

Introduction

The Frisian landscape contains remnants of cultural layers from various periods: traces of times past. Some date from long, long ago. Sometimes, they become so widely known that such a pattern is even called characteristic for the landscape of a certain region. Good examples elsewhere are the esdorp landscape of Drenthe or the bocage landscape of van Brittany and Normandy. Examples of such characterisations in Friesland would be the houtwal (wooded bank) landscape of the Northern Frisian Forest or the terp (artificial dwelling hill) landscape. More often, all kinds of interesting patterns (or elements of these patterns) in the landscape remain fairly obscure. Only a small group of authorities knows about them and is capable of appreciating them. Yet once a wider public has its attention drawn to these patterns or elements, they strike a chord among many. People are interested in these things, want to know the stories associated with them, and call for their preservation. For others, this information can be a point of departure for new developments of consequence for the landscape. It can be a starting point for creative solutions.

An important structure in the landscape of Friesland that people all too easily overlook is how land is parcelled here. Interesting discoveries made in this regard in Friesland show a unique spatial variation in the patterns of parcelling. These are traces that can tell us much about the residential history of this province – on the condition that we can read these traces and know their story. How land in this province was parcelled is part of Friesland's cultural history.

This contribution addresses one of these traces in the landscape of Friesland: the patterns of parcelling the land and their unusually long lines.

The cultural landscape

Friesland's landscape today is a 'cultural landscape', in other words, the result of a long history of human activities. Countless generations have lived here before us. Over the centuries, they have continually made physical changes in their environment in attempts to make a living. Until around 3000 years ago, this was still a natural landscape in which natural processes alone determined its appearance. During the thousands of years before that time, during the Stone Age and Bronze Age, small groups of people wandered here and there or settled for short periods of time, but the impacts of their activities on the landscape were minimal or disappeared with hardly a trace due to natural processes occurring afterward. Their temporary settlements were later covered by drifting sand, were washed away by water, covered with peat or clay or ploughed upside down by more recent land users.

