



# FRONTIERS OF THE ROMAN EMPIRE – THE LOWER GERMAN LIMES

NOMINATION FILE FOR INSCRIPTION ON THE UNESCO WORLD HERITAGE LIST

PART III – ANNEX 2 | MANAGEMENT PLAN







**FRONTIERS OF THE ROMAN EMPIRE  
THE LOWER GERMAN LIMES**

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**MANAGEMENT PLAN  
2021–2027**

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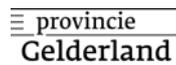
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Ministry for Regional Identity, Communities and Local Government, Building and Gender Equality of the Land of North Rhine-Westphalia



# List of contents

MANAGEMENT PLAN – PART I OVERARCHING FRAMEWORK	9
1. Context, status and structure of the Management Plan	10
1.1 General introductionthe property	10
1.2 Frontiers of the Roman Empire World Heritage site	10
1.3 Status of the Management Plan	11
1.4 Involvement of stakeholders	12
1.5 Terms and abbreviations	13
2. Value and importance of the Lower German Limes	14
2.1 The Lower German Limes	14
2.2 Statement on boundaries and buffer zones	17
2.3 The outstanding universal value of the Lower German Limes	17
3. Overarching structures for management and decision making	22
3.1 Guiding principles	22
3.2 Management of the Lower German Limes at a transnational level	23
4. Main management challenges	26
4.1 Long term objectives	26
4.2 Management Strategy	26
4.3 Risk management	26
5. Overall monitoring and reporting to WHC	32
5.1 Monitoring	32
5.2 Periodic Reporting to the WHC	32
MANAGEMENT PLAN – PART II THE LOWER GERMAN LIMES IN THE NETHERLANDS	35
1. Objectives	36
2. Management structure in the Netherlands	38

2.1 Management structure	38
2.2 Partners	40
3. Protection and conservation	41
3.1 Standards: Principles for planning and conservation	41
3.2 Regulations	41
3.3 Working of the legal system	44
3.4 Developments in and near the component parts	45
4. Presentation	47
4.1 Public awareness	47
4.2 Visitor management	50
5. Knowledge and research	51
5.1 Limes data	51
5.2 Research concept	51
6. Realisation	52
6.1 Implementation	52
6.2 Staffing	53
6.3 Participation and partners	53
MANAGEMENT PLAN – PART III THE LOWER GERMAN LIMES IN GERMANY   RHINELAND-PALATINATE   NORTH RHINE-WESTPHALIA	55
PART A: MANAGEMENT PLAN	56
Overview	56
PART B: GUIDELINES FOR THE CONSERVATION, RESTORATION, RECONSTRUCTION, REBUILDING AND PROTECTIVE COVERING	70
Definitions	70
General parameters	70

Guidelines for future actions	71
International regulations	72
PART C: BASIC PARAMETERS OF A FUTURE STRATEGIC PRESENTATION PLAN (‘INTERPRETATION FRAMEWORK’)	73
MANAGEMENT PLAN – APPENDIX	75
Appendix 1: Management plan actions	76



# MANAGEMENT PLAN



## Part I – OVERARCHING FRAMEWORK

# 1. Context, status and structure of the Management Plan

## 1.1 General introduction

Since 2005, a management plan is required by the UNESCO World Heritage Committee as part of the nomination file. Management plans are aimed at upholding the Outstanding Universal Value (OUV) of World Heritage sites (WHS) recognised by UNESCO. This involves:

- the protection, preservation, sustainable maintenance and management of the World Heritage site;
- the appropriate incorporation of new developments; and
- the propagation of the World Heritage site to society.

Protection is requisite and ensured by laws and regulations. In addition, the parties need to know how to deal with modern development without harming the OUV of the *Frontiers of the Roman Empire – The Lower German Limes*. It is important to understand that the *Frontiers of the Roman Empire – The Lower German Limes* is an archaeological site, located in a densely populated region of Europe, including properties in the centre of cities like Bonn and Utrecht. Integrating understanding and protection of the OUV with development over the long term is essential for continuity of the OUV of the World Heritage site.

The management plan gives an overview on how the *Frontiers of the Roman Empire – The Lower German Limes* will be managed during the period 2021–2027.

Part I of this management plan focuses on positioning the OUV of the World Heritage site, the *Frontiers of the Roman Empire – The Lower German Limes* at the overarching, international level of this transnational serial site. The management plan is an integral part of the nomination file (section 5.e). In Parts II and III, the Lower German Limes in the Netherlands and in Germany are described as separate management units.

## 1.2 *Frontiers of the Roman Empire* World Heritage site

The northern border of the Roman Empire, the Limes, is the largest linear archaeological feature in Europe, part of a larger structure encompassing also Northern Africa and the Middle East. Several sections of the Roman Limes currently have World Heritage status. Hadrian's Wall in Great Britain was the first part to be listed as a World Heritage site, in 1987. In 2005 the Upper German-Raetian Limes was added to the list, followed in 2008 by the Antonine Wall (in Scotland). Together, they form a World Heritage site known as *Frontiers of the Roman Empire*. When the Upper German-Raetian Limes was nominated, the World Heritage Committee recommended 'that the nomination be seen as the second phase of a possible wider, phased, serial transboundary nomination to encompass remains of the Roman frontiers around the Mediterranean Region'.

In 2017, a thematic study was presented to the World Heritage Committee, developed and adopted by the joint partners of the *Frontiers of the Roman Empire*. This study provided an overview of the remains of the frontiers of the Roman Empire, extending across the continents of Africa, Asia and Europe (fig. 1). In the thematic study, five different frontier types were distinguished across the *Frontiers of the Roman Empire* as a whole, each type displaying clear differences in the densities, disposition, type and size of military installations, reflecting variations in climatic and geographical conditions, habitation and land use, external threats and political interests. These five groups are:

- the desert frontiers of the Roman provinces of Africa, Egypt, Arabia and southern Syria;
- the frontiers of northern Syria and Cappadocia (Turkey), constituting the frontier with the powerful Parthian Empire in the East;
- the frontiers along the European rivers of the Rhine and the Danube;
- the artificial linear barriers of Hadrian's Wall, the Antonine Wall and the Upper German-Raetian Limes (the existing World Heritage site);

- the mixed frontiers of the Roman province of Dacia (Romania), encapsulating the chronological and geographical scope of the frontiers and their functional, chronological, social and cultural links and complexity.

A nomination strategy was developed based on these five groups, providing the World Heritage Committee with insight into the intended nominations of the *Frontiers of the Roman Empire* within Europe. Within this strategy, it was agreed that the European frontiers should be divided into four single properties, operating under a common framework *Frontiers of the Roman Empire*.

- The artificial linear barriers of Hadrian's Wall, the Antonine Wall and the Upper German-Raetian Limes.
- The Lower German (i.e. Lower Rhine) frontier.
- The Danube frontier.
- The frontier of the Roman province of Dacia.

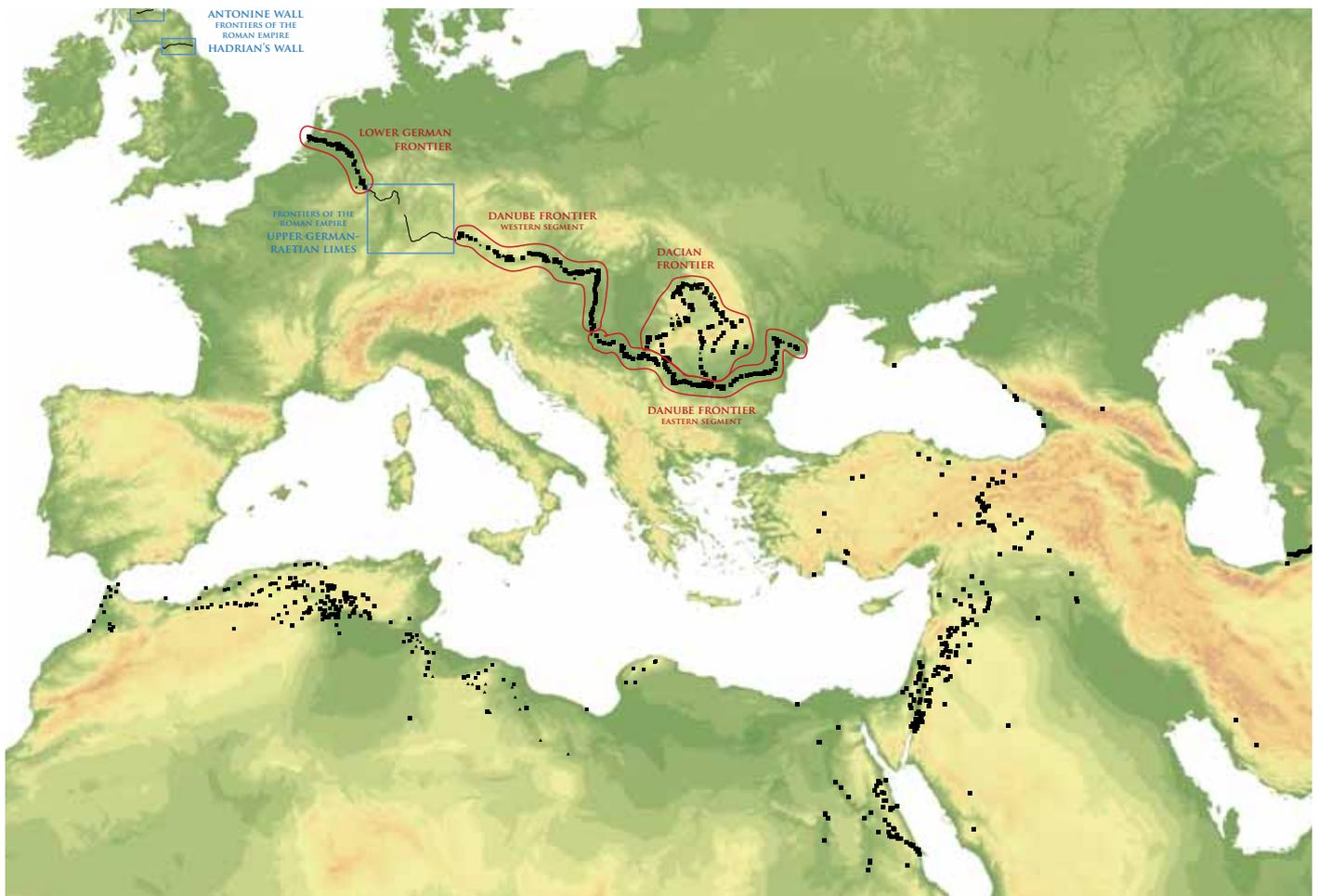
The *Frontiers of the Roman Empire – The Lower German Limes* was identified as a prospective UNESCO World Heritage site in 2011 in the Netherlands (by inscription on the Tentative List of Dutch World Heritage sites) and in 2018 in Germany.

### 1.3 Status of the Management Plan

The Dutch State and the German States of North Rhine-Westphalia and Rhineland Palatinate are responsible jointly, as the site manager, for the nomination and the adoption of the management plan, which complies with the requirements of the UNESCO World Heritage Committee. The site manager is responsible for management and plays an important role in the implementation of the management plan.

Following adoption by the steering group of administrators of the state governments and provinces (September

Fig. 1 *Frontiers of the Roman Empire*.



2019), the management plan will be a binding plan for the site manager. The management plan provides the basic principles and guidelines for the policies of all the signatories. It has no legal status itself, but the management measures affect public authorities, private parties, owners and users/ operators. Following adoption by the steering group, the management plan will be added to the nomination file to be submitted to the UNESCO World Heritage Committee.

The management plan is adopted for a period of 6 years. The nomination of the Lower German Limes as a World Heritage site will be submitted in 2020 for approval in 2021. This management plan therefore focuses on the period 2021–2027. Included in the management plan are developments (opportunities or threats) considered likely to manifest themselves during those 6 years. The administrative parties have committed themselves to act in accordance with this management plan during the nomination phase (2018–2020). Three years after coming into effect (2023), a mid-term review of this plan will take place.

#### **1.4 Involvement of stakeholders**

The management plan has been developed by the Dutch Limes Association together with the German States of North Rhine-Westphalia and Rhineland-Palatinate. Local governments were involved from the beginning and throughout the process of drawing up the management plan, through regular meetings and consultation. The proposed boundaries of the World Heritage site have been approved by the municipalities. Discussions with key stakeholders, such as regional water boards, heritage organisations, museums, universities and (other) NGOs have also contributed to the management plan. Input from the local and wider community with an interest in the site has been gathered and utilised. In those areas where extra protection measures were required, residents and owners have been informed.

The final draft of the management plan, together with the nomination file, was open for consultation from January 15 to March 1 in 2019 in the Netherlands. Local government and key stakeholders were approached individually for their input. To give the wider community opportunities to voice their opinion, attention was drawn to the consultation via a variety of media and networks. All comments received were considered, leading to revision of the management plan where deemed necessary. The process of handling the input during the consultation period has been documented in a consultation report.

## 1.5 Terms and abbreviations

**OUV:** Outstanding Universal Value means cultural and/or natural significance which is so exceptional as to transcend national boundaries and to be of common importance for present and future generations of all humanity.

**FRE:** *Frontiers of the Roman Empire*. The border line of the Roman Empire at its greatest extent in the 2<sup>nd</sup> century AD. It stretched over 7,500 km from the Atlantic coast of northern Britain, through Europe to the Black Sea, and from there to the Red Sea and across North Africa to the Atlantic coast.

**LGL:** Lower German Limes. Part of the *Frontiers of the Roman Empire* encompassing the north-eastern border of the Roman province of *Germania inferior* (Lower Germany), from Katwijk (NL) to Remagen (DE).

**Frontiers of the Roman Empire – The Lower German Limes:** Full name of the proposed World Heritage site

**Property:** The area(s) that is inscribed on the World Heritage List. A property can exist of more than one part. In that case it is a serial nomination. In cases where those areas are located in different states, it is a transnational serial nomination.

**Component part:** an area, clearly defined, being a part of the Property, that contributes to the Outstanding Universal Value of the property as a whole.

**Buffer Zone:** an area bordering the nominated property which has complementary legal and/or customary restrictions placed on its use and development to give an added layer of protection to the property.

**Cluster:** group of spatially separated parts of a single archaeological complex.

**World Heritage committee:** a representative board that is composed of 21 members and that decides on the management of the World Heritage List.

**World Heritage Centre:** Secretariat to the World Heritage Committee

**ICOMOS:** the International Council on Monuments and Sites. A non-governmental organisation responsible for, amongst other matters, the evaluation of properties nominated for inscription on the World Heritage List

## 2. Value and importance of the Lower German Limes

### 2.1 The Lower German Limes

#### OVERVIEW

The Lower German Limes (LGL) forms an over 400 km section of the Limes from the border of Upper Germany to the North Sea. It runs through the German states of Rhineland-Palatinate and North Rhine-Westphalia and through the Dutch provinces of Gelderland, Utrecht and South-Holland and passes through various landscapes (fig. 2). Most of the Lower German Limes' military facilities have been preserved below ground. In many places, layers with organic material offer very special conditions of preservation. The various elements of the *Frontiers of the Roman Empire – The Lower German Limes* which extend along the Rhine like a string of pearls, together with the river itself, form a border system that existed for over 400 years and still shapes both cities and countryside in many places.

#### HISTORY AND MILITARY DEVELOPMENT

The first military infrastructure was established in the last decades BC, for the conquest of Germanic territories across the Rhine. Once this ambition had failed, the left river bank was converted into a fortified frontier separating the 'Romanised' Gaulish hinterland from the 'barbarian' Germanic foreland. The first military bases on the Lower Rhine represent the very beginning of the linear perimeter defence of the Roman Empire, which would develop into a coherent frontier system extending over three continents in the 2<sup>nd</sup> century AD. The entire range of military facilities such as legionary fortresses, practice camps, cavalry, infantry and fleet forts, fortlets, watchtowers, roads and waterways are represented, reflecting strategic adaptation and development of military engineering. The legions played a special role in this. Four legionary fortresses along this Limes section secured and organised the border, and vexillations operated various production workshops for a wide range of goods. Having survived a crisis in the late 3<sup>rd</sup> century AD, the frontier shared the phased disintegration of the Western Roman Empire until the early 5<sup>th</sup> century AD.

Some of the latest military settlements became nuclei of the ecclesiastical and administrative infrastructure of the Middle Ages. In post-Roman times too (and at certain places even today), the Lower German Limes had an influence on the lives of people living in its vicinity. In the names of towns, woods, roads and meadows it makes an important contribution to the area's identity.

#### WETLAND CONDITIONS

Situated in an area which has always been a wetland, with outstanding preservation conditions, the Lower German Limes exhibits unique testimonies of water management strategies and constructions employed by the military command of the Roman Empire. They provide unparalleled insights into military architecture, shipbuilding, logistics and supply. These are exemplified by an excavated canal, massive quays and landing platforms, specially adapted fort designs and road sections protected by timber revetments. Buried riverine rubbish deposits constitute veritable treasure-chests of organic materials and artefacts bearing unique information on frontier life and on vanished traditions such as notably that of river boat building.

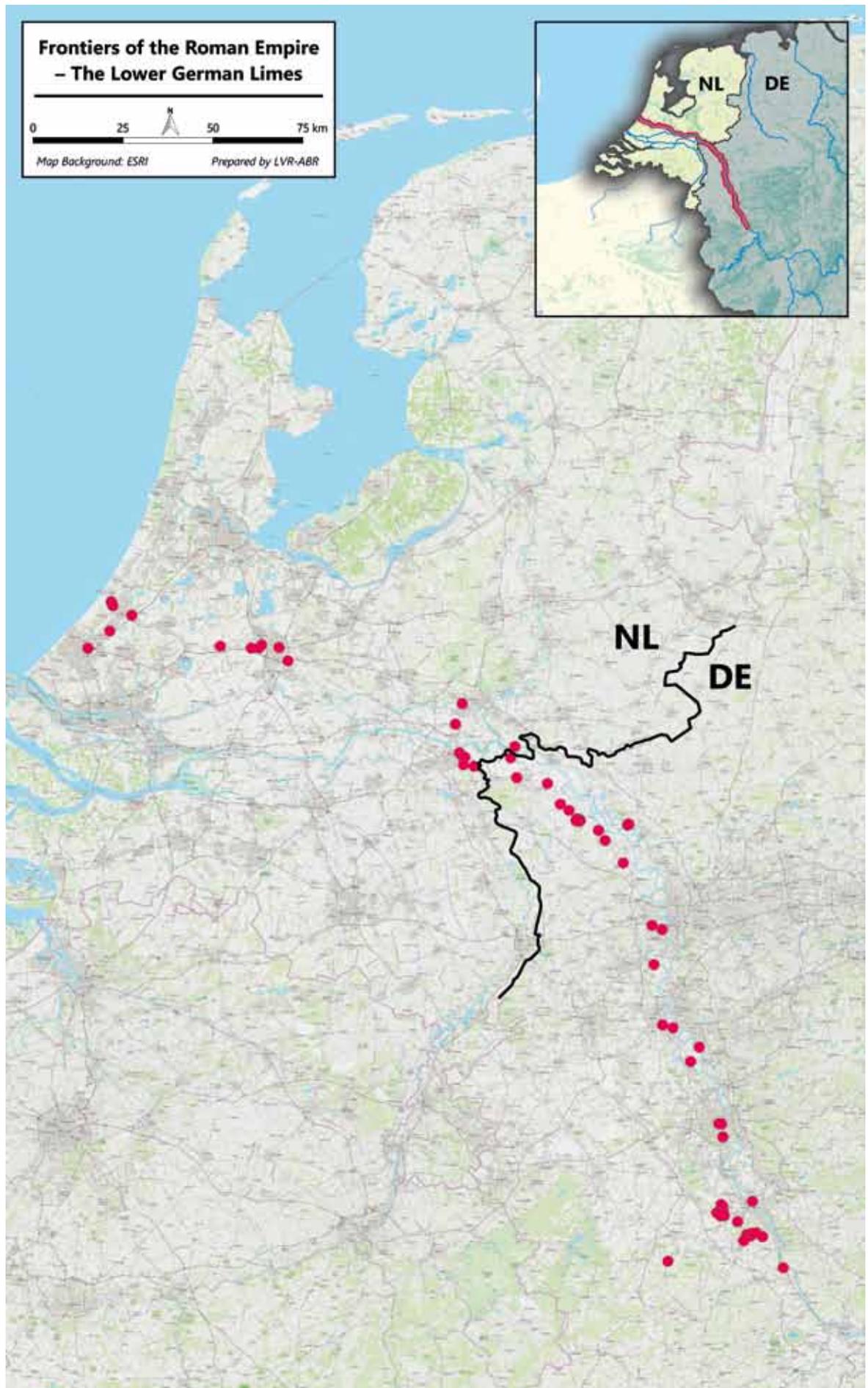
#### INTEGRITY AND AUTHENTICITY

The nominated component parts of the *Frontiers of the Roman Empire – The Lower German Limes* clearly bring out the linear character of the frontier along the river Rhine. They cover its entire range of military installations and relevant associated structures, explaining its functioning and development. The adaptation of military infrastructure to the dynamic river landscape is eminently illustrated by forts with specific designs, an excavated canal and protective timber structures along riverbanks and road sections. Buried riverine deposits with well-preserved artefacts and organic remains provide unique insights into the frontier system and frontier life.

