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Conservation of Historic Buildings along the Eroding Coastline of Northern Jutland

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Introduction

The erosion of the western coast of northern Jutland, in Denmark has generated an extremely challenging environment for the preservation of architectural heritage. This phenomenon causes the loss of approximately two to four meters of shore per year, and tends to become more and more severe, leading to the loss of as much as 11m of shore in a single year. This constitutes a major threat to important historic buildings close to the coast. Jes Wienberg's article describes how the early thirteenth-century Mårup church, in Lønstrup Klint, recently had to be "dismantled under supervision", in anticipation of the erosion of the ground below the church and the historic cemetery surrounding it (Fig.1). This astonishing decision was preceded by a fierce debate, an account of which has been provided by Casper Bruun Jensen and Randi Markussen.¹ Although this decision was controversial, it was not unique in the history of the region. As Wienberg reminds us, in the early twentieth century, similar natural phenomena led to the dismantling and rebuilding of other monuments in the same area, such as the late medieval church of Rubjerg and the church of Lyngby. But, as the above article points out, erosion is not the only threat to the coastal heritage of north-western Jutland. Sand drift has led to the accumulation of sand around historic buildings hindering access to them, and, sometimes, covering part of their fabric. The intensity of this phenomenon is reflected in the gradual redundancy of the 1900s lighthouse of Rubjerg Knude, which started only half a century after its construction.

Counteracting coastal erosion and sand drift has proven to be more complex than it may seem at first sight. This is not only because of the elevated cost of coast protection, but, mainly, because coastal decomposition and sand dune formation also enjoy legislative protection as the generators of a uniquely significant coastal landscape. What sealed the destiny of Mårup church, was the decision that these

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¹ C. B. Jensen and R. Markussen (2001), 795-819.

natural phenomena should continue unhindered. This implies that the protection of nature was given hierarchical priority over the protection of the church.

Wienberg has analysed the decisions affecting the dismantling of the churches. His article has investigated the influence of the debate concerning Mårup church on the evaluation of its significance, and interpreted the divergence of perceptions of the building by local societies (such as "the Friends of Mårup Church"), archaeologists and the central government. This interesting study raises questions about the future of architectural heritage along this coastal region. The cases of Mårup, Rubjerg and Lyngby show that the dominant approach to the problem of preservation in this region involves the dismantling of buildings that had stood in their site for centuries while the sandy landscape they are built upon is claimed by the sea. One might ask whether this approach constitutes the best compromise between the preservation of architectural heritage and nature. To answer this question, it is necessary to consider the implications of this approach for the durability of the built environment as well as for the interaction between architecture and nature in this region. Considering these implications is essential to answer the questions regarding what should be preserved and how.

Durability and Architectural Heritage

The decision to destroy or relocate coastal monuments threatened by coastal erosion challenges the right of coastal communities to create and preserve buildings with a commemorative role. Not only are their historic monuments disappearing, but their loss also sets a precedent that discourages long-term planning in the future: with the coastline receding at this pace, it is very difficult to envisage any new public monument built less than 500m from the sea. These conditions are hardly favourable for the preservation and creation of monuments durable enough to be shared by different generations. Yet, such durable monuments fulfil an important social role: they constitute lasting points of reference and essential elements of the local cultural identity. As Hannah Arendt has observed, the existence of a community that gathers people together and relates them to each other "depends on permanence". Public space "cannot be erected and planned for one generation, but must transcend the life span of mortal men".²

² H. Arendt (1998), 55.

Small churches like the ones of Rubjerg and Mårup have played this role for centuries. Their survival until the 20th century suggests that their poor, provincial communities, in spite of their limited resources, found the materials, expertise and energy required to preserve buildings that acquired a commemorative role. The Mårup church, for instance, kept playing a memorial role long after the settlements that originally surrounded it disappeared. Indeed, the church and its graveyard commemorated the loss of three British ships nearby. The anchor of *HMS The Crescent*, which sunk during the Napoleonic wars, was placed prominently in front of the west elevation of the church (Fig. 2). These memorials constituted the visual manifestation of major episodes in the history of the local community. Thanks to them, historical events became rooted in local traditions and narratives that now form part of the local culture.

The loss of such buildings will make it more difficult to remember and understand the history they were associated with. This history, from now on, will be only accessed through publications and museum exhibitions.³ Still, one might ask whether these sources of information can substitute everything a monument has to offer in this respect. However informative a publication may be, it lacks the presence and permanence of a local monument. Unlike museum exhibitions, monumental buildings constitute the only source of information that allows the observer to interact with the site of historic events. Looking at the giant anchor of *The Crescent* with the sea in which the frigate sank in the background provides a memorable learning experience that cannot be replaced by other media. The above observation naturally leads us to examine another quality of durable monuments like Mårup church: their interaction with an environment subject to constant change.