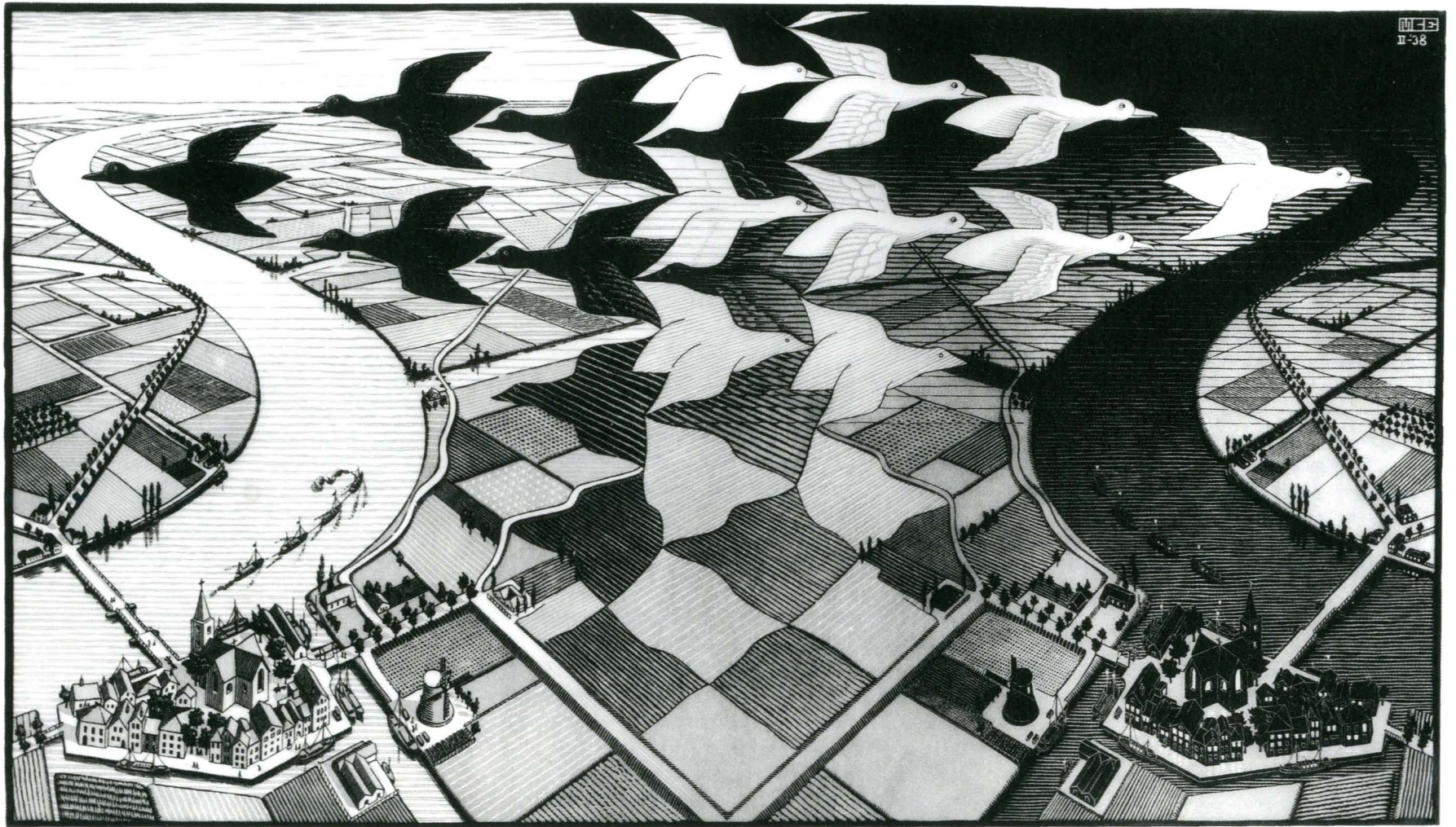
About 2500 years ago, conditions in the coastal area running along the northern part of the Netherlands were such that people could start to settle there permanently. To provide for their own needs, they started to lay out and use parts of the area on a modest scale. Initially, this was a difficult task. Over the centuries, as people had more technical means at their disposal and were better organised, the fact that they could change their environment more easily had more far-reaching consequences for the landscape. As knowledge, technology and administration developed, these changes occurred at a faster pace and on a larger scale. During recent decades, social developments have apparently progressed so quickly and on such a scale that the former cultural landscapes have been adversely affected by this are rapidly disappearing.

Parcelling

Parcelling is the way in which land is divided up into pieces: into parcels or plots. Parcels of land are surrounded by visible boundaries. In the lower-lying wetter parts of this province, parcels are surrounded by drainage ditches. Filled with water, these are conspicuous elements in the landscape. In areas of higher elevation, parcels are usually surrounded by trenches, here and there by rows of trees, by wooded banks and hedges. These are the boundary elements we observe in the field and what divide and articulate the open space into pieces. Since the parcels are not that large, there are relatively many boundary markers. For administrative purposes, these boundaries are recorded in the land register. A common way of showing how an area is divided into parcels is the map. A map is actually a representation of a view from above the Earth's surface: a piece of paper in which lines and symbols indicate the characteristics of the site within a certain area. Today, this bird's-eye view is available to anyone with a PC and an Internet connection by going to Google Earth. This website provides a unique opportunity to look at this parcelling. We can observe the Earth's surface as if we were birds. We can look directly downward at the Earth's surface or at an angle either forward or from the side. Today's digital technology makes all of these views possible.

This bird's-eye view of a region divided into parcels is presented in a unique way on a woodcut made by Escher in 1938 entitled "Day and Night". The artwork shows square parcels in a chessboard pattern gradually change shape into black and white birds flying in either direction toward day and night.

If we apply this image to Friesland, what would we see and what could this tell us about the landscape?



