beginnings of archaeological traces in area 5. It is hard to say whether the settlement
Figure 4.12. A selection of archaeological finds from the clayey fill of the late medieval ditch network in the Kuinre Forest (Fenehuysen II subarea (area 5 in Fig. 4.6). From top to bottom: bricks, animal bones, red ware.
of area 4 (Fig. 4.6) should be considered to be this predecessor based on current archaeological and historical data. Lack of detail prevents drawing evidence-based conclusions at the moment. From an archaeohistorical point of view one might argue that the high density of archaeological objects in area 4, combined with information from the 17th century historical map (depicting the submerged settlement of what would be Fenehuysen I) provide enough evidence to identify Fenehuysen I. Combining these archaeological and historical results points to the following reconstructed event line (Fig. 4.13): the first site of Fenehuysen, possibly in area 4, was left to the mercy of the waves in the 14th century. There might even be a specific event responsible for the destruction of Fenehuysen I: on 10 October 1375, a massive storm hit the coasts of the North Sea, Wadden Sea, and Zuyder Zee (Buisman 1996). As a consequence, the inhabitants might have moved further north (inland) to found Fenehuysen II in area 5. However, from a landscape-historical point of view, one might argue that such a relatively long-distance north-eastward shift (5 km) seems rather farfetched and hard to prove, especially as no remains of land cultivation and infrastructure (e.g. waterways, rivers, roads) appear to have been preserved in area 4 and between area 4 and 5 (owing to erosion and sea floor reworking by the Zuyder Zee since the 14th century). Therefore, it is reasonable to state that, at this moment, insufficient evidence prevents drawing strong conclusions on the identification of Fenehuysen I and linkage with area 4. That said, neither can we exclude the possibility that indeed settlement area 4 embeds the remains of the first location of the unfortunate inhabitants of the first Fenehuysen.

The shifting nature of Fenehuysen (from location I to II, from location II to III) is but one example of shifting of late medieval settlements in the Netherlands. There are more settlements along the inland peat rim of the Zuyder Zee, such as Rouveen/Staphorst and Elburg and even Vollenhove and the nearby castle of Kuinre (see also Chapters 2 and 6), that experienced a similar shift for similar reasons (Bos 1988; Spek et al. 1996; De Boer & Geurts 2002; De Bont 2008).

Also, for the ditch network evidence of medieval reclamations preserved in former lagoon and lake beds such as the Noordoostpolder, there are more examples in other such deep polders in the Netherlands (e.g. the Beemster, Scheemer and Purmer polders), below the water (e.g. Hoornse Hop, Markermeer) and the wider eastern North Sea coast (e.g. De Polders in Belgium, Nordstrand in Germany). In addition, remains of medieval and early modern submerged settlements can be found in other parts of the Netherlands, like northern Frisia and Groningen (many artificial settlement mounds), Zeeland (Verdronken land van Saeftinghe and Reimerswaal), and further afield (e.g. Jomsborg and Vineta).
Conclusion
The aim of this chapter has been to recognize and characterize the submerged and eroded cultural remains in the Noordoostpolder region, with focus on lost late medieval settlements. Several criteria for identifying submerged settlements among the large number of archaeological objects from the region were defined and tested by searching for the submerged historic settlement of Fenehuysen. Although the datasets consulted are of a different nature, the innovative use of spatial and predictive analysis by GIS proved effective in the interpretation of the anthropogenic traces discovered in the Kuinre Forest.

These traces, surrounding small rectangular terrains, are interpreted as a late medieval network of ditches that contained relatively numerous archaeological objects, clearly representing settlement waste. They belong to the second settlement of Fenehuysen that existed roughly between AD 1300 and 1700. The first settlement, discovered further south, was in existence until the 14th century. Fenehuysen was built for a third time to the north-west of the second settlement. The discovery of the late medieval network of ditches that contained the settlement remains of Fenehuysen II demonstrates that an interdisciplinary and methodological approach can be rewarding. Instead of merely focusing on archaeological data, an analysis of data such as archaeological remains, place names, information on historical charters and maps, aerial photographs, LIDAR-data and palaeogeographical interpretations proved valuable.

The settlement of Fenehuysen II needs to be explored further. Excavating the rectangular potential farmstead structures in the Kuinre Forest may show whether settlement remains like wells, pits, and foundations have survived in situ. There are also other settlements mentioned in historical charters like Marcnesse and Nagele that drowned in the northeastern Zuyder Zee region (Mol 2011; Chapter 2). Finding them may be even harder as much of the area is heavily eroded and disturbed. Remote sensing and archaeological research might not be sufficient, but historical records and maps, when thoroughly examined, can help pinpoint the locations of settlements and provide further information on their existence.

To conclude: the existence of the Zuyder Zee has influenced the life of people who inhabited the peatlands on which Fenehuysen was founded. Storm surges and tidal activity constantly threatened the small and vulnerable settlements, leaving their inhabitants no other option than to move further inland. This study illustrates the force of the Zuyder Zee and its influence on the late medieval lands: clearly ‘no country for men’ (to borrow from the book and film title).

Endnote
For this chapter, results of a test-trench excavation in the Kuinre Forest (one of the settlement areas in the region of study) are also included. The methodology used for this field research is in accordance with present-day methodologies in Dutch Archaeology and can be found in Van Popta (2019b).