

## LIVING DANUBE LIMES.

### Report on the progress of the Interreg DTP project “Living Danube Limes” and its activities in Hungary

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*The Department of History of Architecture and Monument Preservation of the Faculty of Architecture of Budapest University of Technology and Economics, which celebrated its 150th-anniversary last year, has always paid special attention to the teaching of the architecture of Antiquity. This stems not only from the fact that the Department of Ancient Architecture was one of the historical predecessors of the Department at the turn of the 19th and 20th centuries, when architectural education was based on historical periods but also from the fact that the Department's staff still considers that architecture students shall graduate with a comprehensive theoretical and practical knowledge of the culture of Antiquity and ancient architecture. This principle was followed by Gyula Hajnóczy, a legendary professor of our department, who, with his qualifications as an archaeologist researcher and designer architect, formed a bridge between the disciplines of research and preservation of ancient buildings. Professor Hajnóczy, the centenary of whose birth was celebrated with an international online conference in 2020, highlighted the importance of education not only through theoretical lectures but also in fieldwork, with monument surveys and the practical fulfilment of monument preservation based on historical data. To continue working in this spirit, our department joined the international Interreg Danube Transnational Programme project “Living Danube Limes”, co-funded by the Hungarian State that aims to highlight the cultural, symbolic and touristic value of the former Roman frontiers and routes, and the ideas to provide innovative concepts for the development of historic sites along the river. The study aims at giving an insight into the activities carried out and planned so far within the framework of this cooperation.*

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With the international cooperation of ten countries along the Danube, the European Union-funded Interreg project, “Living Danube Limes” focuses on the cultural, symbolic and touristic values of the former Roman frontiers and routes as well as on innovative concepts for the development of historic sites along the river. The consortium, led by Danube University Krems, brings together 46 partners, including 19 project partners and 27 associated strategic partners, and comprises leading universities in the region, scientific institutions and cultural organisations with considerable experience in the field. Hungary is represented by the Department of Architecture and Monument Preservation of the Budapest University of Technology and Economics (BME) with two associated strategic partners, the János Banner Archaeological Foundation and the Hungarian Association for Urban Planning. The other project partner representing Hungary is the Association of Cultural Heritage Managers. The Hungarian partners aim at involving potential Hungarian experts in the field of Roman architectural heritage research. With a budget of €3.2 million and co-funded by the Hungarian State, the Interreg project, running from July 2020 to December 2022, is part of the Danube Transnational Programme and brings together regions along the Danube from Germany to the Black Sea in the spirit of cultural heritage (NN 2022) (*Fig. 1*).

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Fig. 1. The project partner countries and the main elements of the project's holistic approach.

Source: Danube University Krems, 2020

In the course of the project, each country with a connection to the Danube has identified a pilot site that will be the main focus point for the implementation of the holistic approach. Activities at the sites include archaeological geoprospecting (geophysical surveys), sustainable tourism strategy development, VR reconstructions, facilitating cooperation between museums and visitor centres and various reenactment events. Once the pilot sites have been surveyed by the experts of Ludwig Boltzmann Institute for Archaeological Prospection and Virtual Archaeology, the data generated from the research provides insight into the hidden structures that lie below the surface and will be used to create VR models of the site. All this data is integrated into a freely available Living Danube Limes application. The cooperation aims to link the pilot sites into a chain of complementary Limes points to enhance the region from a touristic perspective. The project also includes a comprehensive strategy development by heritage conservation experts to promote sustainable and lasting protection of the historic infrastructure along the Danube (KAISER & WOLLER 2021).

Our department is actively involved in almost all aspects of the project, by teaching, research, or organisation. During the last two semesters, the architecture students of the University have been working on

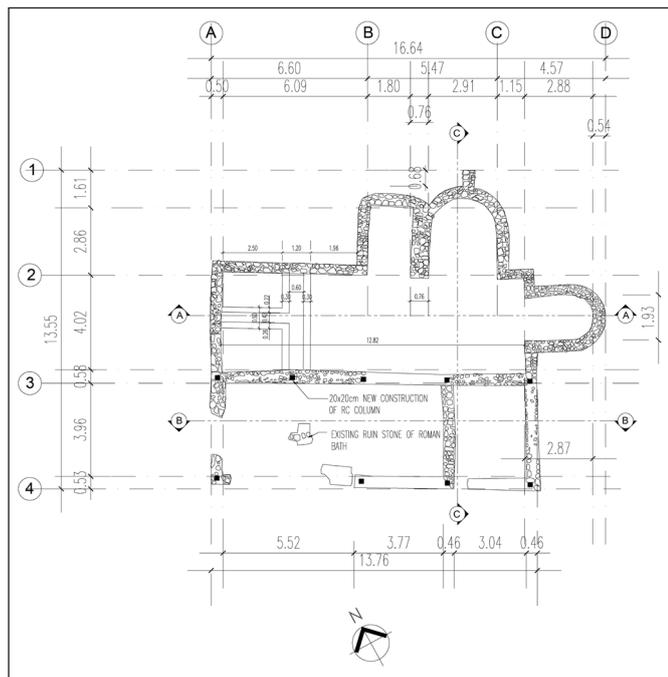


Fig. 2. True-to-form survey plan of the remains of the Roman bath in Százhalombatta, drawn by Fauzi Subaihah, a student of architecture in 2021, during the English course of Department Design. Supervisors: László Daragó and Gergő Máté Kovács

the historical values and contemporary development potential of the Hungarian pilot site, Százhalombatta, combining the disciplines of monument preservation and architecture. During one of the courses, students carried out a true-to-form survey of the remains of the Roman baths in Százhalombatta with a TLS laser scanner and then designed development options for the surroundings of the ruin. During a further regular course, the students worked on a comprehensive mapping and development of the former castrum and vicus area of Százhalombatta, also taking into consideration its historical values and present-day environmental conditions. Throughout this process, the students had the opportunity to visit the site and consult with the city's chief architect, archaeologists, and heritage experts (Fig. 2).

