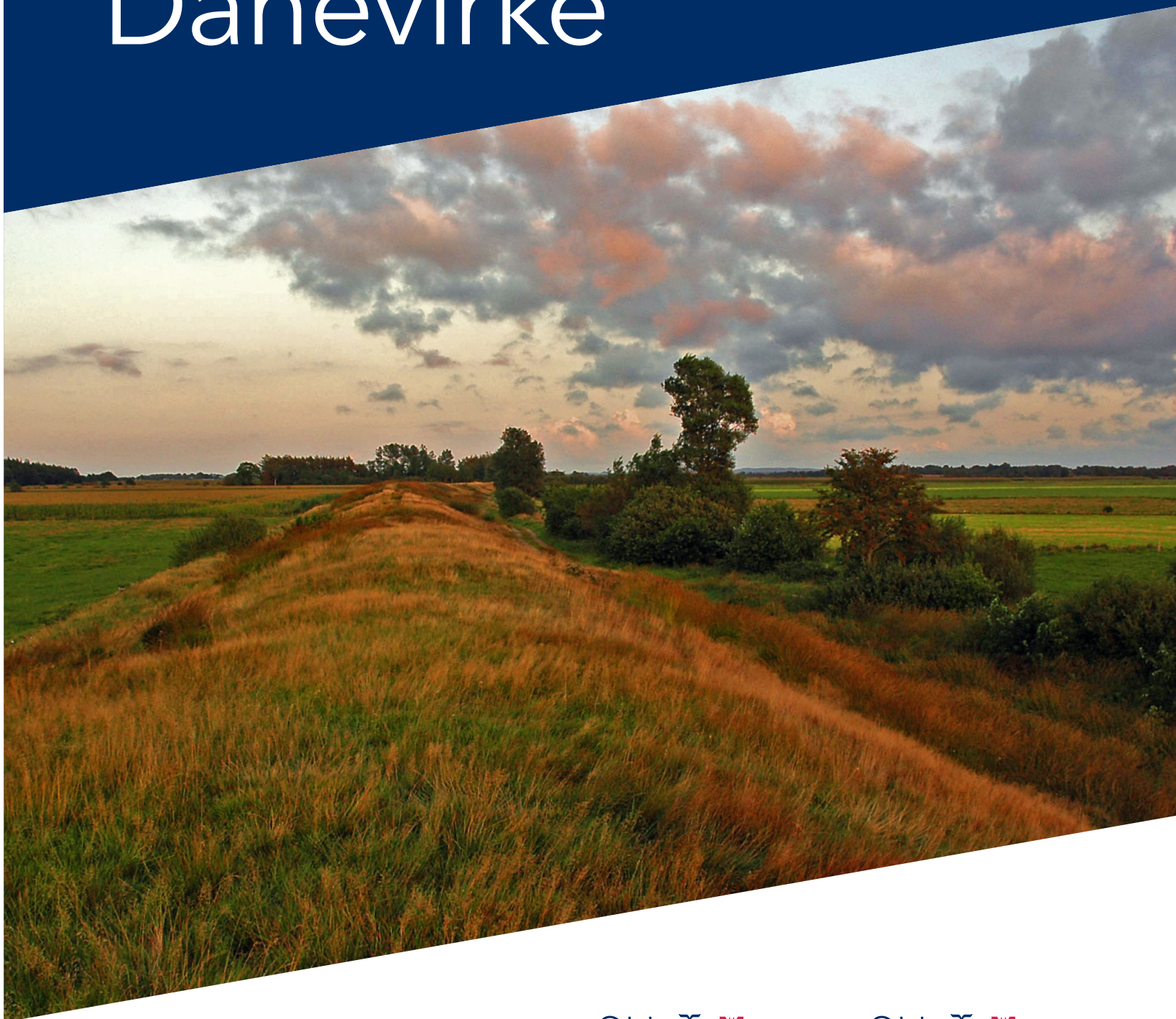


The Archaeological Border Landscape of

Hedeby and the Danevirke



IMPRINT

The Archaeological Border Landscape of Hedeby and the Danevirke
A German nomination to UNESCO's World Heritage List



Schleswig-Holstein
State Archaeological Department



Schleswig-Holstein
Ministry of Justice, Cultural
and European Affairs

December 2016, Schleswig

**State Archaeological Department / Archäologisches Landesamt
Schleswig-Holstein (ALSH)**

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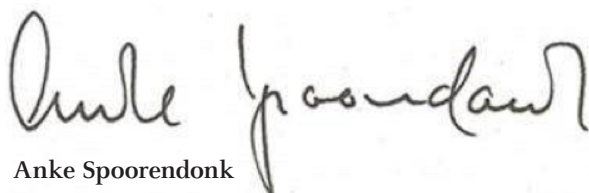
Daniel Zwick, State Archaeological Department of Schleswig-Holstein

FOREWORD

The Federal State of Schleswig-Holstein has integrated the provisions of the UNESCO World Heritage Convention in its amended Monument Preservation Act of 2015. Therefore, we are pleased to propose the Archaeological Border Landscape of Hedeby and the Danevirke for inclusion in the World Heritage List. The State Archaeological Department of Schleswig-Holstein has collaborated closely with two districts, fifteen municipalities and other organisations, museums, state agencies and stakeholders for more than nine years to safeguard, develop and promote Hedeby and the Danevirke. The region fully supports the nomination of the archaeological border landscape. Initially, Hedeby and the Danevirke were nominated as parts of the transnational serial nomination “Viking Age Sites in Northern Europe”, which was deferred on the 39th meeting of the World Heritage Committee in Bonn in 2015. After the project partners resolved not to continue within a transnational context, it was decided to nominate Hedeby and Danevirke as archaeological ensemble in its own right, representing a unique border landscape, which should be considered for complementing the Viking Age heritage on the World Heritage List.

Hedeby and the Danevirke are outstanding examples of how exchange, trade, political power and conflicts between different cultural traditions in the Viking Age are reflected in the archaeological record, architecture and landscape of a borderland from the 8th to the 11th century AD. The sites are characterised by their strategic location at a geographical isthmus, which was the crossroads for two major trading routes of the time in Northern and Western Europe, and the border between, first and foremost, the Danish and Frankish or Saxon dominions. The trading centre of Hedeby and the linear fortifications of the Danevirke were integrated into the landscape so as to serve their purpose in the best possible way. Today, the cultural landscape is of extraordinary importance for the interpretation of historic developments in Viking Age Northern Europe and ensuing periods.

With this nomination we hope that the archaeological heritage of Hedeby and the Danevirke can contribute to the heritage of all humankind.



Anke Spoorendonk

Minister of Justice, Cultural and European Affairs

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Executive Summary



STATE PARTY

Germany

STATE, PROVINCE OR REGION

The districts of Schleswig-Flensburg and Rendsburg-Eckernförde,
State of Schleswig-Holstein

NAME OF PROPERTY

The Archaeological Border Landscape of Hedeby and the Danevirke

**TEXTUAL DESCRIPTION OF THE BOUNDARIES OF
THE NOMINATED PROPERTY**

The boundaries of the nominated property are those of the archaeological complex of Hedeby and the Danevirke. It consists of 22 individual archaeological sites situated at the Schleswig Isthmus, a natural traffic barrier, in the southern part of the Jutland Peninsula. Each individual site is delimited to all sides by the extent of the known or presumably preserved archaeological material or features. The boundaries to the South are orientated at the extent of the ramparts or further defensive ditches and ramparts in front. The boundaries to the North are delimited by the extent of the rear of the ramparts or further ditches. The boundaries of Hedeby are delimited by the rampart of the Hill Fort to the North, the presumed extend of the harbour to the East and the extent of the defensive structures around the Semicircular wall of Hedeby to the West and South. The 21 sites of the fortification works of the Danevirke extend over 33 kilometres across the whole of the isthmus and beyond between the Treene River in the West and the Windeby Noor in the East. The settlement site of Hedeby and its associated features lies concentrated at the Schlei Fjord at the east end of the isthmus.

GEOGRAPHICAL COORDINATES TO THE NEAREST SECOND

ID	Name of the component part	Municipalities	Coordinates of the centre point	Area of nominated property (ha)
1	Crooked Wall Area 4	Ellingstedt	N54°27'26" E9°20'52"	1,4
2	Crooked Wall Areas 3 to 4	Ellingstedt	N54°27'59" E9°23'16"	16,1
3	Crooked Wall Areas 1 to 2 Main Wall Areas 4 to 5	Ellingstedt/Danneverk	N54°27'48" E9°27'19"	25,2
4	Main Wall Areas 2 to 3	Danneverk	N54°28'46" E9°29'25"	14,4
5	Main Wall Area 1	Danneverk	N54°29'19" E9°30'15"	6,3
6	Connection Wall Area 9 North Wall Area 4 Arched Wall	Danneverk	N54°29'42" E9°30'48"	3,6
7	North Wall Areas 1 to 2	Town of Schleswig	N54°30'02" E9°31'28"	3,6
8	Arched Wall	Danneverk	N54°29'45" E9°31'12"	0,8
9	Connection Wall Area 8	Danneverk	N54°29'41" E9°31'08"	2,5
10	Connection Wall Areas 5 to 7	Busdorf / Danneverk	N54°29'36" E 9°32'12"	5,8
11	Connection Wall Area 3	Busdorf	N54°29'32" E9°33'14"	0,6
12	Hedeby	Busdorf/Fahrdorf	N54°29'28" E9°33'59"	95
13	Kovirke Area 1	Danneverk	N54°27'52" E9°28'45"	0,9
14	Kovirke Area 2	Danneverk	N54°27'56" E9°29'10"	0,3
15	Kovirke Areas 3 to 5	Danneverk / Selk / Jagel	N54°28'11" E9°31'04"	7,9
16	Kovirke Area 6	Selk	N54°28'30" E9°33'39"	2,1
17	Kovirke Area 7	Selk	N54°28'33" E 9°34'02"	0,05
18	Kovirke Area 8	Selk	N54°28'36" E9°34'21"	0,5
19	Offshore Work	Borgwedel/ Schaalby	N54°31'00" E9°38'32"	36,2
20	East Wall Area 1A to 1C	Fleckeby / Windeby	N54°28'57" E9°44'53"	1,9
21	East Wall Area 2D	Windeby	N54°28'40" E9°46'27"	0,5
22	East Wall Area 2E to 2F	Windeby	N54°28'41" E9°47'02"	1,9
Hedeby and the Danevirke			N 54°29'33" E 9°34'02"	227,55
				Total area
				Area of the Buffer Zone (ha) = 2670

Connection Wall Areas 1-2 and 4 were destroyed in modern times and are therefore not included in the nominated property.

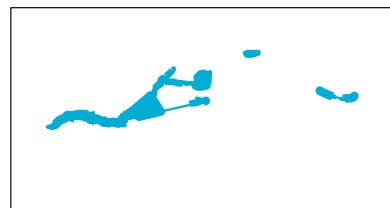


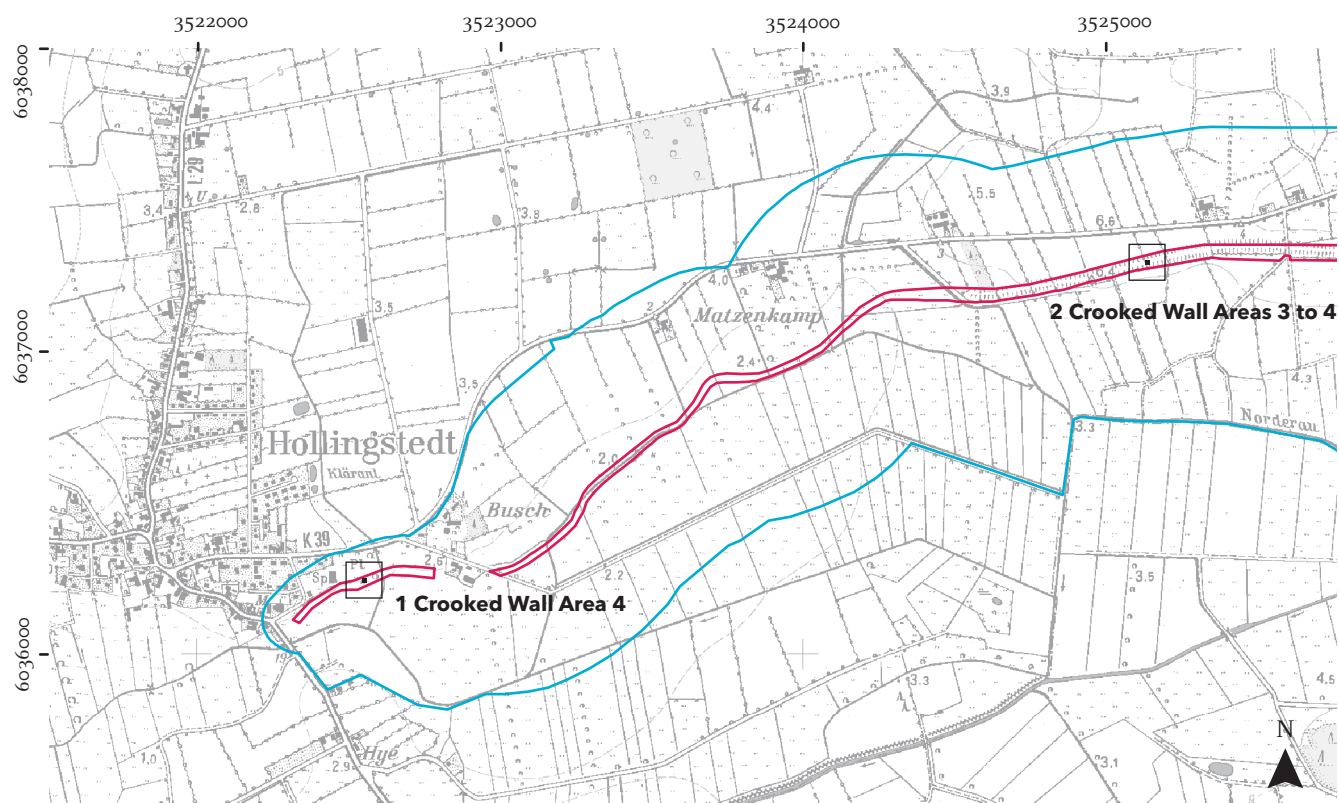


1 centimeter = 1.000 meters

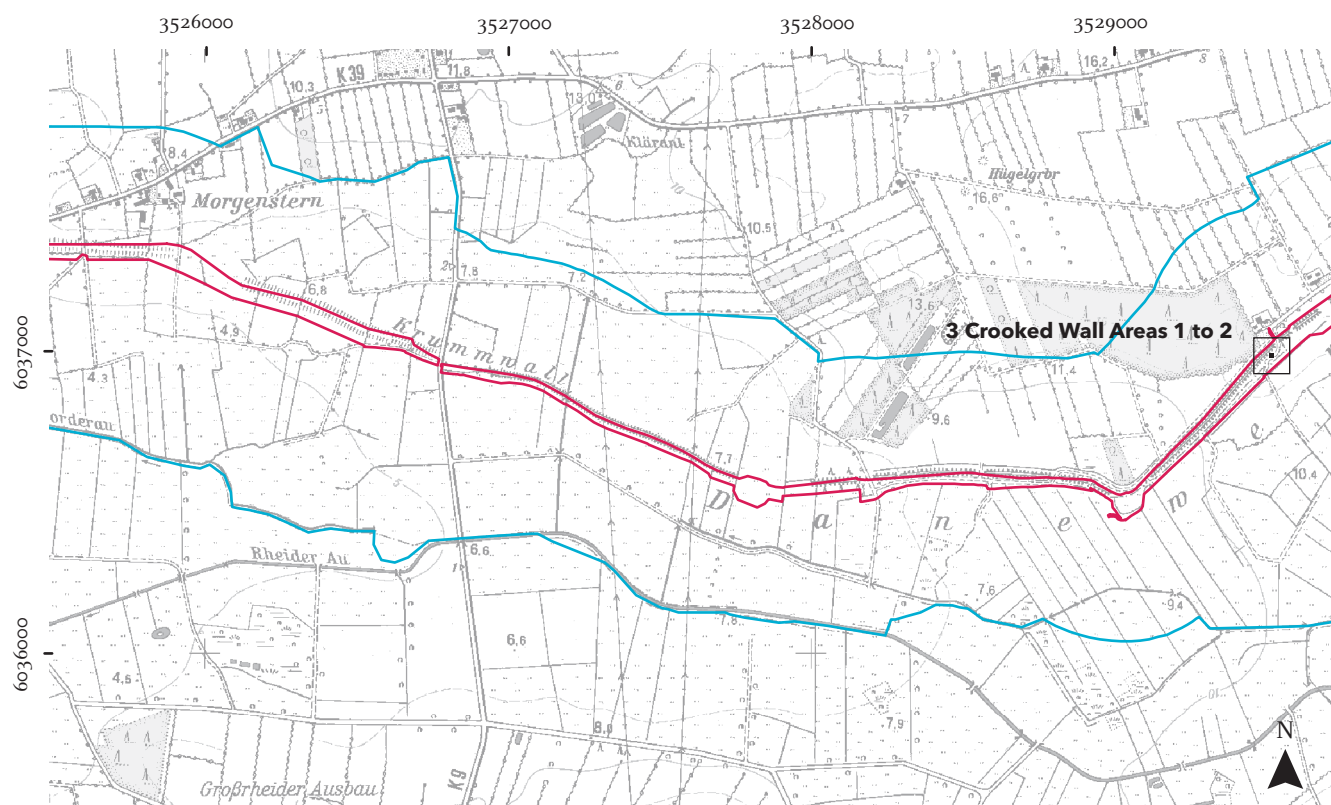
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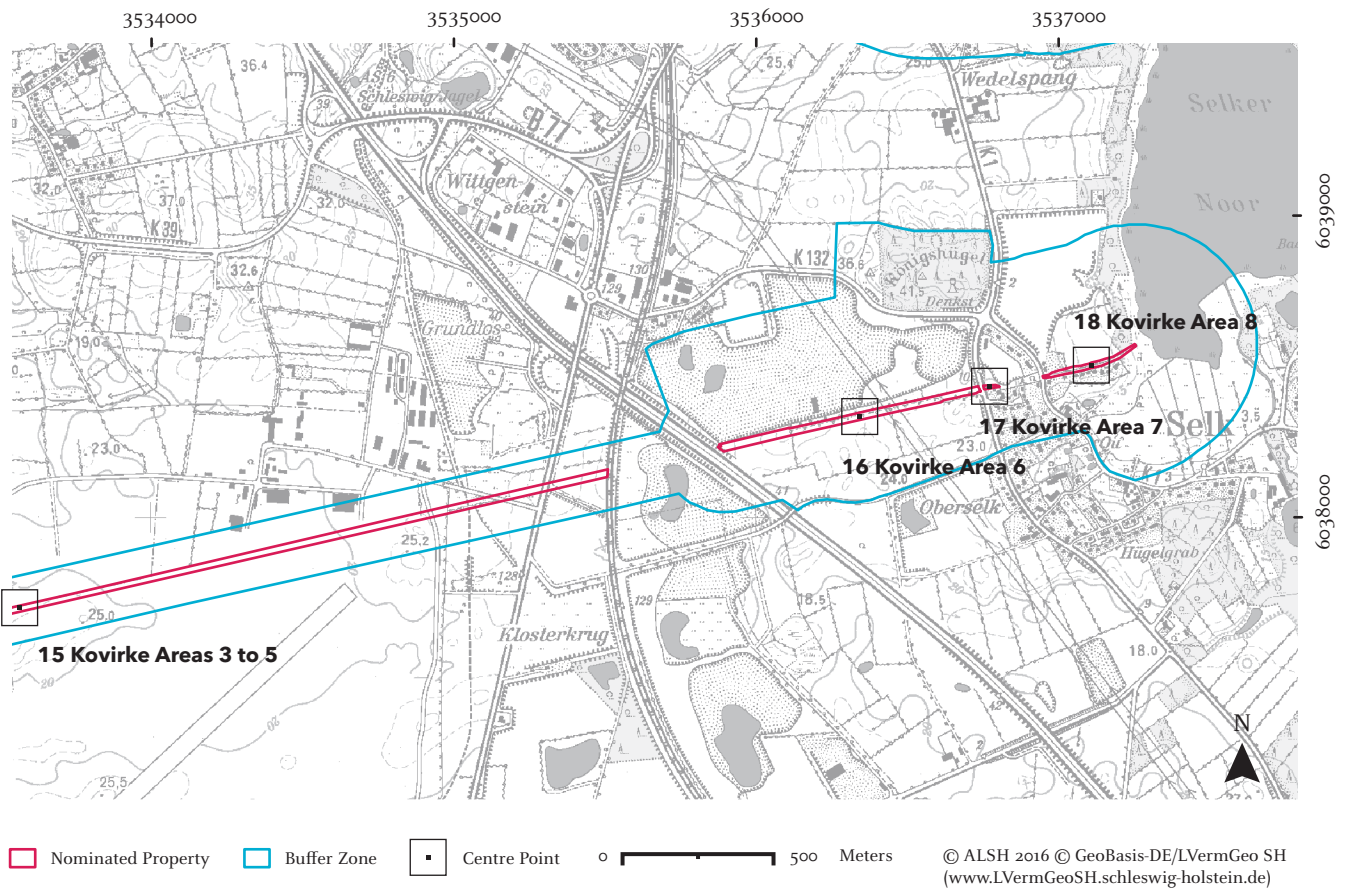
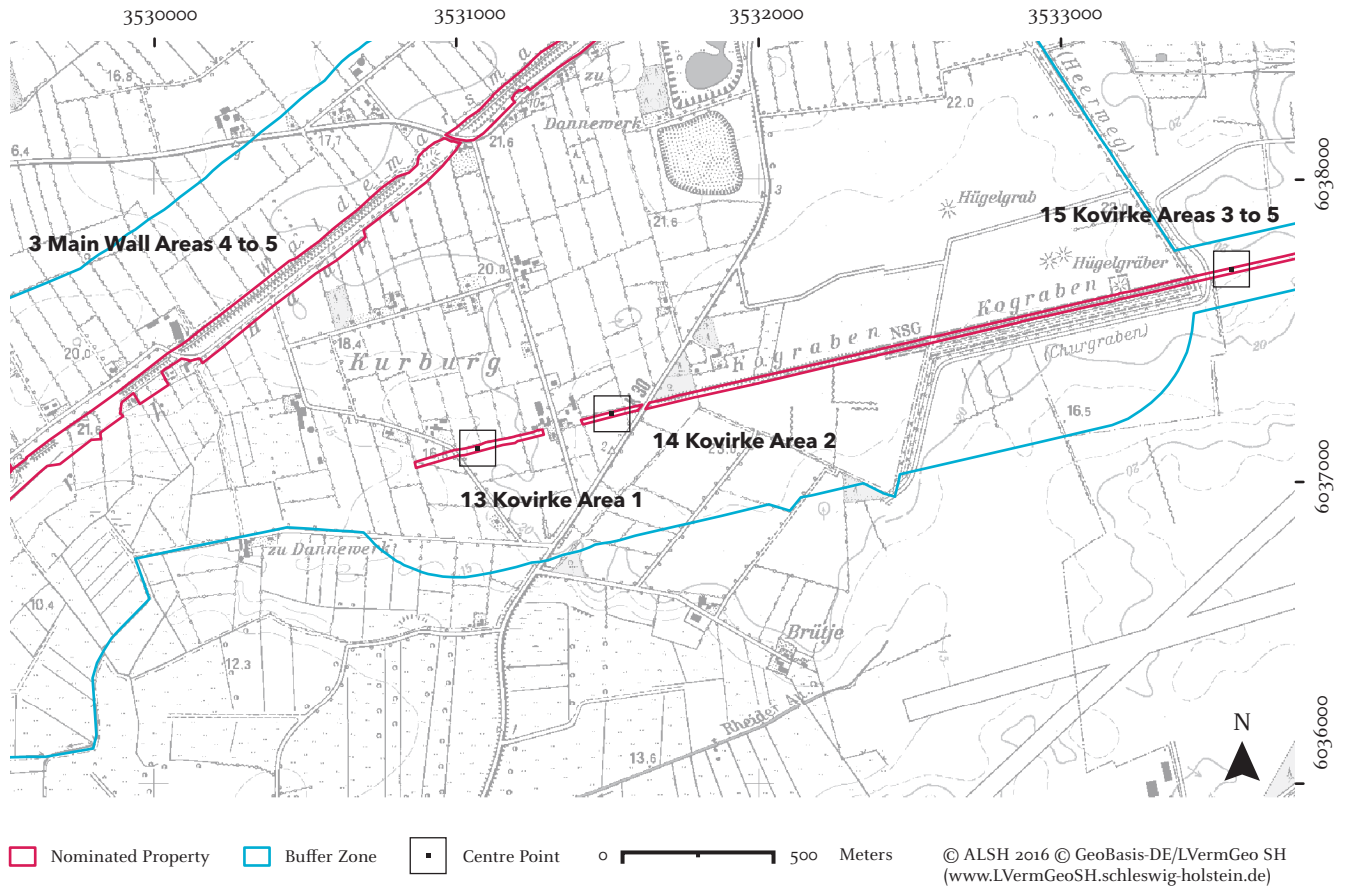


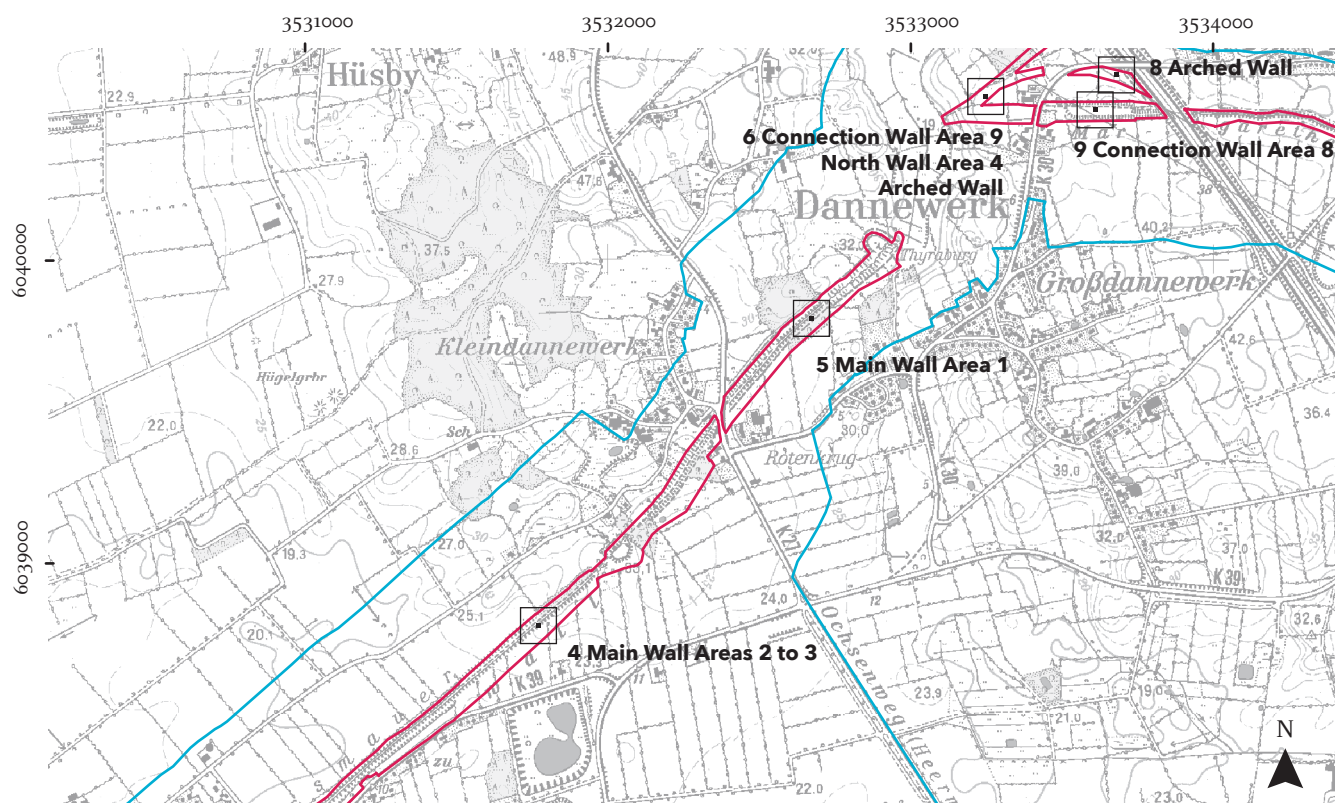


█ Nominated Property
 █ Buffer Zone
 Centre Point
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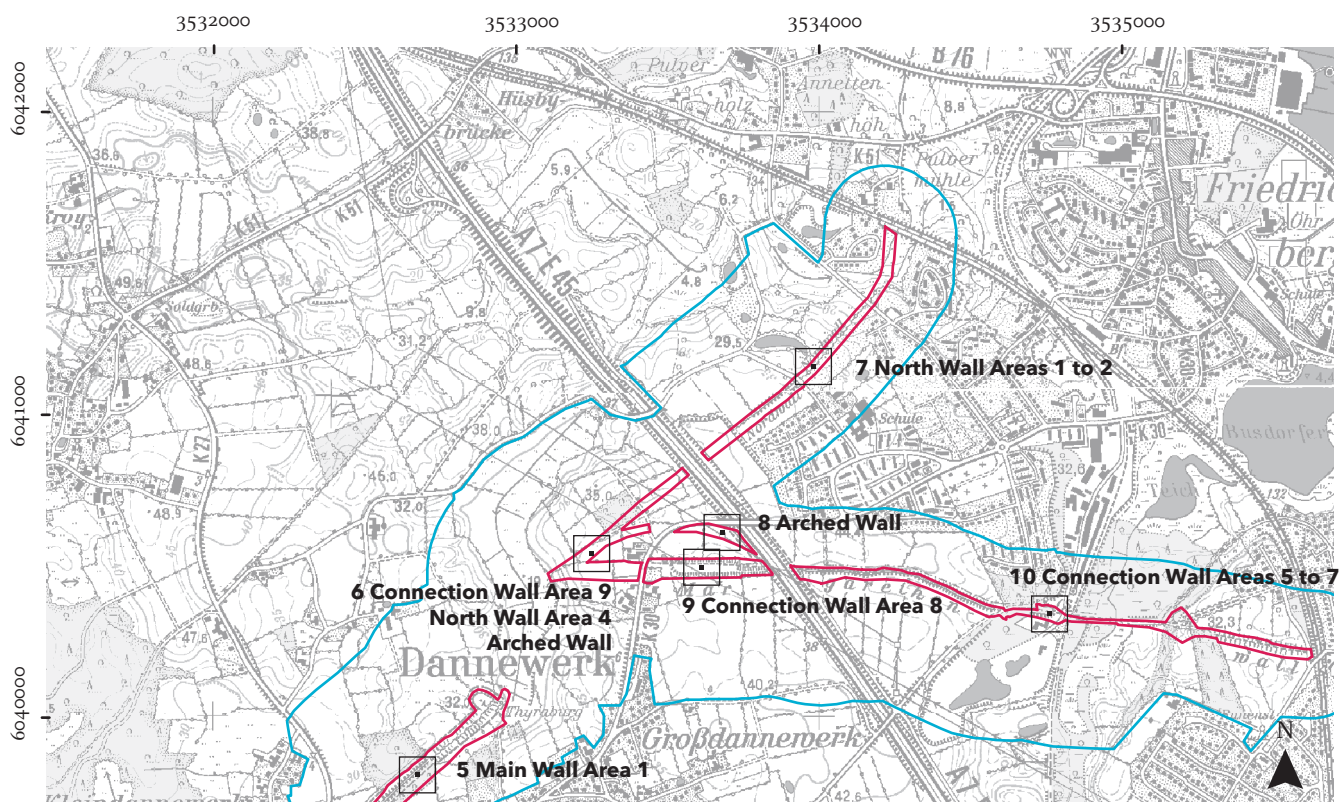


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 Centre Point
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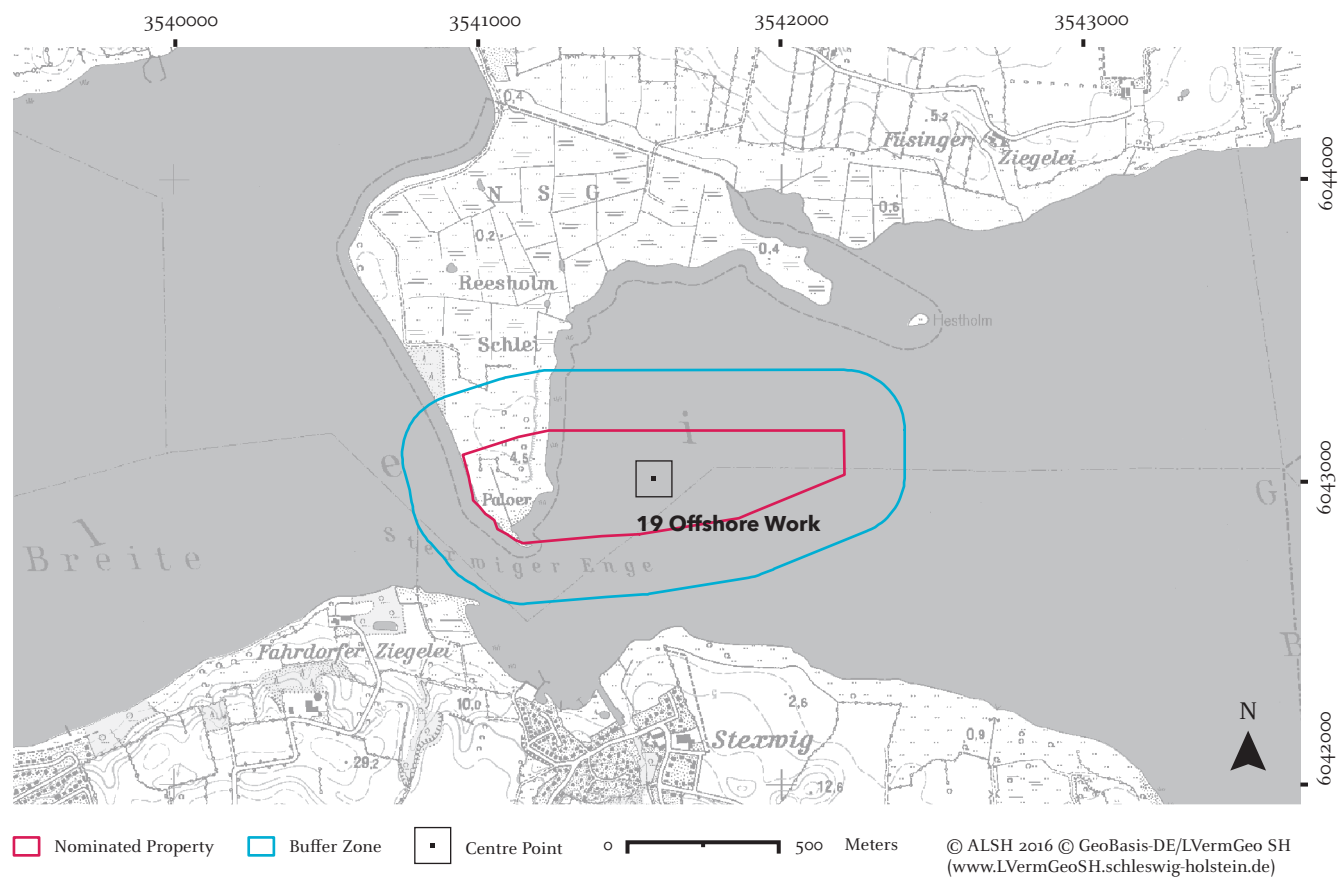
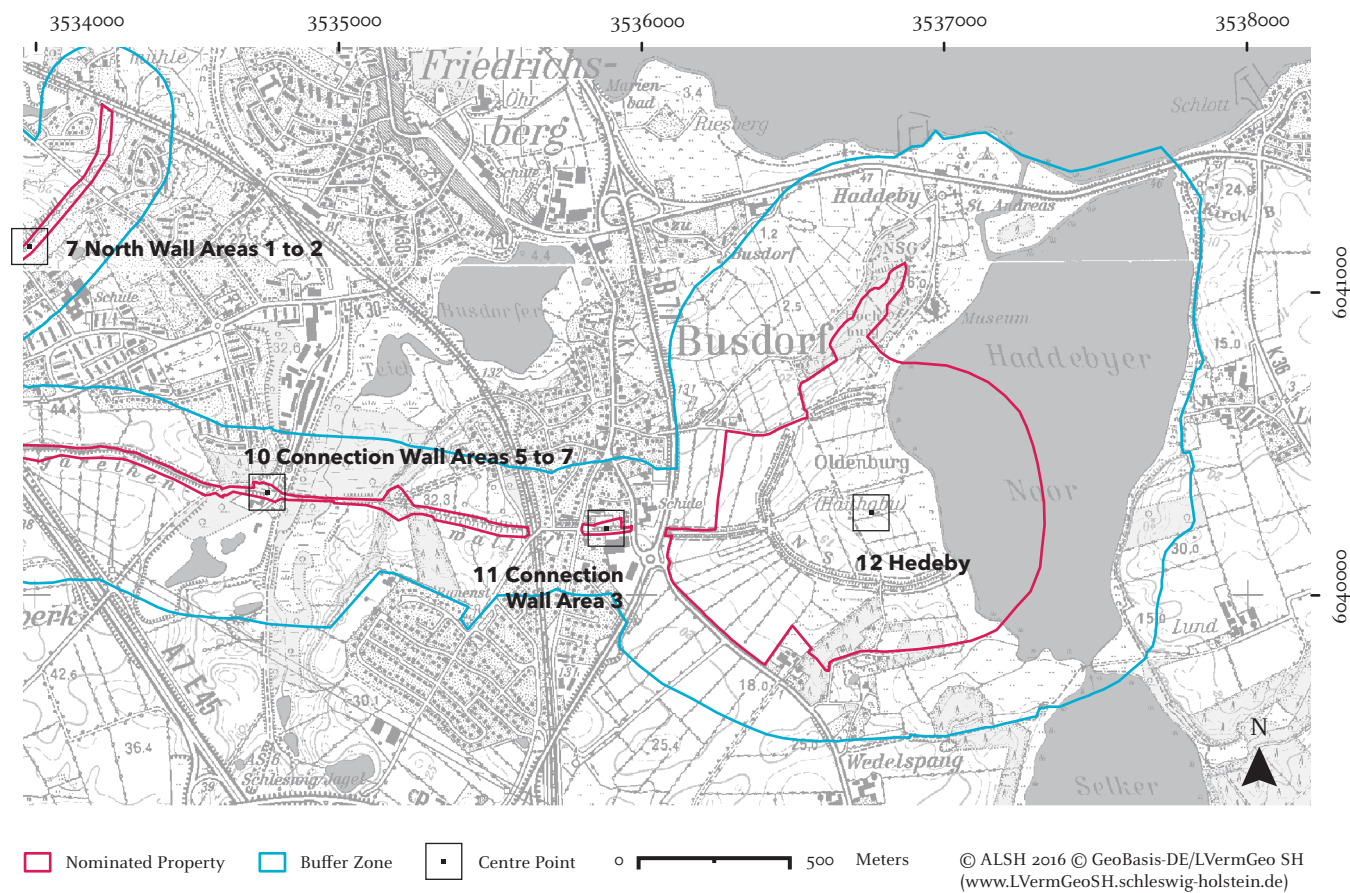




— Nominated Property
 — Buffer Zone
 Centre Point
 0 500 Meters
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— Nominated Property
 — Buffer Zone
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CRITERIA UNDER WHICH PROPERTY IS NOMINATED:

- CRITERION III:** *to bear a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living or which has disappeared;*
- CRITERION IV:** *to be an outstanding example of a type of building, architectural or technological ensemble or landscape which illustrates (a) significant stage(s) in human history.*

DRAFT STATEMENT OF OUTSTANDING UNIVERSAL VALUE**A) BRIEF SYNTHESIS**

The defensive system of the Danevirke and the trading centre of Hedeby consists of a spatially linked complex of earthworks, walls and ditches, settlements, grave fields and a harbour across the Schleswig Isthmus on the Jutland Peninsula in Northern Europe from the first and early second millennia AD. Between the eighth and eleventh centuries, features of the natural landscape and man-made structures were combined intentionally to form a border landscape at a natural bottleneck in the Viking-Age between the eighth and eleventh centuries AD. Here, at the Schleswig Isthmus, the singular geographic situation created a strategic link between Scandinavia, the European mainland, the North Sea and the Baltic Sea. A Baltic Sea inlet, rivers and extensive boggy lowlands constricted the north-south passage across the peninsula while, at the same time, providing the shortest and safest route between the seas across a narrow land bridge. Closely tied to the isthmus situation, Scandinavian, Slavonic, Frisian, Saxon and Frankish peoples and kingdoms met in this important borderland.

By means of Hedeby and the Danevirke it was possible to mark out and control the isthmus not only as the nodal point of important trading routes of the eighth to eleventh centuries but also as the crossover point between different domains. Thus, the border landscape of Hedeby and the Danevirke manifests political power and cultural interaction. The importance of the border landscape is showcased by large quantities of imports among the rich find assemblages in Hedeby. The remains of structures of a notably defensive character, buildings, harbour jetties, burials and settlement infrastructure of Hedeby and the Danevirke are well preserved. The archaeological evidence, including large amounts of organic finds, provides an outstanding insight into the significant political power exercised by Danish kings, the expansion of trading networks and cross-cultural exchange over several centuries in the Viking Age.

B) JUSTIFICATION FOR CRITERIA

CRITERION III:

Hedeby and the Danevirke are outstanding testimonies to the cultural traditions of Northern Europe in the Viking Age between the eighth and eleventh centuries AD. They have become key scientific sites for the interpretation of historic developments in Viking-Age Europe.

Hedeby and the Danevirke exerted great influence on the social and spatial organisation of Northern Europe. The sites developed as a result of the contact between Scandinavian, Frisian, Slavic and Saxon societies and the extensive Frankish – and later German – empires over several hundred of years at an isthmus in the borderland. The rich and diverse archaeological structures and finds, including large quantities of organic material, can still be interpreted in the present setting. As an outstandingly well preserved archaeological landscape, Hedeby and the Danevirke are manifestations of the development of political and economic power in old Denmark and bear witness to its conflicts, and to exchange and trade between people of various cultural traditions in the Viking Age.

CRITERION IV:

Hedeby and the Danevirke represent a significant cultural, political and economic phase in the history of Northern Europe, reflecting the specific nature and the development of borders in connection with the formation of states in Viking-Age Europe between the eighth and eleventh centuries AD. This landscape is a unique case study for the development over centuries of the architecture of fortified boundaries in conjunction with trading centres which are strategically integrated into their natural environment.

Hedeby and the Danevirke functioned as demarcations, fortifications and displays of power, and as a means of controlling exchange, trading routes, the economy and the territory at the crossroads between the emerging Danish kingdoms and the kingdoms and peoples of mainland Europe. Ramparts and other defences are preserved from more than six centuries, including wooden structures, stone and brick (then novel building materials), all of which were effectively combined with natural obstacles. Exceptional archaeological remains of the urban settlement, the harbour and the cemeteries have survived in Hedeby, testifying to different cultural traditions from the eighth to eleventh centuries. The archaeological evidence highlights the significance of Hedeby and the Danevirke as an outstanding example of a landscape in a borderland embodying territorial control and political and economic might.

C) STATEMENT OF INTEGRITY

Hedeby and the Danevirke encompass all the archaeological sites and structures of the sixth to twelfth centuries which are necessary to convey the significance of the

property. All important historical building phases and structures, the archaeological material and substance, the construction and layout and the situation and setting of the sites are well preserved and adequately intact as archaeological sites and scientific sources. Further features important for the functional and visual integrity of the setting are included in the buffer zone and the wider setting. Thus, the landscape is still largely intact with respect to its historical topography. Furthermore, the surrounding of the sites is free from any standing structures that would have a significant impact on the visual integrity of the nominated property.

The ground of Hedeby has never been developed and thus provides a multitude of options and research questions for archaeological study. Hedeby is the only emporium in Viking-Age Europe with a preserved town layout and harbour including shipwrecks and remains of landing stages which served as a market. The largely undisturbed site also contains exceptional archaeological relicts of wooden houses, infrastructural elements, workshops, graves and a broad variety of finds made of often perishable materials. Large parts, 26 km, of the preserved structures of the Danevirke are still visible as pronounced embankments or low ridges. Some parts of the sections, especially the western end of the Crooked Wall, are only known from archaeological surveys.

D) STATEMENT OF AUTHENTICITY

The credibility and truthfulness of the evidence for the interpretation of the Archaeological Border Landscape of Hedeby and the Danevirke is conveyed by the genuine archaeological material and substance, the construction and layout and the location and setting of the archaeological sites. All archaeological remains of the nominated property have retained their authentic construction and layout since the time of their primary use. The archaeological material and substance of the nominated property is also entirely authentic. All building phases, features and their remains relevant to this nomination date to the sixth to twelfth centuries or are likely to do so. Important topographical conditions and features which were historically involved in the choice of site and the layout of the structures are still recognisable even today. Recent repairs and restorations can be clearly distinguished from the historical material and can be traced back thanks to complete and detailed archaeological documentation.

E) REQUIREMENTS FOR PROTECTION AND MANAGEMENT

The nominated property, its buffer zone and its wider setting are protected in the best possible way by the legal systems in place (e.g. listed monuments, nature protection areas, landscape protection areas). In addition, the majority of sites are owned by public bodies. The values of the sites are also considered and respected in public planning processes. The various protection and planning mechanisms and acts which apply

directly to the landscape are sufficient to guarantee the protection and preservation of the proposed Outstanding Universal Value of the nominated property.

A site management plan was implemented in 2014. Here, all important stakeholders commit to the aim of protecting, preserving, monitoring and promoting the proposed Outstanding Universal Value of the nominated property. The values, attributes, integrity and authenticity of the nominated property are safeguarded and managed within the plan, representing the main objective.

Funding for the site management of the property is provided by the Federal State of Schleswig-Holstein and other public owners.

In the long run, the core management issues are to increase awareness of the value of Hedeby and the Danevirke as an archaeological landscape and to retain that value by all important stakeholders participating in its management. The Management Plan aims at further integrating Hedeby and the Danevirke into their cultural, social, ecological and economic settings and to increase their social value to make them a motor for sustainable development in the region. The management works on improving the active network between the stakeholders of Hedeby and the Danevirke in order to maintain and enhance support from local communities and other stakeholders and to secure financial support so as to improve the maintenance and presentation of the sites and their setting.

Future threats to the landscape, such as wind turbines, land use, housing developments and visitor impact, as well as natural agents such as plants and animal activities, need to be tackled collaboratively. Some specific threats such as damage to Valdemar's Wall due to exposure or damage by specific plants or animals such as *teredo navalis*, require additional research and training and the exchange of expertise and mutual support.

**NAME AND CONTACT
INFORMATION OF
OFFICIAL LOCAL
INSTITUTION**

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Fax: +49 4621 387-55

E-mail: info@alsh.landsh.de

Web address: www.archaeologie.schleswig-holstein.de

1

**Identification of the
property**



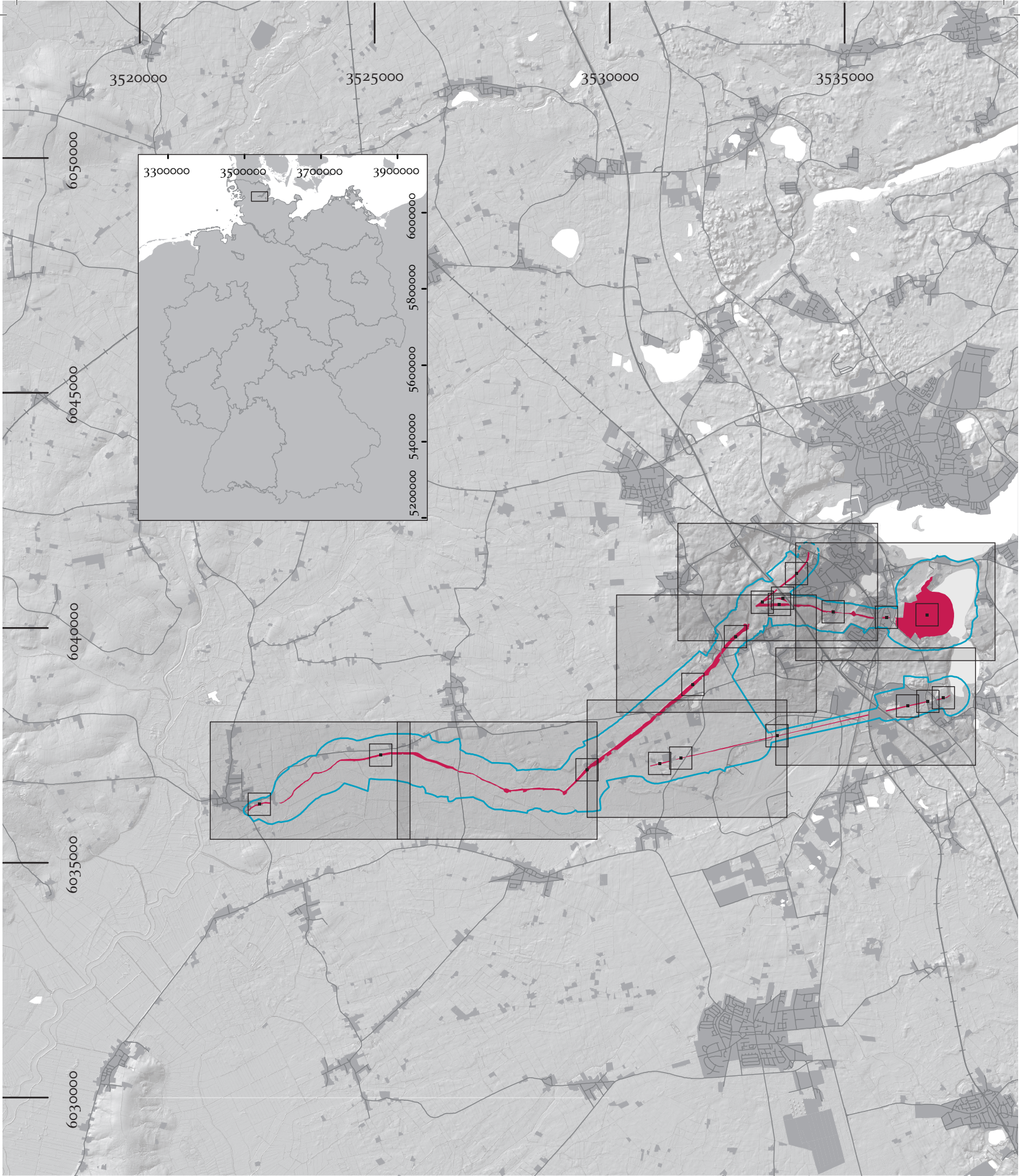
1 IDENTIFICATION OF THE PROPERTY

1.A STATE PARTY	Germany
1.B STATE, PROVINCE OR REGION	Schleswig-Flensburg and Rendsburg-Eckernförde Administrative Regions, State of Schleswig-Holstein
1.C NAME OF PROPERTY	The Archaeological Border Landscape of Hedeby and the Danevirke
1.D GEOGRAPHICAL COORDINATES TO THE NEAREST SECOND	See following page.
1.E MAPS AND PLANS SHOWING THE BOUNDARIES OF THE NOMINATED PROPERTY AND BUFFER ZONE	<p>See maps with large-scale detail and topographic elements, such as neighbouring settlements, land parcels, buildings, traffic routes, and quantitative representation of relief on the pages 32-51.</p> <p>All maps are also annexed to the nomination.</p>
1.F AREA OF NOMINATED PROPERTY (ha) AND PROPOSED BUFFER ZONE (ha)	<p>Area of nominated property: 227.55 ha</p> <p>Buffer zone 2670 ha</p> <p><u>Total 2897.55 ha</u></p>

GEOGRAPHICAL COORDINATES TO THE NEAREST SECOND

ID	Name of the component part	Municipalities	Coordinates of the centre point	Area of nominated property (ha)
1	Crooked Wall Area 4	Ellingstedt	N54°27'26" E9°20'52"	1,4
2	Crooked Wall Areas 3 to 4	Ellingstedt	N54°27'59" E9°23'16"	16,1
3	Crooked Wall Areas 1 to 2 Main Wall Areas 4 to 5	Ellingstedt/Danneverk	N54°27'48" E9°27'19"	25,2
4	Main Wall Areas 2 to 3	Danneverk	N54°28'46" E9°29'25"	14,4
5	Main Wall Area 1	Danneverk	N54°29'19" E9°30'15"	6,3
6	Connection Wall Area 9 North Wall Area 4 Arched Wall	Danneverk	N54°29'42" E9°30'48"	3,6
7	North Wall Areas 1 to 2	Town of Schleswig	N54°30'02" E9°31'28"	3,6
8	Arched Wall	Danneverk	N54°29'45" E9°31'12"	0,8
9	Connection Wall Area 8	Danneverk	N54°29'41" E9°31'08"	2,5
10	Connection Wall Areas 5 to 7	Busdorf / Danneverk	N54°29'36" E 9°32'12"	5,8
11	Connection Wall Area 3	Busdorf	N54°29'32" E9°33'14"	0,6
12	Hedeby	Busdorf/Fahrdorf	N54°29'28" E9°33'59"	95
13	Kovirke Area 1	Danneverk	N54°27'52" E9°28'45"	0,9
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20	East Wall Area 1A to 1C	Fleckeby / Windeby	N54°28'57" E9°44'53"	1,9
21	East Wall Area 2D	Windeby	N54°28'40" E9°46'27"	0,5
22	East Wall Area 2E to 2F	Windeby	N54°28'41" E9°47'02"	1,9
Hedeby and the Danevirke			N 54°29'33" E 9°34'02"	227,55
				Total area
				Area of the Buffer Zone (ha) = 2670

Connection Wall Areas 1-2 and 4 were destroyed in modern times and are therefore not included in the nominated property.