Although several sites have been built over, the general state of conservation is satisfactory. The near absence of aboveground remains is compensated by the outstanding preservation of buried features at many sites. Current



Fig. 2 LGL in the Netherlands, North Rhine Westphalia and Rhineland-Palatinate.



**Fig. 3** Overview of the position of the selected component parts of the LGL.

legislation ensures effective protection of the property, enhanced by adequate buffer zones. The preservation of abundant buried remains in dynamic urban areas demonstrates that, with due care, sustainable protection and development can be compatible.

As an archaeological property, the *Frontiers of the Roman Empire – The Lower German Limes* has a very high level of authenticity. Virtually all of the component parts that have been included in the nomination are underground and remain unexcavated. Since the remains of the *Frontiers of the Roman Empire – The Lower German Limes* are almost all below ground, their value needs appropriate presentation in order to be understandable by the general public. This need has led to a number of innovative projects designed to visualise the defences of some forts aboveground, while protecting the authenticity of the buried remains as well as the setting and integrity of the surroundings. These visualisations and other post-Roman buildings and features overlying the buried remains are treated as vertical buffer zones.

## 2.2 Statement on boundaries and buffer zones

The selection of component parts and buffer zones is an essential requirement for the establishment of effective protection of the nominated components (fig. 3).

### COMPONENT PARTS

All component parts are well protected by monument protection laws. The nominated property *Frontiers of the Roman Empire – The Lower German Limes* comprises 106 component parts, 79 of which are grouped in 17 clusters. An overview of the component parts/clusters and the elements of the frontier they represent is provided in table 1.

The selected component parts and clusters are presented in detail in the catalogue of component parts, where the main characteristics and their contribution to the proposed Outstanding Universal Value may be found under the headings ‘Brief description’ and ‘Attributes and values’.

### BUFFER ZONES

Buffer zones give an added layer of protection to a property. An important function is the protection of views and of the setting. For the *Frontiers of the Roman Empire – The Lower German Limes* the buffer zones often have an important additional function, of safeguarding information that is relevant to the understanding of the values and features included in the property.

This additional function applies amongst others when relevant attributes are expected but have not been securely attested. They may for instance have been hinted at by surface finds or by limited observations during small-scale building activities. In such cases there is normally not enough archaeological evidence for protection under national or state laws, and thus an insufficient basis for nomination as a component part.

The additional function is also applicable when attested attributes cannot be sustainably protected, for instance because they are located near vital infrastructure which is likely to need extension in the future, or in areas where urban development is inevitable and protection cannot be ensured. Inclusion in a buffer zone guarantees that the preserved information can be collected by excavation in conformance with the highest scientific standards.

## 2.3 The outstanding universal value of the Lower German Limes

### PROPOSED STATEMENT OF OUTSTANDING UNIVERSAL VALUE

*Frontiers of the Roman Empire – The Lower German Limes* ran for 400 km along the Lower Rhine, along the north-eastern boundary of the Roman frontier province of *Germania inferior* (Lower Germany), from the Rhenish Massif south of Bonn (Germany) to the North Sea coast (the Netherlands). For more than 450 years from the late 1<sup>st</sup> century BC, it protected the Roman Empire against Germanic tribes which it considered as ‘barbaric’.

The first military bases were built in the last decades BC, for the conquest of Germanic territories across the river Rhine. Once this ambition had failed the left river bank was converted into a fortified frontier separating Roman Gaul from the ‘barbaric’ foreland. Military installations of widely varying types and sizes and associated civil structures were built on the edge of the left river bank and linked by an infrastructural and logistical network.

id	name	country	municipality
1a	Valkenburg-Centrum   Kerkweg	NL	Katwijk
1b	Valkenburg-Centrum   Centrum	NL	Katwijk
1c	Valkenburg-Centrum   Raadhuis	NL	Katwijk
1d	Valkenburg-Centrum   Kerkhof	NL	Katwijk
2a	Valkenburg-De Woerd   North	NL	Katwijk
2b	Valkenburg-De Woerd   South	NL	Katwijk
3	Voorburg-Arentsburg	NL	Leidschendam-Voorburg
4a	Corbulo's canal   Vlietwijk	NL	Voorschoten
4b	Corbulo's canal   Starrenburg	NL	Voorschoten
4c	Corbulo's canal   Knippolder	NL	Voorschoten
4d	Corbulo's canal   Vlietvoorde	NL	Leidschendam-Voorburg
4e	Corbulo's canal   Rozenrust	NL	Leidschendam-Voorburg
4f	Corbulo's canal   Romeinsepada	NL	Leidschendam-Voorburg
5a	Leiden-Roomburg   Park Matilo	NL	Leiden
5b	Leiden-Roomburg   Besjeslaan	NL	Leiden
6	Woerden-Centrum	NL	Woerden
7a	Utrecht-Limes road   Zandweg	NL	Utrecht
7b	Utrecht-Limes road   Veldhuizen	NL	Utrecht
7c	Utrecht-Limes road   De Balije	NL	Utrecht
8a	Utrecht-Hoge Woerd   Castellum	NL	Utrecht
8b	Utrecht-Hoge Woerd   Langerakbaan	NL	Utrecht
9	Utrecht-Groot Zandveld	NL	Utrecht
10	Utrecht-Domplein	NL	Utrecht
11a	Bunnik-Vechten   Marsdijk	NL	Bunnik
11b	Bunnik-Vechten   Provincialeweg	NL	Bunnik
12	Arnhem-Meinerswijk	NL	Arnhem
13	Elst-Grote Kerk	NL	Overbetuwe
14a	Nijmegen-Valkhof area   Valkhofpark	NL	Nijmegen
14b	Nijmegen-Valkhof area   Hunnerpark	NL	Nijmegen
15	Nijmegen-Hunerberg	NL	Nijmegen
16a	Nijmegen-Kops Plateau   West	NL	Nijmegen
16b	Nijmegen-Kops Plateau   North	NL	Berg en Dal
16c	Nijmegen-Kops Plateau   East	NL	Nijmegen
16d	Nijmegen-Kops Plateau   Kopse Hof North	NL	Nijmegen
16e	Nijmegen-Kops Plateau   Kopse Hof South	NL	Nijmegen
17a	Berg en Dal-aqueduct   Mariënboom	NL	Nijmegen
17b	Berg en Dal-aqueduct   Swartendijk	NL	Berg en Dal/Nijmegen
17c	Berg en Dal-aqueduct   Cortendijk	NL	Berg en Dal
17d	Berg en Dal-aqueduct   Louisedal	NL	Berg en Dal
17e	Berg en Dal-aqueduct   Kerstendal	NL	Berg en Dal
18a	Berg en Dal-De Holdeurn   North	NL	Berg en Dal
18b	Berg en Dal-De Holdeurn   South	NL	Berg en Dal
19	Herwen-De Bijland	NL	Zevenaar
27	Kleve-Keeken	DE	Kleve
21a	Kleve-Reichswald   West	DE	Kleve
21b	Kleve-Reichswald   East	DE	Kleve
22	Till	DE	Bedburg-Hau
23	Kalkar-Kalkarberg	DE	Kalkar
24	Kalkar-Bornsches Feld	DE	Kalkar
25a	Uedem-Hochwald   Hochwald 1	DE	Uedem
25b	Uedem-Hochwald   Hochwald 2	DE	Uedem
25c	Uedem-Hochwald   Hochwald 3	DE	Uedem
25d	Uedem-Hochwald   Hochwald 4	DE	Uedem
25e	Uedem-Hochwald   Hochwald 5	DE	Uedem
25f	Uedem-Hochwald   Hochwald 6	DE	Uedem
25g	Uedem-Hochwald   Hochwald 7.1	DE	Uedem
25h	Uedem-Hochwald   Hochwald 7.2	DE	Uedem

**Table 1** List of all component parts of *Frontiers of the Roman Empire – The Lower German Limes*.

id	name	country	municipality
25i	Uedem-Hochwald   Hochwald 8.1	DE	Uedem
25j	Uedem-Hochwald   Hochwald 8.2	DE	Uedem
25k	Uedem-Hochwald   Hochwald 9	DE	Uedem
25l	Uedem-Hochwald   Hochwald 10	DE	Uedem
25m	Uedem-Hochwald   Hochwald 11	DE	Uedem
25n	Uedem-Hochwald   Hochwald 12	DE	Uedem
25o	Uedem-Hochwald   Hochwald 13	DE	Uedem
26a	Wesel-Flüren   Flürener Feld 1	DE	Wesel
26b	Wesel-Flüren   Flürener Feld 2	DE	Wesel
26c	Wesel-Flüren   Flürener Feld 3	DE	Wesel
26d	Wesel-Flüren   Flürener Feld 4	DE	Wesel
27	Xanten-CUT	DE	Xanten
28	Xanten-Fürstenberg	DE	Xanten
29	Alpen-Drüpt	DE	Alpen
30	Moers-Asberg	DE	Moers
31	Duisburg-Werthausen	DE	Duisburg
32	Krefeld-Gellep	DE	Krefeld
33	Neuss-Koenenlager	DE	Neuss
34a	Neuss-Reckberg   Wachturm	DE	Neuss
34b	Neuss-Reckberg   Kleinkastell	DE	Neuss
35	Monheim-Haus Bürgel	DE	Monheim am Rhein
36	Dormagen	DE	Dormagen
37	Köln-Praetorium	DE	Köln
38	Köln-Deutz	DE	Köln
39	Köln-Alteburg	DE	Köln
40a	Kottenforst Nord   Am Weißen Stein 1	DE	Bornheim
40b	Kottenforst Nord   Am Weißen Stein 2	DE	Alfter
40c	Kottenforst Nord   Domhecken 5	DE	Alfter/Swisttal
40d	Kottenforst Nord   Domhecken 1	DE	Alfter
40e	Kottenforst Nord   Domhecken 2	DE	Alfter
40f	Kottenforst Nord   Domhecken 3	DE	Alfter
40g	Kottenforst Nord   Domhecken 4	DE	Alfter
40h	Kottenforst Nord   Dürrenbruch 3	DE	Alfter
40i	Kottenforst Nord   Dürrenbruch 2	DE	Alfter
40j	Kottenforst Nord   Dürrenbruch 1	DE	Alfter
40k	Kottenforst Nord   Pfaffenmaar 1 and 2	DE	Alfter
41	Bonn	DE	Bonn
42a	Kottenforst Süd   Oben der Krayermaar	DE	Bonn
42b	Kottenforst Süd   Villiper Bach	DE	Bonn
42c	Kottenforst Süd   Professorenweg 1	DE	Bonn
42d	Kottenforst Süd   Professorenweg 2	DE	Bonn
42e	Kottenforst Süd   Riesenweg	DE	Bonn
42f	Kottenforst Süd   Wattendorfer Allee 2	DE	Bonn
42g	Kottenforst Süd   Wattendorfer Allee 1	DE	Bonn
42h	Kottenforst Süd   Bellerbuschallee	DE	Bonn
42i	Kottenforst Süd   Villiprot 1	DE	Bonn
42j	Kottenforst Süd   Heiderhof	DE	Bonn
43	Iversheim	DE	Bad Münstereifel
44	Remagen	DE	Remagen

Having survived a crisis in the late 3<sup>rd</sup> century AD, the frontier shared the phased disintegration of the Western Roman Empire until the mid-5<sup>th</sup> century AD.

*Frontiers of the Roman Empire – The Lower German Limes* eminently illustrates the innovative responses of the Roman military engineers to the challenges posed by the dynamic landscape of a lowland river, as witnessed by the positioning and design of the military installations and by exceptional water management works. The entire range of large early bases to small late strongholds is represented, reflecting strategic adaptation and develop-

ment of military engineering. The first military bases on the Lower Rhine represent the very beginning of the linear perimeter defence of the Roman Empire, which would develop into a coherent frontier system extending over three continents in the 2<sup>nd</sup> century AD. The military and civil structures associated with the military fortifications illustrate the formidable impact of the Roman military presence on the landscape and society of the periphery of the Empire.

The wetland conditions have led to an outstanding preservation of timber and other organic remains, providing unparalleled insights into military construction, shipbuilding, logistics and supply.

**Criterion (ii):** The extant remains of *Frontiers of the Roman Empire – The Lower German Limes* constitute significant elements of the Roman Frontiers present in Europe. With its legionary fortresses, forts, fortlets, watchtowers, linked infrastructure and civilian architecture it exhibits an important interchange of human and cultural values at the height of the Roman Empire, through the development of Roman military architecture, extending the technical knowledge of construction and management to the very edges of the Empire. It reflects the imposition of a complex frontier system on the existing societies of the north-western part of the Roman Empire, introducing for the first time military installations and related civilian settlements, linked through an extensive supporting network. The frontier did not constitute an impregnable barrier, but controlled and allowed the movement of peoples: not only the military units, but also civilians and merchants. Hence, it triggered the exchange of cultural values through movement of soldiers and civilians from different nations. This entailed profound changes and developments in terms of settlement patterns, architecture and landscape design and spatial organisation.

**Criterion (iii):** As part of the Roman Empire's general system of defence, *Frontiers of the Roman Empire – The Lower German Limes* has an extraordinarily high cultural value. It bears an exceptional testimony to the maximum extension of the power of the Roman Empire through the consolidation of its north-western frontiers and thus constitutes a physical manifestation of Roman imperial policy. It illustrates the Roman Empire's ambition to dominate the world in order to establish its law and way of life there in a long-term perspective. It witnesses Roman colonisation in the respective territories, the spread of Roman culture and its different traditions – military, engineering, architecture, religion management and politics – and the large number of human settlements associated with the defences which contribute to an understanding of how soldiers and their families lived in this part of the Roman Empire.

**Criterion (iv):** *Frontiers of the Roman Empire – The Lower German Limes* was the earliest linear frontier of the Roman Empire, created as an answer to Rome's inability to control its northern neighbours by means of diplomacy. Its military installations outstandingly illustrate the development of the large operational bases of a field army to the varied range of smaller installations required by an extended frontier line. Situated in an area which has always been a wetland, with outstanding preservation conditions, *Frontiers of the Roman Empire – The Lower German Limes* exhibits unique testimonies of water management strategies and constructions employed by the military command of the Roman Empire. Buried riverine rubbish deposits constitute veritable treasure-chests of organic materials and artefacts bearing unique information on frontier life and on vanished traditions such as notably that of river boat building.

#### INTEGRITY

The component parts of *Frontiers of the Roman Empire – The Lower German Limes* have been carefully selected to provide a good representation of the attributes and values of the proposed Outstanding Universal Value. They clearly bring out the early development of perimeter defence. They cover the entire range of military installations and relevant associated structures of a frontier system, explaining its functioning and development. Distinctive aspects which are clearly brought out by the component parts are the responses of the Roman army to the dynamic river landscape and the large impact of the frontier on the landscape and its inhabitants.

The general state of conservation is good to very good. More than three quarters of the component parts/clusters encompass nearly or largely complete elements of the frontier. All were exposed to the normal degradation of archaeological sites, but in most cases their intactness is good or very good, as witnessed by the presence of remains of the latest building phase. The rarity of aboveground remains is amply compensated by the outstanding preservation of the buried features. The sites are not exposed to significant threats, and current legislation warrants a proper protection of the property, enhanced by adequate buffer zones.

#### AUTHENTICITY

As an archaeological property, *Frontiers of the Roman Empire – The Lower German Limes* has a high level of authenticity. Virtually all the remains were buried during or soon after the Roman period and thus protected

against later alterations. The authenticity of form and design of nearly all elements is unaffected, because they have not undergone any changes after the Roman period. At half of the sites stone walls or timber and organic remains have been preserved to a level which permits the rating of their authenticity as unaffected. Elsewhere only the foundations of stone walls remain, or timber and organics have decayed, leading to a rating of the authenticity of materials and substance as fair. The location and setting of the elements of the frontier have in most cases considerably changed, by the embankment or canalisation of the Rhine, changes in land use and urbanisation. There are only four sites where the present setting is strongly reminiscent of the Roman landscape, although it can still be understood at half of the sites; at the other half the authenticity of location and setting is clearly compromised. Reconstructions occur at five sites, and these and other types of visualisation – evidently not pretending to be authentic – significantly contribute to the sustained protection of the property.

#### PROTECTION AND MANAGEMENT REQUIREMENTS

The nominated property is legally protected by the national and state laws on heritage protection of Germany (federal states of North Rhine-Westphalia and Rhineland-Palatinate) and the Netherlands. Much of the responsibility rests with the owners and with local and regional authorities. The component parts will be primarily managed at the national (NL) and state (DE) levels, but the management of the nominated property is coordinated by a joint Dutch-German Management Group (MG), which is overseen by an Intergovernmental Committee (IGC). The joint Management Group sets out the main lines of the management and supervises the implementation of the national management plans and the periodic reporting to UNESCO. The role of the Management Group and its procedures will be laid down in a Joint Declaration.

The management structures of *Frontiers of the Roman Empire – The Lower German Limes* will cooperate intensively with their counterparts for the existing World Heritage site *Frontiers of the Roman Empire* (Ref: 430ter) and the nominated property *Frontiers of the Roman Empire – The Danube Limes (Western Segment)* (Ref: 1608, nominated 2018), and with States Parties preparing the nomination of other sections of the Roman frontiers. A framework for this international cooperation is provided by the *Frontiers of the Roman Empire World Heritage Cluster* set up in 2018 to support international collaboration in those fields relevant to the overall management and development of the *Frontiers of the Roman Empire* in Europe as World Heritage.

### 3. Overarching structures for management and decision making

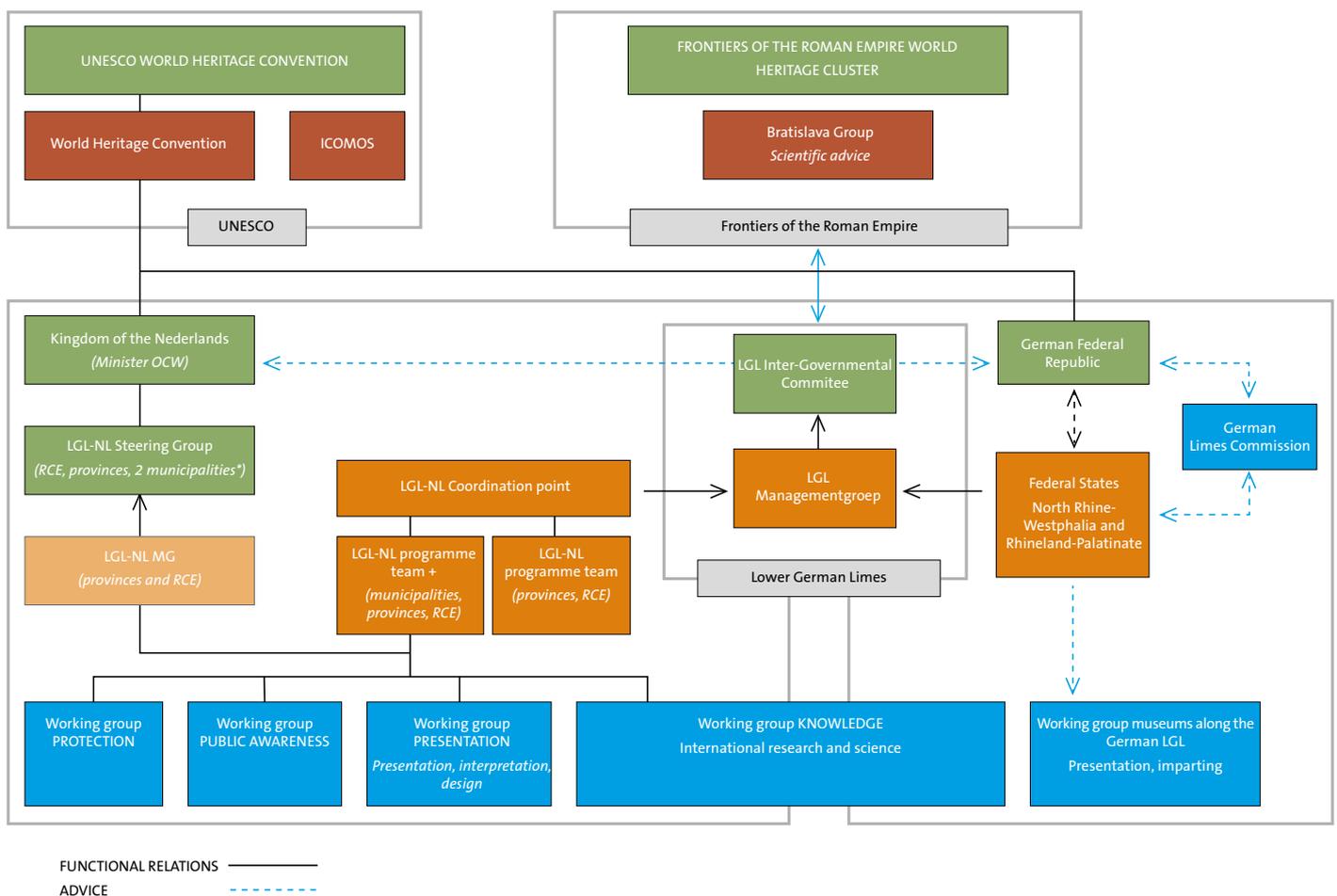
#### 3.1 Guiding principles

The *Frontiers of the Roman Empire – The Lower German Limes* is nominated as a transnational serial archaeological site. The Netherlands and Germany are jointly responsible for the nomination, inscription, recognition and for safeguarding the OUV. They are also jointly responsible for effective long-term implementation of the management plan for the site, and for timely compliance with procedural requirements allowing for verification by UNESCO through periodic monitoring reports. Basic principles of the management structure are:

- taking into account the differences between both countries;
- acting in accordance with each partner's own responsibility;
- decision-making that focuses as much as possible on consensus;
- acting in compliance with guidelines developed at FRE level.

