

Ad Brudgias Portum

Bruges' medieval port system as a maritime cultural landscape

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Session 1: Bruges and its maritime cultural landscape

Christer Westerdahl

Bruges and its corridor. The maritime cultural landscape

The maritime cultural landscape around Bruges displays a totally different topography and cultural background than that of the area where the concept arose, in Northern Scandinavia. It has, however, remained one of my favourite environments to outline precisely this contrast. The same elements of the maritime landscape which permeate the north prevail as well in the Zwin as the entire south side of the Channel, although in variable quantities, e.g. maritime place names indicating various aspects of the landscape. Above all the Bruges area demonstrates extremely complicated sedimentary processes in -more or less mobile- flatland and a partly urbanized countryside. It has been an international storing and trading intercourse along a long inland waterway without the customary immediate transit zone between the sea and a large-scale river (estuary or delta type). In that sense it appears almost unique. In the north we find on the other hand a constant rocky and stabilized undulating coastline with archipelagoes, almost void of larger sedimentary areas, although with an inexorable and strong land rise. It is comparatively sparsely populated and mostly non-urban. Some fleeting impressions of the Zwin will be referred to in this keynote. The early innovative potential in shipping can be demonstrated in ship types almost certainly with their roots in the Channel area, along with a pictorial illustration of the first known stern rudder in Europe (c AD 1180). The analysis of such a wreck-site in such sediments may illustrate the history of the landscape itself. In view of the contrast between our two environments it is rather a suitable consolation to find that a large part of the ballast stones in the Bruges port satellites consist of Scandinavian rocks!

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Inland Outports. An interdisciplinary study of medieval harbour sites in the Zwin region

The Zwin tidal inlet functioned as the medieval gateway to the port of Bruges. Along the banks of this linear harbour-hub, a series of smaller landing sites soon acquired city and commerce privileges. The towns got engaged in specific functions of transshipment, reparation or commerce and were integrated into international trade networks. Therefore, the development of Bruges cannot be understood without considering the gateway system as a whole. However, economic, geomorphological and military developments in the troubled 16th century showed that smaller landing sites were inviable without the port network in which they sprout. Consequently, they were gradually deserted and disappeared from the landscape.

The research on these outports was until now predominantly based on written sources and focused on socio-economic functions, whereas the topography of the sites and their harbour-related infrastructure remained largely unknown. This paper will show how we detect and assess the location, morphology and state of preservation of these deserted ports.

First, the broader port area was approached from a macro-scaled historical-geographical framework in which remote sensing techniques were combined with cartographical and geological data. Then, the focus narrowed to a micro-scaled high-resolution scan of the outports themselves, using a wide array of non-invasive prospection techniques, such as a geophysical survey, DGPS-mapped fieldwalking, UAV-mounted 3D-photogrammetry and a molehill-survey. The integration of these highly detailed datasets enabled us to relate proto-cadastral documents with archaeological surface finds and a geophysical scan of the subsoil at the scale of individual medieval allotments. The combination of these traditional and innovative techniques delivers a promising methodology for non-invasive research on medieval landing sites.

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Ports and power: Bruges, the Zwin mouth and the staple system in the later Middle Ages

For much of the late medieval period, the Zwin mouth was one of the busiest waterways in North-western Europe. Linked to a network of outports, it provided thousands of merchants from all corners of the continent with access to the commercial gateway city of Bruges. Trade flows in the Zwin estuary were subject to staple regulations, which determined where goods could be offloaded and sold. Adopting views from the New Institutional Economics, economic historians have considered the staple system as an example of an efficient tool of trade, which brought merchants together in one place and lowered transaction costs for all involved. In reality, the interests that lay behind the staple regulations were far more complex. The system gave preferential access to trade, and the revenues from it, to certain groups while denying it to others and made commercial exchange in competing centres impossible by restricting or criminalizing it. This paper will consider the role of the staple in the commercial development of the Zwin mouth from a multidimensional point of view, analyzing the constant negotiations between urban groups in Bruges, the central government and the various outports in the estuary, as well as the multitude of economic and political interests they tried to defend.