Centre Point



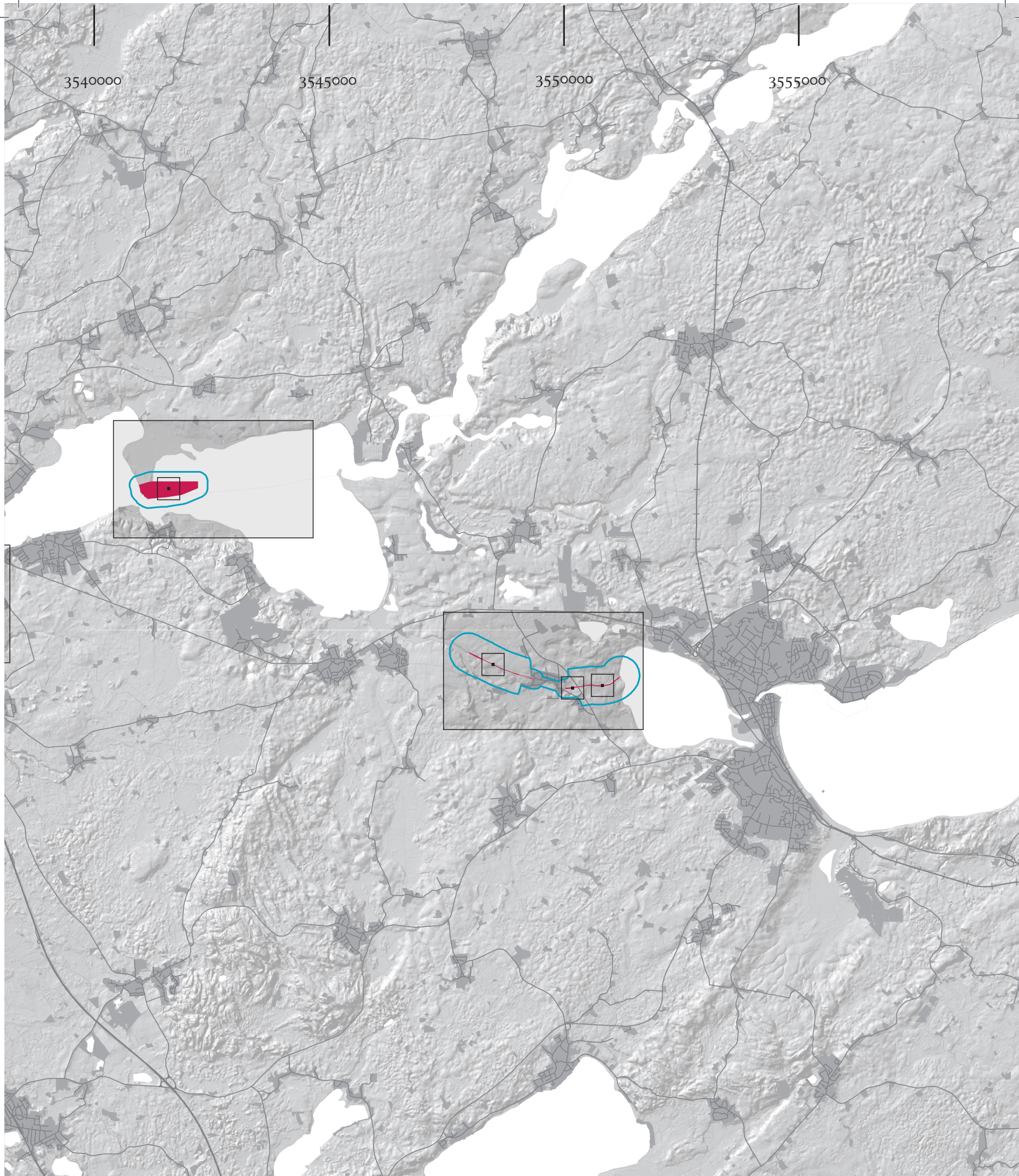
Nominated Property



Buffer Zone



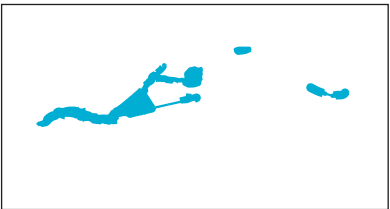
Map Section

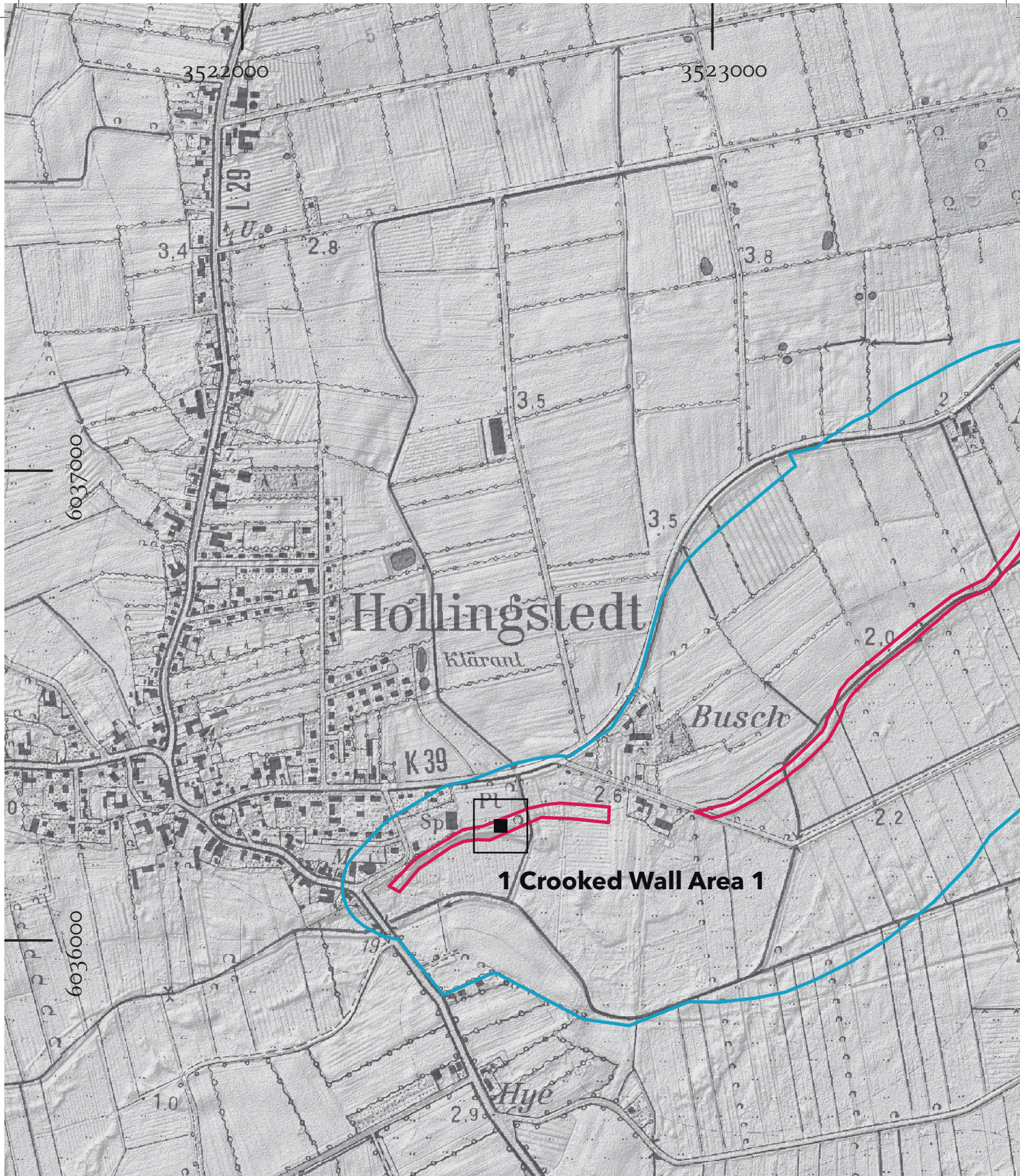


1 centimeter = 1.000 meters

0 2000 Meters

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Nominated Property

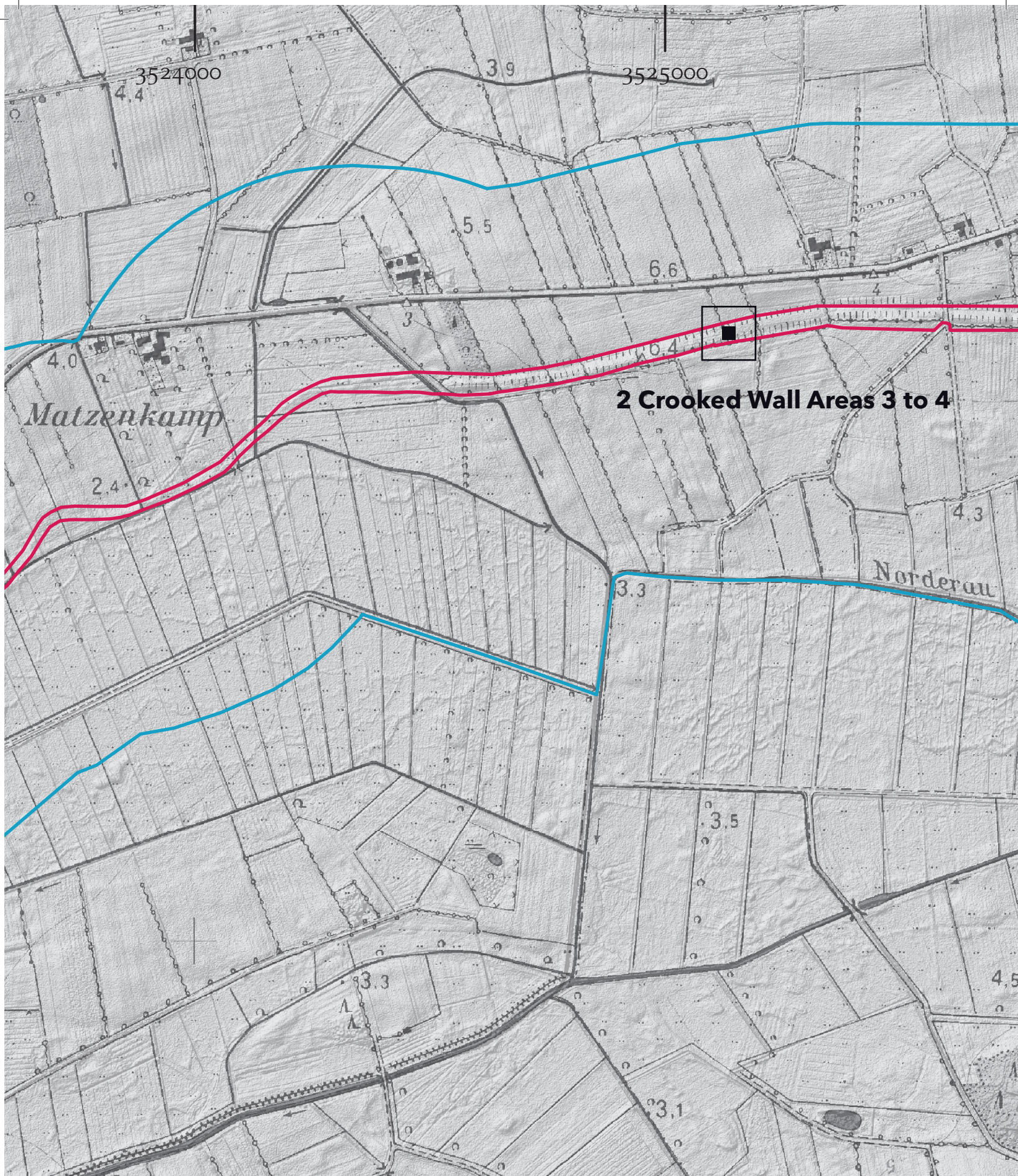


Buffer Zone



Centre Point

0 500 Meters





Nominated Property



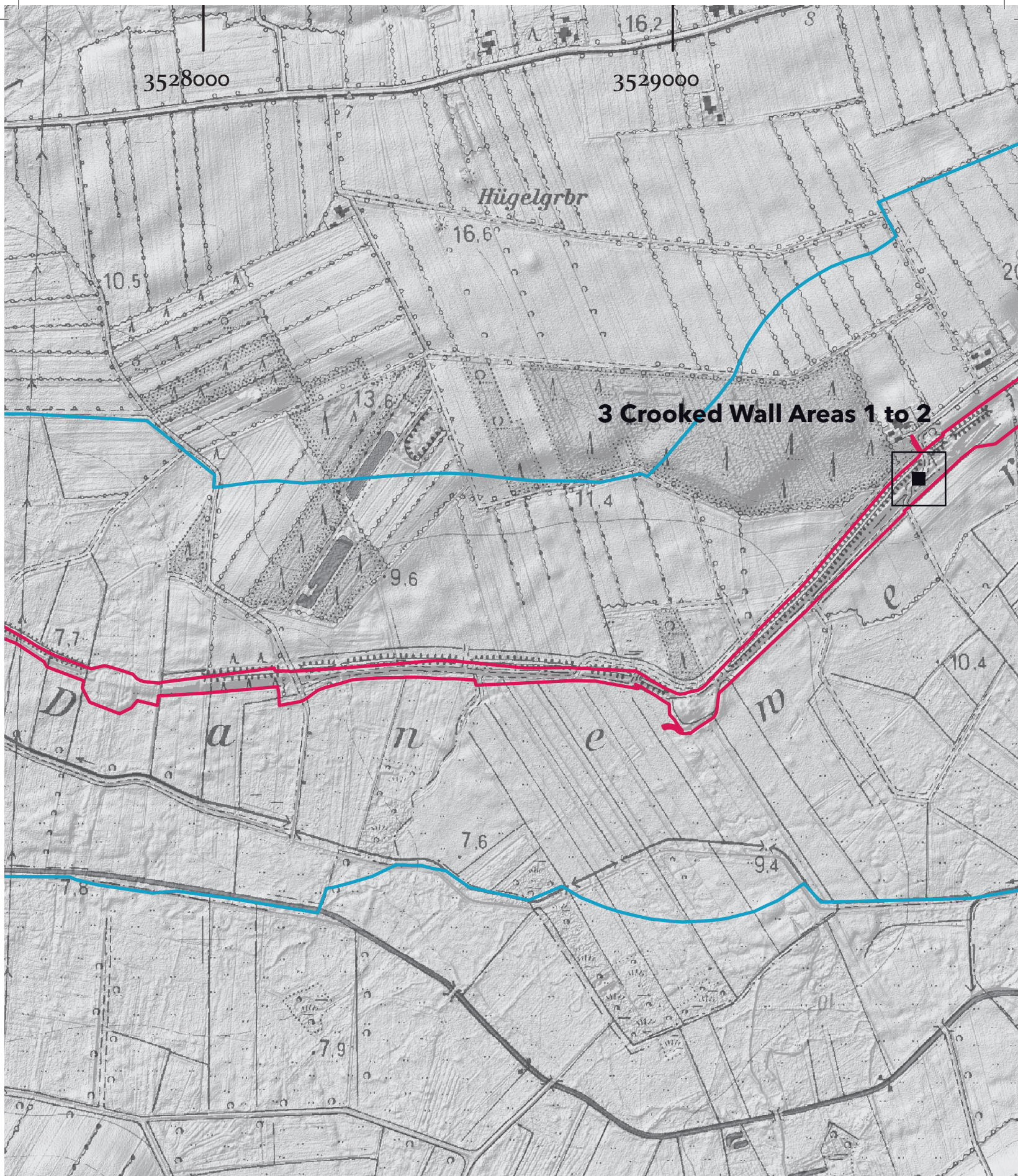
Buffer Zone

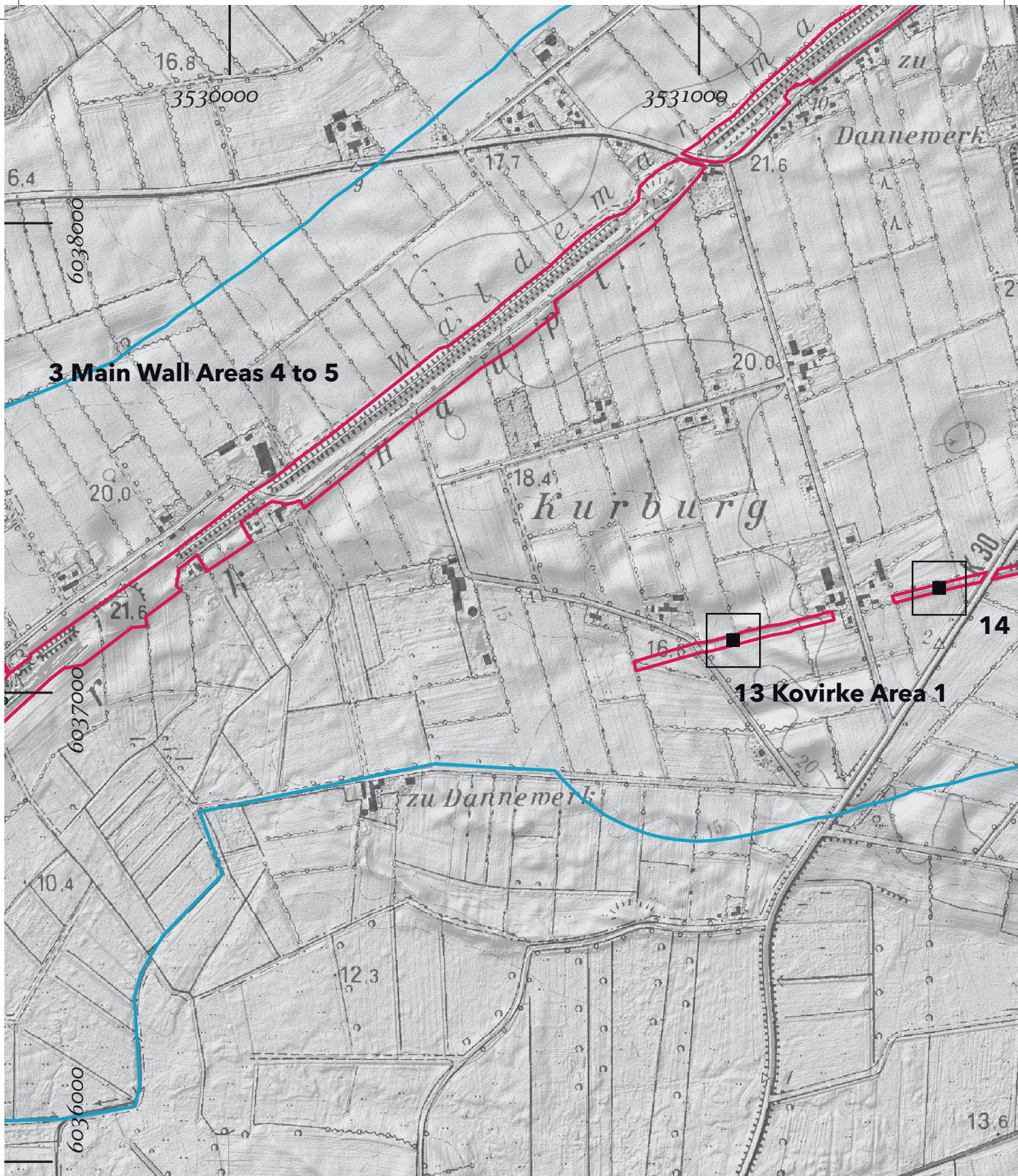


Centre Point



500 Meters





Nominated Property



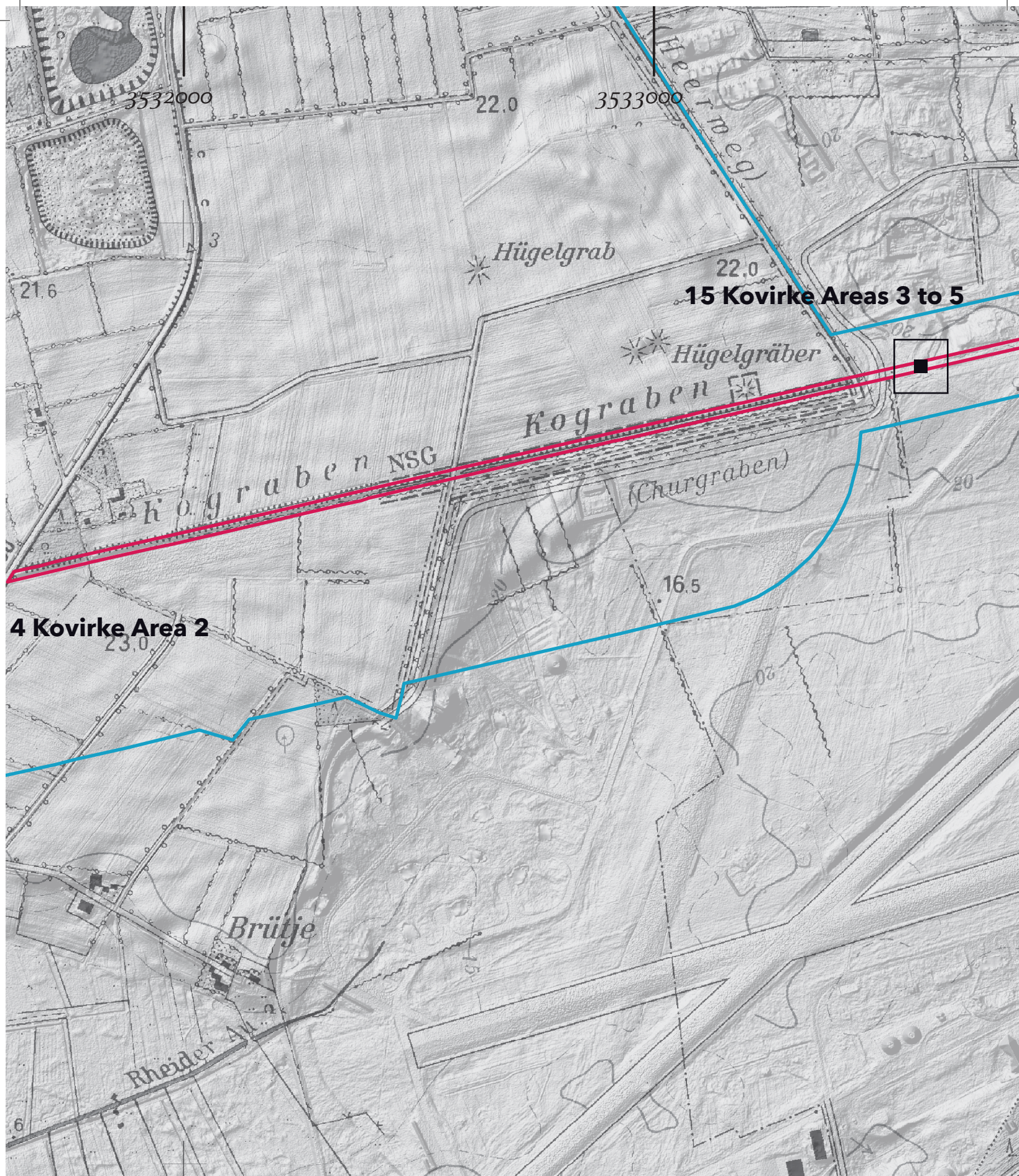
Buffer Zone



Centre Point



500 Meters





Nominated Property

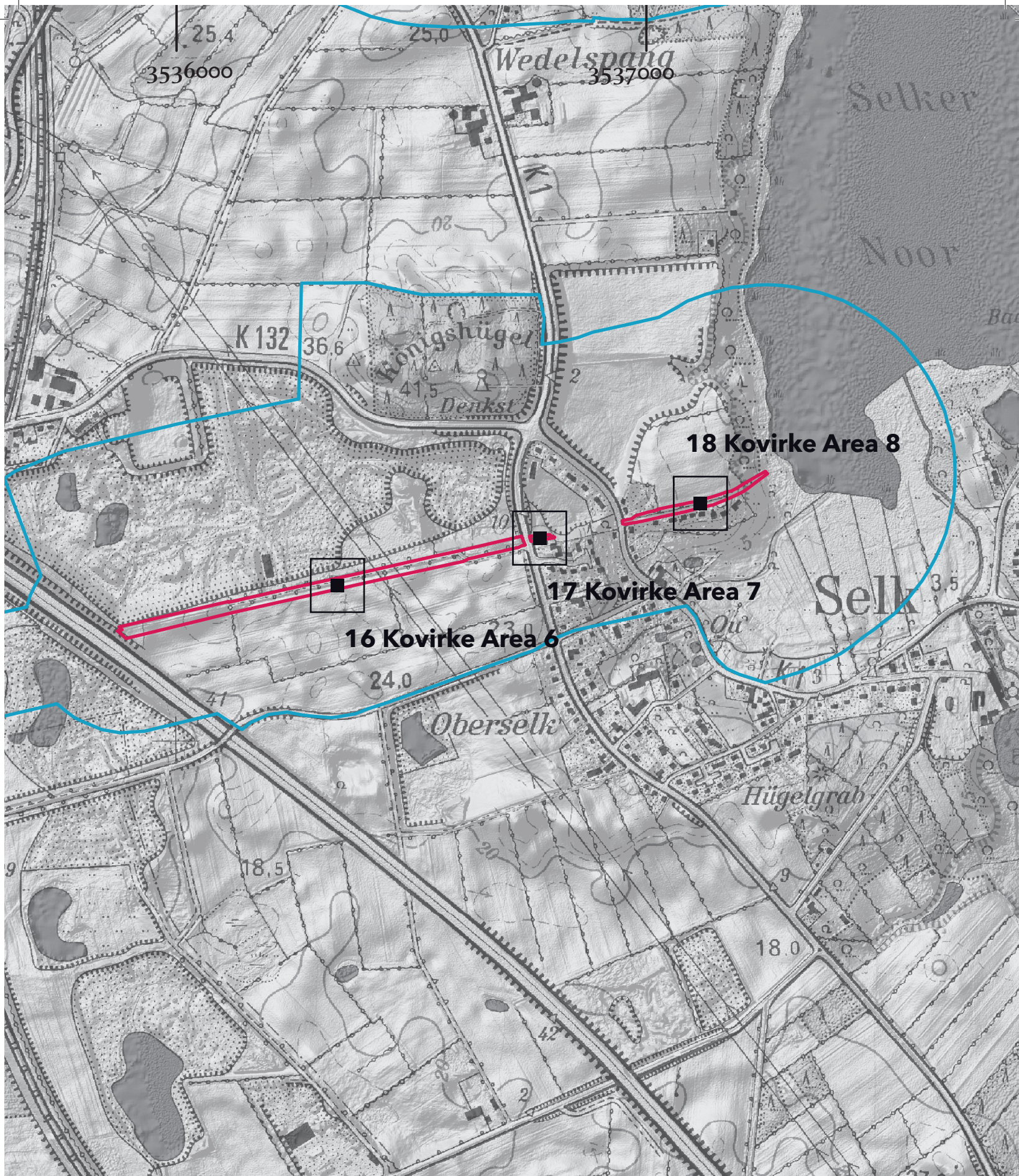


Buffer Zone



Centre Point

0 500 Meters





4 Main Wall Areas 2 to 3



Nominated Property



Buffer Zone



Centre Point

0 500 Meters

6 Connection Wall Area 9
North Wall Area 4
Arched Wall

8 Arched Wall

9 Connection Wall Area 8

Dannewerk

Thyraburg

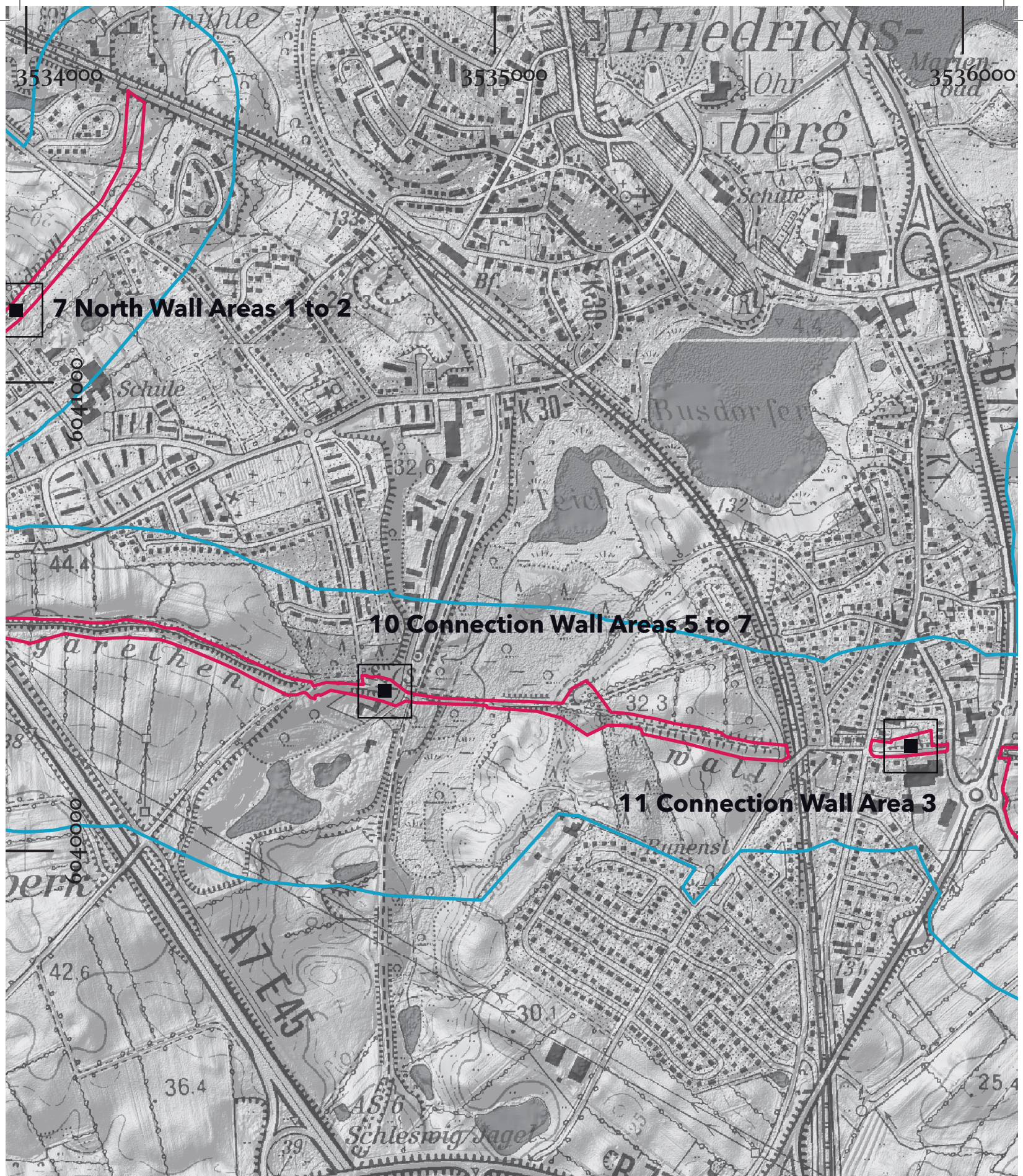
Großdannewerk

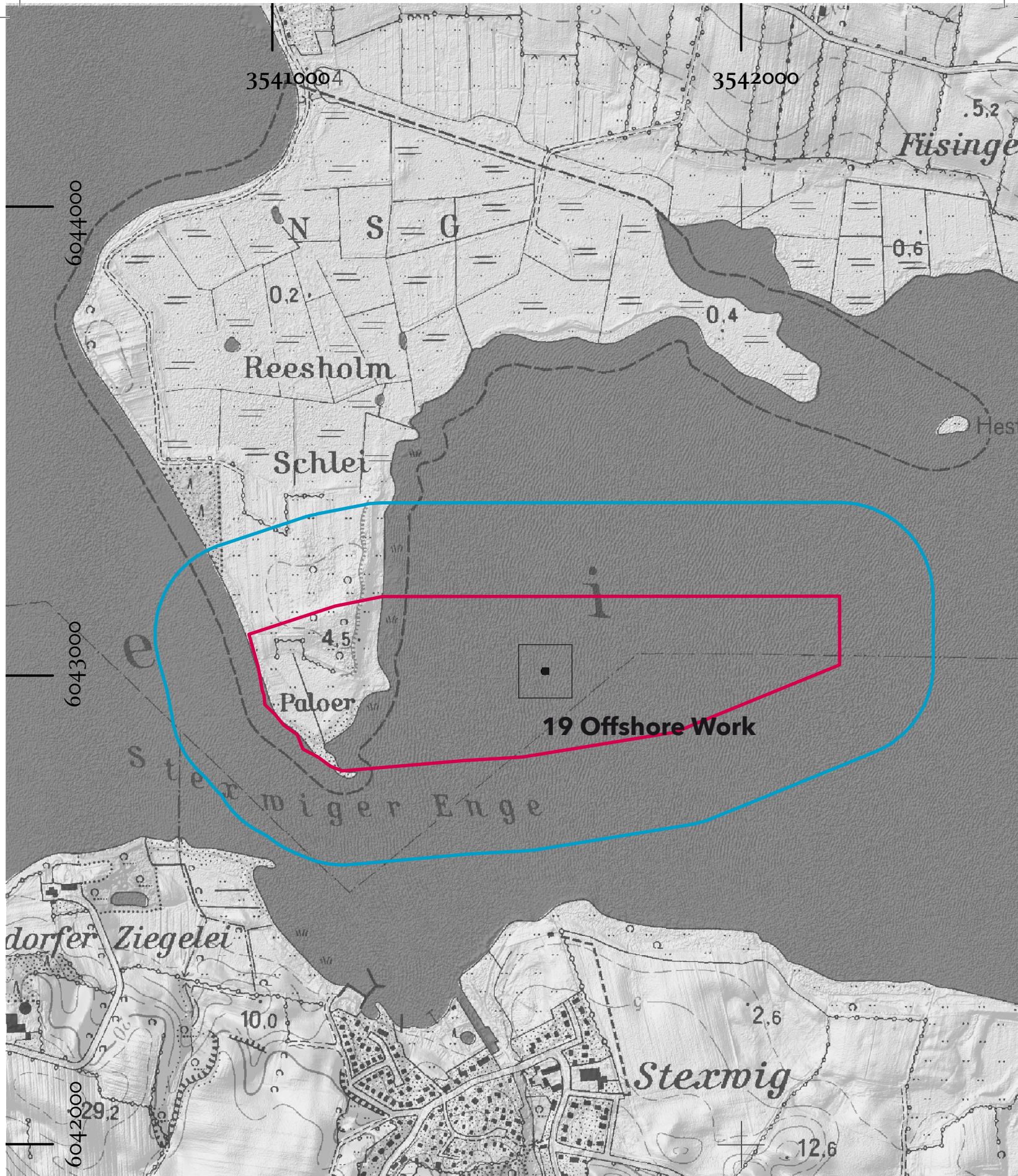
5 Main Wall Area 1

Rotenkrug

Ochseneck







Nominated Property

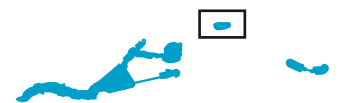


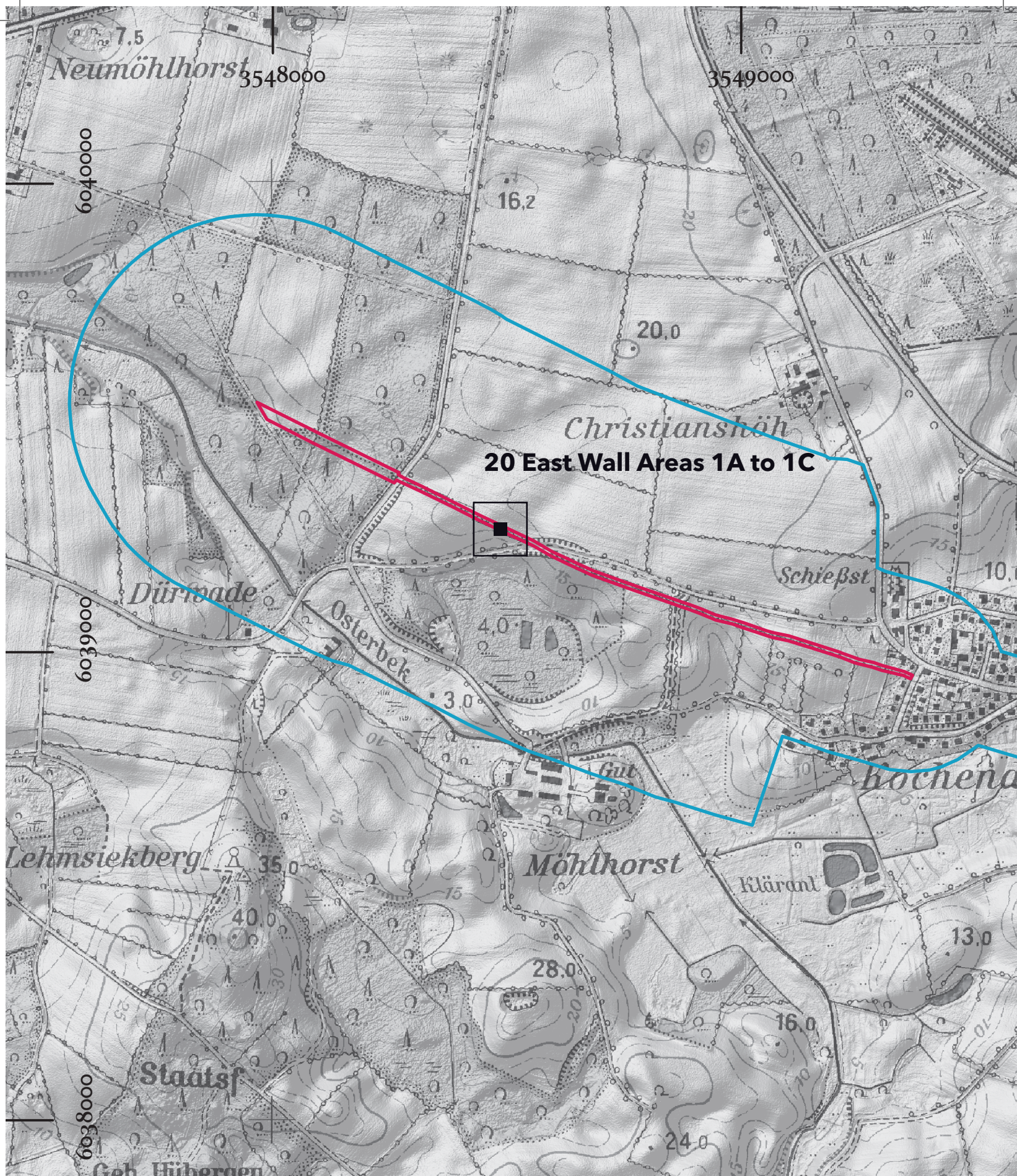
Buffer Zone



Centre Point

0 500 Meters





Nominated Property



Buffer Zone



Centre Point



500 Meters



He (King Godofredus) took the merchants away with him and travelled by ship with all his men to the harbour known as Sliesthorp. There he stayed for several days and resolved to protect the border separating his kingdom from Saxony with a bulwark from the eastern gulf which is named Ostersalt to the western seas, along all the northern banks of the river Aegidora (Eider), with but a single gate through which the horsemen could leave and enter. After he had shared this work among the leaders of his troops, he returned home again.

REPORT IN THE ROYAL FRANKISH ANNALS OF 808: THE FIRST DESCRIPTION OF THE DANEVIRKE (AS MUNIMENTUM VALLI) TOGETHER WITH THE EMPORIUM OF HEDEBY (KNOWN FROM FRANKISH SOURCES AS SLIESTHORP).

2

Description





2.A DESCRIPTION OF PROPERTY

INTRODUCTION

Hedeby and the Danevirke are located in the districts of Schleswig-Flensburg and Rendsburg-Eckernförde in the state of Schleswig-Holstein, Federal Republic of Germany, close to the towns of Schleswig and Eckernförde. The nominated property consists of 22 separate archaeological sites which constitute the defensive system of the Danevirke and the settlement of Hedeby.

Hedeby and the Danevirke form a spatially linked complex of linear defensive works, settlements, cemeteries and a port. The most important parts of the Danevirke extend across the Schleswig Isthmus, a bottleneck on the Jutland Peninsula which, in effect, served as a natural traffic barrier. Hedeby lies protected on the western shore of Hedeby Noor, a marginal bay in the innermost part of Schlei Fjord. Schlei Fjord extends about 42 km inland from the Baltic Sea, while in the west there are bogs, islands and the mud flats of the Wadden Sea as well as expansive boggy lowlands along rivers. The defensive system extends beyond the Schleswig Isthmus and includes parts of Schlei Fjord as well as the transition to the Schwansen region south of the fjord. Hedeby is the modern Danish name for the Viking Age settlement which is known in German as Haithabu. However, the place had different names in contemporary written sources. The name Haithabu is the accusative form of the old Norse Haithabyr, used on the Erik rune stone near Hedeby. This name is known from old English and Norse written sources to mean “settlement in the heathland”. In Frankish and Saxon sources, however, the place was known as Sliethorp or, later, Sliaswich, meaning “settlement at the Schlei”. The name of the modern town Schleswig is derived from that variation of the denomination. Danevirke or Dannevirke is the Danish name for the linear fortification which is called the Danewerk in German. In contemporary written sources the name first appears in its Latin form as munimentum valli and only later as Danewerch on the inscription on the grave of Valdemar I (d. 1182).

In the second half of the first millennium AD, the Schleswig Isthmus was the point at which areas inhabited by various ethnic groups met: the Danes in the north, the Frisians in the west, the Saxons in the south and the Slavs in the southeast. The harbour of Hedeby made the most of this favourable location for trade and communication. The border landscape of Hedeby and the Danevirke became the crossroads for two major trading routes of the time in Northern and Western Europe: the ancient north-south land route along the middle of the Jutland Peninsula and the new shortcut between the Baltic Sea and the North Sea across the narrow land bridge between the Schlei inlet and the rivers flowing into the Wadden Sea.

◀
AERIAL PHOTOGRAPH OF
HEDEBY AND THE SEMICIR-
CULAR WALL

The urban settlement of Hedeby is connected to the Danevirke by the semi-circular earthen rampart functioning as the “town wall” (Semicircular Wall). The entire area within the ramparts was inhabited and the settlement consisted of a dense, regular network of paths and roads which divided the interior into plots. To the southwest



of the settlement there is a large Viking Age cemetery. It is presumed that the port facilities were situated along the entire strip of shoreline enclosed by both ends of the Semicircular Wall and in front of the settlement area. Included in the nominated component part are also archaeological remains of a further settlement and cemetery situated outside the southwestern part of the Semicircular Wall, referred to as the Southern Settlement and Southern Cemetery. Overlooking the northern parts of the Hedeby settlement is the Hill Fort (Hochburg). At the southern foot of the Hill Fort, to the north of the Semicircular Wall, coffin graves have been discovered. All of these structures also form part of the nominated component.

The defensive system of the Danevirke consists of several segments. They combine natural obstacles, such as open water and peaty lowlands, with man-made structures, such as earthen ramparts, palisades, ditches, stone and brick walls and an offshore work in the water. The methods employed in constructing the Danevirke deliberately integrated features in the landscape such as fjords, rivers, valleys, lakes and wetlands. In between specific natural barriers, the ramparts followed the shortest distance requiring the least effort to gain the most protection. Built in different phases and sections and subject to varying deterioration over time, the rampart structures of the Danevirke differ greatly in height and width.

LANDSCAPE AND GEOGRAPHY

From the mainland of Central Europe, the Jutland Peninsula extends northwards for 400 km, its width ranging from 70 to 90 km. This long, extended peninsula forms a natural connection between the Scandinavian world, with its maritime character, and the European mainland. On the Schleswig Isthmus, the north-south passage was constricted to a width of about 15 km in the centuries around 1000.

The Schleswig Isthmus, the site of Hedeby and the Danevirke, is encircled by the river system of the Eider and the Schlei. The Eider empties into the Wadden Sea at Dithmarschen, which is further to the south and was easy to reach at that time. With the Treene, its tributary, it forms a shipping channel well into the interior of the country, as far as Hollingstedt, where the ground is accessible all the way up to the riverbank, providing good conditions for a landing stage. The middle reaches of the Treene and the lower reaches of the Eider follow glacial valleys cut through the Old Drift moraine of the Saalian ice age by the melt waters of the Weichselian ice age. In the west, this is followed by the marshes of the west coast of Schleswig-Holstein, formed by deposits left by the North Sea since the end of the last glacial period. Ships were also able to pass the entire length of the Schlei to Hedeby, on Haddeby Noor. The bay, just under a square kilometre in size, was formed during the Weichselian ice age as a tunnel valley at the end of the Schlei. The Schlei itself developed from a tunnel valley deepened by melt water. Its irregular shape was also affected by kettle holes at its western end at Schleswig and by glacial abrasion at its mouth to the east. The landscape to the north and south of the Schlei is also heavily marked by moraines from the last glacial period. The Weichselian ice age glacier was at its largest at Schleswig.

◀
AERIAL PHOTOGRAPH OF
THE CROOKED WALL, IN
THE FOREGROUND ARE THE
REMAINS OF 1864

Middle Jutland

Jutland Peninsula

South Jutland

Geest

Angel

Schlei

Schwansen

Eckernförder Bay

Kiel Bay

Hill Land

Geest

Marshes

h Sea

Marshes

OF HEDEBY AND THE DANEVIRKE

SCHLESWIG ISTHMUS OF THE JUT-

INSULA

Middle Jutland

Jutland Peninsula

South Jutland

Geest

Angel

Schlei

Schwansen

Eckernförder Bay

Kiel Bay

Hill Land

Geest

Marshes

h Sea

Marshes

OF HEDEBY AND THE DANEVIRKE

SCHLESWIG ISTHMUS OF THE JUT-

INSULA

Middle Jutland

Jutland Peninsula

South Jutland

Geest

Angeln

Schlei

Schwansen

Hedeby and Danevirke

Eckernförder Bay

Kiel Bay

North Sea

Geest

Hill Land

Marshes

Marshes

SHLEWIG ISTHMUS OF THE JUTLAND PENINSULA

Middle Jutland

Jutland Peninsula

South Jutland

Geest

Angel

Schlei

Schwansen

Eckernförder Bay

Kiel Bay

Hedeby and Danevirke

Hill Land

Geest

Marshes

h Sea

Marshes

N OF HEDEBY AND THE DANEVIRKE
SCHLESWIG ISTHMUS OF THE JUT-
INSULA

Middle Jutland

Jutland Peninsula

South Jutland

Geest

Marshes

Angeln

Schlei

Hedeby and Danevirke

Schwansen

Eckernförder Bay

Kiel Bay

North Sea

Hill Land

Geest

Marshes

Schleswig Isthmus of the Jutland Peninsula

Middle Jutland

Jutland Peninsula

South Jutland

Geest

Marshes

Angeln

Schlei

Hedeby and Danevirke

Schwansen

Eckernförder Bay

Kiel Bay

North Sea

Hill Land

Geest

Marshes

Schleswig Isthmus of the Jutland Peninsula

Middle Jutland

Jutland Peninsula

South Jutland

Marshes

Geest

Angeln

Hedeby and Danevirke

Schlei

Schwansen

Eckernförder Bay

Kiel Bay

Hill Land

Geest

Marshes

North Sea

Baltic Sea

Schleswig Isthmus of the Jutland Peninsula

Middle Jutland

Jutland Peninsula

South Jutland

Geest

Angeln

Schlei

Schwansen

Hedeby and Danevirke

Eckernförder Bay

Kiel Bay

North Sea

Geest

Hill Land

Marshes

Marshes

SHLEWIG ISTHMUS OF THE JUTLAND PENINSULA

Middle Jutland

Jutland Peninsula

South Jutland

Marshes

Geest

Angeln

Hedeby and Danevirke

Schlei

Schwansen

Eckernförder Bay

Kiel Bay

Hill Land

Geest

Marshes

North Sea

Baltic Sea

Schleswig Isthmus of the Jutland Peninsula

Middle Jutland

Jutland Peninsula

South Jutland

Marshes

Geest

Angeln

Schlei

Hedeby and Danevirke

Schwansen

Eckernförder Bay

Kiel Bay

North Sea

Hill Land

Geest

Marshes

Schleswig Isthmus of the Jutland Peninsula

Middle Jutland

Jutland Peninsula

South Jutland

Marshes

Geest

Angeln

Schlei

Hedeby and Danevirke

Schwansen

Eckernförder Bay

Kiel Bay

North Sea

Hill Land

Geest

Marshes

Schleswig Isthmus of the Jutland Peninsula

Middle Jutland

Jutland Peninsula

South Jutland

Geest

Angeln

Schlei

Schwansen

Hedeby and Danevirke

Eckernförder Bay

Kiel Bay

Hill Land

Geest

Marshes

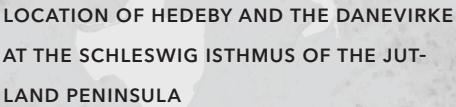
h Sea

Marshes

OF HEDEBY AND THE DANEVIRKE

SCHLESWIG ISTHMUS OF THE JUT-

INSULA



LOCATION OF HEDEBY AND THE DANEVIRKE AT THE SCHLESWIG ISTHMUS OF THE JUT- LAND PENINSULA



Baltic Sea

Lübeck Bay

It drained off towards the west, causing the Old Drift moraine landscape already eroded by the Saalian glacial period to be overlain with sand and gravel deposits. The glacier's alluvial fan created the sandur of the Schleswig Geest and thus the geological basis for the Schleswig Isthmus.

Today the landscape is characterised by a combination of cultivated fields separated by hedgerows, smaller pockets of woodland and several smaller villages and separate farmsteads. Opposite Hedeby, north of Schlei Fjord, lies the town of Schleswig. The town of Eckernförde marks the opposite side of the former Baltic Sea inlet where the Danevirke ends in the east.

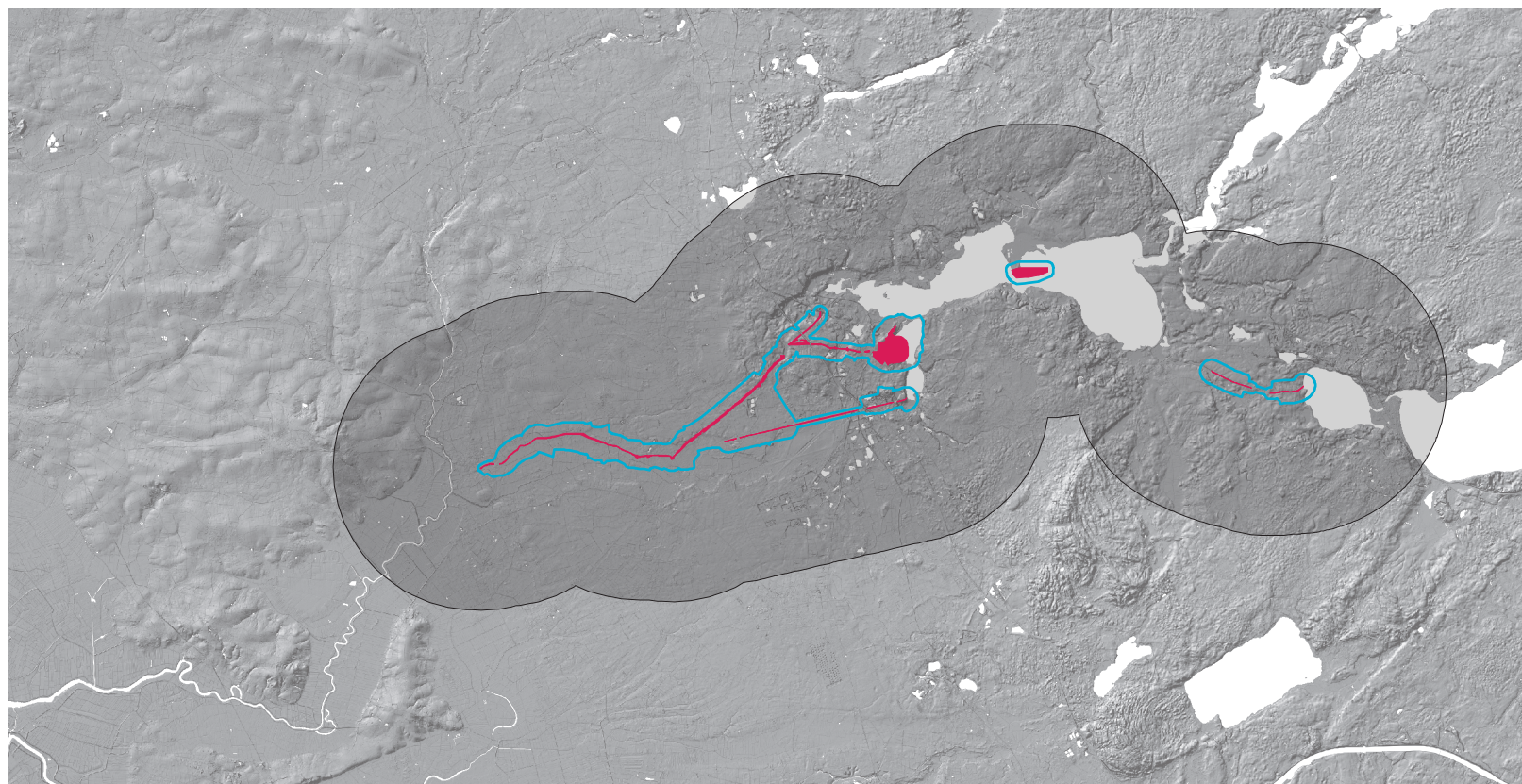
EXTENT OF THE PROPERTY

The nominated property comprises all known sections of the Danevirke as well as all sites belonging to the complex of Hedeby. The boundaries of the nominated property are drawn around the known archaeological remains or those believed to be.

The Danevirke consists of the sections of the Crooked Wall, the Main Wall, the North Wall, the Connection Wall, the Kovirke, the Offshore Work and the East Wall, including all archaeologically verified ramparts, walls, ditches and wooden structures. Large parts of the preserved structures, 26 km in all, are still visible as pronounced embankments or low ridges. Parts of some sections, especially the western end of the Crooked Wall, are only known from archaeological surveys.

Hedeby consists of the settlement area and harbour within the Semicircular Wall, a hillfort on a moraine ridge to the north and a large cemetery, as well as further settlements to the south of the Semicircular Wall. At present, the Semicircular Wall is the most visible feature in the landscape. This rampart also forms part of the defensive system of the Danevirke. The remains of the settlement, the cemeteries and the harbour are largely invisible. The water level has risen about 0.8 m since the eleventh century. This has created a context in which much of the former settlement is now preserved under water. In front of the town wall, within the former harbour area, the presence of several sunken ships has been established.

Natural features in the landscape such as fjords, rivers, valleys, lakes and wetlands are not part of the nominated component but are protected by the buffer zone and the wider setting. The buffer zone was designed to surround all the archaeological sites of Hedeby and the Danevirke as a means of safeguarding the integrity of their immediate setting and to connect most of their constituent sites. An additional so-called “wider setting” was set up to link all the individual sites of the nominated property and protect other aspects of the setting, especially the visual integrity and the integrity of the historic landscape of the monuments. The borders of the wider setting extend up to 5 km around the nominated component parts.



HISTORICAL SURROUNDINGS

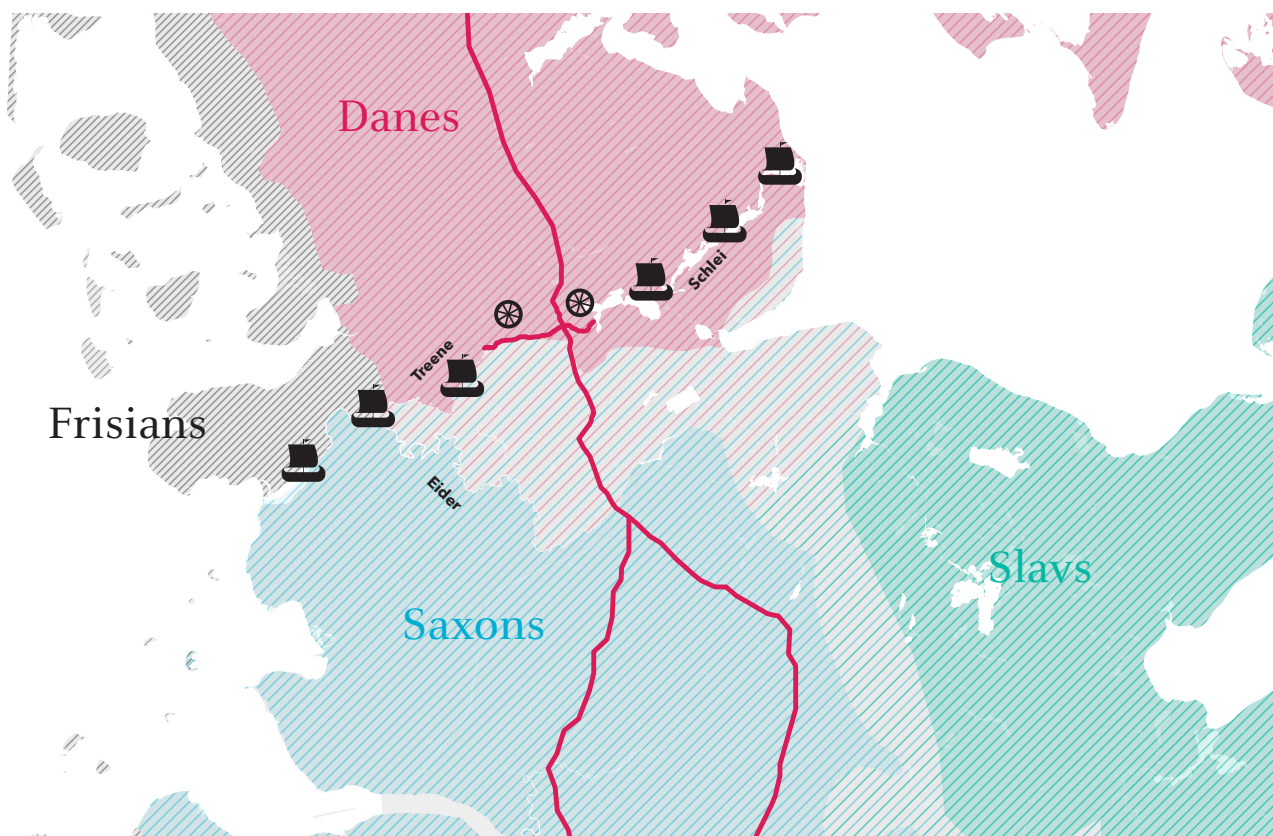


OVERVIEW OF HEDEBY AND
THE DANEVIRKE WITH THE
NOMINATED PROPERTY,
BUFFER ZONE AND WIDER
SETTING

During the Migration Age in the fourth and fifth centuries, the population of the Jutland Peninsula thinned out considerably, as can be seen from the low number of known archaeological finds. For this reason, it was migration after that time which particularly affected the distribution of settlements on the peninsula during the Viking Age.

Written sources from the sixth century speak of the people of the Danes in the Jutland Peninsula. According to archaeological sources, tribes from West Friesland settled on the North Sea coast to the west of the Danes from the seventh century on. In the southwest, archaeological finds also show that the South Jutish Baltic Sea coast was settled by Slavic tribes from the eighth century. To the southwest of the Eider, there is archaeological evidence of Saxon tribes from the seventh century on. Hedeby and the Danevirke were the contact point for these groups in times of both war and peace. As a centre for trade and crafts, Hedeby relied on supplies from outside for its everyday needs. In its hinterland were the fertile countryside of Schwansen and the peninsula of Angeln. The settlements and farms there presumably supplied Hedeby with food and products of all kinds. At the same time, they took part in the trading organised via Hedeby.

As a result, cultural influences were particularly mixed in the area around Hedeby



▲
HISTORIC SETTING OF
HEDEBY AND THE
DANEVIRKE: BORDERLAND
AND CROSSROADS OF TRA-
DE AND PEOPLES

and the Danevirke. In Schuby, to the north of the Danevirke, for example, there are Saxon-style pit houses, while in Kosel, to the south of the Schlei in Schwansen, there are Slavic pottery and cultivated plants (see maps on pages 64-67 for an overview of related sites in the surrounding of Hedeby and the Danevirke). Even Slavic place names, indicating settlements founded by Slavic settlers, can be found in the borderland. In Hedeby itself, there are signs of widely differing burial practices. For example, the oldest known burials so far in Hedeby, from the eighth century, are urn burials of the type known from the Frisian North Sea area.

The political border between the Danish, Frankish, East Frankish and German sovereigns was constantly renegotiated. From the ninth century on, it ran further south along the River Eider. Godfred's successor, Hemming, and Godfred's sons thus had to struggle several times, in 811, 813, 817 and 825, to have the Eider recognised as a border between the Frankish Empire and the Danes under Charlemagne and Louis the Pious. The ramparts of the Danevirke were built as early as the sixth century in this borderland at the most strategic spot in the Schleswig Isthmus to act as a defence, a demarcation, a symbol of power and a checkpoint. In the same way, Hedeby also developed at this location in the borderland in the eighth century at the most suitable spot for overseas trading.

TRADE VIA THE SCHLESWIG ISTHMUS

The Danevirke closes off the main north/south transport route through Jutland, known as the Haervejen (Heerweg or Army Road; later Ochsenweg or Ox Road). This north/south passage through Jutland, via the relatively easily traversable Schleswig Geest, was probably used as far back as the Bronze Age, as can be seen from the numerous tumuli along the way. In mediaeval times and during the modern age (as the Ox Road), it became extremely important for long-distance trading via Jutland. Until very recently, the geological foundations of the Schleswig Isthmus were a crucial factor in the selection of transport routes such as the A7 motorway, Federal Road B77 and the Flensburg-Hamburg rail connection. The gates excavated in the Danevirke's Main Wall and Kovirke show that this route was travelled throughout the period in which the Danevirke was in use.

From the Viking Age there is evidence of the roughly 18 km portage over the Schleswig Isthmus through the harbours of Hedeby and Hollingstedt. This route made it possible for goods to be traded between the North and Baltic Seas without having to travel all the way around the Jutland Peninsula. Ships could also pass into the inner reaches of the Schlei as far as Hedeby. There, the goods were transhipped and taken along the Treene to Hollingstedt. Small trading ships were able to reach the harbour from the North Sea via the Eider and Treene. In 2013, however, a small Viking Age settlement was found near Ellingstedt with a mediaeval route which was probably also used before in the Viking Age. The western section of the trade route between Hollingstedt and Hedeby (and later Schleswig) may have taken this path. The western route from Hedeby probably went through Hedeby's south gate in a western direction up to the gate through the Main Wall. Goods were transported between Hedeby and Hollingstedt on foot and using beasts of burden. Using parts found in Hedeby it has been possible to reconstruct carts. Near Ellingstedt, the remains of workshops have been found along with metal items from the ninth and tenth centuries, such as dress pins, clasps from bridles, Arab coins, a key to a chest and the pommel of a sword. The landing site and later harbour in Hollingstedt were on an outcrop of the geest which extended into the Treene, offering good conditions for transshipping goods. Whereas there was just a simple landing stage in the Viking Age, in the twelfth century the harbour was stabilised with wooden platforms. Rural settlements from the eighth to eleventh centuries, such as Elisenhof on the mouth of the Eider, benefited from trading with Hedeby and were probably used to provide supplies and reload goods onto larger ships.

Towards the end of the eleventh century, Schleswig was founded on the northern bank of the Schlei and appears to have taken over Hedeby's function as a North Sea harbour within just a few years. Nonetheless, some trading with Hollingstedt seems to have continued through the gateway in the Danevirke. The finding of a flat-bottomed barge known as a pram indicates that ferries passed from Schleswig over the Schlei, with the route then again passing south of the Danevirke to the gateway.

DESCRIPTION OF THE SITES [+]

HEDEBY

[+] SETTLEMENT AND GRAVE FIELD

Hedeby is in a sheltered spot on the west bank of Haddeby Noor, south of the moraine hilltop of the Hill Fort. This position well inland is similar to that of other Viking-Age trading centres (known as emporia, (known as emporia, see 2.b Eighth century for a further definition) such as Birka in the Lake Malar region or Kaupang in the Oslofjord. The settlement rises above sea level as the terrain moves further inland. Apart from a strip of land on the shore itself, the area is safe from flooding. By land, Hedeby can only be reached from the southwest and south; to the west it is protected by the marshy area of Busdorf Valley.

Years of excavation and prospecting have determined that the entire area enclosed by the Semicircular Wall on the west bank of Haddeby Noor was used intensively, especially in the ninth and tenth centuries. In the southwestern area there is a large grave field. During a later stage of the Viking Age, houses were built on parts of this area. From the end of the tenth century on, the entire area within the ramparts was evidently inhabited. The spots which are particularly archaeologically informative are at the lower reaches of the stream which flows through the centre of Hedeby. Within the Semicircular Wall, geophysical prospecting has revealed a dense, regular network of routes dividing the interior into plots. (see ch. 04, page 206 for a detailed map of Hedeby, its structure and component parts)

As one example of the dense population within the Semicircular Wall, between 2005 and 2008 the excellent archaeological findings and their extensive investigation made it possible to reconstruct seven buildings, typical corduroy roads (timber trackways), shoring along the route of the stream and a jetty in the harbour, on areas which had already been extensively excavated. The buildings thus give visitors an impression of this historical settlement and emporium.

The thousands of structural timbers preserved in the occupation layers offer a basis for conjecture on the former shape of this early town in terms of its constructions, structure and sequence of settlement. The area near the harbour was obviously densely built-up, as is typical of this type of settlement, consisting of one-storey buildings with one to three main rooms, plus an infrastructure of wells, fences and paths of different construction types. The wooden buildings were constructed with plank walls or wattle and daub and did not contain stalls for animals. As a rule they were smaller than contemporary buildings in rural settlements such as the nearby village of Kosel. Some of the buildings were similar to Frisian structures from the Rhine-Meuse-Scheldt-Ems delta. Water was supplied by numerous wells. The settlement area was accessed via paths with bridges over the stream. The preserved remains of the wooden constructions are mostly from the lower layers, most coming from the ninth century, but occasional, deeply embedded structures (such as wells) also testify to the fact that this area was settled for longer. The most recent well which has been dated was built in the year 1020.

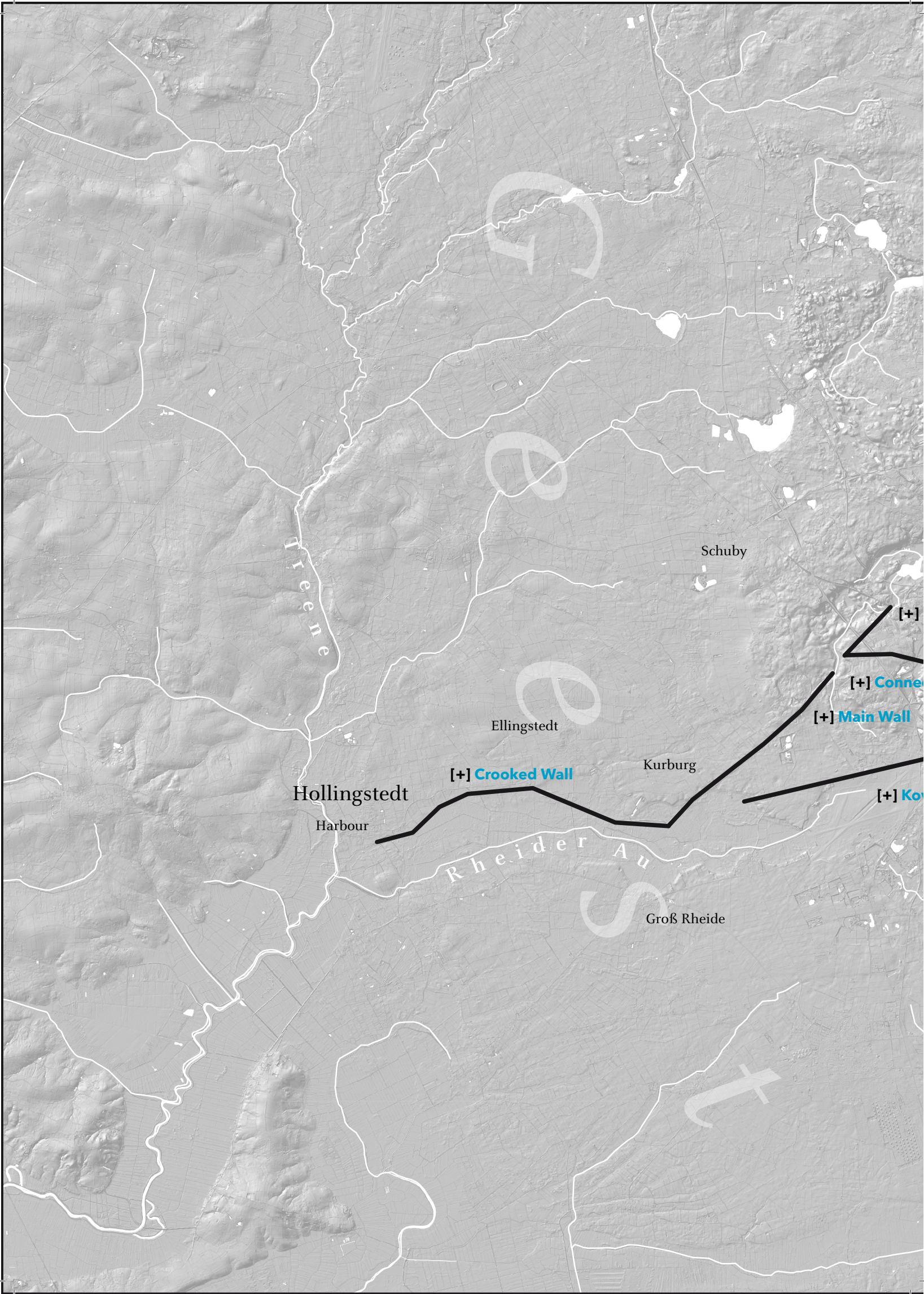
Alongside post-in-ground buildings, in the higher situated areas in the western part of Hedeby there are also numerous indications of pit houses, apparently concentrated in workshop areas. Excavations have provided evidence of buildings constructed in several stages, with posts supporting walls made of planks or wattle and daub, dug more

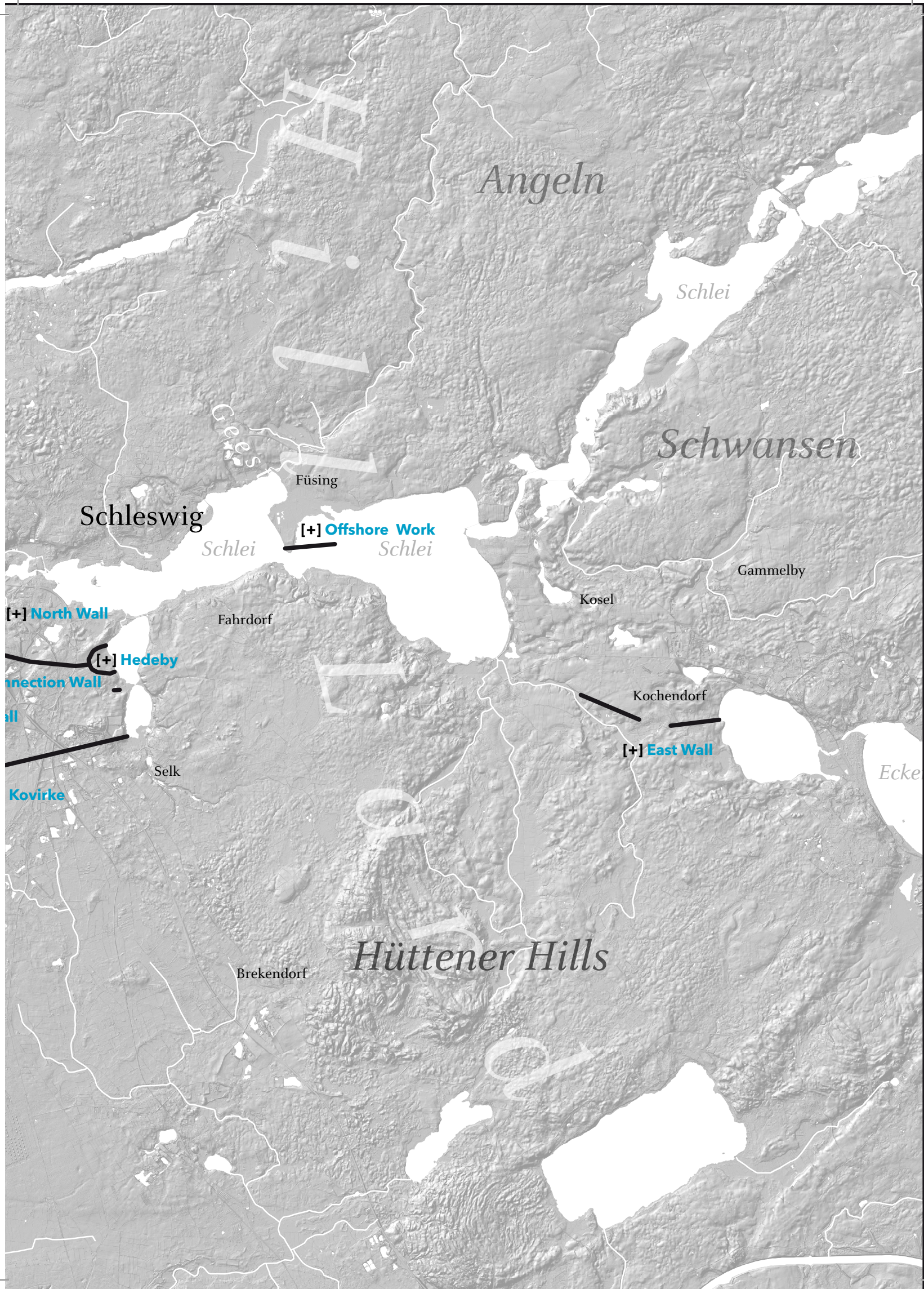
►
PEDIMENTS AND WATTLE
WALLS OF A VIKING AGE
HOUSE IN HEDEBY, EXCAVATED IN 1968

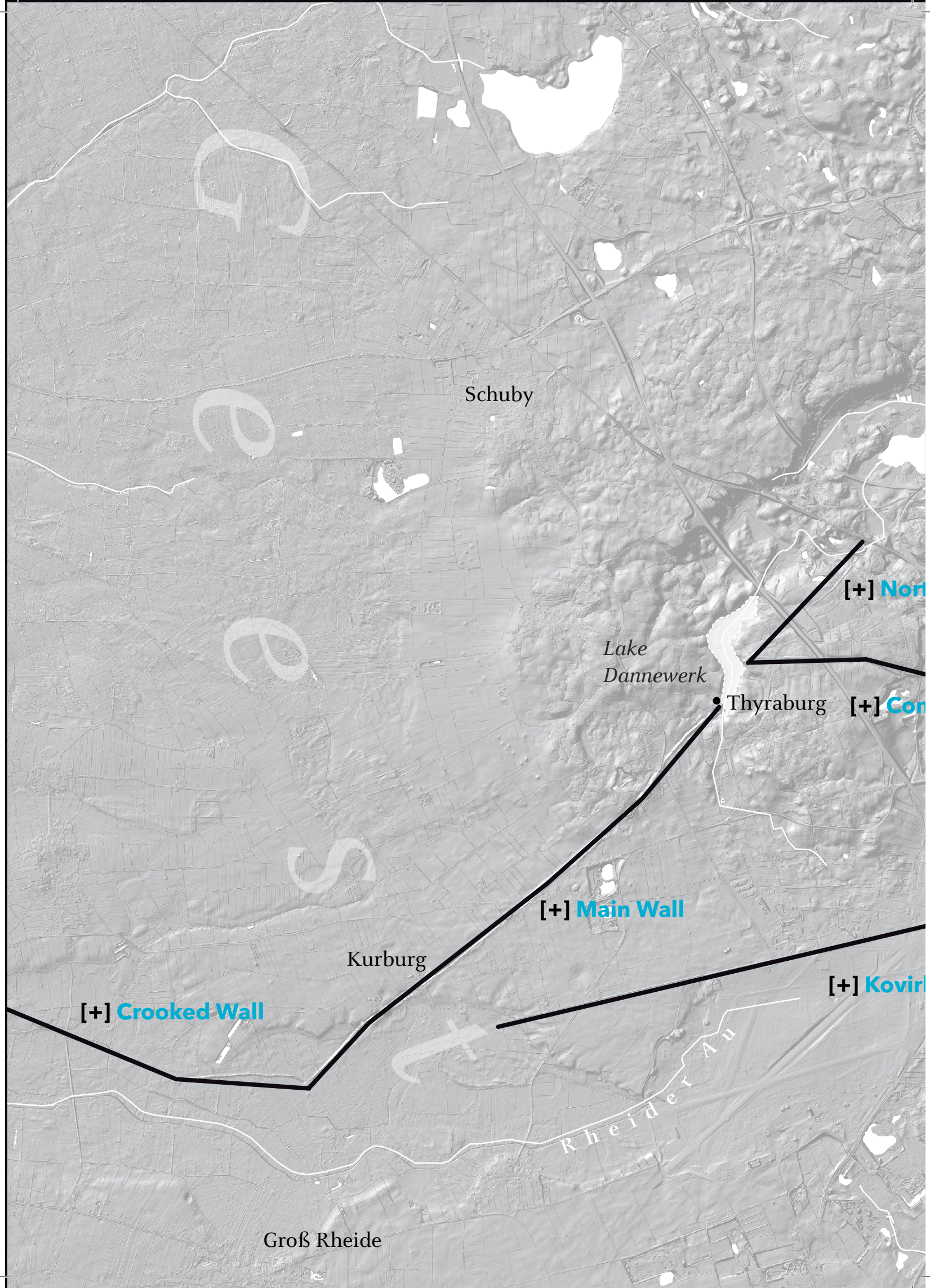


than a metre deep into the ground. These were mainly used as workshops. Finds of waste material from production, semifinished products and tools offer evidence of numerous crafts being carried out in Hedeby, including several types of woodworking, metalworking and stoneworking, jewellery-making, potteries, weaving and even goldsmithing and bell-founding.