The Netherlands and Germany have their own legal and planning system with different instruments and different authorities at the various government levels. The characteristics and customs of practice at national, regional and local level differ between the two countries. Therefore, at national level both countries have their own management structure for implementation of the management plan. The transnational character requires a transnational structure to coordinate and evaluate all activities at a strategic level. Consequently, a multilevel management structure has been established (fig 4; table 2).

Fig. 4 Organisational structure of the *Frontiers of the Roman Empire – Lower German Limes* World Heritage site



Level	Focus	Paragraph
Frontiers of the Roman Empire	Exchange of best practice.	3.3
Lower German Limes	Strategic management of the Lower German Limes	3.2
	Monitoring and reporting	5
	Exchange of best practice	3.2
National	Implementation of the management plan at national level	Part II: The Netherlands
	Involvement of stakeholders in management	Part III: Germany

**Table 2** Overview of the national and transnational levels established to coordinate and evaluate activities and the referring paragraphs here in the text.

### 3.2 Management of the Lower German Limes at a transnational level

At a transnational level, a two layered organisation will be formed comprising an Intergovernmental Committee (IGC) and a Management Group (MG). The IGC is responsible for long-term commitment and strategic management decisions. Also, in the case of emergencies, the IGC will be the platform for providing advice to the responsible governments. The IGC will meet at least once every three years or more often if needed. The MG will be responsible for operational cooperation between both countries and for day-to-day management of the sites and is formed of representatives from the two national management structures.

#### THE INTERGOVERNMENTAL COMMITTEE (IGC-LGL)

The IGC-LGL is collectively responsible for the long-term protection of the World Heritage site following nomination on a consensus basis. The IGC-LGL consists of:

- two representatives from the Netherlands;
- one representative from North Rhine-Westphalia;
- one representative from Rhineland-Palatinate.

The IGC-LGL is responsible for:

- contributing to and ensuring the continuing and further reinforcement of support and enthusiasm for the World Heritage site among stakeholders and in society;
- safeguarding harmonisation in the implementation of the management plan. In practical terms, this concerns the harmonisation of management systems and processes for all the individual properties of the *Frontiers of the Roman Empire – The Lower German Limes*, in order to operate in accordance with a common set of objectives for the protection of the OUV;
- timely administrative identification of and reaction to threats and developments that might affect the OUV of the World Heritage site (for example outcomes of Heritage Impact Assessments);
- ensuring the raising of the necessary means for implementation of the management plan, including the organisational functions necessary for practical implementation of management measures;
- Ensuring timely compliance with monitoring and reporting obligations to UNESCO.
- The IGC-LGL appoints one of its members as chairman and meets once every three years.

#### LGL MANAGEMENT GROUP

The Management Group for the nominated *Frontiers of the Roman Empire – The Lower German Limes* World Heritage site (MG-LGL) is made up of those directly responsible for management of the currently inscribed sections of the LGL in both countries (site managers). The MG-LGL provides the primary mechanism for sharing best practice in relation to the *Frontiers of the Roman Empire – The Lower German Limes*, for coordinating transnational projects and for preparing the work of the IGC.

#### SITE MANAGER (MANAGEMENT STRUCTURE)

The site manager is charged with:

- ensuring, on behalf of the steering group, the protection of the World Heritage site as a whole, as well as a long-term adequate protection of the OUV;
- drawing up the management plan;

- ensuring the implementation of the management plan at national/state level in accordance with the cycle: planning, implementation and execution, monitoring, evaluating and adjusting;
- ensuring compliance with the periodic (six-year) reporting obligations towards UNESCO;
- ensuring the required communication, harmonisation, coordination and collaboration between the different parts of the FRE;
- ensuring, together with all the parties concerned, the availability of sufficient resources for the implementation of management measures;
- ensuring timely consultation and agreement with the steering group and, if necessary, with each separate member of the steering group, to achieve the administrative safeguarding of the harmonisation required by UNESCO in the implementation of the management plan;
- timely administrative identification of and reaction to threats and developments that might affect the OUV of the World Heritage site;
- being the first point of contact for national governments and providing them with knowledge and advice concerning management delivery;
- being the contact for stakeholders at national/state level;
- stimulating mutual exchange of knowledge and management expertise at the level of the FRE.

In Germany, the site manager for the *Frontiers of the Roman Empire – The Lower German Limes* is employed since 2015 in a permanent position at the LVR-State Service for Archaeological Heritage. The site manager also attends the regular meetings of the DLK, which coordinates management of the *Frontiers of the Roman Empire* World Heritage site in Germany.

**LVR-Amt für Bodendenkmalpflege im Rheinland** (LVR-State Service for Archaeological Heritage)

Endenicher Str. 133  
53115 Bonn  
T +49 228 9834184  
M [steve.boedecker@lvr.de](mailto:steve.boedecker@lvr.de)  
W [www.bodendenkmalpflege.lvr.de](http://www.bodendenkmalpflege.lvr.de)

In the Netherlands, the site manager function is invested with the province of Utrecht, which acts on behalf of the three Dutch provinces (Utrecht, South Holland and Gelderland)

**Nederlandse Limes Samenwerking**

p/a Provincie Utrecht  
Archimedeslaan 6  
3584 BA Utrecht  
T +31 30 2589111  
M [info@limessamenwerking.nl](mailto:info@limessamenwerking.nl)  
W [www.limeswereldergoed.nl](http://www.limeswereldergoed.nl)

**FOCAL POINTS**

In each member state, a ‘Focal Point’ is designated as a basis for compliance with the procedural requirements, particularly in respect of periodic reports. In the Netherlands, this position is fulfilled by the Cultural Heritage Agency of the Netherlands (RCE) and in Germany by the Federal Foreign Office. In both countries, the UNESCO Focal Points work in close cooperation with the site manager.

**Rijksdienst voor het Cultureel Erfgoed** (Cultural Heritage Agency)

Smallepad 5 3811 MG Amersfoort  
T +31 33 4217421  
M [info@cultureelerfgoed.nl](mailto:info@cultureelerfgoed.nl)  
W [www.cultureelerfgoed.nl](http://www.cultureelerfgoed.nl)

**National World Heritage Focal Point**

Auswärtiges Amt Referat 603-9 Koordinierungsstelle Welterbe  
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 10117 Berlin  
 Postal address: 11013 Berlin  
 W www.auswaertiges-amt.de/en  
 M birgitta.ringbeck@diplo.de

**3.3 Cooperation with other parts of the *Frontiers of the Roman Empire***

In order to support international collaboration in those fields relevant to the overall management and development of the *Frontiers of the Roman Empire* as World Heritage, in 2017 it was agreed by the European states that an overarching framework was needed. The primary aims of this overarching framework are the presentation of the Roman frontiers as a single, coherent monument and the furthering of international cooperation to facilitate management and development of the inscribed properties.

In 2018 European State parties developed for this purpose the *Frontiers of the Roman Empire* World Heritage Cluster (fig. 5). The existing Bratislava Group forms the basis of this cluster. Within the cluster, there is cooperation at management and strategic levels. It is proposed that all existing and possible future properties will together form an intergovernmental committee and a management group. Exchange of knowledge will take place between both groups. A formal meeting will be held between representatives of the properties inscribed every three years.

**BRATISLAVA GROUP**

The Bratislava Group is an international scientific advisory body with expert members from States Parties along the frontiers of the Roman Empire. It consists of experts and scientists from the countries that have included their national sections of the Limes on the World Heritage List and delegates from countries that have applied for the UNESCO tentative list. The members of the group meet to discuss how to document the Limes sites, how to build an international and national database and how to establish management standards. The group is working to set up a scientific framework for the whole site and bridge the differences which come from individual research traditions. The first meeting of the group took place in Bratislava in 2003, which is how it received its name. The long-term goal of the Bratislava Group is to include on the UNESCO list all the appropriately preserved sections of the Limes in Europe, the Middle East and North Africa. The Bratislava Group supports States Parties by advising on the significance of the Roman frontiers and on the development of best practice guidance for their management and improvement of understanding.

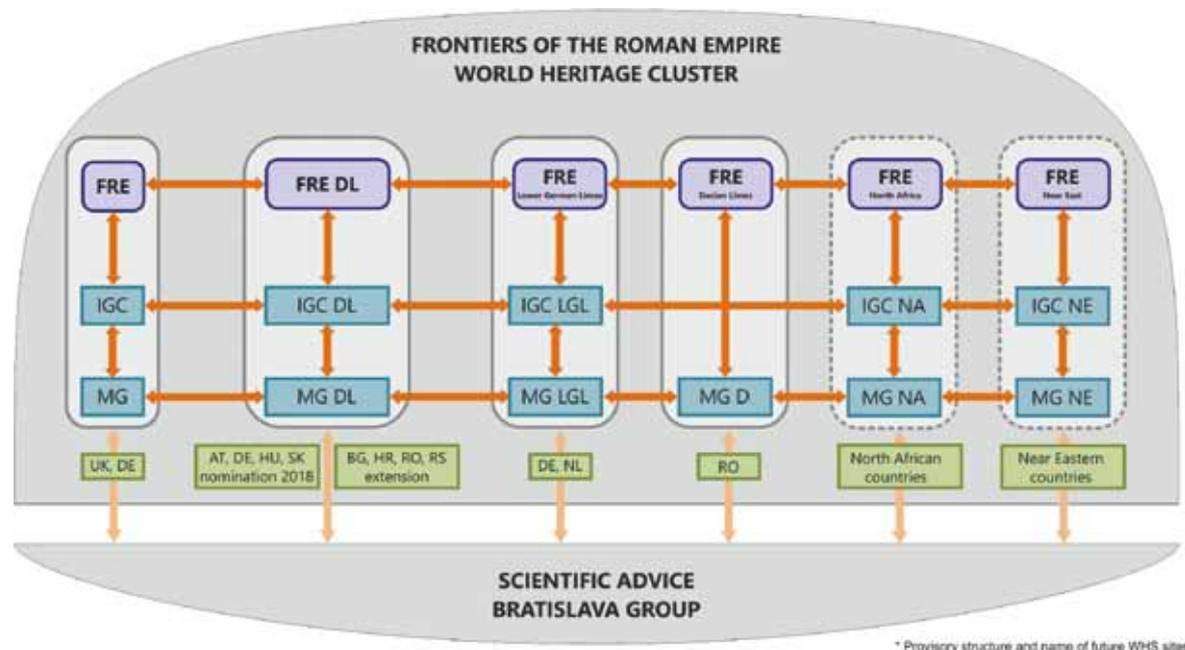


Fig. 5 Management structure for the 'Frontiers of the Roman Empire World Heritage Cluster'.

## 4. Main management challenges

### 4.1 Long term objectives

The long-term strategy for the *Frontiers of the Roman Empire – The Lower German Limes* is aimed at preserving the OUV and creating a common understanding of it. This long-term strategy is translated into six long term aims:

- *Frontiers of the Roman Empire – The Lower German Limes* is sustainably protected. Researchers and governments work together on preservation and development of knowledge.
- *Frontiers of the Roman Empire – The Lower German Limes* is known and acknowledged as a transnational structure within both countries and abroad.
- *Frontiers of the Roman Empire – The Lower German Limes* is part of the *Frontiers of the Roman Empire* (FRE). At FRE level there is alignment with regard to preservation, interpretation, research and public access.
- *Frontiers of the Roman Empire – The Lower German Limes* is used as an educational resource in primary and secondary education.
- *Frontiers of the Roman Empire – The Lower German Limes* is known as a structure that stretches along the Rhine, running through both countries. This structure is accompanied by high quality public presentation (museums/landscape) and is used for leisure and as a tourist destination.
- *Frontiers of the Roman Empire – The Lower German Limes* is a source of inspiration for the local environment/communities. Local residents are proud of the presence of this historical frontier.
- Actions have been developed to implement these long-term aims (Appendix 1). These aims will be adjusted and updated in future management periods.

### 4.2 Management Strategy

The Netherlands and the German states of North Rhine-Westphalia and Rhineland-Palatinate jointly coordinate and control the management of the component parts as a whole. Responsibility for the implementation of management measures is placed and will remain at the lowest possible level, with the organisation that is best equipped to deliver these measures in line with the legal and planning systems in both countries. Each state is responsible for the preservation and management of its respective component parts and for managing any impacts that may arise from wider factors and events.

At the level of the component parts, an individual management plan will be drafted for each site to ensure detailed implementation of the management plan and its requirements.

At the level of the Lower German Limes, the aim is to preserve and further develop the recognisability of the *Frontiers of the Roman Empire – The Lower German Limes* as a whole and as part of the *Frontiers of the Roman Empire*. For these purposes, common standards will be developed in the fields of interpretation, presentation and communication and projects will be initiated at the level of the *Frontiers of the Roman Empire – The Lower German Limes* as a whole and as part of the *Frontiers of the Roman Empire*.

### 4.3 Risk management

Many of the preserved archaeological remains are well protected against most threats by their underground location. Some elements preserved aboveground have been integrated into later buildings, a process that has ensured their preservation down to the present day. All elements are well protected by the national and state

heritage protection laws.

(i) DEVELOPMENT PRESSURES

*Frontiers of the Roman Empire – The Lower German Limes* is characterised on the one hand by large areas of intensive agricultural use and on the other hand by urban areas up to one thousand years old. In consequence the main factors affecting the property are agricultural activities and urban and industrial growth.

German spatial planning law<sup>1</sup> aims to foster a balanced settlement and open space structure, which at the same time takes into account the preservation of the environment.<sup>2</sup> Urban sprawl should be avoided and an effective infrastructure maintained. Rural areas are to be developed and recreational areas promoted.

The State Development Plan of North Rhine-Westphalia<sup>3</sup> and Rhineland-Palatinate<sup>4</sup> aim to achieve sustainable development that balances social and economic spatial requirements with ecological requirements. Archaeological remains are mentioned several times in the context of protecting the cultural landscape. Within the federal states of North Rhine-Westphalia and Rhineland-Palatinate, regional plans<sup>5</sup> give functional substance to implementing the objectives formulated in the spatial planning law. The Lower German Limes features actively in the regional plan by being mentioned in the text and in overview maps.

In the Netherlands an overall policy regarding space and mobility is formulated by the Ministry of Infrastructure and Water Management, based on the national planning law.<sup>6</sup> A vision up to 2040 has been laid down in a memorandum on infrastructure and spatial planning.<sup>7</sup> The balancing of landscape and urbanisation is the responsibility of the provinces, and their policies have been laid down in provincial memoranda.<sup>8</sup> Detailed planning is realised by the municipalities through zoning plans.

In all, 20 component parts/clusters are located in city centres or other built-up areas. In most cases the Roman remains are well protected by thick post-Roman settlement layers. At first sight overbuilding of archaeological sites may be seen as a threat to the underground remains, but there are many instances where it has protected the sites against later erosion. At Utrecht-Domplein, for instance, the Roman fort has survived in good condition thanks to the accumulation of thick medieval occupation layers. At Nijmegen-Hunerberg and Bonn studies of the areas occupied by the legionary fortresses have demonstrated that on the whole only the cellars of modern buildings have destroyed Roman remains, and that more than eighty percent of the areas built over are sufficiently intact. Observations in built-up areas elsewhere point to similar conditions. In some cases, the layout of modern towns reflects the underlying Roman layout, as at Neuss-Koenenlager, where the main road through the legionary fortress is still recognisable in the modern street plan.

Small-scale threats caused, for example, by the installation of power cables do not affect the Outstanding Universal Value, even if they involve some loss of the original substance. These interventions often take place where the archaeological substance has already been destroyed by previous, similar interventions. More substantial interventions such as cellars or underground car parks are handled very restrictively, and rescheduling and shallow foundations are the usual responses. All interventions within the nominated property require permission in accordance with the monument protection laws and can only be carried out following approval by the responsible authorities, in accordance with the state and national heritage laws, and under archaeological supervision.

It is not always necessary to avoid building or rebuilding in protected areas, as long as the attributes of the Outstanding Universal Value are not affected. All underground works in the nominated property require permission in accordance with the state and national laws on heritage protection. Damage to archaeological remains can be prevented or reduced to a minimum by what is termed ‘archaeology-friendly building’. This encompasses a broad range of measures including preparatory raising of the surface, adapting foundation plans and clustering underground infrastructure.

<sup>1</sup> Raumordnungsgesetz (1997, last revision 2017).

<sup>2</sup> Umweltverträglichkeitsprüfungsgesetz (UVPG) (2010, last revision 2019).

<sup>3</sup> Landesentwicklungsplan Nordrhein-Westfalen (2016).

<sup>4</sup> Landesentwicklungsprogramm Rheinland-Pfalz (LEP IV) (2008).

<sup>5</sup> Regionalpläne: Regierungsbezirk Düsseldorf (2018), Regierungsbezirk Köln – Teilabschnitt Region Köln (2018), Regierungsbezirk Köln – Teilabschnitt Region Bonn/Rhein-Sieg (2009); Regionaler Raumordnungsplan Mittelrhein-Westerwald (2017).

<sup>6</sup> Wet ruimtelijke ordening (2018).

<sup>7</sup> Structuurvisie Infrastructuur en Ruimte (2012). In June 2019 a draft has been presented of the National Environmental Vision [*Nationale Omgevingsvisie*], a memorandum which will replace the former document once the Environment and Planning Act [*Omgevingswet*] will enter into force in January 2021.

<sup>8</sup> Gelderland: Omgevingsvisie Gelderland (2018). Utrecht: Provinciale Ruimtelijke Structuurvisie 2013–2028 (revised 2016). South Holland: Visie Ruimte en Mobiliteit (2014; revised 2018).

Many of the elements of *Frontiers of the Roman Empire – The Lower German Limes* have been scheduled monuments for decades and their protection by the judicial and administrative framework has been very successful. In agreement with the municipalities involved, protection of the nominated property is also set out in the management plan.

#### Industrial development

Industrial development is largely confined to the periphery of cities. In Germany the planning of industrial areas is carried out on a long term basis and can be co-designed by the state conservation agencies. All underground works in the nominated property require permission in accordance with the monument protection laws. At Krefeld-Gellep the nominated property lies directly next to an industrial area that has been expanded in recent years. During this expansion, restrictive measures were developed for the future in cooperation with the LVR-State Service for Archaeological Heritage and the municipality of Krefeld.

In the Netherlands, the planning of industrial areas is primarily a concern of the provinces, but the realisation is often carried out at the level of the municipalities. All activities disturbing the soil are subject to the regulations of the national heritage protection law. At Valkenburg-De Woerd the area covered by the component parts is designated for development into a small business park, but the plans will have to comply with the national law on heritage protection. The component part Herwen-De Bijland borders a small industrial area, but is designated for agricultural use in the current municipal zoning plan.

#### Traffic

The expansion of existing or construction of new roads and railway lines is difficult to forecast and to avoid. Each intervention requires the consent of the heritage protection laws and can only be implemented in accordance with these. In the case of existing infrastructure installations such as railway embankments it is quite possible that any remains underneath are well preserved and protected.

Roads running through component parts do not harm the underground substance. Traffic passing over Roman military installations and other structures (e.g. via country roads in Till or a main road in Neuss) does not endanger the underlying structures. Exhaust gases do not damage the component parts in any way.

There is no case of interference with the archaeological substance by railway lines in any of the component parts. At Xanten-Fürstenberg, for example, the railway line is not included in the nominated property in the area where the line runs in a deep cutting, but is included further south where the line runs on a railway embankment above the archaeological remains. At Bunnik-Vechten a main railway line has been included in the buffer zone.

#### WIND ENERGY

So far only two wind turbines occur in the immediate surroundings of the nominated property, in the buffer zone of Till. Visibility is not affected nor is any other aspect of the Outstanding Universal Value. In North Rhine-Westphalia wind turbines will not in future be allowed closer than 1,5 km from the nearest settlement.

The problem of wind turbines at World Heritage sites has received special attention in recent years.<sup>9</sup> At the time of writing, a 'Wind Energy Decree' is about to be published in the Ministerial Gazette of the State of North Rhine-Westphalia and thus to enter into force. The decree will make it difficult to build new turbines within this zone. There are no conflict zones with wind turbines in Rhineland-Palatinate and the Netherlands.

#### Major linear facilities

At Bunnik-Vechten a pipeline for aviation fuel runs immediately south of and parallel to the A12 motorway. Part of the pipeline was relocated southward during the extension of the motorway in c. 1995, but only following excavation of the area to be destroyed. In case of a further southward extension of the motorway – which is not currently foreseen, but may be unavoidable at some point in the future – the pipeline will have to be moved again. Both works require permission under the national heritage protection law.

<sup>9</sup> P.Henrich (ed.), *Regenerative Energien und Welterbestätten*. Workshop der Deutschen Limeskommission am 23. November 2011 in Düsseldorf. Beiträge zum Welterbe Limes Sonderband 2 (Bad Homburg 2013).

