

STATE OF CONSERVATION REPORT 2023
Frontiers of the Roman Empire – The Danube Limes (Western Segment)
(Austria, Germany, Slovakia) - Identification Number: 1608rev

Executive summary

After the introduction of national management structures in the three states of Germany, Austria, and Slovakia, the first transnational Danube Limes (DL) Management Group meeting took place in September 2023 in Regensburg (Germany). The main objective of the meeting was to discuss the recommendations by the World Heritage Committee outlined in Decision 44 COM 8B.24 and its related background documents as well as the process of implementation of the recommendations.

The Scientific Advisory Board of "Forum Donaulimes", also at its first meeting in September 2023, initiated the development of a Research Framework for the Danube Limes, following a step-by-step plan similar to the Hadrian's Wall Research Framework. The plan involves determining the scientific status for all component parts, defining known and unknown aspects, and prioritizing research questions, with a specific focus on the course of the Danube River during Roman times.

In all States Parties, site management aims to enhance outreach and community engagement across various component parts. While a Limes info point opened in Carnuntum in 2023, plans are underway for the design and content of a Limes info point in Enns at the Museum Lauriacum. German colleagues addressed the implementation of World Heritage info centres at the Danube Limes and the Lower German Limes through a working group meeting in Bamberg, highlighting best practice.

In addition to Limes info points museums along the Danube Limes play a crucial role in disseminating information about World Heritage and engaging communities. Museums at the German part of the Danube Limes are already working as a network. Austria aims to continue an existing association for museums at the Danube Limes, emphasizing cooperation with Danube tourism organizations. In this context the DL Management Group discusses revising the Interpretation Framework established in 2015, recognizing the need to involve Slovakian museums and the broader network along the Danube Limes in this process.

Further issues concerning all States Parties are flood defence schemes and a defined approach to reconstructions. For the first issue it's to be mentioned that the site management, guided by Paragraph 172 of the Operational Guidelines, is actively engaged in the planning process as a public body and maintains close contact with planning authorities, with a focus on flood preparedness. Concerning the approach to reconstruction a working group will meet in January 2024 in Carnuntum (Austria) to discuss this issue and prepare a paper for agreement by all States Parties who will send it to the World Heritage centre for review by ICOMOS.

The World Heritage Committee's recommendations also refer to individual national issues, as are the temporary camps in Iza (Slovakia), the wind turbines in Carnuntum (Austria) and possible re-excavations at Eining Weinberg and further investigations at St Peter's church in Straubing (Germany). In Iza (Slovakia) Ground-Penetrating-Radar-Surveys (GPR) successfully documented the entire inner area of the 11th century fort and a sonar survey of the Danube bed led to the identification of probable remains of a Roman bridge. In Petronell-Carnuntum (Austria), discussions with the local authorities and on-site inspections led to recommendations concerning the handling of wind turbines. These clearly recommended preventing from the implementation of new wind farms or solar power plants in specific areas between component parts and the River Danube. Finally, it has to be mentioned that targeted re-excavations in Eining Weinberg (Germany) are not possible due to its status as a protected natural habitat. However, promising results of the geophysical surveys at St. Peter's church are in evaluation.

Decision 44 COM 8B.24, Para 5

The World Heritage Committee recommends that the States Parties give consideration to the following:

- a) Establishing buffer zones for the small number of component parts without them and submit these as minor boundary modifications by 1 February 2023,
- b) Continuing on-going research and documentation on the Roman course(s) of the River Danube, encouraging where possible connections between relevant component parts and the original river course to which they were related, and make the outcomes of this research work accessible,
- c) Developing a clear and consistent approach to reconstruction works for all component parts in the series in relation to limited reconstruction for the purposes of consolidation, conservation or presentation, in order to ensure that reconstruction above original materials is avoided as a general rule, that when used, it is adequately justified; that reconstruction does not dominate any of the component parts; and that differences between original and reconstructed material are distinguished in a consistent manner; such a defined approach should be submitted in draft to ICOMOS for review; and any further reconstruction work in the property should be halted until an approach agreed by ICOMOS and all States Parties is in place,
- d) Developing and approving a long-term strategy to allow all component parts and their buffer zones to be taken out of ploughing,
- e) Strengthening coordinated management with the appropriate water and river authorities to develop flood prevention or flood management measures (such as water retention zones) as well as active measures to control the flow of the Danube (dredging etc.) to prevent the flooding of component parts and their settings, and submit any proposals for major flood defence schemes, to the World Heritage Centre for review by ICOMOS, in line with Paragraph 172 of the Operational Guidelines, before any work is approved or undertaken,
- f) Continuing on-going work on the development of a common database as well as on a comprehensive research framework,
- g) Surveying and documenting the entire ensemble of temporary camps as an archaeological landscape,
- h) Undertaking where possible targeted re-excavations at Eining Weinberg and further investigations at St Peter's church,
- i) Ensuring that when wind turbines in the setting of Carnuntum come to the end of their useful life they are not replaced and introducing regulations to ensure that the landscape settings of other component parts are not compromised by new wind farms or other infrastructure projects,
- j) Expanding the current site-based community engagement to more component parts,
- k) Ensuring that Heritage Impact Assessments are used routinely for assessing the impact of proposed changes that might impact on component parts or their settings, and ensuring that all projects that might have an impact on Outstanding Universal Value are submitted to the World Heritage Centre for review by ICOMOS, in line with paragraph 172 of the Operational Guidelines.

Response to decision 44 COM 8B.24, Para 5

In November 2022, the Austrian State Party established the “Forum Donaulimes” as the operative management body for the management of the Austrian part of the World Heritage “The Danube Limes (Western Segment)” as well as for the coordination of the transnational management of the transnational property.

With the appointment of a managing director for the “Forum Donaulimes” in May 2023, the management is operationally active. The contact data read: Dr. Christian Hemmers, hemmers@forum-donaulimes.at, Forum Donaulimes, c/o Museum Lauriacum, Hauptplatz 19, 4470 Enns, Austria.

Beginning of 2024, the “Forum Donaulimes” will employ two additional site managers for the Austrian part of the World Heritage site. These positions are currently publicly advertised. As outlined in the management plan, a *Scientific Advisory Board* accompanies, supervises and supports the work of the “Forum Donaulimes”. The chair of the Scientific Advisory Board is also part of the governing body of the “Forum Donaulimes”, which is made up of representatives of the sponsoring administrative units in charge for World Heritage on regional and national level.

Germany and Slovakia also established national and / or regional management-systems: In Germany, the management of the World Heritage Danube Limes is the responsibility of the “Bayerisches Landesamt für Denkmalpflege”. The contact person for the German part is: Dr. Markus Gschwind, markus.gschwind@blfd.bayern.de, Bayerisches Landesamt für Denkmalpflege, Obere Stadtmühlgasse 1, 91781 Weißenburg in Bayern, Deutschland.

In Slovakia, the management of the World Heritage Danube Limes is the responsibility of the “Pamiatkový úrad Slovenskej Republiky” (Monuments Board of the Slovak Republic). The contact persons for the Slovak part are: Pavol Izvolt, Pavol.izvolt@pamiatky.gov.sk and Anna Tuhárska, anna.tuharska@pamiatky.gov.sk, Pamiatkový úrad Slovenskej republiky, Cesta na Červený most 6, 814 06 Bratislava, Slovakia.

Both countries delegated experts to the international DL Management Group. The first meeting of the DL Management Group took place in Regensburg from 4th to 6th of September 2023 discussing the issues of minor boundary modification, State of Conservation Report, joint presentations on one website (www.danube-limes.org) in development, shared use of LIMES mobil App, development of research framework and revision of the Interpretation Framework.

a) Establishing of buffer zones:

The establishment of additional buffer zones for the component parts, as recommended by the ICOMOS evaluation of the nomination, will be submitted as minor boundary modifications by 1st February 2024. For the component parts 1608rev-025 Oberranna and 1608rev-038 Albing the boundaries will remain as they currently stand.

At 1608rev-025 Oberranna the property boundaries of the property already includes an area without archaeological traces stretching all the way to the Danube. The objective is to maintain the visual connection to the Danube permanently and to prevent from the

implementation of any kind of built structures between the property and the bank of the Danube (which due to the small size of the area would not be possible anyway).