In the inner southwest section of the Semicircular Wall there is a large flat-grave cemetery. Between 1902 and 1912 at least 351 graves were excavated here, apparently all of which were inhumations. Not far to the south, the archaeologist Herbert Jankuhn excavated another group of ten elaborate chambered tombs, a cremation burial and two inhumation graves, part of a larger grave field. In both areas evidence was found of more recent overbuilding from the tenth century. At that point in time, at the latest, there was intensive development over the entire area enclosed by the ramparts built during the tenth century, and it was used for cemeteries and settlements. The size of the grave field area has only become apparent from modern geophysical prospecting, and still requires verification through excavations.







Schuby

Lake
Dannewerk

Thyraburg

[+] Nor

[+] Con

[+] Main Wall

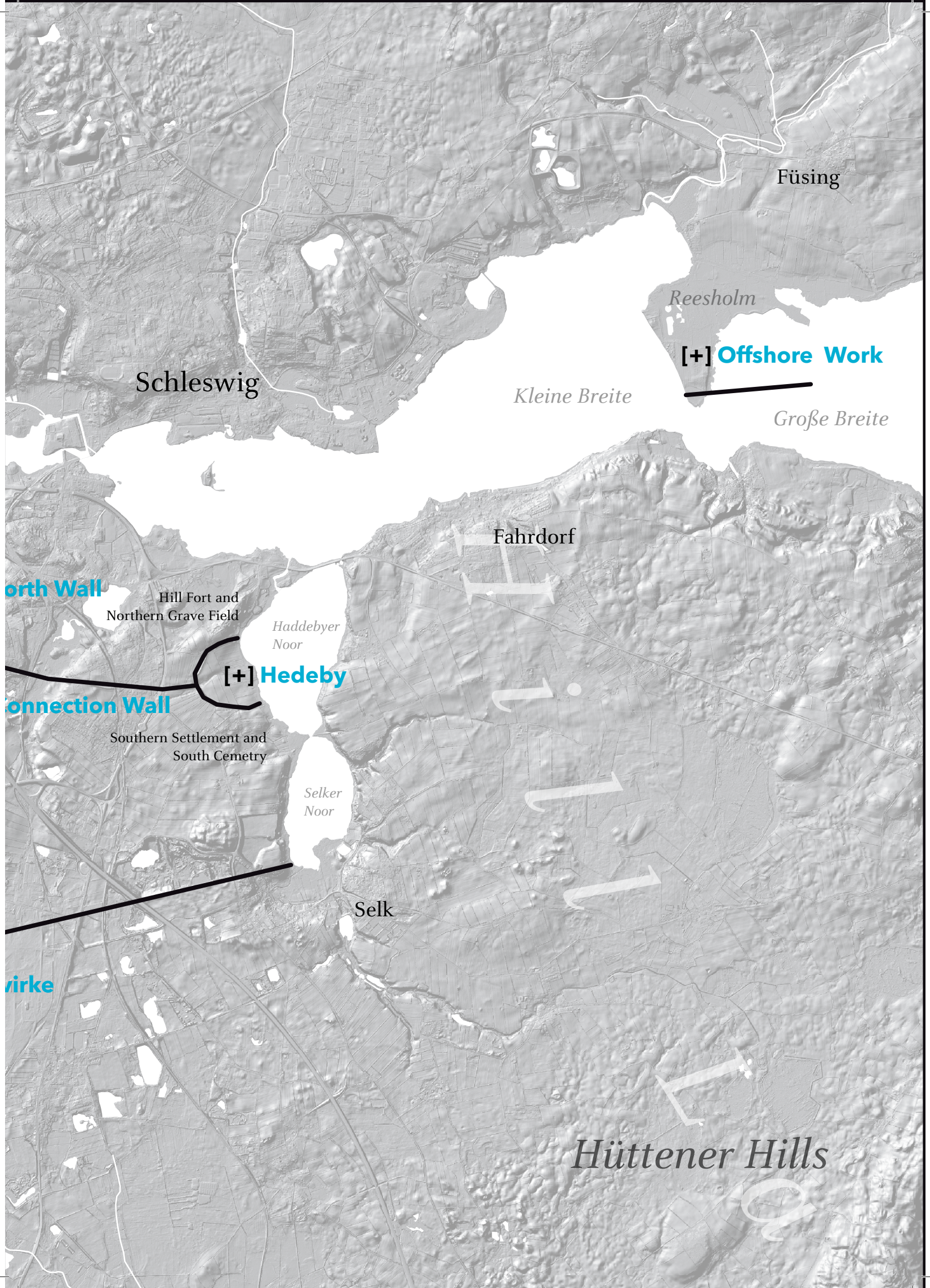
Kurburg

[+] Kovir

[+] Crooked Wall

Groß Rheide

Rheider Au



Schleswig

Försing

Reesholm

[+] Offshore Work

Kleine Breite

Große Breite

Fahrtdorf

Hill Fort and
Northern Grave Field

Haddebyer
Noor

[+] Hedeby

Southern Settlement and
South Cemetry

Selker
Noor

Selk

Hüttener Hills

North Wall

Connection Wall

virke

Altogether, the number of burials originally in the different grave fields at Hedeby has been estimated at 8,000–12,000, of which some 1,350 have been excavated. Most were inhumations, only about 6% being cremations. The burials can be further subdivided into different types. There were, for example, cremation burials in Hedeby which only involved burying the remains from the cremation and pyre in shallow graves or pits. Then there were urns which were either buried or covered with a low mound. Corpses were buried either in simple earth pits, in coffins, in coffin chambers or in elaborately constructed chambered tombs. Altogether, only one in five burials contained grave goods.

►
EXCAVATION IN THE
HARBOUR AREA OF HEDEBY:
POST ROWS BELONGING
TO JETTIES



HEDEBY [+] HARBOUR

Hedeby's harbour is behind the settlement area protected by the Semicircular Wall. Numerous dives have been carried out between an underwater terrace made of materials from the Ice Age, extending from the shore far into Haddeby Noor, and an alluvial fan in the area of the stream's old mouth. This is where the wreck of a Viking longship was discovered in 1953, and numerous timber substructures have been recorded as belonging to harbour facilities built on pile foundations. The harbour facilities consisted in wide landing stages gradually built further into the Noor as the waters receded due to the waste constantly deposited in the harbour area. These landing stages were not only used to load and unload goods but also acted as Hedeby's marketplace, and were thus the central scene of trading. Today, the short stubs

of countless wooden posts from the harbour facilities protrude from the floor of the Noor. It is presumed that the port facilities were situated along the entire strip of shoreline enclosed by both ends of the Semicircular Wall and in front of the settlement area. The dock basin is a source of rich finds, with items made of organic materials (textiles, wood) worth particular mention as they are the exception elsewhere. The shore areas show signs of ships having landed there and a market on the banks before the first harbour facilities were built. As well as the royal longship raised when the harbour was excavated, a composite ship, a knarr and a high mediaeval pram ferry are known from Hedeby harbour. These ships are still on the floor of Haddeby Noor to this day. Numerous wooden ship parts have also been raised.

HEDEBY

[+] SEMICIRCULAR WALL

The Semicircular Wall around Hedeby is approximately 1,300 m in length and reaches up to 10-11 m in height in its southern part. Its modern appearance is heavily influenced by the works of Danish pioneers of the mid-nineteenth century. The ramparts were constructed from 950 onwards in several stages as earthen banks with a covering of turves and with associated ditches. The oldest section was 4 m wide, with a height of just 2 m, with a ditch in front of it. Following numerous extensions, in its latest phases it attained a height of about 7 m, with an associated ditch of about 6 m in width and at least 2 m in depth. Two gaps to the north and south are constructed as chamber gates. There was a ditch in front of the ramparts, and the southwest forefield was additionally protected by several outer fortifications, none of which are visible anymore. Roughly 70 m before the Semicircular Wall there is a ditch in the form of a hollow, about 130 m before it there is a V-shaped ditch, and what is today the district road to Selk runs along the route of an additional rampart in the forefront of the Semicircular Wall.

HEDEBY

[+] SOUTHERN SETTLEMENT AND SOUTH CEMETERY

In the Southern Settlement, outside the Semicircular Wall, extensive excavations in the 1960s revealed not only several post-in-ground buildings but also numerous pit houses which finds suggest were once occupied by craftspeople and merchants. The excavated pit houses were constructed using wattle, staves and posts with areas of 5.5–22 m². In this Southern Settlement area, evidence has only been found of a single longhouse, as yet the only one of its kind among the building types in Hedeby. The preservation in this place is at risk from erosion. For organic materials, the lime-deficient sands offer poor conditions for preservation. After it was abandoned at the end of the ninth century, graves were built over the settlement area.

The Southern Settlement has its own grave field, though after the settlement was abandoned this spread out into the area which was once populated. Its size has not yet been determined, especially to the north and west. Outside the grave field there was a boat-chamber grave containing a royal personage. This princely personage was accompanied by three horses and two attendants in a large chamber. All were placed beneath a ship of around 20 m in length and covered by a burial mound. Investiga-



tions of the cemetery revealed not only a large number of sometimes very humble urn burials, ashes scattered in flat graves and inhumation graves but also five elaborate, sometimes richly furnished chambered tombs from the first half of the tenth century.

HEDEBY

[+] HILL FORT

The Hill Fort is a rectangular walled enclosure on the crest of a moraine formation some 25 m high just north of the Semicircular Wall. The rampart, which is about 1 m in height, encloses an area measuring 240 x 60-80 m. The rampart of the Hill Fort was probably built in two phases. The structure appears not to have been built up in the interior, although it was later used as a Viking Age burial place. In the interior is a barrow cemetery with cremation burials. The low barrows were apparently established in the eighth/ninth centuries according to the date of this burial rite. In the northeast there is a gate formed by the ends of the ramparts bending slightly inwards. Other gates may have been found on the long side to the south, and in the northwest. The enclosure has not been dated, but is very likely to be connected to Hedeby. In the Swedish settlement of Birka there is also a stronghold.

HEDEBY

[+] NORTHERN GRAVE FIELD

At the southern foot of the Hill Fort, there are some coffin grave burials on what is now a very marshy slope to the north of the Semicircular Wall. The size of this area is unknown. It is still not certain whether these graves also belong to their own section of the settlement. The burials on the southern foot of the Hill Fort date from the mid-ninth to the mid-tenth centuries. The quality of the finds indicates that individuals of high social rank were buried here.

DANEVIRKE

[+] CROOKED WALL

In the west, the Danevirke begins as the Crooked Wall, located on a low old moraine ridge on the river Treene. Part of the Danevirke crosses the adjoining boggy flood plain of the river Rheider Au eastwards and then runs for 7.5 km along the flood plain and the adjoining sandur to the north.

The roughly 7.5 km section of the ramparts between what is now the town of Hollingstedt and the start of the Main Wall on the western fringes of the municipality of Dannewerk is known as the Crooked Wall because of its irregular path – at this spot, the ramparts follow the flats of the Rheider Au as they curve gradually northwards. The ramparts take on widely differing forms. To the west, in the municipal area of Hollingstedt and the Treene, they are no longer visible above ground for almost 3 km, though sections have been identified by archaeological means. To the east, they are repeatedly visible as usually low ridges of land before continuing for roughly 1 km as a wide, low embankment which passes over an arm of the river flats extending northwards at this point. Shortly before the path cuts through the ramparts leading to Ellingstedt, the ramparts grow slightly taller and narrower. Finally, for the last kilometre, they take on the clear form of a high earth bank with a berm at the rear foot of the ramparts. The old nineteenth-century Danish bastions nos. 19–23 were built into the Crooked Wall. Today they have been abraded almost without trace.

◀
OSTENTATIOUS CAROLINGIAN SWORD FOUND IN THE BOAT CHAMBER GRAVE AT HEDEBY

DANEVIRKE
[+] MAIN WALL

Between the moraine landscape surrounding the innermost section of the Schlei and the flats of the Rheider Au, once a moor, there is a flat strip of land just 5.5 km wide. This is the site of the Main Wall of the Danevirke, which has been strengthened and raised multiple times. As a massive earthen bank, the Main Wall forms the centre of the Danevirke system and contains most of its building phases, the most recent being from the nineteenth and twentieth centuries.

Three superimposed pre-Viking Age rampart phases have been firmly demonstrated in the Main Wall, dating from before 737. New ¹⁴C dating indicates that they may even date back to before 500. The earliest two constructions were built as plain earthen banks. The third earthen bank was made by stacking layers of turves and attained a height of roughly 3 m and a width of about 8 m. Small ditches ran along the front of the two earliest ramparts. The following construction phase of 740 was probably faced with a timber front while a retaining wall made from fieldstones seem to be from a different building phase. However, it is still unclear whether the stone wall really was actually a somewhat later phase, maybe even associated with the Danevirke mentioned in the Frankish sources of 808, or belonged to the construction of 740. The fieldstone wall is up to 5.5 km long, 2.7 m wide and 3 m high. The stone wall, which used clay mortar, supports an earthen wall which was raised behind it. In front of the wall a berm was constructed, creating an interval before the deep, wide defensive ditch. Soon after 1162 a retaining wall from brick was added. The double-shell construction, some 5 m high and 2 m thick, reinforces an earthen bank located behind it over a distance of at least 3.7 km. Supporting columns give the wall further stability. The wall was presumably equipped with a parapet. It is the largest and oldest secular brick building in Northern Europe. Remains of kilns in the immediate vicinity of the Danevirke attest to the on-site manufacture of bricks and lime mortar.

The Main Wall runs between the now drained Lake Dannewerk to the east and the flats of the Rheider Au to the southwest, where it connects to the Crooked Wall at a sharp angle. The easternmost point is formed by the Thyraburg mound at Lake Dannewerk. The now dried-up lake was a natural obstacle which was an important element of the defence line. As it nears the gap at the Haervejen, the body of the ramparts sometimes reaches an impressive height and incline. The ditch in front of them is clearly visible. An excavation at the opening of the Main Wall at the Haervejen in 2010–13 revealed the existence of a long-suspected gateway structure.

Westwards, part of the ruins of the twelfth-century brick wall known as Valdemar's Wall can be seen. The ruins of Valdemar's Wall reach a height of 2.70 metres in places. The remains of the brick wall are visible over a length of 80 m.

The section connected to the Crooked Wall has the appearance of a massive earth bank and, like the section between Thyraburg and the Haervejen, is heavily affected by the fortifications put in place by the Danish military in 1861/63. During that period a parapet was built along with the now striking defensive trench. While many of the





**BRICK FRONT OF THE MAIN
WALL (VALDEMAR'S WALL)**

earthworks have been worn away entirely, others are still clearly recognisable. The remains of four old bastions are found in the Main Wall. One redoubt was restored between 2002 and 2004.

The system of the Main Wall consists of an outer bank, a 2.5 m deep, 15 m wide ditch and a rampart which is 25-33 m wide and 6-7 m high. Over most of its length the earthworks were faced with a fieldstone wall in the eighth century and the aforementioned brick wall in the twelfth century, both of which are now covered by earth.

**DANEVIRKE
[+] NORTH WALL**

The North Wall extends over a length of about 1.5 km from the eastern edge of Lake Dannewerk as far as the Schlei flats. At first it follows a clearly visible line northwards, but is then almost fully levelled out. Here, the Danevirke is intersected by a motorway route. Afterwards, the structure continues as well preserved, strong ramparts in the form of a hedgerow which take a slight northward turn before leading down a slope to a fold in the land. The end section leading to the flats to the north is no longer preserved, as the terrain has been heavily overformed.

**DANEVIRKE
[+] CONNECTION WALL**

The Connection Wall extends from the starting point of the North Wall at Lake Dannewerk to the Semicircular Wall at Hedeby. It takes its course to the east in a straight

CROOKED WALL

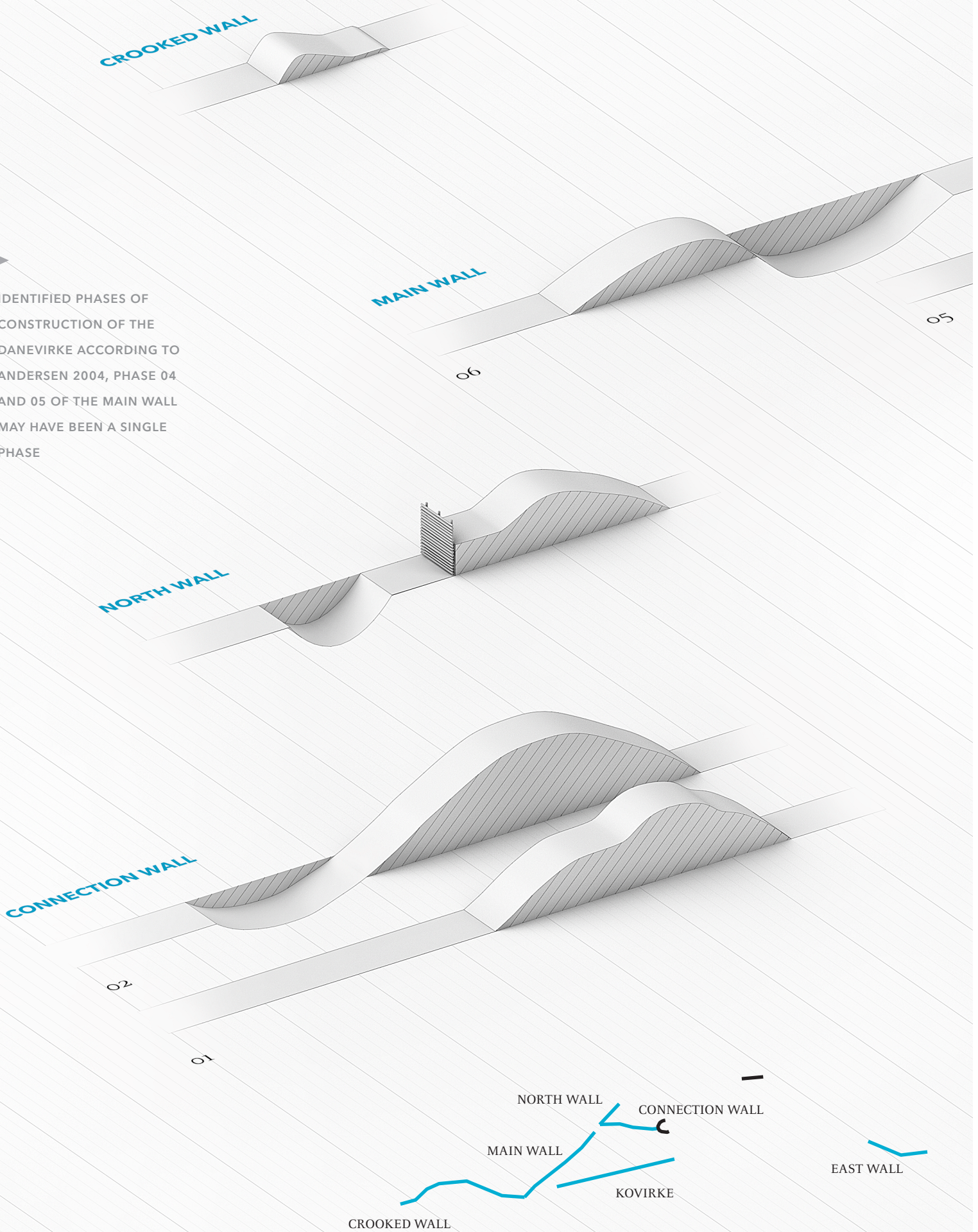
MAIN WALL

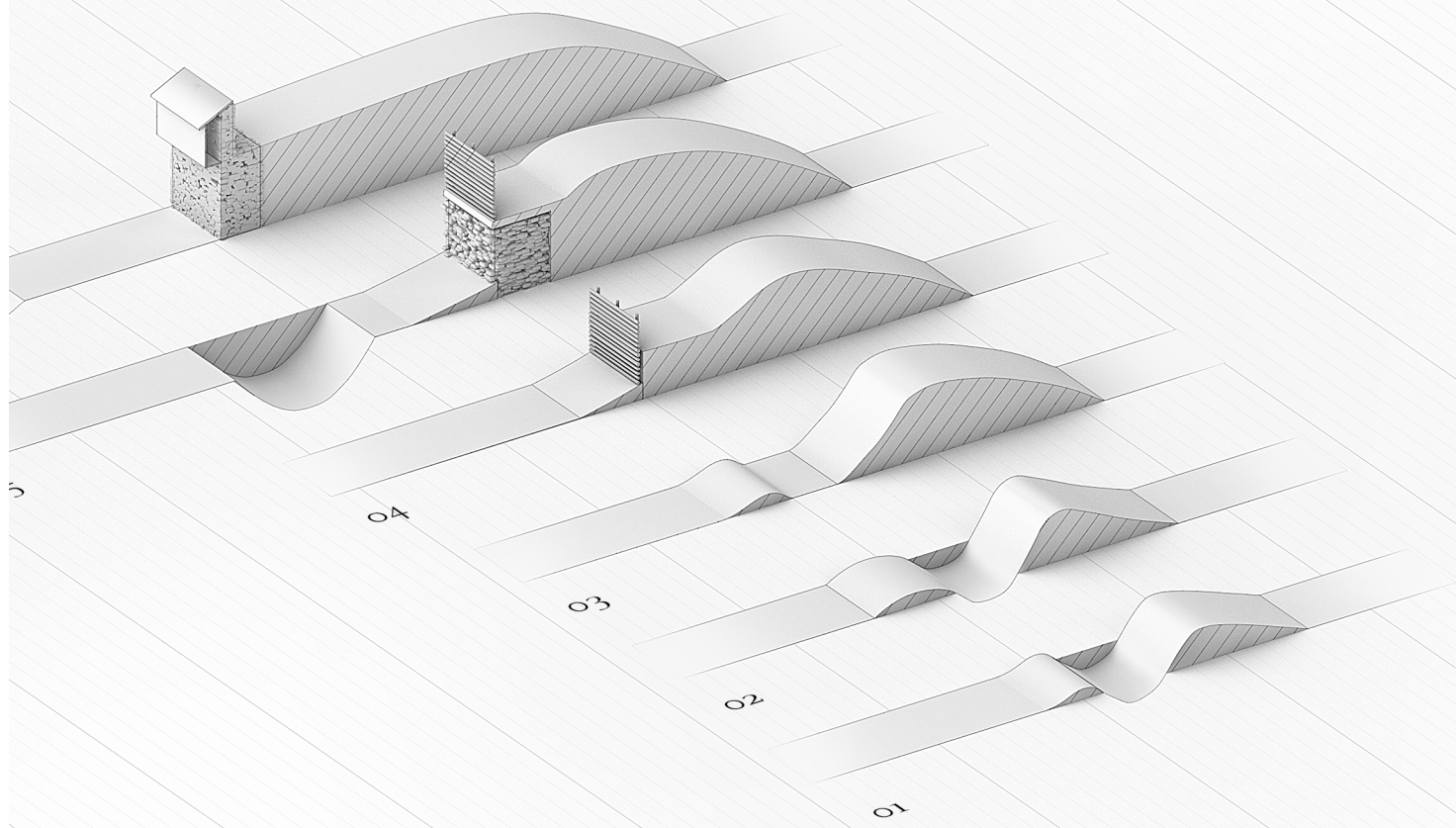
NORTH WALL

CONNECTION WALL

NORTH WALL
CONNECTION WALL
MAIN WALL
KOVIRKE
CROOKED WALL
EAST WALL

IDENTIFIED PHASES OF
CONSTRUCTION OF THE
DANEVIRKE ACCORDING TO
ANDERSEN 2004, PHASE 04
AND 05 OF THE MAIN WALL
MAY HAVE BEEN A SINGLE
PHASE





KOVIKKE

EAST WALL

Area 01 Western Part

Area 02 Eastern Part

line from the Semicircular Wall as far as Busdorf Valley. This Ice Age valley with steep walls forms a natural obstacle and interrupts the ramparts at this point. The valley was probably crossed by means of a dam. Subsequently the ramparts connect to the present-day motorway in a less visible form. A double wall and crescent-shaped ramparts lying to the north (the so-called Arched Wall) lie between the motorway and Lake Dannewerk. They are barely noticeable in the terrain. The Connection Wall was built up after 968 as earthen banks with a covering of turves and with associated ditches. The Connection Wall has also been altered in several places by nineteenth-century Danish trench digging and embankment raising. The bastions have all been abraded today.

DANEVIRKE **[+] KOVIRKE**

South of the Main Wall and the Connection Wall, the so-called Kovirke runs nearly 6.5 km in a straight line over the sandur and young moraines to join up with Selker Noor. The construction is uniformly made up of an originally wooden lined earth bank with a berm preceded by a V-shaped ditch in around 980. The eastern part intersects with the foot of a striking geest hilltop and has been seriously damaged by gravel quarrying. Afterwards, the section leading to the motorway is visible in parts as an outsized hedgerow. During the construction of the motorway, archaeological digs revealed a gateway. Another gateway is likely to have been at the intersection point with the Haervejen. From the Haervejen to the secondary road to the west, the ramparts and ditch are almost intact. Up to its western end on the fringes of the Rheider Au flats to the south of Kurburg, the Kovirke has survived as an unusually high hedgerow.

DANEVIRKE **[+] OFFSHORE WORK**

In areas in which solid stone or earth structures could not be built, wood was more frequently used. The Reesholm Offshore Work was made up of a wooden structure built in the shallows. This probably enabled a strategically risky topographical bottleneck in the west of the Schlei to be protected and to check on travellers passing through.

The Offshore Work extends from the tip of a peninsula out into Schlei Fjord eastwards to a shallow bank which at the time of construction no doubt lay above water as an island. This connection is today interrupted by a modern shipping channel through the fjord. Only certain parts of the overall structure have been discovered so far. Mostly there is evidence of driven posts and timber box cribs. To the west of the peninsula, isolated timbers used to build cribs were found lying about. It cannot be said with any certainty where the wooden structure to the east of the Reesholm peninsula begins, but the structure can then be identified over a distance of 365 m before it curves slightly northwards and stops at the modern shipping channel. To the east, other preserved box crib structures were discovered near the shallows in 2015. It is thus possible that the barrage originally continued further and was either linked to the existing cribbing at Reesholm or this cribbing was part of another line.



RECONSTRUCTION OF
THE WOODEN CAISSONS
CONSTITUTING THE CORE
OF THE OFFSHORE WORK AT
REESHOLM ACCORDING TO
JENS AUER

This means that the known total length of the structure is 670 m, though there is a roughly 150 m wide gap on Reesholm, where no concrete evidence has yet been found of the existence of a wooden structure. If there was a connection between the western section and the cribbing in the shallows to the east, then the entire length was probably more than 1,600 m.

One particularly impressive feature is a row of over 150 m long intact caissons, employing a log construction with an edge length of about 4.5 m, the remains of which protrude some 0.5 m from the bed of Schlei Fjord and constitute the core of the Offshore Work. To the north of this cribbing there are two further rows of individual box cribs built using the log technique, at intervals of 95 and 80 m.

During the construction, notches were cut out of roughly cut timbers and they were laid in alternating layers over posts to form the sides, until they sank under their own weight, forming block constructions which were about 4.5 x 5 m in size. The cribs were attached to a fixed wall on the southern side using longer side timbers.

DANEVIRKE **[+] EAST WALL**

The East Wall stretches from Osterbek River, which leads into the Schlei, to a low valley south of the village of Kochendorf and from there as far as Windeby Noor, a Baltic Sea bay.

Faint signs of the ramparts first appear in a wood on the edge of the stream corridor. They then continue in a straight line over arable land as hedgerow-like remains before ending in the slightly undulating terrain of the western fringes of Kochendorf. An extended section of the flats of the Osterbek stretch into the village of Kochendorf, making it unclear whether the ramparts in what is now the village were ever unbroken, or whether they were interrupted by the flats. From the village's eastern edge the ramparts run for about 700 m over arable land and meadows to Windeby Noor, only visible in the terrain in their central section as a hedgerow interspersed with trees. Finally, they are intersected by a former rail line before turning north and ending near the start of a steep shoreline. The western section consisted of an earthen wall with a palisade-faced front. The eastern section was laid out as a simple earthen wall with a ditch in front. So far the East Wall's construction type is the only basis for its dating and identification as part of the western Danevirke of around 740, meaning this is not absolutely certain.

DESCRIPTION OF THE FINDS

In Hedeby, craft products such as glass, jewellery, containers and vessels of all different kinds of materials, weapons and tools are preserved, in addition to many organic materials such as textiles and leather. Furthermore, timber from houses in their thousands, pathways and fences is well kept. Large quantities of raw materials, such as amber and metals including lead, tin, brass, silver and gold have been recovered. There are soapstone vessels and whetstones imported from Norway. Other finds demonstrating cultural contacts come mostly from burials. These include bronze bowls from Russia and the British Isles, Frankish glass objects, Islamic coins, a seal from Byzantium, quern stones and ceramics from the Rhineland. The jewellery encompasses typical Viking Age objects such as animal-style brooches and pendants. Iron shackles indicate a trade in slaves. Notable items include quern stones, recently identified as originating from Hyllestad (Norway) and objects such as oval brooches and moulds decorated in the Borre and Oseberg styles (both Norway). Beside numerous coins of Frankish and Islamic origin there are also numerous coins minted in Hedeby. Many objects indicate their owner's Christian background or Christian religious practice in general, for example a large bronze bell found in Haddeby Noor.

Furthermore, numerous substructures from port facilities have been documented as well as four Viking Age shipwrecks. Besides the royal longship raised when the harbour was excavated in 1979/80, Hedeby harbour has also produced a ship built in a Scandinavian/Slavic style, a knarr capable of carrying 60 tonnes and a high mediæval pram ferry. The latter three ships are still on the floor of the Noor. The partially restored longship is the most spectacular exhibit in Hedeby's Viking Museum. The dock basin is also a source of rich finds, including items made of organic materials

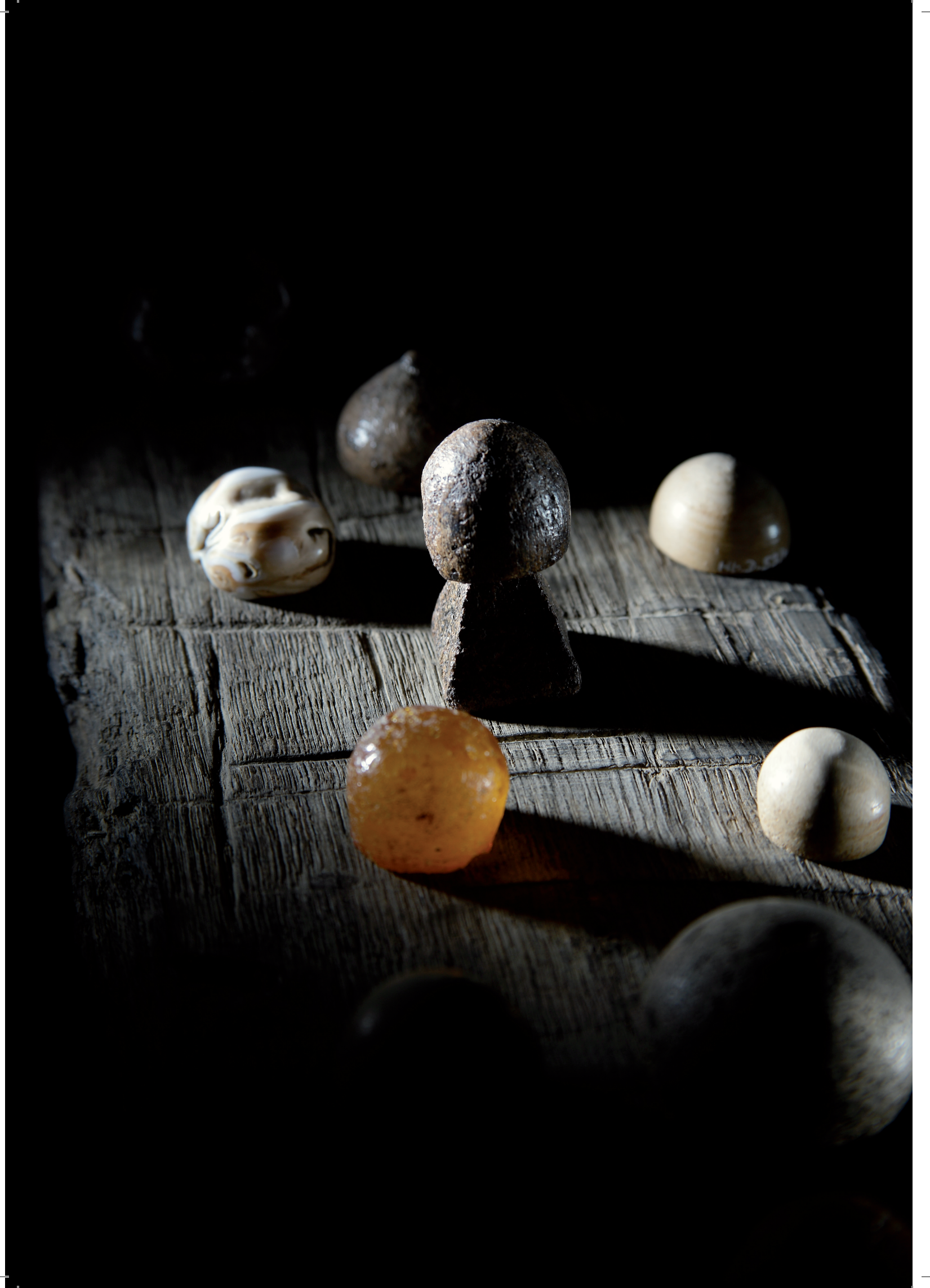
► A GOLDEN COIN FIBULA OF THE EMPEROR THEOPHILOS FOUND AT HEDEBY





BEAR MASK MADE OF FELT,
FOUND IN THE HARBOUR OF
HEDEBY







WOODEN BOARD GAME
WITH ENGRAVED FIELDS
AND GAME PIECES MADE
OF ANTLER, AMBER, BONES,
GLASS, AND WALRUS TOO-
TH, FOUND AT HEDEBY

(textiles, wood) worth particular mention as they are the exception elsewhere.

The parts of the settlement which have been investigated stand out for the exceptional preservation of organic materials – textiles, leather and wood – unmatched by any comparable facilities in Scandinavia. Not only do the preserved organic materials allow the clothing and costumes of the Viking Age to be reconstructed, or inferences to be made, for instance about wooden items of everyday use and their production; structural timbers also form a basis for conjecture about the construction of the early town, e.g. of its buildings, streets and fences. This allows conclusions to be drawn about the settlement structure and timeline. The preserved remains of the wooden constructions are mostly from the lower layers, most coming from the ninth century, but occasional, deeply embedded structures (such as wells) also testify to the fact that this area was settled for longer. As well as organic finds, the overall Hedeby complex has also produced a large amount of jewellery and other handicraft products, with an unusually high number of items made of gold. Many pieces were in serial production here. Key questions on the centre's economic history can be investigated thanks to the numerous coins, both locally minted and imported. Altogether, the archaeological finds clearly reflect the influence of the Frankish and Ottonian Empires, though there are also characteristic items testifying to very distant trading partners, such as the caliphate in what is now the Middle East, and of neighbouring peoples (Slavs and Frisians).

Due to the nature of the construction as a mainly earthen embankment, only a few archaeological objects have been found in excavations at the Danevirke, mainly tools such as wooden shovels. However, substantial preserved remains of wooden structures have been revealed, e.g. from the Crooked Wall, the Offshore Work, the Main Wall near the Thyraburg and the North Wall.

2.B HISTORY AND DEVELOPMENT

SUMMARY

The history of the Danevirke's construction spans more than 500 years, from protohistoric times to the Viking Age and the High Middle Ages. The linear defences of the Danevirke dominated the Schleswig Isthmus before the eighth century. Depending on strategic requirements in the border area between the Danes, Saxon tribes and the Frankish and German Empires, they were extended and reinforced through repeated building activity and the addition of stretches of ramparts. As a consequence, in the course of half a millennium the largest archaeological monument in Northern Europe came into being. The most striking stages of construction include the field-stone wall in the Main Wall from around 740, the Connection Wall with Hedeby's link to the Main Wall in about 970, the Kovirke shortening the line of the ramparts in the late tenth century, and the great brick wall in around 1170.

As a result of planned development and the sub-division of the flats on the shoreline, Hedeby developed during the Viking Age from an unfortified eighth-century settlement to the south of what was to be the Semicircular Wall into a trading and crafts centre for several regions. Hedeby began to serve as a nodal point for long-distance trade and mass production between the North Sea and the Baltic Sea, playing an increasingly important economic and political role in the Nordic region.

The development of the settlement in Hedeby intensified and the harbour facilities were expanded in the 880s. Landing stages for heavy merchant ships served as a market area. The mass production of goods was as important for the new economic developments as trade. Specialised craftsmen produced items for the home market as well as for export. Thus, the production of craft goods from Hedeby grew considerably.

This prime time for Hedeby lasted throughout the tenth century. Further inland, other areas were developed for settlements, workshops and graves. Around the middle of the century, the centre was surrounded by ramparts and structurally connected to the Danevirke. When changes in around the year 1000 put an end to the old emporia in many parts of Northern Europe, the focus of the settlement on the Schlei also successively shifted to the opposite north bank. However, there are only clear archaeological traces of the subsequent settlement at Schleswig from the 1070s on.

UNTIL THE EIGHTH CENTURY

The oldest mention of Hedeby and the Danevirke region as a border land is the Old English Widsith poem, whose origins have been dated back to the sixth century. It tells the tale of a battle on an island in the Eider between the king's son Offa and two opponents, suggesting that it lay between two territories. At the time, the region was probably very sparsely populated. Settlement activities are known only from finds of gold bracteates from the second half of the fifth century between the Eider and the Schlei, and finds in Angeln, Schwansen and Husby from the late seventh and early

eighth centuries. These activities seem to gather pace again from the middle of the eighth century, as shown not only by Hedeby's southern settlement but also by settlement finds from nearby Selk and Försing on the Schlei, and numerous graves on both sides of the Schlei.

Archaeological evidence indicates the existence of travelling routes along the Schleswig Geest, probably since as far back as the Bronze Age, signalled by rows of burial mounds built alongside the routes. A gateway which was unearthed during excavations at the Danevirke shows the regular use of the route in the centuries after the erection of the first ramparts before the sixth century.

Little is known about the earliest building phases of the Danevirke from before 737. At least three phases of earthen banks have been demonstrated (for a more detailed description of the construction see 2.a).

EIGHTH CENTURY

The Frankish expansion under Charles Martel (d. 741) and Charlemagne (d. 814) resulted in several military campaigns against the Frisian and Saxon tribes west of the River Elbe before 734 and again between 777 and 804. The Danes were well aware of the events in Saxony: the Frankish annals record the Saxon leader Widukind taking refuge in Denmark during the campaign from 777–785. The extension of the power of the Frankish Empire towards the River Elbe might have been a strong trigger for building measures at the Danevirke. This would make the re-enforcement a reaction to the threat to Saxon groups living north of the Elbe River and therefore in the long run also to the Danish territory. About 740, or soon after, the earlier ramparts of the Danevirke were enlarged and partially reinforced. This made it the largest structure in Northern Europe at this time. Certainly, the massive extension of the Danevirke is a clear and early indicator in the archaeological record of the extension of territorial power by Danish kings at home. A Danish king possessing previously unheard-of power thus marked the border of his territory.

The eighth century represents the most intense period of development of the entire Danevirke fortification system. Since 1972, several dendrochronological dates from different sections have identified the years around 737/740 as one of the main building phases of the Danevirke. In about 740 or during the following decades the Main Wall was enlarged and almost completely reinforced by one or more phases consisting of a palisade front and a retaining wall from fieldstones. At the transition between Lake Dannewerk and the swampy lowlands west of the Schlei, the North Wall, an earthen bank with a palisade-faced front and a ditch, was erected in 737. In the west, alongside the carr bordering the Rheider Au river, the Crooked Wall was built and later extended several times. The Offshore Work, dated to the years between 730 and 740, was erected as a wooden structure of block construction at a particularly narrow point on the Schlei. Until now it has not been possible to reconstruct any upper structure which might have stood out above the water. At the entrance

to Schwansen, an area of country settled by a Danish population and located to the south of the Schlei, the two sections of the East Wall were constructed.

In the eighth century, economic structures in Northern Europe began to change together with the early development of trading centres, known as emporia. These “emporium” (a re-used term from Antiquity) were situated in borderlands or along coasts and along key trade routes. The trading centres can be described as gates between different cultural and economic traditions. The local inhabitants consisted of gateway communities of trade specialists coming from different trade systems. Often administered by a central or royal power, the emporia provided a safe place and the necessary infrastructure for exchange between faraway places and the hinterland enabling long-distance trade. Among the earliest examples of medieval emporia were Quentovic and Dorestad, Frankish emporia established in the sixth and seventh centuries at the main shipping routes in the North Sea. In Scandinavia the earliest of these trade settlements were established in Ribe in Denmark and in Birka in Sweden as far back as the eighth century, but a small settlement also emerged in Hedeby in the second half of that century. Fundamentally to this development, the Schleswig Isthmus constituted the narrowest land bridge between navigable waterways leading to the Baltic Sea and the North Sea. Serving as a trans-shipment centre, Hedeby evolved in the Viking period from an unfortified eighth century settlement into an international hub for trade and crafts which today provides us with excellent insights into the development of urban settlements in Northern Europe.

Around 740, the earliest settlement emerged at Hedeby, in the area referred as the “Southern Settlement”, south of the later Semicircular Wall. This has been confirmed by both constructional features and associated finds from the mid-eighth to the end of the ninth centuries, recovered during archaeological surveys in the twentieth century. With respect to the area within the later Semicircular Wall at Hedeby, isolated finds indicate the presence of a settlement as far back as the sixth and eighth centuries, but the extent and form of this is as yet unknown. The surveys also identified a further cemetery south of the Semicircular Wall. The oldest graves in the southern grave field probably date back to the eighth century, while most of the graves are likely to have been dug between the ninth and mid-tenth centuries.

NINTH CENTURY

In the ninth century, Viking overseas expansion reached an unprecedented scale. The ensuing contacts with the empires and kingdoms in Western Europe influenced economic, political and social processes in Scandinavia strongly. Thus, it was during the ninth century that Hedeby became established as one of the crucial maritime emporia while Ribe, located further north in Jutland, experienced a considerable decline.

The transport of goods across the Schleswig Isthmus must be seen in close connection with the start of trading activities in Hedeby. Early archaeological evidence for the route between the Baltic Sea and the North Sea from the eighth and ninth

centuries is known from Elisenhof in Eiderstedt and Hollingstedt. Hedeby must also be seen as a centre of political power, shown by minting rights which could have been issued only by Danish kings, the rich boat chamber grave, and the rune stones around Hedeby. However, neither in Hedeby nor in its surrounding area has a royal seat for the king been identified as in Adelsö near the Swedish emporium of Birka.

During the course of Frankish expansion to the north, when Charlemagne threatened to cross the Elbe River after subjugating the Saxon areas in 804, conflicts arose between Emperor Charlemagne and the Danish King Godfred. Godfred then appeared twice with a fleet at Hedeby, now first referred to by its Saxon name "Sliesthorp" (meaning "village on the Schlei"). In 808, according to the Royal Frankish Annals, he also reinforced the Danevirke at this point. The existence of a "munimentum valli", attested to in the Royal Frankish Annals for 808, has not yet been backed up by archaeological evidence in the wall stratigraphy of the Danevirke. However, recent excavations at the gateway through the Danevirke indicate that the fieldstone wall, so far connected with the building phase of 740, could indeed be some decades younger – which would fit much better with the Danevirke mentioned in the Annals (see identified phases of construction page 74-75).

Following the death of Godfred in 810, the river Eider was stipulated as the border between Frankish and Danish territories after negotiations between Godfred's successors and Charlemagne and Louis the Pious at the Eider River. Negotiations on the Elbe did not prove fruitful and led to Northern Albingia being occupied by Charlemagne. Neither the Eider nor the Elbe or the Danevirke seem to have been enduring borders at the time: instead, they were repeatedly contested by all sides. Thus, in the ninth and tenth centuries, the clashes over the border region between the Danish, Frankish and East Frankish rulers continued.

According to the Frankish Annals, the Danish King Godfred destroyed the emporium of Reric – today identified near Groß Strömkendorf at Wismar Bay – and evidently relocated merchants from there to Hedeby. An archaeological survey has revealed that the settlement inside the town wall was gradually extended from just before the 820s and more intensified from the 830s. However, settlement in Hedeby first began south of the later town wall earlier, around the middle of the eighth century.

Besides hundreds of burials of various forms there are also chambered burials from the first half of the tenth century, some of which are richly furnished. Due to its extremely rich and magnificent grave goods, the most elaborate grave, the so-called boat-chamber grave, is associated with the Danish King Harald Klak, who was buried around the middle of the ninth century.

The shore areas served as hithes (i.e. small havens/landing places for boats) with an associated market. The intensive development of the settlement in the boggy zone by the water's edge eventually coincided with an expansion of the harbour facilities in

►
CONSTRUCTION STAGES
OF HEDEBY AND THE DANE-
VIRKE

RED AREAS MARK NEW
CONSTRUCTION STAGES,
BLACK AREAS SHOW FOR-
MER STAGES

the 880s. Landing stages, where heavy merchant ships could also berth, were built extending far out into the water. They also served the trading centre as a market area, which is shown by the large number of finds of items lost during trade activities on the landing stages. Besides scales, balance weights, coins and pearls, 41 press dies used for modelling golden pendants were among the most notable objects. Besides long-distance trading, economic life was also characterised by the intensive and highly specialised production of craft items made both for the home market and for export.

Consequently, as early as the middle of the ninth century, Hedeby had emerged as a maritime trading centre where traders from all points of the compass met, as confirmed by both historical sources and archaeological finds. Evidence of a mint and reports of a Christian mission in Hedeby underline the important role of the place: the minting of coins began in the 820s and ceased in about 860 then resumed towards the beginning of the tenth century, lasting until the end of the tenth century. Numerous coins have been found which were produced in Hedeby. Coins used as a means of payment (and sovereign right) were based on Continental or English models. However, the evidence shows that minting was only of a temporary nature in Hedeby. The minting of silver denarii was modelled on Frankish coins issued by Charlemagne from 793/94. Their production ceased in the second half of the ninth century.

The reported building of a church in about 850 by St Ansgar (d. 865), and the establishment of a bishopric about 100 years later, mark important missionary activities. The site of these first churches is as yet unknown, however. In the late ninth century, Rimbert (an archbishop of Bremen-Hamburg) reported on Ansgar's travels with the Danish kings Godfred and Harald Klak, as well as on his journeys to Birka where he also established a church. It was via Hedeby that the German missionary Ansgar visited Birka in Sweden in 829 and established the first known Christian congregation in Scandinavia. Other historical texts attest to the central role of Hedeby with respect to trade in Northern Europe: in around 890, an Old English text tells of the journeys of the Norwegian trader Ottar, who travelled from the trading place of Skiringssal, near the Gokstad mound in Vestfold, to Hedeby. The fact that Christian and heathen beliefs appeared together in Hedeby is additionally proven by grave goods with clearly Christian symbols, such as a wooden coffin fitted with an iron cross.

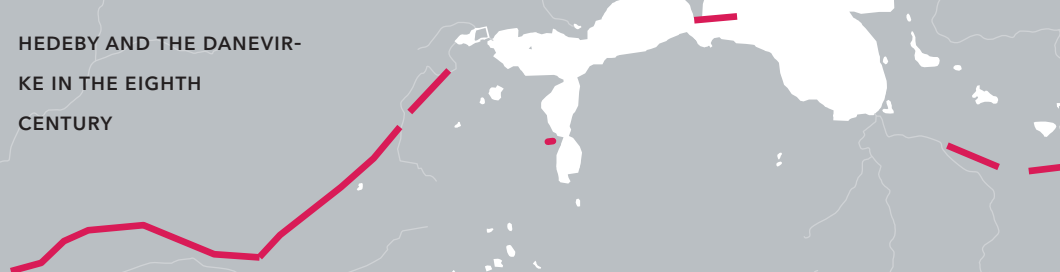
While archaeological research has answered many questions relating to the development of Hedeby, the exact dating of the Hill Fort, its function and its association with Hedeby remain uncertain. The Hill Fort is situated on a moraine ridge north of the Semicircular Wall.

As early as the late ninth century, the settlement in Hedeby appeared to change. This is manifested in a more regular pattern of settlement, a more uniform expansion of infrastructure, better quality and more advanced house constructions and the further extension of the landing stages. In addition, areas further to the rear were developed

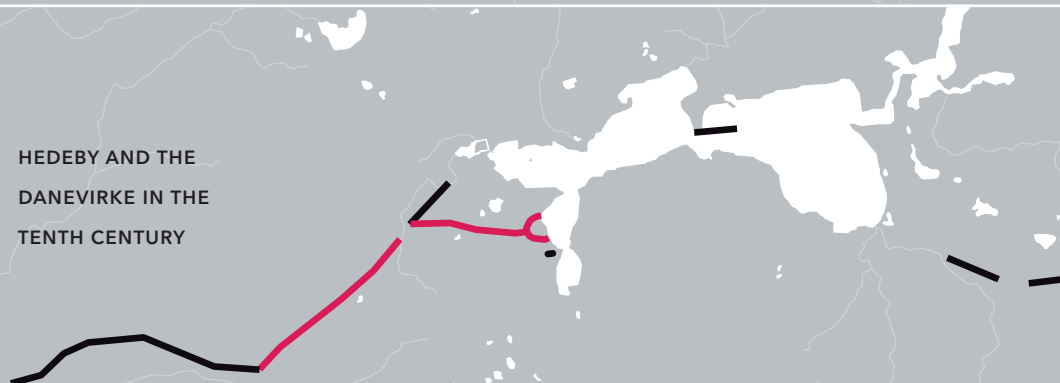
THE DANEVIRKE UNTIL THE
EIGHTH CENTURY



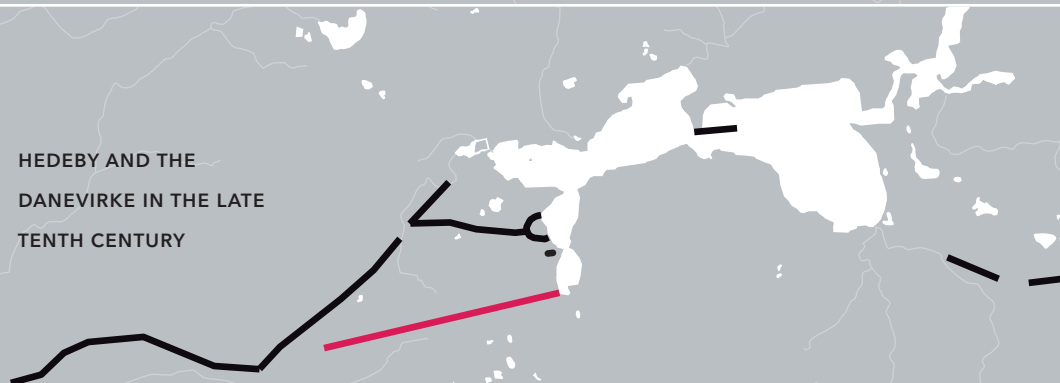
HEDEBY AND THE DANEVIR-
KE IN THE EIGHTH
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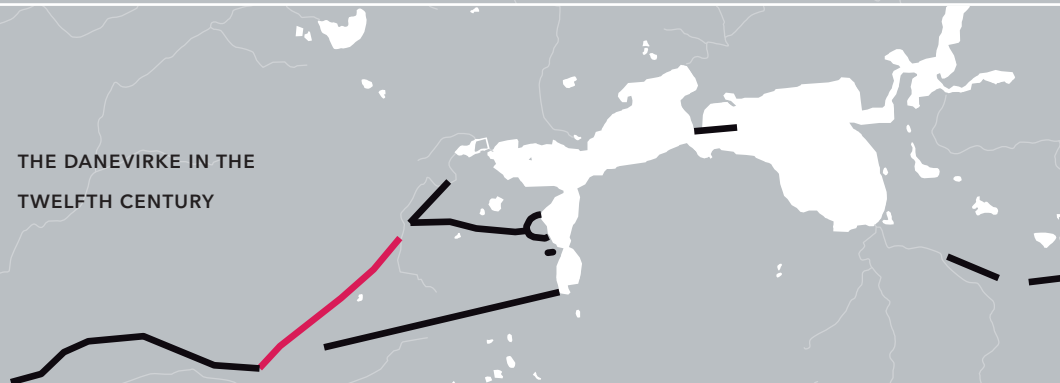
HEDEBY AND THE
DANEVIRKE IN THE
TENTH CENTURY



HEDEBY AND THE
DANEVIRKE IN THE LATE
TENTH CENTURY



THE DANEVIRKE IN THE
TWELFTH CENTURY



for settlement purposes. Workshops were founded there, mainly established in small sunken-floored buildings. The settlement also began now to encroach onto parts of the cemetery in the southwest of Hedeby. From the end of the ninth century, the landing stages were built successively further out into the water due to the silting-up of the harbour basin and the simultaneous increase in the size of the cargo vessels. At the same time, they were extended into large platforms, presumably running along the entire length of the shoreline, which also served as a market place. The core area of the harbour, enclosed by both ends of the Semicircular Wall, was surrounded by a port palisade which possibly marked a separate jurisdiction.

From the ninth century, other Viking-Age settlements were also established near Hedeby, in Schuby and west Kosel. Finds of tools, raw materials and semifinished and finished goods show that these places also produced crafts and took part in foreign trading via Hedeby rather than making agricultural products.

TENTH CENTURY

Due to its burgeoning economic significance and its border location, political leadership in Hedeby was at times contested by Danish and East Frankish rulers. The successful military campaign by the East Frankish king Henry I against Hedeby and the Danevirke in 934 does not, however, appear to have led to lasting East Frankish supremacy. The names of the defeated King Gnupa and his son Sigtrygg are known from two rune stones outside Hedeby. They probably lost their kingdom shortly afterwards to Gorm the Old, the founder of the Jelling dynasty.

Around this time in the middle of the tenth century, Hedeby was fortified with the building of the Semicircular Wall. At this time, the Semicircular Wall evidently enclosed what was then the furthest reaches of the settlement and had two gates. The ramparts were built in several stages. Also, in the tenth century, minting resumed, with thin silver coins again based on denarii being made in Dorestad under Charlemagne. Through the building of the Connection Wall after 968, Hedeby became incorporated into the defensive system of the Danevirke for the first time. This demonstrates a new strategy by the Danish kings regarding the relationship between the emporium and the border fortifications; one underlined by the construction of the Kovirke only about a decade later. Apparently Hedeby was not supposed to be situated south of the Danevirke line any more – be it for protective reasons or because of the legal implications.

According to Adam of Bremen, Thietmar of Merseburg and other contemporary writers, the East Frankish Emperor Otto II launched a crusade against the Danes in 974, conquering the Danevirke in the process. There are reports that Otto II only conquered King Harald Bluetooth of the Jelling dynasty with great difficulty, then built a fortress near Hedeby before advancing to the Limfjord in North Jutland. Thus, from 934 on, the Kingdom of the East Franks strengthened its influence to the north and directly ruled the border lands, at least for some time. It is during this phase of

increased East Frankish influence that the bishopric of Hedeby was founded in 948, along with Ribe and Aarhus, as suffragans of the archbishopric of Bremen. Svend Tveskæg, the son of Harald Bluetooth (d. 987), was, however, able to recapture Hedeby in a joint Slavic and Danish revolt against East Frankish rule in 983.

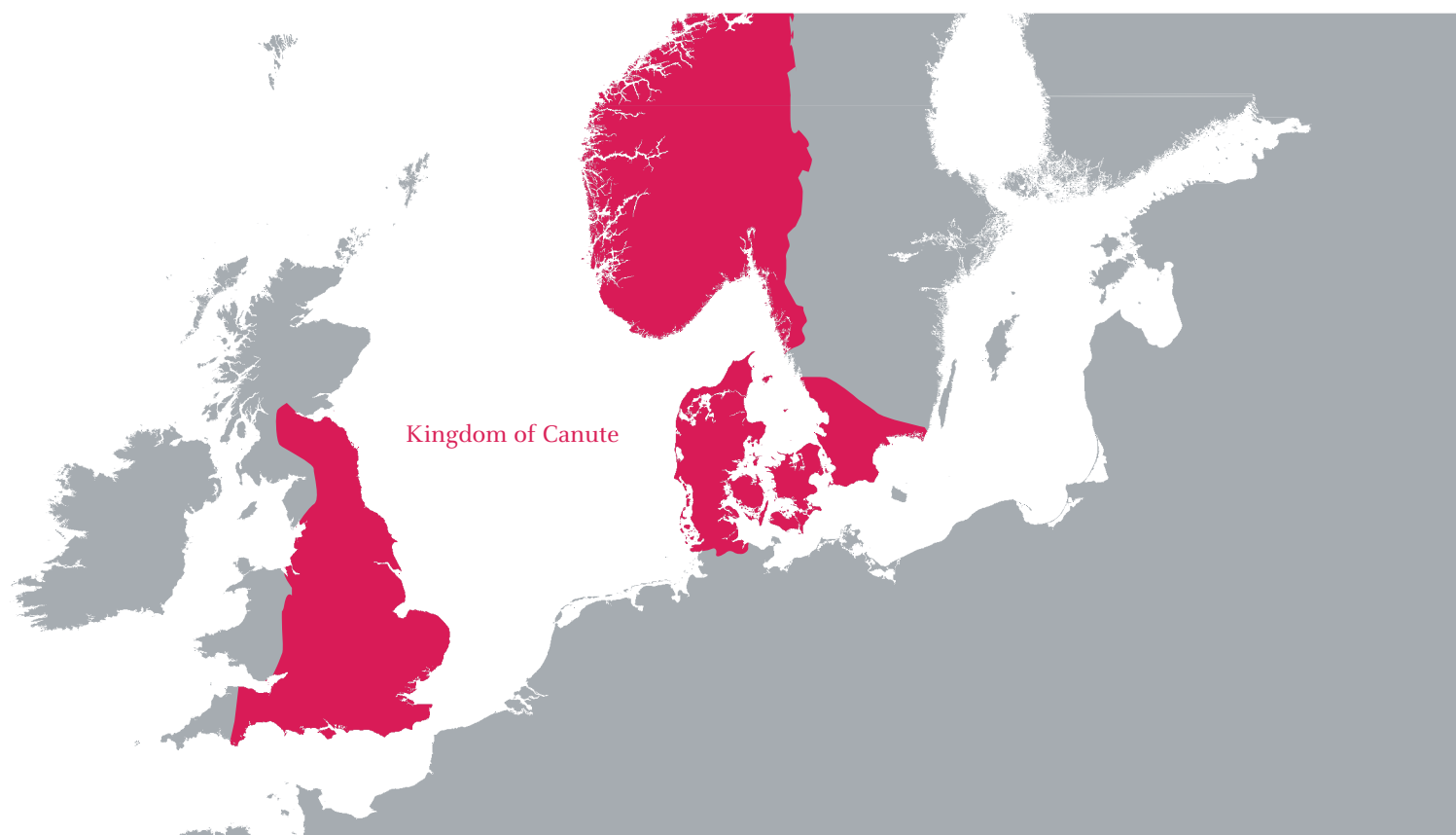
Following liberation from East Frankish rule soon after 983 the Kovirke section was built south of the existing ramparts. This resulted in the shortening of the defensive line and meant that Hedeby was no longer situated in the forefront of the Danevirke, but was now located behind the fortified boundary of the Danish Kingdom. The straight, uniform design of the Kovirke is an outstanding technological achievement, and the ramparts differ clearly from previous stages. Given the structural and chronological analogies to the contemporary Trelleborg fortresses in Jutland and on the Danish isles, the building of the Kovirke is also likely to have been carried out on the orders of King Harald Bluetooth.