## Agriculture

Since Antiquity, the landscape along the Rhine has been well suited and used for agriculture and livestock breeding. Until recently these activities were not very detrimental to buried archaeological remains; the damage caused by ploughing with animal traction was limited. In the course of the 20<sup>th</sup> century, however, the threats posed by agricultural activities have increased: mechanical ploughing, intensive manuring, lowering of groundwater levels and artificial drainage have led to deeper disturbance of the soil and to degradation of metal objects and organic remains.

Ploughing can be a threat to buried remains. In very small areas at Kalkar-Kalkarberg and Xanten-Fürstenberg erosion through ploughing downhill is occurring. In recent decades more and more strategies have been developed by the farmers to reduce erosion and to improve the structure of the topsoil, especially by greening. Particularly in places where there is a risk of erosion, greening is often used and little ploughing is done. Sustainable land use is financially supported by the European Union. In general, ploughing is increasingly being abandoned and there is a general objective to convert arable fields into grassland in archaeologically sensitive areas. Ploughed areas are intensively monitored. A policy of providing farmers with detailed information and advice will increase awareness of the threats and possible solutions.

In the Netherlands, under the national heritage law grassland cannot be converted into arable fields within listed archaeological monuments without permission.

Intensive manuring, which contributes to the degradation of metal objects, receives more and more attention both at a national level and at the level of the European Union, primarily for its adverse effects on drinking-water quality. More stringent directives will gradually reduce this type of threat.

## Forestry

In all, five component parts/clusters are largely or entirely located in forests; these include mainly temporary camps and the earthworks of an aqueduct. The remains of these structures are located at or above the present ground surface and are vulnerable to uprooting of trees and poor forest management. On the other hand the root systems of trees protect against erosion of earthworks constructed of sandy soil.

Four clusters of temporary camps lie in forest areas in North Rhine-Westphalia: Uedem-Hochwald, Wesel-Flüren, Kottenforst Nord and Kottenforst Süd. Explicit agreements have been made with the foresters responsible to avoid use of heavy harvesting machines. Soil compaction must also be avoided.

## Quarrying

Downstream from Xanten, where the Rhine has deposited sediment during periods of flooding, the extraction of clay for the production of bricks and tiles has been a disturbing factor over recent centuries. The impact on the landscape can be observed in digital elevation models of rural areas in the delta, but it applies also to some areas which were built up after the clay extraction took place. The Limes road to the west of Utrecht-Veldhuizen has been affected by clay extraction in many locations, so these westerly areas were not included in the nomination. Clay extraction within the nominated property is now prevented under the laws for heritage protection.

Sand extraction by shallow trenching over the centuries can result in some superficial damage but this has only been attested at Utrecht-Groot Zandveld. Large-scale industrial extraction of gravel and sand is obviously entirely destructive. This occurs mainly on point bars of former meanders, where any settlement remains will already have been eroded by river activity. Attested cases are those of the successor of the legionary fortress of Xanten-Fürstenberg, where extraction has finished and the area designated as a nature reserve, and of the (supposed) latest fort at Herwen-De Bijland, at the bifurcation of the Rhine and Waal. In the latter area concessions have been granted in the past which will lead to extraction in the near future. However, extraction will take place in an area where only eroded Roman remains are expected and which has been placed in the buffer zone. The works will be carried out under archaeological supervision, to collect relevant information and finds.

## (II) ENVIRONMENTAL PRESSURES

### Groundwater level reduction

In low-lying parts of the Netherlands the groundwater level has fallen significantly in the third quarter of the 20<sup>th</sup> century, as a result of increased extraction of drinking-water and intensified drainage of agricultural land. A growing awareness of the adverse effects of this development – e.g. drying out of nature reserves, land subsidence, and subsidence of buildings through decay of timber piles – is currently leading to initiatives to mitigate or reverse earlier measures.

#### Climate change

Global warming resulting from climate change may cause the water level of the Rhine to rise, increasing the risk of flooding of the nominated property in the future (cf. above). A warmer climate or higher water levels will not harm the organic deposits that are part of the Outstanding Universal Value.

#### Air pollution

No elements within the nominated property are endangered by air pollution. Underground remains in rural or urban areas are not affected. The aboveground remains of walls at Haus Bürgel are not exposed to any danger as no vehicular traffic passes in proximity. Its location in a nature reserve and its function as an education and information centre for nature conservation offer additional protection. The component parts Utrecht-Domplein and Köln-Praetorium, located in city centres, are well protected through their integration into underground museums, where they are not exposed to exhaust fumes.

### (III) NATURAL DISASTERS AND RISK PREPAREDNESS

#### Flooding and river erosion

River erosion has been countered in previous centuries by the construction of dikes and river bank revetments. However, these measures cannot provide full protection against flooding and erosion. As with any lowland riverine landscape, the Rhineland is still exposed to flooding in extreme conditions. On the whole, flooding is not a major threat as it normally results in sedimentation, providing a protective layer of sand or clay. Bursting of dikes and other bank reinforcements is more of a threat, but erosive impact is only very local.

The Lower German frontier is internationally renowned for the excellent preservation of organic remains, a result of its position in a lowland riverine landscape. However, the dynamics of the river Rhine have also led to erosion in some areas. For most of its course below Bonn, the river has remained very active in the medieval and early modern periods. Areas particularly affected by river migration are those (i) from Dormagen to Moers-Asberg, (ii) near Xanten-Fürstenberg and Xanten-CUT, (iii) from Kleve-Keeken to Arnhem-Meinerswijk and (iv) approximately halfway between Arnhem-Meinerswijk and Bunnik-Vechten.

In Germany the current exposure to flooding is expressed by the *Jahrhunderthochwasser* (one-hundred-year flood) zone, which encompasses all areas at risk of a 1 in 100 year flood (i.e. an annual chance of 1 %). Component parts/clusters located *inside* this zone (i.e. exposed to flooding) are Kleve-Keeken, Till, Kalkar-Bornsches Feld, the harbour area at Xanten-CUT, Duisburg-Werthausen, Monheim-Haus Bürgel and Köln-Deutz. With the exception of Monheim-Haus Bürgel, all the mentioned sites are separated from the active river by dikes and other protective structures.

In the Netherlands the coastal dunes and primary dikes protect against water levels which may occur with probabilities varying from 1/300 to 1/10,000 per year (i.e. an annual chance of 0.3–0.001 %). The areas affected if these water levels are exceeded cover approximately sixty percent of the Netherlands. Component parts/clusters located *outside* these risk areas (i.e. not exposed to flooding) are those in Voorburg-Arentsburg, Leiden-Roomburg, Utrecht-Hoge Woerd, Utrecht-Domplein and Nijmegen and Berg en Dal. The only component part not protected by the primary river dikes is Arnhem-Meinerswijk. Since it has survived centuries of periodic flooding by the Rhine it can be assumed that the risk of degradation is minimal.

#### Earthquake

The sites from Remagen to Neuss in Germany are located in area 1 of the DIN EN 1998-1/NA:2011-01 earthquake zones. In area 1 there is a risk of 10 % in 50 years of the occurrence of an earthquake with an intensity of 6.5–7.0 on the European macroseismic scale (EMS-98), characterised as ‘slightly damaging’. The expected magnitudes do not pose a substantial risk to the nominated property with its almost exclusively underground remains. The sites downstream from Neuss, including those in the Netherlands, are all located outside earthquake risk zones.

For some time, a crack in the walls of Köln-Praetorium was thought to have been caused by an earthquake, but this supposition is now rejected by seismologists. It was caused by unstable ground beneath the building and subsidence of the soil.

#### (IV) OTHER FACTORS

##### Metal detecting

In Germany metal detecting is on the one hand considered as a threat to archaeological sites, on the other hand as a potential benefit when carried out responsibly by trained amateurs by contributing to our understanding of the past. In North Rhine-Westphalia metal detecting is only legally allowed with a permit in compliance with par. 13 of the monument protection law; the permit only allows metal detecting in the disturbed topsoil, and listed monuments, meadows and forests are explicitly excluded. In order to reduce illegal metal detecting the state authorities have produced an information leaflet which has been widely distributed and is available online. In Rhineland-Palatinate metal detecting is only allowed with a permit in compliance with par. 21 of the state law for heritage protection.

In the Netherlands metal detecting is increasingly seen as contributing to the general knowledge of archaeological sites, as demonstrated by the Netherlands Portable Antiquities academic programme through which finds of metal objects by private collectors are recorded and studied. Metal detecting is permitted, but not on listed monuments – thereby prohibiting metal detecting on the nominated property – and not deeper than 30 cm below the surface, to mention the most relevant restrictions.

#### (V) RESPONSIBLE VISITATION AT WORLD HERITAGE SITES

So far, no damage has been caused to any sites by excessive visitor numbers. The intensity of visitation depends strongly on the preservation and presentation of the site. The flow of visitors to exposed archaeology in museums can easily be controlled and none of the existing facilities has reached the limits of their capacity. The numbers of visitors to the main museums are listed in table 4.7. The well-preserved stone walls of Köln-Praetorium, Monheim-Haus Bürgel, Elst-Grote Kerk and Utrecht-Domplein have been integrated into museums, thereby ensuring management of visitor flow and protection of the substance. In all areas where appropriate, hard surfaced walking routes enable visitor management and protection of buried archaeology.

Visitors to the LVR-Archaeological Park Xanten (APX) do not pose a high risk to the monument's substance. The scheduled and touristically developed archaeological monument is well protected as it remains buried. Restoration will only be partial and any excavations are limited to answering specific research questions. The majority of visitors to the APX use the modern surfaced routes. All exhibition areas, partial and full reconstructions and protective buildings with high visitor levels are monitored by trained staff throughout opening hours. In addition the majority of visits take place in the form of guided tours of the park.

Original structures are visible in a few places only, for example at the large thermal baths, in the craftsman's house B or in the 'Window into the past' pavilion. At all these points visitor access is by modern footbridges constructed along, beside or over the archaeological remains, and separated from them by railings or a handrail; direct contact with the archaeology is therefore not possible. Exposed remains are protected from the weather by roofs and protective buildings. In some cases the remains of the original ancient walls are built up with 'sacrificial layers' [Opferschichten] intended to protect the underlying archaeology. These sacrificial layers are partly accessible to visitors, for instance in the area of the outdoor facilities next to the large thermal baths, or next to the Roman hostel. 'Open' sections of Roman road drains are secured by railings, preventing direct access by visitors. Damage to the original substance can only occur through an intentional act, such as vandalism, which is in any case difficult because of the degree of surveillance.

## 5. Overall monitoring and reporting to WHC

### 5.1 Monitoring

Permanent monitoring of the nominated property is essential for its preservation. The most important task is to closely monitor the state of conservation as well as possible threats that could harm aspects of the Outstanding Universal Value.

Monitoring is primarily the responsibility of the monument protection agencies in Germany and the Netherlands, but is coordinated by the joint Management Group (MG-LGL) and supervised by the joint Intergovernmental Committee (IGC-LGL). In the first management period common strategies for monitoring, conservation and protection will be developed.

#### KEY INDICATORS FOR MEASURING STATE OF CONSERVATION

The monitoring indicators and methods which will serve to assess the state of conservation and any changes are listed in table 3. A first group of indicators (1) concerns preservation of integrity, that is the physical condition of the component parts. A second group (2–4) is related to the risk factors considered in section 4.b.

### 5.2 Periodic Reporting to the WHC

The monitoring provides input for the periodic reporting, which in principle takes place every six years. The periodic monitoring questionnaires will be completed by the MG-LGL in cooperation with the site managers on the basis of the measures recorded in the above-mentioned databases.

The results of the monitoring and reporting will be used for reflection on the objectives of this management plan and – where needed – help define new or additional objectives.

no	indicator	method	periodicity	responsible authorities & location of records
1	Integrity			
1a	state of conservation of aboveground remains	visual inspection; hygrometer	annually	responsible monument preservation agencies; museums
1b	state of conservation of buried remains	visual inspection and aerial reconnaissance	annually	responsible monument preservation agencies
1c	state of conservation of buried organic remains	coring (oxidation/reduction, sulphide, calcium)	5 years	responsible monument preservation agencies
1d	erosion, integrity of topsoil, sediment cover	visual inspection; airborne laser scan	annually; 5 years	responsible monument preservation agencies
1e	damaging vegetation	visual inspection	annually	responsible monument preservation agencies
1f	illegal metal detecting or excavation	visual inspection	in case of event	responsible monument preservation agencies
1g	ploughing	visual inspection	continuously	responsible monument preservation agencies
2	Development			
2a	urban and industrial development	spatial planning processes and visual inspection	continuously	responsible monument preservation agencies
2b	Infrastructure development	spatial planning processes	continuously	responsible monument preservation agencies
2c	expansion of extraction areas	spatial planning processes and visual inspection, aerial reconnaissance	continuously	responsible monument preservation agencies
2d	change of land use	spatial planning processes/ visual inspection	continuously	responsible monument preservation agencies
3	climate and nature			
3a	flooding, earthquake	visual inspection	in case of event	responsible monument preservation agencies
3b	groundwater level	data check	5 years	responsible monument preservation agencies
4	visitation & facilities			
4a	number of visitors	visitor counting	annually	museums/responsible agencies/ associations
4b	condition of protective buildings	visual inspection	annually	museums/responsible agencies/ associations
4c	condition of reconstructions and marked out structures	visual inspection	annually, in advance of events	responsible monument preservation agencies; responsible museum
4d	safety for visitors	visual inspection	annually, in advance of events	responsible museum; owners
4e	condition of panels/signs	visual inspection	annually	responsible monument preservation agencies; museums

**Table 3** Key indicators for measuring the state of conservation.



# MANAGEMENT PLAN

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## Part II – THE LOWER GERMAN LIMES IN THE NETHERLANDS

# 1. Objectives

Drawing on the longer-term vision (part I) and the management strategy, medium-term objectives have been identified to meet the longer-term aims. These medium-term objectives will form the core management priorities for the *Frontiers of the Roman Empire – The Lower German Limes* World Heritage site for the seven-year period 2021 to 2027.

## OBJECTIVES 2021–2027

### I. The Lower German Limes is sustainably protected. Researchers and governments work together on preservation and knowledge development.

- The governments involved act in accordance with the management plan. Where needed for sustainable protection, extra protection measures for properties and buffer zones are devised and implemented.
- Individual management plans will be developed for the component parts.
- Scientific knowledge and understanding of the LGL will be increased; a joint research strategy will be developed to ensure better understanding of the Limes as a whole and of its protection, and partners will work together on the dissemination of scientific knowledge.

### II. The Lower German Limes is known and acknowledged as a transnational structure within both countries and abroad.

- Partners will work on a joint communication strategy reflecting the transnational character of the Lower German Limes, that will be used in international communication and be integrated into national communication strategies.
- A common interpretation framework and common standards to guide on-site presentation will be developed.

### III. The Lower German Limes is part of the *Frontiers of the Roman Empire* (FRE). At FRE level there is alignment with regard to preservation, interpretation, research and public access.

- International exchange of knowledge between partners of the FRE will be facilitated and strengthened where needed. Partners will explore opportunities to develop joint projects in the fields of preservation, research, public access and interpretation.
- The partners will establish joint monitoring and evaluation standards.

### IV. The Lower German Limes is used as an educational resource in primary and secondary education.

- More attention will be paid to the Dutch-German Limes in primary and secondary education, with a focus on greater awareness of the Lower-German Limes as a valuable historical structure linked to the core values of UNESCO.
- In cooperation with the German partners, an education strategy will be developed, integrating the existing offer into a coherent educational programme.

### V. *Frontiers of the Roman Empire – The Lower German Limes* is known as a structure that stretches along the Rhine, running through both countries. This structure is accompanied by high quality presentations (museums/landscape) and used for leisure and as a tourist destination.

- Within the joint communication approach, agreements will be reached regarding outdoor marking and signage of the Limes.
- There is an improved product offer for different target groups.
- Public presentation of the Lower German Limes is of high quality.
- There is stronger linkage between presentation in museums and outdoors.

VI. *Frontiers of the Roman Empire – The Lower German Limes* is a source of inspiration for the local environment/communities. The residents are proud of the presence of the historical frontier.

- Develop new and strengthen existing partnerships between regional and local stakeholders (capacity building).
- Third-party initiatives to promote the Limes as part of their public face are encouraged and facilitated.

## 2. Management structure in the Netherlands

### 2.1 Management structure

#### STRUCTURE

An overview of the overall management structure and explanation of how the site managers of both countries cooperate on a transnational level and of the decision-making process was provided in Part 1. This section sets out the roles and responsibilities of those involved in the management of the Lower German Limes World Heritage site within the Netherlands. The core of the management structure is the existing cooperation arrangement between the three provinces. They act together as the **site manager** and work in close cooperation with the Cultural Heritage Agency, municipalities, other partners who take an active role in day-to-day management and the diverse range of stakeholders who have an interest in the Site.

The management structure for the Dutch Part of the Lower German Limes (fig. 6) is based on the following principles: organise and deliver from the bottom-up, coordinate from the top down. The process of site management is seen as providing a coordinating, supportive and facilitating role for other partners. The number of ambassadors for the Limes has grown in recent years. This shared ownership is reflected in the management structure which ensures effective strategic coordination and resourcing whilst retaining the benefits of on-the-ground delivery and effective communication associated with small organisations. The chosen management solution is a network structure, through which the formal site manager collaborates with various public and private parties to jointly shape the management tasks for the coming period. The structure provides for close and structured relationships between elected representatives and professional officers, ensuring strategic buy-in and resourcing aligned with professional knowledge and understanding.

#### STEERING GROUP

The Steering Group is ultimately responsible for the management of World Heritage in the Netherlands. The Steering Group includes one elected representative from each of the three provinces, the State and two elected representatives from municipalities. The latter includes representation from an urban and a rural municipality, which rotate every few years. The main tasks of the Steering Group are to set out long term objectives, to give direction to the implementation of the management tasks, to approve the delivery plans and budgets of the work groups and the coordination point and to manage risks. The Steering Group is also responsible for arranging the budget and the means necessary to deliver the management plan. This strategic approach to resourcing ensures that funds are available to enable delivery through the management period.

The Steering Group is administered by the **Management Group**, comprising management directors the three provinces and the state. The Management Group advises the Steering Group on strategic matters.

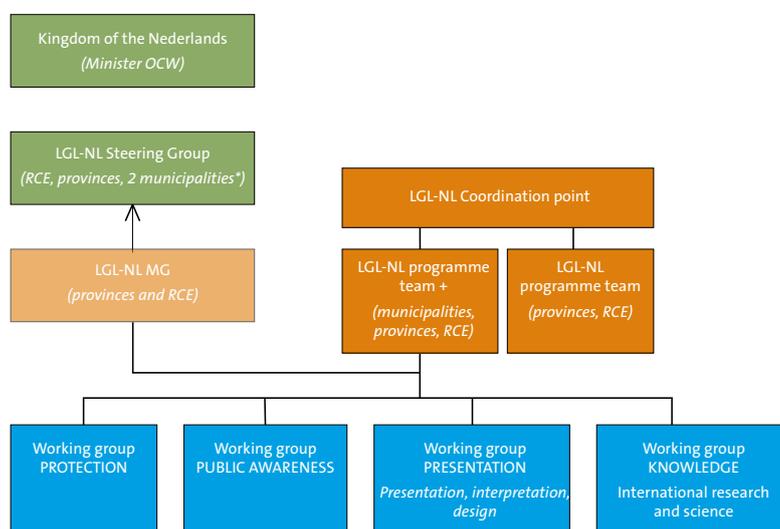


Fig. 6 Management structure for the Dutch Part of the Lower German Limes.

## COORDINATION POINT

The scale and complexity of the *Frontiers of the Roman Empire – The Lower German Limes* World Heritage site, with both national and international involvement, requires a strong degree of coordination between the partners. A Lower German Limes Coordinator was appointed by the provinces of Gelderland, Utrecht and South Holland to coordinate preparation of the World Heritage nomination and multiple projects to increase public awareness.

This coordination point will continue in the management structure for the future World Heritage site. Responsibilities include maintaining an overview of management of the Lower German Limes as a whole, ensuring alignment with international developments, managing and facilitating the various meetings for the Steering Group and the programme teams and setting clear objectives and guidance for the work of the four work groups. This coordination function is an important one: bringing together the work of the International Partners; maintaining and enhancing relationships with other organisations and individuals who have an interest in the management of the World Heritage site; and ensuring that all stakeholders are aware of the importance of the Site and feel they can contribute effectively to its management.

Projects between national partners will benefit from central coordination, ensuring an overview of the achievements and progress being made with Management Plan objectives and actions. The benefit of having a single point of contact for managing the ‘front end’ of the World Heritage site, such as public enquiries, community engagement and general administrative duties, is central to the effective management of the Site. Dedicated coordination supports partner organisations and facilitates a common approach to key issues. Effective coordination also enables effective delivery of the day-to-day requirements as set out by UNESCO: these include producing monitoring reports and further versions of the Management Plan.