M.C. Escher: "Day and Night", © 2008 The M.C. Escher Company,
Baarn - The Netherlands. All rights reserved. www.mcescher.com

Differences and similarities

In general, Friesland exhibits two kinds of parcelling patterns. In the north and west, we see a pattern of irregularly shaped polygons, sometimes with fluidly tapering, winding boundaries (see Figure 1). Predominating in the centre, south and east of the province is a pattern of parcels in long strips (see Figure 2). Located between these two main kinds of patterns is a transitional zone where both the irregular and more regular patterns are found side by side. We can then examine these parcelling patterns at the level of individual parcels and at the level of blocks that we can classify as based on certain similarities such as the predominant direction of the strips in each block. In turn, such blocks are demarcated by straight, curved or winding lines.

This parcelling may have occurred at the hand of man but the region's geological history is a very real factor as well (a factor we will address in greater detail later). In the past, people made use of natural conditions they encountered in the area where they lived. Back then, people employed the technical means they had and their own ingenuity in order to use and change their surroundings. An example was to take advantage of a naturally occurring change in elevation to let excess water drain away by digging a trench or drainage ditch. In this way, you could create a small field. By digging these trenches and drainage ditches, you could make a larger area more productive. Drainage ditches also served another purpose: you could use them to separate your land from that of your neighbours. These scratches in the Earth's surface are still visible today. Taking a closer look, we can see that, together, the parcels and plots delineated in this way form a pattern. The differences in parcelling patterns have remained largely unchanged over the centuries.

The parcelling pattern in Friesland is the result of developments covering two thousand-year periods, each of the two main types of parcelling being associated with one of these periods. The parcelling into irregular blocks so typical of the coastal region originated during the first millennium. The parcelling into strips found in the central,

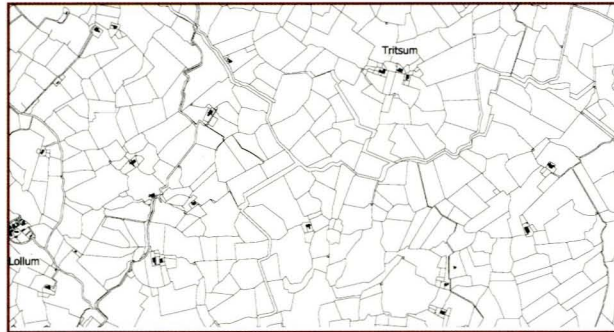


Fig. 1 The parcelling found in the northern and western parts of Friesland consists of a pattern of irregularly shaped blocks.



Fig. 2 In the central, southern and eastern parts of Friesland, the land is parcellled into long strips that are often oriented to former or still existing small rivers.

southern and eastern areas of the province is a product of the second millennium.

Since each village area had been built up from land used by the individual households in that village, the boundaries of the village territory display delineations that correspond to the locally predominant parcelling pattern. Figure 3 clearly illustrates what this spatial division looks like. In the old village and parish boundaries in the coastal zone in the north and west of Friesland, we encounter jagged lines. In the east and south, parish boundaries were based on the local strip parcelling and are thus conspicuously straight.

The clayey coastal region

Around 2500 years ago, people who lived farther inland on the higher sandy soils in what is now Drenthe started settling on the fertile and somewhat higher dry shoals in the coastal area. Later, more settlers came to the coastal plains from the coastal area west of what is now Friesland and from an area farther to the east encompassing the coastal zone from the north of Germany to around the mouth of the River Wezer. Until about the end of the Roman Iron Age around 350 AD, the coastal area was inhabited by herdsmen. At that time, the sea started pounding the coastline harder and more often, thus resulting in erosion and the development of wide bays at estuaries. Inhabiting the coastal region became more difficult. Archaeological research has shown that populations at some sites either left or were greatly reduced. This period of coastal erosion lasted at least until the eighth century. The coastal area was a tidal landscape open to the sea. The people who lived there during the early Middle Ages laid the foundations for the parcelling we still see along the coast. As delineations, they chose natural boundaries such as creeks as well as the drainage ditches that divided pieces of territory or parcels. It is also clear that they made use of local differences in elevation and drainage options. People lived in the middle of all these parcels, whether they lived on solitary artificial dwelling hills (*terps*) or in concentrations on terp villages. Since each terp had more or less its own way of laying out its fields and parcels, the result is a jumble of parcel boundaries.