Architecture and Nature

The Danish Government claimed that the dismantling and eventual removal of specific historic monuments along the coastline was necessary to maintain the natural decomposition of the coastal cliffs and the sand dune formation process.⁴ At a time when the dune areas elsewhere Europe are being threatened,⁵ and great parts of the

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³ This instance seems to confirm the prediction expressed in Victor Hugo's *Notre Dame de Paris* concerning the undermining and replacement of architecture by the printed word. See E. V. Ellis (1997), p. 37.

⁴ C. B. Jensen and R. Markussen (2001), p. 810.

⁵ F. Jensen (1994), p. 268

Mediterranean coastline are disrupted by speculative touristic development, the decision of the Danish Government may be interpreted as a sign of environmental consciousness. On the other hand, this same decision also reflects the belief that building preservation is incompatible with ecology. This seems to overlook the efforts of the last fifty years to incorporate environmental data in the planning process, reconciling planning and ecology, built and the natural environment. The possibility of reaching a compromise between natural process and heritage preservation does not seem to have been adequately evaluated when the decision to dismantle the churches was taken. The following paragraphs cannot hope to fill this lacuna. This requires systematic, site-specific study and collaboration between conservation architects, planners, and landscape urbanists. However, it is possible to give the brief outlines of an alternative approach to the problem of reconciling natural process and heritage preservation.

This approach suggests that the maintenance of historic structures in a landscape subject to constant change may enhance our ability to evaluate, measure, and experience this change. 8 Thanks to their durability, historic monuments constitute 'golden threads' that link different stages in a site's history. Their continued presence provides the datum points necessary to understand the development of their changing context. In the case of Jutland, the local protection of the coast around monuments such as Mårup church should not only be viewed as an obstacle to coastal erosion and dune formation but also as a means to understand these processes better. If soft landscaping was developed to prevent coastal erosion around Mårup church, the church could become an ideal vantage point from which to observe this natural phenomenon. Experiencing the increasing distance between the protected church and the receding shoreline outside the protected zone could have enlivened our awareness of the phenomenon of coastal erosion.

Coastal protection depends largely on our ability to model the formation of dunes and to anticipate the coast's reaction to human intervention. Comparable examples such as the Dutch defences against the violent sea may be particularly useful here, as they involve "soft" measures that preserve the elements of the natural landscape. These techniques include the stabilisation of dunes with appropriate plants

 ⁶ I. McHarg (1992), p. iv.
⁷ B. Feilden (2003, pp. 191-202), describes the role of these disciplines.

⁸ S. Kostof (2010), p. 10.

and their protection from human activity, the preservation of the littoral drift, this seainduced transportation of sand that nourishes the dunes, as well as the building of natural dikes with layers of twigs, sand and clay. These techniques are friendlier to the environment than the techniques employed elsewhere in Jutland, such as shore revetments and groynes (i.e. artificial barriers constructed perpendicularly to the coast). The expertise accumulated from these 'soft' interventions shows how the maintenance and reinforcement of dunes can serve to preserve the coast, its morphology and its monuments. This method could be used to prevent coastal erosion along the entire coast. Alternatively, it could focus on zones of coastal protection outside which erosion can continue unimpeded.

An Inclusive Approach to Architectural Heritage

One of the most iconic confrontations between the man-made and the natural in Northern Jutland is found in the lighthouse of Rubjerg Knude. Periodically submerged in sand dunes and redundant, the elegant 1900s building seems condemned: it will be destroyed prior to the erosion of the ground it is built upon (Fig. 3). As Wienberg has observed, although the lighthouse is a fine example of the region's industrial heritage and a memorial of Denmark's naval history, its scheduled destruction has not been met with the same public opposition as the one organised for the Mårup church. The public's discrimination between the two buildings may reflect the way in which their significance is perceived today, on the basis of their age, uniqueness and social role. Similar discrimination and different degrees of protection between different 'classes' of buildings characterises most conservation legislations, including the one of Denmark.¹⁰

Discrimination between monuments may prove to be problematic when the criterion is not the significance of the monuments but their association with the most popular aspects of a community's history. This kind of discrimination favours only one aspect of an area's heritage, the one that fits better with the dominant perception of history; buildings that represent less popular narratives are lost. There are countless examples of this selective approach to architectural conservation in recent European history. Every one of them was marked by the loss of the architectural vestiges of entire periods: large part of the medieval tissue of many European cities was lost

See I. McHarg (1992), pp. 7-17; I. Carydi (2006).
J. A. Skovgaard (1978), pp. 520-523.

during the urban regeneration of the 19th and the 20th centuries; the emergence of new nation-states in the Balkans and Asia Minor was detrimental to the preservation of monuments that did not serve the new religious, cultural, and political agendas. Similar phenomena distort our current understanding of several historic sites that have lost entire phases of their history.

