

Silesian University of Technology in Gliwice

Faculty of Architecture

**DOCTORAL THESIS: LIGHTHOUSES AS AN ELEMENT OF THE CULTURAL HERITAGE OF THE  
POLISH BALTIC COAST. IDENTIFYING THEIR POTENTIAL FOR ADAPTATION TO NEW  
FUNCTIONS AND THE PROSPECTS FOR THE DEVELOPMENT OF COASTAL AREAS**

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**Abstract in English**

As a result of ongoing social changes and dynamic technological development, it is necessary to reassess the existing functions of lighthouses and their significance, as well as to adapt them to new socio-cultural conditions. The ongoing automation of navigation systems means that the traditional functions of lighthouses are becoming less important, leading to their gradual phasing out worldwide.

Due to the rich history and unique geographical location of the Baltic Sea, lighthouses in what is now Poland have a long and varied tradition. This doctoral thesis is a comprehensive analysis of the adaptation possibilities of lighthouses located on the Polish coast of the Baltic Sea, taking into account 19 objects, including those that are no longer in operation. The main objective of the research was to determine the potential for transforming lighthouse complexes into facilities with new functional uses, while preserving their cultural and historical value, thereby increasing the tourist and cultural attractiveness of coastal towns and adapting them to contemporary market and social realities.

The research approach was interdisciplinary and included architectural, functional, historical, urban planning and interior design analyses. Spatial development strategies for coastal areas were also taken into account, examining the place and role of lighthouses in local planning policies. In order to gain a broader perspective, numerous examples of foreign towers and accompanying buildings were cited. The aim was to examine how other countries and continents are dealing with the problem of changing social needs and the development of navigation systems and technologies.

The results of the research emphasise the importance of lighthouses as carriers of tangible and intangible heritage and point to the need to develop coherent strategies for modernisation and protection, as well as the need to raise public awareness of these structures. The author argues that effective adaptation requires close interdisciplinary cooperation. The analyses confirmed that Polish lighthouses have great adaptive potential, allowing for a diversification of functions. The author's research results prove that even small-area structures can be effectively adapted.