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Session 2: The Zwin and its tidal harbour system

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The dynamic landscape of the Zwin inlet, or how to preserve the Sluis-Bruges access navigable, 1000–1600

This paper gives an overview of the measures taken by Bruges to keep its port accessible via the Zwin inlet. In order to understand the impact of the measures the main characteristics of the Zwin landscape will be discussed along with the threats it faced through time. Initially the landscape was made up of mainly salt marshes, while the dunes emerged after about 1000 AD. From then onwards also a process of land reclamation and founding of new settlements began. Hence special attention needs to be given to the embankments and storm surges which threatened to flood the new land regularly. Towards the 1470s Bruges began to undertake far reaching measures to improve the accessibility of the Zwin inlet. The measures aimed at changing the natural water ways in the area, hence they need to be discussed in detail. First, the transformation of the water courses gives an insight in the interplay of processes such as erosion and deposition triggered by the use of the tides. And secondly, apart from the expected outcome of this interference with the landscape, questions such as did the contemporaries of the 15th and 16th centuries have enough hydraulic knowledge to understand the impact of changing the water courses this dramatically and ... did the measures have a satisfying impact?

The final blow to the access of Bruges as a port came in 1584, when the Zwin area was partly inundated and separated from Bruges that stayed loyal to Spain during the Eighty Year's War.

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Ballasting the Hanse. Baltoscandian erratic cobbles in the later medieval port landscape of Bruges

One remarkable characteristic of the Bruges' maritime landscape consists in the occurrence of rounded cobbles, present on the fields of the harbor sites and in the medieval and later historic monuments, lining the tidal inlet. Multidisciplinary research points to the exotic nature of these rounded, often colorful stones, which geologically can be traced back to the Baltoscandian area for a part of the group. Archaeological and historical examination further leads to the interpretation of these 'cuckoo's eggs' as ballast stones, which were probably left in exchange of local sand which was shipped back to the north as ballast and commodity. In the paper, we will focus upon some recent finds of ballast stones in the Zwin area. Foremost we will discuss the cultural biography of ballast stones in the maritime landscape as well as the methodological implications of the use of ballast as an archaeological object category to assess maritime networks.

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Origins and consequences of subaltern relations in a medieval portuary system in Flanders: the case of Hoeke

Although unlimited maritime access was advantageous, medieval seaports and port cities were often incorporated into serving a capital city's economy by providing merchants with a transport system. Consequently, these outports had a subaltern relationship with that city, as well as tenuous relations of competition and cooperation with neighbouring outports. This contribution focuses on the hierarchical relations underpinning the subaltern status of Hoeke, one of the smallest cities in the medieval County of Flanders and a minor hub in the portuary system in the Zwin. This city is used as a case study through which to explore the paradox of maritime access and development. The research indicates that arguments of geography are insufficient to explain the development of these portuary systems, utilizing new insights from recent historical research and other academic disciplines. I will demonstrate that Hoeke's retreat from the waterfront put an end to the paradox of maritime access, resulting in the transformation of the hierarchy in its relations with the capital city.

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Recycling the past. An assessment of recent archaeological research in the medieval ports of Flanders at Hulst, Axel and Sluis

In medieval Flanders Hulst, Axel and Sluis were regional trading places situated along important waterroutes. As municipal archaeologist of the communities in this part of the Netherlands, I will give an insight of the results of research and excavations, mainly concentrating on the infrastructure of the harbours and trade relations.

The last ten years, archaeologists and historical researchers have been given the opportunity to excavate a part of the medieval port of Hulst. It is known that parts of the vessels were re-used as building timber to build houses or landing points. In Hulst, we found many parts that belonged to more than four different vessels, so called 'cogs'.

In Axel, the archive needed to be rebuild on the exact place of the medieval harbour. Archaeologists could study the history of the harbour because of the excavations that took place a few years ago.

Sluis, one of the most northern medieval harbours of the former Zwin, has been object of research and I will give a summary of the latest results we obtained because of many recent civil works that took place inside the medieval city walls.

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Destroyed & Destructed. An interdisciplinary study of the drowned harbour of Coxyde

The village of Coxyde appears for the first time in a historical source in 1249 as an already existing parish that was probably founded by a vassal of the count of Flanders. Because of its position along the tidal branch of the Zwin it could profit of Bruges' late medieval economic heyday. Unlike most of the other outports in Bruges' harbour network, Coxyde never received urban privileges and it remained mostly a fishermen's settlement. Nevertheless the harbour had its part in the international trade as it is mentioned as one of the eight harbours with a comital toll office for trade and shipping on the Zwin in the 14th century. Concurrently with the surrounding region, the prosperity of the village diminished during the 15th and 16th century. Flooding, wars, political conflicts and eventually inundation during the Eighty Year's War led to the disappearance of the village at the end of the 16th century. As the area was rigorously re-embanked after the turmoil of war, the precise location of Coxyde got lost in the new rationalized blocks of farmland.