We realise that discrimination *between* buildings can often lead to discrimination *against* buildings. In the case of Mårup church, one might ask whether the focus on a single significant landmark represents the best strategy to preserve the region's architectural heritage. Indeed, even if this strategy had proven to be successful it would have only guaranteed the preservation of only one part of this heritage. Focus on key monuments makes it difficult to justify the preservation of theoretically 'lesser' buildings, such as the lighthouse, which are very likely to become vulnerable. Yet, these buildings and their interaction with their surroundings may prove to be essential components of the site's character, history and identity. Their disappearance may therefore create a far greater loss than a simple assessment of their individual significance may initially suggest.

The above observations suggest that the campaign for the preservation of architectural heritage may be more convincing if it focuses on broader areas instead of isolated buildings. This ensures that what is preserved is a true reflection of the history of a community and representative of the full spectrum of its architectural achievements. Reflecting the deliberations of the 1975 Congress on the European architectural heritage, which led to the famous "Amsterdam Declaration", this inclusive approach to heritage makes it possible to preserve a wide variety of historic buildings in a given site and to avoid the meaningless and artificial isolation of key monuments.¹¹

The Practice of 'Creative Dismantling'

The concept of 'creative dismantling' seems to have marked the preservation of church architecture in the region. The National Museum started dismantling Mårup church in August 2007 (Fig. 4). "Dismantling" was preceded by detailed investigation

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¹¹ The Amsterdam Declaration can be accessed through the site of ICOMOS. It states that "the architectural heritage includes not only individual buildings of exceptional quality but also their surroundings as well as all areas of towns or villages of historic or cultural interest."

and was carried out methodically, stage by stage. The removed parts were stored in order to be reassembled in an open-air museum in the future.

This was not the first time that a monument is treated in this way in Jutland: the churches of Rubjerg and Lyngby were relocated in a similar manner in the early 20th century. This is a recurrent phenomenon in Denmark: several buildings of Aalborg were moved to an open-air museum; a large farm building which is now at Hjerl Hede was originally built in the village of Vinkel, near Viborg. 12 This practice is also encountered outside Denmark. Spon Street, in Coventry, UK is partly lined by medieval timber buildings that were relocated there from elsewhere in the city, during the post-war redevelopment of the war-torn city centre.¹³

At first sight, this technique may seem to protect buildings by taking them away from sites that compromise their chances of survival. One could also claim that open-air museums facilitate access to the buildings and provide an environment suitable for their study. On the other hand, relocation risks 'fossilising' historic buildings, emptying them from the function that once animated them. Another disadvantage of similar relocations is the loss of archaeological evidence during dismantling. However careful the latter may be, not all the fabric can be moved intact, nor are modern craftsmen always able to reproduce every aspect of the original structure. In the case of Mårup church, for instance, none of the internal arches had a regular tracing. Like most medieval structures, they were non-geometric, the products of a "free-hand" method of construction. The future reconstruction risks erasing irregularities that constitute essential elements of the building's medieval character. Considering a building's relocation one should note the caveat expressed by one of the most important architectural historians of the 20th century. For Spiro Kostof, "no building is sufficient unto itself". Its character partly derives from the building's interaction with its changing setting. ¹⁴ To remove a building from its setting is to deprive it from part of its character.

Both the practice of relocating buildings to open-air museums and the perception of their maintenance as antagonistic to natural processes reflect a static perception of architectural heritage. Placing buildings in static, contrived environments overlooks the potential of their character to evolve due to the changes in

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J. A. Skovgaard (1978), p. 535.
F. W. B. Charles (1984), pp. 59, 224, 229.
S. Kostof (1984), p. 10.

their setting. Had the churches of North Jutland been preserved in situ they would have constituted an excellent illustration of how a dynamic landscape can affect a building's character. The dismantling of Mårup church brought an end to the fascinating interaction between this building and its surrounding landscape. To profit from a similar interaction in the future, further efforts need to be made to reconcile the preservation of nature with the preservation of architectural heritage.

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Figure 1. Mårup church, in Lønstrup Klint

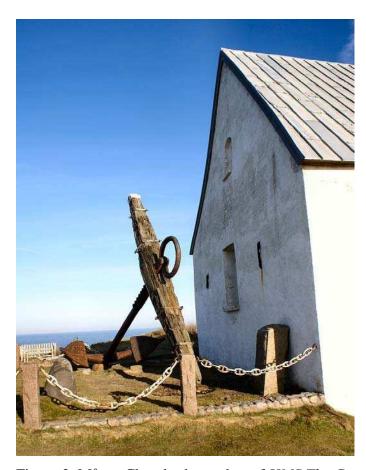


Figure 2. Mårup Church: the anchor of *HMS The Crescent*



Figure 3. The lighthouse of Rubjerg Knude



Figure 4. Mårup Church after its "creative dismantling" in 2007.