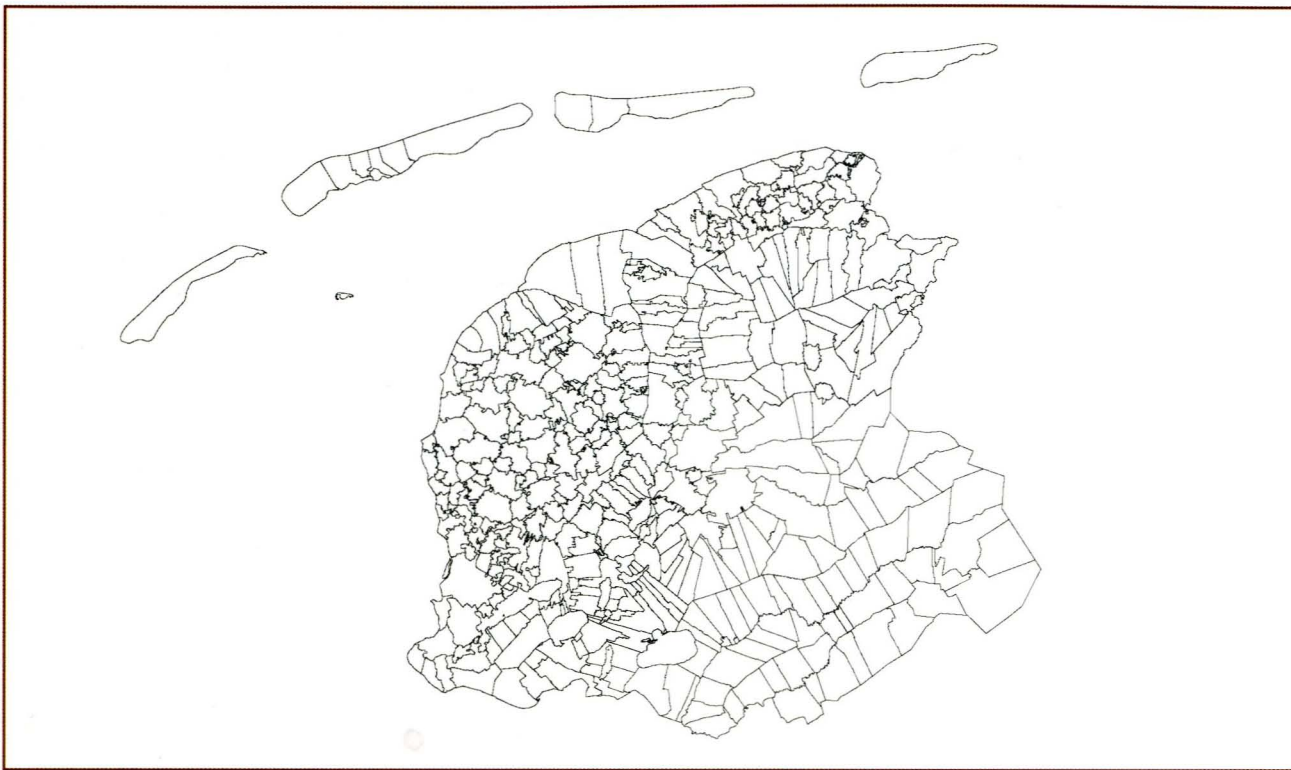


Fig. 3 In Friesland, the appearance of the lines delineating village territories shows the existence of two main kinds of parcelling patterns: in the coastal zone, the land was parcelled into irregularly shaped blocks with jagged lines; in the southern, eastern and central parts of Friesland, the land was parcelled into straight strips.