## PROGRAMME TEAM

The **Programme Team** comprises professional officers from the three provinces and the Cultural Heritage Agency. This team meets four times a year. The programme team is the link between the coordination unit and the Steering Group. The members of the core Programme Team ensure alignment with other disciplines within their own organisations and the respective Provincial Executive. They advise the Steering Group on the decision-making process, through the Management Group. The provincial members of the Programme Team are also the first point of contact for relevant partners from their own province. Within the provinces, networks have already been established that serve as a marketplace for bottom-up initiatives. The intention is to continue these networks and resources have been set aside for this purpose.

The **Programme Team +** comprises the core Programme Team supplemented by officers representing the relevant municipalities. This Programme Team + meets twice a year and has an important consultative role in preparing the decision-making process for the Steering Group and provides input to the implementation of projects.

## FOUR WORK GROUPS

The four work groups responsible respectively for the four themes of Protection, Research, Public Awareness and Presentation are a key element in delivery of the management plan. Within these work groups governments and/or other stakeholders cooperate to implement actions within the framework of the management plan. Where needed, the work groups also cooperate with international partners.

The **Protection Group** will comprise those responsible for the day-to-day protection of the World Heritage site, from the municipalities and the state service. Key tasks will include sharing best practices, preparing management plans for individual sites and monitoring the site.

The **Knowledge Group** will comprise representatives from the state service, universities, municipalities and other relevant organisations. This group will be responsible for developing a research strategy to better understand the Lower German Limes, identify gaps in existing knowledge, and identify potential research themes. The Research Strategy will be connected to the NOaA (National Research agenda on Archaeology) and other relevant archaeology research projects. This connectivity will give the greatest value and avoid duplication of effort whilst ensuring relevancy.

The **Public Awareness** work group will be responsible for developing products to improve wider public awareness and for developing an education strategy including educational products. At the time of nomination, cooperation between the three regional heritage agencies and Romeinen.nu is responsible for capacity building and communication. Annual network meetings involving all partners provide opportunities for site visits, and

learning and exchange of best practice, support and reinforce cooperative working and provide a basis for initiating new projects. This partnership will be continued and strengthened and will form the basis of the work group responsible for projects relating to public awareness

The **Presentation** work group is an independent advisory board that advises museums, governments and local communities on improving on-site public presentation and interpretation. It comprises independent professionals from disciplines such as archaeology and landscape design.

## 2.2 Partners

Many stakeholders with different responsibilities are involved in the day-to-day management of the Lower German Limes in the Netherlands. Governments play an important role in protection, conservation (chapter 3), research and on-site presentation. Non-governmental organisations often lead projects relating to interpretation and visitor experiences, such as new exhibitions or local events.

An overview of the partners is given in table 4. The aim is to involve these partners as much as possible in management of the Lower German Limes, including product development and delivery, through the management structure and the work groups.

	Organisation	Task/responsibility
Governments	Ministry of Culture Education and Science	Cultural Heritage Policy Protection Monuments
	Cultural Heritage Agency	Monument Protection UNESCO Focal Point Research and monitoring
	Provinces (Utrecht, South Holland, Gelderland)	Site manager Cultural Heritage Policy Spatial Planning Tourism & Leisure Regional infrastructure Ground water management
	Municipalities	Cultural Heritage Policy Spatial Planning & permits Education Ground water management Tourism & leisure Enforcement
	Water boards	Ground water management
NGOs	Regional Heritage Organisations	Education Public awareness
	Museums and visitor centres	Product development On-site presentation Education Leisure
	Universities	Research Education
Tourism & Leisure	Regional Tourism Agencies	Product development Promotion
	Wandelnet (National Hiking Board)	Long distance hiking trail
	Fietsplatform (National Biking Board)	Long distance biking trail
Volunteer organisations	AWN	Research
	Romeinen.nu	Public awareness Events
Private companies		Product development Research (archaeological companies)
Owners	Governments, NGOs, Private	Land use

**Table 4** Overview of the partners involved in the management of the Lower German Limes in the Netherlands.

## 3. Protection and conservation

### 3.1 Standards: Principles for planning and conservation

#### PRINCIPLES

The basic principles for the protection and conservation of the Lower German Limes in the Netherlands are:

- adequate protection by the state, provinces, municipalities and water boards;
- a process of careful consideration for developments on and in the immediate vicinity of the site (buffer zones);
- clear procedures and responsibilities;
- clear agreements about how to deal with unforeseen situations and risks (escalations).

#### PROTECTION OF COMPONENT PARTS

The conservation of the component parts in the Netherlands is in most cases achieved through their protection as a national archaeological monument (Heritage Act). The working of this act is explained in paragraph 3.3. For component parts not protected as a national archaeological monument, protection through the planning system is acceptable, but only in those cases where it is clear that negative impacts can be prevented by the planning regulations. Municipalities can protect the Outstanding Universal Value by establishing regulations that require permits for all activities that could harm the archaeological values. In the case of densely populated areas where component parts have not been protected as an archaeological monument in the past, protection through the planning system is a more feasible approach and can have the same effect as protection as an archaeological monument. For the *Frontiers of the Roman Empire – The Lower German Limes*, Nijmegen-Hunerberg will be protected through the planning system.

#### BUFFER ZONES

Protection of the buffer zones is regulated by the provincial Environmental Ordinances and the municipal land-use plans (to be replaced by environment plans under the new Environment and Planning Act, as of 1-1-2021). The protective regulations impose limits on the horizontal and vertical extent of potentially damaging activities that can be undertaken without a formal permit being granted by the competent authorities. The regulations provide opportunities to encourage less damaging alternatives or to enforce prior archaeological research in conformance with the highest scientific standards, recording the preserved archaeological information to enhance understanding of the attributes and values included in the neighbouring component parts. Land-use plans generally prohibit any ground disturbance exceeding an area of 100 m<sup>2</sup> and a depth of 30 cm, but currently the norms differ between municipalities and between different land-use zones within municipalities. Current regulations in the land-use plans will be reviewed during the first management period, and where needed, regulations will be adjusted to a common maximum of 100 m<sup>2</sup>/30 cm, with less stringent norms allowed only if their applicability has been tested through archaeological research.

### 3.2 Regulations

#### INTERNATIONAL REGULATIONS

Multiple international conventions, regulations and charters that have been adopted by the Netherlands are relevant for the protection Lower German Limes. An overview of these regulations is given in table 5. These regulations are integrated into Dutch national legislation and will be followed in managing the *Frontiers of the Roman Empire – The Lower German Limes* World Heritage site.

**Table 5** Relevant international conventions, regulations and charters adopted by the Netherlands for the protection Lower German Limes.

Conventions, regulations and charters
The Hague Convention (1954)
London Convention (1969)
UNESCO Convention (1970)
World Heritage Convention (1972)
Granada Convention (1985)
The Valletta Convention (1992)
UNIDROIT Convention (1995)
Florence Convention (2000)
Faro Convention (2005)
New Delhi Recommendation (1956)
Venice Charter (1964)
Washington Charter (1987)
Lausanne Charter (1990)
Nara Document (1994)

#### NATIONAL REGULATIONS

A change is taking in the regulation of protection at national level at the time of nomination. From January 2021 protection of the Lower German Limes will be effected through the Environment and Planning Act and its associated legal instruments, and through the Heritage Act that entered into force in 2016.

##### Heritage Act [*Erfgoedwet*]

The Heritage Act [*Erfgoedwet*] regulates the designation and the preservation of archaeological monuments (table 6). The Heritage Act contains specific provisions relating to aspects of archaeological conservation that are not directly or not exclusively related to the physical environment. These provisions concern regulations regarding the designation of archaeological national monuments, the provision of subsidies, regulations regarding archaeological excavation, obligations to report archaeological finds, the ownership of archaeological finds and archaeological depots. The Heritage Act provides the legal basis for the designation of national archaeological monuments by the Minister of Education, Culture and Science.

Under the Heritage Act it is prohibited, without a permit, to carry out actions involving the detection, investigation or acquisition of archaeological monuments, or parts thereof, which result in disturbance of the soil, disruption, total or partial displacement or removal of the archaeological monument (Heritage Act, section 5.1). In an Order of Council an exception to this rule is made for searching with a metal detector, on the provision that the soil is not disturbed deeper than 30 cm below the surface; this exception does not, however, apply to listed monuments (*Besluit Erfgoedwet archeologie, 8 april 2016, art. 2.2*), and thus not to the component parts of *Frontiers of the Roman Empire – The Lower German Limes*.

##### Environment and planning act

The Environment and Planning Act is the national law that provides a legal framework for regulations relating to land-use planning, environmental protection, nature conservation, construction of buildings, protection of cultural heritage, water management, urban and rural redevelopment, development of major public and private works, mining and quarrying. It defines the tasks and responsibilities of the administrative bodies within the planning system, the use of land and the effect of various sectoral laws. The Environment and Planning Act was adopted in 2016 and integrates numerous sectoral laws, including the Water Act and the Spatial Planning Act. It will enter into force in January 2021. A key instrument of the Environment and Planning Act is the National Environment Vision, which sets out national goals and ambitions, including goals relating to cultural heritage. Four instructional decrees have been established through which to implement the National Environment Vision. For the Lower German Limes, the Living Environment Quality Decree [*Besluit kwaliteit leefomgeving*] and the Living Environment Activities Decree [*Besluit activiteiten leefomgeving*] provide regulations that safeguard the OUV on a national level.

Heritage Act provides for	Environment and Planning Act provides for
<ul style="list-style-type: none"> <li>• Rules regarding depots for archaeological finds</li> <li>• Rules regarding archaeological finds</li> <li>• Funding for the preservation of built monuments</li> <li>• Certification of archaeological contractors</li> <li>• Prohibition of excavations without permits</li> <li>• Rules and procedures regarding appointing of archaeological monuments</li> </ul>	<ul style="list-style-type: none"> <li>• Permits for works associated with archaeological monuments (including refusal to grant a permit)</li> <li>• Rules regarding the shutdown of activities in case of unexpected archaeological finds</li> <li>• The obligation of taking cultural heritage into account in environmental plans</li> </ul>

**Table 6** Main arrangements relevant to the protection of archaeological monuments in the Heritage Act and the Environmental Planning Act in the Netherlands.

### Regulations regarding the Lower German Limes in the Living Environment Quality Decree:

#### Article 7.3

The Roman Limes is the location known as a series of archaeological monuments concerning the former Roman frontier, which runs from Katwijk aan Zee to the border with Germany over the territories of the provinces of South Holland, Utrecht and Gelderland, the geometric boundaries of which were laid down by ministerial decree.

#### Article 7.4

The key attributes of World Heritage and heritage on the Tentative World Heritage List, referred to in Article 7.3, are the essential characteristics of the existing landscape and cultural heritage outlined in Annex XVII in the interest of preserving the outstanding universal values of world heritage.

### Regulation regarding World Heritage in the Living Environment Activities Decree:

#### Article 14.9

Anyone who carries out an activity relating to World Heritage and knows or may reasonably suspect that this activity may lead to the damage or destruction of World Heritage or a part thereof, is, insofar as it affects the Outstanding Universal Value, obliged to take all measures that could reasonably be expected to prevent this damage or destruction

The key attributes are specified in detail in the Environmental Ordinances.

## REGIONAL REGULATIONS

At the provincial level, an Environmental Vision defines the spatial policy of the provinces (table 7). It describes the goals to be achieved, the policy through which to achieve these goals and the instruments intended for implementation. Protection of the existing landscape and heritage values is a predominant part of the ambition. The structure plan is a self-binding document, meaning it can only bind the province itself; in order to bind other parties regulation needs to be put in place. Hence the environmental vision plan is accompanied by an Environmental Ordinance, which takes into account the instructional regulations set out at national level.

## WATER REGULATIONS

Water level maintenance is covered by the Water Act [*Waterwet*], which places much authority in the hands of the water boards, which are supervised by the provinces. The Dutch component parts are spread across five regional water boards. For those component parts where organic material is part of the Outstanding Universal Value, a sufficient groundwater level is essential to maintain the quality of the sites. Under Article 5 of the Water Act regional water boards can issue a water level decision [*peilbesluit*]. This is a legal document in which a water board lays down the water levels that it maintains within a certain area. In managing the ground water level, water boards follow the functions as laid down in the environmental vision.

## MUNICIPAL REGULATIONS

Under the current Spatial Planning Act [*Wet op de ruimtelijke ordening*] the municipal authorities specify the designated use of sites in land-use plans [*bestemmingsplannen*]. The municipal land-use plan sets out rules and preconditions for land-use within the municipality and constitutes an important instrument for protecting

**Table 7** Overview of the relevant regional regulations (valid from 1-1-2021).

Province	Document	Year
PROVINCE OF SOUTH HOLLAND	Environmental Vision [Omgevingsvisie Zuid-Holland]	(2019)
PROVINCE OF SOUTH HOLLAND	Environmental Ordinance [Omgevingsverordening Zuid-Holland]	(2019) Of 2020
PROVINCE OF UTRECHT	Environmental Vision and Environmental Ordinance	2021
PROVINCE OF GELDERLAND	Environmental Ordinance [Omgevingsverordening Gelderland] (2018)	(2020)

existing and projected archaeological values. Municipalities are obliged to integrate archaeological policy into their land-use plans. The municipal land-use plan is legally binding. It designates land-use and constitutes the legal basis for granting permits for developments. For this reason, protective measures have to be established in these municipal plans. Rules set out in general Orders in Council at national level and in provincial ordinances have to be integrated in these municipal land-use plans.

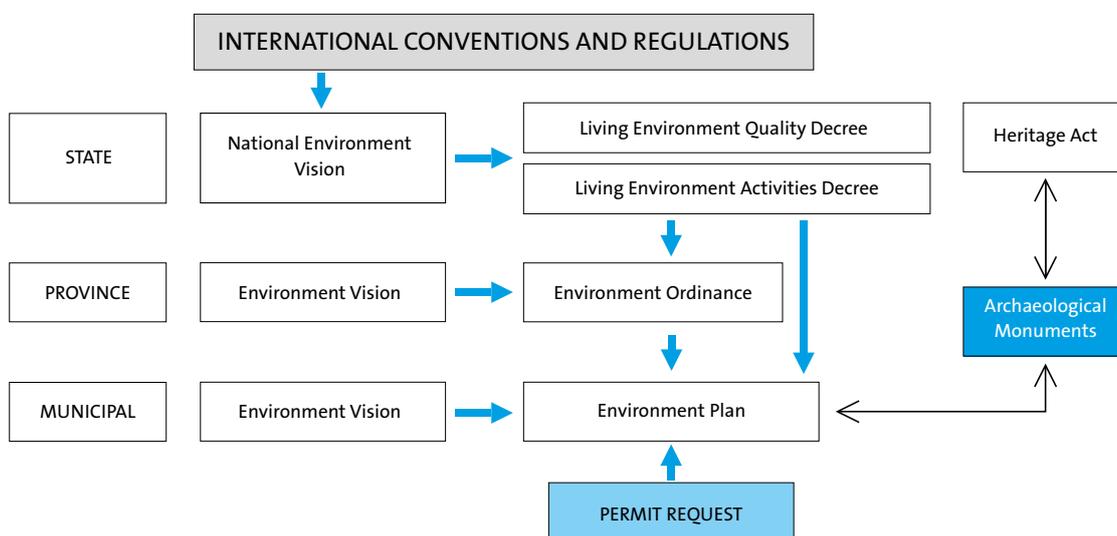
Under the new Environment and Planning Act, municipalities have to develop a self-binding environment vision and legally binding environment plan, which integrates spatial planning with sectoral regulations. Where, under the existing legislation, listed archaeological monuments are not integrated in the land-use plans, the new Environment and Planning act requires that a listed archaeological monument is integrated into these plans. Existing land-use plans will remain in force until the municipalities have replaced them with an environment plan. The protection of the monuments will be safeguarded during the transition phase.

Besides the existing land-use plans and the new environment plan and vision, municipalities can develop self-binding programmes and policies, for instance in the fields of tourism, education, culture, etc. These policy documents often constitute the backbone of the environment vision, plan and local budget planning.

### 3.3 Working of the legal system

Based on the legal system, any activity that changes or disturbs a listed archaeological monument requires a permit from the Minister of Education, Culture and Science (fig. 7). This permit is issued on behalf of the minister by the Cultural Heritage Agency. Under the new Environment and Planning Act the process of granting (or refusing) permits is placed under the authority of the municipalities. When a permit for any building or ground working activity on a listed monument is requested, the municipality is the competent authority, but the Minister of Education, Culture and Science does hold an advisory role with the right of consent when granting a permit; a municipality cannot deviate from this advice.

Not all activities require a permit: a limited number of activities listed in the inscription document of the archaeological monument – such as normal maintenance or activities in the disturbed upper layer of the soil and



**Fig. 7** Overview of relevant protective regulations relating to the component parts in the Netherlands under the Environment and Planning Act.

Development pressures	<p><b>Ambition: Conservation in situ in the component parts.</b></p> <p><i>Excavation is only allowed in those situations where:</i></p> <ul style="list-style-type: none"> <li>• There are no alternatives for the development to take place elsewhere – at a location where the archaeological remains of the component parts will not be affected.</li> <li>• There are no options for archaeological friendly development.</li> <li>• The development is of high societal importance.</li> </ul> <p><i>Preconditions</i></p> <ul style="list-style-type: none"> <li>• Reasonable effort must be made to eliminate or minimise negative impacts.</li> <li>• Excavation must take place in conformance with the procedures as laid down in the 'Kwaliteitsnorm Nederlandse Archeologie'</li> <li>• A contribution is made to enhancing public awareness of the value of the archaeological heritage.</li> </ul> <p><i>Procedure</i></p> <ul style="list-style-type: none"> <li>• All excavations are reported in advance to the IGC (prior to granting the permit for the development). In a situation where development might affect the OUV of the FRE-LGL as a whole, ICOMOS can be asked for advice.</li> </ul>
Scientific research	<p><b>Ambition: Non-destructive methods of investigation are applied wherever possible.</b></p> <p><i>Excavation is possible:</i></p> <ul style="list-style-type: none"> <li>• When integrated with the international research strategy.</li> </ul> <p><i>Preconditions</i></p> <ul style="list-style-type: none"> <li>• Excavation must take place in alignment with the procedures as laid down in the 'Kwaliteitsnorm Nederlandse Archeologie'.</li> </ul> <p><i>Procedure</i></p> <ul style="list-style-type: none"> <li>• The Knowledge working group will establish a research strategy, including a framework for scientific research that would contribute to delivering the goals of this MP.</li> <li>• Excavation is reported in advance to the IGC. In a situation where excavation might affect the OUV of the FRE-LGL as a whole, ICOMOS can be asked for advice.</li> </ul>

**Table 8** Framework for conservation in situ in the property and buffer zone.

maintenance of underground infrastructure – are excluded. The depth of known disturbance is determined for each monument, based on archaeological knowledge. For the component parts this depth varies from 0–50 cm, with the exception of Herwen-De Bijland, where the Roman remains are deeper thanks to the deposition of a thick layer of post-Roman river sediment. For activities within this depth range, a permit is not needed.

The land-use plan (from 2021 onwards the environment plan), provides the legal basis for the assessment of applications submitted by initiators of developments such as building, potentially damaging activities or functional changes in land-use. Interventions requiring a permit include the (re)construction of sheds, houses or business premises, the construction of paving, the digging of trenches, (re)excavation or filling-in of ditches and canals, deep ploughing, the construction of drainage pipes, reduction of the groundwater level and conversion of grassland into arable land, (glass) horticulture, bulb-growing or fruit-growing. Superficial soil interventions such as garden work do not require a permit because they do not change or disturb the archaeological values. For component parts not protected as a national archaeological monument, regulations are set out that require permits for all activities that could harm the archaeological values. In the more elevated areas where there are no peat soils, protection through the planning system is sufficient.

When drawing up and implementing spatial planning policies, municipalities are required to take account of archaeology (Valetta Convention, cf. section 5.b.1) and of regulations set out on a higher government level such as the state and the provinces. In the case of the Lower German Limes, the State has formulated an extra protection policy for the conservation of World Heritage sites in general; this is binding at the provincial level. The provinces in their turn translate this policy into regulations for municipalities. In this way, the effective safeguarding of the Outstanding Universal Value of *Frontiers of the Roman Empire – The Lower German Limes* is ensured through a municipal land-use plan and environment plan.

### 3.4 Developments in and near the component parts

For safeguarding the OUV of the *Frontiers of the Roman Empire – The Lower German Limes*, all the sites are adequately protected as described in paragraph 3.2. The starting point for conservation is conservation in situ within the component parts (table 8).

In a few exceptional cases, conservation in situ in the component parts will not be possible. A framework has been developed covering when and under what exceptional conditions an excavation might be necessary and what procedures should be followed.

In the buffer zones there is an obligation to undertake research prior to any proposed development. An assessment is then made based on the research outcome, balancing conservation and development. Regulations regarding the buffer zones are laid down in the municipal zoning plans and environmental plans.

## 4. Presentation

### 4.1 Public awareness

World Heritage status represents worldwide recognition of special cultural value. The status offers other opportunities also: it can strengthen the identity of an area or neighbourhood and it offers potential impetus for tourism and leisure. Various initiatives have been supported in recent years to realise these opportunities.

A number of priorities have been identified for the first management period, focussing on museums, signage, communication, education and visitor management. The aim is to develop these priorities in cooperation with the Public Awareness work group, local governments and other relevant partners.

#### MUSEUMS

Museums and visitor access and information points along the Lower German Limes manage and present a large proportion of the associated archaeological collections. These facilities have a large audience and thus make an important contribution towards broader awareness and understanding of the Limes and its historical significance.