During the tenth century, the settlements around Hedeby continued to grow in density, as can be seen from the many impressive weapon and equestrian burials around the Schlei, for example in Thumbby-Bienebek. These graves, and richly equipped settlement sites such as that near Föising, are interpreted as indicators of elites or a royal entourage (Eisenschmidt and Arents, 2010).

Five rune stones from the tenth and eleventh centuries were found near Hedeby. As written sources, they are an important addition to the rich archaeological finds from Hedeby. With their comparatively long texts, the stones provide the most detailed contemporary information on individual personages from around Hedeby. The original stones are today all in Hedeby Viking Museum and Gottorf Castle, with copies replacing them at their presumed locations in the buffer zone. The inscriptions are in Viking-Age runic writing and are written in Old Norse. The rune stones from Hedeby are the southernmost in Scandinavia, where there are still more than 3,000 existing rune stones. Those found at Hedeby are memorials to fallen warriors who were in close contact with the town's royal rulers. It was the mention of the place name Hedeby which led to the settlement being identified in the nineteenth century. Today, the stones are mostly named after the names inscribed upon them: the Erik stone, the Skarthi stone, the big Sigtrygg stone, the small Sigtrygg stone and the Schleswig Cathedral stone.

ELEVENTH CENTURY

Finally, in 1025 or 1035, the Kingdom of the East Franks, or now of Germany (later known as the Holy Roman Empire) formally gave up the area between the Eider and the Schlei on Henry III's engagement to the daughter of the Danish King Canute the Great. The area to the south of the Danevirke leading up to the Eider once again gained prominence due to the border jarldom of Schleswig, in the Danish kingdom. This area with a special legal status within the Kingdom of Denmark, comparable to a march (also a kind of borderland, in other mediaeval European kingdoms) later



▲

EXTENT OF THE KINGDOM
OF CANUTE THE GREAT
FROM JELLING IN THE ELE-
VENTH CENTURY

developed into the Duchy of Schleswig (also known as Slieswick).

Archaeological evidence for the settlement in Hedeby in the eleventh century is elusive. However, it is certain that the place was occupied until the middle of the century. The port underwent its final extension in the early eleventh century. In the middle of the century, the town suffered destruction on several occasions. Political and ecclesiastical meetings at the highest level are, however, evidence of the undiminished significance of Hedeby at this time. Sporadic settlement activities in areas more distant from Hedeby Noor within the Semicircular Wall have been demonstrated until the end of the eleventh century.

The emporium of Hedeby was abandoned in the eleventh century after it was destroyed twice within a short time. Conquests by Norwegians and Slavs are recorded historically in 1050 and 1066. Later accounts by Snorri Sturluson, from the twelfth century, connect the Norwegian King Harald Hardrada with the destruction of Hedeby in around 1050. Harald Hardrada (1045-66) is often regarded as “the last Viking king” of Scandinavia. He was defeated and killed by the English King Harold Godwinson at Stamford Bridge, in his attempt to invade England in 1066. However, several historic events still mark the importance of the town. Here, Danish kings met several times with archbishops of Hamburg and Bremen in 1042 und 1052/53.

Furthermore a synod of bishops was planned by archbishop Adalbert in 1063 which never took place.

In the late eleventh century, the medieval settlement of Schleswig emerged on the northern shore of the Schlei. Hedeby's function for trading and transshipment was taken over by Schleswig, which also provided more favourable conditions for the larger ships of the time. Notably, its name was derived from the Frankish, German and Saxon names for Hedeby Sliethorp/Sliaswich. Schleswig was to maintain and expand the outstanding functional significance of Hedeby as a transshipment centre between the North Sea and the Baltic for a further 200 years before this role was taken over by the Hanseatic town of Lübeck. During this period, only few rural settlements developed around Hedeby and Schleswig, such as those known from pit houses near Brekendorf and longhouses from the eleventh and twelfth centuries near Tüdal by the middle reaches of the Treene. In Hollingstedt, however, there is definite evidence in the twelfth century of a trading station on the Treene which benefited greatly from the land connection to Schleswig.

TWELFTH CENTURY

Under the Danish king Valdemar I (d. 1182) and his son Valdemar II, the border jarldom becomes the Duchy of Schleswig, initially passed down to the king's second son where possible over several generations. Valdemar I did not obtain the Danish royal crown until 1157, after years of civil war; during the first years of his reign he also had to battle stiff resistance within Denmark. At the same time, he ran military campaigns and crusades against the Slavic Obotrite tribe. From 1162 to 1181, Valdemar was also forced several times to give in to German feudal lords. As a reaction to such political and military challenges, Valdemar I had the front of the Main Wall reinforced with a wall of brick, presumably soon after 1162.

At the time, bricks were a novelty in Northern Europe, and their use on the Danevirke can thus be seen as an expression of great political and military power. The significance of the wall in terms of power politics is made especially clear by two inscriptions on Valdemar I's grave and the earliest histories of the Danes, written in the same period by Saxo Grammaticus and Svend Aggesen. Valdemar's Wall is the largest and the oldest secular brick structure in Northern Europe.

Valdemar's successor, Canute, was the first to refuse to give an oath of fealty to the German rulers. Valdemar II, who succeeded Canute, followed a policy of expansion towards Holstein and into the Slavic areas along the Baltic Sea coast. A Golden Bull issued by the Holy Roman Emperor in 1214 confirmed his conquests. However, an attempt to extend his realm to Holstein failed when he was defeated at Bornhöved south of Kiel in Holstein in 1227. Under Valdemar II, the Danevirke played an even more important role as part of his expansion policy; it was probably still maintained at this time and only abandoned entirely after his death. The Danevirke eventually lost its meaning in the course of the Middle Ages.



LATER DEVELOPMENTS OF IMPORTANCE

▲
DANISH ORDNANCE SURVEY
MAP FROM 1864 SHOWING
THE REINFORCEMENTS AND
REDOUBTS OF THE
DANEVIRKE

From the thirteenth century onwards, the Danevirke fell into ruin. The brick wall was used as a quarry for building material in subsequent centuries. Parts of the ramparts were ploughed up or dug away.

The memory of Hedeby faded completely during the Middle Ages. Instead, the remains of the Semicircular Wall became wrongly associated with a German fortress reportedly erected by Otto II in the tenth century in order to secure his conquered lands and therefore went under the name “Oldenburg”. In the early eighteenth century a pheasantry for the court of Gottorf Castle in Schleswig was situated inside the Semicircular Wall; this has left no visible traces.

As a consequence of nationalist movements all over Europe beginning in the late eighteenth century, by the middle of the nineteenth century, the Danevirke emerged as a Danish national symbol for defence against the Germans. Consequently, the Danish military erected a new fortification line at the Danevirke in late 1850 as a de-

fence against an army of insurgent pro-German Schleswig-Holsteiners. This line was further greatly extended in 1861–63 with the construction of 27 large bastions which badly affected the old earthen ramparts. Less than a century after the nineteenth century reinforcements, the Danevirke again played a part in a military conflict. During World War II, anti-aircraft defences were erected by the German armed forces on parts of the Main Wall and the Crooked Wall. An anti-tank ditch which had been dug directly in front of Valdemar's Wall was back-filled in 1946.

From the early nineteenth century on, several attempts were made to conserve the ramparts of the Danevirke for posterity by taking the land into state ownership. Legal protection only became possible after corresponding acts were passed following World War II. Parts of Hedeby and the Danevirke became legally protected by a conservation order in 1950 (as a Nature Protection Area) and since 1965 they have both been listed monuments (and have preservation orders to safeguard them).

Important steps in the exhibition of the finds and the interpretation and communication of the sites were the building of two museums in 1985 near Hedeby (Viking Museum Hedeby) and in 1990 at the Danevirke (Danevirke Museum). Reconstructions of a fortification from 1864 and of Viking Age houses were built in Hedeby and at the Danevirke in 2003–2008.

HISTORY OF RESEARCH

As far back as the Danish historical writings of the twelfth century, the old rampart system is described as *danæwirchi* and *opus Danorum* (work of the Danes). To authors such as Saxo Grammaticus, whose work on Danish history *Gesta Danorum* was written in 1170–1180, it symbolised Danish drive and greatness. From the sixteenth century onwards, the ramparts once again aroused literary and cartographical interest. Yet it was not until the nineteenth century that the Danevirke became the subject of serious and comprehensive accounts and interpretations.

Archaeological investigations were carried out when the redoubts were built on the Danevirke in 1861. An archaeological investigation into Hedeby began somewhat later, as the historically attested town of Haidaby/Schleswig had fallen into oblivion after the Middle Ages. Only in 1895 was the Copenhagen archaeologist Sophus Müller able to equate the settlement enclosed by the Semicircular Wall with the place referred to as Haidaby on two neighbouring rune stones. Just a few years later, in 1903, Carl Neergaard and Sophus Müller published the first scientific archaeological work on the Danevirke. A long series of comprehensive excavations on the Danevirke and at Hedeby ensued. However, the identification of Hedeby was only confirmed through the investigations by W. Splieth and F. Knorr which extended over many years between 1900 and 1921. Important results were produced, in particular by the excavations of Günther Haseloff and Herbert Jankuhn at the Danevirke and in Hedeby in the 1930s. The discovery of Hedeby's South Cemetery led to excavations in the 1960s. Also in the 1960s, Kurt Schietzel began large-scale excavations in the settlement area of Hedeby,

culminating in the excavation of the port in 1979–80. Further information concerning the construction and dating of the Danevirke was gained through the excavations of Hans H. Andersen and Willi Kramer which were carried out in the 1970s and 1980s.

In 2002, geo-magnetic surveys were conducted over a large area within the Semicircular Wall. In the course of this new research project, the finds and findings resulting from previous excavations will also be systematically re-evaluated. The latest investigations comprised the excavation of a few pit-houses in the northwest quarter within the Semicircular Wall in order to obtain evidence comparable with the results of the geo-magnetic and metal-detector surveys carried out inside the Semicircular Wall during the last few years.

ARCHAEOLOGICAL RESEARCH AND EXCAVATIONS AT HEDEBY AND THE DANEVIRKE (SELECTION)

Year	Activity
1861–64	Documentation and surveys during the building activities for fortifications by Danish troops at the Danevirke by G.F. Hammann and J. Kornerup.
1900–1934	Survey and small excavations within the Semicircular Wall by W. Splieth, F. Knorr and H. Jankuhn. Verification of the place as the historical Hedeby (Knorr 1912; Jankuhn 1937, 1984).
1908	Excavation of the boat-chamber grave by F. Knorr (Knorr 1911; Müller-Wille 1976).
1935–39	Excavations of the low-lying settlement area inside the Semicircular Wall by H. Jankuhn (Jankuhn 1937b, 1943).
1933–36	Excavations at the Main Wall of the Danevirke by H. Jankuhn, Haseloff (Jankuhn, 1937a).

1963–69	Investigation of burials and settlement area inside the Semicircular Wall by K. Schietzel.
1963/64, 1966–69	Large excavations of burials and settlement area inside the Semicircular Wall by K. Schietzel (Schietzel 1981; Schultze, 2008b).
1963–1965, 1970	Large excavations at the Southern Settlement and the South Cemetery by H. Steuer (Steuer, 1974).
1972	Excavation of massive wooden substructures at the Danevirke by H. Andersen; first dendrochronological dating to 737 (Andersen, 1976).
1979–1980	Excavation of harbour area and wreck of longship by K. Schietzel (Kalmring 2010a).
1991–1993	Series of excavations at the Main Wall, Kovirke, Semicircular Wall, Connection Wall and North Wall of the Danevirke by H. Andersen (Andersen, 1998).
1992–97	Survey of the Offshore Work by W. Kramer; dating to 730/740 (Kramer, 1995).
2002	Geo-physical survey inside the Semicircular Wall (Neubauer et al., 2003; Carnap-Bornheim & Hilberg, 2007).
2005–2010	Excavation of a few pit-houses in the northwest quarter within the Semicircular Wall by Stoltenberg and A. Tummuscheit.
2009–2013	Excavation of a gate in the Main Wall of the Danevirke by A. Tummuscheit.
Since 2003	Metal-detector survey inside the Semicircular Wall.

3

**Justification for
Inscription**



3.1.A BRIEF SYNTHESIS

The defensive system of the Danevirke and the trading centre of Hedeby consists of a spatially linked complex of earthworks, walls and ditches, settlements, grave fields and a harbour across the Schleswig Isthmus on the Jutland Peninsula in Northern Europe from the first and early second millennia AD. Between the eighth and eleventh centuries, features of the natural landscape and man-made structures were combined intentionally to form a border landscape at a natural bottleneck in the Viking-Age between the eighth and eleventh centuries AD. Here, at the Schleswig Isthmus, the singular geographic situation created a strategic link between Scandinavia, the European mainland, the North Sea and the Baltic Sea. A Baltic Sea inlet, rivers and extensive boggy lowlands constricted the north-south passage across the peninsula while, at the same time, providing the shortest and safest route between the seas across a narrow land bridge. Closely tied to the isthmus situation, Scandinavian, Slavonic, Frisian, Saxon and Frankish peoples and kingdoms met in this important borderland.

By means of Hedeby and the Danevirke it was possible to mark out and control the isthmus not only as the nodal point of important trading routes of the eighth to eleventh centuries but also as the crossover point between different domains. Thus, the border landscape of Hedeby and the Danevirke manifests political power and cultural interaction. The importance of the border landscape is showcased by large quantities of imports among the rich find assemblages in Hedeby. The remains of structures of a notably defensive character, buildings, harbour jetties, burials and settlement infrastructure of Hedeby and the Danevirke are well preserved. The archaeological evidence, including large amounts of organic finds, provides an outstanding insight into the significant political power exercised by Danish kings, the expansion of trading networks and cross-cultural exchange over several centuries in the Viking Age.

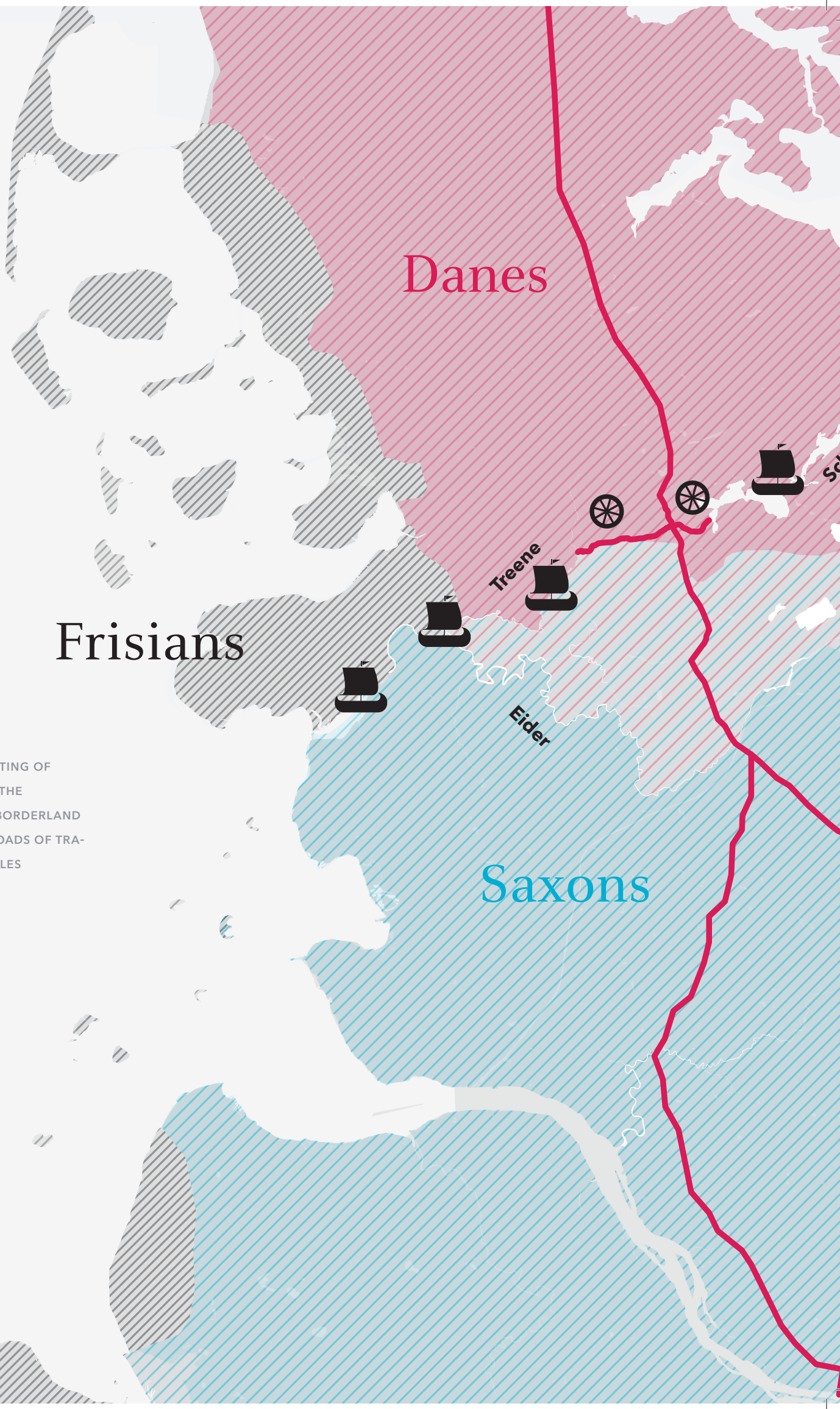
The nominated property consists of 22 separate archaeological sites which comprise the defensive system of the Danevirke and the settlement site of Hedeby, encompassing a total area of 228 ha. A buffer zone surrounds all archaeological sites connected to Hedeby and the Danevirke, including parts and attributes of the adjacent landscape that were important for setting up the sites. An additional “wider setting” was defined to link all the individual sites of the nominated property and protect the visual integrity of the landscape.

Five distinct earthen ramparts were built across the Schleswig Isthmus between the Treene River and the Schlei Baltic Sea inlet in at least nine construction phases between the sixth and the twelfth centuries. A barrier composed of wooden caissons built in the eighth century (the Offshore Work) extends into the Schlei, and two more

ramparts run between a tributary of the Schlei and a marginal bay of the Baltic Sea. Some of the building phases were additionally reinforced with ditches and timber revetments, while the most important rampart, the Main Wall, has retaining walls of stone and brick from the eighth and twelfth centuries, respectively. Large parts of the embankments are still visible as pronounced or low ridges while others are only known from archaeological surveys. All of the aforementioned structures are summarised under the term “the Danevirke”. Hedeby consists of a settlement area, cemeteries and harbour protected by an earthen embankment, a hillfort on a moraine ridge and, as well as a further settlement and a large cemetery to the south, all dating from the eighth to the eleventh centuries. The town wall is connected to a rampart of the Danevirke. The settlement phase started south of the town wall in the eighth century, then shifted north and expanded considerably in the ninth and tenth centuries, including the town wall itself and large landing stages in the harbour. The remains of the settlement, the cemeteries and the harbour are largely invisible above ground but well preserved in water-logged conditions. In Hedeby, numerous substructures from port facilities and four shipwrecks have been documented. A large number of remains of sunken-floored dwellings and house timbers in their thousands are preserved in the settlement layers. Substantial remains of wooden structures are identified in the Danevirke. Also, large quantities of raw materials and craft products such as glass, jewellery, vessels, weapons and tools are known from the sites, in addition to many organic materials such as textiles and leather.

Hedeby and the Danevirke are located on the Jutland Peninsula, which extends for about 400 km north of the River Elbe, which divides the Jutland Peninsula from mainland Europe. The Schleswig Isthmus, where most ramparts of Hedeby and the Danevirke are situated, is a geographic bottleneck in the southern part of Jutland, where the Schlei extends about 42 km inland from the Baltic Sea while extensive boggy lowlands along rivers reach as far as the Wadden Sea in the west. This place, which is only about 5 km wide, in effect, served as a natural traffic barrier and as a portage, an overland shortcut, between the North Sea and the Baltic Sea at the same time in the Viking Age. Hedeby lies sheltered on the western banks of Haddeby Noor, a marginal bay in the innermost part of the Schlei.

The border landscape of Hedeby and the Danevirke was characterised by the cross-roads for two major trading routes of the time in Northern and Western Europe: the ancient north-south land route along the middle of the Jutland Peninsula, later called the Haervejen or Ochsenweg (Army Road, Ox Road), which crossed the isthmus since as far back as the Bronze Age, and the route between the Baltic Sea and the North Sea across the isthmus and along rivers and the Schlei inlet. Hedeby and the Danevirke were situated in the borderland between different territories and ethnic groups throughout the Viking Age, notably between Danish kingdoms to the north and the Frankish and German dominions to the south. The lands south of the border were inhabited by the Saxon people, while to the south-east there was a settlement area of Slavonic tribes. The North Sea coast and islands, to the west, was inhabited by Frisians.



Danes

Frisians

Treene

Eider

Saxons

HISTORIC SETTING OF
HEDEBY AND THE
DANEVIRKE: BORDERLAND
AND CROSSROADS OF TRA-
DE AND PEOPLES



Slavs

Schlei

The Viking Age, the historical period used for this nomination, is understood to encompass the eighth to eleventh centuries. The definition is based upon historic events, changes in material culture, and the gradual emergence of – for instance – new styles of architecture, a broader range of settlement types, and changing patterns of economic interaction. Archaeological excavations in Hedeby and the Danevirke have added particularly greatly to the written evidence, showing that such important Viking-Age sites had in fact already emerged in the eighth century. The name “Viking” was used in the eighth to eleventh centuries referring to piracy in general and to Norse activities of warfare or trade in particular. During the second half of the nineteenth century, the terms “Viking” and “Viking Age” reappeared as a modern term for the people inhabiting Scandinavia and as a term for the archaeological period between the Iron Age and the Middle Ages in Scandinavia.

Trade and exchange between the Baltic Sea region, the North Sea region, Scandinavia and continental Europe in the Viking Age relied fundamentally on the portage via Hedeby, while controls on movement across the border via the ancient routeway from north to south were facilitated by the Danevirke. The biography of the archbishop of Bremen, Ansgar, from about 875 describes Hedeby as the meeting place for traders from “all over the world”. Even before the Viking Age, the bottleneck situation on the Schleswig Isthmus in the southern part of the Jutland Peninsula made it the strategically best suited place to control movement, thus promoting the establishment of a fortified boundary in the borderland that could be built and guarded with comparatively little effort. As a consequence, the isthmus was used for more than 500 years as a boundary between the Carolingian and German dominions and the Danish kingdoms and, in consequence, between the realms of the European continent and Scandinavia from the sixth to the thirteenth centuries. The Danevirke gives this border material form as a demarcation and linear fortification. In the Viking Age, the isthmus situation was of vital importance for the development of the portage – the shortcut between the Baltic Sea and the North Sea on either side of the peninsula – and for the ensuing crossing with the trading route along the Jutland Peninsula. Controls on trade and traffic were facilitated by Hedeby and the Danevirke via transshipment at the emporium and the restriction of passage through gates in the ramparts. The landscape as a whole serves as a display of power by the Danish kings who were strongly involved in building and reinforcing the defensive structure of the Danevirke and in founding and promoting the emporium of Hedeby.

3.1.B CRITERIA UNDER WHICH INSCRIPTION IS PROPOSED

CRITERION III:

to bear a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living or which has disappeared

Hedeby and the Danevirke are outstanding testimonies to the cultural traditions of Northern Europe in the Viking Age between the eighth and eleventh centuries. They have become key scientific sites for the interpretation of historic developments in Viking-Age Europe.

Hedeby and the Danevirke exerted great influence on the social and spatial organisation of Northern Europe. The sites developed as a result of the contact between Scandinavian, Frisian, Slavic and Saxon societies and the extensive Frankish – and later German – empires over several hundred of years at an isthmus in the borderland. The rich and diverse archaeological structures and finds, including large quantities of organic material, can still be interpreted in the present setting. As an outstandingly well preserved archaeological landscape, Hedeby and the Danevirke are manifestations of the development of political and economic power in old Denmark and bear witness to its conflicts, and to exchange and trade between people of various cultural traditions in the Viking Age.

HEDEBY AND THE DANEVIRKE AS KEY SCIENTIFIC SITES

Since 1861, the sites of Hedeby and the Danevirke have been frequently subject to intensive archaeological investigation following the latest scientific standards of the time. Underwater surveys have been conducted at the Offshore Work and in the harbour area of Hedeby. Not only excavations and field surveys but also non-intrusive methods such as geophysical or side-scan sonar surveys have revealed an even broader range of details about settlement features such as pits, sunken floor dwellings, workshops and the plot division in Hedeby as well as the extension of stone walls and other construction features of individual phases in the segments of the Danevirke.

The excellent preservation of organic material in Hedeby and the Danevirke allows us to reconstruct the traditional costumes and wooden artefacts of everyday life in the Viking Age. The thousands of timbers that were found in settlement layers at Hedeby, in substructures and the underwater structures of the Danevirke from a time span of more than 400 years, give us a rare insight into the construction of dams, palisades, ramparts, buildings, causeways, wells, canals, landing stages and ships. The organic remains help to further our understanding of the development of the sites' settlement structure and building sequence, and of the borderland's defences in the Viking Age. Together, the construction timber, the rich find assemblages and the preserved ramparts provide an excellent opportunity for conducting further research in early urbanism, harbours, markets and linear fortifications in Northern Europe.

►
VIEW OVER THE CENTRAL
SETTLEMENT AREA OF HEDE-
BY DURING THE EXCAVATION
IN 1937

The artefacts unearthed in Hedeby are a major source of knowledge for the nature of trading networks, for mercantile practices in market places, the production of goods, for shipbuilding and burial practices in the Viking Age and for the amalgamation of different religions in the early years of the Christian mission in Northern Europe in the ninth to tenth centuries. Furthermore, the archaeological remains of Hedeby and the Danevirke provide essential information for interpreting the development of political power in Scandinavia and the power relations between Scandinavia and continental Europe.

**MANIFESTATION OF
EXCHANGE AND TRADE,
ECONOMY, POLITICAL
POWER, CONFLICTS**

The political powers in old Denmark between the sixth and the twelfth centuries took advantage of the strategic situation and shaped the landscape in many ways. According to the Royal Frankish Annals, King Godfred sailed with tradesmen from the emporium of Reric to the Hedeby in the beginning of the ninth century, triggering the development of a centre for commerce in the borderland which was able to control the important node between the North Sea and the Baltic Sea.

Archaeological excavations and geophysical surveys have revealed the extent of the transition from a small settlement site on the banks of the Haddeby Noor into an urban settlement that occupied the entire interior space encompassed by the town wall built in the tenth century. Furthermore, large landing stages seem to have lined most of the shoreline within the ramparts and extended far into the Noor. They were not only used for loading and unloading ships but also served as a town market for the exchange of goods. The rich finds show the wide range of the trading network which had Hedeby at its centre due to its favourable geographical location. Goods were traded via Hedeby to and from the British Isles, Scandinavia, the Carolingian Empire, northern Italy, the Baltic Sea region and eastern Europe, and even as far as the North Atlantic, Byzantium and the Caliphate at Baghdad. Thus, it is not surprising that Hedeby became one of the main gateways of the Christian mission to Scandinavia and the stepping stone for Ansgar's mission to Birka in Sweden. In Hedeby, the first parish and the first bishopric in Scandinavia were founded in 850 and 948, respectively. The choice of Hedeby as an entrance point for the Christian missions into Scandinavia underlines the pivotal role of the borderland in mediating socio-cultural interactions between continental Europe and the Scandinavian world. The emporium complemented the border landscape which was then used for territorial defence, controls on traffic, demarcation, and exchange, but which was also a multifaceted reflection of the power of the Danish elites.

Godfred is also mentioned by the Frankish source as the king who built the Danevirke in the early ninth century to guard the border of his realm against the Saxons and, in effect, Charlemagne, emperor of the Carolingian Empire (d. 814). However, most of the Danevirke's extant ramparts and defensive structures can be interpreted in connection with known historical events in Northern Europe. The palisades in the Main Wall, the North Wall, the Offshore Work and probably also the East Wall were



built around 740, at a time when the Carolingian Empire was beginning to campaign against Saxon tribes south of the Elbe River, while Slavonic tribes started to occupy the southeastern part of the Jutland Peninsula. Both developments could have been seen by the Danish elites as a potential threat to the Danish realm. The ramparts of the tenth century – the Semicircular Wall around Hedeby, the Connection Wall to Hedeby and the Kovirke – are all dated to a time when the Jelling Dynasty ruled Denmark. Therefore, it is likely that the fortifications were built by one of the kings, Gorm the Old or Harold Bluetooth. This extension of the Danevirke can be interpreted as a reaction to the attempted conquest by the sovereign of East Francia, Henry I, in 934. Harold seems to be responsible for building the Kovirke in around 980 as part of his building programme in connection with his policy of power after he suffered defeat to the Emperor of East Francia, Otto II, in 974. The construction very much resembles the ramparts of the Trelleborg fortresses in Denmark, which are also attributed to Harold's reign. The brick front added to the Main Wall by Valdemar I (1131–1182) in the late twelfth century is the most obvious political statement. A lead plaque on the grave of king Valdemar I and the contemporary Danish historic writings of Svend Estridsen and Saxo Grammaticus emphasise the role of the Danevirke as a symbol of Valdemar's claim to kingship.

Furthermore, archaeological remains and finds attest to the political and strategical importance of the border landscape. Coins were minted in Hedeby in the ninth and again in the tenth century. Even though it is not clear who actually commissioned the minting, this was a privilege that was most likely granted by the king. Several burials in Hedeby are very wealthy with regard to their architecture and grave goods and must therefore also be seen in connection with the elite in Denmark at the time. One really outstanding example is the boat chamber grave just south of Hedeby from the middle of the ninth century, often interpreted as the burial of Harold Klak. He was a pretender to the Danish throne, who was baptised in 826 in Ingelheim by Louis the Pious (d. 840), king of the Franks, in order to secure support. Four rune stones from around Hedeby attest to the close involvement of the Danish royalty in borderland affairs in the tenth century. Two rune stones commemorated warriors, Erik and Skarthi, who died in conflicts near Hedeby while two more were ordered by Queen Asfrid as memorials for her son, King Sigtrygg.

**INFLUENCE ON THE
SOCIAL AND SPATIAL
ORGANISATION OF
NORTHERN EUROPE**

The border landscape of Hedeby and the Danevirke was at the centre of political and military struggles for dominance over Jutland between Danish, Carolingian and, later, German sovereigns. The border marked the end of the Carolingian expansion to the north, after the Frisians and Saxons had been subdued and incorporated into their realm in the course of the eighth century. However, Danish kings were not able to conquer all the territories north of the Elbe River either, despite several attempts made from the Viking Age until the thirteenth century. As a consequence, military campaigns from either side resulted in repeated border negotiations between the ninth to the thirteenth centuries, through which – in fact – the Eider River some 40

kilometres south of Hedeby and the Danevirke was established as a political boundary. In this context, Hedeby and the Danevirke remained the defence line and the centre for trade and exchange between the realms.

The historical role of Hedeby and the Danevirke within the borderland continued beyond the Viking Age into the twelfth century. While Hedeby was abandoned towards the end of the eleventh century, trade was shifted to a new mercantile centre, Schleswig, on the northern banks of the Schlei, which flourished during the twelfth century using basically the same trading networks as Hedeby. In the late twelfth century, King Valdemar I refitted the Main Wall, referring in his actions to Queen Thyra Danebod who lived in the tenth century. Much later, in the nineteenth century, based on a Valdemar I legend about Thyra Danebod, the Danevirke became a landmark symbol for the struggle for a Danish national identity and the Danish claim for the Eider border. Consequently, the ramparts were reenforced to defend the Danish kingdom against Prussian and Austrian troops in the war of 1864. The border landscape of Hedeby and the Danevirke thus also played an important role in the definition of the national states of Denmark and Germany in the nineteenth and twentieth centuries.

Hedeby and the Danevirke are mentioned over time in several contemporary written sources in connection with important actions carried out by the Danish or Frankish royalty, beginning with a reference from 804 in the Royal Frankish Annals (*Annales Regni Francorum*) mentioning Hedeby. In 808 the written source describes the gathering of a fleet at Hedeby at the behest of King Godfred of Denmark and the building of the Danevirke by the same king. A few years later the Royal Frankish Annals refer to a commander of the Danish borderland who participated in the attack on the Frankish fort of Esesfelth, not far from the Elbe River, in 817. Thus, the first written accounts highlight the crucial importance of Hedeby and the Danevirke in defending the king's realm against the Carolingian Empire. Due to the repeated presence of the king, it should be assumed that a royal seat was located in the borderland, but no such location has been verified so far. It has been suggested that (similarly to the situation in Birka, Sweden) the former peninsula, where the old town of Schleswig is situated today, could have been well-suited as a royal seat. But the existence of a royal palace has been archaeologically traced back to no earlier than the twelfth century.

The Danish king Godfred – the reported founder of Hedeby – was the same king who plundered the Frisian coast and probably also the Carolingian emporium of Dorestad with an alleged number of 200 ships in 810. These actions illustrate the deliberate creation of a trading centre strategically located on an isthmus in order to take control of the long-distance trade networks in Northern Europe, thereby greatly increasing revenues and political power. The key role of Hedeby in long-distance trade is reflected by the formidable quantities of valuable import items from all over Europe and beyond.

The borderland played a key role in negotiations between the successors of both the Frankish and Danish kings in the ninth century, in which the Eider was settled as a

political boundary between the realms. The Danevirke, however, effectively remained the built demarcation and defensive boundary in the borderland. In the tenth century, kings of East Francia such as Henry I and Otto II again tried to push north, encouraging Danish kings like Gorm and Harold to reinforce and defend Hedeby and the Danevirke. Inscriptions on the rune stones from around Hedeby testify to these struggles and to the importance the borderland still had to the Danish kings at the time. Several rich burials of warriors along the Schlei and a potential noble seat at Försing complement the written evidence.

In the years 1050 and 1066, Hedeby and the Danevirke saw attacks by Norwegians and Slavs, respectively. Nevertheless, several meetings of Danish king with archbishops of Hamburg and Bremen took place. The kings of East Francia finally renounced their claims on the land north of the Eider in the early eleventh century while a duke (jarl) was installed on the Danish side to protect the borderland. These decisions paved the way for the development of the Duchy of Schleswig and the County of Holstein in the following centuries, the former remaining a fief of the Danish king while the latter became part of the Holy Roman Empire. All of these events and the archaeological remains underline the constant importance of Hedeby and the Danevirke for the history of Northern Europe in the Viking Age until today.

CRITERION IV:

to be an outstanding example of a type of building, architectural or technological ensemble or landscape which illustrates (a) significant stage(s) in human history

Hedeby and the Danevirke represent a significant cultural, political and economic phase in the history of Northern Europe, reflecting the specific nature and the development of borders in connection with the formation of states in Viking-Age Europe between the eighth and eleventh centuries. This landscape is a unique case study for the development over centuries of the architecture of fortified boundaries in conjunction with trading centres which are strategically integrated into their natural environment.

Hedeby and the Danevirke functioned as demarcations, fortifications and displays of power, and as a means of controlling exchange, trading routes, the economy and the territory at the crossroads between the emerging Danish kingdoms and the kingdoms and peoples of mainland Europe. Ramparts and other defences are preserved from more than six centuries, including wooden structures, stone and brick (then novel building materials), all of which were effectively combined with natural obstacles. Exceptional archaeological remains of the urban settlement, the harbour and the cemeteries have survived in Hedeby, testifying to different cultural traditions from the eighth to eleventh centuries. The archaeological evidence highlights the significance of Hedeby and the Danevirke as an outstanding example of a landscape in a borderland embodying territorial control and political and economic might.

**A CASE STUDY FOR
THE ARCHITECTURE OF
FORTIFIED BOUNDARIES
IN CONJUNCTION WITH
A TRADING CENTRE**

The different segments and phases of the Danevirke feature a great variety of defensive architecture and consist mostly of ditches in connection with earthworks which were built on wooden substructures or were combined with wooden dams in wetland areas. Retaining walls made of wood, fieldstones and brick were added in many building phases; these are rare features for linear ramparts of the time. The massive fieldstone wall in the Main Wall from the eighth century used clay for additional adhesion and is outstanding in its size and construction. The brick wall in the Main Wall from the twelfth century is among the earliest examples of brick architecture in High Mediaeval Europe and a landmark for the introduction of this technique to Northern Europe. Another really remarkable structure, in the Schlei inlet, is the large eighth-century Offshore Work, which consists in wooden caissons and has no comparison in Northern Europe. All defensive lines were adapted to the local topography, taking advantage of natural boundaries such as river lowlands, lakes and wetland areas in order to enhance their effectiveness.

In the ninth century, Hedeby became one of the most important urban trading centres in Northern Europe before 1000. Before and during the Viking Age, settlements in Northern Europe were still predominantly rural, consisting of single farmsteads or small villages. Large permanent trading centres then developed from often temporary marketplaces which had been established at strategically well-situated natural harbours. Hedeby offers the earliest preserved example of a planned town layout in Northern Europe and gives a unique insight into the wooden architecture of towns and harbours in the Viking Age. The maritime trading centre of Hedeby became an excellent showcase for the development of urban structures and for the growth and decline of the emporia in Mediaeval Europe. Places such as Ribe, Birka, Aarhus, Schleswig, Kaupang, Staraja Ladoga, Dublin, York, Dorestad and London originated as trading centres with urban features such as plot divisions within the settlement in the eighth to eleventh centuries but were either abandoned or overbuilt by mediaeval towns.

**A SIGNIFICANT
CULTURAL, POLITICAL
AND ECONOMIC PHASE
IN THE HISTORY OF
NORTHERN EUROPE**

In the eighth century, in the initial phases of Hedeby and the Danevirke, territorial and social organisation in Denmark and Scandinavia was based on chieftains and petty kings. By the eleventh century, larger states had developed and Denmark had become an integral part of the civilisation of the European Middle Ages. In Northern Europe, principal institutional functions which characterised Mediaeval European states have their origins in the late Viking Age (tenth and eleventh centuries) and include administrative systems based on the Catholic church, Catholicism as the state religion, taxation, large-scale trade and production, the establishment of regulated trading places (towns) and a centralised power structure. During the ninth and the first half of tenth century, petty kings in Denmark succeeded in enlarging their realms, as reflected in the flourishing of Hedeby as the most important emporium of old Denmark. It was not until the middle of the tenth century, however, that Harald Bluetooth managed to conquer all of Jutland, the islands of Zealand and Funen, Sca-

nia in Sweden and Vestfold in Norway. The kings of Jelling, and Harold Bluetooth in particular, invested considerably in military infrastructure such as the town wall of Hedeby, the Connection Wall and the Kovirke of the Danevirke, which helped them rule their kingdom from 940–990. Hedeby and the Danevirke are clear archaeological manifestations of a re-organization of governmental and economic structures of a large territory aimed at adopting the organization of the Catholic East and West Frankish kingdoms. Sven Forkbeard (986–1014) and Canute the Great (1018–1035) managed to extend the Danish kingdom to England and eventually ruled over a realm encompassing Denmark, England, Scotland, the North Atlantic Islands, Norway and the southern parts of Sweden, furthering Denmark's development into a Mediaeval European society. At the end of the eleventh century, the kingdom featured a feudal system, centrally organised minting, established bishoprics, fully developed towns, taxation and fines for resorting to the private use of violence (*Landfrieden*), a development that is reflected in the archaeological material of Hedeby.

In the late eleventh century, due to new economic requirements, Hedeby was succeeded by the *civitas* of Schleswig on the opposite banks of the Schlei. The site is now completely built over by the present town. Schleswig served as a transshipment port on the Schleswig Isthmus for about another century until its function as trade hub was taken over by the town of Flensburg and the Hanseatic town of Lübeck. Valdemar I's brick wall, from the late twelfth century, is the youngest testimonial for the importance of the borderland in the struggle against German – especially Saxon – sovereigns and in the attempt made by his successor Valdemar II (1170–1241) to further enlarge the Danish kingdom. In the thirteenth century, land north and south of the Schleswig Isthmus was increasingly owned by nobility from the County of Holstein, which had developed under the rule of East Francia and of German sovereigns of the High and Late Middle Ages. As a consequence of these developments, the borderland lost its function until the Danevirke was revived in the nineteenth century in the course of the Danish national movement.

Hedeby and the Danevirke give a unique insight into the architecture and development of defensive structures, harbours and towns over several centuries in Mediaeval Europe, where borders often shifted and territorial control was mostly facilitated by simple earthworks or forts. The combination of the man-made structures at a geographic isthmus in a borderland make Hedeby and the Danevirke a unique example of a border landscape that connected different regions in Europe and which is extraordinarily rich in rare archaeological remains. The landscape illustrates the political, territorial and economical developments in Northern Europe over a significant amount of time. Furthermore, the combination of defensive structures and an emporium showcase the social function of borders, not only as an expression of territorial politics but also as contact zones between different cultural traditions or civilisations, in an exceptional way.

3.1.C STATEMENT OF INTEGRITY

INTEGRITY OF THE PROPERTY

Hedeby and the Danevirke encompass all the archaeological sites and structures of the sixth to twelfth centuries which are necessary to convey the significance of the property. All important historical building phases and structures, the archaeological material and substance, the construction and layout and the situation and setting of the sites are well preserved and adequately intact as archaeological sites and scientific sources. Further features important for the functional and visual integrity of the setting are included in the buffer zone and the wider setting. Thus, the landscape is still largely intact with respect to its historical topography. Furthermore, the surrounding of the sites is free from any standing structures that would have a significant impact on the visual integrity of the nominated property.

The ground of Hedeby has never been developed and thus provides a multitude of options and research questions for archaeological study. Hedeby is the only emporium in Viking-Age Europe with a preserved town layout and harbour including shipwrecks and remains of landing stages which served as a market. The largely undisturbed site also contains exceptional archaeological relicts of wooden houses, infrastructural elements, workshops, graves and a broad variety of finds made of often perishable materials. Large parts, 26 km, of the preserved structures of the Danevirke are still visible as pronounced embankments or low ridges. Some parts of the sections, especially the western end of the Crooked Wall, are only known from archaeological surveys.

Integrity measures the completeness and intactness of all elements and attributes that convey and express the proposed Outstanding Universal Value of this nomination. The archaeological border landscape of Hedeby and the Danevirke is nominated as exceptional testimony to the Viking Age between the eighth and eleventh centuries and as an outstanding example of the architecture of fortified boundaries in conjunction with trading centres.

The nominated area encompasses almost all the known man-made structures associated with the defensive system of the Danevirke and the trading town of Hedeby from the Late Iron Age to Medieval times between the river Treene and Windebyer Noor, a marginal bay of the Baltic Sea. This includes the various known segments of the embankments, the alternative defence lines of the Kovirke and the rampart connecting to Hedeby, the line of wooden caissons in Schlei Fjord, and all their elements such as ramparts, stone walls, ditches and additional embankments in the forefront. Only few areas have been omitted, where all archaeological substance has most likely been removed. The archaeological complex of Hedeby comprises all those elements which are important for the interpretation of the place as an early urban settlement and emporium in the Viking Age. This includes all known settlement and production

COMPONENT PARTS AND THEIR CONTRIBUTION TO THE PROPOSED OUV

ID	Name of the component part	Features
1	Crooked Wall Area 4	Non-visible part of the rampart that runs along the lowland of the Rheider Au River as westward extension of the main rampart of the Danevirke
2	Crooked Wall Areas 3 to 4	Part of the rampart that runs along the lowland of the Rheider Au River as westward extension of the main rampart of the Danevirke
3	Crooked Wall Areas 1 to 2 Main Wall Areas 4 to 5	Part of the rampart that runs along the lowland of the Rheider Au River as westward extension of the main rampart of the Danevirke and the adjoin part of the main rampart of the Danevirke that was re-used for more than six centuries.
4	Main Wall Areas 2 to 3	Part of the main rampart of the Danevirke that was re-used for more than six centuries including the visible section of the brick wall, Valdemar's Wall, the Danevirke Museum and the reconstructed bastion from 1864.
5	Main Wall Area 1	Part of the main rampart of the Danevirke that was re-used for more than six centuries including Thyrburg and adjoining Lake Dannewerk.
6	Connection Wall Area 9 North Wall Area 4 Arched Wall	Part of the rampart from the tenth century that connected Hedeby to the main rampart of the Danevirke. Section where the Arched Wall, the North Wall and the Connection Wall adjoin Lake Dannewerk.
7	North Wall Areas 1 to 2	Part of the rampart from the eighth century that closed the gap between Lake Dannewerk and the Schlei.
8	Arched Wall	Part of the Arched Wall not included in 6.
9	Connection Wall Area 8	Part of the rampart from the tenth century that connected Hedeby to the main rampart of the Danevirke and adjoins the Arched Wall.
10	Connection Wall Areas 5 to 7	Part of the rampart from the tenth century that connected Hedeby to the main rampart of the Danevirke. Segment runs across a valley and includes a dam.
11	Connection Wall Area 3	Part of the rampart from the tenth century that connected Hedeby to the main rampart of the Danevirke. Segment is part of a village park.
12	Hedeby	Comprises all elements of Hedeby and the section of the Connection Wall adjoining the town wall (Semicircular Wall).
13	Kovirke Area 1	Part of the Kovirke rampart, the alternative defence line of around 980.
14	Kovirke Area 2	Part of the Kovirke rampart, the alternative defence line of around 980.
15	Kovirke Areas 3 to 5	Part of the Kovirke rampart, the alternative defence line of around 980.
16	Kovirke Area 6	Part of the Kovirke rampart, the alternative defence line of around 980.
17	Kovirke Area 7	Part of the Kovirke rampart, the alternative defence line of around 980.

ID	Name of the component part	Features
18	Kovirke Area 8	Part of the Kovirke rampart, the alternative defence line of around 980, adjoining a marginal bay of the Schlei.
19	Offshore Work	Line of wooden underwater caissons in the Schlei dated to the building phase of around 740.
20	East Wall Area 1A to 1C	Western rampart section of the East Wall is ascribed to the Danevirke building phase of around 740.
21	East Wall Area 2D	Part of eastern rampart section of the East Wall is ascribed to the Danevirke building phase of around 740.
22	East Wall Area 2E to 2F	Part of eastern rampart section of the East Wall is ascribed to the Danevirke building phase of around 740.

areas related to Hedeby, the area along the shore where harbour facilities are known or can be expected, and all cemeteries and defensive structures attributed to Hedeby in their entirety.

CONSTRUCTION AND LAYOUT

The construction and the layout of the sites are still complete enough to exhibit their original function. Features made of lasting materials such as earth and stone can generally be seen above ground. Most ramparts of the Danevirke are still visible over most of their length of 26 km, being up to several metres high. Open ditches can still be perceived in many places. The earthen town walls (the Semicircular Wall) of Hedeby are preserved to a height of several metres. All historical building phases and structures important for understanding the property can still be recognised visually or by archaeological methods. The visible structures and archaeological layers still display the original set-up and alignment of the sites as they developed over the centuries. This becomes especially clear when viewing the results of the geomagnetic survey in Hedeby showing settlement patterns and plot division.

MATERIAL AND SUBSTANCE

The materials of the individual archaeological sites of this nomination rank among the best preserved and scientifically most valuable sources for the Viking Age. The archaeological material and the original substance are largely intact so as to contain all information to the extent necessary for interpreting the function of each site. The original built structures and superstructures of Hedeby were predominantly made of perishable materials such as timber and wattling. Remains of these places are conserved as layers of embedded archaeological material, showing the extent of the perished materials. The storage conditions for archaeological material in Hedeby and the Danevirke are largely characterised by conservation due to water saturation, i.e. perishable materials such as wood and wickerwork and even textiles survive here, enabling light to be shed on Viking-Age building technology and everyday culture. All these structures below ground are well preserved from an archaeological point of view although subject to natural wear and tear. The ditches and ramparts of Hedeby and the Danevirke were mainly built of durable materials such as earth, stone and brick. They have survived the long period without use relatively well.

Hedeby has never been resettled and has therefore lain unused since being left by its inhabitants. Therefore, only the most recent archaeological layers are disturbed as a consequence of agricultural land use over the centuries. Although there have been numerous excavations and surveys in Hedeby, only 5% of the area with high archaeological potential has been dug. Large parts of the Danevirke are preserved, though they have been affected by decay and deterioration over the centuries, mainly as they were used for agricultural purposes and as a quarry for bricks, re-employed for house construction. Due to the linear nature of the Danevirke's elements, excavations have only destroyed small sections of the original substance.

LOCATION AND SETTING

Where it is of importance for the interpretation of the property, the location and setting of the component parts and their sites have been sufficiently preserved. All the natural conditions which affected the building of the wall system and the choice of site for Hedeby and the Danevirke – such as Schlei Fjord, rivers, wetlands and plains – still exist or are still recognisable in the topography of the area today. Further landscape features that were relevant for building the individual ramparts and sites, such as rivers and river lowlands, creeks, lakes, boggy areas and valleys, are still recognisable and preserved in terms of their topographical relief. These natural features are included in the buffer zone and wider setting to such an extent that the location of Hedeby and the Danevirke and the alignment and set-up of the sites can be understood. Many features are still visible in the landscape and for the most part unobstructed for the visitor. However, notably, land use, settlement and transport infrastructure have changed the landscape since the Viking Age. Some wetland areas have lost their original nature due to intensive irrigation measures. The flat relief of the sandur plain has, to some degree, been adversely affected by gravel mining.

THREATS AND ADVERSE EFFECTS

Some places suffer minor current encroachment by various sources, such as animal activities, plant cover, frost damage etc. These threats are all under control and do not pose any immediate danger to the integrity of the attributes or to the value of the sites. None of the attributes suffers from processes or developments threatening their intactness. The surrounding landscape is mostly free from construction which might obstruct or detract from the view from the sites and diminish visitors' experience of the monuments in their setting. As wind energy priority areas are currently being revised in regional spatial plans, it has been agreed with the responsible authority that the wider setting will be free of wind energy plans that might compromise the visual integrity of the nominated property.

3.1.D STATEMENT OF AUTHENTICITY

AUTHENTICITY OF THE PROPERTY

The credibility and truthfulness of the evidence for the interpretation of the Archaeological Border Landscape of Hedeby and the Danevirke is conveyed by the genuine archaeological material and substance, the construction and layout and the location and setting of the archaeological sites. All archaeological remains of the nominated property have retained their authentic construction and layout since the time of their primary use. The archaeological material and substance of the nominated property is also entirely authentic. All building phases, features and their remains relevant to this nomination date to the sixth to twelfth centuries or are likely to do so. Important topographical conditions and features which were historically involved in the choice of site and the layout of the structures are still recognisable even today. Recent repairs

and restorations can be clearly distinguished from the historical material and can be traced back thanks to complete and detailed archaeological documentation.

The credibility of the evidence has been corroborated by numerous written sources and extensive research using established archaeological and natural scientific methods. The theories used for the interpretation of the sites are derived from this research and have wide acceptance in the scientific community. Significant insights into the history and development of the nominated property have been gained since the nineteenth century through extensive archaeological excavations, examinations and various types of site surveys using invasive and non-invasive methods. Research has always been based on current international standards. These studies have always harnessed and further advanced the latest methods of investigation and analysis. The dating and analysis of the material has been achieved by traditional archaeological methods and, more recently, by employing a variety of natural scientific methods such as dendrochronology or radiocarbon dating. In particular, archaeometry with chemical and physical dating techniques, remote sensing, geophysical surveys and the use of metallurgy, palaeobotany and zooarchaeology have created an enormous amount of new, previously unimaginable information.

Before the use of archaeological methods, knowledge about the credibility of Hedeby and the Danevirke was exclusively gained by the interpretation of contemporary and historic written sources, which are still available today. These include inscriptions on the rune stones from the Viking Age and historic reports from contemporary Europe as well as medieval historiographies such as the “Gesta Danorum” from the late twelfth century. Intensive research on this material still offers essential data for the interpretation of the monuments. The numerous myths and songs about Hedeby and the Danevirke underline their function and importance in popular belief up to the present day. Written references to Hedeby and the Danevirke appear as early as the ninth century in the Royal Frankish Annals and later also in other contemporary written sources under various names and linguistic variations. Hedeby lost its importance and became deserted as a consequence of the foundation of Schleswig on the opposite side of the Schlei inlet and shortly afterwards fell into disuse. The Danevirke, however, remained in use well into the Middle Ages and was mentioned in the earliest Danish records of the twelfth/thirteenth century.

CONSTRUCTION AND LAYOUT

All preserved archaeological remains at Hedeby and the Danevirke have retained their authentic construction and layout since the Viking Age. However, the present form and appearance of the ramparts and ditches of the Danevirke and of Hedeby have been particularly affected by deterioration over the centuries and, to some degree, by the re-use of parts of the ramparts in the nineteenth and twentieth centuries. Other building phases of the Danevirke have conserved much of their original form, notably when preserved under later building phases. The use of the Danevirke contin-

ued into the Middle Ages. Some parts of the ramparts and ditches of Hedeby and the Danevirke were re-used in the nineteenth and twentieth centuries.

Where recent restorations have been carried out, they are clearly marked and based on complete and detailed archaeological documentation. In Hedeby, reconstructions of seven houses and a landing stage were recently built on excavated ground as an open-air museum. The only reconstruction on the Danevirke is the so-called Redoubt XIV. All were built according to the state of the art of archaeological scholarship and substantiated by photographs, excavations and other sources in the years between 2003 and 2007.

MATERIAL AND SUBSTANCE

The archaeological remains of Hedeby and the Danevirke today still constitute the original legacy from the time of their construction and are entirely authentic. All archaeological layers from the Late Iron Age to the Middle Ages are preserved beneath the surface. Their age has been corroborated by archaeological research revealing genuine materials from the Viking Age or providing other scientific dating, such as from dendrochronology or radiocarbon dating or by comparison with other known materials or structures from the Viking Age. However, the sites also encompass earlier and later archaeological phases. Earlier phases have, as a rule, been re-shaped by later building measures. The conditions of preservation for organic materials are extremely good in the water-logged milieu of the harbour areas in Hedeby.

Significant insights into the extent, history and development of Hedeby and the Danevirke have been gained since the nineteenth century through extensive archaeological excavations, examinations and various types of surveys of the monuments. The attribution of segments of Hedeby and the Danevirke to these sites is based on this research.

None of the reconstructions impairs the original substance. The repairs to the brickwork of Valdemar's Wall serve its preservation and can be clearly distinguished from the historical material.

LOCATION AND SETTING

Hedeby and the Danevirke are in their original Viking-Age location. The remaining setting is entirely authentic, even though the location and setting of the sites have naturally undergone constant change and development since the Viking Age. Some important topographical conditions and features which historically affected the choice of site and the layout of the structures are still recognisable even today.

3.1.E PROTECTION AND MANAGEMENT REQUIREMENTS

OVERALL MANAGEMENT FRAMEWORK AND SITE MANAGEMENT PLANS

The nominated property, its buffer zone and its wider setting are protected in the best possible way by the legal systems in place (e.g. listed monuments, nature protection areas, landscape protection areas). In addition, the majority of sites are owned by public bodies. The values of the sites are also considered and respected in public planning processes. The various protection and planning mechanisms and acts which apply directly to the landscape are sufficient to guarantee the protection and preservation of the proposed Outstanding Universal Value of the nominated property.

A site management plan was implemented in 2014. Here, all important stakeholders commit to the aim of protecting, preserving, monitoring and promoting the proposed Outstanding Universal Value of the nominated property. The values, attributes, integrity and authenticity of the nominated property are safeguarded and managed within the plan, representing the main objective.

Funding for the site management of the property is provided by the Federal State of Schleswig-Holstein and other public owners.

Almost one third of all the areas comprising the nominated property are already listed monuments. All further areas are monuments by definition and therefore also legally protected. The buffer zone and wider setting are protected by law as the setting of the monument. A large area within the buffer zone is designated as protected area for archaeological heritage. The Monument Preservation Act incorporates the protection of World Heritage Sites. In addition, the nominated property and the buffer zone are almost completely protected by various nature conservation regimes. Parts of the nominated property are designated as nature protection areas, Natura 2000 areas and landscape protection areas.

The Management Plan for Hedeby and the Danevirke is designed to implement all instruments available for protecting the sites and to employ them to optimum effect, and covers all decision-making levels from national to local stakeholders. On this basis, legal and spatial planning measures are to be coordinated and optimised, as are other measures and developments related to the maintenance and use of the monuments. The sites are also monitored for potential and current threats and effects which might negatively impact on their intactness and completeness. Monitoring is carried out according to the Management Plan. The site management is sponsored financially by the State of Schleswig-Holstein and is part of the state administration. The district of Schleswig-Flensburg (the largest public owner of parts of the monuments), other public bodies and private trusts support activities concerning protective measures. Subsidies for nature protection are being used to maintain Hedeby and the Danevirke.

**LONG-TERM
EXPECTATIONS**

In the long run, the core management issues are to increase awareness of the value of Hedeby and the Danevirke as an archaeological landscape and to retain that value by all important stakeholders participating in its management. The Management Plan aims at further integrating Hedeby and the Danevirke into their cultural, social, ecological and economic settings and to increase their social value to make them a motor for sustainable development in the region. The management works on improving the active network between the stakeholders of Hedeby and the Danevirke in order to maintain and enhance support from local communities and other stakeholders and to secure financial support so as to improve the maintenance and presentation of the sites and their setting. Future threats to the landscape, such as wind turbines, land use, housing developments and visitor impact, as well as natural agents such as plants and animal activities, need to be tackled collaboratively. Some specific threats such as damage to Valdemar's Wall due to exposure or damage by specific plants or animals such as *teredo navalis*, require additional research and training and the exchange of expertise and mutual support.

A borderland is the land on either side of a border between two or more territories. It is a place where political power manifests itself and connects to the landscape. Here, different cultures either mix or clash, creating a specific political, spatial, cultural, economic and social environment.

(CF. SPARKE, 2011, 53; MINGHI AND RUMLEY, 2014)

3.2

Comparative Analysis



3.2.1 INTRODUCTION

The German sociologist Georg Simmel (1908) described a border as a spatial manifestation of social interaction between different people or groups of people which creates space as perceived by human beings. Simmel therefore considers borders as important and constant factors of human social behaviour which can be expressed not only by physical demarcations but also in social practices. Territorial behaviour is therefore the geographical expression of power structures which link society and space. Borders display the connection between geography and politics, as they are tangible manifestations of political control and power in the landscape and on maps. According to Robert Sack (1986), territorial behaviour encompasses three main attributes: the area, the communication of the area (often by way of boundary markers), and the attempt to control the area. Expressions of these aspects of territorial behaviour can be found inside the territories and also at their borders, reflecting the cultural context of those creating the delimitations. Recent research emphasises the role of borders as intercultural interfaces, rather than their separating character. Even strictly separating borders, such as those between the Catholic realms and the Islamic Caliphate in Spain at the time of the Reconquista in the Middle Ages, are at times very permeable and in fact a meeting ground for different cultures (Prescott, 1978; Abulafia, 2007). Thus, borders are invaluable sources of knowledge about the civilisations, societies and cultural traditions which meet there.

Modern borders between nation states have mainly either developed over centuries through warfare and political negotiation or have been imposed by foreign regimes. Today, we usually perceive borders by their institutionalised lines and clear demarcations, such as the borders between European states in the twentieth century or, even more clearly, the fence on the US-Mexican border, the Berlin Wall or the military demarcation line between North and South Korea. Modern borders delineate the territorial and political boundaries of a state more or less precisely and permanently. But political borders cannot be reduced to demarcation. Borders have a strong societal dimension that impacts on the regions in the vicinity of a border and their inhabitants. Communities and social practices on either side of a border have been shaped by the political and social processes which often shifted and eventually established the border, and which have thus created distinct borderlands between modern nations. While there is a vast amount of literature on the analysis of borderlands and political boundaries in modern times, comparatively little has been said about historic and archaeological borderlands. One exception is, for example, research on the Roman Limes and its role as a frontier between the Roman Empire and its neighbours of nomadic cultures and 'barbarians'. Archaeological evidence clearly shows that Germanic or Celtic material culture can be found on the Roman side of the Limes, while Roman artefacts, technology and even settlements can be found in the "Barbaricum". The Roman Limes and the Great Wall were in fact a frontier or borderland based on the extremely different cultural and territorial practices on either side of the borders, as

often historically found in connection with empires. During most periods of history, borders were not fixed lines but subject to dynamic interaction and negotiation between political entities, people and the landscape (Konrad, 2015). Certain landscape conditions or fortifications, such as rivers, embankments, palisades or stone walls, were used as boundaries. They served manifold functions: to demarcate different judicial areas or realms, symbolise power, control trade routes, dominate territories or act as hubs of exchange and trade. Borders in prehistory, Antiquity and the Middle Ages were less political borderlines and more borderlands or frontiers describing narrower or broader zones which were more or less vaguely defined, open for cultural, social and economic exchange, and which comprised natural and/or artificial boundaries, both linear and non-linear.

In the context of this nomination a border landscape is understood as an area between territories – in a borderland – where territorial control, power politics, socio-cultural exchange, and separation are manifested in physical form. Thus, border landscapes must be seen as a type of cultural landscape representing the "combined works of nature and of man" as designated in Article 1 of the World Heritage Convention. Border landscapes are also clearly "illustrative of the evolution of human society and settlement over time, under the influence of the physical constraints and/or opportunities presented by their natural environment and of successive social, economic and cultural forces, both external and internal", as described in paragraph 47 of the Operational Guidelines (2015). Border landscapes could therefore be viewed – following the definition of Historic Urban Landscapes by ICOMOS (2011) quite closely – as the result of a historic layering of cultural and natural values extending beyond the notion of strictly delineated borders. Border landscapes are part of a borderland which includes the broader context of a border and its geographical setting. This wider context includes the site's topography, geomorphology and natural features; its built environment, both contemporary and historic, including archaeological layers; its land use patterns and spatial organisation; its visual relationships; and all other elements of the structure of a borderland. It also includes social and cultural practices and values, economic processes, and the intangible dimensions of heritage as related to diversity and identity, all of which establish the basic role of the border as a manifestation of human territorial behaviour.

The Archaeological Border Landscape of Hedeby and the Danevirke furthers the understanding of the different notions of historic and contemporary border landscapes and the imprint of human territorial activities on the environment. Moreover, the archaeological border landscape exemplifies the development of territory in the Middle Ages and modern times and therefore the motion of the border region between Denmark, the Frankish Empire and its successors and neighbours.

The following overview and definition of terms relate to the multifaceted phenomenon of borders which helps to categorise the nominated property. Furthermore, by addressing the subtheme of an archaeological border landscape, we want to contribute to the multi-layered concept of cultural landscapes according to UNESCO.

DEFINITION OF TERMS RELATED TO THE PHENOMENON OF BORDERS

Border	general term for all contact zones between different territories; more specifically a politically negotiated demarcation between states (Prescott 1978)
Frontier	zones between territories, civilisations or cultural groups (Prescott, 1978), but also inhabited/uninhabited land or buffer zones; frontiers are places that lack clearly defined geographical and cultural boundaries (Adelman & Aron, 1999)
Boundary	physical linear demarcation, such as boundary stones, rivers, fences or embankments, as part of a border or within a frontier (Prescott, 1978)
Borderland	area encompassing either side of a border (Sparke, 2011), “regions around or between political or cultural entities where geographic, political, demographic, cultural, and economic circumstances or processes may interact to create borders or frontiers” (Parker, 2006, p.80)
Border landscape	physical manifestation of political and social actions in a borderland, a frontier or along a border (Knight, 2014)

3.2.2 AIM AND METHODOLOGY

AIM

The comparative analysis establishes the relative value of the nominated property in its regional, national and international contexts. The analysis outlines the similarities which the nominated property may have with other properties and the reasons which make the nominated property unique. Hence, there is a need to determine: 1) whether the values and attributes of The Archaeological Border Landscape of Hedeby and the Danevirke are already present on the World Heritage List, and 2) whether there is scope on the World Heritage List for the nominated property.

Further, this analysis bears in mind the fact that culture takes diverse forms across time and space as outlined in the UNESCO Declaration on Cultural Diversity (2001) and referred to in the ICOMOS (2005) study “Filling the Gaps”, which is the basis of this comparison. This diversity is embodied in the uniqueness and plurality of the identities of the groups and societies making up humankind.