Besides regular university courses, the students could join the project within the framework of summer interdisciplinary workshops. During the summer of 2021, a two-phase summer university and student workshop was organised in Viminacium, Serbia, in cooperation with the Archaeological Institute of Belgrade, the Danube University Krems, and the BME. The first, online phase of the programme took place between 14 and 18 June 2021 with a scope of heritage preservation, contemporary digital survey methods, and various professional issues at the interface of architectural history and archaeology, with speakers from the Archaeological Institute of Belgrade, the Historic Environment Scotland, the CLIR Research Centre of the University of Pécs and the Department of History of Architecture and Monument Preservation of the BME. The participants arrived from partner universities in the Living Danube Limes project. The online preparatory course was followed by practical field training in early September, when the architecture students were given an insight into the excavation and ground-penetrating radar survey processes at the archaeological park of Viminacium in Serbia, saw the evaluation of the data, and visited the various laboratories of the archaeological park (Fig. 3). An important part of the programme was an excursion to several Roman sites and museums, from Viminacium to the Iron Gate. For both the objects and the summer workshop, the architecture students needed to be able to gain insight into the work of representatives from other disciplines, thus modelling the professional dialogue that they will need to engage in their future work.

Following a commemorative conference at the 100th anniversary of the birth of Professor Hajnóczy, organised during the initial phase of the project in cooperation with the Hungarian Academy of Sciences Standing Committee for the History of Architecture, Architectural Theory and Monuments, the Budapest History Museum Aquincum Museum



Fig. 3. Participants of the Summer School of Archaeology in Viminacium studying magnetometric survey methods. Photo by Gergő Máté Kovács / BME, 2021

and the National Cultural Fund in September 2021 (KRÄHLING 2021), the Faculty of Engineering of the University of Novi Sad, the Danube University of Krems and the Budapest University of Technology and Economics have organised an international conference between 7 and 8 September 2021 with the title “Potential of Historic Storytelling along the Roman Danube Limes.” The theme of the symposium was the architectural, archaeological, and touristic value and connectivity of Roman historical sites along the Danube. The scientific forum explored the possibilities of contemporary presentation and “storytelling” of a historical structure along the river in an international overview in different thematic sessions including “Roman Frontiers & their Presentation in the 21st Century”, “Ships and Roman Riverine Traditions”, “UNESCO World Heritage” and “Storytelling & Museums in the 21st Century.” Among the speakers at the conference were Craig Caldwell, Rob Collins and René Ployer. The conference was also attended by a number of Hungarian experts, including Tamás Mezős, Magdolna Vicze and Katalin Wollák.

Between 3 and 5 November 2021, the Ludwig Boltzmann Institute, that is also famous for its research in Carnuntum (WALLNER ET AL. 2021), conducted a magnetometer survey at the Hungarian experimental site Százhalombatta-Dunafüred comprising a former Roman auxiliary camp, a vicus, and the surroundings of a Roman bath (*Fig. 4*). The scientifically evaluated data generated during the survey will be used for VR modelling of the site’s features, which will be integrated with additional data by the project participants into a freely available Living Danube Limes application. The Municipality of Százhalombatta, the “Matrica” Museum and Archaeological Park and the János Banner Archaeological Foundation provided important technical support for the survey.

In February 2022, the leading partner of the project, the Danube University Krems organised an online Winter University on the threats to built heritage. And we shall not forget to look forward: a key element of the project is to link archaeological research with thematic itineraries – this time on water. What does Roman heritage mean for us in the 21st century? Through the research of the Roman heritage and its tourism potential it creates a contemporary link between the countries along the Danube. However, for locals, experimental archaeology can be the most appropriate method. Thus, a special feature of the programme is the complete and authentic reconstruction of a 4th-century lusoria type Danube vessel by the experts of Friedrich Alexander University Erlangen-Nuremberg based on the remains excavated in Mainz (DREYER 2021). The reconstructed vessel is scheduled to sail down the Danube from Germany to Romania in the summer and autumn of 2022. This vessel will have several stops in our country during August, welcoming the audience. Thus, through archaeology-based reconstruction work, the connecting cruise of the reconstructed lusoria will create a linear cultural route along the former Danube limes on the water with the involvement of the wider society.

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*Fig. 4. Experts of the Ludwig Boltzmann Institute carry out a magnetometer survey at the site of the former Matrica auxiliary camp in Százhalombatta. Photo by Zsuzsanna Emília Kiss / BME, 2021*

partner in the project is co-funded by the Hungarian State. For further information, see: <http://www.interreg-danube.eu/approved-projects/living-danube-limes> The authors of the study would like to express their thankfulness to all the partners, associated strategic partners and experts involved in the project.»

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