At component part 1608rev-038 Albing there are ongoing geophysical prospections in the wider setting showing previously unknown archaeological structures under the surface with context to the component part. The prospection will be finished in 2024 und will result in protection proceedings by the Federal Monuments Authority. Therefore, a minor boundary modification, or probably even a major boundary modification, will make more sense after the completion of the prospections in 2024.

b) Research and documentation of the Roman course(s) of the River Danube

As mentioned above, a Scientific Advisory Board for “Forum Donaulimes” was established in November 2022 to support the management in research questions. It is composed of experts working in the archaeological departments of the Federal States of Upper Austria, Lower Austria and Vienna, archaeologists of the University of Salzburg, the University of Innsbruck and the Austrian Academy of Sciences. An expert of the Federal Monuments Authority is also part of the Scientific Advisory Board.

As mentioned before, the elected head of the Scientific Advisory Board is also member of the management board. Dr. Stefan Traxler, Department for Culture of the Federal State of Upper Austria, currently holds this position.

Research on the Roman course(s) of the River Danube will take an important part in the agenda of the research framework (please also note section “f” below). Concerning the development of a comprehensive research framework, the International Management Group has commissioned the Scientific Advisory Board of “Forum Donaulimes” to start the process. To address research questions like the Roman course(s) of the River Danube “Forum Donaulimes” is about to establish a research cooperation with Geosphere Austria. This federal agency is well known for its expertise in geophysics and geophysical prospections at an international level and therefore will be an ideal partner for the task. This cooperation will also support the investigation of the impact of climate change on archaeological remains; particularly on these beneath surface.

c) Approach to reconstructions („one-to-one mock-ups“):

In its founding session, the International Management Group initiated the establishment of a working group to develop guidelines for a defined approach to reconstruction works respectively so called one-to-one mock-ups at archaeological sites along the Danube Limes. The first meeting of this working group will take place in January 2024 in Carnuntum (Lower Austria), including members of all States Parties responsible for the transnational World Heritage property. Further reconstructions are halted in the property until a common approach agreed by ICOMOS and all States Parties will be in place.

d) Long-term strategy for component parts and buffer zones to be taken out of ploughing

In all States Parties, due to the legal situation, the control of extensive agriculture is only possible on a voluntary basis. Nevertheless, at some Austrian parts of the property it was possible to stop deep ploughing. In Zwentendorf (1608rev-029) there are plans to buy or lease the land to visualize the invisible archaeological remains by planting of vegetation that does not intrude into the structures below the surface. In Germany, the government offers a programme to bring parts of the property into public ownership.

e) Major flood defense scheme

The site management is either involved in the planning process as a public body or it is in close contact with the planning authorities. It acts in accordance with Paragraph 172 of the Operational Guidelines. At the Austrian River Danube, extensive measures have been taken in the last 20 years to be prepared for further flooding events. However, in many cases, the component parts are situated on higher ground and therefore not endangered by flooding or flood prevention.

f) Development of a common database and research framework

As mentioned above, the Scientific Advisory Board of “Forum Donaulimes” started the process of developing a Research Framework for the Danube Limes. Thereon the following step-by-step plan was developed along the lines of the Hadrian's Wall Research Framework: In a first step the scientific status quo for all component parts will be determined. As a second step that will lead to a definition of what we know and what we don't. The third and last step will be the prioritization of research questions with a special focus on the course of the Danube River in Roman times.

Step One: The scientific status quo for each component part will be developed according to the following aspects:

- natural area, environment, course of the Danube
- pre-Roman (changes, turning points, continuities)
- Roman period: chronology (changes, turning points)
- Choice of location (reference to the Danube - ports, fords, bridges etc)
- Roman settlement and military topography
 - military installations
 - crew
 - foreland
 - population
 - infrastructure (navigable rivers, “Limes road” etc)
 - economy (raw materials, production, trade etc)
 - hinterland/supply
 - nutrition
 - water supply/disposal
 - religion, shrines, cult
 - burial grounds
- post-Roman (turning points, continuities)

Step one is estimated to last for two or three years. Thanks to the Scientific Advisory Board this seems to be manageable. In a first experimental phase, the Department for Urban Archaeology in Vienna will survey the component parts in Vienna according to the mentioned aspects. In addition to this the University of Innsbruck will provide a class dealing with the examination of several component parts according to the aspects mentioned above. In spring 2024, the Scientific Advisory Board will discuss the results of these attempts.

g) Surveying and documenting of temporary camps

A group of temporary camps at Iža was identified on the basis of aerial photographs that were conducted in the past. Geophysical measurement did not yield any results due to the low magnetic susceptibility. The localization of camps was confirmed and specified more precisely by archaeological probes.