Around the end of the first millennium, the population in the terp region grew: more mouths had to be fed. New land had to be created on a larger scale than before. There was no other way out but to reclaim this new land to create crop fields and pastures for livestock. At the same time, the sea continued to surge farther inland and erode the coastline. The solution was found in reclaiming new land located inland that could be used to raise grain, tuberous vegetables and peas and to graze livestock. This land, however, was covered in a large desolate peat marsh that would require taking measures to make it useful.

Medieval reclamation of the peat marsh

The first reclamation activities in this peat marsh took place in the ninth and tenth centuries at the edge of it where the substantial clay soils of the coastal region coincided with the weak wet sponge of the desolate peat marsh. The consequences of these reclamation activities are clearly visible at various places in the existing parcelling pattern. Along a broad front, people started their assault on the peat marsh. It was essential to drain the upper layer of the marsh first to get it dry enough to make it passable and usable. This development of new land was done according to a pre-made plan in which the land reclaimers living in the adjoining villages in the clay area would be allocated a strip on a proportional basis. Along the edge of each strip, people dug a ditch that was then extended farther and farther into the marsh. The area south of Dokkum is a good example of this.

Gradually, people reclaimed what had previously been an isolated and practically impassable peat marsh. Appearing along these strips, the colonists built rows of simple dwellings that were situated at right angles to the parcel strips. This was the beginning of the ribbon-shaped villages that are still so prevalent in this part of Friesland. As reclamation activities continued farther inland, the locations for houses and the church sometimes changed to higher ground. Several locations show evidence that such a shifting of a ribbon village took place in the Middle Ages. The presence of a piece of land still known as 'the old churchyard' indicates the site where the current village's predecessor stood many centuries ago.

The second wave of land reclamation and colonisation occurred along creeks and small rivers that occurred at various places in the peat marsh. Along the lower reaches of these peat streams, a layer of clayey sediment had been deposited as a result of centuries of tidal action, this material having been washed from the coastal area far inland along with the seawater during occasional high tides. Starting from the banks of these small rivers, trenches and drainage ditches were excavated to drain the marsh and make the land usable. This resulted in herringbone patterns of long strips of land that grew in length as reclamation activities continued. Because the drainage ditches often followed the curving course of streams, the resulting direction of the parcelled strips reveals the direction of drainage flow. Figure 2 shows a good example of the results of such land reclamation activity starting from Het Ges, a stream near Oppenhuizen and Uitwellingerga: a herringbone pattern and fans composed of strips of land. Similar patterns can be seen along the Boorn and its former tributaries, along the Lauwers near Surhuizum (see Figure 5), or on both sides of the Tjonger. Such long parcelled strips are then interrupted by ditches excavated at right angles across them. These are sometimes channels or drainage canals leading excess water off to the sides as well. These were also the ditches along which the houses of the colonists stood; this pattern can still be seen today in the form of linear settlements running at right angles to the direction of the parcelled strips.