Only the “early evolution of humans” and the “modern world” since the First World War are regarded as notable exceptions to an otherwise more regional approach to cultural heritage. Neither the Viking Age nor Northern Mediaeval Europe belongs to these universal periods. Therefore, all developments connected with this time and region deserve and require an evaluation particular to their cultural and chronological context. The main theme of the nominated property is a complex of fortified boundaries in conjunction with an emporium, strategically situated in a borderland where narratives of political decision-making, long-distance trade, and cross-cultural communication converge and manifest themselves. This theme could nevertheless prompt a request for comparison with other great creative responses to the environment, especially with respect to the development and continuity of multi-faceted border landscapes. But, as with other important themes related to human existence, even such meta-narratives of humankind vary substantially from one time and one region to another.

As it would clearly be beyond the scope of this nomination to illustrate the development of linear fortifications, urban settlements and centres of trade and exchange on a generic worldwide level, this comparative analysis will be confined mainly to the cultural and chronological framework of Western and Northern Mediaeval Europe, and, to some extent, to Mediaeval Europe. However, because of the significance of the architecture of fortified boundaries in conjunction with trading centres facilitated by the borderland, this comparative analysis will look further, analysing the theme of archaeological borders and borderlands outside Europe and the given chronological framework. In order to identify adequate examples for comparison outside the regional and chronological framework, we will therefore mainly look at linear border defences rather than the much more frequent urban trading centres as indicators for border landscapes with complex features of defence, trade and demarcation.

METHODOLOGY

For the purpose of a credible and systematic comparison, this analysis rests upon:

- the factual information, qualities and values
(see Chapter 3.1.a-d) of the nominated property
- and the typological, regional and chronological and thematic framework of the ICOMOS (2005) study “Filling the Gaps”

to define the indicators for selecting comparable sites on the World Heritage List, and the Tentative Lists and those sites that are relevant for comparison but not listed. It is essential to reach a clear-cut definition of the nominated property in order to be able to compare it with other sites. Furthermore, the indicators used for comparison comprise key attributes of all the criteria under which inscription is proposed.

Consequently to be comparable to the nominated property, the selected properties should meet at least one out of the following indicators:

- be situated in the borderland between two or more territories or cultural traditions within the geo-chronological region of Western and Northern Mediaeval Europe:
 - Frontier of Latin European civilization
 - Other frontiers between empires and less organised political entities
 - Any historic borderland
- designate a demarcation or constitute fortified boundaries:
 - Linear ramparts, earthworks, dykes, walls, berms, ditches, etc.
 - Other fortification or demarcation of a border
- include important place(s) of trade and communication:
 - Emporia or other trading centres with a diverse wooden architecture
 - Places of trade and routes controlled and protected by connective defensive works
 - Maritime component (access to sea)
 - Other evidence of communication
- include archaeological sources of high scientific relevance and sites of outstanding integrity and authenticity:

- Excellent preservation of archaeological evidence, long period of use, strong foreign influences

This definition of the relevant attributes of the nominated property provides the basis for comparison with other cultural properties. The selected cultural landscape or site should have similar attributes and share comparable typological, regional, chronological and thematic traits in order to qualify for comparison.

INDICATORS OF COMPARISON

	a. Outstanding example of a borderland between two or more territories or cultural traditions	b. Includes significant examples of places of trade and communication
fully comparable	<ul style="list-style-type: none"> · Properties located within the geo-chronological region of Western and Northern Mediaeval Europe or – to a lesser extent – Mediaeval Europe · Representing a borderland, frontier or border landscape that greatly increases knowledge about the interaction of different cultural traditions 	<ul style="list-style-type: none"> · Comparable type of trading centres such as emporia (harbour/ accessibility to sea/coastal shipping). · Sites are unique or have a key historic or typological role. Architectural features are comparable, e.g. construction is mainly of earth and timber. · Places of trade and routes that are controlled or protected by defensive works
partially comparable	<ul style="list-style-type: none"> · Properties in other historical periods in Europe or around the world representing frontiers between highly and less organised political or social entities · Other outstanding examples of borderlands 	<ul style="list-style-type: none"> · Contains places or settlements showing significant trade activities, but not related to the features of an emporium or other kind of trading centre
not comparable	<ul style="list-style-type: none"> · Properties not related to demarcation and communication in borderlands 	<ul style="list-style-type: none"> · Properties without any significant trading activities

c.

Includes significant examples of territorial demarcations, fortified boundaries or linear fortifications in general

- Linear ramparts, barriers, earthworks, walls, berms, ditches, etc.
- Sites are unique or have a key historic or typological role.
- Architectural features are comparable, e.g. construction is mainly of earth and timber.
- The fortified boundary is facilitated by a land corridor, or more specifically an isthmus creating a bottleneck for routes

d.

Includes archaeological sources of high scientific relevance and consists of sites whose integrity and authenticity is outstandingly good and investigated

- Contains extremely well-preserved archaeological material with many visible structures.
- Evidence comes from a long period of use and exhibits strong foreign influences.
- A broad variety of materials (e.g. stone, metals, ceramics, organic material) and data which led to significant scientific results.
- Excellent future opportunities for further research (e.g. dating possibilities, typology, environmental reconstruction).

- Contains similar architectural features but with another context, shape or dimension
- Mainly displays other conditions for the construction of a border fortification, e.g. protection of valued land or demarcation between different territories

- Contains only partially preserved archaeological sites
- Archaeological material is less well researched
- Conditions of preservation and opportunities for future research are limited

- Characterised by other systems of fortification, e.g. bastions, castles, fortresses, canals, etc.
- Properties without any significant defensive structures

- Contains no significant archaeological site or material

3.2.3 TYPOLOGICAL, REGIONAL AND CHRONOLOGICAL AND THEMATIC ANALYSIS

The following analysis of the typological description, the regional, chronological and cultural context, and the thematic scope of the nominated property provides the rationale for shortlisting the sites for the detailed comparison (see Chapter 3.2.4).

TYPOLOGICAL ANALYSIS

According to ICOMOS (2005), typology is a classification of tangible elements that possess certain similarities and characteristics which can be grouped. First and foremost, the nominated property is proposed under ICOMOS (2005) and UNESCO's (2015) cultural heritage category of a "cultural landscape" which is clearly defined and created intentionally by man. Second, within the typological framework of ICOMOS (2005), Hedeby and the Danevirke can also be categorised as "archaeological heritage" comprising different typologies of sites. Although both categories overlap and interact in reality, they point out different typological features relevant to the following analysis and shortlisting of comparable sites.

CULTURAL LANDSCAPE

UNESCO's Operational Guidelines (2015) define cultural landscapes as specific cultural properties that fall into three main categories:

- clearly defined landscapes designed and created intentionally by man,
- organically evolved landscapes, which can be further categorised as relict (or fossil) landscapes or continuing landscapes,
- and associative cultural landscapes, which are characterised by religious, artistic or cultural associations of the natural element of the site.

The OGs further state that cultural landscapes may "embrace a diversity of manifestations of the interaction between humankind and its natural environment." As also pointed out in the ICOMOS (2005) study "Filling the Gaps", and as becomes obvious when examining the World Heritage List, designated cultural landscapes refer to numerous themes and further themes are continuously being developed and acknowledged, of which The par force hunting landscape in North Zealand, no. 1469 is a good example.



▲
FIGURE: HISTORIC MAP
OF THE DANEVIRKE BY
NEYNABER AND HEMSEN
FROM 1761, ILLUSTRATING
THE INTERPLAY OF LINEAR
DEFENSIVE WORKS AND
NATURAL BARRIERS

Taking that into consideration and understanding the typological and thematic framework of the ICOMOS (2005) study “Filling the Gaps” as an open and evolving structure, the nominated property can be described as a clearly defined landscape designed and created intentionally by human beings. It features a significant archaeological border landscape expressing both a long interaction and a demarcation between Scandinavian, Frisian, Slavic and Saxon societies and large states such as the Frankish Empire over centuries, brought about by the narrow isthmus of the large southern Jutland Peninsula. It was only logical to construct the linear fortification structure of the Danevirke between its narrowest points – the gap between the Treene River and the Schlei inlet. Trade activities on land and on water, cross-cultural communication running from the north-south and west-east axis are concentrated at the nodal point and trade centre of Hedeby.

As a readable and spacious structure in today’s landscape, the border landscape of Hedeby and the Danevirke incorporates an urban settlement, a complex of linear defensive works and the strategic use of the landscape features and geographical setting of the isthmus. It displays not only elements of an artificial and a non-artificial border landscape involving the construction of straight-lined border fortifications but also the integration and strategic use of existing landscape features, such as topography, water or former marshland.

ARCHAEOLOGICAL HERITAGE

Hedeby and the Danevirke are closely interwoven and only convey their proposed Outstanding Universal Value as an ensemble. However, the complex nature of this archaeological ensemble makes it difficult to identify properties which are comparable in type and function. Therefore, different types of sites will be identified which constitute the nominated property. Using the ICOMOS (2005, 33) typology, the archaeological heritage of Hedeby and the Danevirke includes an urban settlement with a town wall, cemeteries and a harbour, as well as a linear defensive system on a large scale.

Hedeby was a large and well-structured urban settlement with defined streets and plots, a harbour with large wooden piers, extensive burial grounds and eventually also a town wall protecting the settlement. Extensive remains associated with craft production and long-distance imports of mass-produced goods indicate that Hedeby functioned as a significant maritime trading centre (emporium) and place of cross-cultural communication between Scandinavia and continental Europe. The town wall is connected to the defence structure of the Danevirke, highlighting the strategic position of Hedeby at the root of Jutland and along its communication route, the Haervejen or Army Road, which cuts across the peninsula southwards, towards the European continent. Furthermore, Hedeby's location by the southwestern part of the Baltic Sea and only a short distance from the North Sea's south-eastern ports made it a truly interregional nodal point for trade and the long-distance transport of both people and goods.

In Northern Europe, the Danevirke was the largest embankment marking the border between Scandinavia and the European continent in the Early and High Middle Ages, extending over 33 km, of which 27 km consist of clearly visible wall and embankment structures including moats and berms. Between the different areas of the wall structures, water, marshland or bogs serve as natural barriers. The border fortifications of the Danevirke are characterised by different phases of construction, expansion and reinforcement that show a change in technological skills and continuous use over centuries. The setting of the Danevirke is facilitated by the Schleswig Isthmus, the land corridor of the Jutland Peninsula between the Treene River and the Schlei Inlet.

There are numerous World Heritage Sites which fall under the category of "cultural landscapes" and "archaeological heritage". Many of the sites stretch chronologically over millennia and cover other geo-cultural regions, and are thus not at all comparable to the current nomination. Consequently, properties constituting strong cases for comparison are those which are by definition cultural landscapes within a borderland, with a pronounced archaeological heritage containing a trading centre and a large, linear defensive system.

In order to analyse the attributes and values of the nominated property in our comparison better, the search for similar sites is further narrowed down by focusing on: 1) the regional and chronological features and 2) the thematic scope of the current nomination.

REGIONAL AND CHRONOLOGICAL ANALYSIS

As stated above, cultural traditions may take diverse forms across time and across world regions, expressing and promoting the richness of different ways of life. Therefore, it is crucial to evaluate the nominated property within its chronological, regional, and cultural framework as described below. This framework narrows down the number of those sites that are most suitable for comparison with regard to their contributions to the heritage of the Viking Age in Northern Europe.

According to the ICOMOS (2005) study, the Archaeological Border Landscape of Hedeby and the Danevirke falls under the regional and chronological category of “Western and Northern Mediaeval Europe”, which is divided into the following periods of European history (ICOMOS 2005, 54):

- Early Middle Ages (fifth to tenth centuries AD)
- Vikings and Normans (eighth to eleventh centuries AD)
- High and Late Middle Ages (eleventh to fifteenth centuries AD)

CHRONOLOGICAL FRAMEWORK

The period of time that is most relevant to the nominated property is the eighth to eleventh centuries AD. At the height of their activity during this time, Hedeby and the Danevirke are strongly connected and associated with the so-called Viking Age – though not exclusively dated to that period. Especially in regard to the strengthening of the Danevirke for the purpose of state consolidation and power politics by Valdemar I of Denmark in the twelfth century, the nominated property also extends to the era of the High and Late Middle Ages.

The general notion of the beginning and the end of the Early Middle Ages differs quite substantially within different parts of Europe. The establishment of Mediaeval Christian states is commonly connected with the Early Middle Ages, a development which takes place in various regions of Europe at different times. In Southern and Western Europe, the beginning of the Middle Ages is commonly associated with the end of the Western Roman Empire in the fifth century and the migration of Germanic tribes roughly from the third to the sixth centuries. In Northern Europe, however, the Middle Ages are often connected with the end of the Viking Age and begin no earlier than the eleventh century.

Properties of the Late Middle Ages, from the eleventh to the fifteenth centuries, tend to be extremely different from those of earlier centuries. Properties from the twelfth century can sometimes be more comparable to the manifestation of early Christian societies, especially in Northern Europe, e.g. World Heritage Site Urnes Stave Church, no. 58. This becomes especially obvious considering the type of site – archaeological heritage in contrast to built heritage – and the construction – mainly timber and



Qagssiarssuk

Þingvellir



L'Anse aux Meadows

▲
IMPORTANT SITES AND TRADING CENTRES OF THE VIKING AGE IN NORTHERN EUROPE AND OVERSEA



Avaldsne

Kaupang

Birka

Staraja Ladoga

Aarhus

Grobina

Daugmale

Jelling

Ribe

Hedeby

Reric

Dublin

York

London

Dorestad

Quentovic

earth vs. mainly stone. An across-the-board comparison with various High and Late Mediaeval sites is therefore pointless.

REGIONAL FRAMEWORK

One geo-cultural region which is particularly important for this nomination and comparison is Northern Europe. Here, we find the areas characterised by archaeological material linked to the Viking Age or related cultures, such as Frisian culture. Those regions that do not belong to Northern Europe but contain Norse overseas settlements, such as Canada or Greenland, are also of interest for the comparison.

Further, the term “Northern Europe” is a culturally and geographically based delimitation and describes an area which is largely determined by an almost detached situation from mainland Europe and which is almost exclusively populated by peoples with a Norse cultural background. Historically there has never been a clear definition of what this region encompasses. For the purpose of this nomination we therefore define the northernmost countries of Europe as part of Northern Europe including but not limited to the Scandinavian Peninsula, Jutland Peninsula, the Baltic plain that lies to the east and the many islands that lie offshore from mainland Europe such as the British Isles. The term includes the maritime regions of Northern Europe and Greenland, as the area stretches over vast expanses of sea.

CULTURAL FRAMEWORK

The date range of the eighth to eleventh centuries for the Viking Age, as defined for the nomination, rests upon a number of criteria, among them historical events, changes in material culture, and the gradual emergence of, for instance, new architectural features, a broader range of settlement types, and changing patterns of economic interaction.

The term “Viking Age” emerged in the nineteenth century, when the chronological framework of Scandinavian prehistory was established by leading scholars in Denmark, Sweden and Norway (Svanberg, 2003). In contrast to earlier prehistoric periods, written sources also played a part in defining the Viking Age. Historic events, not least the infamous raid upon the monastery of St. Cuthbert on Lindisfarne off the east coast of Northumbria in 793, heralded the start of Viking attacks on Western Europe, thus providing a date for the transition to the Viking Age. Archaeological excavations since the nineteenth century have added greatly to the written evidence, indicating that some of the prominent building works and settlements typically associated with the Viking Age – trading sites such as Hedeby, and the Danevirke ramparts – in fact emerged in the eighth century or even earlier.

The end of the Viking Age has likewise in part been defined by historical events rather than archaeological typology, most significantly by the acceptance of Christianity, a process noted by mediaeval chroniclers who distinguished between their own Christian era and former pagan times. By the eleventh century, not only religion

but also economic, social and political structures were undergoing change. The failed re-conquest of England by Harald Hardrada and the Norman Conquest of England in 1066 are a similar fixed point. Thus, although the eleventh century marks the end of an age, daily life may not have changed and Scandinavian influence and dominance abroad did not necessarily end (cf. Crawford, 2013; Duczko, 2004).

DEFINITION OF THE TERM "VIKING"

The term "Viking" can be looked upon from two main perspectives: its use during prehistoric times (in the "Viking Age") and the definition of the term "Viking" in modern research since the nineteenth century. In the first case, "Viking" refers to piracy in general and to Norse activities of warfare or trade. In the latter case, "Viking" refers to the historic period of the Viking Age and to people from that period. In this nomination "Viking" is used in the narrow sense for Norse people who went on "Viking" expeditions, meaning for trade, warfare, conquest, etc. The term "Norse" is used for all people who spoke an Old Nordic language and shared a common culture in the Viking Age.

The modern use and thus the connection between the word "Viking" and the peoples of Scandinavia and the North Atlantic Islands is less than 200 years old. From at least the first half of the nineteenth century on, people from Sweden, Norway and Denmark identified themselves as "Scandinavians" referring to the old (mediaeval) Latin name (Scania) for the Southern part of Sweden. The term "Scandinavia" is therefore relatively well defined as the region where Sweden, Norway and Denmark are situated.

In modern research, during the last two centuries the word "Viking" has become more commonly used as a generic term for all people from Northern Europe who went on expeditions for warfare and trade during the Viking Age. The reason for the popular use of a term such as "Viking" is that it is almost always easier to use to refer to people from Northern Europe in the Viking Age instead of talking about Danes, Norwegians, Swedes or Icelandic peoples. "Viking" and "Norse" are therefore convenient terms to sum up the diverse ethnic, religious and political identities in the area relevant to our nomination.

VIKING-AGE SITES ON THE WORLD HERITAGE LIST

At present, only six World Heritage Sites fall within the category of "Vikings and Normans". Two of those, no. 731 Hanseatic Town of Visby and no. 84 Vézelay, Church and Hill, are built heritage sites with groups of buildings and religious properties and do not, strictly speaking, belong to the Viking-Age heritage covered by this nominated property; nor do they share the relevant qualities of a borderland location or linear defences with the nominated property. They will therefore be eliminated from the process of shortlisting and comparison.

The other four World Heritage Sites

- Birka and Hovgården, no. 555,
- Jelling Mounds, Runic Stones and Church, no. 697,
- L'Anse aux Meadows National Historic Site, no. 4,
- and Þingvellir National Park, no. 1152

are outstanding examples of different sites with different thematic foci from the Viking Age and are well qualified for the regional and chronological comparison. While located geographically outside the designated region of Western and Northern Europe, World Heritage Site L'Anse aux Meadows National Historic Site, no. 4, in Canada is also ascribed to the Viking Age.

VIKING-AGE SITES ON THE TENTATIVE LISTS

As the information on the Tentative Lists is less detailed than for those on the World Heritage List, a somewhat simplified regional and chronological framework has been drawn up. Rather than dividing all of Europe into a series of regions, the wider regional and chronological scope of Mediaeval Europe (fifth to fifteenth centuries) has been used for the first step of shortlisting. All Tentative Lists of State Parties within Europe have been examined, and the tentative properties falling within the regional chronological scope of Mediaeval Europe (fifth to fifteenth centuries) have been taken into further consideration. It becomes obvious that the vast majority of sites consist of stone-built Christian heritage and belong to the later stages of the Mediaeval period; therefore, they are of an inherently different nature in comparison to the archaeological nature of Hedeby and the Danevirke, with original constructions mainly built from wood and earth.

The process of shortlisting showed that at present there are only five sites on the Tentative Lists (in Denmark, Latvia and Norway) which fall under the regional and chronological category of "Vikings and Normans", some of which were already component parts in the former transnational serial nomination of the Viking-Age Sites in Northern Europe of which Hedeby and the Danevirke were also component parts:

- Church ruin at Hvalsø, episcopal residence at Gardar, and Brattahlíð part of the Kujataa – a subarctic farming landscape in Greenland, no. 1781
- Grobiņa archaeological complex, no. 5608
- Meanders of the Upper Daugava, no. 5610
- The Trelleborg fortresses, no. 5475
- Vestfold Ship Burials and Hyllestad Quernstone Quarries, no. 5577

UNLISTED SITES FROM THE VIKING AGE

The following section will focus on different typological sites that can be assigned to the regional and chronological framework of this analysis. Although the selected sites

are neither on the World Heritage List nor on the Tentative Lists they contain some important aspects similar to the nominated property. While the development and typology of emporia is clearly embedded in the Early Middle Ages of Northern Europe, linear fortifications and fortified boundaries similar to the Danevirke can be related to a far wider chronological and regional framework. For this reason this section will give a brief overview of examples of linear defensive systems and territorial demarcations from other regions and times including the Frankish Empire, Britain and the Holy Roman Empire.

VIKING-AGE TRADING SETTLEMENTS

Unlike many of the trading settlements in the larger area of interaction, such as in Britain, the trading settlements in Scandinavia did not develop from, for example, earlier Roman towns (Clarke & Ambrosiani, 1993, 46). Instead, the emporia are particularly closely linked to seafaring, long-distance trade and the mass production of various wares. As such, they represent a new development in Scandinavia, and, as centres of interaction, the trading settlements became vital areas for the exchange of goods and ideas. The most well-known and significant Viking-Age trading settlements are:

- Birka (World Heritage Site)
- Hedeby
- Ribe
- Kaupang

Besides Birka and Hedeby, Ribe and Kaupang are important trading settlements and points of reference for the study of early urbanisation in Northern Europe. For this reason, they are selected as comparable emporia to Hedeby.

Trading settlements in Western and Eastern Europe, such as in Britain, Ireland, and in the Frankish, Frisian and Slavic areas, developed in the Early Middle Ages as emporia comparable to those in Scandinavia. Some examples are Dublin, York, Staraja Ladoga, Dorestad and London. As with the sites in Scandinavia, many of them extended both into earlier and later phases.

York, for example, already existed as a trading place in Anglo-Saxon times but was occupied and extended by the Vikings' great army in 866 and then retaken by the Anglo-Saxon King Edred in 954 (Richards, 1991). These sites are largely built over and can best be compared to Schleswig, the successor of Hedeby. Therefore, the integrity of the Viking-Age layer of these sites is usually largely impaired. The Frisian emporium of Dorestad, on the border of the Frisian and Frankish areas, was one of the main transit ports in Europe. For this reason, Dorestad serves in this comparison as an example of a significant Frisian urban settlement and trading centre.

VIKING-AGE DEFENSIVE SYSTEMS

With increasing attacks and raids, both abroad and within Scandinavia, the need for protection at home in Scandinavia grew stronger in the Viking Age. As a result, it is possible to build up a chronology of the defensive and fortification structures in Scandinavia. Furthermore, the fortification structures can be divided into different types based on their geographic position: border embankments, such as the Danevirke, urban fortification structures, such as the town wall of Hedeby, and ring fortresses, such as the Trelleborg fortresses. Of particular interest for this comparative analysis are the large, linear border embankments which clearly divide large landscape areas and are often found in Scandinavian areas where there is a clear sense of tension between the governing elites. The most important embankments in Scandinavia in the Viking Age and relevant to our comparison are:

- Danevirke
- Götaverket
- Kräklingbo

In addition to these ramparts, within the wider regional and chronological framework the demarcation of the eastern boundary of the Frankish empire in the ninth century, the dykes in Britain dated to the Early Middle Ages and the Landwehren (a German term meaning "land defences") in the Holy Roman Empire dated to the High and Late Middle Ages offer further insights into the nature and comparability of embankments in Mediaeval Europe.

BORDERS OF THE FRANKISH EMPIRE

The eastern border of the Frankish Empire under Charlemagne is thought to have been demarcated by the Limes Saxoniae and the Limes Sorabicus. The chronologist Adam of Bremen ascribes the definition of the Saxon-Slavic border to Charlemagne. According to this source, at the same time that the River Eider was stipulated as the northern border of the Frankish Empire in 811, Charlemagne reached a border agreement with the Slavic Obotrites in the annexed territory of the Saxons. In his written accounts, Adam of Bremen gives a very detailed description of the course of the Limes Saxoniae, according to which it followed mainly natural boundaries starting at the River Elbe near Boizenburg and moving northwards following the rivers Delineau, Trave and finally the Schwentine, which flows into the Kiel Fjord and the Baltic Sea. It is assumed that the Limes Saxoniae was a natural frontier that was difficult to pass due to dense forests, rivers and peatlands. But the validity of this source is highly contested for several reasons (Lemm 2008, 349). Archaeological surveys could not confirm the idea of Adam's limes. However, the region in which Adam of Bremen located the limes did provide favourable natural conditions for establishing a borderland. While there is no evidence of any kind of demarcation or fortified border, archaeological investigations revealed the existence of aligned Saxon and Slavic castles that stood opposite one other in the periphery of the respective settlement areas, forming an undefined borderland in between. Only the circular earthworks of the castles are preserved. Another eastern border of the Frankish empire is the Limes

Sorabicus, also known as the Sorbian March. It can be seen as the counterpart to the Limes Saxoniae adjoining the territory of the Slavic Sorbs. However, historic sources do not mention the exact location of the Sorbian March.

The inconclusive data on the course, size and associated archaeological material of the Limes Saxoniae and the Limes Sorabicus makes both sites difficult for a detailed comparison. Research in fact indicates that, in contrast to the Danevirke, the borderland between the Slavs and the Saxons was not fortified or demarcated by linear defensive works but controlled by individual castles. Moreover, in the Frankish borderland, no sites have been identified where extensive and significant trade activities and cross-cultural communication took place.

DYKES IN BRITAIN

« Across Britain there are dozens of monuments known either as ditches or dykes [...]. They are a simple type of monument, made of an earth bank, usually with a ditch along one side. Some are short, only a few hundred metres in length, while others run for kilometres across the landscape; some follow a straight line across the landscape, while others trace a more winding course » (Bell, 2012, 12).

The origin and purpose of the dykes in Britain are unclear and have remained a matter of constant dispute among scholars since they were rediscovered in modern times. It is presumed that the dykes originated in Roman military engineering (Bell 2012, 82–96) and were used as boundary markers of land and different jurisdictions or served a more defensive purpose. In particular, their function as a demarcation line is supported by archaeological and written evidence, such as that on Offa's Dyke, separating the kingdoms of Mercia and Powys, or the Scots Dike dividing England and Scotland. Especially the longer dykes, which are comparable in size to Hadrian's Wall or the Antonine Wall, required a lot of manpower and organisation to build and could therefore have been used to control and demarcate a larger realm, such as a kingdom. However, the defensive ability of the dykes is contested since no archaeological trace has been found which indicates further fortification, such as wall-walks, watchtowers or forts, in contrast to the military infrastructure of Hadrian's Wall. None of the dykes is connected with trade activities and cross-cultural communication as are Hedeby and the Danevirke. The largest, most well-known and most significant examples are the Wansdyke and Offa's Dyke, dating from the Early Middle Ages, which shall serve as *pars pro toto* for the purpose of this comparison.

LANDWEHREN IN THE HOLY ROMAN EMPIRE

Landwehren were linear barriers that were widely used in the Holy Roman Empire in the Late Middle Ages and therefore only partially applicable to the wider regional and chronological framework of the nominated property. The Holy Roman Empire was a patchwork of territories and polities, such as dioceses, free cities, princedoms or duchies.

Between the fourteenth and the sixteenth century, hundreds if not thousands of kilometres of linear earthworks were built upon, or dense thickets were grown, to defend the borders of many of these polities (Spring, 2015, 120).

The Landwehren consisted of earthworks, ramparts, gate towers, single or double ditches, and large hedges, and had many functions. They enclosed land, guarded routes, protected villages and economic bases or marked jurisdictions. They were built, planted and maintained as living obstacles to prevent marauders from destroying crops, pillaging farms, feuding or stealing cattle. Even cities with stone walls erected Landwehren at a distance to provide a second ring of defence and demarcate their jurisdiction. The Landwehren also protected important trade routes leading to or from cities which often functioned as marketplaces and trading centres in the High and Late Middle Ages. Many of the Landwehren in Germany have been only partially preserved due to development projects or the intensification of agriculture. An outstanding example of this type of site is the Mühlhäuser Landgraben in Thuringia, dating from the middle of the fourteenth century. It is 26 km long and still visible in an authentic forest area. Besides earthworks and ditches, border stones and the remains of gate towers have been preserved. The Mühlhäuser Landgraben will be used as a good example of an embankment from a later epoch for the purpose of this comparison.

THEMATIC ANALYSIS

The final element of the ICOMOS (2005) study's comparative framework is a thematic analysis. Here, six main themes and numerous sub-themes are listed, which are considered to be universally applicable to describe and compare World Heritage Sites:

- I. Expressions of society
- II. Creative responses and continuity
(monuments, groups of buildings and sites)
- III. Spiritual responses (religions)
- IV. Utilising natural resources
- V. Movement of peoples
- VI. Developing technologies

Comparing the themes with the nominated property, it becomes obvious that the Archaeological Border Landscape of Hedeby and the Danevirke is best captured by a combination of different themes and subthemes. The theme "II Creative responses and continuity", addressing the subthemes of "Cultural Landscapes", "Military architecture / Fortified boundaries" and "Urban settlements", and the theme "V Movement of peoples", addressing "Systems of Transportation and Trade / Centres of trade and

exchange of goods”, express and convey the attributes and values of the nominated property best. For the process of shortlisting we therefore first look for sites that have a significant intersection with the listed topics above, i. e. have at least two of the above themes in common with the nominated property. It quickly becomes clear that no site either on the World Heritage List, on the Tentative List or unlisted conveys all of these subthemes together within the regional and chronological framework of Northern Europe in the Viking Age. Therefore, the following analysis narrows the shortlist down to those sites that have the most typological and thematic overlaps with the nominated property but fall within a different regional, cultural or chronological setting.

CULTURAL LANDSCAPES ON THE WORLD HERITAGE LIST

There are cultural landscapes on the World Heritage List whose period of use covers millennia and shows rich archaeological evidence; however, only very few can be used in comparison which represent and combine a significant border location, fortifications, and significant traces of cross-cultural communication and maritime trading. The shortlist for comparison comprises the following World Heritage Sites:

- Kernavė Archaeological Site (Cultural Reserve of Kernavė), no. 1137
- Bam and its cultural landscape, no. 1208

These sites have in common a combination of archaeological heritage and cultural landscape. Of these sites, Kernavė is the strongest candidate for comparison. The site reflects a rich concentration of archaeological evidence including traces of a very long and continuous period of settlement. It contains an exceptionally large defence system and is set in a cultural landscape within the Baltic Sea region and therefore within the wider regional framework of the nominated property. Leaving aside the regional and chronological context for a moment, the World Heritage Site Bam and its cultural landscape, no. 1208 in Iran is another example of a cultural landscape with a strategic location at the crossroads of major trade routes, the network of the Silk Road.

MILITARY ARCHITECTURE ON THE WORLD HERITAGE LIST

The category of “military architecture”, falling under the often applied second main theme “Creative responses and continuity”, is also applicable to the current nomination due to the construction of the Danevirke as a border fortification and Hedeby as a fortified town. In the ICOMOS (2005) study “Filling the Gaps”, military architecture is divided into three subthemes: “fortified cities”, “forts”, and “fortified boundaries”. The subtheme of “fortified cities”, which is numerous represented on the World Heritage List, is only partially applicable to the nominated property, since Hedeby (as a constituent of the border landscape) is first and foremost a centre of trade and communication. The Semicircular Wall surrounding Hedeby, however, is both a town fortification and an important part of the border fortification of the Danevirke.

Bearing this in mind, an example of a World Heritage Site that is closely associated with the theme “fortified cities” is Port, Fortresses, and Group of Monuments, Cartagena, no. 285. Its strategic location on the northern coast of Colombia on a sheltered bay facilitated the control of the route of the West Indies, a significant instance in the history of exploration and great mercantile maritime routes. The World Heritage Site contains the most extensive fortifications in South America. However, the site is set in a completely different chronological/regional (“Colonial States in South America”) and typological context (stone-built heritage/historic urban landscape/different construction material) and would therefore not facilitate a credible comparison.

A very good example of the subtheme “forts” is the serial World Heritage Site Hill Forts of Rajasthan, no. 247, located in present-day India. The site includes six massive and vast forts scattered across the landscape. Some walls of these extend up to 20 kilometres in circumference, bearing witness to the power of various Rajput dynasties that ruled in the region from the eighth to the eighteenth centuries. Urban centres, palaces, trading centres, temples and other sacred buildings developed within the huge walls of the forts. In addition, similarly to the Danevirke, the forts strategically used natural barriers, such as hills, deserts, rivers and forests. However, the Hill Forts of Rajasthan are in a completely different cultural, regional and typological setting. Due to the nature of the construction of vast city-like forts, the theme of a border landscape with linear fortifications does not become apparent here. The Hill Forts of Rajasthan can be defined and characterised as defences built from stone and situated in a historic urban landscape differing greatly from the nominated property. A comparison would not be useful. Therefore, the World Heritage Site Hill Forts of Rajasthan will not be included in the comparison.

CENTRES FOR TRADE AND THE EXCHANGE OF GOODS ON THE WORLD HERITAGE LIST

Numerous World Heritage Sites refer to the themes of trading centres and the exchange of goods. However, most of them – Birka as mentioned above being the exception – do not belong to the same regional and chronological or typological framework and therefore lack the key qualities of the nominated property – a significant early mediaeval cross-cultural urban trading centre with access to the sea and set in a linearly fortified border landscape in Northern Europe. The World Heritage Site Khami Ruins National Monument, no. 365 in Zimbabwe has a strong archaeological record with cross-cultural findings from Europe and China that also indicate a significant trade network. However, there is no connection or association to a historic border. Moreover, the site has a very different regional and chronological background. Another example is the World Heritage Site Qal’at al-Bahrain – Ancient Harbour and Capital of Dilmun, no. 1192, which displays rich archaeological findings, an extensive trading network, a coastal fortress and a meeting point for many peoples and cultures. However, it is not suitable for a closer comparison because it is set in a very different region and time with a period of occupation of almost 4,500 years and is not intimately linked to a borderland with linear fortifications.

**FORTIFIED BOUNDARIES
ON THE WORLD
HERITAGE LIST**

The subtheme “fortified boundaries” comes close to the typological and thematic essence of the Archaeological Border Landscape of Hedeby and the Danevirke. Trading centres may occur in various settings, but linear fortifications are mostly located at borders. While fortified boundaries do not include the aspects of (maritime) trade and communication, they exemplify the material aspects of the demarcation and control of territory in a borderland. This subtheme is underrepresented on the World Heritage List and on the Tentative Lists. To date, only four World Heritage Sites are clearly associated with that theme. Three of them are dated to pre-modern times, while one belongs to modern times:

- Citadel, Ancient City and Fortress Buildings of Derbent, no. 1070
- Frontiers of the Roman Empire, no. 430
- The Great Wall, no. 438
- Garrison Border Town of Elvas and its Fortification, no. 1367 (modern times)

The World Heritage Site of Citadel, the Ancient City and Fortress Buildings of Derbent is similar to the nominated property as an example of a complex, linear fortification system alongside a border and of a related town in a strategic point of north-south communication. Despite the differences in the cultural, regional and chronological framework, Derbent therefore qualifies for the more detailed comparison.

The Frontiers of the Roman Empire is a transnational archaeological serial property that at present consists of component parts in the United Kingdom and Germany, with the possibility of extension in the future as other sections of the Roman Limes are currently on various Tentative Lists. The Roman Limes represent the border of the Roman Empire at its greatest extent in the second century and illustrate the proto-type of fortified boundaries in historic times. Typologically, thematically and regionally the Frontiers of the Roman Empire are suited for the comparison.

A site similar to the Frontiers of the Roman Empire with regard to scale, The Great Wall of China is the most impressive and largest fortified boundary on the World Heritage List, with a total length of more than 20,000 km. It was continuously built from the third century BC to the seventeenth century AD on the northern border of the country as the great military defence project of successive Chinese Empires. Although it shows quite different architectural features to the nominated property, the Great Wall is an example of linear military architecture and will therefore be included in the comparison.

The Garrison Border Town of Elvas and its Fortification is the largest bulwarked dry-ditch system in the world. The Garrison Border Town of Elvas was fortified extensively from the seventeenth to the nineteenth centuries in order to secure the key border

crossing between Portugal's capital Lisbon and Spain's capital Madrid in a riverine landscape. The World Heritage Site is characterised by a complex system of bulwark fortifications that consist of several forts with dry ditches, ravelins and counterscarps in a broad segment of a circle surrounding the historic centre of Elvas with its mediæval castle. The bulwarked fortifications of the historic centre are the world's best extant evidence of the old Dutch art of fortress construction. It becomes clear that, although it is a fortification system securing a key border passage, Elvas does not fit the indicators of comparison, notably due to the differences in the typology and chronology (modern times) of the site in comparison with the nominated property. Elvas is a fortified historic town with groups of buildings and built from stone and thus quite different from the original architecture of earthwork and wood and the archaeological nature of Hedeby and the Danevirke.

**MILITARY ARCHITECTURE
AND FORTIFIED
BOUNDARIES ON THE
TENTATIVE LISTS**

A wide range of military architectures can be found on the Tentative Lists: desert castles, forts, fortified cities, ensembles of fortresses, citadels, fortified buildings, barracks, artillery fortifications, etc. Most of them belong to the modern era, starting from the sixteenth century onwards, are located in different regions of the world, and feature non-linear fortress defences rather than linear fortifications such as long walls, embankments or barriers. For this reason, no military architecture sites from the Tentative Lists are sufficiently suitable for comparison.

The tentatively listed cultural property Brazilian Fortresses Ensemble, no. 5997, is a good example of this type of site. It belongs to the colonial history of Brazil and is not linear, but spread across the country due to territorial occupation processes. The tentatively listed Derawar and the Desert Forts of Cholistan, no. 6108, in Pakistan are another example of significant fortification systems. The massive forts, dating originally from the Middle Ages yet mostly built or renovated between the sixteenth to eighteenth centuries, form a remarkable, dense concentration of defensive structures in a relatively small area protecting access to water and the important mercantile caravan routes running through the Cholistan desert. The Forts illustrate a variety of forms, ranging from square brick structures with circular corner bastions, to square walls completely faced with semicircular towers, to rectangular and even hexagonal enclosures. It quickly becomes apparent that both examples are non-linear fortification systems – showing great differences in terms of typology, chronology and cultural context in comparison to this nomination.

As mentioned earlier, various sections of the vast stretching Roman Limes, for example in Austria, Bulgaria or Serbia, are in the process of being nominated as extensions to the transnational property of the World Heritage Site Frontiers of the Roman Empire. They all contribute to the same OUV of the serial property and will be nominated under the same criteria and should therefore not be considered in the comparison. Only sites from the Tentative Lists show features of linear defence systems fortifying a border:

- Victoria Lines Fortifications, no. 1114
- Bulwarked Frontier Fortifications, no. 1021

The Victoria Lines Fortifications in Malta are complex, linear fortification systems that run along the Great Fault, a geographical barrier spanning the whole width of the island north of Medina. The site dates back to the eighteenth and nineteenth centuries. The Victoria Lines served to protect the islanders in the northern part of the island from an enemy invasion. The Victoria Lines originally consisted of three strong, polygonal forts (Fort Madalena, Fort Bingemma, Fort Mosta) to which entrenchments, forts, barracks, towers and stone walls were added in the second half of the nineteenth century. The linear fortification of the Victoria Lines is characterised by its strategic use of the Great Fault as a natural obstacle. Similarly to the Danevirke, the Victoria Lines display how people integrated the given landscape features into man-made structures to build an effective, linear fortification system. However, it has a very different historical and regional background in comparison to Hedeby and the Danevirke. The Victoria Lines are an example of built heritage from modern times, making a credible comparison to Hedeby and the Danevirke difficult.

The Bulwarked Frontier Fortifications in Spain were constructed as a result of military conflicts between bordering countries, i.e. Portugal and France, between the end of the sixteenth and the end of the eighteenth century. They consist of a variety of defensive structures, such as fortified cities, military fortresses and the re-use of mediaeval defence systems, such as castles. The Bulwarked Frontier Fortifications is a site that is thematically related to the nominated property, but comprises completely different typological, chronological and cultural contexts from the nominated property. Thus, a comparison would not be useful.

UNLISTED FORTIFIED BOUNDARIES

There are numerous unlisted sites across the world that fall under the theme of “fortified boundaries”. They are described and categorised under various terms, such as “linear earthworks”, “embankments”, “dykes”, “barriers” or “ramparts”, which have been discussed for the wider regional and chronological framework above. Linear border fortifications are evident in almost all the regions of the world and across time, such as Ancient Greece, the Roman Empire, the Byzantine or Sasanian Empires (for instance the walls of Derbent). Most of the historic fortified boundaries secure

important routes, demarcate and control the limits of a territory, or symbolise political power.

The complex set of linear barriers of Hedeby and the Danevirke is situated at the narrow isthmus of a large peninsula. This geographic situation facilitates the building of some sort of linear barrier to control and defend the narrowest part of an area, and can also be found in other regions across the world. Consequently, fortified boundaries that are located between two natural obstacles, e.g. sea to inlet or river to sea, show a strong similarity in this regard to Hedeby and the Danevirke.

Unlike the Danevirke or the Frontiers of the Roman Empire, linear walls in the Byzantine Empire were usually not located at the borders, but rather at strategic locations, such as land corridors, to prevent Hun raids into core parts of the Byzantine Empire. The building of linear walls in the Byzantine Empire is closely associated with Emperor Justinian in the sixth century and was based on rebuilding and reinforcing existing walls in Greece, Thrace and Crimea, such as the Hexamilion Wall, the Long Wall, the Walls of Constantinople and the Perekop Wall listed above. Unfortunately, most of them lack integrity, are of unknown location or have not been sufficiently researched yet. Only the well-preserved and researched examples of the Anastasian Wall and the Hexamilion are therefore included in the comparison as thematically similar unlisted sites.

TABLE 3.3 OVERVIEW OF LINEAR FORTIFICATIONS ACROSS MAJOR EUROPEAN ISTHMUSES AND PENINSULAS (CF. SPRING, 2015, 251)

Peninsula / isthmus	Linear fortification
Britain – Firth of Forth to Firth of Clyde	Antonine Wall (WH site Frontiers of the Roman Empire)
Britain – Firth of Solway to Tyne River	Hadrian's Wall (WH site Frontiers of the Roman Empire)
Jutland – Treene River to Schlei Inlet	Danevirke and Hedeby
Corinthian Isthmus – Gulf of Corinth to Saronic Gulf	Hexamilion Wall
Thracian Chersonese (Gallipoli) – Aegean Sea to Dardanelles	Walls of Miltiades, Pericles, Dercylidas, Justinian (Long Wall/ Wall of Agora)
Thrace – Sea of Marmara to Black Sea	Anastasian Wall (Long Walls of Thrace)
Thrace – Sea of Marmara to Black Sea	Walls of Constantinople
Crimean Isthmus – Crimean Peninsula to Ukrainian mainland	Perekop Wall

3.2.4 COMPARISON WITH SIMILAR PROPERTIES

The following table shows the shortlist and analysis of the sites already inscribed on the World Heritage List, on the Tentative Lists and unlisted which are comparable with the nominated property from typological, regional/chronological and thematic points of view. As explained above in more detail, it lists only those sites that share the most similarities with the nominated property.

COMPARISON BETWEEN THE CURRENT NOMINATION AND THE SELECTION OF COMPARABLE SITES THAT ARE ON THE WORLD HERITAGE LIST, ON THE TENTATIVE LISTS OR UNLISTED

Name	Proposed criteria	Description of the nominated property
The Archaeological Border Landscape of Hedeby and the Danevirke	(III) (IV)	The defensive system of the Danevirke and the trading centre of Hedeby consist of a spatially linked complex of earthworks, walls and ditches, settlements, grave fields and a harbour across the Schleswig Isthmus on the Jutland Peninsula in Northern Europe from the first and early second millennia. Features of the natural landscape and man-made structures were combined intentionally to form a border landscape at a natural bottleneck in the Viking Age between the eighth and eleventh centuries.

a.	b.	c.	d.
Outstanding example of a borderland between two or more territories or cultural traditions	Includes significant examples of places of trade and communication	Includes significant examples of territorial demarcations or fortified boundaries	Provides archaeological sources of high scientific relevance and consists of sites whose integrity and authenticity is outstandingly good

REGIONAL AND CHRONOLOGICAL COMPARISON (WORLD HERITAGE LIST)

Name and number of the property	Criteria	Description of the property
Birka and Hovgården, no. 555	(III) (IV)	Birka and Hovgården are archaeological sites located on islands in Lake Mälaren (Sweden), at the time a fjord connected to the Baltic Sea. Together, the two archaeological sites are a strong testimony to the wide-ranging trade network established by the Vikings. Birka's research history stretches over more than a century and the site has yielded invaluable insights relevant to the study of early urbanisation in Northern Europe.
Jelling, no. 697	(III)	Jelling is a thoroughly planned complex indicating the Danish king's ability to build monuments to highlight and enhance the past. The Jelling complex is considered as an outstanding example of the pagan Nordic culture representing unparalleled symbolic value in comparison to other monuments in Scandinavia.
L'Anse aux Meadows National Historic Site, no. 4	(VI)	The archaeological property of L'Anse aux Meadows is the first and only known site established by Vikings in North America and the earliest evidence of European settlement in the New World. The excavation of the site shows that the settlement has been constructed using techniques (wood-en-framed turf buildings) common in Iceland and Greenland. Thus the property is seen as a milestone in the history of human migration. The site was discovered in 1960 and then fully excavated between 1961–68 and 1973–76 and protected in 1977.
...

a. Outstanding example of a borderland between two or more territories or cultural traditions	b. Includes significant examples of places of trade and communication	c. Includes significant examples of territorial demarcations or fortified boundaries	d. Provides archaeological sources of high scientific relevance and consists of sites whose integrity and authenticity is outstandingly good
<u>Not comparable:</u> although the Birka and Hovgården site is regionally and chronologically fully comparable to the current nomination, it wholly lacks the theme of a borderland or border landscape.	<u>Fully comparable:</u> the property is one of the earliest trade settlements (emporia) in Northern Europe in the Viking Age (beginning of the eighth century).	<u>Not comparable:</u> the Birka and Hovgården site does not feature a significant territorial demarcation or fortified boundary.	<u>Fully comparable:</u> the site contains rich archaeological material of high value and integrity.
<u>Not comparable:</u> it is not situated in any form of borderland. Typologically, it can be defined as a seat of governance with associated sepulchral monuments in the Viking Age.	<u>Not comparable:</u> Jelling does not encompass a trade settlement.	<u>Not comparable:</u> the property includes no fortification component.	<u>Fully comparable:</u> the site contains rich archaeological material of high value and integrity.
<u>Not comparable:</u> even though chronologically and culturally comparable, the archaeological property does not represent the theme of a borderland.	<u>Not comparable:</u> the site can be seen as a late example of an over-seas settlement in the Viking Age. However, its role for trade or even as an important emporium is not evident.	<u>Not comparable:</u> the property contains no fortification component.	<u>Partially comparable:</u> the archaeological material is not rich or well preserved, as the site is fully excavated. But it is strong enough to prove the first European presence in North America.
...

REGIONAL AND CHRONOLOGICAL COMPARISON (WORLD HERITAGE LIST) CONTINUATION

Name and number of the property	Criteria	Description of the property
...
Þingvellir, no. 1152	(III) (VI)	The history of the cultural landscape of Þingvellir, which is a Viking-Age assembly site for freemen to hear the law recited and to settle conflicts, dates back to 930 and is one of the few Things for which the location and code of law are well known. The assembly site of Þingvellir is set in Thingvellir National Park and includes remains of the agricultural use of the park landscape from the eighteenth and nineteenth centuries, Thingvellir Church and an adjacent farm as well as the population of arctic char in Lake Thingvallavatn.

a. Outstanding example of a borderland between two or more territories or cultural traditions	b. Includes significant examples of places of trade and communication	c. Includes significant examples of territorial demarcations or fortified boundaries	d. Provides archaeological sources of high scientific relevance and consists of sites whose integrity and authenticity is outstandingly good
...
<u>Not comparable:</u> although Þingvellir is regionally and chronologically comparable to the current nomination, it wholly lacks the theme of a borderland or border landscape.	<u>Not comparable:</u> the site testifies to the settlement of Iceland and thus to the overseas expansion of the Norse based on the use of ship and sea, but does not include a trading centre.	<u>Not comparable:</u> the property contains no fortification component.	<u>Partially comparable:</u> the archaeological material is strong enough to convey the narrative of the Viking Age, but it lacks the diversity and density of archaeological findings which we find at Hedeby and the Danevirke.

REGIONAL AND CHRONOLOGICAL COMPARISON (TENTATIVE LISTS)

Name and Number of the property	Criteria	Description of the property
Church ruin at Hvalsø, episcopal residence at Gardar, and Brattahlid part of the Kujataa – a subarctic farming landscape in Greenland, no. 1781	(III) (IV) (V) (VI)	Kujataa landscape is a cultural archaeological landscape in Greenland. It consists of the remains of Thule Eskimo settlements from the Middle Ages to the early twentieth century. Thus it covers the period when the Thule Eskimos first encountered and developed relations with the new settlers. The nominated area also includes the ruin of the Norse Mediaeval stone-built church of Hvalsø dating from around 1300, the remains of a stone-built hall in the same style, the episcopal residence at Gardar from the twelfth century, and the tenth-century remains of the Norse Brattahlid settlement (today Qassiarsuk) and church.
Grobiņa archaeological complex, no. 5608		The archaeological complex of Grobiņa in Latvia is one of the early overseas settlements of the Vikings in the Baltic area. The long-term presence of the Vikings in Grobiņa is demonstrated by the many cemeteries displaying Scandinavian burial traditions over a period of 200 years (650–850). The great diversity in the burials shows the processes of Scandinavian expansion and cross-cultural interaction with other peoples.
...

a. Outstanding example of a borderland between two or more territories or cultural traditions	b. Includes significant examples of places of trade and communication	c. Includes significant examples of territorial demarcations or fortified boundaries	d. Provides archaeological sources of high scientific relevance and consists of sites whose integrity and authenticity is outstandingly good
<u>Not comparable:</u> notwithstanding the typological comparability in terms of archaeological heritage and an intact cultural landscape, Kujataa does not show indications of a borderland.	<u>Not comparable:</u> the site shows traces of Greenlandic Norse settlements and building culture. However, the component of trading and intercultural communication is not significant.	<u>Not comparable:</u> there is no indication of a fortified boundary or similar.	<u>Fully comparable:</u> the site contains rich archaeological material of high value and integrity reflecting the evolution and changes of the Greenlandic Norse culture
<u>Not comparable:</u> although the site reflects a contact place between different groups and tribes, the site is not situated in a borderland.	<u>Fully comparable:</u> as an early cross-cultural overseas settlement of the Viking Age, Grobiņa shows abundant archaeological finds with a particular focus on the sepulchral context and burial traditions. Its strategic position along the river Alande, which reached the Baltic Sea in the Viking Age, made the settlement attractive for trade and thus also a popular place to settle.	<u>Not comparable:</u> Grobiņa does not contain traces of a complex, linear border fortification.	<u>Partially comparable:</u> the site features rich archaeological material of high value. However, it lacks the outstanding conservation conditions of organic material which we find at Hedeby.
...

REGIONAL AND CHRONOLOGICAL COMPARISON (TENTATIVE LISTS) CONTINUATION

Name and number of the property	Criteria	Description of the property
...
Meanders of the Upper Daugava, no. 5610		This is a mixed property of which the primary focus is on the natural features. The Upper Daugava valley has nine unique meanders and the cultural heritage is proposed as an “excellent example of multicultural living from ancient Balts, Vikings and crusaders” dating from the tenth and eleventh centuries. Archaeological sites include burial grounds, hillforts, castle ruins, palaces, churches and settlements.
The Trelleborg fortresses, no. 5475		The Trelleborg fortresses, which all date from around 980, but were not in use for very long (perhaps only 10 to 20 years), include the three preserved examples of the four known ring fortresses of the so-called Trelleborg type: Aggersborg, Fyrkat and Trelleborg. Each fortress comprises circular ramparts, a ditch and the remains of buildings and roads. In the case of Fyrkat and Trelleborg, cemeteries are also known to exist. As there are no definite examples of similar structures of the exact same type, it is unlikely to be possible to determine with certainty the source of inspiration for their construction.
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a. Outstanding example of a borderland between two or more territories or cultural traditions	b. Includes significant examples of places of trade and communication	c. Includes significant examples of territorial demarcations or fortified boundaries	d. Provides archaeological sources of high scientific relevance and consists of sites whose integrity and authenticity is outstandingly good
...
<u>Not comparable:</u> chronologically and regionally, this mixed landscape may be comparable to the current nomination. However, there is no link to the theme of a borderland.	<u>Partially comparable:</u> the archaeological findings include settlements indicating a long period of human activity. However, the mixed landscape does not include a significant trading centre (emporium) from the Viking Age.	<u>Not comparable:</u> while it encompasses traces of military architecture, such as hillforts or castle ruins, it does not have remnants of a linear, fortified boundary.	<u>Fully comparable:</u> The property features rich archaeological material of high value.
<u>Not comparable:</u> chronologically, historically and regionally, this property is comparable. However, it is not a borderland.	<u>Not comparable:</u> the property did not act as a nodal point of trade and communication	<u>Partially comparable:</u> while the Trelleborg fortresses all feature a uniform, unparalleled circular rampart, the Danevirke is characterised by a linear rampart that guards the Jutland isthmus over several kilometres.	<u>Fully comparable:</u> The ring structure of the fortresses is clearly visible. However, the site does not show the same degree of density and favourable preservation conditions of archaeological findings as Hedeby does.
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REGIONAL AND CHRONOLOGICAL COMPARISON (TENTATIVE LISTS) CONTINUATION

Name and number of the property	Criteria	Description of the property
...
Vestfold Ship Burials and Hyllestad Quern- stone Quarries, no. 5577		This archaeological property contains burial sites and a mass-production site in the Viking Age. The Vestfold Ship Burials site is characterised by well-pre-served ships and grave inventories. The findings and structures of the Burials are responsible for a deeper understanding of fine carpentry traditions and material culture from the Viking Age. The Quernstone Quarries site shows the development of quarrying technology, logistical organisation, and eco-nomic growth in the Viking Age.

<p>a. Outstanding example of a borderland between two or more territories or cultural traditions</p>	<p>b. Includes significant examples of places of trade and communication</p>	<p>c. Includes significant examples of territorial demarcations or fortified boundaries</p>	<p>d. Provides archaeological sources of high scientific relevance and consists of sites whose integrity and authenticity is outstandingly good</p>
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Not comparable:
while the property does belong to the heritage of the Viking Age, it contains very different typological and thematic features from Hedeby and the Danevirke.

Not comparable:
the property did not act as a nodal point of trade and communication, even though remains of two large halls, a harbour and a large longhouse have been identified at the Borre complex.

Not comparable:
the property contains no fortification component.

Fully comparable:
the site exhibits rich archaeological material of high value and integrity. In addition, the archaeological findings contain many artefacts made of textile and wood which provided crucial knowledge about Viking crafts and styles.

REGIONAL AND CHRONOLOGICAL COMPARISON: URBAN SETTLEMENTS (UNLISTED)

Name and number of the property	Criteria	Description of the property
Dorestad		Dorestad was an early mediaeval emporium and settlement from 675 onwards. It was situated in Frisian territory but most likely controlled by the Frankish kings. After repeated raiding and destruction by Vikings, it was deserted and activities moved to Tiel, Deventer and Zutphen. Its layout is only partially known but was very structured along the river. As a mint, it produced a large quantity of Frisian coins for long-distance trade from the mid-sixth century.
Kaupang		Located in present-day Norway, Kaupang was a Viking-Age trading centre from the early eighth century. It also displayed urban features such as plot divisions within the settlement. At the settlement site, there are traces of craft production similar to the other urban settlements in Scandinavia at the time.
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a. Outstanding example of a borderland between two or more territories or cultural traditions	b. Includes significant examples of places of trade and communication	c. Includes significant examples of territorial demarcations or fortified boundaries	d. Provides archaeological sources of high scientific relevance and consists of sites whose integrity and authenticity is outstandingly good
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Not comparable:
the site contains Frisian archaeological heritage and is not situated in a historic borderland.

Fully comparable:
the site is an important Frisian trading centre (emporium) within the same regional and chronological context as Hedeby.

Not comparable:
the property contains no fortification component.

Partially comparable:
archaeological excavations revealed different findings, such as coins or ceramics but the archaeological material lacks integrity, because the site was destroyed by flooding of the Rhine and built over by a recent town

Not comparable:
while the property is strongly associated with the Viking Age, the theme of a borderland is not visible in the material evidence.

Fully comparable:
the site is a trading centre (emporium) from the Viking Age.

Not comparable:
there is no linear border fortification.

Fully comparable:
the archaeological, material and scientific value of the site contribute to settlement studies and the study of Viking-Age trading networks of Northern Europe.

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REGIONAL AND CHRONOLOGICAL COMPARISON: URBAN SETTLEMENTS (UNLISTED) CONTINUATION

Name and number of the property	Criteria	Description of the property
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Ribe		Ribe is a trading settlement from the eighth century located in present-day Denmark. Archaeological excavations have established that the settlement was divided into plots, each of which was marked out by clearly defined ditches. The buildings were laid out close to one other and surrounded by a town wall. Ribe has been particularly important for the study of crafts and trade in the Viking Age and is, together with Birka, a central point of reference for the study of early urbanisation.
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<p>a. Outstanding example of a borderland between two or more territories or cultural traditions</p>	<p>b. Includes significant examples of places of trade and communication</p>	<p>c. Includes significant examples of territorial demarcations or fortified boundaries</p>	<p>d. Provides archaeological sources of high scientific relevance and consists of sites whose integrity and authenticity is outstandingly good</p>
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Not comparable:
while the property is strongly associated with the Viking Age, the theme of a borderland is not visible in the material evidence.

Fully comparable:
there are extensive traces of craft production and trade from the mid-eighth century well into the mediaeval period; however, these are less well preserved than Hedeby.

Not comparable:
apart from a town wall, the site does not contain a significant fortification component.

Partially comparable:
the archaeological material is of high value for the study of early urbanisation in Northern Europe. Today, however, the urban settlement of Viking-Age Ribe is situated underneath the modern town and the integrity of the archaeological material is lacking.

REGIONAL AND CHRONOLOGICAL COMPARISON: LINEAR DEFENSIVE SYSTEMS (UNLISTED)

Name and number of the property	Criteria	Description of the property
Götaverket		A border embankment in Götaland, Sweden, the Götaverket was constructed in the ninth century. Approximately 3.5 km of the earth and palisade wall remain. The Götaverket can be seen in relation to the conflict between the Göter and the Svear groups and is therefore a physical trace of the battles between them.
Kräklingbo		A 5–6 m high and 2 km long stone wall has been identified at Kräklingbo in Gotland. The embankment encloses a natural plateau. Archaeological surveys have shown that the embankment was constructed during the Roman Iron Age, but its period of use also extends into the Viking Age.
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<p>a.</p> <p>Outstanding example of a borderland between two or more territories or cultural traditions</p>	<p>b.</p> <p>Includes significant examples of places of trade and communication</p>	<p>c.</p> <p>Includes significant examples of territorial demarcations or fortified boundaries</p>	<p>d.</p> <p>Provides archaeological sources of high scientific relevance and consists of sites whose integrity and authenticity is outstandingly good</p>
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Partially comparable:
chronologically, typologically and regionally this property is comparable to the current nomination, but the theme of the borderland is not as strong and complex as in Hedeby and the Danevirke.

Not comparable:
the site does not contain a trading or settlement component.

Fully comparable:
similarly to the Danevirke, only on a much smaller scale and less well preserved, this border embankment uses a combination of natural barriers and man-made embankments.

Partially comparable:
the archaeological material lacks integrity.

Partially comparable:
chronologically, typologically and regionally this property is comparable to the current nomination, but the theme of the borderland is not as strong and complex as in Hedeby and the Danevirke

Not comparable:
the site does not contain a trading or settlement component.

Fully comparable:
this border embankment is comparable to the Danevirke, only smaller in size, without several building layers and less well preserved.

Partially comparable:
the archaeological material lacks integrity. In addition, it has not been possible to establish a definitive date for this border embankment.

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REGIONAL AND CHRONOLOGICAL COMPARISON: LINEAR DEFENSIVE SYSTEMS (UNLISTED) CONTINUATION

Name and number of the property	Criteria	Description of the property
...
Mühlhäuser Land- graben		The Mühlhäuser Landgraben is a linear defence system consisting of em- bankments, ditches, border stones and lookouts. It demarcated the jurisdic- tion and protected the free city of Mühlhausen in Thuringia from the middle of the fourteenth century onwards. Further, it was an additional fortification to the older town wall. It is 26 km long and still visible in a pristine forest area.
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a. Outstanding example of a borderland between two or more territories or cultural traditions	b. Includes significant examples of places of trade and communication	c. Includes significant examples of territorial demarcations or fortified boundaries	d. Provides archaeological sources of high scientific relevance and consists of sites whose integrity and authenticity is outstandingly good
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Not comparable:
typologically and regionally, this property is comparable to the current nomination. However, it features an extended town fortification and is therefore not situated in a cross-cultural borderland. Moreover, it was built and in use much later than Hedeby and the Danevirke.

Partially comparable:
the Mühlhäuser Landgraben protected and delimited the free city of Mühlhausen, which was part of the Hanseatic League, a significant commercial and defensive confederation. But the city of Mühlhausen was landlocked and had a completely different architecture from Hedeby.

Fully comparable:
the Mühlhäuser Landgraben features very similar architectural elements (ramparts and ditches) and materials (earthwork) to Hedeby and the Danevirke. However, several, complex phases of construction and extension are not demonstrated in the archaeological material.

Not comparable:
although the property is designated as an important and well-preserved archaeological monument in the region, it does not contain the same variety, density and quality of archaeological findings at the nominated property.

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REGIONAL AND CHRONOLOGICAL COMPARISON: LINEAR DEFENSIVE SYSTEMS (UNLISTED) CONTINUATION

Name and number of the property	Criteria	Description of the property
...
Offa's Dyke		Offa's Dyke is considered the largest linear earthwork in Britain. If one includes all parts (the northern, central and southern sections of the Dyke), it reaches a length of 120 km. Based on historical sources, it is presumed that Offa, the eighth-century king of Mercia, built a dyke that established a border between the Kingdom of Mercia and the Welsh Kingdom of Powys. It is debated whether Offa's Dyke was merely a boundary marker and demonstration of power or also served a defensive purpose.
...

a. Outstanding example of a borderland between two or more territories or cultural traditions	b. Includes significant examples of places of trade and communication	c. Includes significant examples of territorial demarcations or fortified boundaries	d. Provides archaeological sources of high scientific relevance and consists of sites whose integrity and authenticity is outstandingly good
...
<p><u>Fully comparable:</u> although its exact purpose, function and dating is debated, Offa's Dyke outlined the border between the Kingdom of Mercia and the Welsh kingdom of Powys, most likely in the eighth century. Moreover, Offa's Dyke is located in Western Europe and therefore within the wider regional and chronological framework.</p>	<p><u>Not comparable:</u> a maritime trading centre that is closely linked to the property is neither documented nor visible in the archaeological material.</p>	<p><u>Fully comparable:</u> Offa's Dyke is one of the largest monuments in Britain, its scale only comparable to Hadrian's Wall. The central section of the dyke is an almost uninterrupted 103 km of earthworks with a ditch intended to provide maximum visual control over the landscape facing west. It is presumed that the northern part of Offa's Dyke was never finished. In contrast to the central section, the embankments of the northern section contain a ditch on both sides.</p>	<p><u>Partially comparable:</u> although the integrity of the property is outstanding – showing the structure of the earthworks clearly for more than 100 km – it does not contain the same density and quality of archaeological findings as Hedeby and the Danevirke. Further, the lack of historic and archaeological data hinders significant scientific research opportunities and results in the future.</p>
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REGIONAL AND CHRONOLOGICAL COMPARISON: LINEAR DEFENSIVE SYSTEMS (UNLISTED) CONTINUATION

Name and number of the property	Criteria	Description of the property
...
The Wansdyke		The Wansdyke is a series of linear embankments and ditches in southwest England. It consists of a western and an eastern section, spanning a combined 35 km in length and covering the access to the old counties of Wiltshire and Somerset. The Wansdyke is considered one of the most imposing archaeological monuments in Britain, similar in scale to Hadrian's Wall and Offa's Dyke. The dating of the Wansdyke has been frequently debated; however, based on excavations, the mid-third century was established as a terminus post quem.
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a. Outstanding example of a borderland between two or more territories or cultural traditions	b. Includes significant examples of places of trade and communication	c. Includes significant examples of territorial demarcations or fortified boundaries	d. Provides archaeological sources of high scientific relevance and consists of sites whose integrity and authenticity is outstandingly good
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Partially comparable:
the property's dating and function is debated. It is likely that the Wansdyke served several functions controlling the Roman Road from Bath, forming a defensive line, and demarcating a territory and jurisdiction. Based on the results of the excavations, however, the mid-third century would constitute a very different chronological framework in comparison to the nominated property.