In 2021, it was possible to identify traces of probably the 11th large temporary camp in Iža by old and new aerial photographs. The ditch of the camp was confirmed by Ground Penetrating-Radar (GPR) measurements (with two different measuring frequencies, 500 MHz and 250 MHz).

During a GPR survey in 2021, it was possible to document the entire inner area of the fort (3.0 ha). In terms of confirming previously excavated features, these measurements yielded very good results (regarding both their location and details), while carried out by specialists from the Ludwig Boltzmann Institute for Archaeological Prospection and Virtual Archaeology (LBI ArchPro, Vienna). A sonar survey of the Danube bed in 2021-2022, carried out by experts from Helicop s.r.o., led to the discovery of the remains of pillars identified with high probability as a Roman bridge dating to the 4th century, which connected Brigetio with its bridge head fort Iža.

New geomagnetic measurements will also presumably bring more precision in the documentation of other parts of temporary camps. Geomagnetic surveys of the temporary camps are planned gradually as well as a continuation of documentation and research, depending on the acquisition of financial resources.

All identified temporary camps are adequately protected by law as archaeological sites and in the intentions of the declared protection zone and its conditions.

h) Eining-Weinberg and St. Peter's church

Since Eining Weinberg is a registered biotope and a protected natural habitat, targeted re-excavations there are not possible.

For St Peter's church, the results of the geophysical surveys carried out at the suggestion of the ICOMOS experts indicate structures probably associated with the late Roman fort. An evaluation of these findings is underway.

i) Wind turbines of Carnuntum and regulations for landscape settings

During the planning-process of extensions to the wind farm in Petronell-Carnuntum a site-inspection took place on March 31st 2021 in order to ensure the consideration of the ICOMOS evaluation 2019. The result was an agreement that new wind-turbines, wind farms or solar power plants shall neither be implemented in the area between the component parts and the River Danube nor between the component parts located in Carnuntum and Bad Deutsch Altenburg. The extension of the existing wind-park outside the southern buffer zone of the property from 47 to 52 wind turbines does not change the visual appearance of the wind-park and hence has no effects on the property. However, in the course of replacing expired wind turbines of the wind park, those located in the immediate vicinity of the buffer zone should be removed. The new ones should be implemented in a greater distance from the property.

Since the visual relationships from the World Heritage property to the river Danube and vice versa are of crucial importance, the strongest visual disturbance currently arises from three existing wind turbines operating isolated in the in the middle of the buffer zone and in the

direct field of view of the archaeological site of Carnuntum. These shall not be replaced after the expiry of their operating life.

j) Expanding community engagement

In all States Parties, the site management strengthens outreach and promotes the expansion of community engagement to more component parts.

While a Limes-info point was opened in Carnuntum in 2023, as an addition to the existing exhibition in the visitors-centre of the Archaeological Park, there are ongoing plans for design and content of the Limes-info point in Enns, at the entrance of Museum Lauriacum.

Due to several attempts for the implementation of World Heritage info centres or further info points at the Danube Limes and the Lower German Limes, the German colleagues organised a conference in Bamberg dealing with this issue and presenting best practices examples.

A great advantage in providing information about World Heritage and the Danube Limes and in involving communities are the museums along the Danube Limes. These are ranging from small volunteer-run houses to large tourist hotspots. For Austria, it is a main goal to carry on with the existing association “Verein Museen am Donaulimes”, or alternatively, to build up a museum network as it already exists in Bavaria (Germany). Regardless of the approach chosen, a cooperation with the Danube tourism organisations of Upper and Lower Austria are essential for further dissemination of the World Heritage idea and enhancing awareness of the Danube Limes

According to this idea, a network meeting between museums and tourism is shall take place amid 2024.

An issue concerning the museums and discussed by the Management Group is the revision of the Interpretation Framework established in 2015. Since the Slovakian museums were not yet involved at that time, there is need for revising the Interpretation Framework. This process certainly has to involve the museums along the Danube Limes.

k) Heritage Impact Assessments should be used

In case of proposed changes that might affect component parts or their settings, Heritage Impact Assessments shall be used as a standard tool of management. The necessity of carrying out an HIA shall in any case be discussed within the transnational management group based on the findings of the regularly carried out monitoring. In Austria, ICOMOS experts support the site managers in the monitoring of the property and for this purpose hold close contact with the site management.

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