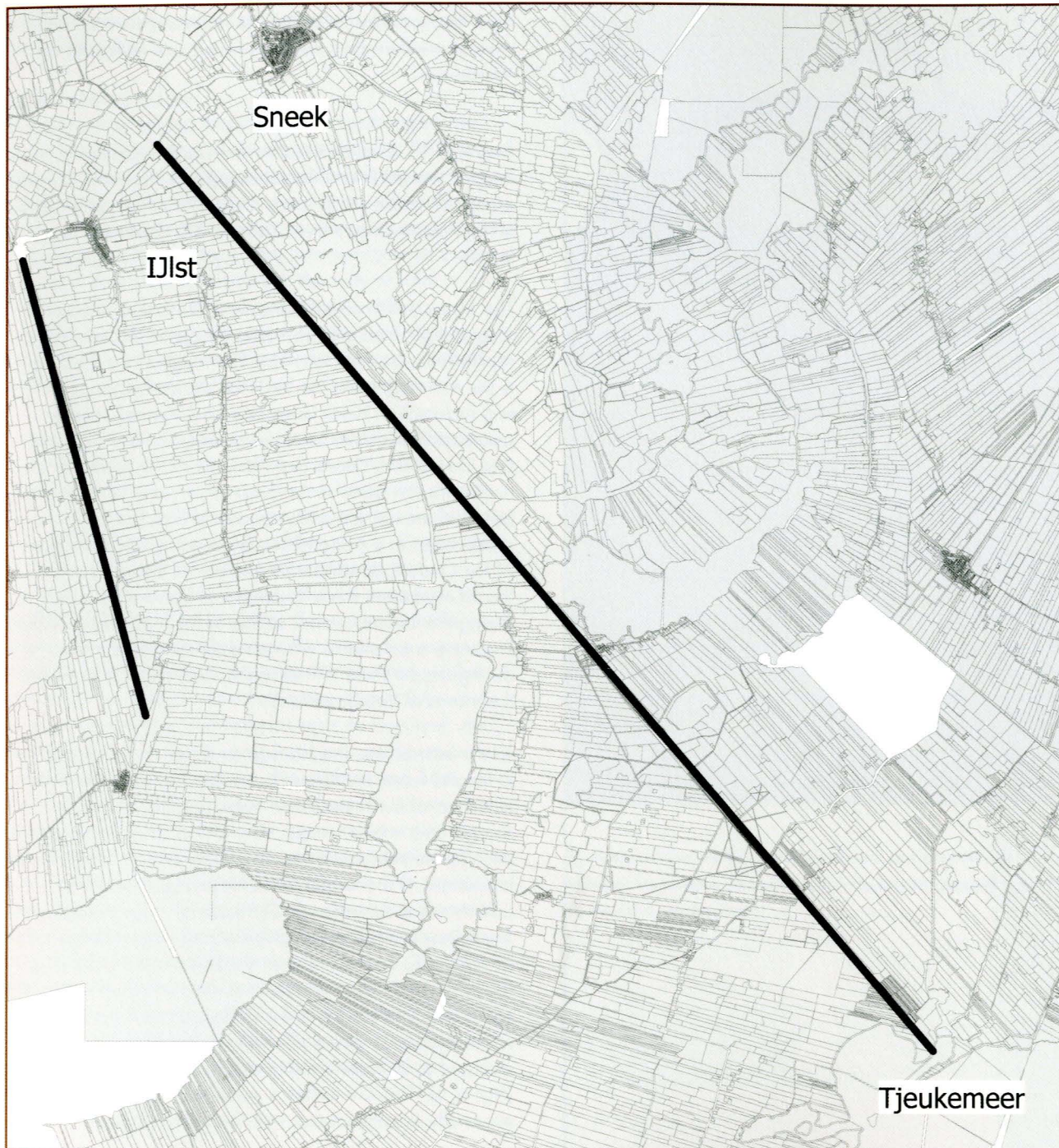


Fig. 4 The longest straight line in the Friesian landscape is 17 kilometres in length and is formed by the Oosterwimerts that separates two medieval reclamation blocks and runs from a point halfway between Sneek and IJlst on the former River Ee all the way to Lake Tjeuke.

Later, these large strips of land were undoubtedly subdivided. Just as possibly, they may have been consolidated in later centuries. Yet despite these interventions, the basic pattern of strips has remained intact.

Long lines

In the reclaimed peat marsh – the land made usable during the second millennium – we can discover major structures that trace their history to reclamation blocks and village territories. Conspicuous in this coarsely meshed pattern of blocks are certain very long lines – lines that go back to medieval reclamation activities. These lines are still visible even though such interventions as an expansion of village development have nibbled away at them here and there. It's a challenging game to use images like the ones available on Google Earth to trace these long lines. We will address four of them in greater detail here. The first pair of lines, one of which is the longest straight line in the Friesian landscape, is the Wimerts in the Municipality of Wymbritseradeel in the southwest of Friesland (see Figure 4). The second pair is the Monnikeregoppel and Homeer in the Municipality of Achtkarspelen in the northwest of the province (see Figure 5).