Not comparable:
a maritime trading centre that is closely linked to the property is neither documented nor visible in the archaeological material.

Fully comparable:
contrary to the Danevirke, the Wansdyke shows no sign of cover, revetment, walkways or palisades.

Partially comparable:
although the integrity of the property is exceptional – clearly showing the linear structure of earthworks for more than 30 km – it does not contain the same density and quality of archaeological findings as Hedeby and the Danevirke.
Further, the lack of historic and archaeological data hinders significant scientific research opportunities and results in the future.

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THEMATIC COMPARISON: CULTURAL LANDSCAPES (WORLD HERITAGE LIST)

Name and number of the property	Criteria	Description of the property
Bam and its Cultural Landscape, no. 1208	(II) (III) (IV) (V)	The historic town of Bam and its cultural landscape were strategically located at a crossroads of major trade routes of the Silk Road in Iran. The height of activities at Arg-e Bam was from the seventh to eleventh centuries. It is a unique example of a fortified mediaeval town built with a vernacular technique of mud layers due to the climatic and topographical conditions of the region.
Kernavė Archaeological Site (Cultural Reserve of Kernavė), no. 1137	(III) (IV)	The archaeological site of Kernavė reveals around 10 millennia of human settlements and shows a unique complex of impressive hill forts as part of an exceptionally large defence system. In addition, the site reflects a rich concentration of archaeological evidence ranging from traces of significant geological processes to a very long and continuous period of human activity and settlement.

<p>a. Outstanding example of a borderland between two or more territories or cultural traditions</p>	<p>b. Includes significant examples of places of trade and communication</p>	<p>c. Includes significant examples of territorial demarcations or fortified boundaries</p>	<p>d. Provides archaeological sources of high scientific relevance and consists of sites whose integrity and authenticity is outstandingly good</p>
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Not comparable:
although the property is a cultural landscape at the crossroads of one the most significant trade routes in the world with a similar chronology, it differs greatly with regards to the regional, typological and cultural context from the nominated property. In addition, the property is not related to a historical or archaeological border.

Partially comparable:
the site showcases an outstanding example of the development of an ancient fortified trading settlement in the desert environment of the Central Asian region. However, it lacks the attributes of a Mediaeval European emporium with a seafaring trading component.

Not comparable:
the property does not represent any linear border fortification or territorial demarcation but instead comprises town fortifications built with layers of mud.

Not comparable:
the site's elements do not reflect archaeological material comparable to the nominated property.

Not comparable:
although it is a designated archaeological cultural landscape, Kernavė neither encompasses the attributes of an archaeological or historic borderland nor is it a strong testimony to the cultural traditions and heritage of the Viking Age.

Not comparable:
the property does not contain a cross-cultural trading centre with access to the sea.

Not comparable:
the property does not contain linear barriers, but instead other military architecture: a complex of five massive hillforts.

Fully comparable:
the site's archaeological material covers a long period of human settlement activity and is of high value.

THEMATIC COMPARISON: FORTIFIED BOUNDARIES (WORLD HERITAGE LIST)

Name and number of the property	Criteria	Description of the property
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Citadel, Ancient City and Fortress Build- ings of Derbent, no. 1070		
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		The property is situated on the west side of the Caspian Sea and was part of the northern border of the Sasanian Empire from the first millennium BC. The defence structures were built of stone and consisted of two parallel walls forming a barrier from the seashore up to the mountain, encompassing the town of Derbent. The 11 km long, well-preserved walls of Derbent are the most significant and representative section of the defence system built in the Sassanid Empire along their northern border.
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a. Outstanding example of a borderland between two or more territories or cultural traditions	b. Includes significant examples of places of trade and communication	c. Includes significant examples of territorial demarcations or fortified boundaries	d. Provides archaeological sources of high scientific relevance and consists of sites whose integrity and authenticity is outstandingly good
<p><u>Partially comparable:</u> the site is located in an important borderland and contains a trading city. The fortress city of Derbent was critical for the Sassanids' northern border, allowing them to secure the highly strategic land corridor between the Caucasus Mountains and the Caspian Sea. However, the site is situated in a completely different regional, cultural and historical context from the nominated property.</p>	<p><u>Partially comparable:</u> the ancient city of Derbent was crucial for controlling the north-south passage and access to the Caspian Sea. It was in use and inhabited by different peoples and traders reflecting cross-cultural communication. But it is a historic urban landscape with built heritage rather than an archaeological settlement.</p>	<p><u>Partially comparable:</u> the northern frontier of the Sassanid Empire was fortified in order to resist potential invasion from Turkic nomads. This linear barrier extended to the east over the mountains into the Caucasus, where around 40 km still remain today. However, the architectural features are very different; construction is of stone instead of mainly earth and timber as at Hedeby and the Danevirke.</p>	<p><u>Partially comparable:</u> the site showcases high integrity (built heritage/ high stone walls) and authenticity but does not contain archaeological heritage comparable to the nominated property.</p>
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THEMATIC COMPARISON: FORTIFIED BOUNDARIES (WORLD HERITAGE LIST) CONTINUATION

Name and number of the property	Criteria	Description of the property
...
Frontiers of the Roman Empire, no. 430	(II) (III) (IV)	Frontiers of the Roman Empire is a transnational archaeological serial property which at present consists of sites in the United Kingdom and Germany, but may be extended in the future as other sections of the Roman Limes are currently on other Tentative Lists. The Roman Limes represents the border of the Roman Empire at its greatest extent in the second century. Today, the property consists of two component parts: the Limes in Germany and the Limes in the United Kingdom (Hadrian's Wall and the Antonine Wall).
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a. Outstanding example of a borderland between two or more territories or cultural traditions	b. Includes significant examples of places of trade and communication	c. Includes significant examples of territorial demarcations or fortified boundaries	d. Provides archaeological sources of high scientific relevance and consists of sites whose integrity and authenticity is outstandingly good
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Partially comparable:
the transnational World Heritage Site is situated within the same geographical region in Europe and is thematically comparable to the current nomination. However, the site has a different chronological and cultural context (Rome and the Roman Empire).

Partially comparable:
the site is associated with trading activities along the limes (e.g. the Rhine), the foundation of Roman forts (castra), the development of urban settlements and cities, and exchange and communication across the limes. However, it does not include an emporium with maritime trading activities.

Fully comparable:
the property functioned as a permeable demarcation, a symbol of power and a fortified boundary. It encompasses a wide range of Roman military structures. The construction materials of the buildings and the fortification structures are of stone, timber and earthwork.

Fully comparable:
the archaeological material covers a wide range and is of high value and integrity.

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THEMATIC COMPARISON: FORTIFIED BOUNDARIES (WORLD HERITAGE LIST) CONTINUATION

Name and number of the property	Criteria	Description of the property
...
The Great Wall, no. 438	(I) (II) (III) (IV) (VI)	With a total length of more than 20,000 kilometres, the Great Wall is the world's largest military architecture. It was built continuously from the third century BC to the seventeenth century AD on the northern border of China. It constitutes a complicated defence system consisting of walls, parapet walks, passes, fortresses and beacon towers.

<p>a. Outstanding example of a borderland between two or more territories or cultural traditions</p>	<p>b. Includes significant examples of places of trade and communication</p>	<p>c. Includes significant examples of territorial demarcations or fortified boundaries</p>	<p>d. Provides archaeological sources of high scientific relevance and consists of sites whose integrity and authenticity is outstandingly good</p>
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Partially comparable:
the property is thematically comparable to the current nomination. It demarcates the border between the Chinese empires and the nomadic tribes of the Eurasian Steppe. As a meandering landscape feature, the Great Wall displays perfect integration with the topography. But it is not located within the same region. In addition, it has a completely different chronological and cultural context.

Partially comparable:
the Great Wall served many functions. One of them was the protection and control of trade routes, such as routes along the significant Silk Road. However, the property does not contain a maritime trading settlement like Hedeby.

Partially comparable:
the most characteristic feature of the site is its great linearity. The Great Wall differs from the Frontiers of the Roman Empire and the Danevirke in terms of its geographical setting, construction material, dimension and building methods. However, the reasons for building it were very similar: to symbolise power, protect territory, act as an economic base, and control trade routes.

Partially comparable:
as a masterpiece of monumental military architecture, the property is characterised not by archaeological heritage but rather by built heritage, with many visible structures showcasing its outstanding integrity. It lacks the broad variety of archaeological findings, e.g. organic material, that was found at Hedeby and the Danevirke.

THEMATIC COMPARISON: FORTIFIED BOUNDARIES (UNLISTED)

Name and number of the property	Criteria	Description of the property
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Anastasian Wall		The Anastasian Wall, also called the Long Wall of Thrace, stretched from the Sea of Marmara to the Black Sea and served as additional defensive fortifications at Constantinople. It was built during the end of the fifth century and was probably in use until the seventh century. The wall was originally about 56 km long, of which less than half is preserved. It consisted of a ditch, gates and forts.
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...

a. Outstanding example of a borderland between two or more territories or cultural traditions	b. Includes significant examples of places of trade and communication	c. Includes significant examples of territorial demarcations or fortified boundaries	d. Provides archaeological sources of high scientific relevance and consists of sites whose integrity and authenticity is outstandingly good
<p><u>Not comparable:</u> unlike the Danevirke or the Frontiers of the Roman Empire, the Anastasian Wall defended the well-populated city of Constantinople from raids by nomad tribes such as the Huns, Slavs or Pannonian Avars. The property is not situated in a borderland of different territories, cultures and peoples. In addition, it is set in a completely different regional and chronological framework.</p>	<p><u>Partially comparable:</u> protecting the city of Constantinople, the Anastasian Wall was linked to a very prosperous trading city thanks to its remarkably strategic position at the Bosphorus.</p>	<p><u>Partially comparable:</u> the property is a very large linear fortification made of stone to defend the capital and the interior regions of the Byzantine Empire at an isthmus. In some parts the wall reaches a height of 4 m. Ditches, gates and forts strengthened this impressive linear fortification. It is obvious that this property exhibits completely different architectural elements than the Danevirke.</p>	<p><u>Partially comparable:</u> the property contains well-preserved archaeological material of wall structures, ditches, gates and forts. However, it does not have the density, variety or quality of artefacts, such as organic materials, found at Hedeby.</p>
...

THEMATIC COMPARISON: FORTIFIED BOUNDARIES (UNLISTED) CONTINUATION

Name and number of the property	Criteria	Description of the property
...
Hexamilion Wall		The Hexamilion was a stone wall built and rebuilt in the fifth and sixth century by Theodosius II and Justinian along the Corinthian Isthmus, from the Gulf of Corinth to the Saronic Gulf. Together with a massive Byzantine fortress it was intended to protect the unwalled cities of the Peloponnese from Germanic invasions from the north by the Visigoths. The wall was about 9.6 km long and covered the entire isthmus. It was constructed of large ashlar masonry blocks, mortar and rubble; several parts of the wall have been preserved until today. Originally, there were 153 towers along the entire wall.

a. Outstanding example of a borderland between two or more territories or cultural traditions	b. Includes significant exam- ples of places of trade and communication	c. Includes significant examples of territorial demarcations or fortified boundaries	d. Provides archaeolog- ical sources of high scientific relevance and consists of sites whose integrity and authen- ticity is outstandingly good
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...

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Not comparable:
unlike the Danevirke or the Frontiers of the Roman Empire, the property is not located in the vicinity of a border but rather at a strategic location in the interior to prevent frequent raids into core parts of the Byzantine Empire. In addition, the property has a different chronological context (late antiquity) and regional context.

Not comparable:
the archaeological material offers no evidence of a maritime trading centre that is closely linked to the property.

Partially comparable:
the property is a linear barrier made of stone that is facilitated by a land corridor, more specifically an isthmus creating a bottleneck for routes. However, the architectural features differ in terms of construction material and building method, stone walls vs. mainly earthwork and timber.

Partially comparable:
the archaeological material is rich and covers different types, such as building structures, burial sites, stone as construction material, spolia and other artefacts. However, it does not have the density, variety or quality of artefacts, such as organic materials, found at Hedeby.

3.2.5 CONCLUSION OF THE COMPARATIVE ANALYSIS

The analysis and the comparison have shown that the nominated property does have similarities with other properties, whether on the World Heritage List, on the Tentative Lists or unlisted, but only in some aspects. No other site represents the same combination of typological, regional, chronological and thematic attributes and values as Hedeby and the Danevirke.

TESTIMONY TO THE CULTURAL HERITAGE OF THE VIKING AGE

CRITERION III

Hedeby and the Danevirke are outstanding testimonies to the cultural traditions of Northern Europe in the Viking Age between the eighth and eleventh centuries AD. They have become key scientific sites for the interpretation of historic developments in Viking-Age Europe.

As an invaluable contribution to the cultural heritage of the Viking Age in Northern Europe, Hedeby and the Danevirke were compared with archaeological sites from the World Heritage List and Tentative Lists and which are not listed within the same regional and chronological framework. It became clear that all the selected sites represent very different typological features, themes and values from the Viking Age compared with Hedeby and the Danevirke. Birka is a significant urban settlement and trading centre of the Viking Age and therefore very similar to the emporium character of Hedeby, but lacks any connection to a significant border landscape with a complex linear border fortification and cross-cultural interaction between different cultural traditions and peoples. Jelling is a striking example of a seat of governance representing the religious and political transformation and the state formation that took place during the Viking Age, marking both the consolidation of royal power in Denmark and the official acceptance of Christianity by King Harald Bluetooth around 965. The archaeological site of L'Anse aux Meadows is the first and only known site established by Vikings in North America and the earliest evidence of European settlement in the New World. Pingvellir constitutes an authentic assembly site where language, laws and traditions are most closely matched by concrete remains firmly dated to the Viking Age. The border landscape of Hedeby and the Danevirke, with its diverse material sources of high scientific value and outstandingly preserved findings, complements and expands the underrepresented archaeological heritage of the Viking Age on the World Heritage List.

Comparing Hedeby and the Danevirke to Viking-Age sites on the Tentative Lists, the same conclusion can be drawn as with sites from the World Heritage List. The overall attributes and values represented by the nominated property differ greatly from

















OVERVIEW OF SIMILAR SITES IN COMPARISON TO HEDEBY AND THE DANEVIRKE

fully comparable  partially comparable  not comparable 




















The Archaeological Border Landscape of Hedeby and the Danevirke

a. b. c. d.













Regional and chronological comparison (World Heritage List)

Birka and Hovgården				
Jelling				
L'Anse aux Meadows National Historic Site				
Thingvellir				





















Regional and chronological comparison (Tentative Lists)

Kujataa – a subarctic farming landscape in Greenland				
Grobiņa archaeological complex				
Meanders of the Upper Daugava				
The Trelleborg fortresses				
Vestfold Ship Burials and Hyllestad Quernstone Quarries				









Regional and chronological comparison: urban settlements (Unlisted)

Dorestad				
Kaupang				
Ribe				













Regional and chronological comparison: linear defensive systems (Unlisted)

Götaverket				
Kräklingbo				
Mühlhäuser Landgraben				
Offa's Dyke				
The Wansdyke				









Thematic comparison: cultural landscapes (World Heritage List)

Bam and its Cultural Landscape				
Kernavė Archaeological Site (Cultural Reserve of Kernavė)				

Thematic comparison: fortified boundaries (World Heritage List)

Citadel, Ancient City and Fortress Buildings of Derbent				
Frontiers of the Roman Empire				
The Great Wall				

Thematic comparison: fortified boundaries (Unlisted)

Anastasian Wall				
Hexamilion Wall				

other Viking-Age sites. Sharing similarities in parts, such as the overseas settlement of Grobiņa, the structure of ramparts of the Trelleborg fortresses or the burials of the Vestfold Ship Burials and Hyllestad Quernstone Quarries, none of these sites convey a comparable Outstanding Universal Value which is proposed for the nominated property.

The extraordinary conditions of preservation, its location in a borderland and its physical link to the fortified boundary of the Danevirke make Hedeby stand out in comparison to other researched emporia of the Viking Age or of the wider regional framework (Ribe, Kaupang, Dorestad).

FORTIFIED BOUNDARY IN CONJUNCTION WITH TRADING CENTRE

CRITERION (IV)

Hedeby and the Danevirke represent a significant cultural, political and economic phase in the history of Northern Europe, reflecting the specific nature and the development of borders in connection to the formation of states in Viking-Age Europe between the eighth and eleventh centuries AD. This landscape is a unique case study for the development over centuries of the architecture of fortified boundaries in conjunction with trading centres which are strategically integrated into their natural environment.

The border embankments highlighted in the regional and chronological comparison indicate that they were commonly used throughout Northern Europe and also (looking at the wider regional and chronological framework) in Britain and the Holy Roman Empire. The contemporary Götaverket and Kräklingbo are both smaller and less well preserved than the Danevirke. Therefore, the Danevirke holds a special position due to its size, construction, extensions and reconstruction – many of which took place during the chronological time frame of the nomination. The Danevirke's authenticity and integrity is scientifically well confirmed and the fact that it is connected to the town wall of Hedeby enforces the qualities of this border embankment. While some of the dykes in Britain are much larger in scale than the Danevirke, they do not show signs of complex construction techniques and fortification elements, such as walkways, retaining walls or palisades. The comparison to other linear barriers in the same regional and chronological framework highlights the conjunction of a fortified boundary and a significant cross-cultural maritime trading settlement as the unique feature of Hedeby and the Danevirke.

However, comparable sites are also difficult to find in other regions and historic periods. All of them lack at least one of the important attributes of Hedeby and the Danevirke: the location in a borderland, the linear fortification, the maritime trading centre or the rich archaeological heritage. For example, the Landwehren, a very

common means of demarcating and protecting cities, agriculture and livestock in the Holy Roman Empire, are in some cases comparable in shape and size, but belong to a different region and to a later epoch of European history. They are neither a part of a cross-cultural borderland nor are they linked to maritime trading centres.

Furthermore, the comparative analysis has shown that sites featuring fortified boundaries and (notably) archaeological border landscapes are underrepresented on the World Heritage List and on the Tentative Lists. Only the Frontiers of the Roman Empire site truly conveys that typological and thematic characteristic, but this represents a completely different culture, civilization and historical epoch. Other thematically similar sites on the World Heritage List or on the Tentative Lists involve built heritage rather than archaeological heritage. Some of them, such as the Great Wall or the walls of Derbent, are greater in their dimensions, were in use longer and are made of massive stone-built structures or different materials from the fortifications of Hedeby and the Danevirke. But they differ decisively from the nominated property in terms of their typological, chronological, regional and historical-cultural contexts.

To sum up, Hedeby and the Danevirke is an archaeological border landscape that includes an emporium with a town wall, burial sites, a harbour and a linear border fortification strategically integrated into the landscape, securing the land corridor and portage of the Schleswig Isthmus in the Viking Age between the eighth and eleventh centuries. The nominated property offers an invaluable insight into the cultural traditions and peoples of the Viking Age as a whole. It stands out by virtue of its preservation conditions, which provide great scientific potential for present and future generations in the field of archaeology of the Viking Age and beyond. It is well researched and well preserved in comparison to similar, unlisted sites. Notably, the combination of a border landscape displaying territorial behaviour in structures of defence, and exchange manifested in the rich, diverse archaeological heritage of the Viking Age, makes Hedeby and the Danevirke fundamentally different from other landscapes and monuments featured to date on the World Heritage List. Fully comparable sites have not been identified on the World Heritage List, the Tentative Lists or outside the lists in the geo-cultural area of Mediaeval Europe – or even beyond, in other regions of the world. Moreover, the thematic analysis of the World Heritage List has shown that border landscapes and fortified boundaries are underrepresented in general. Thus, the nominated property would add an important new combination of values to the World Heritage List.

3.3

**Proposed
Statement of
Outstanding
Universal Value**



3.3. PROPOSED STATEMENT OF OUTSTANDING UNIVERSAL VALUE

3.3.A BRIEF SYNTHESIS

The defensive system of the Danevirke and the trading centre of Hedeby consists of a spatially linked complex of earthworks, walls and ditches, settlements, grave fields and a harbour across the Schleswig Isthmus on the Jutland Peninsula in Northern Europe from the first and early second millennia AD. Between the eighth and eleventh centuries, features of the natural landscape and man-made structures were combined intentionally to form a border landscape at a natural bottleneck in the Viking-Age between the eighth and eleventh centuries AD. Here, at the Schleswig Isthmus, the singular geographic situation created a strategic link between Scandinavia, the European mainland, the North Sea and the Baltic Sea. A Baltic Sea inlet, rivers and extensive boggy lowlands constricted the north-south passage across the peninsula while, at the same time, providing the shortest and safest route between the seas across a narrow land bridge. Closely tied to the isthmus situation, Scandinavian, Slavonic, Frisian, Saxon and Frankish peoples and kingdoms met in this important borderland.

By means of Hedeby and the Danevirke it was possible to mark out and control the isthmus not only as the nodal point of important trading routes of the eighth to eleventh centuries but also as the crossover point between different domains. Thus, the border landscape of Hedeby and the Danevirke manifests political power and cultural interaction. The importance of the border landscape is showcased by large quantities of imports among the rich find assemblages in Hedeby. The remains of structures of a notably defensive character, buildings, harbour jetties, burials and settlement infrastructure of Hedeby and the Danevirke are well preserved. The archaeological evidence, including large amounts of organic finds, provides an outstanding insight into the significant political power exercised by Danish kings, the expansion of trading networks and cross-cultural exchange over several centuries in the Viking Age.

3.3.B JUSTIFICATION FOR CRITERIA

CRITERION III:

to bear a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living or which has disappeared

Hedeby and the Danevirke are outstanding testimonies to the cultural traditions of Northern Europe in the Viking Age between the eighth and eleventh centuries AD. They have become key scientific sites for the interpretation of historic developments in Viking-Age Europe.

Hedeby and the Danevirke exerted great influence on the social and spatial organisation of Northern Europe. The sites developed as a result of the contact between Scandinavian, Frisian, Slavic and Saxon societies and the extensive Frankish – and later German – empires over several hundred of years at an isthmus in the borderland. The rich and diverse archaeological structures and finds, including large quantities of organic material, can still be interpreted in the present setting. As an outstandingly well preserved archaeological landscape, Hedeby and the Danevirke are manifestations of the development of political and economic power in old Denmark and bear witness to its conflicts, and to exchange and trade between people of various cultural traditions in the Viking Age.

CRITERION IV:

to be an outstanding example of a type of building, architectural or technological ensemble or landscape which illustrates (a) significant stage(s) in human history

Hedeby and the Danevirke represent a significant cultural, political and economic phase in the history of Northern Europe, reflecting the specific nature and the development of borders in connection with the formation of states in Viking-Age Europe between the eighth and eleventh centuries AD. This landscape is a unique case study for the development over centuries of the architecture of fortified boundaries in conjunction with trading centres which are strategically integrated into their natural environment.

Hedeby and the Danevirke functioned as demarcations, fortifications and displays of power, and as a means of controlling exchange, trading routes, the economy and the territory at the crossroads between the emerging Danish kingdoms and the kingdoms and peoples of mainland Europe. Ramparts and other defences are preserved from more than six centuries, including wooden structures, stone and brick (then novel building materials), all of which were effectively combined with natural obstacles. Exceptional archaeological remains of the urban settlement, the harbour and the cemeteries have survived in Hedeby, testifying to different cultural traditions from the eighth to eleventh centuries. The archaeological evidence highlights the significance of Hedeby and the Danevirke as an outstanding example of a landscape in a borderland embodying territorial control and political and economic might.

3.3.C STATEMENT OF INTEGRITY

Hedeby and the Danevirke encompass all the archaeological sites and structures of the sixth to twelfth centuries which are necessary to convey the significance of the

property. All important historical building phases and structures, the archaeological material and substance, the construction and layout and the situation and setting of the sites are well preserved and adequately intact as archaeological sites and scientific sources. Further features important for the functional and visual integrity of the setting are included in the buffer zone and the wider setting. Thus, the landscape is still largely intact with respect to its historical topography. Furthermore, the surrounding of the sites is free from any standing structures that would have a significant impact on the visual integrity of the nominated property.

The ground of Hedeby has never been developed and thus provides a multitude of options and research questions for archaeological study. Hedeby is the only emporium in Viking-Age Europe with a preserved town layout and harbour including shipwrecks and remains of landing stages which served as a market. The largely undisturbed site also contains exceptional archaeological relicts of wooden houses, infrastructural elements, workshops, graves and a broad variety of finds made of often perishable materials. Large parts, 26 km, of the preserved structures of the Danevirke are still visible as pronounced embankments or low ridges. Some parts of the sections, especially the western end of the Crooked Wall, are only known from archaeological surveys.

3.3.D STATEMENT OF AUTHENTICITY

The credibility and truthfulness of the evidence for the interpretation of the Archaeological Border Landscape of Hedeby and the Danevirke is conveyed by the genuine archaeological material and substance, the construction and layout and the location and setting of the archaeological sites. All archaeological remains of the nominated property have retained their authentic construction and layout since the time of their primary use. The archaeological material and substance of the nominated property is also entirely authentic. All building phases, features and their remains relevant to this nomination date to the sixth to twelfth centuries or are likely to do so. Important topographical conditions and features which were historically involved in the choice of site and the layout of the structures are still recognisable even today. Recent repairs and restorations can be clearly distinguished from the historical material and can be traced back thanks to complete and detailed archaeological documentation.

3.3.E REQUIREMENTS FOR PROTECTION AND MANAGEMENT

The nominated property, its buffer zone and its wider setting are protected in the best possible way by the legal systems in place (e.g. listed monuments, nature protection areas, landscape protection areas). In addition, the majority of sites are owned by public bodies. The values of the sites are also considered and respected in public planning processes. The various protection and planning mechanisms and acts which apply

directly to the landscape are sufficient to guarantee the protection and preservation of the proposed Outstanding Universal Value of the nominated property.

A site management plan was implemented in 2014. Here, all important stakeholders commit to the aim of protecting, preserving, monitoring and promoting the proposed Outstanding Universal Value of the nominated property. The values, attributes, integrity and authenticity of the nominated property are safeguarded and managed within the plan, representing the main objective.

Funding for the site management of the property is provided by the Federal State of Schleswig-Holstein and other public owners.

In the long run, the core management issues are to increase awareness of the value of Hedeby and the Danevirke as an archaeological landscape and to retain that value by all important stakeholders participating in its management. The Management Plan aims at further integrating Hedeby and the Danevirke into their cultural, social, ecological and economic settings and to increase their social value to make them a motor for sustainable development in the region. The management works on improving the active network between the stakeholders of Hedeby and the Danevirke in order to maintain and enhance support from local communities and other stakeholders and to secure financial support so as to improve the maintenance and presentation of the sites and their setting.

Future threats to the landscape, such as wind turbines, land use, housing developments and visitor impact, as well as natural agents such as plants and animal activities, need to be tackled collaboratively. Some specific threats such as damage to Valdemar's Wall due to exposure or damage by specific plants or animals such as *teredo navalis*, require additional research and training and the exchange of expertise and mutual support.

4

**State of conservation
and factors affecting the
property**



4.A PRESENT STATE OF CONSERVATION

SUMMARY

Hedeby and the Danevirke are a unique combination of monuments, some visible above ground and some only accessible by archaeological means, which have been overbuilt or damaged to different extents over time by the area's subsequent uses.

On the whole, the state of conservation is to be rated as outstandingly good in regard to the significance of the monuments as archaeological structures and landscape and as scientific sources. The property as a whole is generally in a condition that is able to secure their historic, scientific and social values for the long term. Locally, the state of conservation varies to some degree, especially as some areas are currently encroached by plant cover, agricultural use or frost. All of these restrictions are being monitored and minimised by measures within the scope of the Management Plan.

The location of the archaeological structures, their connections with other archaeological sites and other aspects of how they relate to the space and lines of sight within the landscape, as well as other visual and physical facets of their spatial impact, are key to understanding Hedeby and the Danevirke, and significant elements remain preserved to this day. Though the landscape is not the same as it was a millennium ago, it still has many of the characteristics which underpin the value of Hedeby and the Danevirke, especially the topography of the different landscapes between Eckernförde Bay to the east and the flats of the Eider and Treene to the west, and the visual integrity of the surroundings in the buffer zone and the wider setting.

Wild grassland or rather ground vegetation (i.e. the herb layer) is being fostered as plant cover with the function of stabilising the ramparts since the roots of trees and shrubs can likewise disturb the stone walls and find layers. Reed beds on the Hedeby shoreline damage the settlement layers and the finds lying within them through their rootstock. Within the scope of the Management Plan work has now begun on cutting back the reed-covered areas and on transforming them into ecologically valuable salt marshes with brackish water through extensive grazing with cattle. Trees are being removed that are believed to be at risk of collapsing. Valdemar's Wall, a brick wall, is affected by frost and plants. A new action plan has been developed by an expert

PRESENT STATE OF CONSER-
VATION OF THE DANEVIRKE



6 %
destroyed

29 %
not visible

33 %
visible

group envisaging constant maintenance and covering the wall in the winter season. Nowadays less than 12% of the nominated property is still used for crop production. These uses are to be discontinued step by step according to the Management Plan by converting all of these areas into grassland for extensive grazing. The number of visitors at Hedeby and the Danevirke is not known as the monuments are very extensive and freely accessible; however, the Viking Museum Hedeby (Wikinger Museum Haithabu) and the Danevirke Museum together receive around 160,000 visitors per year. Footpaths on and around the monument are monitored and visitors are guided through the site by means of signposts, paths, staircases and barriers.

Among other things, the critical factors behind any evaluation of the state of conservation of Hedeby and the Danevirke include the composition of the monuments' original materials and the conditions of their preservation. Structures made of perishable materials must be treated differently to structures made of durable materials; if they have been preserved in the same condition they must generally be ascribed a higher value.

The sections of the Danevirke which have been preserved in best condition are the Kovirke to the west of Jagel airport, the entire Main Wall with the eastern Crooked Wall, the Semicircular Wall at Hedeby and the attached part of the Connection Wall. Here, the body of the ramparts is particularly easy to identify on the ground, as are other construction elements such as ditches or berms. On about 11% of the entire ramparts, parts are still to be found which can be authentically traced back to the Middle Ages and have not been built over since. These are mainly on the Kovirke and the Crooked Wall. Over the centuries they have, nonetheless, been subjected to natural erosion and other environmental influences. During the nineteenth century, the whole Main Wall, the Semicircular Wall and parts of the Connection Wall (about 21% of the entire constructions) were built over by extension work before and during the two Schleswig Wars.

Wide parts of the East Wall (Osterwall), the Kovirke, the Arched Wall, the North Wall, the Crooked Wall and the Connection Wall have been preserved and can be visited in situ in the form of visible above-ground remains, though only to a limited extent as they are sometimes in quite rough terrain. Another third of the Danevirke

19 %
reshaped in modern times

13 %
Authentic historic
surface

can be seen in this way but is abraded to varying extents. The embankment of the Hill Fort and the tumuli this encloses can also still be seen.

Parts of the construction or the constructive elements of the Kovirke, the North Wall, the Crooked Wall and the Connection Wall are no longer visible and only preserved in the ground as archaeological remains. This applies to about one third of the entire Danevirke site. The wooden foundations of the Offshore Work and remains of the harbour and the shipwreck in the harbour of Hedeby are in a similar condition. Under water and in the sediment, these elements are relatively well preserved, but there are no signs of them above the water. The settlements and grave fields of Hedeby cannot be recognised above the ground and can only be explored archaeologically. Only small areas of them have been excavated. In these areas, the archaeological fabric has been destroyed. Some parts of the large areas in and near the water provide exceptionally good conditions for the preservation of organic objects, which are of significant value to the archaeological cultural landscape.

The additional rampart reinforcements can only be seen in certain places in their original combination of a berm and a ditch, mainly along an almost 2000m section of the Kovirke. The Main Wall system, in particular, was damaged and built over by new military work in the nineteenth and twentieth centuries.

Where the ramparts were totally destroyed, this was mainly by transport routes being cut through them, by building development and by gravel pits. This makes up roughly 6% of the ramparts in all, but only some 3.5 % of the overall area of the structures which once existed, or roughly 8 ha. These sections are not part of the nominated property, but are in the buffer zone. Excavations at the Danevirke are mostly restricted to short sections of areas which have already been revealed, while the sites in Hedeby involved area excavations, but less than 5% of the entire area was excavated altogether.

PROPORTION OF INDIVIDUAL SECTIONS TO THE OVERALL PRESERVATION OF THE RAMPARTS.



In two places, at the North Wall and the Crooked Wall, short stretches of the body of the Danevirke rampart have been restored. Furthermore, a 19th century Danevirke bastion, the so-called Redoubt XIV, was rebuilt exemplarily in 2005. From 2002 to 2008, seven houses and a landing-stage for ships were reconstructed in Hedeby, on land that had largely been excavated.

9 % Connection Wall

26 % Main Wall

22 % Crooked Wall



1 % Arched Wall

3 % North Wall

CONSERVATION STATUS OF THE DANEVIRKE

The Danevirke	Destroyed	Not visible	Visible	Modern overbuilding	Authentic historic surface	Total	% of wall length
Semicircular Wall				1,300 m	0 m	1,300 m	5%
Connection Wall	430 m	440 m	840 m	1,610 m	0 m	3,320 m	13%
Arched Wall	120 m	220 m	140 m	0 m	0 m	480 m	2%
North Wall	170 m	380 m	930 m	0 m	0 m	1,480 m	6%
Main Wall	40 m	340 m	330 m	2,020 m	770 m	3,500 m	13%
Crooked Wall	0 m	2,700 m	3,120 m	0 m	840 m	6,660 m	26%
East Wall	0 m	670 m	2,030 m	0 m	0 m	2,700 m	10%
Kovirke	700 m	2,920 m	1,160 m	0 m	1,830 m	6,610 m	25%
	1,460 m	7,670 m	8,550 m	5,390 m	2,980 m	26,050 m	100%

ASSESSING AND EVALUATING THE STATE OF CONSERVATION

The archaeological sites of Hedeby and the Danevirke have different qualities as monuments depending especially on their materials and the conditions in which they have been kept, affecting their state of preservation. On one hand, the structures at Hedeby mainly consist of wood and wickerwork. The trading centre is characterised by preservation in waterlogged soil, i.e. perishable materials such as wood and wickerwork are preserved which provide information about early mediaeval construction engineering. Moreover, as well as all the other organic finds, there are also inorganic

all 26 % Kovirke

10 % Semicircular Wall

4 % East Wall

objects which might be made of glass, metal, pottery and other materials. The Danevirke, by contrast, was mainly built out of durable materials such as earth, stones and bricks. Here, the organic materials such as wooden palisades have mostly degraded over the centuries. By contrast, the earth and stone banks and ditches which were left unused have survived this long time relatively well. Nonetheless, even here there are some signs of the negative effects of erosion or later use.

The Archaeological Border Landscape of Hedeby and the Danevirke is made up of all the pieces, structures and sites of finds which it has been possible to allocate to the two sites according to the latest scientific evidence. In other words, ruined parts of the archaeological sites in which no relevant fabric is likely to have been preserved were not included in the nominated property. Examples of this include spots intersected by large roads and developed areas within the municipality of Busdorf. It is still not clear how large all the Danevirke fortifications were originally, or what they looked like, as no contemporary written sources or images provide sufficient information on the subject, and archaeological and scientific investigations only relate to the remaining groups of finds and preserved structures. Unknown sites and sections would first have to be localised and identified as belonging to the monuments. Information from non-contemporary maps and writings, in particular, also need to be viewed with scepticism, as they sometimes offer demonstrably incorrect information, e.g. demonstrating the authors' lack of local knowledge, or connect structures to names when these links could not have existed in the original context. Even the full extent of the archaeological complex of Hedeby and the Danevirke can thus not be determined definitively or without doubt.

The assessment of the integrity of the different sections and thus the state of their conservations can therefore only be based on a comparison with reconstructed historical conditions, as described according to the current state of the research. Resolving many of the research questions would at the same time further damage the existing structure due to the excavations this would require. The aim is thus to find a balance between preserving the monument and investigating its history.

Other important information on the state of the sites' preservation can be obtained by comparing their current states with earlier reports on the various sections of the ramparts. There are also more reports of damage from the last two centuries, especially, some already describing damage to the fabric (such as the building of the bastions in 1861).

The current state of conservation can, however, not be assessed based on original conditions, such as the buildings in Hedeby. Hedeby and the Danevirke have been rebuilt and renewed many times over the long period of their use. As an archaeological site, the important point must in fact be how well the remains have been preserved, and how they have been disturbed and ruined since they were put in the ground, or after they fell out of use.

DETAILED DESCRIPTION

HEDEBY

[+] SETTLEMENT

The settlement of Hedeby and its wooden buildings within the Semicircular Wall are no longer visible above ground as a whole. However, it has been possible to explore the site using excavations and non-invasive prospecting. So far, only about 5% of the area has been archaeologically excavated. Despite this low level of intervention, we have already gained an extremely extensive, detailed picture of the settlement at Hedeby.

For a long time, the site was used for arable farming, which disturbed the most recent archaeological layers nearer the surface. However, the site of the settlement within the Semicircular Wall was never built over or damaged in any other way. All that stood there was a menagerie in the northwestern area in the first half of the eighteenth century, belonging to the Duke of Gottorp. Of the 25.5 ha, 95% is thus preserved as a soil archive, its preservation conditions characterised by the waterlogged subsoil, especially to the east, near the water. The interior area is used as extensive pastures; it is covered with grass and divided by hedgerows. In the area within the Semicircular Wall are reconstructed houses which can be visited and are used for presentations as part of the Viking Museum Hedeby, on areas which have largely been excavated.

HEDEBY

[+] HARBOUR

The remains of the harbour at Hedeby are under water and can only be explored to a limited extent with special equipment and divers. In the past, the wooden remains of the harbour facilities were also destroyed by winter ice drifts. The wet environment is excellent to preserve organic finds, but disadvantageous for metal. Only a small area of 0.2 ha has been excavated here.

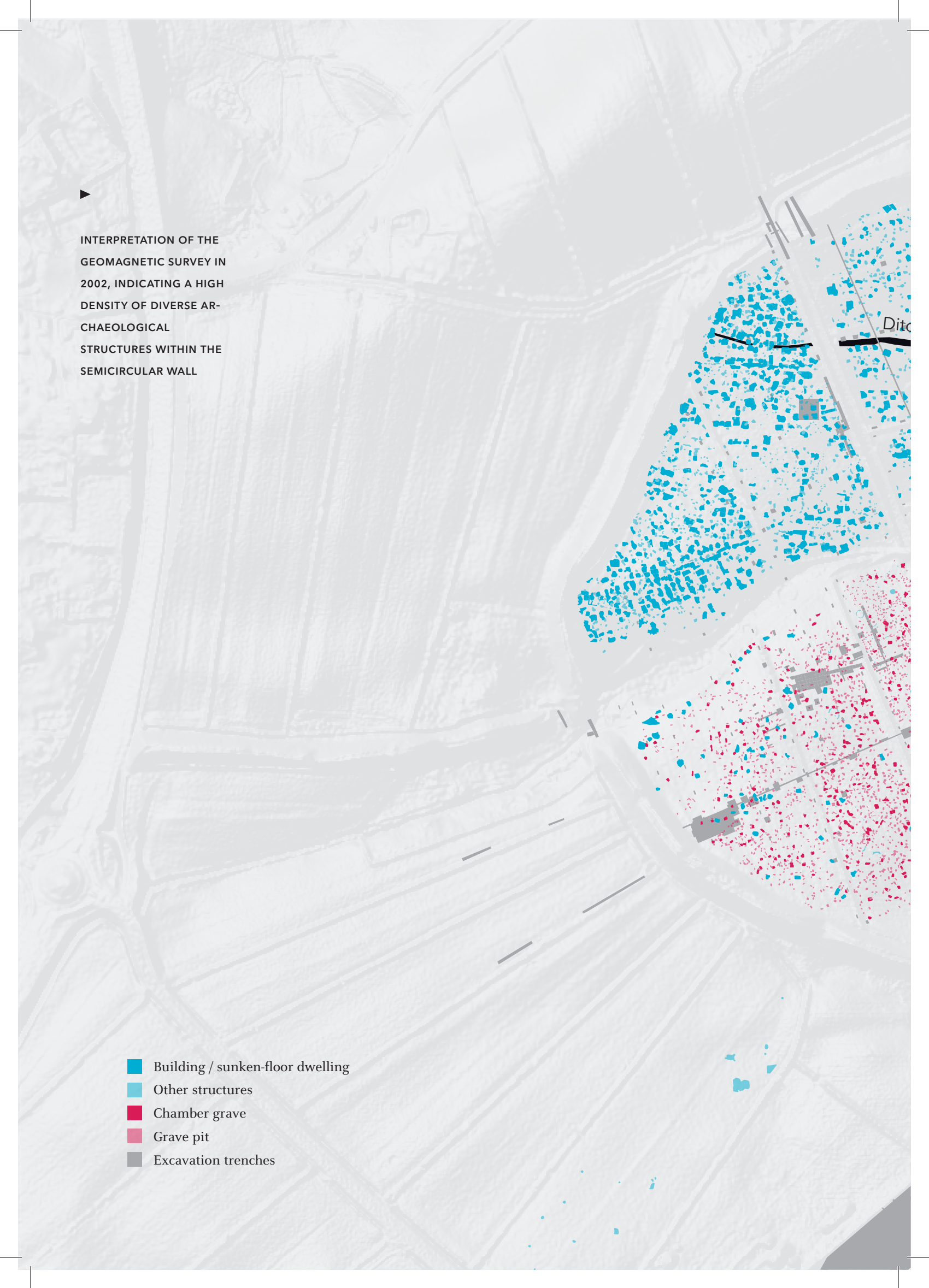
HEDEBY

[+] SEMICIRCULAR WALL

The Semicircular Wall encloses the entire settlement of Hedeby with its roughly 25 ha, and its monumental nature is still easily appreciated despite some forested areas. It was heavily overbuilt and extended during the First Schleswig War of 1848. The Semicircular Wall is a particularly popular tourist attraction, even though the individual sections of the ramparts sometimes show signs of digging or erosion. Today it is almost entirely dominated by forested land. Fortifications in the outlying areas, such as the additional ramparts in the forefront or infilled ditches, can no longer be seen in the terrain. Reed beds by the shore at Hedeby damage the occupation layer and the finds it contains with their rootstocks. This makes them an urgent danger to the archaeological fabric and thus to Hedeby's scientific value, authenticity and integrity. Based on a report and the maintenance plan, work started in coordination with the responsible nature protection authorities on mowing the area and using it extensively as pastureland for cattle to transform it into valuable salt marshes with brackish water; this is expected to reduce the amount of reed beds in the long term.

►

INTERPRETATION OF THE
GEOMAGNETIC SURVEY IN
2002, INDICATING A HIGH
DENSITY OF DIVERSE AR-
CHAEOLOGICAL
STRUCTURES WITHIN THE
SEMICIRCULAR WALL

- 
- The image is an aerial photograph of a landscape, overlaid with a semi-circular wall and various archaeological data points. The wall is a thick, grey line that curves from the bottom left towards the top right. To the right of the wall, there is a large area filled with blue and red dots, representing archaeological structures. A legend in the bottom left corner explains the colors: blue for buildings/sunken-floor dwellings, red for chamber graves, and grey for excavation trenches. The background is a light grey aerial view of the terrain, showing fields and some modern infrastructure like roads and a ditch labeled 'Ditch' on the right.
- Building / sunken-floor dwelling
 - Other structures
 - Chamber grave
 - Grave pit
 - Excavation trenches



**HEDEBY****[+] SOUTHERN
SETTLEMENT AND SOUTH
CEMETERY**

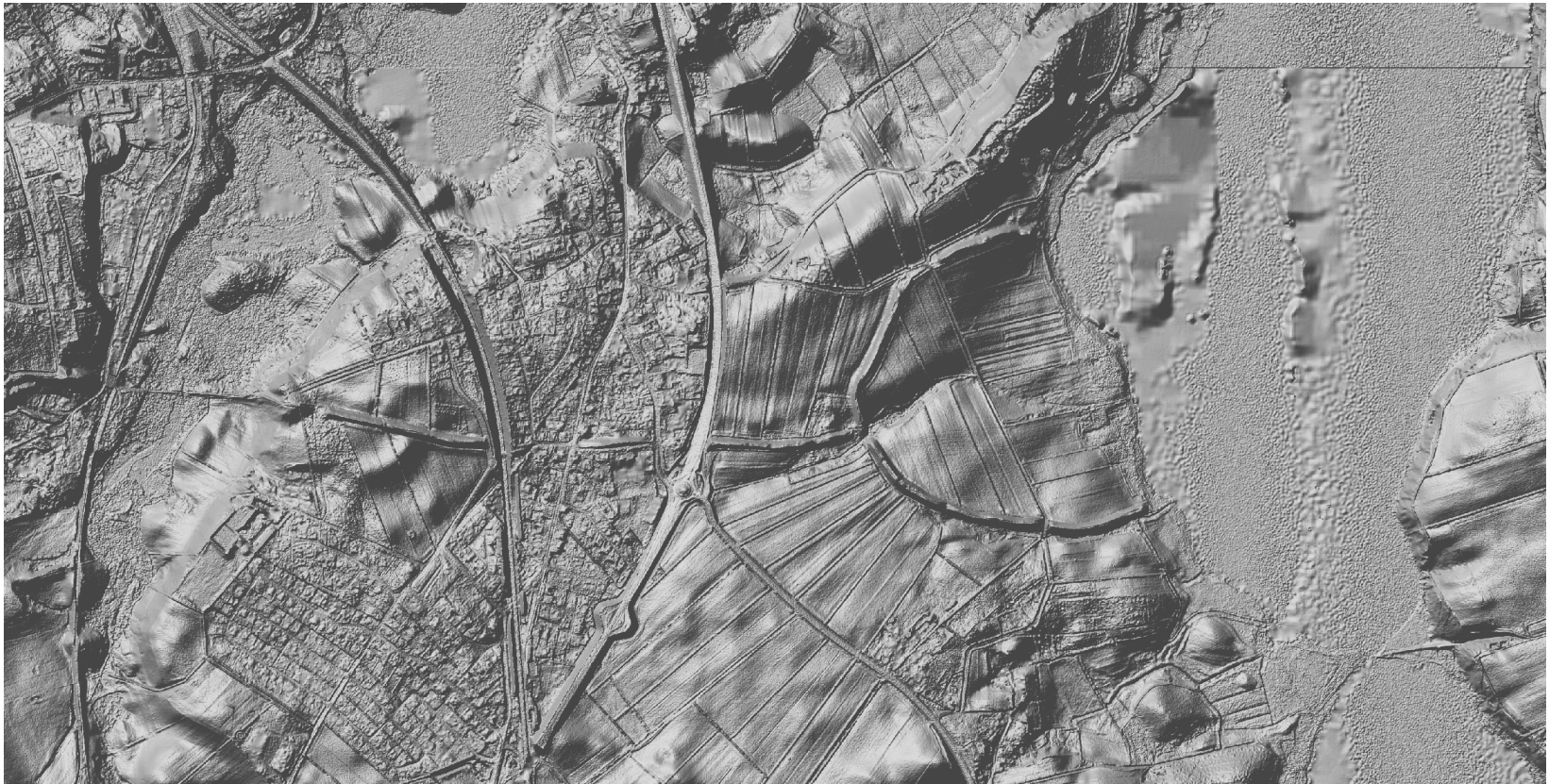
The three ditches leading up to and defending the ramparts, the Southern Settlement and the South Cemetery at Hedeby have been preserved in situ as archaeologically verifiable structures, but are not visible on the ground. Roughly 15% of these areas has been excavated archaeologically, but the full extent of the Southern Settlement and the South Cemetery remains uncertain. The entire area is still in agricultural use today.

HEDEBY**[+] HILL FORT**

The Hill Fort is on a hill plateau above the Semicircular Wall, on which a forest now grows. Today there are few signs of the circular wall around the Hill Fort, though some of the tumuli inside are clearly visible. A hiking path leads up to the Hill Fort. The southwestern part of the plateau was dug away by clay extraction, and on the eastern outskirts of the circular wall there is an open-air stage. There has been occasional damage to the circular wall and the tumuli caused by fallen trees.

THE DANEVIRKE**[+] CONNECTION WALL**

Most of the ramparts have been preserved clearly as an earth bank which is several metres wide and high. The state of conservation of the fabric varies considerably from one section to another, however. No remains of ditches are visible any longer; they are only preserved as archaeological finds. The double ramparts at the westernmost end of the section have been heavily abraded and there are now only faint signs of it



DIGITAL ELEVATION MODEL OF HEDEBY AND THE CONNECTION WALL

in the terrain. It is possible to walk along almost the entire length of the Connection Wall. The Connection Wall has mainly been impinged upon by the many roads cut through it, the railway line, the military constructions of 1848 and 1861 and extensions to the built area. As long ago as the nineteenth century the ramparts were also abraded in part, for example at the "Wallgarten" park in Busdorf. The building of bastions on either side of the Busdorf valley damaged further sections. In 1861 the building of a dam covered up what might have been older stages of construction. The section from the B77 to Heideby, and the Semicircular Wall, were heavily built over and raised in 1848 during the First Schleswig War. The bastions built in 1861 along the Connection Wall have all been seriously damaged today. In addition, parts of the ramparts were ruined in the twentieth century by the construction of the A7 motorway, the building of houses in the town of Busdorf, and Federal Highway B77. There are also signs of digging and erosion. The Connection Wall is largely forested, while its westernmost part, starting at the motorway, and the Arched Wall, are used as pastures.

The "Arched Wall" is between the North Wall and the Connection Wall. It is covered with grass, is used as a pasture and is almost invisible in the terrain. Agricultural use has flattened it out such that it can only be identified in the eastern half using modern geophysical prospection methods. The middle section, between a street and a path, was dug away. The eastern end was razed to the ground by the motorway.





▲
FOOTPATH ON THE CONNECTION
WALL NEAR HEDEBY

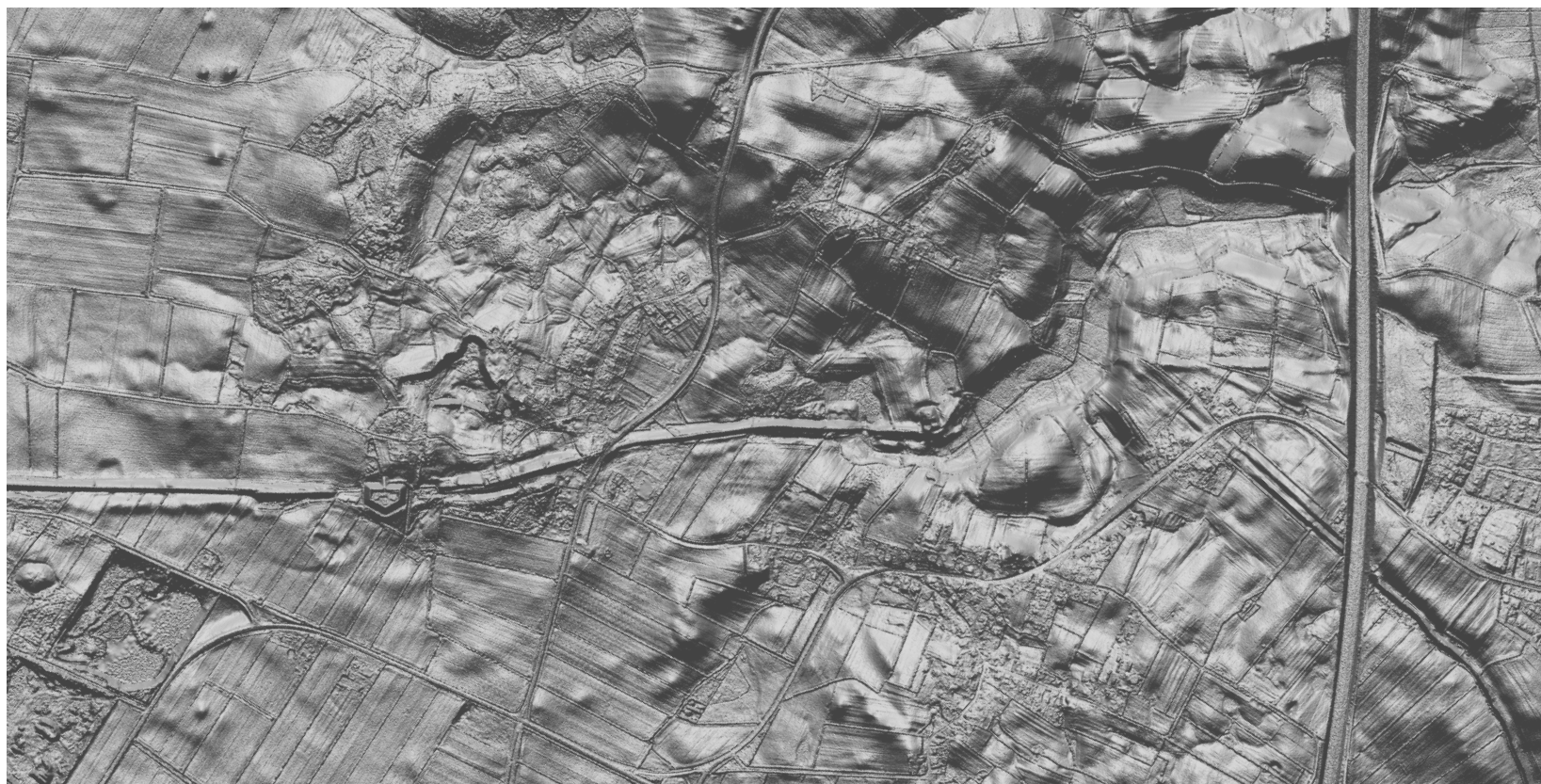


THE DANEVIRKE

[+] MAIN WALL

The Main Wall is the best-preserved part of the Danevirke; here, the body of the ramparts is mostly very well preserved. The fortifications leading up to the rampart are made up of an additional rampart in the forefront, ditches, berms, and the walls and body of the Main Wall. They can still be easily explored at the site, in some places in their entirety. The full length of the Main Wall can be seen and explored. Its use for tourism is mainly concentrated on the area around the Danevirke Museum, known as the Archaeological Park. The original rampart and ditch system along the Main Wall was destroyed in parts by the bastions built in the nineteenth century, and shows clear signs of overbuilding as a whole. The ditch along the Main Wall, especially, was overbuilt and affected by the fortifications of the nineteenth century and the anti-tank ditch in the twentieth century, while the body of the ramparts was abraded for about 100m on either side of the bastions. The front and parts of the upper side of the ramparts were damaged by ditch-digging and the anti-aircraft unit system built in the twentieth century. Moreover, parts of the ditches and additional rampart in the forefront were damaged by the modern residential development and the body of the ramparts was damaged. The construction is cut through by numerous roads and paths. Transport routes, agricultural use and development mainly impinge upon the constructions in front of the ramparts.

Some of the Main Wall is forested, such as the eastern section at Lake Dannewerk and at Redoubt XIV, but the largest sections consist of grassland with occasional



DIGITAL ELEVATION MODEL OF THE MAIN WALL

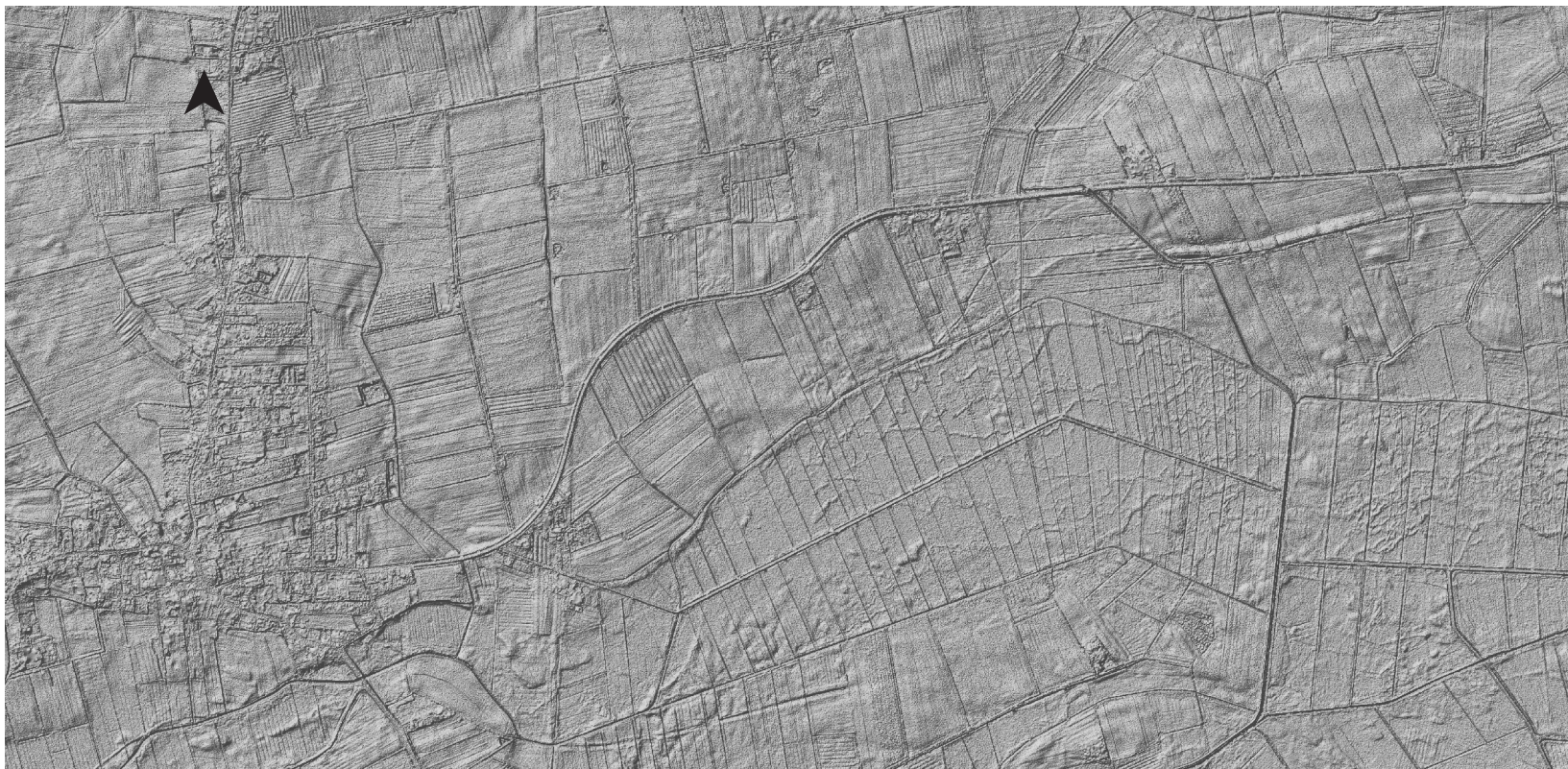
shrubs and trees. The grass growing on them sustainably preserves the fabric of the monument. This kind of growth also makes the monument easier to see and explore. On both sides along the foot of the ramparts at the spot where it joins the Crooked Wall to the west, there are agricultural roads. Their use with heavy agricultural vehicles constantly erodes the fabric of the ramparts, especially at the places where the roads cut through them. The Management Plan has medium-term plans to block these routes for motor vehicles and build alternative routes further away from the ramparts.

The part of Valdemar's Wall which is still visible today is in the Archaeological Park. This brick wall was seriously damaged over the centuries by its use as a quarry for construction materials, and is now largely buried beneath earth which fell in upon the quarry. The ruin of the wall is directly visible for a distance of about 80 m. The exposure of the wall, which occurred back in the 19th century, goes a long way in helping to illustrate the complex history of the structure to the visitors today. Rainwater and water either coming directly from rain and moisture or seeping through the wall from the earthen rampart in the back freezes in winter, causing pieces of mortar and brick, or even complete bricks, to break off. This state is further aggravated by the fact that the irregular, heterogeneous surface and the often soft mortar of the wall promote the growth of plants and provide a good habitat for small animals such as ants. A drainage system, which was installed in the earthen wall behind a visible





THE MAIN WALL



stretch of the brick wall between the years 2007 and 2009, was supposed to prevent water from the earthen wall from pressing through the front of the brick wall and freezing there. However, the conditions of the wall have not improved substantially and the wall still suffers from erosion, notably in the winter season. New measures to stabilise the wall have been discussed in an expert group and are being monitored by 3D scanning of the wall. A preliminary action plan envisages covering the wall in the winter season, repairing gaps between the bricks and removing plants and animals as carefully as possible on a constant basis.

THE DANEVIRKE **[+] CROOKED WALL**

The western part of the Crooked Wall and the sections around the bastions of 1861 are today abraded with some breaches. In the eastern third, however, it can easily be recognised over large stretches as a wide embankment, and for about 1 km leading up to the connection to the Main Wall it has been preserved as a solid earth bank. The preservation of the western section of the ramparts has been most heavily impaired by agricultural use, when the section was ploughed over. From the municipal border between Ellingstedt and Hollingstedt to the west it is no longer visible above ground at this point. Moreover, parts of the body of the ramparts were used to backfill ditches and for other purposes. In addition, the body of the ramparts was disturbed by paths being cut through it and cannon embrasures from the time of the War of 1864. Parts of the upper side were damaged by the building of anti-aircraft units and military trenches in the twentieth century.