The location of Coxyde was retraced using a interdisciplinary approach with integration and comparison of historical textual and cartographic sources and an archaeological field survey. The recently developed "Artefact-Accurate survey of Diagnostic fragments" method was tested during this prospection and made it possible to link the archaeological material of four late medieval artefact clusters with the historical and spatial data derived from historical sources. These clusters provided a mainstay to interpolate the other known elements of the village. The western part of the village – including the harbour area – suffered from erosion caused by the Coxsche Gat, a large tidal inlet that was created during the flooding of the region. Further research has to reveal what survived archaeologically. The eastern part of the village seems to be archaeologically well-preserved under a layer of flood deposits. Moreover, the collected artefacts of this eastern area evidence a so far unknown earlier medieval settlement history related to this harbour site.

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Cities, counts and merchants. Conflicts of interest in the Zwin region and the foundation of Sluis (ca. 1280-1324)

During the later Middle Ages, the most important harbour along the Zwin inlet was Sluis. Remarkably, Sluis was also the youngest of the Zwin ports, founded only at the end of the thirteenth century by the Flemish count Guy of Dampierre and his son John of Namur. The rapid growth of Sluis – strongly favoured by the comital dynasty – soon disrupted the existing hierarchies among the Zwin towns and often led to tensions between the new port, Bruges and the other Zwin ports. This presentation addresses the question as to why the Count of Flanders founded a new port town within this already densely urbanized region. In the light of the increasing presence of foreign merchants in Bruges and the Zwin region during the thirteenth century, I argue that the foundation of Sluis was a deliberate, political-territorial act by which the Flemish count tried to secure his share of the profits brought to the Zwin region by these foreign merchants and keep a check on the defiant metropolis of Bruges. Within a few decades, the tensions between Bruges and Sluis led to the formalization of the relations between the various towns along the Zwin and the (economic) dominance of Bruges, securing the metropolis' development into the main hub of international commerce in the decades to come.

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Phalluses & fishermen. Late medieval and early modern pottery from Sluis: the case Beestenmarkt/De Lindenhoeve

In 2013 a rescue excavation was carried out on the site Beestenmarkt/De Lindenhoeve in the city of Sluis. It turned out to be a difficult project, due to the limited time frame imposed by the civil engineering works. Although little of the internal structure of the site could be retrieved, relevant information on the development of the city could be collected. About forty late medieval graves belonging to the old parish church of Onze-Lieve-Vrouw were excavated, besides several waste pits belonging to the townhouses adjacent to this church. The scope of our research focused on the ceramics from these pits. Analysis showed that the Late Medieval component consisted mainly of cooking pots in a red, glazed fabric and large vessels in grey ware used for the storing of liquids. Occasionally some imported ceramics and peculiar objects were found among these kitchen utensils. Among these are models of phalluses in glazed red ware, which are possibly related to certain customs in seafaring communities. Only one context contained ceramics dating from the strife ridden late 16th and early 17th century. Our research shows that even an excavation with limitations still has many possibilities for understanding the development of the site and its occupants from the early 14th century, the period during which the town was developing into a large trade hub, to the early 17th century, in which Sluis became a modern, fortified city.

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Evelien Hauwaerts

A miserable Italian in Bruges and his manuscript with the oldest map of Flanders

The Public Library of Bruges holds a manuscript which contains the oldest known map of the county of Flanders (Bruges, Public Library, Ms. 685 ff. 208v-209r). The map appears at the end of the manuscript, as an annex or illustration to the text in the volume, the '*Cronache de singniori di fiandra e de loro advenimenti*'. The text is part of a complex textual tradition of chronicles of Flanders in Latin and in vernacular, warranting a profound study and critical edition.