The IJlst reclamation block, the basis for its reclamation being the River Ee, is bounded on two sides by a wimerts (or wymerts) that forms the eastern and western boundary of this block reclaimed during the Middle Ages. A wimerts is the name given to a boundary in a marshy area. Most of them can still be recognised in the landscape in the forms of waterways, drainage ditches or trenches. The Oosterwimerts (eastern wimerts) is a waterway that runs straight as an arrow from the River Geeuw, at a point about halfway between IJlst and Sneek and then continues to the Tjeukemeer (Lake Tjeuke). Its

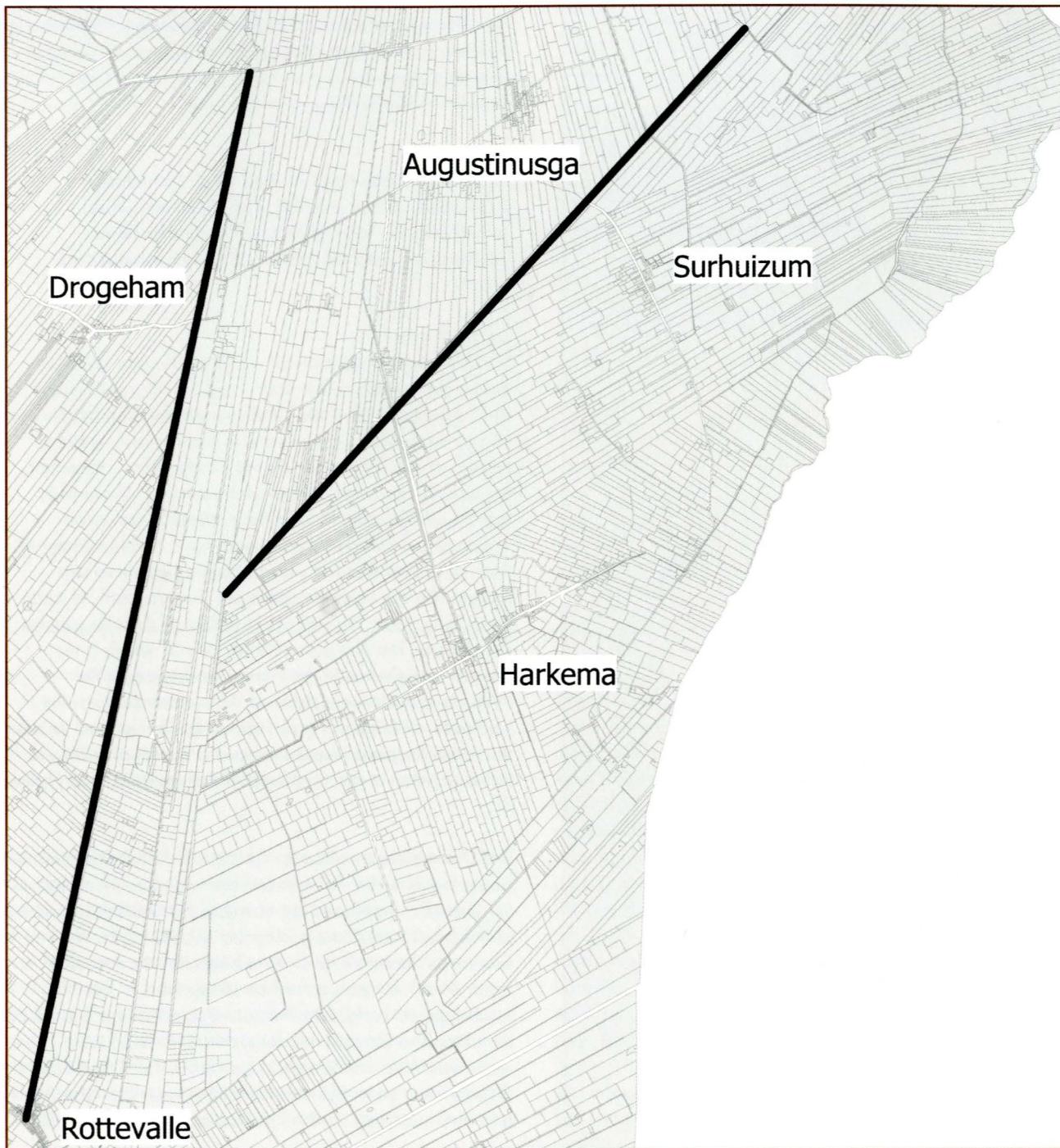


Fig. 5 The Monnikegreppel (left) and the Homeer (right) are two of the medieval reclamation block boundaries located in the Municipality of Achtkarspelen.

length of 17 kilometres makes the Oosterwimerts the longest straight line in the landscape of Friesland. Running along the western boundary of the IJlst reclamation block is the Westerwimerts that is almost 6.5 kilometres in length.

The Municipality of Achtkarspelen also has a number of long straight lines that delineate village territories and reclamation blocks (Figure 5). The longest here (8.3 km) is the Mûntsegroppe (or, in Dutch, Monnikegreppel). This is a reclamation block boundary and line delineating peat-cutting activities between Harkema and Drogeham and Hoogzand/Oostermeer located to the south. In the north, this line starts at the place where the Kolonelsdiep (a canal) now dissects the prominent direction of the reclamation at a point where the winding upper reaches of the Oude Ried divide the territory of Drogeham from that of Harkema. It is a dividing line that was created during the course of peat cutting in the high moors of the Harkema area and in Witveen south of Oostermeer during the 16th and 17th centuries and which stretched to the moors of Smallerland.

To the east of this, the Homeer (a dead straight line 7 km in length) forms the former boundary between the village territories of Surhuizum and Augustinusga. This long straight line, which we can now distinguish as a drainage ditch (sometimes wide, sometimes narrow) or trench in the landscape, is the former line delineating peat-cutting activities that 'scheiden Opeynde en Augustinusga van Suyrhuysum' (separates Opeynde and Augustinusga from Suyrhuysum) as indicated on the Schotanus-Halma map issued in 1718. The Homeer is so straight that it makes a conspicuous landmark in the landscape and even more so when seen in an aerial photograph, the Google Earth website, or a recent photo taken in bird's-eye perspective (Figure 6). This line makes a wonderful historic element, especially in combination with the parcel lines of