There are several museums along the Limes in the Netherlands (table 9). These museums are often managed by independent, non-governmental organisations. One of the primary priorities for the first period of the management plan is to establish formal cooperation between the various museums presenting objects and topics associated with the Lower German Limes and between these museums and the individual archaeological sites. In some cases, where museums are situated directly on-site, cooperation between museum and site is inherent; nine Dutch museums are housed in buildings located within component parts.

Museum	Relevance/focus
Rijksmuseum van Oudheden	Iconic finds & Canon of Dutch History
Openlucht Museum Arnhem	Canon of Dutch History
Museum Hoge Woerd *	Iconic finds & Local history
Archeon/Scheepvaartmuseum	Experience & Iconic finds
Archeologiehuis Zuid-Holland	Archaeological background
Museum het Valkhof *	Iconic finds
Museum Kam	Archaeological background
DOMunder *	Experience & Archaeological background
Museum Dorestad	Regional
Centraal Museum	Archaeological background
Tempel   Kerk Museum Elst *	Local
Stadsmuseum Woerden *	Local
Museum Swaensteyn	Local
Ipse de Bruggen	Local
Waterliniemuseum *	Regional
Allard Pierson Museum	Archaeological background
Museumpark Orientalis	Experience
Torenmuseum Valkenburg *	Local
Baron van Brakel	Regional
Hof van Hessen	Local
De Bastei *	Local
Liemers Museum	Local
Streekmuseum Reeuwijk	Regional

**Table 9** Overview of museums along the Lower German Limes in the Netherlands. Museums identified with \* are located within a component part.

A feasibility study was begun in 2018, exploring the possibility of developing one or more visitor hubs to act as gateways for visitors to the Lower German Limes, to introduce and provide an overview of the Outstanding Universal Value and of the different sites and their geographical spread. Based on the outcomes of the study, a decision will be made as to whether and how to develop these hubs.

#### ACCESSIBILITY

Most of the Dutch component parts are located in public areas, which makes them in general fairly easily accessible. Investment to make Roman history more visible have been made by many partners at many of these sites in recent years. Parks have been developed which reference Roman history, outlines of forts have been visualised, art works have been installed and other projects undertaken. Underground remains can be seen at two locations: Elst and Utrecht Domplein.

Locations with leisure or tourism potential, such as Museum Het Valkhof (Nijmegen), DomUnder (Utrecht) and Park Matilo (Leiden) usually have parking facilities or are easily accessible by public transport

A long-distance cycling route and a long-distance hiking trail were developed in 2018 and provide other means of accessing the Lower German Limes, giving opportunities for different visitor groups to visit the sites, providing a different, linear perspective and stimulating environmentally friendly ways of visiting.

A few of the sites are on private – partly agricultural – land and are not directly accessible. The feasibility of creating visitor information points at these locations will be assessed. If the owners agree to make the site accessible, opportunities will be explored in consultation with the authorities and other stakeholders involved, in conformance with the requirements of World Heritage designation.

In the first management period a management plan will be prepared for each component part/cluster, to provide better insight into visitor numbers, and whether existing facilities are sufficient or extra facilities are needed.

#### ON-SITE INFORMATION

Most of the component sites already have on-site information provided through information panels or other forms of presentation (table 10). Recognizable and up to date on-site information is essential for awareness and understanding of the *Frontiers of the Roman Empire – The Lower German Limes*.

Guidance for on-site presentation will be developed in cooperation with the German management partners to support a uniform and coherent approach to signage. It is desirable to develop this signage not only for those archaeological monuments designated as contributing to OUV, but also for other sites that are part of the Lower German Limes, but are not part of the property itself.

#### DIGITAL RESOURCES

Digital technology increasingly has the potential to offer an improved visitor experience of cultural heritage. These technologies can have great added value, in particular as part of a broader approach to presentation and public experience. The development and management of such products lies primarily with the heritage partners. At national level it is desirable to maintain a digital platform as a central point where visitors can gather information about the Lower German Limes. During the first management period, the Public Awareness working group will further develop this digital platform as a gateway to digital information about the Limes in the Netherlands.

It is desirable that a strong link be made with the Archaeological Map of the Netherlands. This Map, developed by the National Museum of Antiquities in cooperation with the Cultural Heritage Agency, presents all archaeological values in the Netherlands online.

Nationally and internationally, various digital applications have been developed which have potential to make the Limes easier to experience. Use of digital applications will be assessed on a case-by-case basis at site level, with reference to the latest technological developments and specific target groups.

#### EDUCATION

The Roman period and the Limes are part of the Canon of Dutch History: a list of fifty topics that aims to provide a chronological summary of Dutch history to be taught in primary schools and the first two years of secondary school in the Netherlands. In order to support schools and students, there is an education portal through which school and students are provided with education material for primary and secondary education. This portal is

id	name	landscape references	art works	information panels	digital visualisation	visitor centre/museum
1	Valkenburg-Centrum	•		•	•	•
2	Valkenburg-De Woerd					
3	Voorburg-Arentsburg			•	•	
4	Corbulo's canal		•			
5	Leiden-Roomburg	•		•	•	
6	Woerden-Centrum	•		•		•
7	Utrecht-Limes road	•	•	•		
8	Utrecht-Hoge Woerd	•		•	•	•
9	Utrecht-Groot Zandveld		•	•		
10	Utrecht-Domplein	•		•		•
11	Bunnik-Vechten	•		•		•
12	Arnhem-Meinerswijk	•		•		
13	Elst-Grote Kerk	•		•		•
14	Nijmegen-Valkhof		•	•		•
15	Nijmegen-Hunerberg	•		•		
16	Nijmegen-Kops Plateau			•		
17	Berg en Dal- aqueduct			•		•
18	Berg en Dal-De Holdeurn		•	•		•
19	Herwen-De Bijland		•	•		

**Table 10** On-site facilities at component parts in the Netherlands (at the time of nomination).

managed by the joint regional heritage agencies [*Erfgoedhuizen*] together with the organisation RomeinenNU. Use of the education portal is monitored. Various educational programmes about the Roman period and the Limes are also offered at various museums.

During the first management period, the aim is to further develop these products. The Public Awareness work group will develop an education strategy and identify projects through which to implement this strategy.

The adult education offer for the Lower German Limes is a future priority. In Germany the Limes cicerones programme is aimed at this audience. Opportunities for adult education in the Netherlands will be explored through the education strategy.

## COMMUNICATION

At the time of writing, coordination of raising public awareness of the Lower German Limes lies in the hands of the joint regional heritage agencies [*Erfgoedhuizen*], one for each of the three provinces involved. In partnership with the RomeinenNU agency, they maintain a website (<https://www.romeinen.nl>) which provides a central point where visitors can obtain information about the Netherlands during the Roman period, with a focus on the Lower German Limes (including a special education platform), about the individual sites and museums that can be visited and about the World Heritage nomination process.

During the first management period, the Public Awareness working group will further develop digital communications for different target groups, to inform the wider public and engage larger audiences.

There is shared responsibility for these activities by governments, public and semi-public institutions, private parties and individuals, all of whom have an interest in promoting the special values of the *Frontiers of the Roman Empire – The Lower German Limes*. This shared responsibility is promoted strategically across the management structure. It is delivered through partnerships and network meetings to which partners such as local (volunteer) organisations, private parties and individuals are invited and stimulated to participate and encouraged to take initiatives themselves, in alignment with the communication strategy.

At a transnational level, an international logo has been developed for the Lower German Limes and during the first management period a joint communication strategy will be developed for communications about the Lower

German Limes, including guidance for use of the logo.

#### INTERPRETATION FRAMEWORK

In 2016 an Interpretation Framework for the Dutch part of the Lower German Limes has been established. This Interpretation Framework identifies several key interpretive themes for the history of the Roman presence along the Rhine and provides guidance on the presentation of these storylines through spatial planning and through displaying material culture associated with the Lower German Limes at visitor information points and museums. The term ‘framework’ has been used very deliberately to describe a flexible approach which sets out guidelines to help local organisations present the frontier using a variety of interpretive media, supporting local partners in building or improving their presentation of the Lower German Limes. The framework presents an overall thematic structure comprising eight diverse themes relevant to interpreting the values of the Lower German Limes. In 2017–2018 a pilot project was executed with two expert teams supporting local groups to implement the Interpretation Framework on-site: one focusing on spatial planning and landscape design, the other on supporting visitor information points and museums in improving their presentation. This approach has been evaluated and based on the outcomes of this evaluation a quality advisory group (Presentation work group) will be formed as part of the new management structure, to advise governments and institutions on their presentation of the Limes, outdoors and indoors.

Additionally, for the first management period there is an aim to build on the existing Interpretation Framework for the Netherlands to develop an international framework for the entire Lower German Limes, including guidelines for on- and off-site presentation.

## 4.2 Visitor management

#### LEISURE AND TOURISM

At the time of writing there is a diverse range of products – workshops, apps, museums, routes. There is currently insufficient understanding of the extent to which this product range meets the needs of the different target groups, if it is accessible and if it is balanced.

A visitor management plan can provide insight into audiences and target groups and the balance of products available for them, can clarify audience needs and gaps and identify opportunities to make the Lower German Limes more accessible for tourists and recreational users. During the first management period, a visitor management plan will be produced and will include an implementation strategy.

Visitor overload is a concern at some international sites. This is currently not the case with the *Frontiers of the Roman Empire – The Lower German Limes*.

#### MARKETING

In 2019, a brand identity and logo were developed for the Lower German Limes in the Netherlands, aligning with the identity defined in the Interpretation Framework. The logo will be used as a transnational logo in communications.

Marketing the Lower German Limes as a tourist destination seems particularly promising as part of a wider destination (historic centre/museum), recreational activity (walking/cycling) or larger concept (World Heritage). The first step is to gain better insight into the existing offer and needs of target groups through a visitor management plan. Based on the outcome, the aim is to carry out at least three geographically spread pilots in the 2020–2023 period, designed to market the Lower German Limes to tourists and recreational users. A more structured marketing approach will be developed based on the results of the pilots.

These pilots will also seek cooperation with existing regional tourism organisations/agencies to see how the Limes can be included in the wider product range. Cooperation opportunities with the Dutch national label ‘World Heritage.nl’ will be investigated.

Making agreements with providers about the use of the logo and its application within promotion and communications is part of marketing. The site manager will manage the Roman Limes brand along with the UNESCO World Heritage brand if World Heritage status is granted. In 2020, clear frameworks will be established on logo and brand formulation, including agreements on use of the UNESCO logo if World Heritage status is granted.

## 5. Knowledge and research

### 5.1 Limes data

A lot of information is already available on the Lower German Limes. Currently this is spread over many different locations. In the coming years, efforts will be made to improve access to this information via a central portal, initially at the level of the Dutch German Limes and possibly at the FRE level in the long term. This is primarily about unlocking/linking what is already in existing systems and then keeping the portal up to date. This is task of the Knowledge work group. The study group 'Nederrijnse Limes', comprising Dutch archaeologists and specialists in the field of the Limes, is an essential partner for the working group

### 5.2 Research concept

The National Archaeology Research Agenda (NOaA) identifies the most important research questions with regard to future archaeological research. Research theme 15 of the NOaA 'The Limes: design and interaction', in combination with the research agendas at provincial, regional and municipal level, provides the framework for future studies of the Limes.

New information has been unlocked in recent years through the study and re-interpretation of old, unpublished studies. Together with more recent excavations prior to spatial developments, these have yielded important new knowledge.

It is the task of the Knowledge work group to map the most important knowledge gaps and research questions with regard to the Dutch-German Limes and to provide information so that the research agendas noted above remain current. The goal is to prepare a research agenda for the entire Dutch-German Limes in collaboration with the scientific partners of the German part of the LGL and the Bratislava Group.

On the one hand, the focus will be on assessing 'old research'. A number of important sites found in the past are still awaiting analysis and publication. Old data sets can also provide new information through new and improved analytical methods. On the other hand, new information about the properties can be collected through non-invasive fieldwork, for research, management or presentation. No excavation will be carried out unless this is of crucial scientific importance or if it can improve understanding of the OUV, and only on condition that non-invasive methods cannot provide the information needed. The Working Group assesses in advance the consequences of any fieldwork for the integrity of the property. Invasive fieldwork is only allowed if a permit has been granted for this.

## 6. Realisation

### 6.1 Implementation

Management of the Lower German Limes in the Netherlands will be financed by the three provinces of Gelderland, Utrecht and South Holland. These organisations have made an agreement on long-term cooperation and provision of budget for executing the core tasks related to managing the *Frontiers of the Roman Empire – The Lower German Limes* in the Netherlands: general management, knowledge development, public awareness, visitor facilities and education. For the first four-year period a budget of 2. Million euro is reserved for delivery of these tasks. Other stakeholders will be approached to participate and co-fund on a project basis, to increase the reach and impact.

The municipalities within the provinces of Gelderland, Utrecht and South Holland will perform the regular tasks needed for the conservation of the component parts at their own expense, including preservation of the monument and law enforcement.

The archaeological monuments are mostly owned by governments and private owners. Only a small number is owned by non-governmental organisations such as *Staatsbosbeheer* (land owner and manager of natural reserves). In most cases there are no specific costs related to the conservation of the sites, and the existing land-use can be continued. In cases where maintenance might be needed, national funding is available to help maintain the monument.

#### BUDGET FOR IMPLEMENTATION OF THE MANAGEMENT PLAN ACTIONS

For the first four-year period, budgets have been reserved for the projects identified below. In all cases co-funding by third parties is needed.

- communication and partnerships
- education
- presentation working group – quality board
- knowledge and research
- funding small projects
- marketing: strategy and support of pilot projects
- projects that need third-party funding
- Limes Congress 2021
- Visitor Hubs

## 6.2 Staffing

Together the provinces of Gelderland, Utrecht and South Holland are responsible for managing the nominated property in the Netherlands [*Nederlandse Limes Samenwerking or Dutch Limes Association (DLA)*].

The human resources capacity required to carry out the management tasks will be funded from the budget allocated by the provinces. The coordination point for the *Frontiers of the Roman Empire – The Lower German Limes* includes:

- a *Frontiers of the Roman Empire – The Lower German Limes* programme manager
- an archaeological expert
- a programme staff member

Additionally, the partners provide:

- a representative officer from each of the three provinces
- a representative officer from the National Heritage Agency

## 6.3 Participation and partners

### PROTECTION WORK GROUP

The Protection work group comprises representatives of the authorities involved with the day-to-day protection of the component parts: the state service, municipalities and provinces. The deployment of this capacity for the Lower German Limes is covered by these partner organisations.

### PUBLIC AWARENESS WORK GROUP

The Public Awareness work group will manage development of products in the field of:

- capacity building
- communication [*publiekscommunicatie*]
- education

The work group will comprise members of governmental as well as non-governmental organisations, in order to represent the different partners involved. Resources are set aside for the deployment of experts to deliver relevant tasks.

### PRESENTATION WORK GROUP

The Presentation work group will comprise independent experts in the field of archaeology, presentation and design. Resources are set aside for the deployment of experts as required.

### KNOWLEDGE WORK GROUP

Archaeological expertise is deployed from various sources within the management structure to contribute to the Knowledge work group. In addition, resources are set aside for the organisation, development and maintenance of the knowledge portal.

This draft is based on the existing management plans 2019–2025 for the Danube Limes in Bavaria and 2019–2023 for the Upper German-Raetian Limes.



# MANAGEMENT PLAN

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## Part II – THE LOWER GERMAN LIMES IN GERMANY

RHINELAND-PALATINATE

NORTH RHINE-WESTPHALIA

# PART A: MANAGEMENT PLAN

## Overview

The Lower German Limes (LGL) extends over 400 km from the border of Upper Germany to the North Sea. It runs through the German states of Rhineland-Palatinate and North Rhine-Westphalia and through the Dutch provinces of Gelderland, Utrecht and South-Holland and passes through a variety of landscapes.

Most of the LGL's facilities have been preserved below ground. In many places, waterlogged layers offer very special conditions for preservation of organic materials. The various elements of the LGL, extending along the Rhine like a string of pearls, together with the river itself form a border system that existed for over 400 years and still shapes cities and countryside in many places.

Today the monuments of the LGL affect the very different interests of a great number of people and institutions along the former frontier. Efforts to preserve these monuments as a witness to history and to improve visitor access can, in individual cases, conflict with the needs of modern town planning and the commercial use of our cultural landscape.

This management plan is based firmly in the conviction that an improved exchange of information along the length of the LGL and in its direct vicinity can help build consensus between the interests of preservation, research and tourism on the one hand, and the needs of those who live and work along the Limes on the other. As a connecting framework, the plan contains precise statements regarding the future management of the LGL, but also more general perspectives on its future development. A key aim of the plan is to identify ways in which the existing protection mechanisms can be improved and developed. The first steps towards achieving this are discussion and liaison as to how the LGL can be sustainably protected, how it should be further researched, how visitor facilities can be improved, and how its landscape setting can be conserved and improved.

## 1. INTRODUCTION

### 1.1 Importance of the LGL

**1.1.1.** The protection of the LGL, an archaeological and cultural monument as defined by the conservation laws of the states in which it lies and a prospective UNESCO World Heritage site, is a matter of particular public interest.

**1.1.2.** The first Roman military presence along the LGL was established at Nijmegen and Neuss in the second decade BC. In the course of the 1<sup>st</sup> century AD, a chain of different types of fortresses and forts developed between these and other legionary sites, controlling transport and trade as well as all military activities along and beyond the Rhine. For over 400 years, this system secured the province of *Germania inferior*. Expansion in Late Antiquity and a new construction phase of fortlets led to a continuity of the border into the 5<sup>th</sup> century AD.

**1.1.3.** The natural landscape of the Lower German Limes is divided into three main components, which were already important in antiquity. The steep slopes of the Middle Rhine Valley in the Rhenish Slate Mountains remained an obstacle for shipping until pre-modern times. Near Bonn, the landscape opens into the Lower Rhine plain, where the Rhine meanders freely over a wide area. Military installations were often erected here in flood-free situations on Holocene terraces. In the Rhine-Waal Delta, the changing courses of the rivers define which areas are suitable for settlement and cultivation.

**1.1.4.** Over a distance of 400 km, the Rhine forms a unique border system as a natural barrier combined with military installations. This and the opportunities offered by the Rhine for transport and communications form the basis of the beginning and development of the LGL.

**1.1.5.** The complete range of Roman military facilities is represented along the LGL, including legionary fortresses, practice and temporary camps, cavalry, infantry and fleet forts, fortlets, watchtowers, roads and waterways, production centres and supporting civil settlements. The legions played a special role in this complex frontier system. Four legionary fortresses along this Limes section secured and organised the border, and legionary vexillations operated various workshops producing construction materials and other supplies for the army. The

Rhine served as a formal border, in times of crisis as a barrier, but for the most part as a transport corridor for exchange between the Roman provinces and the Germanic territories outside the Roman Empire.

**1.1.6.** In post-Roman times too (and at certain places even today), the LGL had an influence on the lives of people living in its vicinity. Many towns can trace their origin to Roman forts and the Roman layout is often still legible in the modern street pattern. In the names of towns, woods, roads and meadows it makes an important contribution to the area's identity. Its remains are an economic factor. In addition they can be natural monuments, and at times an increased effort is required to secure their sustainable preservation and use.

**1.1.7.** Many monuments of the LGL are perceived within cities and municipalities as important, formative objects in their history. An important aim is to enhance the contribution the LGL makes to local identity and pride of place, through increased awareness and understanding by residents of its nature as a holistic boundary system with all its components and ground monuments.

**1.1.8.** Two particular features of the LGL are on the one hand the abundance of very well-preserved organic materials and on the other hand, the excellent state of preservation of built structures, underground in cities and above ground in rural areas.

## 1.2. Responsibility and involved state parties

**1.2.1.** All actions likely to impact the archaeological monument are subject to approval by the state conservation agencies in accordance with the conservation laws of the state concerned.

**1.2.2.** It is the responsibility of private and public landowners, on whose land the individual parts of the LGL lie, to ensure that the Roman remains are handled responsibly, and this has usually been the case for many generations. These landowners and users of the land play the most important role in looking after the monuments of the LGL.

**1.2.3.** It is the responsibility of the local authorities along the LGL to make decisions concerning all types of future development affecting the LGL. This applies not only to questions of preservation, but also to matters concerning public access.

**1.2.4.** Many institutions are involved in the development of public access to the LGL, working cooperatively and in coordination with the conservation agencies of individual federal states in building footpaths, putting up signs and producing brochures and leaflets. These institutions include local authorities, civic partnerships, forestry offices and nature parks, and also in many cases local and regional societies.

**1.2.5** Research along the LGL and its individual sections has been carried out since the beginnings of scientific archaeology by universities, museums, conservation agencies and other research establishments. The authorisation and supervision of scientific archaeological excavations is the responsibility of the state conservation agencies.

**1.2.6.** With the foundation in 2003 of the German Limes Commission [*Deutsche Limeskommission (DLK)*], extended in 2005 to include management responsibility for the LGL, conservation, research and development associated with the monument were together given a stronger, coordinated basis. As the point of contact for all institutions, local government bodies and individuals in any matters concerning the LGL, a primary function of the DLK is to ensure that the protection of the LGL has the highest priority in any planning or development schemes by improving the exchange of information and assisting with coordination. This approach ensures that research and development serve to assist protection.