The aim of the presentation is to gain deeper understanding of the map by examining its manuscript context. The text provides a considerable number of interesting details on the conditions in which text and map were produced and on their intended audience. Insight into its production and (intended) consumption is vital to a subsequent analysis of the map itself, which is well-known but has rarely been examined in detail. A break-down of the map leads to some key observations, e.g. that the author's focus was on waterways and, to a lesser extent, on religious routes. By means of conclusion, I will discuss how these characteristics might connect back to the nature of the endeavour and to the profile of the author.

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Session 3: Connection Ports & People

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Infrastructure and organisation of a 11th century trading port – the Schleswig case

The town of Schleswig is located at the inner end of the Schlei fjord, where the smallest part of the Jutland peninsula between the North Sea and the Baltic Sea is situated. Due to this favorable topographical situation large amounts of the goods have been transferred via this spot for over a half millennium. The extensive interaction can be traced back to the early Viking-age, when the emporium of Hedeby was established. During the course of 11th century Schleswig takes over. Within a time span of just 25 years, large areas of the waterfront were systematically occupied. Starting out with a plot layout and a street infrastructure, the building activities quickly reached out into the Schlei fjord where large dams were erected in alignment to the plots. On those structures properties were developed as well as a large public marketplace. While the major initiative behind these actions must be traced back to the Danish kings, most structures have been established individually by different actors who were engaged in the long-distance trade.

Compared to other medieval ports in Northern Europe this development was of an outstanding intensity and rapidness. The Schleswig waterfront is most notably to be understood against the background of the emerging professional merchant seafaring which accompanies with increasing amounts of cargo, larger trading vessels and the consolidation of trade networks. Thereby the investigations on the Schleswig waterfront provide detailed information on the specific infrastructure of a high-medieval town whose economic power relied to large amounts on its far-ranging connections.

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Money deposits and shipwrecked saints: the Norwegian presence in medieval Bruges

In the High Middle Ages, Norwegians travelling to the continent would often disembark on the Flemish coast. An intriguing example of such a traveller is Torfinn, a bishop who died in the monastery of Ter Doest near Bruges in 1285. Almost unknown in his native Norway, he was revered as a saint in Flanders from the middle of the 14th century onwards. His contemporary, the monk Walter de Muda, depicts the exiled Torfinn as being led by Providence to the shores of Flanders after a shipwreck.

In reality, Ter Doest had been in regular contact with Scandinavians for a long time; for instance, Torfinn's own mentor, Archbishop Jon, had deposited money there, as had many other Northerners. An intriguing late 13th-century letter from the Bishop of Tournai authorises the Bishop of Oslo to act in his place in Ter Doest. Additionally, Torfinn was not the only Norwegian saint to be revered in Flanders: the cult of St Olaf had spread to the Dominicans in Bruges, who in the 14th century also acted as a point of transfer for Scandinavian money deposits, as Ter Doest had done before.

This paper discusses the presence of Norwegians in Bruges in the 13th and 14th centuries and their connections with – and influence on – local institutions. What was the extent of this influence? How were these networks shaped by patterns of travel and trade? What role did these connections play in secular politics, and what cultural traces did they leave?

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Architectural exchange between Hanseatic cities. Brick, Bruges and Lübeck

The remarkable wealth of medieval brick architecture in the regions bordering the North Sea coast has struck architectural historians ever since the 19th century. Commonly brought up as the explanation for this supra-regional architectural phenomenon is the Hanseatic league. This commercial maritime network is thought to have facilitated the spread of "brick Gothic" from Calais in the south up to the harbor cities of the Baltic sea in the north. However, extensive comparative research based on archaeological analysis of actual buildings largely remains to be done, thus leaving the concept of Hanseatic brick architecture unchecked. Nevertheless, in recent years several medieval brick buildings in the city of Bruges have been studied extensively, thus allowing a tentative comparison with contemporary brick architecture in the coastal cities of Northern Germany, most notably Lübeck.

Technical similarities (brick sizes, masonry bonds) are surprisingly few, which makes the existence of commuting building teams unlikely. Despite the use of the same building material, one must rather think of local building traditions. Inversely, several similarities, in some cases of a striking resemblance, occur in formal architectural features. These point towards master builders and patrons as agents of architectural exchange between Bruges and Lübeck.

For now, the direction of exchange, northwards or southwards, remains unclear. But this might be asking the wrong question: in the dynamic cultural space of the North Sea coast during the Middle Ages, architectural exchange may have been a case of two way traffic.