Surhuizum and Augustinusga that run off at an angle from it on both sides.

Final conclusion

We started by saying that the current landscape is the result of a long history of development and a reflection of how countless generations of inhabitants have used an area. In a cultural landscape, we can see all kinds of patterns and characteristics that can only be explained by understanding their history. They are remnants of a past that, until now, have not stood in the way of later changes. They have either been integrated into subsequent systems or they have survived simply because they have never been an obstacle for anyone. There is no guarantee, however, that this will remain the case.

As the most important land user for thousands of years, agriculture has made a substantial impact on the landscape. In today's society, it is no longer the most significant factor providing a basis for the continuity of the cultural landscape or ongoing changes in it. Urbanisation in the form of new residential developments, the construction of industrial estates, and the expansion of traffic infrastructure is laying big claims on available space. Throughout northwestern Europe and in many other parts of the world, this is leading to changes that can erase the entire former landscape in one fell swoop. In some parts of the Netherlands such as Friesland, the landscape is still relatively rich in objects and patterns of cultural and historical interest. Yet patterns and lines continue to be nibbled away. In a dynamic society, this should come as no surprise. An important question we should ask is to what extent we want to let the loss of historic elements in our environment go on. We could also, however, try to integrate these interesting elements and structures into new inevitable developments and to use them as sources of inspiration for change. Why not start nurturing this network of parcelling or these remarkable long lines in the landscape? Prevent the thoughtless severing of the line: this is something unique. After reading this article, you can no longer plead ignorance.



Fig. 6 A recent aerial photo shows the Homeer as a dead straight boundary line between the territories of Surhuizum and Augustinusga. (Photo: J.H.P. van der Vaart)