**1.2.7.** The conservation agencies of the federal states acting in conjunction with the DLK are responsible for coordinating conservation, development and research concerning the LGL.

## 1.3. Concept: Goals of this MP

**1.3.1.** Preparation of this management plan has been informed by previous experience gained through the preparation of management plans for the *Frontiers of the Roman Empire* and *Danube-Limes (West)* World Heritage sites.

**1.3.2.** The aim of the Management Plan is to provide the basis for the long term preservation, research and development of the LGL as an archaeological monument, formulating strategic policy and identifying mechanisms and actions for delivery. This Management Plan is the basis for future discussions with all parties involved along the length of the LGL.

**1.3.3.** Additionally, specific chapters of this Management Plan identify objectives for new regulations, in so far as these are seen as being necessary and useful for the protection, conservation or development of the LGL.

**1.3.4.** The Management Plan describes the current legal situation.

**1.3.5.** The Management Plan will be revised every six years. During the operating period of the plan it is envisaged that the content will evolve and adapt in the light of experience gained in managing the ORL and through exchange of experience with those organisations which manage the other sections of the former boundary of the Roman Empire, particularly if they are part of the group of UNESCO World Heritage sites that collectively form the *Frontiers of the Roman Empire*.

## 2. WORLD HERITAGE PROPERTY (VALIDITY)

### 2.1. Basis

**2.1.1.** The LGL is an extensive archaeological monument made up of a number of different elements. The history of its rediscovery and of research on it is long, and the results often reflect the spirit of the particular age. Over time there have been many different approaches to its preservation and the development of visitor access, with great variation in quality also. In consequence the condition of the monument varies greatly from place to place and from site to site.

The LGL has so far been seen as a number of different, separate sites. Awareness of the LGL as a coherent, organic system needs to be strengthened and this is one of the aims of the Management Plan.

**2.1.2.** Conservation considerations, scientific necessities and the interests of landowners, town planning officers, local inhabitants and visitors make it necessary to formally document and continually revise a detailed assessment of the monument's condition. For this reason the state conservation agencies will be required to organise and conduct systematic and comprehensive surveys of monument condition.

**2.1.3.** As a complex of mainly military sites, the LGL forms a homogeneous monument manifested in very differing landscapes including forests, agricultural areas, residential settlements, built-up urban areas and in close proximity to industrial estates and main roads.

**2.1.4.** The LGL is an authentic historical site and as such forms a direct link with the past. For this reason it attracts strong interest in research, science and education. Many questions regarding the monument and its historical importance have yet to be answered.

**2.1.5.** The LGL World Heritage site continues to exert a strong influence on the modern urban landscape, and even in rural areas the remains can have a strong influence on the modern cultural landscape.

**2.1.6.** Strong affiliations to the archaeological site exist, especially in cities with a strong Roman connection. In these situations it is particularly important to protect, enhance and make visible the connections with the ancient road network and with other locations that have influenced a city's history.

**2.1.7.** Most of the various elements of the LGL are very well preserved, but underground. It is desirable to make the buried monument more easily identifiable and comprehensible above ground and, in particular, to make its course traceable. This approach serves to make visitor access easier whilst still giving the highest priority to preservation. All schemes intended to improve access and legibility of the monument must avoid causing damage to its substance.

**2.1.8.** The process of urbanisation which began in the Middle Ages in many places interrupted the relationship between the Roman sites and the countryside surrounding them. In urban areas this often severely impedes the discovery and documenting of archaeological remains.

**2.1.9.** It is therefore of particular importance to protect those known and positively located elements of the LGL which lie within urban areas. All sites in which archaeological substance may survive must be scheduled in order to facilitate their protection or research. The basis for scheduling would be a precise identification of the monument's location and a survey of the quality of the substance surviving under the surface.

**2.1.10.** Coordination with town- and land-use planning officers is essential in urban areas, in order to protect or possibly reconstruct Roman construction layouts still legible in the contemporary townscape.

## 2.2 Boundaries of the LGL

**2.2.1.** The plans and policies outlined here apply to all archaeological sites recognised as belonging to the LGL. They are to be preserved as archaeological sites and monuments in accordance with the conservation laws of the federal states.

**2.2.2.** The designation of the protected area of the LGL is based on precise surveys, on evidence of a clear and direct relationship with known monuments or on scientifically projected extensions to monuments belonging to the LGL.

**2.2.3.** The LGL includes legionary fortresses, auxiliary forts, fortlets, temporary camps and watchtowers, which extend along the Rhine like a string of pearls. In addition to these overtly military structures there are the connecting limes road and a canal, *vici*, cemeteries, quarries and production facilities.

**2.2.4.** The LGL includes other military facilities in addition to the fortifications. These facilities form part of the strategic concept of the LGL, with a functional link between them and the fortified sites.

**2.2.5.** The continuing progress made in archaeological survey methodology and results, and the general expansion of scientific knowledge, make it necessary to continually review and where appropriate revise the extent of the monument's boundaries. Alterations to the monument boundaries can only be made under certified expert archaeological advice and with the application of acceptable conservation methods.

**2.2.6.** Those areas where the substance of the monument has been lost should be included in all descriptions for information purposes, in order to preserve the historical context.

## 2.3. Boundaries of the buffer zone

**2.3.1.** The buffer zone is intended to help preserve and increase the awareness of the LGL.

**2.3.2.** Buffer zones are defined in order to prevent unsuitable developments close to the monument or in its vicinity. Buffer zones correspond to the protection zones included in the conservation laws of some federal states, in which interventions likely to affect the substance or visual setting of a monument must be assessed and approved. For this reason buffer zones must be included in town planning and land use regulations.

**2.3.3.** Buffer zones have been established particularly in places where the elements of the LGL are important components of the cultural landscape.

**2.3.4.** The Buffer zone may also contain archaeological 'expectation or suspicion areas' – areas where archaeological remains relevant to understanding of the LGL are projected or expected. In built-up areas especially, it is necessary to protect unscheduled and unknown sites. This is an aspect in which research takes on an important role in defining the location and extent of possible archaeological sites.

**2.3.5.** The designated area of the Buffer zone of the LGL has been precisely mapped (see 6.1).

**2.3.6.** It may be necessary to take into account interests outside the designated buffer zone which might affect archaeological conservation, nature and landscape conservation, science, visual perception or tourism within the buffer zone.

### 3. MANAGING THE WORLD HERITAGE SITE (VALIDITY OF CONTENT)

#### 3.1. Management structure

**3.1.1.** The federal states involved have the obligation to preserve the LGL archaeological monument. To ensure its permanent survival it is necessary that as many people and institutions as possible in the vicinity of the LGL share an interest in its preservation.

**3.1.2.** Actions which serve to protect the LGL or promote public awareness of it must therefore be continually revised and adapted to changing social and technical conditions.

**3.1.3.** Significant sections of this plan have already been agreed with the institutions concerned along the LGL during preparation of the nomination document for inscription as a World Heritage site.

**3.1.4.** The local authorities bear great responsibility for the monument as they are directly responsible for its in-situ protection and for development along the LGL. To ensure successful management of the monument they will be actively involved in the continuing development of this plan.

**3.1.5.** This plan is addressed to all those responsible for the day-to-day management and care of the LGL.

**3.1.6.** Successful implementation of this plan and achievement of its goals depends on the agreement and cooperation of all those responsible and interested in the management and care of the LGL.

#### 3.2. Status of the Management Plan

**3.2.1.** This Management Plan provides the framework for all activities along the LGL archaeological monument. The contents and objectives of the Plan are designed to be acceptable to all concerned.

**3.2.2.** Much of the content is based on existing standards of jurisdiction and public administration; implementation of other aspects of the Plan will depend on additional agreements. However, implementation of all objectives identified in this plan will depend, to a great extent, on the voluntary collaboration and cooperation of all concerned.

**3.2.3.** The Management Plan should be revised by 2027 on the basis of the experience gained during the period of its operation.

#### 3.3. Reviewing the Plan

**3.3.1.** Since archaeological science develops continually, it is essential to reassess the boundaries of the monument and the surrounding buffer zones regularly. At the same time it is necessary to take into account any changes that take place through the continuing development of landscapes, settlements and transport infrastructure.

**3.3.2.** Reflecting this continuing process of change, the factual and administrative contents of the Management Plan will be continually reviewed and modified by the DLK.

**3.3.3.** This process of review will incorporate the results of the reports submitted periodically to UNESCO.

#### 4. PROTECTION AND CONSERVATION (REQUIREMENTS)

##### 4.1. Standards

**4.1.1.** In total, the LGL monument covers an area of c. 756 ha, to which must be added the c. 3,761 ha area of the buffer zone. The diversity of elements of the LGL, its special properties as a river frontier and as an area with well-preserved organic materials and the divided ownership make it essential to establish agreements for its protection, maintenance and development.

**4.1.2.** The LGL is a homogeneous monument of international importance. Consequently, uniform standards that comply with internationally recognised criteria must be applied to all future actions on any section of it.

**4.1.3.** The main focus of attention must be on the conservation of the substance of the monument. The protection of the surviving, authentic sites and of the individual elements of the LGL forms the basis for all research and development activity. This aspect of protection is adequately covered by existing legal and administrative arrangements.

**4.1.4.** It is important also to accommodate the wishes and requirements of ongoing scientific research and debate on the archaeological monuments of the frontier of the Roman Empire. The direct and indirect results of this research are incorporated into the content of visitor presentation and have an influence on conservation strategies for the LGL.

**4.1.5.** A further fundamental factor to be considered for all future activities on the LGL is the need for amicable agreement and acceptance of all measures by those people who live and work at or close to the monument. This is especially the case in situations where conflicting interests are apparent.

**4.1.6.** On some sections of the LGL greater attention needs to be paid to the importance of tourism. This applies not only to the needs of visitors with regard to their understanding of the monument and its presentation, but also to the role tourism plays as a local economic factor.

##### 4.2. Threats

**4.2.1.** Individual sections of the LGL or parts of the fort locations on the LGL are threatened by a number of factors. These factors threaten not only the preservation of the monument itself but also scientific research and use for tourism.

**4.2.2.** The most enduring damage occurs in places where parts of the LGL are affected by construction projects. The use of land for building new roads or railways, for industrial purposes, for quarrying and the production of energy, as well as for housing, generally leads to a complete loss of the substance of the monument in the affected area as well as to permanent and extensive damage to the sectors bordering it.

**4.2.3.** Modern land management, in particular the use of ploughs, leads in many sections of the LGL to regular interference with the monument's substance. The damage is particularly heavy in places where land consolidation has led to a realignment which, in contrast with the old alignment, no longer takes the location and course of the LGL into consideration.

**4.2.4.** Comparable dangers exist also in woodland areas. The use of modern heavy machinery and the construction of new forest roads can lead to destruction in sections of the LGL where, as a result of centuries of respectful and low intensity use, the monument has been impressively preserved as visible above-ground remains.

**4.2.5.** Experience has shown that facilities for renewable energy can endanger the visual understanding of the monument by the public. Wind turbines in particular can compromise the LGL's appearance and legibility if they are located in close proximity to the monument, or if they dominate views significant to the monument's setting.

**4.2.6.** At present, only minimal danger to the monument is caused directly by visitors' behaviour, as the substance is largely protected underground or is structurally safe. Dangers from vandalism etc. can occur at elements of visitor infrastructure such as car parks and playgrounds.

**4.2.7.** Presentation of the monument and its subsequent development for tourism purposes must not be allowed to detract permanently from the impression that the monument itself makes. This applies to the number and types of information signs erected and the positioning of these signs in relation to the monument, as well as to the provision of other facilities such as benches, tables and litter bins.

**4.2.8.** Treasure hunting and metal detecting still pose a real threat to unexcavated sections of the archaeological monument. Suitable measures should be developed and enforced to counter this threat, in coordination with the conservation agencies of the federal states and with the appropriate legislative bodies.

## 5. OBJECTIVES

### 5.1. The process of increasing the public awareness

**5.1.1.** Many aspects of the historical value of the ancient frontier of the Roman Empire and the role it played in the subsequent historical development of Europe have not yet been adequately researched. This affects also the opportunities and challenges for public presentation of the monument.

**5.1.2.** One of the main goals of the MP is to promote broad awareness of the great importance of the LGL as part of the Roman Empire and as a link between ancient cultures inside and outside its frontiers.

### 5.2. Protection and care, research and presentation

**5.2.1.** It is the duty of the Management Plan to establish and strengthen the positive interaction between protection and care, research and presentation.

**5.2.2.** It is intended to intensify all these areas of activity along the LGL.

As a grouping of local community interests, the German Limes Road Association [*Deutsche Limesstraße e.V.*] plays a very important role in touristic presentation along the ORL. The aim is to extend the sphere of operation of the Association to include the LGL in Rhineland-Palatinate and North Rhine-Westphalia.

**5.2.3.** Maintenance, research and presentation plans are to be coordinated with the DLK and delivered based on an overarching regional approach. Measures regarding conservation, restoration, reconstruction, construction of replicas and protective covering of archaeological monuments along the LGL are to be carried out in accordance with the guidelines established in Part B.

**5.2.4.** In an increasingly global world, coordination with additional international partners, particularly those in the *Frontiers of the Roman Empire* World Heritage Cluster which unites all sites in the areas of the Roman frontier that are inscribed on the World Heritage List, or where there is interest in a segment's inscription, plays a special role.

### 5.3. The certainty of continued development

**5.3.1.** In future it will have to remain possible to allocate and develop areas of land along the LGL for new housing, settlements, or roads and railways, or for commercial and agricultural use. Land- and forest-management have a particular influence on the appearance of the LGL.

**5.3.2.** Scientific research on the LGL will continue through selective projects along its length and in its constituent parts. These projects must conform to the highest international standards. Their results form a basis for the sustainable protection, care and development of the LGL and must also be considered and disseminated in a supra-regional context.

## 5.4. Guidelines

This Management Plan for the LGL is based on the guidelines set out below. The plan intends to:

- 5.4.1.** demonstrate ways of managing all future change to the advantage of the LGL and its surroundings, and thus secure its existence for future generations;
- 5.4.2.** contribute towards the preservation of the general character of the remains and their historical context;
- 5.4.3.** maintain authenticity and integrity during all future measures and changes;
- 5.4.4.** encourage the preservation of the visual experience produced by the many different landscapes along the LGL by means of forward looking and integrated development measures;
- 5.4.5.** help and inform the use of public and private resources to improve the protection and development of the landscapes along the LGL;
- 5.4.6.** encourage the search for ways to protect the World Heritage site from the effects of construction or other damaging influences;
- 5.4.7.** increase public awareness of the archaeological and historical value of the individual sites as well as of the LGL as a whole;
- 5.4.8.** identify strategies through which the visibility and legibility of the LGL can be improved;
- 5.4.9.** encourage improvements in visitor access facilities along the LGL;
- 5.4.10.** support growth in the economic benefits of the LGL to local inhabitants through tourism;
- 5.4.11.** seek to achieve a spirit of partnership and cooperation among those people and institutions, public and private, that have an interest in the LGL and its surroundings.

## 6. BASIS

### 6.1. Limes database

**6.1.1.** The basis of the protection and care of every archaeological monument is a comprehensive knowledge and understanding of it. The process of documentation and inventory is essential to ensure knowledge is acquired, retained and accessible. Information concerning the exact location and condition of all elements of the LGL is particularly important.

**6.1.2.** The setting up of a geographical information system of the state service for archaeological and historical heritage (BODEON – Bodendenkmalpflege.Denkmalpflege.Online) has made it possible to bring together different types of information. At the core of this database are the detailed maps drawn using knowledge that already exists in each of the federal states. The boundaries of the property and the buffer zones are recorded within this database.

**6.1.3.** Information from this data base is provided by the LVR-State Service for Archaeological Heritage to bona fide interested parties for the purpose of future planning and monitoring, in accordance with data privacy laws.

### 6.2. Research concept

**6.2.1.** In order to broaden our knowledge of the World Heritage site, continuous scientific research into LGL is necessary. Non-invasive methods will take priority. As part of future research, for example, comprehensive surveys applying the full range of methods available are necessary, with the primary aim of gaining more precise information on the exact location of the LGL and its dimensions (including areas outside the nominated sections). The documentation of sites that are unknown or not sufficiently studied is another research project with very high priority.

**6.2.2.** All actions taken in connection with research on the LGL must conform to the terms of reference of the state conservation agencies.

**6.2.3.** Excavations on the LGL should only be permitted if it is clear that they are to be carried out in accordance with the principle of permanent conservation and protection of the monument's substance. The need for an excavation is to be weighed against the principle of preserving the monument in its present condition, taking into account all existing sources and knowledge.

**6.2.4.** Furthermore, increased efforts should be made to tap the full scientific potential provided by a systematic re-evaluation of previous archaeological research ('old excavations').

### 6.3. International cooperation

**6.3.1.** In order to further develop the Management Plan for the LGL it is necessary to improve coordination along the whole of the ancient frontier of the Roman Empire in Europe.

**6.3.2.** The strategic management of the nominated World Heritage falls to the Intergovernmental Committee (IGC) as contact partner for UNESCO.

**6.3.3.** Operational management of the nominated World Heritage site LGL at international level will be carried out through the Management Group (Hexham Group). From the German side, the executive manager of the German Limes Commission, the Limes Coordinators in Rhineland-Palatinate and North Rhine-Westphalia and the executive manager of the German Limes Road Association [*Verein Deutsche Limesstraße e.V.*] are members.

**6.3.4.** It is intended to expand the World Heritage site *Frontiers of the Roman Empire* beyond the sections currently inscribed. This process is supported by the Bratislava Group.<sup>10</sup>

**6.3.5.** International communication on the subject of the care, research and presentation of monuments should be increased.

## 7. PROTECTION AND CONSERVATION

The World Heritage site and its buffer zones are defined in such a way that it is possible for the parties responsible for each component part of the LGL to develop and apply processes for the protection, research and accessibility of the monument in accordance with this Plan.

### 7.1. The monument in non built-up areas

**7.1.1.** By 2021 all component parts of the LGL will be legally protected by conservation orders or by inscription as a scheduled monument. This provides sufficient long term protection.

**7.1.2.** Sustainable preservation of the World Heritage site is dependent on not only the landowners, but also local authorities and the conservation agencies of the federal states. They have at their disposal not only such instruments as conservation laws, but also planning legislation, land use laws and nature conservation laws.

**7.1.3.** It makes sense, wherever possible, to strive to establish a network of interests with nature and landscape conservationists and to pursue the concept of an integrated protection scheme for cultural landscapes. Schemes intended to serve the protection of archaeological and historical monuments have a better chance of success if they are coordinated with other legally scheduled conservation interests.

**7.1.4.** Along the length of the LGL and in the buffer zone there is a close relationship between the conservation of the monument and the protection and conservation of the landscape. Protection and conservation of the landscape saves the vicinity of the LGL from inappropriate construction activities and adverse effects on its

<sup>10</sup> R. Ployer/M. Polak/R. Schmidt, *The Frontiers of the Roman Empire – A Thematic Study and Proposed World Heritage Nomination Strategy*. Advised by ICOMOS-International and commissioned by the Intergovernmental Committee of the 'Frontiers of the Roman Empire' World Heritage Site (UK, DE) and the Bratislava Group (Vienna, Nijmegen, Munich 2017).

visual appearance, and it also serves to preserve its characteristic features. This is particularly true for extensive arable land and of wooded areas.

**7.1.5.** In special cases it is necessary and helpful to provide additional protection for certain pieces of land by acquiring them, either with public funding or through any other institution that has an interest in the protection and conservation of the LGL. This is particularly to be considered in situations where a compromise between a use which would damage the monument and the interest in its preservation is not otherwise possible. In these cases, a change in use compatible with the protection of the historical monument is to be aimed for.

**7.1.6.** The acquisition and change in use of larger areas of land should be accompanied by a plan for the sustainable conservation and management of the monument.

**7.1.7.** The LGL must be integrated into the developing cultural landscape of which it forms a part. This requires a knowledge of the surrounding cultural landscape and its individual elements, as well as an integral view of the LGL together with the river Rhine as a relevant component within this landscape.

## 7.2. The monument in built-up areas

**7.2.1.** Sections of the LGL located in built-up areas are nevertheless part of the World Heritage site. Even when only very small remains of the LGL are visible in these areas, they can nevertheless be of great archaeological value.

**7.2.2.** Generally the same conservation regulations apply here as in areas which are not built-up.

**7.2.3.** The major problem confronting successful protection of the LGL in urban areas is that frequently there is imprecise knowledge of the monument's preserved remains and the extent of impact by historical or modern structures.

**7.2.4.** In places where understanding of the Roman boundary fortifications appears difficult, a long-term effort must be made to improve knowledge of the LGL.

**7.2.5.** It is particularly important to protect the scheduled remains of the LGL in urban areas therefore, in accordance with the prevailing criteria. The main objective must in the first place be the conservation of the existing substance of the monument.

**7.2.6.** The World Heritage site and its buffer zones have been designated in order to give those persons locally responsible the opportunity to develop procedures for the protection, research and development of the LGL.

**7.2.7.** In areas where the remains of the monument are no longer visible due to previous encroachment, the responsible authorities should at least try to restore visual sight lines and elements of Roman spatial planning through urban planning measures.