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Small-scale and local port infrastructure in coastal Flanders: about landing places, wharfs, hyths and Ydes in late medieval Flanders

Sources reveal the existence of a multitude of small-scale mooring places in late medieval coastal Flanders. They are often called Yde or hyth, or sometimes wharf, and represent a much more local but also dense network of landing places for local traders, farmers and fishermen compared to the larger port towns in coastal Flanders. Their infrastructure and lay-out remains are not well-known and are hard to grasp. Comparisons with the English Fens or the Netherlands show that the accompanying settlement and market infrastructure is often more clear than the landing places themselves. In this contribution we want to discuss the archaeological and landscape-historical problem of the Flemish late-medieval local landing-places and consider their importance from what we know. They can be seen as the local version of non-place, albeit with a significant economic role, which goes back to the pre-urbanisation time of coastal Flanders.

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Markets and ports in perspective. The development of the town plans of Utrecht and Amsterdam until c. 1560

The origin and proliferation of medieval towns in North-West Europe is generally ascribed to their prime economic functions as regional markets and/or as maritime nodes (ports) in trading networks over longer distances. In the study of medieval urban form and topography, however, the emphasis on markets and ports as determinant forces in the process of town plan development has seldom been explored. That is remarkable, as this notion might provide a useful alternative to the classical yet misleading dichotomy of 'spontaneous, unplanned development' versus 'deliberate, planned urban growth' that is still upheld in literature on medieval urban form. The proposed paper presents the first results of an ongoing PhD-research into the origin and development of medieval town plans in the northern Netherlands. In this research, an alternative theoretical model is adopted, which postulates that medieval town plans were the result of the drive of human agents to accommodate functions (particularly economic ones, such as markets and ports) under certain conditions and within existing frames. The paper focusses on the town plan development of Utrecht and Amsterdam until c. 1560. On the one hand, it demonstrates how these towns were deliberately shaped around the market and port functions they aimed to accommodate. On the other hand, it also reveals how (sometimes unforeseen) conditions and existing frames have influenced urban form. In doing so, the paper argues for a more balanced approach in examining medieval town plans, which credits both the similarities in terms of generative processes and the differences in resulting urban forms.

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Francesca Carboni

Ad navigia trahenda vel veranda. The port of Recanati (Marche, Italy) between the 13th and the 15th century

The proposed paper tackles the historical vicissitudes and the infrastructures of the port of Recanati. This flourishing inland town in the Marche region, which was founded in the middle of the 12th century, played, at least for a circumscribed period of time, a significant role for the maritime trade of products from both sides of the Adriatic sea, mainly Venice and Ragusa.

In the 13th century, Frederick II granted the town permission to construct a harbour along the sandy shore, where the fortified village of *Castrum Maris* had been built in the vicinity of the already abandoned Roman town of *Potentia*.

This examination originates from the results of the interdisciplinary work conducted by the geomorphologists of the Potenza Valley Survey Project's team (Department of Archaeology, Ghent University), who provided strong evidence of the critical hydrogeological conditions of this area at the mouth of the river, whose bed moved significantly from Roman times into the Middle Ages.

Thanks to the essential historical research conducted on archive, cartographical and iconographical documents, we can also shed light on the complex sequence of events, of natural and man-made origin, which led the inhabitants of Recanati to deviate the course of the Potenza river in order to construct a fluvial harbour, which in the end was never completed.

The research on public and private archive sources has given us significant insight into the different features supporting the port activities and into the equipment facilities adopted to allow the ships to dock and be pulled ashore while a real harbour was under construction.

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Cosimo Damiano Diella & Sara Murgolo

The medieval ports of Barletta and Ariscianne between written, cartographic and archaeological sources

Barletta is a port city in the northern center of Puglia. It is known through the Tabula Peutingeriana. It develops as an important port center from the VI century AD, becoming one of the main ports of the Apulian coast. With the start of the crusades the port becomes a starting point for the Holy Land. The major orders of chivalry are located in the city and supply the offices in the East through mass production of agricultural products. The presence of Florentine, Venetian, Amalfi and Ravello merchants also contributes to commercial traffic with the East. With the unification of Southern Italy, starting from the Normans, the port is affected by restructuring measures from the various sovereigns, Anjou mainly. These are the written sources to attest, between XI and XV centuries, in detail, goods departing and entering the port and restructuring interventions. The written sources also attest to the system of smaller ports connecting the port to the rural territory (like the port of Ariscianne) and to the nearby Ofanto river. The cartographic sources attest instead the remains of the structures of the medieval port and allow a reconstruction of the same also based on changes in the coastline and therefore to the changes suffered over time. The integration of written, archaeological and cartographic sources allows a detailed summary of the port of Barletta, of its international flows of goods, of the relationship with the surrounding territory and with the city and the sovereign and city authorities.