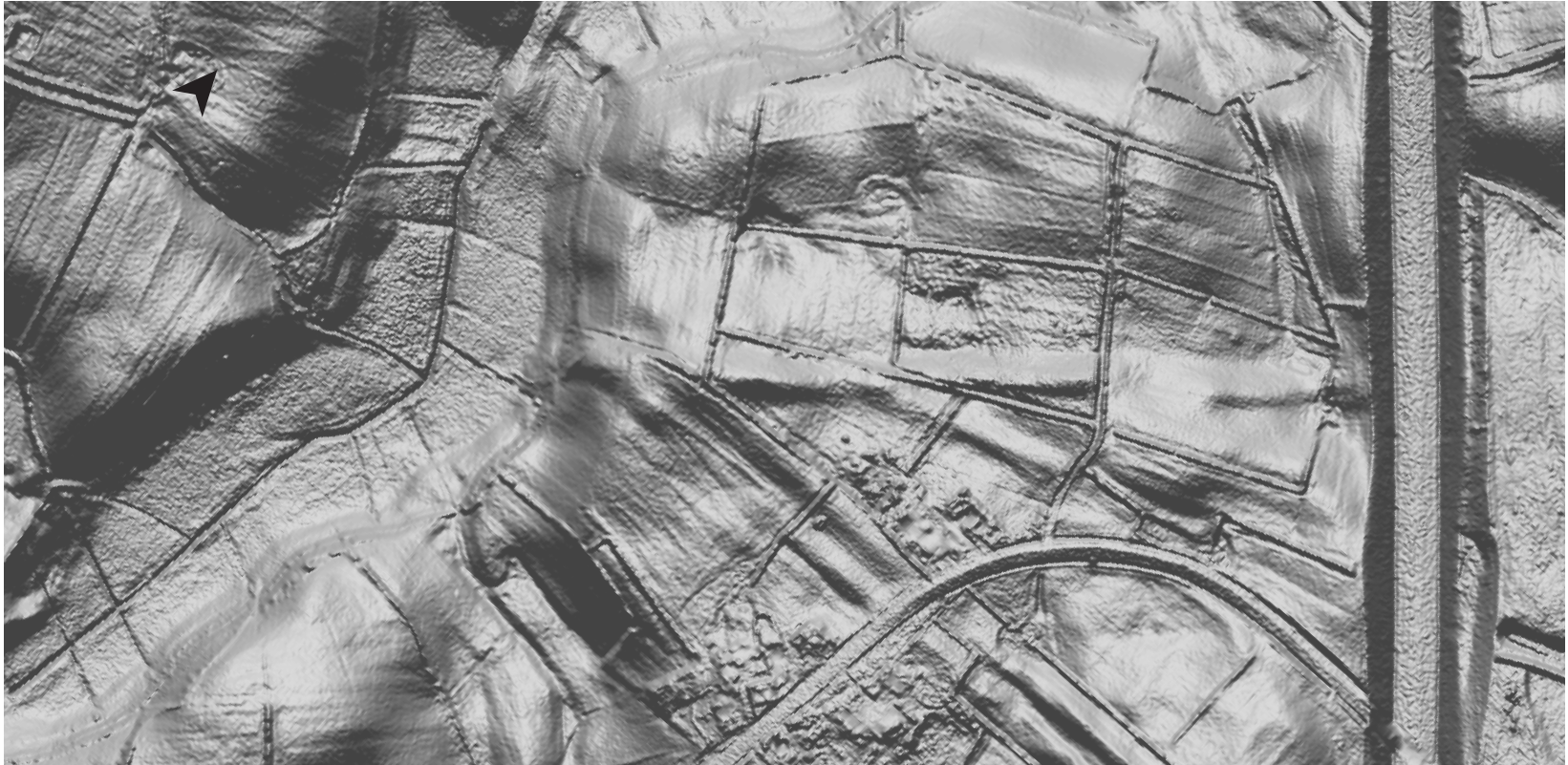
DIGITAL ELEVATION MODEL
OF THE CROOKED WALL

The Crooked Wall is largely covered with grass. Some parts of the western section are still used agriculturally today, as hay meadows or for arable farming, though the farmland ploughs damage the fabric of the ramparts and put their long-term preservation at risk. The Management Plan thus includes the medium-term goal of preventing these types of use in this section, too. The growth of grass, however, sustainably protects the preservation of the fabric of the monument and allows it to be seen directly, without any interference.





▲
THE CROOKED WALL



THE DANEVIRKE
[+] NORTH WALL

Large parts of the North Wall are visible, but heavily disturbed or worse. Between them there are many abraded sections. The remaining parts of the ramparts have been dug away on one side along almost the entire length of the remaining section, and only preserved in the centre. This makes the remains of the walls easy to confuse with the hedgerows which are found locally. One part was infilled with debris from the construction of the motorway, which also entirely destroyed the ramparts along its route. There are other breaches interrupting the line of the ramparts. A brickworks and related clay extraction and the railway line have destroyed the northeastern end. Today, the brickworks area has been filled in and is being used as a residential area. During the housing development, one part of the old line of the ramparts was reconstructed at this spot.

The western end of the North Wall is forested. Woody plants and shrubs are growing on the remaining sections. These plants are not a danger to the preservation of the fabric in the long term, but severely impede the view and exploration of the remains of the ramparts.

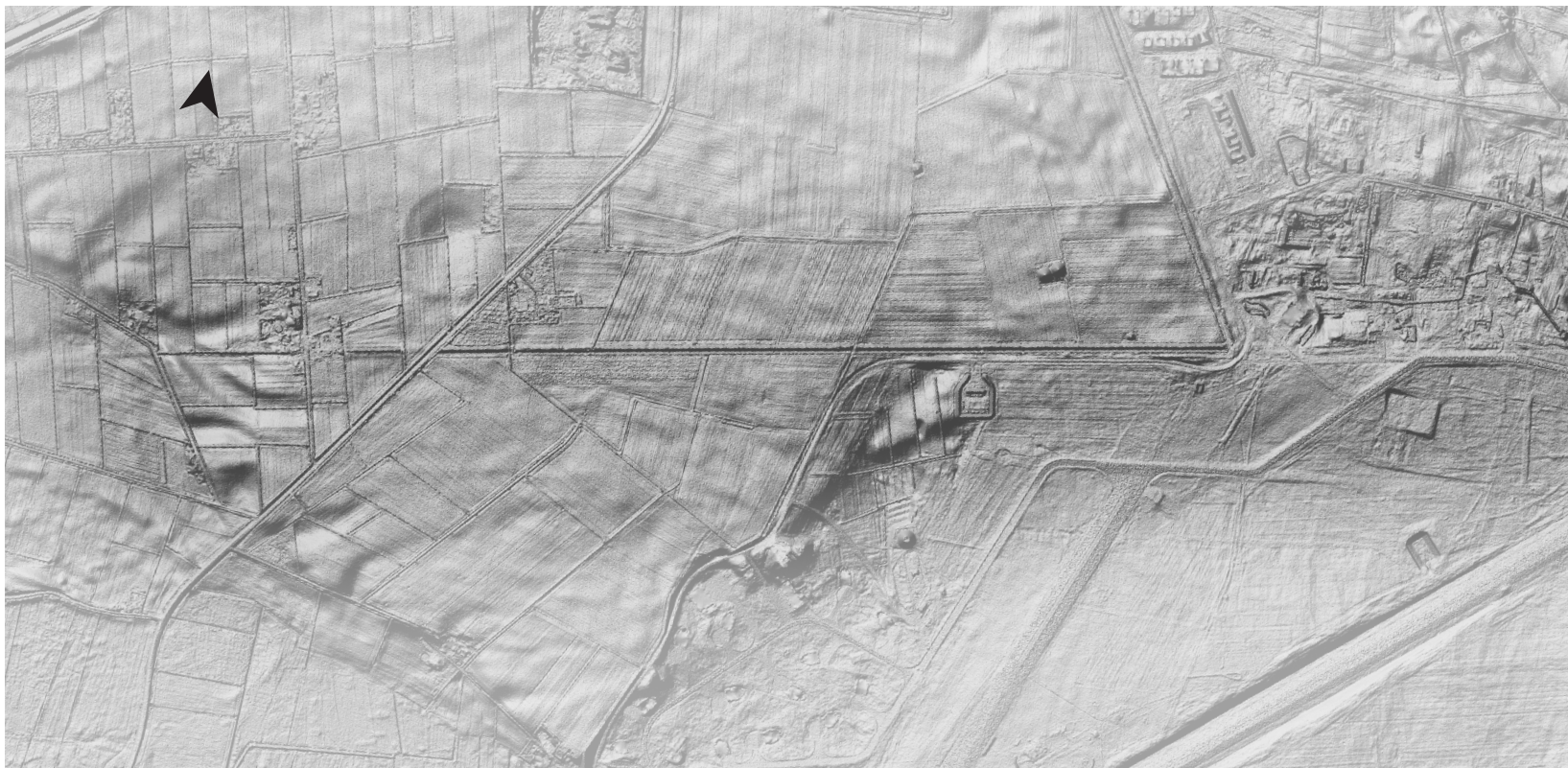


DIGITAL ELEVATION MODEL
OF THE NORTH WALL





**THE NORTH WALL, IN THE BACK-
GROUND IS SCHLOSS GOTTORF
WHERE THE STATE
ARCHAEOLOGICAL MUSEUM IS
LOCATED**



THE DANEVIRKE

[+] KOVIRKE

The western end of the Kovirke is well to very well preserved with the ramparts and ditch, while the eastern area is now almost invisible and has been destroyed in places. Large parts of the eastern Kovirke have been dug out to excavate gravel and build trunk roads and a railway line. In the town of Selk, part of the ramparts still remain, with woody plants and trees growing on them; otherwise only short sections can be seen. Outside the town of Selk, the body of the ramparts is at first still visible in the terrain, then it is covered further to the west by an agricultural road and a hedgerow. In the central area, the Kovirke runs through a military airport. Here, the ramparts have been levelled out, though the V-shaped ditch should still be preserved under the ground. At this point, the ramparts are covered in mown grass. Directly following on from the airfield, the body of the ramparts and the Kovirke ditch are exceptionally well preserved and also have a covering of grass. At this point, they run on for 2.6 km, and are only intersected at a few points by agricultural roads and other breaches. At the western end, by contrast, the ramparts are badly affected by agricultural use, eventually being fully levelled out and almost invisible.

In the case of the sections of the ramparts which have grass growing on them, the fabric of the monument is sustainably protected and thus also very easy to explore. The fabric of the forested sections is not at risk, but they cannot currently easily be recognised as monuments.



DIGITAL ELEVATION MODEL
OF THE KOVIRKE





▲
THE KOVIRKE

**THE DANEVIRKE****[+] EAST WALL**

The western section of the East Wall is visible in the terrain, but otherwise these ramparts are heavily abraded. Particularly, parts of the body of the ramparts have been preserved as hedgerows, making them hard for the untrained eye to spot. The ditch identified during excavations can no longer be recognised in the terrain. The margins of the ramparts are severely abraded, and the eastern and western ends razed entirely, due to agricultural use in particular. They are also intersected by several roads and paths, as well as an old railway line. It is not clear how much has been destroyed or built over in the village of Kochendorf, but at the western and eastern margins it is clearly visible. Within the village, there may historically have been gaps in the ramparts which were never filled entirely.

The western end of the East Wall is forested. Woody plants and shrubs are growing on the remaining sections. These plants are not a danger to the preservation of the fabric in the long term, but severely impede the view and exploration of the remains of the ramparts.



DIGITAL ELEVATION MODEL
OF THE EAST WALL



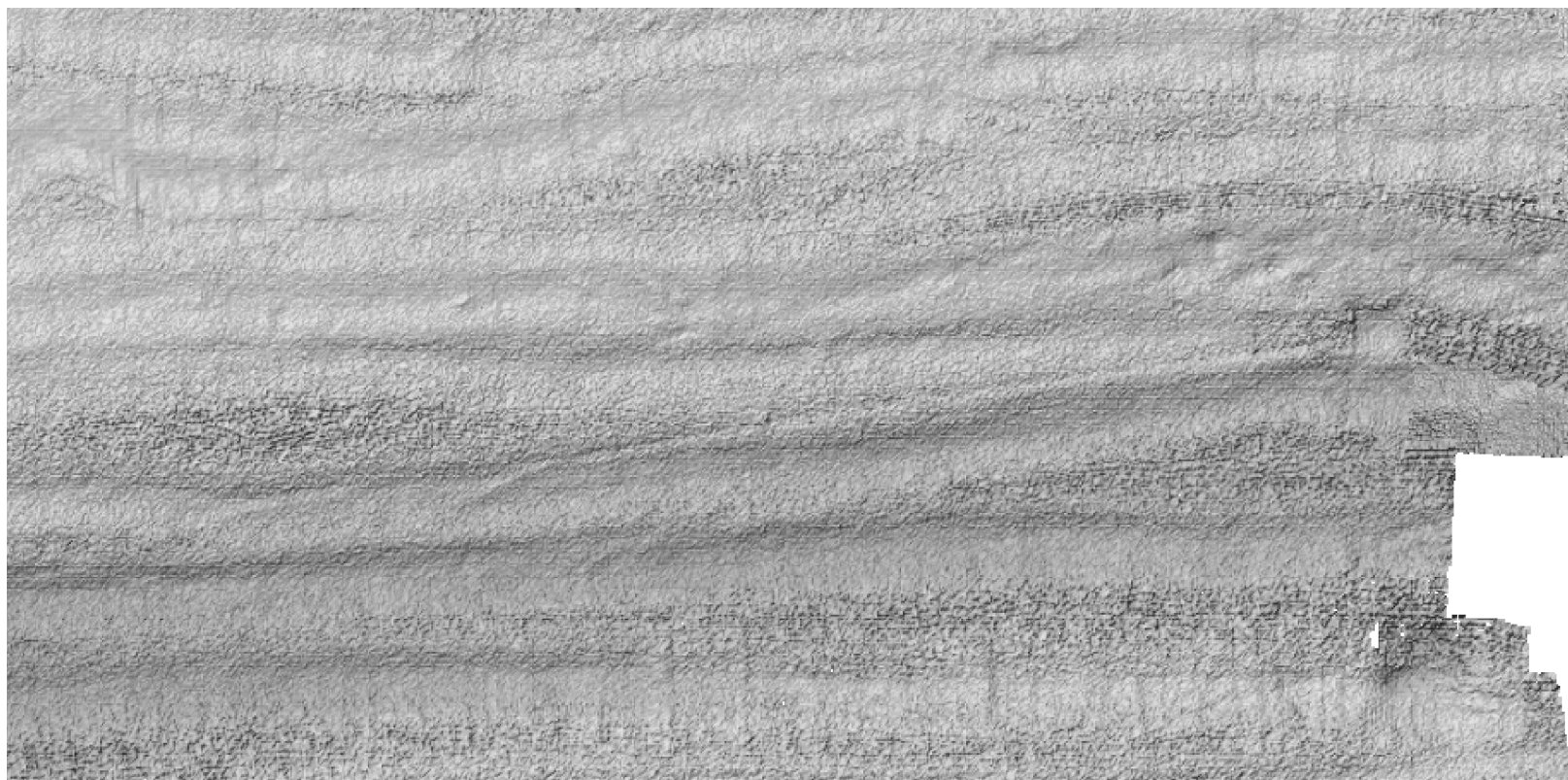


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THE EAST WALL

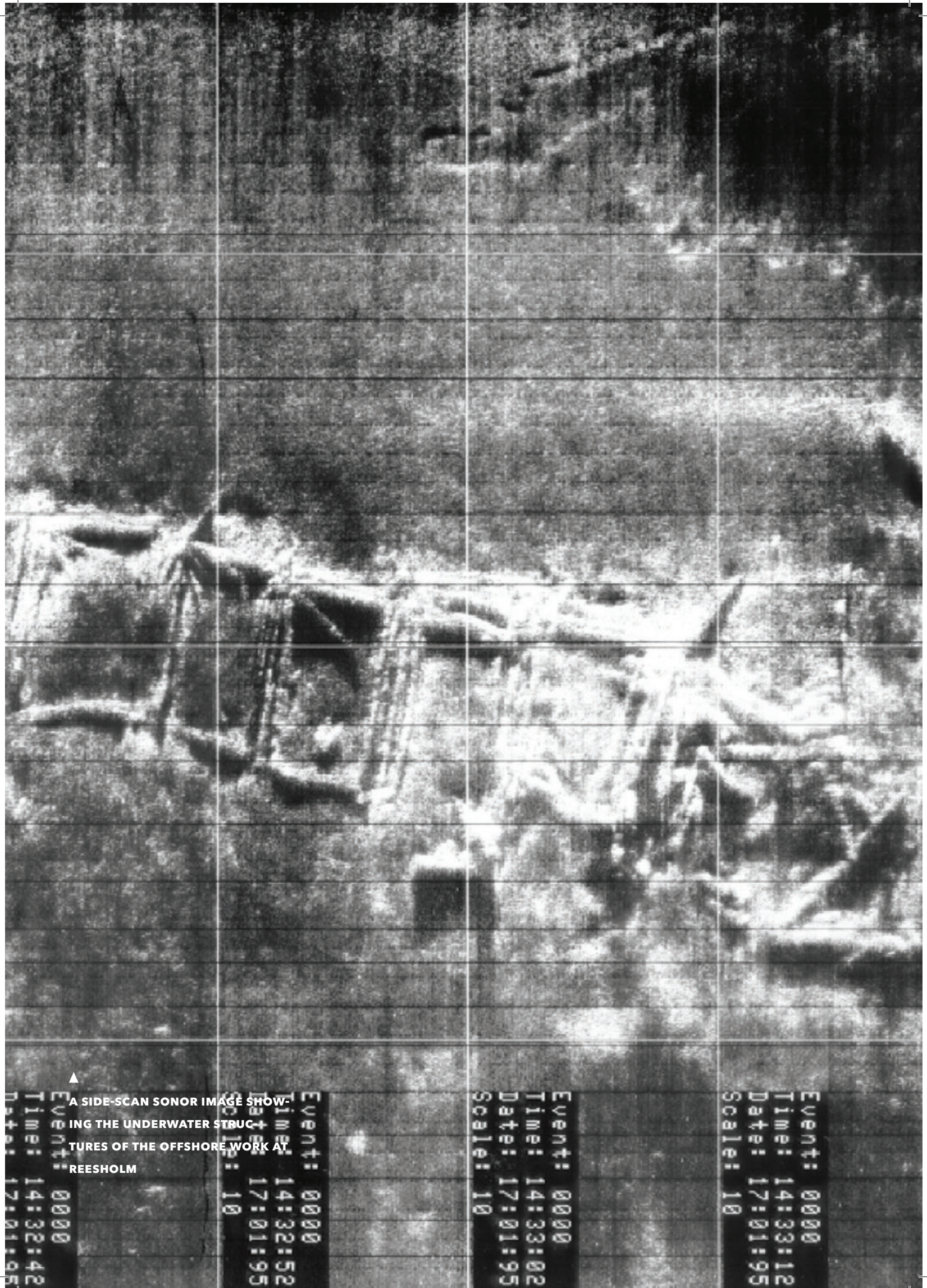


THE DANEVIRKE
[+] OFFSHORE WORK

As an underwater monument, the Offshore Work can only be accessed to a very limited extent. The wooden remains are at a depth of 2.5 m beneath the surface of the water, in the sediment of the Schlei, and can only be identified by archaeometric means or using underwater archaeology methods. Basically, the anaerobic environment of the Schlei offers good conditions for preserving the wooden construction, though it is presumed to have been damaged by dredgers deepening the eastern part of the shipping channel. Recent dives indicate that the Offshore Work was originally at least 670 m in length.



BATHYMETRIC CONTOURS
OF THE AREA OF THE
OFFSHORE WORK



▲ A SIDE-SCAN SONAR IMAGE SHOW-
ING THE UNDERWATER STRUC-
TURES OF THE OFFSHORE WORK AT
REESHOLM

Event: 0000	Event: 0000	Event: 0000	Event: 0000
Time: 14:32:42	Time: 14:33:02	Time: 14:33:12	Time: 14:33:12
Date: 17:01:95	Date: 17:01:95	Date: 17:01:95	Date: 17:01:95
Scale: 10	Scale: 10	Scale: 10	Scale: 10

Event: 0000
Time: 14:33:52
Date: 17:01:95
Scale: 10

Event: 0000
Time: 14:33:42
Date: 17:01:95
Scale: 10

Event: 0000
Time: 14:33:32
Date: 17:01:95
Scale: 10

Event: 0000
Time: 14:33:22
Date: 17:01:95
Scale: 10

LANDSCAPE SETTING AND NATURAL ENVIRONMENT

The surroundings of the monuments of Hedeby and the Danevirke have an important role to play in their significance and value as authentic relics and scientific sources. The location of the archaeological structures, their connections with other archaeological sites and other aspects of how they relate to the space and lines of sight within the landscape are key to understanding Hedeby and the Danevirke. In addition to this, certain properties of the landscape are worth protecting, and there are non-material links such as place names and traditions.

The setting described here is not part of the nominated property. The buffer zone is designed to protect some of the constitutive features of the cultural landscape which are found here, but other features extend beyond the buffer zone or cannot be included in it. Following recommendations by ICOMOS (Xi'an Declaration), these aspects too are included and preserved in the Management Plan as part of the wider setting. For this reason, when managing sustainable development within the buffer zone around Hedeby and the Danevirke and within the wider setting, all these different aspects are taken into account.

The sites' topographic and strategically important location in the Schleswig Isthmus was key both to Hedeby's role as a trading centre and to the Danevirke's functions as a border fortification and a symbol of power. The flats and bogs, especially, acted as natural forms of protection and supplemented or replaced artificial obstacles. The Crooked Wall and the western East Wall ran along the northern edge of the flats. The Main Wall, Kovirke, North Wall and eastern East Wall clearly run between flats or lakes. The Main Wall and the North Wall, for example, ended at Lake Dannewerk and the East Wall at Windebyer Noor. As Hedeby was once a harbour, its location immediately by the water and its access from the Schlei inlet are significant.

In the wider setting there are many other archaeological sites which are historically related to the border landscape of Hedeby and the Danevirke. To name a few, there are the Haervejen, the rune stones, additional Viking Age burials and settlements, the ovens used to fire bricks for Waldemar's Wall, etc. These sites are also to be preserved in situ as part of the wider cultural landscape.

Since the Viking Age, the topography around Hedeby and the Danevirke has changed, especially through building and the extraction of raw materials at isolated spots. The landscape is not the same as it was a millennium ago, though as a whole it does display many of the features of that time. The surroundings of the monuments in the Schleswig isthmus are, for example, still shaped by the different landscapes between Eckernförde Bay in the east and the flats of the Eider and Treene in the west. The East Wall is between the waters of Windebyer Noor and the Schlei at the northern outskirts of the foothills of the Hüttener Hills and the Osterbek Flats. This area is characterised by an elevated, hilly landscape with small farms, bodies of water, meadows and woods. The Offshore Works near Reesholm all falls within the landscape of the Schlei, shaped at this spot by the area between the waters of the Große Breite and the Kleine Breite and the boggy peninsula of Reesholm. Hedeby lies in

the waterlogged banks of Haddebyer Noor, a branch of the Schlei, and is surrounded by moraine ridges. The ramparts of the Danevirke run westwards to what was once Lake Dannewerk through this hilly and sometimes wooded late Ice Age landscape. The landscape here is marked by old meltwater channels, stretches of water and flats. To the west of Lake Dannewerk, the flat, dry sandurs of the geest start to appear with their copses, arable land and pastures. Further to the west, the Danevirke runs along the flats of Rheider Au to the flats of the Treene, where hedgerows give way to open meadows and arable land.

For this reason, the topography basically requires protection against further change, for example caused by soil deposits or erosion. In particular, stretches of water and former flats need to be protected against further overbuilding and draining.

4.B FACTORS AFFECTING THE PROPERTY

SUMMARY

Since the time Hedeby and the Danevirke lost their original function, the main factors affecting the archaeological monuments and the areas surrounding them have been the building of settlements, the extraction of raw materials, the expansion of agricultural production facilities, the infrastructure (roads, railway), military use and last, but not least, agriculture.

At Hedeby and the Danevirke there are some development pressures today. Parts of the Danevirke are under some pressure both from agriculture within the property and gravel mining within the buffer zone. The expansion of housing areas within or close to the buffer zone as well as new wind energy plants in the wider setting could be a future issue. The part of the Danevirke known as the Kovirke (component parts 13–18) is partly within a military training facility.

The nominated property is also under some pressure from plant cover and animal activity. Plant cover damaging the archaeological remains will be removed according to the Management Plan. Reed beds along the shoreline at Hedeby damage the settlement layers and the finds within them with their underground rhizomes. Within the scope of the Management Plan, work has now begun on mowing the reed-covered areas and on transforming them into ecologically valuable brackish saltmarshes through extensive grazing with cattle. These measures also include trees seen as being at risk of collapse. Since the roots of trees and shrubs can similarly disturb the stone walls and archaeological layers, wild grassland or rather ground cover (i.e. a herb layer) is being fostered as plant cover with the function of stabilising the ramparts.

At the sites of the underwater finds around the Offshore Works in the Schlei, there is also a threat caused by the naval shipworm (*teredo navalis*), wherever the wooden remains are washed clear and the salt content of the Schlei is high enough to offer good living conditions for the *teredo navalis*.

No people live within the nominated property. The buffer zone is inhabited by fewer than 1,000 people.

I DEVELOPMENT PRESSURES

HOUSING AND COMMERCIAL DEVELOPMENT

The nominated property is not endangered by residential development from inside its boundaries. The expansion of housing areas within or close to the buffer zone poses a potential threat from outside the property.

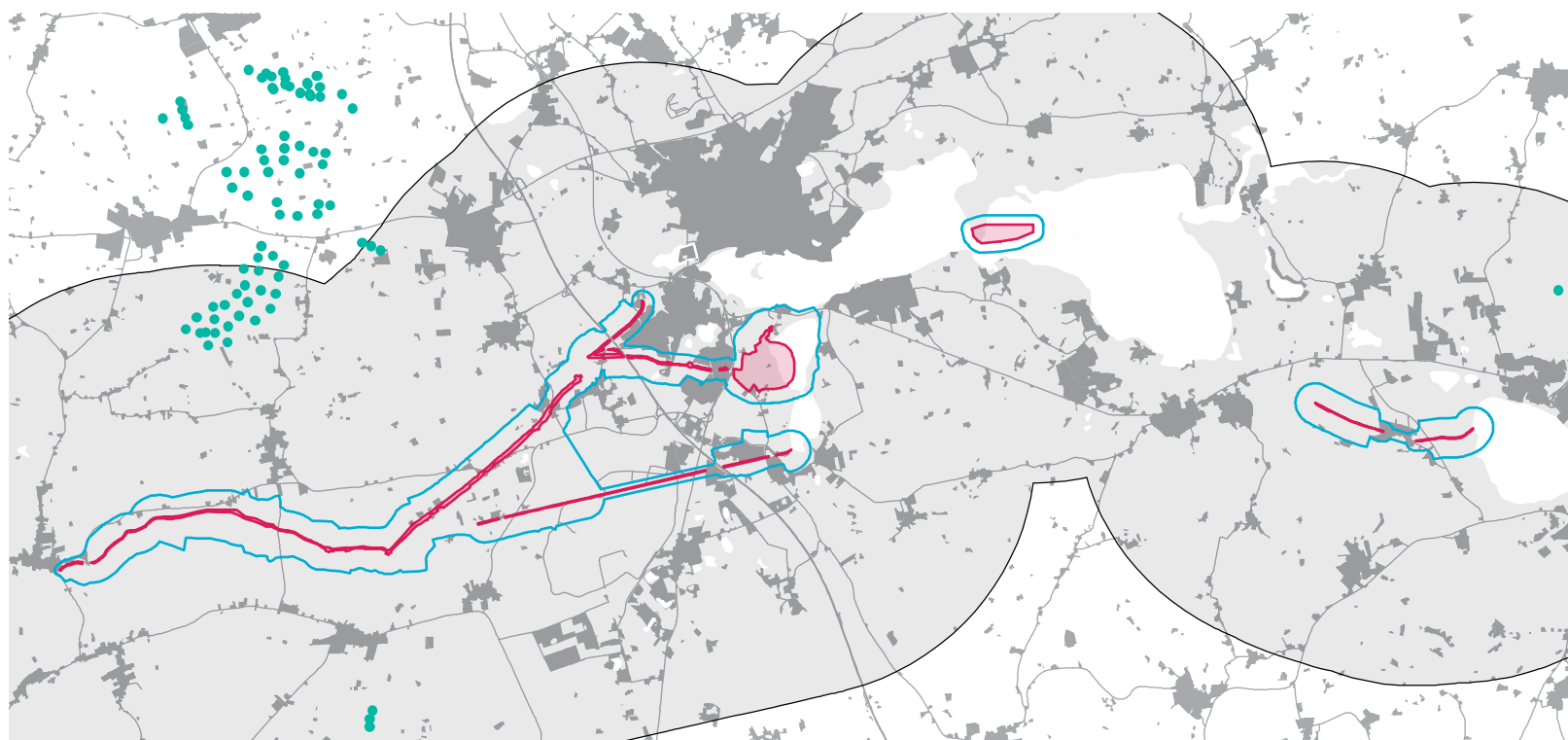
As far as is known, the archaeological fabric has only been damaged by construction in a small number of areas. These areas are not part of the nominated property. No new building is planned in the nominated property, and new building activity has been banned by the relevant authorities.

At present there is one extension to the building zones developed next to the buffer zone in the municipality of Dannewerk and another one in the municipality of Busdorf. According to the impact assessment the envisaged constructions pose no threat to the nominated property. To this end, restrictions to the view and exploration of the monuments are being minimised. The municipalities will forego any future expansion of building development in the monuments' buffer zone. To supplement the legally foreseen regulation of current planning, an overall concept for monument-compatible planning is envisaged within the framework of the Management Plan for Hedeby and the Danevirke. Future extensions in these communities to residential and industrial development capable of adversely affecting the monuments are to be banned in the course of this process by a wide-ranging re-evaluation of the municipalities' land-use plans.

The area of the nominated property is mainly used for tourism and recreational purposes. Within the buffer zone there are numerous agricultural businesses whose economic existence has to be safeguarded for the time being. Their extension poses a potential threat from outside the nominated property. They are potentially able to obscure the visibility of parts of the monuments or impair the visibility of the landscape from parts of the monuments. Schemes for their structural upgrading are only authorised under conditions designed to minimize any possible impairment to the monuments.

WAYS IN WHICH THE AREAS OF THE NOMINATED PROPERTY ARE USED

Use	Area	% of property
Arable land	8.73 ha	4%
Streams	0.72 ha	0.3%
Bastions	11.00 ha	5.1%
Airfield	5.41 ha	2.5%
Plots on transport routes	1.18 ha	0.6%
Buildings and open spaces – residential area	1.03 ha	0.5%
Buildings and open spaces – public purposes	0.32 ha	0.2%
Ditches	0.26 ha	0.1%
Other	3.15 ha	1.5%
Sports	1.14 ha	0.5%
Roads	3.29 ha	1.5%



● Wind energy plants

1 centimeter = 1.500 meters

RENEWABLE ENERGY FACILITIES

▲
SITES OF EXISTING WIND
ENERGY PLANTS WITHIN OR
ADJACENT TO THE WIDER
SETTING OF HEDEBY AND
THE DANEVIRKE

Wind energy plants pose a potential threat to the nominated property from outside the nominated property.

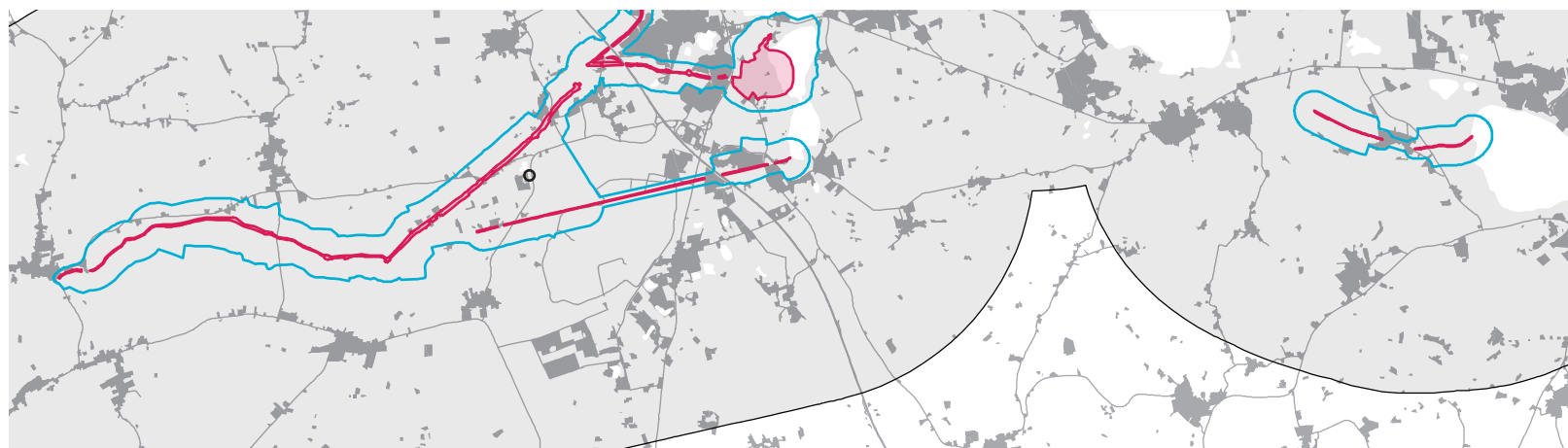
There are currently a few existing wind energy plants within the wider setting of Hedeby and the Danevirke near the villages of Schuby, Fahrdorf, Gammelby and Groß Rheide. These are all old plants which have been erected before qualification areas for wind energy were designated and will thus not be replaced by more modern plants in the future.

All the existing, large wind energy plants are located beyond the buffer zone and the wider setting at a distance of more than 4.5 km from the nominated property. The designation of further land for wind energy at a distance of less than 5 km is not envisaged as they would significantly impair the view of the monuments and their setting. The existing designation of new wind energy priority areas is currently being revised as a sectoral amendment to regional spatial plans. In this context, it has been agreed with the responsible planning authorities that a visibility study shall determine an acceptable, substantiated radius for the wider setting, designed to preserve the proposed OUV of the nominated property (for more information see Chapter 5c buffer zone and protection of the wider setting).

CROP PRODUCTION

Crop production poses a potential threat from outside the nominated property. Inside the buffer zone of Hedeby and the Danevirke most agricultural areas are outside settlement areas and have only little impact on the monuments. An increasing amount of land for grazing within the buffer zone has recently been converted into land for crop production for anaerobic digestion facilities, with possible negative impacts on the monuments. Possible repercussions on the monuments' fabric and the ways visitors can experience them will henceforth be minimised in the intermediate term by creating a protective strip between the nominated property and those areas which are used intensively for agriculture.

Most of the areas along the Danevirke and in and around Hedeby are not on developed land and are in agricultural use. When assessing the risk and negative impact on the monuments, it is necessary to distinguish between land used for arable farming or as meadows, and between intensive and extensive use. In the case of arable farming, the top layers of the soil are still regularly ploughed, damaging the soil archive beneath and gradually levelling out the ramparts and ditches. This kind of impact on the monument now only takes place on less than 9 ha, or almost 4% of the area of the nominated property. Arable farming or intensive use as meadows often also involves fertilisers containing nitrates and phosphates which can damage potential metallic finds. Arable farming in the direct vicinity of archaeological structures also frequently leads to ramparts being damaged, e.g. ploughed over or dug away by agricultural machinery. Over recent years, the abovementioned 9 ha land located on the nominated property has increasingly been subjected to intensive arable farming again. Heavy agricultural machines moving along paths or over the monument continue to damage the fabric of the monument. By contrast, long-term, ideally extensive use as meadowland tends to have a positive effect on the preservation of monuments. Plans for managing the area involve therefore gradually shifting from the intensive agricultural use of the nominated property to extensive sheep grazing. Moreover, a strip of land along the ramparts and ditches is to be extended in the long term as an ecological buffer zone.



○ Gravel mining

1 centimeter = 1.500 meters

QUARRYING

Gravel mining poses a potential threat to the nominated property from outside the nominated property.

▲
LOCATION OF GRAVEL
MINING WITHIN THE WIDER
SETTING OF HEDEBY AND
THE DANEVIRKE

As a result of the Ice Age, the landscape surrounding Hedeby and the Danevirke is rich in raw materials such as sand, gravel and clay. Clay has been extracted for centuries and used, among other things, to make bricks. The damaged northeastern end of the North Wall is on the grounds of a former brickworks. Sand and gravel are mainly extracted for the construction business.

Parts of the landscape surrounding the monuments have been dug down as much as several metres to mine mineral resources, and are identifiable today as water-filled pits, hollows in the terrain and a relief that is now more pronounced than originally. In the wider setting of the monuments gravel-mining is still taking place on a large scale. This development will be halted within the buffer zone and in the adjoining surroundings. New licences for quarrying will no longer be issued in the area of the buffer zone. The old gravel-mining areas are no longer being re-filled, remaining as visible pits testifying to the landscape's recent history.

This mainly affects the area between the railway line and the Federal Highway, and the areas between the Main Wall and the Kovirke. The change in the ground surface relief and the creation of new bodies of water hide the historical relationship between the monuments and the surrounding topography. Some of the extraction zones near the monuments severely impinge upon the impression they make on observers. However, no part of the fabric of the ramparts in the nominated property is today directly threatened by the extraction of raw materials. There is nonetheless still some pressure in terms of changes to the environment, as some old extraction licenses are still valid. In this context, the ecological restoration of heathland was planned in one plot following the extraction of gravel from the area. A new extracting method was proposed

which extracts only a fraction of the gravel, leaving the rest to fill the extracted area. This method is supposed to be able to restore the original surface level. However, the impact assessment identified this method as threat to the nominated property as the topography of the area surrounding the nominated property needs to be authentic if we are to understand its construction in the past. The approval of further steps, however small, is likely to result in a substantial build-up of negative effects caused by gravel extraction in the future. Thus, the proposal was refused. A court procedure is now pending as the developer is not willing to accept the refusal.

MILITARY USE

Military training facilities pose a potential threat to the nominated property from inside and outside the nominated property. The military aerodrome “Jagel” encloses a long stretch of the Kovirke. The earth bank once found here was levelled out as long ago as the 1930s, but the ditch still exists as an archaeological feature. The ongoing airport operations have no negative impact on the remains of the archaeological fabric below ground. Some of the military pilot training of the German Armed Forces will be moved to Jagel airport in the near future. Whether this will have any negative impact on the nominated property is currently difficult to assess.

The current operator, the military district administration, has given its assurance that no measures detrimental to the monuments are to be conducted. In future, monument protection will have to be balanced against national defence interests.

FORESTRY

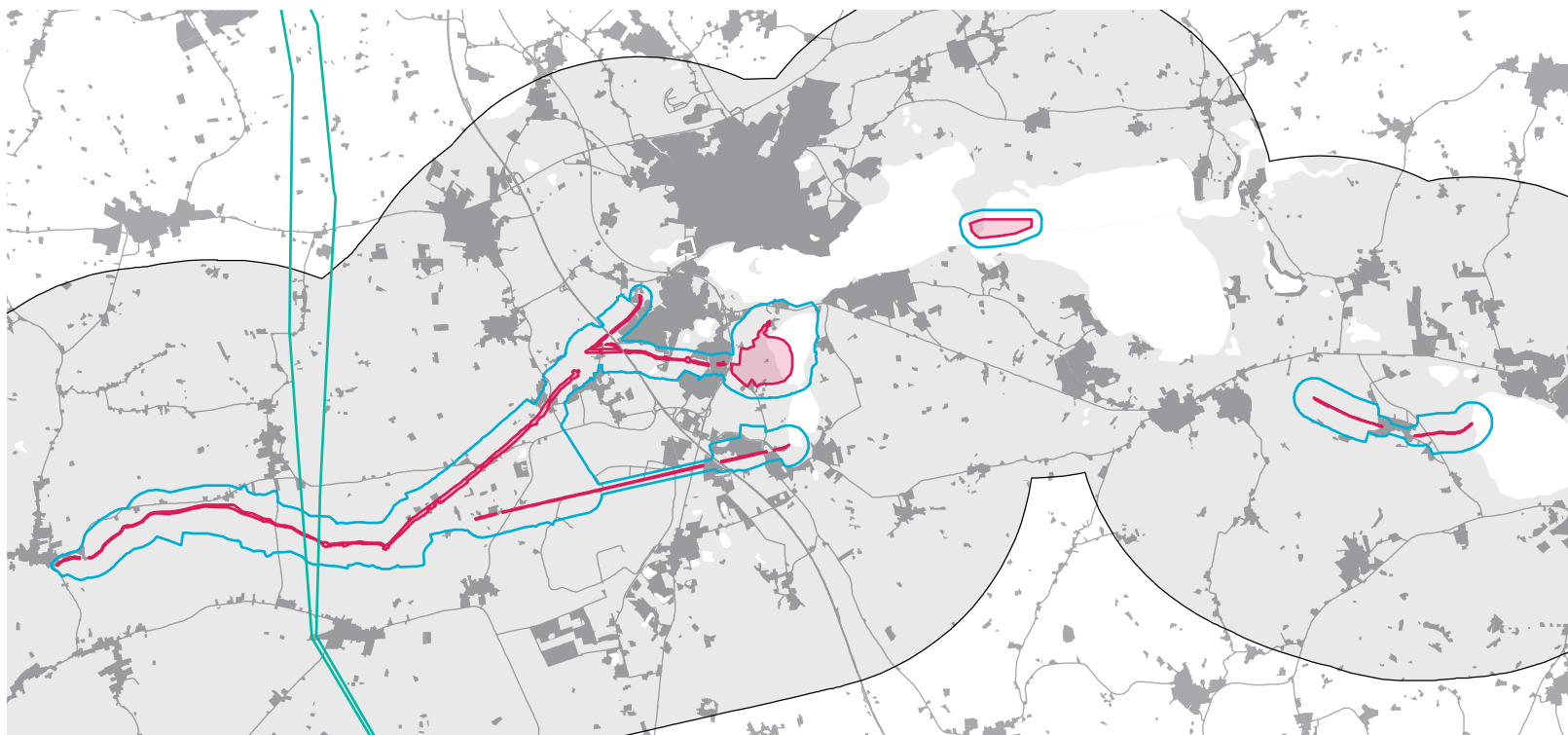
Only few parts of the Main and Connection Walls and the Hill Fort still feature timber forests or coppice. Only a small area of 1.18 ha is used for forestry. As the use of heavy machinery to fell trees can damage archaeological structures, the maintenance plan ensures that wood is only cut using techniques not encroaching the substance of the sites. No further reforestation is planned.

TRANSPORT (ROAD, RAIL, AIR, WATER)

The Schleswig Isthmus, the site of the Danevirke, is today still the narrowest point of the Jutland Peninsula and crossed by the most important north-south transport routes. There are currently no plans to add to or widen existing roads.

There is, however, a direct potential risk to the fabric of the monument from two unpaved agricultural roads along the Main and Crooked Walls, which run directly along the route of the monument in places (see also Chapter 4.a).

A shipping channel in the centre of the Schlei is regularly excavated to allow ships to continue using the shallow waters. It was during clearing work of this kind that the Offshore Work was discovered, and at the same time damaged, in 1925. Other negative effects are generally possible, though as the shipping channel is always only excavated at the same spot, the impact on the remaining historical construction will be minor, as far as is known.



— Power line

1 centimeter = 1.500 meters

HIGH VOLTAGE POWER LINE



PROPOSED POWER LINE
CROSSING THE DANEVIRKE

A new 380kV power line running from north to south is planned for Schleswig-Holstein. It is projected as an overhead power line. The proposed crossing of the nominated property is indicated in the map. According to the planning it either replaces a smaller existing 220kV line or is built parallel to an existing 380kV power line. Both options seem to be those with the smallest effect on the nominated property. An impact assessment is being conducted at the moment. The construction, as indicated in the current planning, seems to pose no threat to the nominated property.

II ENVIRONMENTAL PRESSURES

WATER

The conditions for the preservation of organic material in the ground are still good and measures for regulating the water level seem to pose only a minor threat to material such as timber through drying.

Over the last 200 years, the groundwater level in the region around Hedeby and the Danevirke has been lowered considerably to enable arable farming and the use of meadows in spots which were previously waterlogged. This reduction in the groundwater level poses a risk due to the drying out of organic materials such as wood, which

were used especially in marshlands as subconstructions for the ramparts of the Danevirke. The extent of the risk cannot be precisely defined, but in the last few decades (most recently in 2005), excavations have frequently revealed the remains of historical timber, suggesting that the conditions for preservation are still good and there is only a low potential risk from measures taken to regulate the water level. The surface of the archaeological structures has been damaged in many small areas by erosion. Altogether, the potential risk from these natural factors can be said to be relatively low.

FROST DAMAGE

Frost poses a threat to the nominated property from inside the nominated property. Valdemar's Wall, a brick wall directly visible for a distance of about 80 m, is affected by frost damage. The condition of the wall as well as conservation measures are set out in Chapter 4.a.

ANIMAL ACTIVITIES

Animals pose a potential threat to the nominated property from inside the nominated property. Game passing through leads to pinch point erosion, which occurs almost everywhere to a small extent. Besides this, bioturbation caused by rabbit warrens can also be observed in some places. At the Offshore Work in the Schlei at Reesholm, an examination of the timbers lying under water and in the sediments has led to the first, and to date only, report of a shipworm (*terredo navalis*) infestation.

In the case of frequent or long-term infestations, this species is capable of almost entirely destroying underwater wooden constructions, as has already happened to archaeological ship wrecks in various sections of the waters of the Baltic Sea. Conditions in the brackish waters of the Schlei, however, do not provide favourable living conditions for this mollusc at present and hence the timber structures are not in acute danger. Nevertheless, potential mollusc activity is being monitored.

However, if the salt content rose, even briefly, this would favour an infestation. As a result, the monitoring taking place includes a request for information on the salinity of the waters from the relevant environmental agency (LLUR). There are also plans to set wooden bait which would warn of mollusc activity. In a case of this kind, imaginable emergency measures taken might include covering up the structures.

PLANT COVER

Specific plants pose a threat to the nominated property from inside the nominated property. Plant cover, controlled through regular maintenance, helps stabilise the monuments and increases their resistance to erosion. A risk is only likely in isolated cases such as the reed beds in Hedeby, which are able to damage archaeological find layers. The reed beds are, however, being gradually removed in accordance with the Management Plan. The detailed condition of threatened parts and conservation measures are set out in Chapter 4.a.

The roots of trees and shrubs can disturb walls and the archaeological find layers beneath them. The implementation of the maintenance plan includes encouraging the growth of wild grass or an extensive herb layer grown to stabilise the ramparts. In some places, woods and bushes are tolerated for reasons related to nature protection. Large trees can fall over, ripping out their root ball and causing considerable damage to the fabric of the ramparts. Trees considered at risk of falling are felled. There is an especially high threat from fallen trees on the tumuli of the Hill Fort, though finds within the body of the ramparts are unlikely to be put at risk. Altogether, only a small percentage of Hedeby and the Danevirke has a growth of trees.

III NATURAL DISASTERS AND RISK PREPAREDNESS

Natural disasters do not pose any relevant threat to the monuments.

IV RESPONSIBLE VISITATION AT WORLD HERITAGE SITES

Visitors to the monuments pose a potential threat to the nominated property from inside the nominated property. However, access also has a current positive effect on the awareness and promotion of the monuments.

Some parts of the wall system are accessible for visitors in the form of footpaths with a dirt or grass surface on the structures. These allow visitors to directly experience the ramparts and their great dimensions. They also help improve people's perception of the historical structures and increase visitors' appreciation of their value and their conservation.

Visitors to the monuments concentrate around Viking Museum Hedeby (140,000 visitors in 2015) and the Danevirke Museum (18,000–20,000 visitors in 2015). According to a study from 2010, an increase in visitor numbers of 20–30% at the main attraction is expected as a result of a World Heritage inscription. The number of persons visiting the other parts of the monuments is small at present and is also expected to increase by 20–30%. No figures are available as the monuments are very extensive and freely accessible. Mainly locals use the more remote areas.

The carrying capacity of the monuments is determined by the abrasion along the footpaths. The museums and their open air areas within the nominated property are constructed for ca. 150,000 visitors p.a. in Hedeby and ca. 50,000 visitors p.a. at the Danevirke Museum. In the vicinity of the museums, slight erosive effects can be

monitored on the ramparts when the grass surface of footpaths is eroded away due to visitor impact. Improving the resilience of these tracks will help limit the threat to an acceptable amount in the future. At the moment new types of step construction are being used to reduce the risk of erosion on the monuments. Undesirable uses are restricted and regulated by means of barriers and unambiguous signposts. Visitors and their impact on the monuments are managed within the framework of the Management Plan. An improved visitor signage system is also intended to limit visitor movement to the official paths while adding further information on the route to take, as this is still insufficient in places.

Visitors and residents access part of the ramparts via unpaved footpaths on the structures. This means they can directly explore the full extent of the ramparts. Residents also use them for local recreation. This access is intended to help improve public perception of the historical structures and enhance visitors' understanding of their value and preservation. However, people harm and wear the ramparts in numerous tiny ways which, in combination, can damage their fabric or lead to such damage. Damage is mainly caused by unauthorised uses such as horse riding, cycling (mountain biking) or climbing on the ramparts. The highest visitor numbers are found on the Semicircular Wall and parts of the Connection Wall. Footpaths along the ramparts show signs of erosion at the points which are most frequented. Regular mowing is designed to enable large areas of the ramparts to be accessed, reducing erosion caused by entrenched paths. Erosion caused by soil being washed away on the tracks leading up the ramparts has been reduced by new staircases which have only a minimal impact on the ramparts and also allow plants to grow under the steps. Desire paths and climbing points cause more extreme damage.

V NUMBER OF INHABITANTS WITHIN THE PROPERTY AND THE BUFFER ZONE

NUMBER OF INHABITANTS WITHIN THE PROPERTY AND THE BUFFER ZONE

Population living in nominated area	Estimated population living in buffer zone	Total population	Year
0	1000	1000	2010

5

**Protection and
management of the
property**



5.A OWNERSHIP

Approximately 66% of the nominated property is under public ownership, its owners including the German Federation (Bund), the State (Land) of Schleswig-Holstein, the districts (Kreise), municipalities (Gemeinden) and state foundations and, though on a smaller scale, the church parishes and the Association of the Danish Minority (SSF). The “Stiftung Schleswig-Holsteinische Landesmuseen Schloss Gottdorf”, the foundation of the state museums of Schleswig-Holstein, owns a large part of Hedeby. The district of Schleswig-Flensburg owns large parts of the Danevirke. About 33% is in private ownership. Of the roughly 134 private land owners, none possesses more than 3% of the area.

The “Verein Danewerk/Haithabu e.V.” association serves the purpose of bringing together the interests of mainly public owners of land within the nominated property and the adjacent buffer zone with those of other important stakeholders from the region and from the affected municipalities /communities. In this context, the association supports property purchases. One goal of the Management Plan is to extend the area of the nominated property under public ownership or leasing.

STRUCTURE OF OWNERSHIP

Owner	Area size	% of overall area
Area in public ownership	149 ha	66%
State of Schleswig-Holstein with its authorities and state foundations (Land):	69 ha	
State of Schleswig-Holstein with its authorities and state foundations (Land):	69 ha	
Districts and municipalities (Kreise und Kommunen)	44 ha	
German Federation (Bund)	36 ha	
Area in private ownership	79 ha	34%
Around 134 different owners		< 3% per owner
Overall area of nominated property	228 ha	

5.B PROTECTIVE DESIGNATION

The nominated property is protected by acts and regulations at federal, state and municipal levels. All sections and parts of the nominated property are protected by designations as monuments and by the spatial planning systems at state and municipal levels. Large parts of the nominated property are designated as nature protection areas. At present, almost the entire buffer zone is designated as a landscape protection area and part of it as a protected area for archaeological heritage (Grabungsschutzgebiet). Upon receiving status as a World Heritage Site, the buffer zone and the visual qualities of the property will become a constituent of the listed monuments according to the Monument Preservation Act for the State of Schleswig-Holstein.

The following table lists the relevant protective designation, year of designation and the legislative acts under which the nominated property is protected.

PROTECTIVE DESIGNATION

Protective designation	Year of designation	Legislative acts
Protected area under general legislation	1950-2015	<ul style="list-style-type: none"> • The Nature Conservation Act of Schleswig-Holstein • The Building Act (BauGB) • The Federal Soil Conservation Act (BBodSchG) • Spatial Planning Act (ROG)
Listed Monument	1965-2016	<ul style="list-style-type: none"> • The Monument Preservation Act for the State of Schleswig-Holstein
Protected area	1977-2016	<ul style="list-style-type: none"> • The Monument Preservation Act for the State of Schleswig-Holstein
Nature Protection Area "Hedeby-Danevirke"	1950	<ul style="list-style-type: none"> • Federal Regulation
Nature Protection Area "Reesholm/Schlei"	1976	<ul style="list-style-type: none"> • Federal Regulation
Landscape Protection Area "Hedeby-Danevirke"	1989	<ul style="list-style-type: none"> • District Regulation
Landscape Protection Area "Windeby Noor and Schnaaper Lake"	1998	<ul style="list-style-type: none"> • District Regulation
Landscape Protection Area "Hüttener Foothills"	2000	<ul style="list-style-type: none"> • District Regulation

5.C MEANS OF IMPLEMENTING PROTECTIVE MEASURES

The Federal Republic of Germany ratified the World Heritage Convention (1972) and the Valetta Convention (1992). The State of Schleswig-Holstein has applied the recommendations of both conventions in its state legislation concerning the preservation of monuments. The nominated property and its buffer zone are completely protected through various protective mechanisms, in some cases several at once, in the form of laws and decrees from various domains.

According to the definitions of Article 1 of the Convention Concerning the Protection of the World Cultural and Natural Heritage (1972), The Archaeological Border Landscape of Hedeby and the Danevirke is considered “cultural heritage”, more precisely a site that is the “combined work of nature and man, and areas including archaeological sites which are of outstanding universal value from the historical, aesthetic, ethnological or anthropological point of view.” For that purpose the Monument Preservation Act of Schleswig-Holstein (DSchG SH 2015) and the Nature Conservation Act of Schleswig-Holstein (LNatSchG, last amended 2016) and the Federal Republic of Germany set the most important framework for statutory protection, preservation and management of the site’s natural and cultural features with special attention to the protective needs of World Heritage Sites, in particular the elements of OUV, visual qualities and buffer zones. Therefore, the nominated property is not only protected by a buffer zone which covers its immediate surroundings but also by a wider setting which allows the monuments to be seen and maintains their significant views.

At the federal level, there are three acts which are relevant to the regulation and protection of the nominated property. First, the Building Act (BauGB, last amended 2015) states that the ground must be treated sparingly and respectfully (Section 1a, Art. 2). Second, the Federal Soil Conservation Act (BBodSchG, last amended 2015) emphasizes the function of the ground as an archive of natural and cultural history (Section 2, Art. 2). Third, the Spatial Planning Act (ROG, last amended 2015) regulates regional planning processes in the states and regions. The act provides principles to secure the sustainable preservation and development of cultural landscapes, their characteristic features and their cultural and natural monuments as well as taking the archaeological heritage into consideration in spatial planning.

The all-embracing and key instrument for implementing the statutory protection and sustainable development of the values and integrity of the monuments of Hedeby and the Danevirke, their buffer zone and wider setting is the Management Plan for Hedeby and the Danevirke (2014).

ADMINISTRATIVE STRUCTURE

Schleswig-Holstein, as a partly sovereign state of the Federal Republic of Germany with its different levels of administration, is responsible for the implementation and

Federal Republic of Germany

Federal State of Schleswig-Holstein

Top-level heritage protection authority: Ministry for Justice, Culture and Europe (MJKE)
Top-level nature protection authority: Ministry of Energy, Agriculture, the Environment and Rural Areas (MELUR)

Upper-level heritage protection authority: State Archaeological Department of Schleswig-Holstein (ALSH)
Upper-level nature protection authority: State Department of Agriculture, the Environment and Rural Areas (LLUR)

District of Schleswig-Flensburg
lower-level heritage protection authorities
lower-level nature protection authorities

District of Rendsburg-Eckernförde
lower-level heritage protection authorities
lower-level nature protection authorities

Amt Arensharde Municipality of Hollingstedt Municipality of Ellingstedt	Amt Kropp-Stapelholm Municipality of Groß Rheide Municipality of Klein Rheide	Town of Eckernförde	Amt Schlei-Ostsee Municipality of Windeby Municipality of Fleckeby
Amt Südangeln Municipality of Schaalby	Amt Haddeby Municipality of Fehrdorf Municipality of Busdorf Municipality of Dannewerk Municipality of Selk Municipality of Bergwedel Municipality of Jagel		
Town of Schleswig			



ADMINISTRATIVE STRUCTURE
WITH RESPECT TO HEDEBY
AND THE DANEVIRKE

monitoring of most of the acts. The acts covering spatial planning, nature conservation and monument protection are especially relevant here and all lie completely within the sovereignty of the State of Schleswig-Holstein. The highest level in respect of administration and planning is the ministries. These supreme authorities have subordinate departments charged with providing technical expertise at the upper level of administration. At this level there are the State Archaeological Department of Schleswig-Holstein and the State Department of Agriculture, the Environment and Rural Areas. The lower administrative level is that of the districts, which additionally exercise administrative tasks regarding the municipalities, and the urban municipalities. A municipality is the smallest administrative unit and local authority and represents the lowest political level. The municipalities are in charge of town planning, the most important instrument for controlling building development. The municipalities surrounding Hedeby and the Danevirke are very small and seldom have a population in excess of 1000 inhabitants, the city of Schleswig and the town of Eckernförde being exceptions. As some municipalities are small in size, their administrative duties are taken over by an "Amt"; a local authority.

COMPREHENSIVE
PROTECTIVE MEASURES

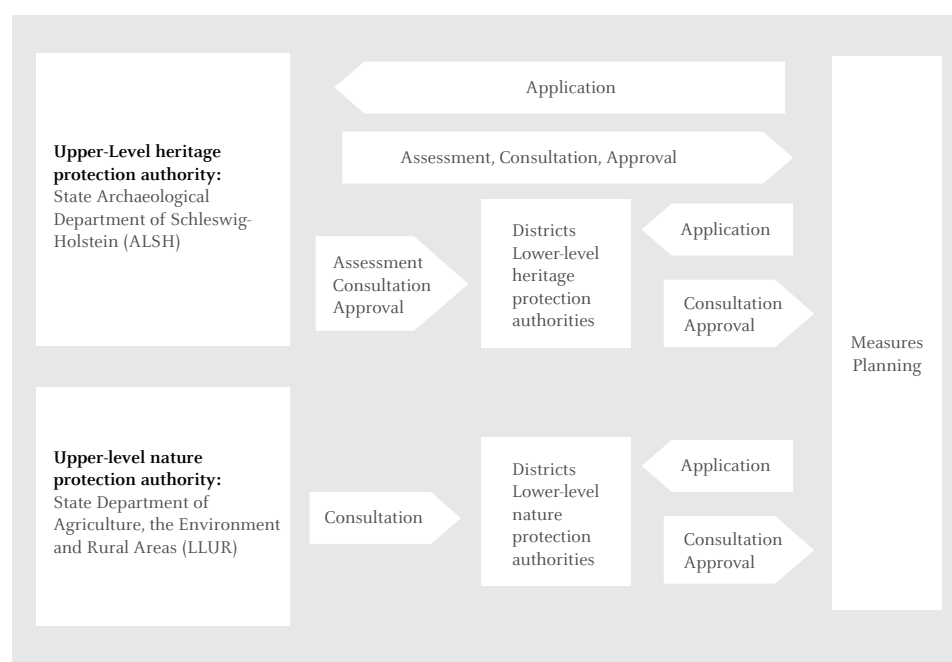
The purpose of the Management Plan for Hedeby and the Danevirke is to implement all available instruments for protecting the sites and to control them to optimum effect. Legal and spatial planning measures, as well as other measures and developments to do with the maintenance and use of the monuments in the areas of tour-

ism, museums and research, are to be coordinated and optimised on this basis. Even though the Management Plan being implemented may seem to have the status of a voluntary agreement between the stakeholders and the parties involved, it constitutes a commitment, in regard to the answerable authorities, institutions and organisations, to act in accordance with the jointly formulated objectives of cooperation. It thus covers all decision-making levels from the national to the local level. In the case of planning and development, the population and relevant protagonists who otherwise have no direct legal or planning-related tasks in the protection of monuments can be actively involved, so there is a far greater than usual number of options available for the protection and conservation of the monuments.

STATUTORY PROTECTION

The observance of the statutory and planning protection is monitored by the Local Monument Protection Services of the separate districts and the State Archaeological Department. The task of nature conservation is the responsibility of the Local Nature Conservation Services of the districts as well as of the State Department of Agriculture, the Environment and Rural Areas (the superior authority for nature conservation). The local services for protecting monuments and nature are thereby responsible

► IMPLEMENTATION OF THE STATUTORY PROTECTION WITH RESPECT TO HEDEBY AND THE DANEVIRKE



for the actual enforcement of the protection. Where measures and strategies are an issue, the local monuments and nature conservation services have to be engaged as a matter of principle. These agencies decide, according to the envisaged impact, whether interference in the area of the protected property and its surroundings (buffer zone and wider setting) is to be approved, is to be approved under certain conditions, or

is to be refused approval. Interference is thus controlled insofar as it cannot threaten the value and integrity of the nominated property.

MONUMENT PRESERVATION

In the Monument Preservation Act for the State of Schleswig-Holstein (DSchG SH, 2015) there is a list of all monuments (Section 8 (1)), which is accessible to the public. Almost one third of all the areas comprising the nominated property are already listed monuments. All the other areas are monuments by definition and therefore also legally protected (Section 8 (1)).

The buffer zone and wider setting are protected as the setting of the monument. The protection afforded to the setting of a monument is not given for a fixed distance from the listed monument. Thus it applies beyond the borders of the buffer zone in particular cases defining the wider setting. A large area within the buffer zone between the Main Wall and the Kovirke is, in addition, indefinitely designated as a protected area for archaeological heritage.

The protection of the nominated property and its buffer zone is attained by imposing conditions for property owners (Section 13 (4)). Should measures be capable of compromising the monuments, their value and setting, approval can be refused or only given under certain conditions (Section 12). Thus modifications to the monuments and related new building are prohibited as far as possible, their use being specifically restricted as defined by the objectives of the archaeological heritage management. Moreover, the Monument Preservation Act incorporates the designation of World Heritage Sites (Section 2, (3)), in particular cultural landscapes, protecting buffer zones, visual qualities and further values.

The act (Section 4, (1)) stipulates that all interests and requirements of the Convention Concerning the Protection of the World Cultural and Natural Heritage of 16 November 1972 must be taken into consideration when undertaking any public planning activities and measures concerning the cultural heritage assets of the state. Furthermore, it states that a World Heritage coordination unit (site management) must be established to manage all activities affecting the respective World Heritage Site. At an early stage of any public planning activities and measures that may affect the interests of the World Heritage Site, the monument protection authorities and the World Heritage coordination unit need to be involved in order to safeguard the use and preservation of the monuments and its surrounding against competing interests.

EXECUTIVE SUMMARY OF THE MONUMENT PRESERVATION ACT

§ 2 DEFINITIONS, FIELD OF APPLICATION

- [1] Monuments, as defined under this law, are cultural monuments and protected areas.
- [2] Cultural monuments are things, groups of things or parts of things from the past which it is in the public interest to study or preserve due to their particular value in terms of history, science, art, technology, urban planning or their effect on the cultural landscape. Cultural monuments may be movable or immovable. Among other things they include heritage buildings, archaeological heritage and green heritage. This law defines those terms thus:
1. Heritage buildings are groups of buildings, parts or the main parts of such groups, or connected buildings.
 2. Archaeological heritage is sites which were or are found in the soil, in moors or in a body of water, and from which archaeological methods can derive knowledge on humankind's past. These include material evidence such as changes and discolouration in the natural fabric of the soil and evidence of plant and animal life, from which archaeological methods can derive knowledge on humankind's past.
 3. Green heritage is areas of gardens and landscapes which fulfil the requirements of Sentence 1. Among other things, green heritage may include gardens, parks and cemeteries, including associated areas of water and woodland. They may also include avenues and lines of trees.
 4. Movable cultural monuments are individual items, collections and other groups of associated movable individual items which are of particular importance to the history and culture of Schleswig-Holstein, are national cultural assets or deserve protection according to international recommendations.

A cultural monument may include its immovable attachments and its inventory.

- [3] Protected areas are World Heritage Sites which are not protected as cultural monuments, as well as heritage areas and protected excavation areas. This law defines the following terms thus:
1. World Heritage Sites are the sites inscribed on the "World Heritage List" in accordance with Article 11, Section 2 of the Convention Concerning the Protection of the World Cultural and Natural Heritage of 16 November 1972 (Federal Law Gazette II 1977, p. 215), as long as they are not only nominated as natural heritage.
 2. Buffer zones are defined areas around a World Heritage Site to protect its

immediate setting, important views and other attributes which determine its value.

3. Heritage areas, historical cultural landscapes, items or groups of items or cultural heritage from a cultural landscape, whose appearance or relationship to one another are of particular importance in terms of history, science, art, technology, urban planning or their effect on the cultural landscape. Heritage areas may also:
 - a) consist in items which do not individually fulfil the requirements of Sentence 2
 - b) be settlement structures, city or town layouts, city- or townscapes, city districts or neighbourhood, settlement centres or settlements,
4. Protected areas for archaeological heritage are delimited areas in which archaeological heritage is known or thought to be found.