**7.2.8.** One approach, for example, is the marking of alignments of defensive or building structures by reversible measures, so that the elements of the LGL can be recognised and understood as historical spatial structures. This approach can be applied also to the representation of well-known Roman building axes and street alignments. Such marking does not require the presence of monument substance in the areas concerned.

**7.2.9.** The basis for this could be the systematic purchase of selected plots of land, not only to prevent them being built on, but also to create open areas

**7.2.10.** In the medium and long term it could thus be possible to make the position of the individual elements and their interacting relationships legible once more, even in urban areas.

## 8. PRESENTATION

### 8.1. Goals

**8.1.1.** The goal of a regionally structured approach to public presentation of the LGL is to provide attractive and audience focused offers for the public.

**8.1.2.** To this end, the LGL should be presented locally, regionally, nationally and internationally.

### 8.2. Implementation

**8.2.1.** Part C of this Management Plan outlines the basic parameters of a future strategic presentation plan (Interpretation Framework) for the German part of the LGL.

**8.2.2.** The entire Framework is an integral part of this Management Plan.

**8.2.3.** This is a content- related framework with suggestions for museums and other presentation sites.

**8.2.4.** Implementation of the basic parameters of the LGLIF at local and regional levels is a duty of the responsible parties at each presentation site.

## 9. TOURISM

### 9.1. Requirements

**9.1.1.** As is the case with many other historical sites, tourism plays an essential and central role for the LGL in the presentation of the monument.

**9.1.2.** The requirements of tourism must be secondary to the conservation of the monument and its surroundings, in accordance with the aims of UNESCO.

**9.1.3.** Tourism requirements include not only appropriate presentation of the entire monument for German and foreign visitors, but also the provision of adequate access and other facilities on-site.

**9.1.4.** It is in the interests of all neighbours of the LGL to exert influence on all measures connected with the development of tourism to ensure tourism brings benefits rather than negative impacts.

### 9.2. Aims

**9.2.1.** All measures taken to develop tourism to the LGL must be done in a way which is reconcilable with the monument itself. They must not harm the substance or the quality of the monument in any way, or restrict research programmes, but should be planned instead so as to improve the visitor's understanding of the LGL and of the need for its conservation.

**9.2.2.** All measures planned in future should be coordinated in content and appearance and be carried out to the same high standard.

**9.2.3.** Further development of tourism to the LGL should take place with the agreement of the local community. It is intended to plan all measures wherever possible in consultation with the parties concerned.

**9.2.4.** Tourism schemes on the LGL should aim where possible to generate income for the local population.

### 9.3. Interests

**9.3.1.** The DLK (cf. 10.3.) coordinates and advises on the further development of tourism to the LGL in both federal states. It acts as point of contact and cooperation partner for the persons and institutions listed below.

**9.3.2.** Normative controls in the field of tourism can be helpful. The state conservation agencies will be given an advisory role in the development of new tourism projects, which will include not only advice on the archaeological monument locally, but also the provision of factual information.

**9.3.3.** The various museums are an important factor in the successful development of tourism and presentation of the LGL.

**9.3.4.** The German Limes Road Association [*Verein Deutsche Limesstraße e.V.*] was founded in 1995 to coordinate implementation of these aims on behalf of the vast majority of towns and local authorities along the ORL. A future extension of the Association's activities throughout the LGL is planned. Among other activities in the field of tourism, the Association is responsible for public relations, the publication of tourist information, press relations, the coordination of advertising measures, general information, accommodation information and regulation of the flow of visitors. Besides museums, tourism along the Roman frontier in Germany hinges on the comprehensive work of the German Limes Road Association as a first point of contact for potential visitors and interested guests. Due to its importance the Association is a permanent member of the German Limes Commission.

**9.3.5.** An important aspect for presentation of the LGL is the long term provision of information and assistance to visitors through qualified and trained personnel. For the Upper-German Raetian Limes World Heritage site the 'Limes Cicerones' play an important role. They are trained and given regular skill enhancement courses in close cooperation with the state conservation agencies. It is planned to develop the system of 'Limes Cicerones' for the LGL, too.

**9.3.6.** Some individual sites along the LGL continue to be looked after by societies, schools, and other regional or local initiatives. All activities at these sites should be coordinated with the DLK and the state conservation agencies.

**9.3.7.** Owners and occupants of property within the World Heritage site live in close contact with visitors to the site. Their understanding and agreement should always be sought.

#### 9.4. Resources

**9.4.1.** The ORL Footpath, which has existed for decades, has in recent years been complemented by a cycle path and a road, so that individual and group visitors now have access to almost every point of the ORL. A similarly strong network of complementary routes is intended for the LGL.

Single and group travellers should in future be able to reach almost every site along the LGL by following signs. The state conservation agencies will work together with The German Limes Road Association, other relevant associations and the respective local authorities to plan and sign appropriate routes.

**9.4.2.** Conservation, restoration, reconstruction, rebuilding or protective covering measures for archaeological monuments along the component parts of the LGL are carried out in accordance with the guidelines outlined in Part B. The text is based on the relevant section of the Management Plan for the Upper German-Raetian Limes. The guidelines in Part B are an integral part of the Management Plan.

### 10. IMPLEMENTING THE PLAN

#### 10.1. Interested parties

**10.1.1.** The legislative and administrative responsibilities for the conservation of monuments and therefore for the preservation of the LGL are regulated differently from state to state within the federal system of the German Federal Republic.

**10.1.2.** There is a fundamental public interest in the protection and conservation of its monuments, as stated in the Monument Protection Laws. Those responsible for the preservation of The LGL are first and foremost the landowners on whose property the World Heritage site is located.

**10.1.3.** Regional conservation agencies are, as a rule, responsible for legal measures concerning conservation. This however does not apply, for instance, to measures which involve cultural monuments owned by the state, or which involve planning laws. In such cases they receive support from the state conservation agencies, the office of the state president or the relevant ministries.

**10.1.4.** The LVR-State Service for Archaeological Heritage and the head office of Cultural Heritage in the State of Rhineland-Palatinate are expert agencies. They study the LGL and assess what remains of its substance and what is therefore a cultural monument within the terms of the respective conservation laws. They are responsible for most of the public relations work, they advise owners of monuments and produce a report on all plans and measures which involve the LGL.

**10.1.5.** In the conservation agencies of the federal states the position of Limes Coordinator should be made permanent. In Germany these officers are the 'site managers' referred to in the UNESCO guidelines.

**10.1.6.** Responsibilities for all measures connected with development and tourism along the LGL is allocated according to the policies, regulations and procedures identified above.

**10.1.7.** As a general rule the local authorities acting in cooperation with the state conservation agency or the head office of Cultural Heritage are involved in the implementation of all measures, alongside the landowners. Forestry offices, the administrators of nature parks or specific public officers are involved in infrastructure measures concerned with tourism. These include functions within the field of public relations.

**10.1.8.** For decades there has been close and successful cooperation between the state conservation agencies and societies or local interest groups. The important role that these groups play in protection and care as well as in the presentation of the LGL is recognised and supported by the state conservation agencies.

## 10.2. Catalogue of actions and ways of implementing them

**10.2.1.** The importance of the LGL and the contents and aims of the Management Plan will be publicised through greater use of suitable means (publications, information events, on-site information, signage etc.). This will also involve the display of known archaeological finds from the LGL in appropriate modern ways and with the help of modern media.

**10.2.2.** Every measure that serves the direct or indirect preservation of the component parts of the LGL will be discussed and agreed and then authorised by the state conservation agencies and the regional conservation agencies. Overlapping or fundamental measures must be evaluated by the DLK.

**10.2.3.** Before beginning any preservation scheme a complete and detailed scientific documentation must be made of the respective part of the monument, and an evaluation carried out.

**10.2.4.** The main focus of attention must be on the prevention or limitation of possible damage. It is intended to designate significant sections of the monument as public property, either by means of regional or local planning procedures or through acquisition.

**10.2.5.** In cases where the identified sites of LGL forts and other component parts have not yet been registered, or have been incompletely or erroneously registered into land use and development plans, this will be corrected in the course of their updating.

**10.2.6.** In cases of reallocation of land rights and use, the legibility and understanding of the LGL should be retained or restored. This will require close cooperation between owners and users on the one hand and the appropriate state agencies and institutions on the other hand.

**10.2.7.** The question of whether regionally important land use plans could impact on the LGL is being examined in cooperation with the conservation agencies.

**10.2.8.** To ensure sustainable protection and preservation it is imperative that the core and buffer zones be taken into consideration during regional planning proceedings and included in regional development plans.

**10.2.9.** In order to reduce damage caused by quarrying, agriculture and forestry, contacts with the responsible public officers will be intensified and a catalogue of measures will be developed in cooperation with them within the framework of future land use plans.

**10.2.10.** During the implementation of regional or local protection or information schemes the understanding and legibility of the LGL in cultivated areas should be increased where possible by marking out known buried structures, and means should be found to remodel sections which were previously cultivated.

**10.2.11.** Particular attention should be paid to aspects connected with the economic situation: ecology and nature conservation, green tourism etc. Facilities which are functionally linked with the LGL may be incorporated in the process and wherever possible cooperation established with other, compatible approaches.

**10.2.12** Knowledge of the topography of individual sites is one of the important research subjects for the LGL: In places where the extent of the substance of the archaeological monument is not precisely known, increased use should be made of non-destructive survey methods (surveying, aerial archaeology [especially wide spectrum recording such as heat imaging, multi-spectral photography, infrared photography], geophysics, etc.).

In addition, active research into organic conservation conditions, where these are to be expected but are unknown in quality and extent, is to be promoted. In addition, monitoring procedures to monitor the state of conservation in situ must be reinforced.

Future research projects on the LGL should pay increasing attention issues concerning the preservation of archaeological monuments, alongside the reprocessing and reassessment of archives and collections.

In cultivated areas a land register may be of help in the detailed cataloguing of the monument's substance.

**10.2.13.** Further development of tourism to the LGL should take place in close cooperation between *the state conservation agencies* and the Limes Coordinators on the one hand, and the German Limes Road Association [*Verein Deutsche Limesstraße e.V.*], specialist authorities, individual local authorities, societies and interest groups on the other hand.

**10.2.14.** Should anything occur that, despite the participation of the state conservation agencies, causes or is likely to cause damage to the World Heritage site or have a negative influence on its buffer zones, this must immediately be communicated to the office of the DLK, which will inform the senior conservation agency and the German representatives at the IGC.

### 10.3. Coordination by the DLK

**10.3.1.** Coordination of the recommendations and strategies contained in the Management Plan is the responsibility of the DLK, which was founded in 2003 for this purpose. The commission's office is the point of contact for all institutions and persons named above. The states undertake to provide the commission with sufficient funding and staff.

**10.3.2.** The DLK takes on an advisory role in the development of protection policy and, together with other institutions, draws up cooperative action plans for implementation.

**10.3.3.** Among its duties are the strategic development and planning of research policy, the exertion of influence on and coordination of all research activities, the consolidation and coordination of research topics and the assumption of an advisory role prior to all major excavation projects on the LGL.

**10.3.4.** The DLK is, in close cooperation with the Limes Coordinators, responsible for the strategic planning and technical monitoring of spatial development plans and well as having an advisory role in infrastructure planning along the LGL.

**10.3.5.** As a service for the individual federal states, the commission takes on the expansion, administration and archiving of the Limes Data Base which will gradually be expanded to include not only current information on the LGL but also older material as well as the results of new excavations and research projects.

**10.3.6.** The commission represents the German part of the World Heritage site at national and international level.

## PART B: GUIDELINES FOR THE CONSERVATION, RESTORATION, RECONSTRUCTION, REBUILDING AND PROTECTIVE COVERING OF THE ARCHAEOLOGICAL MONUMENTS OF THE LOWER GERMAN LIMES IN NORTH RHINE-WESTPHALIA AND RHINLAND-PALATINATE

### Definitions

These definitions apply in the following text:

**Conservation** is an action taken on the substance of the monument in order to preserve it, for instance cleaning and measures to secure its substance. Alterations to the substance do not exceed those actions which are technically necessary.

**Restoration** is the return of an existing structure to a documented former condition by the removal of elements added later or by the reassembly of existing components without using new material, except for the purpose of consolidation and stabilisation.

**Reconstruction** is the building up of an existing structure into what is deduced as having been its earlier condition, adding (in contrast to restoration) comparable new materials and using appropriate working techniques.

**Rebuilding** is the creation of a new building on the basis of existing documentation and conclusions which may be drawn from it.

**Protective covering** is a reversible covering with soil or other materials. This includes ground modelling and covering over.

**Reversible** is applied to actions that do not affect the original substance, or that do no damage to it and that can later be removed without any adverse effects.

### General parameters

The default position is that the monument's present condition, i.e. as a ruin, is its only authentic condition in the modern context. That which has been destroyed, is lost. It is our duty to preserve the status quo of the monument's general appearance. Anything else would be detrimental to the authenticity and integrity of the monument, the decay of which must be respected as an integral part of historical process. Thus it is necessary to consider beforehand whether an action will result in change to the present condition, and in all cases the present condition must be documented in accordance with current scientific standards. Conservation, restoration and protective covering are actions which serve to preserve the monument or to save its substance. They must take preference over actions which involve the substance itself. In exceptional cases it may seem advisable to carry out an action that goes beyond conservation and restoration. This is possible if in a specific place on the monument didactic considerations make it seem necessary to do more in order to present the monument in the spirit of the concept of World Heritage. Only in such cases can reconstructions or rebuildings be accepted. Such schemes require discussion beforehand which should be as broadly-based as possible and should be assessed by independent experts. Only then can a valid preservation decision be made. Abstract representations, models and virtual presentations for the purpose of visualisation are approaches that preserve the original substance and are a valid alternative to antique/historical reconstructions.

### **Reconstruction and rebuilding:**

- must take place in accordance with national and international guidelines;
- must preserve the historical importance of the site and its surroundings;
- may not take place until a complete scientific documentation of the area concerned has been carried out and evaluated;
- must be based on sound scientific evidence and be the result of an experimental use of ancient methods;
- are presentations in model form, and therefore an accumulation of similar forms in any one area should be avoided;
- should in principle be implemented using original techniques and with materials comparable to the original, whenever this is possible. Financial considerations do not justify the use of other types of materials;
- are intended to increase understanding – hypotheses should be clearly identifiable and necessitate the presentation, documentation and publication of any findings or results gained during the implementation;
- must be so designed that their construction and sustainable maintenance are guaranteed;
- may not be used as a reason for excavation;
- are to be rejected as copies of constructions which already exist.

The basis for each action is the understanding of the monument. This encompasses not only areas above and below ground, but also the area surrounding it in the sense of its being a hereditary and historically evolved cultural landscape. Any evaluation should take into account the archaeological potential and the historical and contemporary importance as well as aesthetic, scenic and nature conservation values. Any action must be preceded by a thorough documentation of the status quo. All measures taken within the area of the World Heritage site LGL must conform with national and international quality standards. The plan for each project must make absolutely clear in what manner its implementation would affect the integrity and authenticity of the monument. Implementation must take into account all the given guidelines and have a positive influence on the significance of the ORL. Before implementation, all projects must be jointly agreed with the relevant conservation agency of the federal state concerned and require authorisation within the terms of that state's conservation law. The same care which is given to the conception of a scheme must also be exercised with regard to its sustainability. The basis for this should be a maintenance plan jointly agreed with the state conservation agency (Limes Coordinator). Repairs and maintenance work may only be carried out by qualified persons under expert supervision. Sufficient tangible means must be made available for maintenance as well as for the repair of unforeseen damage.

### **Guidelines for future actions**

The following guidelines apply in particular:

- All actions must have a direct regional and historical link with the corresponding section of the World Heritage site.
- Information panels should be presented as uniformly as possible, in accordance with the guidelines for The Lower German Limes that are to be developed, informed by the existing guidelines for the Upper German-Raetian Limes World Heritage site.
- Ways should be sought to facilitate visitors' understanding and perception of the LGL.
- Any planting done for the purpose of visualisation must not damage the substance of the monument.
- Forestry and conservation should work together to combine their objectives.
- Protective covering must not lead to a loss of authenticity by creating new, artificial monuments.
- Any new materials used must be clearly distinguishable from the original substance.
- Reconstructions and rebuildings are generally only to be accepted on sites which have already been completely excavated and/or where the in-situ findings have been largely destroyed and/or where modern-day use of the surrounding area has made visualisation particularly difficult.
- Reconstructions and rebuildings in the property area of the World Heritage site must be designed to be reversible.
- With the aim of gaining insight through experimental research, copies of existing reconstructions or rebuildings are to be opposed.

### **International regulations**

In addition, all actions must conform with international standards as laid down in the following conventions and sets of guidelines:

- Charter of Venice 1964: International charter on the conservation and restoration of monuments and ensembles
- Charter of Burra 1979: Charter on the conservational handling of objects of cultural importance
- Charter of Lausanne 1990: Charter for the protection and care of the archaeological heritage
- Convention of Malta 1992: European convention for the protection of the archaeological heritage
- The Nara document on authenticity 1994
- Charter of Riga on authenticity and historical reconstruction in relation to the cultural heritage 2000
- The Salalah recommendations for archaeological parks 2015

## PART C: BASIC PARAMETERS OF A FUTURE STRATEGIC PRESENTATION PLAN ('INTERPRETATION FRAMEWORK')

The Interpretation Framework as an integral part of the management plan is of particular importance for promoting and presenting the Lower German Limes. Just like the MP itself, the Interpretation Framework will be updated as necessary. The character of the Interpretation Framework and its main function is that of an advisory tool for interpretation of and access to the monuments and sites. The core concept of comparable Interpretation Frameworks such as that for the Danube Limes in Austria and Bavaria or the Hadrian's Wall Interpretation Framework is the identification of a core narrative and lead themes. The narrative and lead themes should guarantee diverse and improved permanent exhibitions in the museums along the river Rhine.

The Interpretation Framework should also guarantee a well-organised and structured family of regional and supra-regional museums, enhancing a fascinating experience of visiting the museums and sites. This includes a better understanding of the concept of World Heritage in general through the special case of the LGL, its meaning as well as its conservation for the future. A side-effect of a coordinated and well developed museums concept and communication is the opportunity to strengthen social and cultural links between local communities and the monument through an enhanced sense of pride of place and local identity.

Useful guidance to define the function of museums in this sense are the 'Recommendation concerning the protection and promotion of museums and collections, their diversity and their role in society', adopted by the UNESCO in 2015. Visitors should be able to understand the Lower German Limes as part of the *Frontiers of the Roman Empire*. The Interpretation Framework contributes to public understanding of the Outstanding Universal Value of the future World Heritage site.

It is natural that permanent exhibitions should be renewed and adjusted according to the latest scientific results and changed methodological and educational approaches in the work of museums. Temporary exhibitions also can contribute towards fulfilling the main goals of the Interpretation Framework.

The individual experience of visitors and audiences stands side by side with shared, collective experience through the role of museums and sites as places for lifelong learning and education. The intellectual range of the interpretive offer will be based on analysis of target groups and audiences, and on archaeological and educational evaluations of relevant sites along the Lower German Limes and of associated finds in terms of their individual potential to explain to and engage all members of the public with the Lower German Limes.

A common interpretation framework and common standards to guide on-site and off-site presentation will be developed for the whole Lower German Limes for the first management period.



# MANAGEMENT PLAN



## APPENDIX

## Appendix 1: Management plan actions

### Lower German Limes

I PROTECTION AND KNOWLEDGE: The Lower German Limes is sustainably protected. Researchers and governments work together on preservation and knowledge development.		Success Measure	Nether-lands	Germany	Together
MP Objective	Action				
Sustainable protection	Implement a extra protection measures for properties and buffer zones where needed	All sites and buffer zones sustainable protected before 2024	x	x	
Sustainable protection	Develop individual management plans for component parts	All component parts have individual management plans	x	x	
Strengthen the knowledge of the LGL	Development of research strategies for improving a detailed mapping of archeological structures within the property and buffer zone with main emphasis on the use of existing data and the use of non-invasive prospecting methods	Scientific and public publications and presentations on new results mapping the monuments	x	x	x
Strengthen the knowledge of the LGL	Development of research strategies for a better understanding of the in-situ preservation of archeological layers in the property and buffer zone with main emphasis on organic deposits	Scientific and public publications and presentations on new results for understanding in-situ preservation of the monuments	x	x	x
Strengthen the knowledge of the LGL	Development of an international research strategy together about issues affecting the entire limes	Continuation of the scientific discussion about the LGL as one limes-segment; shared approach on research along the LGL			x
Dissemination of knowledge	Exchange on current research through workings groups, workshops and congresses	Set up a regular congress on the LGL	x	x	x
<b>II COMPREHENSION:</b> The Lower German Limes is known and acknowledged as a transnational structure within both countries and abroad.					
MP Objective	Action	Success Measure			
More awareness of the the <i>Frontiers of the Roman Empire</i> – Lower German Limes	Development and implementation of a joint communication strategy	A joint communication strategy including a joint logo and standards.	x	x	x
Better understanding of the importance of the <i>Frontiers of the Roman Empire</i> – Lower German Limes.	The development of a common interpretation framework and common standards for guidelines for on-site presentation	An interpretation framework for the Dutch and German part of the Limes			x