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Session 4: The material culture of gateway communities

Bieke Hillewaert

The obvious, the barely suspected, and the unknown. Archaeological evidence for late medieval imported commodities in the Zwin area

The existence and nature of trade relations between Flanders and the medieval Christian and Islamic world are fairly well documented. Located at the crossroads of the North-Sea maritime routes, the commercial axis from England to the French Champagne fairs, crossing the Alps to the cities of the Italian peninsula, and the route from England to Cologne and the Rhineland, Bruges was well-positioned to reap the benefits of trade.

Several medieval lists of commodities imported to Bruges have been preserved. Those mention a variety of products, bulk as well as piece goods, originating from regions as far as the British Isles in the West, Scandinavia and Russia in the North, North Africa and the Balearics in the South and Byzantium, the Levant and Tartary in the East.

The main topic of this paper is the presence or absence in the archaeological data of traces of imported commodities, known or unknown from the written sources. The area of study includes the outports of Bruges alongside or connected with the former Zwin estuary and the town of Bruges itself. Commodities, such as pottery, glass, ballast stones and certain luxury goods, mainly from the 13th until the 15th century, are discussed. At the heart of the discourse are certain aspects of the mechanisms of a minor trade and the movement of isolated items in particular.

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Late medieval ships from the Scheldt basin. The cases of Doel and Hulst

The Scheldt basin served as one of the main arteries of trade during the late medieval period in continental Europe. Trade to a large extent was done via the sea and waterways.

Up until the year 2000 shipwreck finds of that period were generally lacking or very poorly preserved and researched in this area. With the construction of the Deurganckdok in the harbour of Antwerp on the left bank of the Scheldt river in 2000 and 2002 two medieval shipwrecks were found. Both laying at 50 m apart and turn upside-down with their keel facing upwards. Based on their construction details they were determined as 'cogs', late medieval trading vessels. One of them was in such a pristine condition that plans were made for a detailed research. This was done between 2010-2014 using 3D technology and with a detailed interdisciplinary approach. Which led to new insights in the construction, date and usage of both ships.

In 2010 in the former medieval town of Hulst an excavation was ongoing in its harbour basin. Due to the restricted research possibilities of the project the province of Zealand was able to make funds available for the study of the ship remains. On two locations a total of four wrecks could be identified dating between the early 13th and early 14th centuries. Their construction features and dates offer an additional chapter to the history and maritime connections of this medieval town and its broader area.

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Stony migrants in Bruges' port landscape during medieval times

Medieval monuments in the harbour landscape of Bruges often contain "exotic" building stones from overseas origin, different from those of the hinterland. Fluvial transport within the Scheldt river basin allowed the supply of Tournai limestone, Oosterbant quartzarenites and chalk stones. Of particular interest, however, is the occurrence of building stones from the Boulonnais area (N-France), the Rhine basin and the Baltic sea. The Rhine delta accounts for the supply of Bentheimer sandstone and Rhenish volcanic tufa (Römer Tuff), whereas maritime transport in the Channel accounts for the supply of Caen stone, Baincthun calcareous sandstone and the Marquise stone. Most remarkable is the presence in pavements and some historical buildings, of recycled ballast stones. Their lithological and petrographical analysis points to a more remote origin, related to both erratics picked up along the pebbly shores of the Baltic sea and to boulders sampled at the foot of limestone cliffs along the English-Scottish border (De Clercq et al, 2017). The Baltic sea also produced a particular ornamental stone, the Öland limestone, as evidenced by the presence of some tombstones. Their presence is witnessing of the importance of maritime trade during Medieval times, especially during the Hanseatic period.