§ 4 PUBLIC PLANNING AND PROCEDURES, WORLD HERITAGE

- [1] Urban planning, land stewardship and regional planning shall include matters related to heritage protection and conservation, the requirements of European law and the international and European conventions ratified in Germany on the safeguarding of the tangible cultural heritage. Such matters shall also be taken into account as appropriate during all public planning and procedures.
- [2] The legal entity which is responsible for managing the World Heritage Site shall set up a World Heritage coordination unit and name an official World Heritage representative to deal with matters relating to the World Heritage Site. This legal entity shall compile and maintain integrated concepts for planning and action in the form of management plans. If the legal entity does not fulfil its duty to compile and maintain the management plan, even after a period of notice set by the relevant upper-level heritage protection authorities, the management plan shall instead be compiled or maintained by the relevant upper-level heritage protection authorities.
- [3] The heritage protection authorities and the World Heritage representative are public-interest bodies. They are to be involved in all public planning and measures which might affect the interests of World Heritage, heritage protection and conservation at an early enough stage to allow the matters named in Section 1 and those related to the World Heritage Site, its buffer zones and its important views to be included in considerations along with other concerns, and to ensure that the monuments can be maintained and used, and their surroundings laid out appropriately. World Heritage Sites are to be preserved in their outstanding universal value, including their surroundings.

8 § PROTECTION OF IMMOVABLE CULTURAL MONUMENTS

- [1] Immovable cultural monuments are protected by law. They are to be inscribed on a list (heritage list) and this inscription is to be reported. The protection of the cultural monuments does not depend on their inscription on the heritage list. The heritage list is not conclusive. It is to be regularly checked, and additions and corrections made. The upper-level heritage protection authorities shall maintain the heritage lists for their own areas of responsibility.

[...] ...

§ 12 MEASURES REQUIRING PERMISSION

- [1] The permission of the lower-level heritage protection authorities is required for
1. repairs or alterations to a cultural monument, or its destruction,
 2. moving to another place a cultural monument which is of importance to local history or the cultural landscape,
 3. changing the surroundings of an immovable cultural monument if this is likely to significantly impinge upon the impression it leaves,
- [2] The permission of the upper-level heritage protection authorities is required for
1. all measures in heritage areas and their surroundings which are likely to significantly impinge upon the heritage areas; this shall not apply to the measures described in paragraph 1 of this section,
 2. all measures in protected excavation areas and World Heritage Sites which are likely to impinge upon or endanger them,
 3. infringements upon the fabric of a heritage site for the purposes of research,
 4. the use of archaeological methods designed to find cultural heritage, in places which are known to contain cultural heritage or which circumstances suggest might do so,
 5. the use of measuring and searching devices which are designed to find cultural monuments without authorisation to do so according to other legal regulations,
 6. investigations, excavations or dives in places which are known to contain cultural monuments or which circumstances suggest might do so, without authorisation to do so according to other legal regulations, or
 7. taking possession, in full or in part, of a cultural monument which has come to light by means of an excavation or dive.

§ 13 PROCEDURE TO FOLLOW FOR MEASURES REQUIRING PERMISSION

[...] ...

- [2] Permission may be denied if this is necessary in order to protect the monuments. It shall be granted if there are no reasons to deny it related to heritage protection and if the site's status as a World Heritage Site is not put at risk, or if an overriding public interest necessitates the measure. Public and private concerns shall be weighed up amongst and against one another.

[...] ...

- [4] Permission may be granted with conditions or requirements attached.

[...] ...

BUFFER ZONE AND PROTECTION OF THE WIDER SETTING

In accordance with articles 103-107 of the Operational Guidelines for the Implementation of the World Heritage Convention (last amended 2015) a buffer zone surrounding the immediate and wider setting of the nominated property was established.

The buffer zone for the immediate setting is designed to preserve:

- the topography, consisting of the authentic landscape relief and hydrology, particularly by refraining from quarrying or backfill (gravel mining, pond construction, or similar) or the construction of new, not historically documented bodies of water as well as the drainage of bodies of water,
- significant views and open spaces in the buffer zone around the Danevirke, kept free from new planting of forest and the agricultural cultivation of quick-growing woody plants,
- the views and open spaces in the buffer zone around the Danevirke, kept free from new building areas and business parks,
- the open spaces free of new building development and facilities: these are all the greenfield sites within the buffer zone which are located directly at the monuments or which are visible from the walls or from which a good view is afforded of large areas of the monuments,

- and the built-on areas of the buffer zone, kept free from measures clearly exceeding the height of the surrounding development or those interfering with the overall picture.

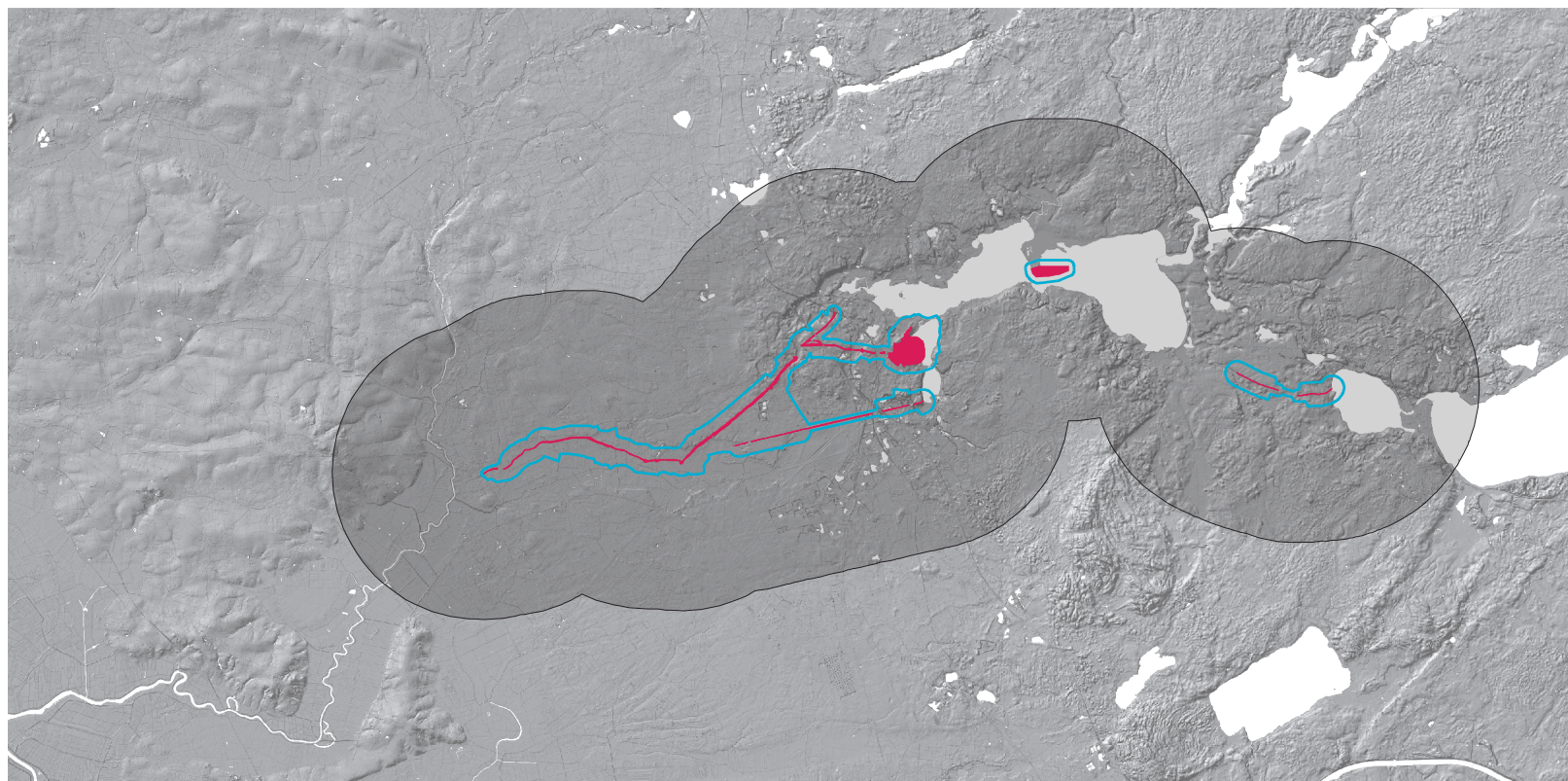
Though the boundaries of the buffer zone were individually adapted in line with local circumstances, the following principles still apply in general:

- The buffer zone fully encloses the ramparts of Hedeby and the Danevirke. Its boundaries are based on the site's central point.
- In the outer area (open, unbuilt areas), which is largely used for agriculture, they follow the borders of the landscape protection area, but fully enclose the nominated property up to a distance of at least 400 m.
- In the built areas within the site, they follow the borders of the current building developments and those of the landscape protection area, but fully enclose the monuments up to a distance of at least 200 m.

The designation of the wider setting serves the protection of important views which convey the significant historic topography of this cultural landscape. The main goal is to keep the area free from facilities and buildings that are visible from afar, such as wind turbines. Currently, the protection of the wider setting has a radius of 5 kilometres.

In view of the upcoming allocation of sites most suitable for wind energy plants in the regional plans, the State Archaeological Department is currently carrying out (Dec. 2016) an in-depth analysis and justification of the 5 km radius of the wider setting. This analysis will focus on the identification of important viewsheds from the site into the landscape as well as potential visual impairment in the border area of the wider setting. The goal of this analysis is to establish a better understanding of the visual qualities of the nominated property and to strengthen the wider setting. The allocation of sites for wind energy plants that may impair the OUV of the nominated property will be ruled out within the planning process.

The abovementioned protective mechanisms (see Monument Preservation) also apply for the designated buffer zone and the wider setting. Here, as one aspect of protecting the setting of monuments, measures capable of considerably affecting the impact of the monuments need to be examined case by case. Whether and to what degree such proposals can negatively affect the monuments and their surroundings is usually examined and appraised by the heritage protection authorities including the State Archaeological Department (ALSH) managing the site. Reviews are carried out on the



AREA OF NOMINATED PROPERTY, BUFFER ZONE AND WIDER SETTING

basis of the specifications of the Management Plan and the planned view analysis. The strategy of the Management Plan preventively banks on activating and involving the property owners, the residents and the users more strongly, to consolidate their acceptance of and their good will about the monuments' conservation.

NATURE CONSERVATION

Alterations to nature protection areas, landscape protection areas and other areas protected by law must be approved by the district nature conservation service. Measures in the relevant nature protection areas of the nominated property are appraised on the basis of the specific conservation goals. The goals for protecting the landscape and the biotopes largely coincide with those of monument preservation since they prohibit alterations and modifications running counter to the protection of the value of the archaeological substance. Furthermore, the responsible nature conservation authorities are legally obligated only to carry out measures in areas which are subject both to nature protection and monument protection in consultation with the heritage protection authorities. The management and maintenance of the nominated property are coordinated as part of the Management Plan for the monuments, with the objective of nature conservation.

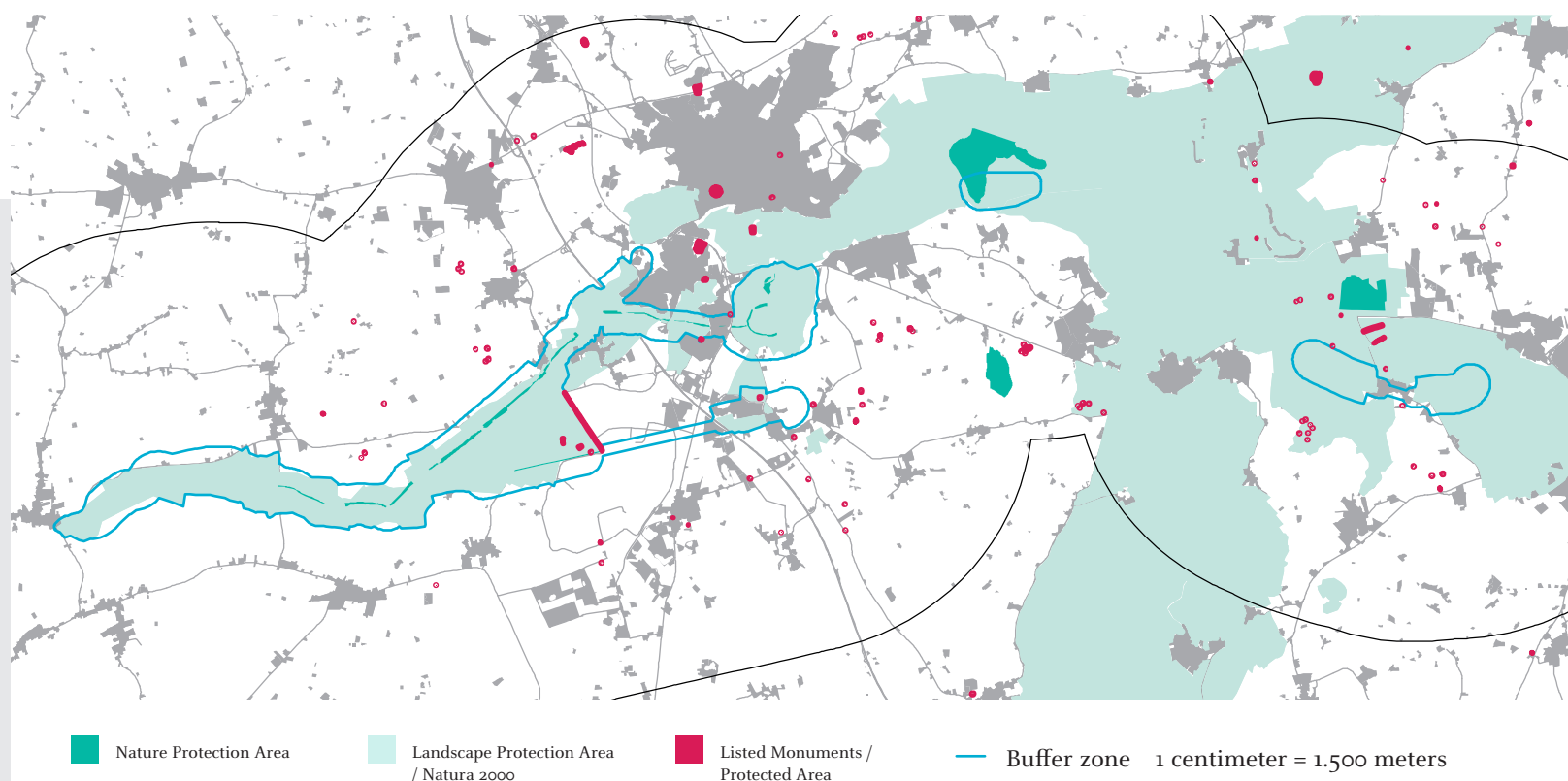
Schleswig-Holstein's Nature Conservation Act (LNatSchG, last amended 2016) and the Nature Conservation Act of the Federal Republic of Germany (BNatSchG, last amended 2016) are the most important acts for the conservation of nature and the landscape

in Schleswig-Holstein. Besides the general objectives of sustainability in respect of natural assets and habitats, one general principle is also the conservation of cultural assets and cultural landscapes (BNatSchG, last amended 2016):

1 § OBJECTIVES AND POLICIES OF NATURE CONSERVATION AND LANDSCAPE PRESERVATION

- [1] On grounds of their own intrinsic value and as people's basis of life, including responsibility for future generations, nature and the landscape in populated and uninhabited areas are to be protected such that (...)
 - 1. the biological diversity, (...)
 - ...
 - 3. diversity, uniqueness and beauty as well as the recreational value of nature and the landscape/countryside are ensured on a permanent basis. The protection also includes the maintenance, the development and, if required, the restoration of nature and the landscape (general objective of nature conservation and preservation of the landscape).
- [...] ...
- [4] For a permanent conservation of the diversity, character and beauty as well as the recreational value of nature and the landscape
 - 1. natural landscapes and historical cultural landscapes and landscapes, together with their cultural, architectural and archaeological monuments, are to be protected in particular from deformation, urban sprawl and other impairments. (...)
- [...] ...

Nature protection areas, landscape protection areas and Natura 2000 areas enjoy additional protection by law or by regulations. Here, all activities leading to destruction or impairment are prohibited, and uses are severely restricted in part. Conservation goals, conditions and restrictions are administered in the underlying regulations or in the act itself. While interventions are possible, they are only given approval where they are inevitable and where they can be counterbalanced. Parts of the nominated property are designated as the nature protection areas "Hedeby-Danevirke" and "Reesholm / Schlei". Other areas in the buffer zone are protected as Natura 2000 areas, namely "Busdorf Valley", "Lime Spring Fen near Klein Rheide" and "Schlei". Nearly all the areas are part of the landscape protection areas "Hedeby-Danevirke", "Windeby Noor and Schnaaper Lakes" and "Hüttener Foothills". All in all, the nom-



PROTECTED AREAS OF HED- EBY AND THE DANEVIRKE

inated property is thus almost completely protected and the buffer zone is protected on a large scale by various nature conservation regimes. The Nature Conservation Act of the State of Schleswig-Holstein complements specific regulations in the Nature Conservation Act of the Federal Republic of Germany.

PROTECTIVE EFFECTS

Protected areas for archaeological heritage, listed monuments and nature protection areas, as well as areas of the interconnected Natura 2000 network, are subject to the strictest of conditions. Within the nature protection areas, for instance, it is largely forbidden to build constructions, to leave the marked paths and roads on foot or otherwise, to affix signs or to bring about change in any other way. The restrictions in landscape conservation areas and the protection afforded to the setting offer opportunities for regional development but in doing so they put constraints on buildings and other measures when it comes to protecting the overall picture of the landscape, the spatial references of the monuments and the aesthetic value of the whole ensemble. The accordingly graduated legal protection facilitates prohibitions, authorisations and measures, which are adapted to the on-site requirements of the monuments and their surroundings. Thus it is able to protect the value and the character of the nominated property in a suitable manner whilst allowing the necessary room for developments at the same time.

SPONSORSHIP

The measures for protecting nature and the landscape are sponsored financially by the State of Schleswig-Holstein. In addition, there are the public and private trusts which likewise support nature protection activities. Subsidies are presently being applied to the maintenance of the plant cover and in land-use management at Hedeby and the Danevirke. The goal is to change land use from privately owned land by acquiring or exchanging land in the area of the nominated property or the buffer zone.

CONSERVATION

All areas of the nominated property are being attended to by means of a detailed maintenance plan within the Management Plan for Hedeby and the Danevirke. This is coordinated between the various property owners and users and controls the condition of the monuments' substance and the plant cover through regular maintenance of the areas of the nominated property and suitable special measures. Thus provision is made for the optimal conservation of the monuments and their value as well as of the valuable habitats. The maintenance measures are primarily carried out by a non-profit organisation which is financed by contributions from the property owners and public monies.

SPATIAL PLANNING

In the Federal Republic of Germany, the protection of the archaeological heritage has to be taken into consideration in spatial planning in compliance with the Spatial Planning Act (ROG, last amended 2015). According to this act, as a matter of principle, the interests of archaeological heritage management or monument preservation within the sphere of spatial planning have to be treated at the same level as the interests of, for example, nature protection and landscape conservation. The act's principal purpose is to secure sustainable regional development, that is, the careful and preventive use of space (spatial assets) for present and future generations, guaranteeing them opportunities to develop chances for development. The ROG (Section 2, (2), 5.) provides guidelines for the preservation of cultural landscapes:

5. Cultural landscapes shall be preserved and developed. The characteristic features and the cultural and natural monuments of historically evolved cultural landscapes shall be preserved. The various landscape types and use of the sub-regions shall be designed and developed with the aim of achieving a harmonious co-existence, overcoming structural problems, and creating new economic and cultural concepts. Suitable spatial conditions shall be established to allow agriculture and silviculture to contribute to the protection of the natural resources in rural areas and to conserve and shape nature and the landscape.

The nominated property and its surroundings are affected by planning at the federal, state and municipal levels. At the level of the federal government, guidelines are given in the Federal Spatial Planning Programme.

PLANNING AT STATE LEVEL

The interests of the nominated property must be respected when the basic principles of spatial planning are being compiled. If the inspection of the cultural heritage does not take place, or if these interests are found not to have been taken into consideration, then the State Archaeological Department, the superior authority for monuments, has the option of correcting the situation. The municipalities' planning department is obligated to act in pursuance of the planning specifications and principles at the federal state level.

PLANNING AT MUNICIPAL LEVEL

As public-interest bodies, the upper-level authorities for heritage protection and nature conservation have to approve the municipalities' land-use plans. Should measures be at risk of compromising the monuments and their impact, the approval can be refused or only given under certain conditions.

5.D EXISTING PLANS RELATED TO THE MUNICIPALITY AND REGION IN WHICH THE PROPOSED COMPONENT PARTS ARE LOCATED

MAINTENANCE PLAN

The Maintenance Plan for Hedeby and the Danevirke from 2008 was amended in 2010 and is integrated in the Management Plan (see Chapter 5.e.). The responsible institution is the State Archaeological Department (ALSH).

TOURISM DEVELOPMENT PLAN

A regional tourism plan was designed in 2009. A specific plan for Hedeby and the Danevirke is integrated in the Management Plan. The tourism development plan is further specified in Chapter 5.i. The institution responsible for this is Ostseefjord Schlei GmbH.

REGIONAL DEVELOPMENT PLAN FOR SCHLESWIG- HOLSTEIN

The Regional Development Plan for Schleswig-Holstein (LEP, passed 6 July, 2010) formulates general outlines and objectives for spatial planning. The most important policy vis-à-vis the protection of cultural and natural assets is the preservation of the diversity, unique character and beauty of the landscapes, the perpetuation of the ecosystem, and the protection and qualitative development of open spaces. Thus, it is consistent with the protection, conservation and management of the nominated property. The responsible Institution is the state planning division in the State Chancellery of Schleswig-Holstein.

**EXECUTIVE
SUMMARY REGIONAL
DEVELOPMENT PLAN
FOR SCHLESWIG-
HOLSTEIN (LEP 2010)**

Outside the management planning concerned specifically with the Hedeby and the Danevirke monuments, spatial planning policy also makes provision for the monuments in the Regional Plan for the Region of Schleswig. The superordinate Regional Planning Programme for Schleswig-Holstein and its successor, the Regional Development Plan for Schleswig-Holstein (passed 6 July, 2010) formulate general outlines and objectives of spatial planning. This is designed to coordinate the competing claims among interested parties, resolve conflicts and make provisions for retaining the individual functions and uses of the space. All relevant ecological, economic and social aspects are to be taken into consideration.

The most important policy in Schleswig-Holstein's Regional Development Plan vis-à-vis the protection of cultural and natural assets is the preservation of the diversity, unique character and beauty of the landscapes, the perpetuation of the ecosystem, and the protection and qualitative development of open spaces. The area surrounding Hedeby and the Danevirke is, in state planning terms, a structurally weak rural area which is partly in the environs (hinterland) of the middle-order centres of Schleswig and Eckernförde. These areas are specifically assisted to strengthen them as independent and sustainable living environments on par with the others. The remaining municipalities without any function as centres are limited in their structural development by the plan. The use of existing development potential and regional initiatives is being facilitated in particular. Part of the area is designated as being particularly significant for tourism and recreation. Here, the emphasis is on the conservation of open spaces in the landscape and making the area an attractive tourist destination. Fundamentally, these objectives support the conservation of the monuments and their surroundings as well as the objectives of the Management Plan.

**REGIONAL PLANS FOR
AREAS III AND V**

The area of Hedeby and the Danevirke is controlled by two regional plans (amended in 2000 for Area III and in 2002 for Area V). Regional Plan V is responsible for the District of Schleswig-Flensburg and embraces the whole of the nominated property and its buffer zone except for the East Wall sector. This lies in the District of Rendsburg-Eckernförde and for this reason is in Planning Area III. Regional Plan V designates the western part of the Danevirke within the regional open space structure as an element worthy of protection that shapes the historical cultural landscape. The monument additionally counts as a recreation area close to built-up areas. In both regional plans there are priority areas designated for nature and the environment within the buffer zone. Within the framework of the new designation of land for wind energy, an intervening distance of 3–5 km is to be kept clear in the area around Hedeby and the Danevirke. Thus both plans are consistent with the protection, conservation and management of the property. The responsible institution is the Schleswig-Holstein Ministry of the Interior.

Currently, the state of Schleswig-Holstein is revising all regional plans including those which are relevant to the nominated property. Most importantly, they will

contain the allocation of new areas suitable for wind power plants in order to meet sustainable energy goals. As the site manager of the nominated property, the State Archaeological Department of Schleswig Holstein is closely involved in this planning and drafting process. As stated above (see Buffer zone and protection of the wider setting), the planning and building of facilities that endanger the proposed OUV of the nominated property will not be approved. The projected date of publication of the regional plans is 2018/2019.

EXECUTIVE SUMMARY OF REGIONAL PLANS FOR AREAS III AND V

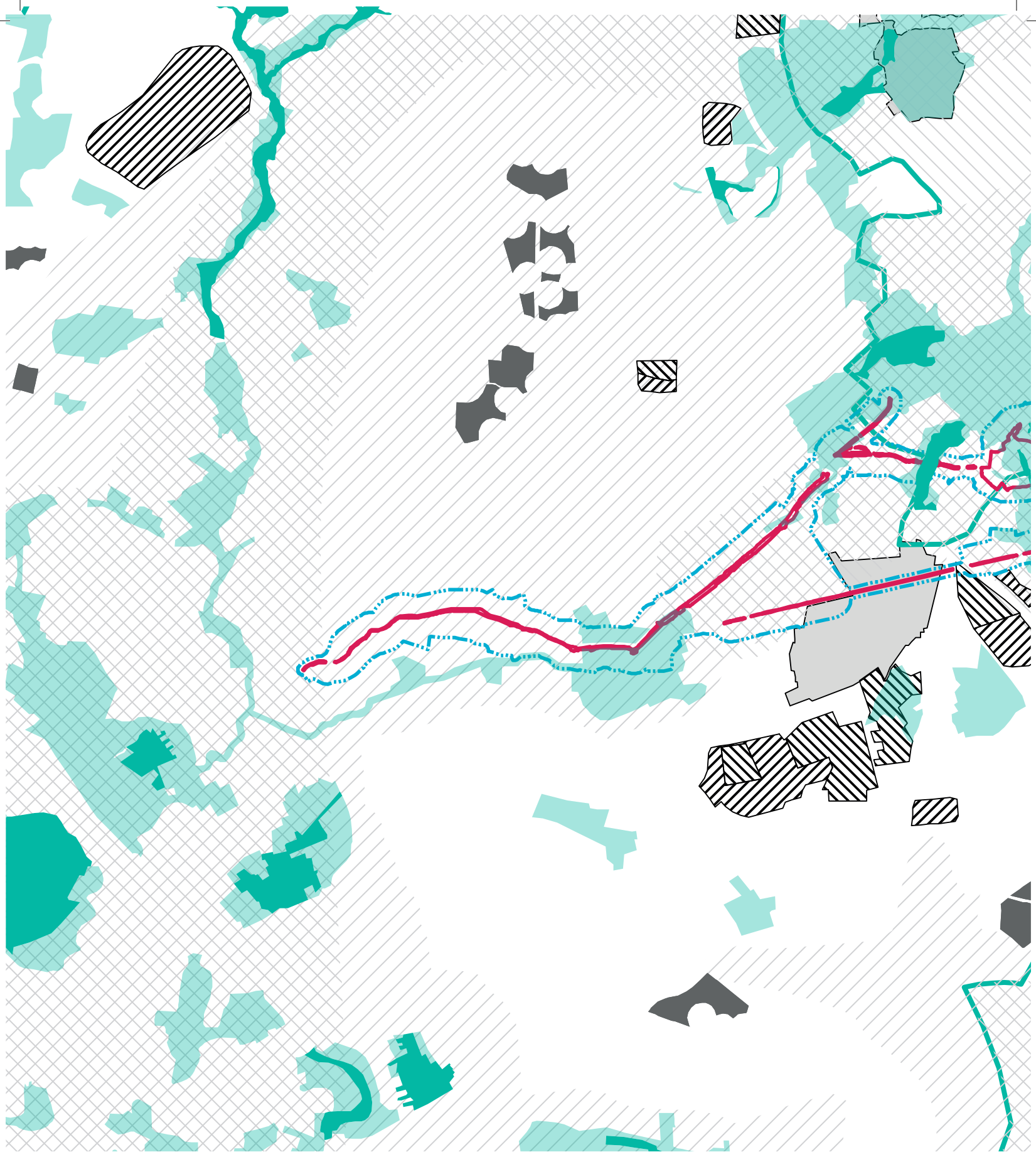
Priority areas for nature conservation are designated within the nominated property, the buffer zone and the wider setting. Priority areas are those in which nature conservation takes priority over other interests when it comes to the use of space in planning processes. Areas which qualify for nature conservation are those where the interests of nature conservation are of great weight when balanced against other interests in planning processes. Land use plans and measures can only be conducted as long as they do not compromise nature and the landscape fundamentally. Nature conservation measures, especially those which are able to support the combination of different biotopes, are to be supported in these areas.

Areas which qualify for wind energy are those where wind energy is of particular relevance and new wind energy facilities may be installed. Within the framework of the new designation of land for wind energy, an intervening distance of 4.5-5 km is to be kept clear in the area around Hedeby and the Danevirke as extraordinary monuments within the landscape. No wind energy facilities are to be planned or built outside the designated qualification areas.

The property is situated within development areas and areas which qualify for tourism. The latter are zones where tourism is of great relevance. Here, an effort is made to promote the conservation and development of the prerequisites for tourism and recreation, especially the diverse landscape and typical scenery. Both goals are important for the protection of the setting of Hedeby and the Danevirke.

South of the monuments are areas which qualify for near-surface mineral extraction: potential mineral extraction is of great relevance, though archaeological heritage management interests are recognised. Small parts of priority areas for near-surface mineral extraction are found within the buffer zone. During planning, these areas take priority over other land use interests.

Parts of the Danevirke are situated within a military area, the Jagel airfield. Even though national defence interests have priority over other land-use interests, the military administration has agreed to avoid any planning which might cause harm to the monuments.



▲
PLANNING ISSUES IN
CURRENT REGIONAL PLANS
(2016) AROUND HEDEBY AND
THE DANEVIRKE



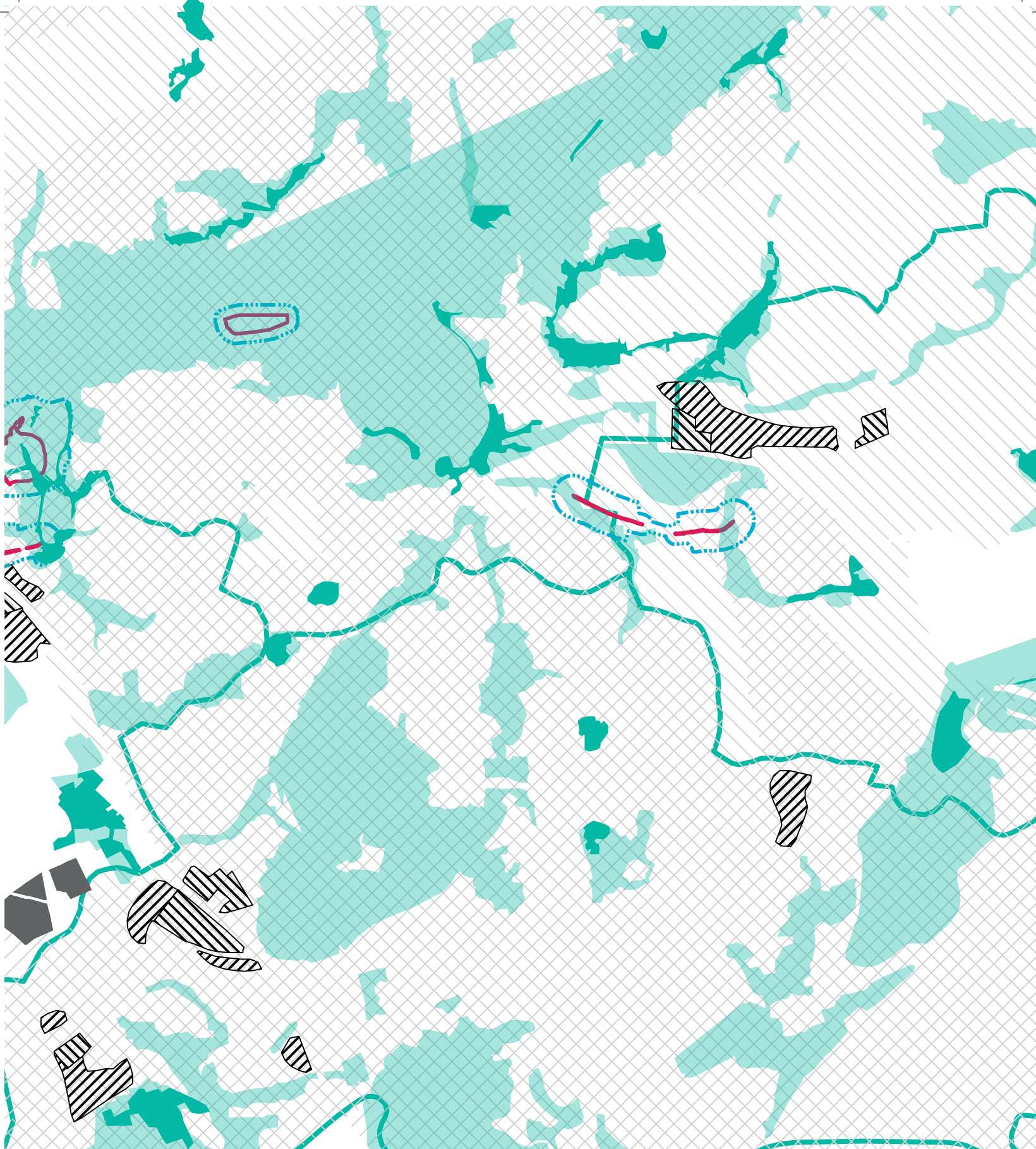
Qualification areas for near-surface natural resources



Priority areas for near-surface natural resources



Military areas



Qualification areas for wind energy



Priority Areas for nature conservation



Qualification areas for tourism



Qualification areas for nature conservation



Development areas for tourism



Nature parks

5.E PROPERTY MANAGEMENT PLAN OR OTHER MANAGEMENT SYSTEM

The Site Management Plan for Hedeby and the Danevirke is stipulated jointly by local, regional and federal protagonists and interest groups as a guideline for action geared to the long term. It is determined by all relevant international standards applying to monument conservation as well as the charters and conventions connected with the management of the archaeological heritage.

The Management Plan for Hedeby and the Danevirke encompasses the nominated property including the core zone, the buffer zone and, in part, the statutory wider setting protection which extends beyond the site itself. For all three zones, operational objectives have been agreed upon and recommendations for planning and actions given which can be specified and supplemented by means of a catalogue of measures.

Moreover, the Management Plan provides all necessary basic information about the history, inventory and value of the monuments for planning and other measures. Its field of action extends from statutory tasks such as monument preservation and nature conservation and planning, to development concepts for municipalities and maintenance measures, or important forms of utilisation such as tourism, interpretation and research.

The objectives and the principles of the Management Plan link the preservation of the physical and intangible values of the archaeological monuments and their mutual relationship with their setting with their ecological, social and economic development. The emphasis is on integrating the monuments into the modern social environment and into all spheres impacting directly or indirectly upon value retention. In terms of the strategic objectives of the UNESCO World Heritage Committee concerning effective management, participation through communication, and strengthening the role of local communities, a very far-ranging course of action for long-term conservation is being set up. Besides passive protection through boundaries, laws and regulations, it envisages active preservation through plans and strategies, and through raising acceptance and awareness of the monuments and their value. Hedeby and the Danevirke are to have a role as a driving force for development in the region, thus becoming more strongly anchored socially as an important regional resource.

Preceding the Management Plan is a strategy based on the principles of heritage management. The strategy guides all further strategic and functional decisions, in order to realise the ideas described in a vision. The strategy comprises the following long-term objectives and basic principles:

**INTEGRATIVE
APPROACH:**

Hedeby and the Danevirke are perceived and conserved as an integral historical complex and as part of the UNESCO World Heritage nomination « The Archaeological Border Landscape of Hedeby and the Danevirke ».

VALUE RETENTION:

All features embracing the contribution to the Outstanding Universal Value of The Archaeological Border Landscape of Hedeby and the Danevirke remain in situ in their entirety. Features which provide further historical context and values of national, regional and local importance are also conserved. These include form and substance, spatial reference and spatial impact and perceptibility.

SUSTAINABILITY:

Hedeby and the Danevirke are integrated into their cultural, social, ecological and economic settings and are, by means of their sustainable use, a driving force for development and an improved quality of life in the region.

PARTICIPATION:

The population is aware of the significance of Hedeby and the Danevirke and actively supports the safeguarding and further development of this site.

USE:

The prime use of the monuments is as sources of historical material and subjects of scientific research. Furthermore, distinct concepts are created within the scope of the Management Plan for conveying their significance and usage as well as giving the monuments public exposure through tourism. Development in terms of cultural and educational activities and tourism plays a significant role in the long-term conservation of the monuments. It is today's most important form of economic use and creates direct economic benefits for the surrounding areas while at the same time constituting a potential threat to the monuments. The monuments' development in terms of culture, tourism and museology endorses the educational mandate of the UNESCO in a special way and help to sensitise visitors and residents to the site's cultural and natural heritage.

BASIC PRINCIPLES:

- Guided by the terms of reference of the UNESCO World Heritage Convention
- Preventative protection by safeguarding the substance, preventing the monuments' values from being compromised and by long-term strategies, plans and measures which are monument-friendly
- Weighing up decisions on grounds of the best information available
- Best possible use of existing laws, responsibilities and other instruments

- Participation of the population, relevant institutions and organisations and other important interest groups
- Sustainable use of the monuments for education, nature conservation and recreation and of the buffer zone for activities and developments which help retain the monuments' value
- Raising awareness and acceptance with respect to the monuments as well as cultural and natural heritage in general through information and education

MANAGEMENT:

The Management Plan creates an effective management structure in order to achieve the long-term and operational objectives. The basis for this is good communication and the participation of all the important interest groups in the region with the help of specified structures, rules and instruments.

The objectives and measures agreed upon in the Management Plan are implemented by the responsible local actors. The Danevirke/Hedeby Association and its working groups serve as a legally constituted participating platform for the region in the development, updating, implementation and monitoring of the Management Plan. In addition, it operatively assumes the trustee obligations of the property owners in matters of maintenance and areal management. Communication with UNESCO's World Heritage Centre and its partners and the administrative tasks of monument management are carried out via the Site Management Office, which is domiciled in Schleswig-Holstein's State Archaeological Department.

Long-term and secure financing for the implementation of the Management Plan is guaranteed through the Government of the State of Schleswig-Holstein and its representative the Ministry of Justice, Cultural and European Affairs, as well as through the local interest groups based on a stipulated distribution key.

5.F SOURCES AND LEVELS OF FINANCE

This overview features only those monies which can be directly assigned to the regular management of the Hedeby and the Danevirke monuments and their interpretation to the public. Pro rata work by the participating institutions must remain unconsidered. Furthermore, a substantial part of the work (especially maintenance and monitoring) is carried out in an honorary capacity and through a non-profit organisation. The financial sources available are adequate for the management of the nominated property.

The financing of the maintenance and management of Hedeby and the Danevirke is shared by the agencies responsible for public tasks within the scope of the Management Plan, as well by the property owners.

Special projects play an important role in the implementation of elaborate proposals concerning the monuments. The support programmes of the State of Schleswig-Holstein, the Federal Government of Germany and of the EU, as well as local cultural trusts, are of special significance for financing such projects.

TABLE 5.3 FINANCIAL SOURCES FOR MANAGEMENT, PROTECTION AND MAINTENANCE OF HEDEBY AND THE DANEVIRKE IN 2016.

Institution	Sum in euros
State Archaeological Department ALSH	100.000
Viking Museum Hedeby (Wikinger Museum Haithabu)	270.530
Sydslesvigsk Forening SSF (Danevirke Museum)	230.000
Ministry for Energy Transition, Agriculture, Nature and the Environment MELUR	23.000
District Schleswig-Flensburg	20.000
Amt Haddeby	5.000

5.G SOURCES OF EXPERTISE AND TRAINING IN CONSERVATION AND MANAGEMENT TECHNIQUES

In terms of technical training, the staff members of the institutions which undertake important tasks in the protection, conservation and mediation of the monuments of Hedeby and the Danevirke are all well to very well trained. The state of knowledge about the monuments and their maintenance has grown over the decades. The maintenance of the monuments is carried out by a non-profitmaking company with one foreman and a group of several workers.

At the upper-level authorities for heritage protection and nature conservation, Schleswig-Holstein's State Archaeological Department (ALSH) and the State Department for Agriculture, Environment and Rural Areas (LLUR), academically trained scholars and specialists of international renown are in charge of professional issues. Numerous academic works about the monuments have been produced by these institutions. For planning tasks, additional experts with a university education in the planning sector are available. The lower public authorities (local services) with responsibility for monuments and nature conservation are part of the district administration, and their qualifications are of a broader disposition. The personnel employed by the municipal agencies are also qualified for administrative tasks by way of corresponding technical training or university studies or have gained the required proficiency through advanced training. Likewise, the staff employed by the lower-level heritage protection authorities have also acquired qualifications for monument preservation within the framework of advanced training and years of experience. The experts who work in the Local Nature Conservation Service have been specifically trained for these tasks at degree level.

The heads of the museums are academically trained, experienced experts working in the sectors of archaeology (Danevirke Museum) and education theory (Viking Museum Hedeby) who have extensive knowledge about the monuments and the best way to communicate this knowledge. Viking Museum Hedeby is part of the State Archaeological Museum, an arrangement which fosters intensive academic exchange. Additional academic staff or staff whose task it is to impart knowledge are employed in the museum as freelance visitor guides or have temporary jobs on projects. All the guides are trained at the Viking Museum Hedeby and participate in an advanced training course at least once a year.

The State Archaeological Museum in Schloss Gottorf and its staff are the most important source of academic expertise on Hedeby and the Danevirke. For years now, they have published the most important contributions to research on Hedeby in scientific journal series and other publications.



5.H VISITOR FACILITIES AND INFRASTRUCTURE



THE MAIN WALL NEAR DANE- VIRKE MUSEUM

Hedeby and the Danevirke are well served by road, and multifaceted and multilingual information is available on the sites, concentrated primarily in two communication centres, namely Viking Museum Hedeby and the Danevirke Museum. Both centres have their main topics and complement each other as regards content. Alongside this, information about the monuments is provided on-site in three different languages (German, English and Danish) and in various ways such as through signposts, guided tours, moderated programmes and audio guides. This type of interpretation will also be developed further. Pressure on the monuments will be better controlled by means of a standardised visitor control system within the scope of the Management Plan. At present, the Viking Museum Hedeby (the main focus for visitors) is located outside the nominated property, whereas the rebuilt Viking houses belonging to the museum are situated within the historic town. The original structures themselves are only walked upon in a few places and the visitor intensity is low. Where the paths are suitably maintained, the number of visitors on the walls themselves could be significantly increased without the substance of the monuments suffering further damage.



▲
RECONSTRUCTED VIKING
AGE HOUSES IN HEDEBY

A basic principle here is the continued encouragement of visits to the monuments so that guests are offered an interpretation at the original cultural monuments which is as authentic as possible.

Viking Museum Hedeby was provided with an elaborate new permanent exhibition in 2010 and is the most important tourist magnet for the Hedeby and the Danevirke monuments. In winter 2016, the museum will close for renovation for about one year. Visitor interpretation will then focus on the reconstructed houses and an excavation which is planned in the grave field within the settlement area. At Danevirke Museum, there are plans to extend and renew the buildings and the exhibition.

Tourist services, such as accommodation, restaurants and car parking are all outside the nominated property. Toilets can be found at the reconstructed Viking houses inside the nominated property. Both museums are equipped with adequate car and bus parking facilities and toilets outside the nominated property. Additionally, Viking Museum Hedeby offers a restaurant. The environs of Hedeby and the Danevirke feature a substantial number of overnight accommodation facilities and restaurants, especially in the city of Schleswig and the town of Eckernförde, just outside the buff-



EXHIBITION SPACE IN THE
VIKING MUSEUM HEDEBY

er zone. Most accommodation is in private rooms or apartments. A few larger hotels capable of accommodating tourist coaches can be found in the towns. Other facilities such as hospitals and other medical treatment, shopping, police etc. are also located in both towns.

5.1 POLICIES AND PROGRAMMES RELATED TO THE PRESENTATION AND PROMOTION OF THE PROPERTY

INTERPRETATION

Between the museums assigned with the mediation of the nominated property and the State Archaeological Department, a concept was agreed upon as part of the Management Plan of Heideby and the Danevirke which addresses relevant key principles in the interpretation of the monuments on the ground and in the museums. In this concept, guidelines for networking and communication are formulated, as are mediation methods and instruments and also target groups. The interpretation is directed at comprehensible quality criteria, standards and content, with the responsi-

bilities and duties being regulated. Further participating parties, such as schools and tourism-related stakeholders, are being integrated into a network. The mediation is to concentrate on the Viking Age as the central theme of the monuments and their significance within the context of Scandinavian culture. At the same time, however, other important themes relating to the monuments are integrated, such as their significance in modern times, the surrounding natural environment and notably that of the “Danish Minority”. This approach to mediation envisages the multilingual, multimedia-based visitor information being concentrated in the existing museums – Viking Museum Hedeby and the Danevirke Museum – with their adjoining external sections, whereas the monuments themselves, and experiencing them directly on-site (in the field), are of central importance in terms of interpretation. This on-site interpretation of the monuments is guided by a working script that provides information on themes, content, texts and the target group, as well as places and means of presentation (panels, app, etc.). In 2015, new panels were set up in several easily accessed spots offering comprehensive, easy-to-understand information on the monuments in general and the location in particular. A website [www.haithabu-danewerk.de] was also set up to provide information and maps in three languages on the archaeological and natural values of the nominated property. Signposts were set up on every crossing at the archaeological sites with public roads and paths in order to mark the special jurisdiction of the listed monuments and protection areas, and to show the way to the next information panel and the website.

CORPORATE DESIGN

On the basis of the mediation concept, a design manual was established serving as framework and tool kit for shaping and creating public spaces, paths, viewpoints and signage on-site and in the surrounding area.

This design manual serves as a guideline for the public owners of the site, such as municipalities, communities and other important stakeholders. The manual outlines a corporate design that helps to design free spaces which convey and enhance the values of the nominated property. The manual aims to facilitate regional development and connects historical and present values.

In combination, the elements and tools in the design manual produce recurring places and features which shape and open up Hedeby and the Danevirke as a single, connected experience. Its use is intended to reveal local potential and make it visible. The design manual has already been used in the municipality of Busdorf, where the Connection Wall is now on show and the surrounding public space has been designed and upgraded using a public spaces plan. Other planning proposals have already been made and are being implemented successively by the municipalities.

TOURISM DEVELOPMENT PLAN

It is envisaged that, within the scope of the Management Plan of Hedeby and the Danevirke, a cultural tourism marketing concept will contribute to developing and

marketing the monuments and, at the same time, control visitor movements, thereby minimising negative interventions with respect to the monument and nature. The aim is to channel the vast majority of tourists into the museums and to offer special packages giving target groups such as individual tourists or school classes, access to the monuments outside. The Tourism Development Plan aims to create a cultural tourism brand, Hedeby and the Danevirke, making the monuments and the region a tourism centre of excellence in Germany, with the theme of the Vikings. The monuments' marketing will be integrated into the region's existing tourism concept, with Hedeby and the Danevirke being incorporated as the driving force for the domain of culture and interlinked with other themes. When designing the tourism infrastructure and tourism products related to the monuments, particular importance will be attached to high quality and sustainability. A system of certified partnerships with municipalities, enterprises and visitor guides is designed to help control tourist usage and to achieve high standards as regards world heritage competence, sustainable economic activity and cooperation within the region. The partnerships are intended to help the region identify more closely with the monuments and UNESCO's aims.

5.J STAFFING LEVELS AND EXPERTISE (PROFESSIONAL, TECHNICAL, MAINTENANCE)

One person in the State Department of Archaeology of Schleswig-Holstein is specifically appointed to coordinate the management tasks and communicate with UNESCO and its partners (Site Management Office). The site manager is also responsible for collecting and analysing monitoring data on the monuments.

The maintenance of the monuments, in particular the continuous control of vegetation and paths, such as mowing, cutting and other tasks, is conducted by a non-profit-making company (the German Diakonie association) that specialises in landscape maintenance and (re)integrates handicapped people into the community. This cooperation is planned for the long term.

Viking Museum Hedeby employs a director, six employees and three freelance workers, in addition to further freelance visitor guides. The Danevirke Museum employs an academic director as well as a variable number of employees in the ticket office and information sections.

6

Monitoring



6.A KEY INDICATORS FOR MEASURING THE STATE OF CONSERVATION

The reference point for monitoring is the site's state of conservation at the time all the data were recorded in the years 2006 to 2010. The data were collected by the institutions responsible for the different spheres of activity and, consequently, for measures in the management plan. The data were then gathered and evaluated by the site management. All data are stored, managed and presented digitally in a geographic information system (GIS), the GIS-Danevirke. More detailed information on the monitoring process is described in the attached Management Plan.

Based on the factors affecting the Property which are outlined in Chapters 4a and 4b, the following indicators have been developed as applicable and conclusive tools to measure the state of conservation of Hedeby and Danevirke during monitoring.

6.B ADMINISTRATIVE ARRANGEMENTS FOR MONITORING THE PROPERTY

State Archaeological Department of Schleswig-Holstein /
Archäologisches Landesamt Schleswig-Holstein (ALSH)

Brockdorff-Rantzau-Str. 70

24837 Schleswig

Germany

Tel: +49 (0) 4621 387 0

E-mail: info@alsh.landsh.de

Foundation of Schleswig-Holstein State Museums /
Stiftung Schleswig-Holsteinische Landesmuseen Schloss Gottorf

Schlossinsel 1

24837 Schleswig

Germany

Tel: +49 (0) 4621 - 813 222

E-mail: service@schloss-gottorf.de

Danevirke Museum

Ochsenweg 5

24867 Dannewerk

Germany

Tel: +49 (0) 4621 37814

E-mail: danevirke@syfo.de

**KEY INDICATORS FOR MEASURING THE STATE OF CONSERVATION OF HEDEBY
AND THE DANEVIRKE**

Impact on	Indicator	Monitoring method	Periodicity	Location of records
Surface	Erosive effects on the ramparts due to visitor impact	Survey of all the monuments	Annual	State Archaeological Department of Schleswig-Holstein
	Type and intensity of land use (e.g. agriculture)	Survey of all the monuments	As required Twice annually	State Archaeological Department of Schleswig-Holstein
	Type and intensity of plant cover (weed control)	Survey of all the monuments	As required Twice annually	State Archaeological Department of Schleswig-Holstein
Material and structure	Loss of bricks and mortar due to frost damage	3D scan of Valdemar's Wall	Twice annually	State Archaeological Department of Schleswig-Holstein
Storage conditions Below ground	Groundwater level	Measurement at defined points along ramparts	As required Every few years	State Archaeological Department of Schleswig-Holstein
Underwater	Salinity and water temperature (Practical Salinity Units) in degrees Celsius, which favours tere-do navalis attack	Measurement at Offshore Work	Once a year in summer	State Archaeological Department of Schleswig-Holstein
Landscape and topography	Extent and position of encroachment in the topography of the buffer zone	Documentation and review of spatial planning and measures	Ongoing	State Archaeological Department of Schleswig-Holstein
Views and perceptibility	Obstruction of significant views	Use of a viewshed and visibility study	Ongoing	State Archaeological Department of Schleswig-Holstein
Use of monuments and setting	Total number of visitors	Continuous count of visitors at museums Number of visits to website	Annually	Foundation of Schleswig-Holstein State Museums Schloss Gottorf and Danevirke Museum

6.C RESULTS OF PREVIOUS REPORTING EXERCISES

A register of damage to the monuments was compiled within the framework of the GIS-Danevirke and is available to the site management in electronic form. The analysis of the data constitutes the foundations for the current Management Plan for Hedeby and Danevirke.

7

Documentation



7.A PHOTOGRAPHS, SLIDES, IMAGE INVENTORY AND AUTHORIZATION TABLE AND OTHER AUDIOVISUAL MATERIALS

ID No	Format (Slide / print / video)	Caption	Date of photograph (mo/yr)	Photographer
D_HD_1	digital	Hedeby	2010	Archäologisches Landesamt Schleswig-Holstein
D_HD_2	digital	Crooked Wall of the Danevirke	2010	Archäologisches Landesamt Schleswig-Holstein
D_HD_3	digital	Brick Front of the Main Wall of the Danevirke (Waldemar's Wall)	2010	Michael Lang
D_HD_4	digital	The Crooked Wall of the Danevirke	2010	Rainer Heidenreich
D_HD_5	digital	Copy of Rune Stone for Skarathi near Hedeby	2010	Hans Haebler
D_HD_6	digital	Main Wall near Danevirke Museum	2010	Ingo Lau
D_HD_7	digital	Semi-circular Wall of Hedeby	2010	Mathias Bannick
D_HD_8	digital	Main Wall of the Danevirke	2010	Wolfgang Hartmann
D_HD_9	digital	Excavation near Thyraburg 1972	1972	Archäologisches Landesamt Schleswig-Holstein
D_HD_10	digital	East Wall	2008	Archäologisches Landesamt Schleswig-Holstein
D_HD_11	digital	North Wall	2008	Archäologisches Landesamt Schleswig-Holstein
D_HD_12	digital	Kovirke	2008	Archäologisches Landesamt Schleswig-Holstein
D_HD_13	digital	Connection Wall	2010	Evi Krebs-Hoffmann
D_HD_14	digital	Find of press dies from the harbour of Hedeby, 10th century AD.	2009	Stiftung Schleswig-Holstein- ische Landesmuseen Schloss Gottorf

Copyright owner (if different from photographer / director of video)	Contact details of copyright owner (name, address, tel / fax, and e-mail)	Non-exclusive cession of rights
Archäologisches Landesamt Schleswig-Holstein	Archäologisches Landesamt Schleswig-Holstein Schloss Annetenhöh Brockdorff-Rantzau-Str. 70 D-24837 Schleswig	Yes
Archäologisches Landesamt Schleswig-Holstein	Archäologisches Landesamt Schleswig-Holstein Schloss Annetenhöh Brockdorff-Rantzau-Str. 70 D-24837 Schleswig	Yes
Archäologisches Landesamt Schleswig-Holstein	Archäologisches Landesamt Schleswig-Holstein Schloss Annetenhöh Brockdorff-Rantzau-Str. 70 D-24837 Schleswig	Yes
Archäologisches Landesamt Schleswig-Holstein	Archäologisches Landesamt Schleswig-Holstein Schloss Annetenhöh Brockdorff-Rantzau-Str. 70 D-24837 Schleswig	Yes
Archäologisches Landesamt Schleswig-Holstein	Archäologisches Landesamt Schleswig-Holstein Schloss Annetenhöh Brockdorff-Rantzau-Str. 70 D-24837 Schleswig	Yes
Archäologisches Landesamt Schleswig-Holstein	Archäologisches Landesamt Schleswig-Holstein Schloss Annetenhöh Brockdorff-Rantzau-Str. 70 D-24837 Schleswig	Yes
Archäologisches Landesamt Schleswig-Holstein	Archäologisches Landesamt Schleswig-Holstein Schloss Annetenhöh Brockdorff-Rantzau-Str. 70 D-24837 Schleswig	Yes
Archäologisches Landesamt Schleswig-Holstein	Archäologisches Landesamt Schleswig-Holstein Schloss Annetenhöh Brockdorff-Rantzau-Str. 70 D-24837 Schleswig	Yes
Archäologisches Landesamt Schleswig-Holstein	Archäologisches Landesamt Schleswig-Holstein Schloss Annetenhöh Brockdorff-Rantzau-Str. 70 D-24837 Schleswig	Yes
Archäologisches Landesamt Schleswig-Holstein	Archäologisches Landesamt Schleswig-Holstein Schloss Annetenhöh Brockdorff-Rantzau-Str. 70 D-24837 Schleswig	Yes
Archäologisches Landesamt Schleswig-Holstein	Archäologisches Landesamt Schleswig-Holstein Schloss Annetenhöh Brockdorff-Rantzau-Str. 70 D-24837 Schleswig	Yes
Archäologisches Landesamt Schleswig-Holstein	Archäologisches Landesamt Schleswig-Holstein Schloss Annetenhöh Brockdorff-Rantzau-Str. 70 D-24837 Schleswig	Yes
Stiftung Schleswig-Holsteinische Landesmuseen Schloss Gottorf	Stiftung Schleswig-Holsteinische Landesmuseen, Schloss Gottorf 1, D-24837 Schleswig	Yes

D_HD_15	digital	Jewellery of precious metal of woman in chamber grave 5, around 900 AD	2009	Stiftung Schleswig-Holsteinische Landesmuseen Schloss Gottorf
D_HD_16	digital	Deposition of brass bars from the harbour of Hedeby, originally from Rhineland, late 8th/early 9th cen. AD	2009	Stiftung Schleswig-Holsteinische Landesmuseen Schloss Gottorf
D_HD_17	digital	Glass tesserae from Hedeby, used for glass production, Viking Age	2009	Stiftung Schleswig-Holsteinische Landesmuseen Schloss Gottorf
D_HD_18	digital	Coin hoard from Steinfeld near Hedeby, Dorestad imitations, probably minted in Hedeby, early 10th cen. AD	2009	Stiftung Schleswig-Holsteinische Landesmuseen Schloss Gottorf
D_HD_19	digital	From a smithy: casting mould of soap stone, iron pan, melting pot, iron pliers, Viking Age	2009	Stiftung Schleswig-Holsteinische Landesmuseen Schloss Gottorf
D_HD_20	digital	Rune stone for Skarhi, Busdorf, 2nd half 10th/1st half 11th cen. AD; Runes highlighted in recent years	2009	Stiftung Schleswig-Holsteinische Landesmuseen Schloss Gottorf
D_HD_21	digital	Quern stone, probably from Hyllestad, 1st half 11th cen. AD	2009	Stiftung Schleswig-Holsteinische Landesmuseen Schloss Gottorf
D_HD_22	digital	Reconstruction of wreck 1 from Hedeby, „royal“ long ship	2009	Stiftung Schleswig-Holsteinische Landesmuseen Schloss Gottorf
D_HD_23	digital	Ware cube in the present exhibition of the Viking Museum Hedeby	2010	Stiftung Schleswig-Holsteinische Landesmuseen Schloss Gottorf
D_HD_24	print	Excavation at the Semicircular Wall of Hedeby	1934	Herbert Jankuhn
D_HD_25	digital	Excavation in the central settlement area of Hedeby	1969	Stiftung Schleswig-Holsteinische Landesmuseen Schloss Gottorf
D_HD_26	digital	Excavation in the central settlement area of Hedeby	1969	Stiftung Schleswig-Holsteinische Landesmuseen Schloss Gottorf
D_HD_27	digital	Excavation in the harbour area of Hedeby: View on post rows of harbour facilities	1980	Stiftung Schleswig-Holsteinische Landesmuseen Schloss Gottorf
D_HD_28	digital	State of research: excavations and wrecks in Hedeby	2010	Stiftung Schleswig-Holsteinische Landesmuseen Schloss Gottorf

7.B TEXTS RELATING TO PROTECTIVE DESIGNATION, COPIES OF PROPERTY MANAGEMENT PLANS OR DOCUMENTED MANAGEMENT SYSTEMS AND EXTRACTS OF OTHER PLANS RELEVANT TO THE PROPERTY

Executive summaries with key provisions of the Monument Preservation Act of Schleswig Holstein (last amended 2015) as well as of the Regional Development Plan and Regional Plans Area III and V are integrated into Chapters 5.c and 5.d. Further relevant texts are provided on DVD annexed to the Dossier:

- Executive summary Management Plan Hedeby and Danevirke (2014)
- Executive summary The Nature Conservation Act of the Federal Republic of Germany (last amended 2016) and The Nature Conservation Act of the State of Schleswig-Holstein (last amended 2016)
- Executive summaries Regulation Concerning the Nature Protection and Landscape Protection Areas:
 - Executive summary Regulation concerning the Nature Protection Area “Hedeby-Danevirke”
 - Executive summary Regulation concerning the Nature Protection Area “Reesholm/Schlei”
 - Executive summary District Regulation concerning the Landscape Protection Area “Hedeby-Danevirke”
 - Executive summary District Regulations concerning further Landscape Protection Areas
- Examples of the Detailed Description of Hedeby and Danevirke:
 - Description individual section Main Wall
 - Summary Main Wall

7.C FORM AND DATE OF MOST RECENT RECORDS OR INVENTORY OF PROPERTY

STRUCTURAL ELEMENTS

All structural elements and known archaeological sites that can be counted as Danevirke and Hedeby monuments are completely recorded in a formalised detailed description (see 7.b). Here the location, visibility, state of preservation and use is explicated, as is also the research history of the respective elements. The description is complemented by sketch-maps, topographical maps and airborne LIDAR imagery

of the constituent parts as well as by cross-sections and profiles of the wall and the terrain compiled on the basis of these. There is also the Danevirke Atlas from 2001, a cartographic record of the surface of the monument at a scale of 1:2000. Airborne LIDAR images allow the recording of the over-ground relief to the nearest decimetre and in this way the surface of the monuments can be recorded. With the cross-references to archaeological investigations there are also statements regarding the ascertained state of conservation as part of the description. The monuments were described within the nominated area. The descriptions are conducted by the State Archaeological Department of Schleswig-Holstein and are housed there. They are also to be found in the Management Plan and in extracts in the appendix of the application.

DATA BANKS / MOVABLE INVENTORY / FINDS

All the fundamental cartographic material and information on the inventory, protection, maintenance, use and research that are available, are administrated in a geographical information system (GIS) of the State Archaeological Department of Schleswig-Holstein (ALSH). It serves as the central data pool and information pool on the Danevirke and Hedeby. From this pool, maps interlinked with various types of information can be generated at all times - or dynamically sorted.

Reports dealing with archaeological enquiries are archived in the State Archaeological Department (ALSH). Part of the documentation on the Hedeby investigations is housed in the Archaeological State Museum Schloss Gottorf (ALM). The comprehensive documentation includes photographs, a digital model of the terrain based on LIDAR imagery, orthogonal aerial photographs of all the Danevirke and of Hedeby as well as geomagnetic surveys and Sidescan-sonar images of underwater segments of the Danevirke. The results of the Georadar surveys within the Semicircular Wall are in the State Museum (ALM). The finds from all the excavations are also kept in the ALM and are fully archived. At present work is progressing on setting up a common data bank which will allow the registration of findspots / archaeological sites in the ALSH to be synchronised with the registration of finds/artefacts of the ALM.

7.D ADDRESS WHERE INVENTORY, RECORDS AND ARCHIVES ARE HELD

Archäologisches Landesamt Schleswig-Holstein

Schloss Annettenhöh
Brockdorff-Rantzau-Str. 70
D-24837 Schleswig

Stiftung Schleswig-Holsteinische Landesmuseen

Schloss Gottorf
D-24837 Schleswig

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9

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the State Party**



THE ARCHAEOLOGICAL BORDER LANDSCAPE OF HEDEBY AND THE DANEVIRKE

**SIGNED ON BEHALF OF THE STATE PARTY OF
GERMANY / SCHLESWIG-HOLSTEIN**

Place and date

Anke Spoorendonk
Minister of Justice, Cultural and European Affairs

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Viking Museum Hedeby/Wikinger Museum Haithabu (**WMH**)

State Archive/Landesarchiv Schleswig-Holstein (**LASH**)

Institute of Geosciences University of Kiel/Institut für Geowissenschaften (**IFG**)
Christian-Albrechts-Universität zu Kiel (**CAU**)

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