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Geert Verbrugghe

Trade of stone mortars across the Channel and the North Sea

Two recent rescue excavations in Normandy (Caen and Dieppe) recall indices concerning the late medieval trade of stone mortars across the Channel and the North Sea. They confirmed *in situ* morphological and decorative specificities assigned to the Caen stone production highlighted by mortars published since the seventies in England, the Scheldt estuary (Middelburg, Netherlands) and in Denmark (G.C. Dunning, M. Bencard). They illustrate also the diffusion up to Caen of productions in the center of the Paris Basin documented by recent rescue research in and around Champagne fair cities (Lagny-sur-Marne, Troyes). Subject to petrographical examination, morphological characteristics of two mortars discovered in the context of the Zwinproject are well represented in the Paris Basin.

The excavations of the fishermen village of Raversijde (Ostend, Belgium), illustrate the trade of an English mortar production (Purbeck Marble, Dorset), also attested in Brugge (Gruuthuse museum), Zeeland (Netherlands) and- again - up to Denmark.

Recent discoveries in the Meuse valley (Poilvache and Dinant, Belgium) bring new indications of another production on decorative and petrographical indications, attested since the seventies mainly in the Dutch part of the Rhine Valley (Ridderkerk, Dorestad and surroundings), up to Denmark, but also possibly in a suburb of the Flemish city of leper excavated in the nineties.

These recent discoveries renew evidence illustrating the importance of this type of – still badly known – utensil and its place in the late medieval maritime trade.

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Ben Jervis

Possessions and maritime identities: Archaeological and historical perspectives on the material culture of port households in medieval England

Coastal communities are distinctive by virtue of their range of links with distant places. They have access to a range of goods not available to comparable inland communities, and also have special requirements for objects essential to their lifestyles. In this paper I will draw on the findings of the Leverhulme Trust funded project 'Living Standards and Material Culture in English Rural Households 1300-1600' to examine the kinds of objects which could be found in coastal households, how they vary from the possessions of those living inland and what they might tell us about the particular systems of value and identities of people living on the coast.

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Stuart Whatley

Burghers, merchants and servants. Material culture in the medieval port community of Copenhagen

Harbours in the medieval period were interesting and diverse places. They were contact points where a mixture of migration, travel and trade occurred. They were also a place where ideas were diffused between the people visiting, living and working around the harbourside. All these activities affected the surrounding populace where a mixture of industry and private housing areas were interlinked around the harbourside.

Copenhagen harbour was located on the southern boundary of Copenhagen, with the other boundaries static and fortified. From the early 13th Century the southern boundary was constructed via land reclamation and the city expanded to the south. This occurred every 30-70 years according to dendrochronology. After the port expanded these former port areas became habitation zones, which by the late medieval period, comprised large town houses. In the 15th century Copenhagen became the capital of Denmark and the home of the Royal court. The harbour area, Gammel Strand, was located just across from the Royal Castle and records state it being an area inhabited by merchants, mayors and other members of the Copenhagen elites

This paper aims to discuss the material culture of the Copenhagen port community from the 13th – mid 16th century. It will use historical records and the results from the recent Gammel Strand Metro Cityring excavation to examine evidence for trade, consumption and identify specific social communities amongst the larger port community. It will also investigate the differences between the port communities of Copenhagen with a similar high status inland community from Odense, Denmark.

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Timber supply in a growing medieval city

A constant and reliable supply of construction timber was paramount for an expanding medieval town. Both infrastructural works, the construction of public and religious buildings as private houses required an immense volume of wood. In the County of Flanders, most of the local forest were converted to arable land and the remaining forest and woodlands became highly fragmented. It is estimated that in Flanders the lowest forest cover ever was reached by the end of the thirteenth century, and local forests could no longer provide the necessary amount of timber. As a consequence, Flemish towns – and Bruges in particular – were obliged to import massive amounts of construction timber. Numerous references to the purchase of timber from remote areas can be found in the accounts of the city of Bruges.

However, tangible evidence of the massive import of timber has become part of our built heritage and is often found during archaeological excavations. Recently, a catalogue of ca. 150 medieval roof constructions – of which 59 were dated by means of a dendrochronological analysis – from Bruges and Damme was published. This catalogue and dendrochronological dataset now provides an opportunity to trace down the origin of these timbers. Tree-ring analysis not only allows to date the felling dates of trees and building phases, but also allows to determine the region where the trees actually grew. As historical written sources often only mention the place of purchase, dendrochronology can trace down the origin of the timber itself, revealing supply routes and timber trade networks.

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