5.2 CHRONOLOGICAL DIVERSITY

During the centuries of the Roman Empire the frontiers went through several changes. In the Republic and indeed under Augustus, military frontiers to the Roman Empire did not exist. Under Augustus, some legions were based within the interior of provinces, as resistance to Rome often continued for many years. It appears that it often took some time for the new provincials to settle peacefully into their new role. It was only when the new province was pacified that the army was moved from the interior onto the frontier line. This process took nearly a hundred years to complete in Noricum and Pannonia.\(^\text{73}\)

In Europe, the demarcation lines along the rivers Rhine and Danube under Augustus did not yet mark the extent of the Roman state as boundaries. In addition, they did not offer any real protection because the Germans were used to swimming across rivers. In winter, the frozen waters could be easily crossed. Through the military control of the two rivers, Rome created a security zone in front of the empire in the west, which corresponded to the client kingdoms and federates in the east.\(^\text{74}\)

The Varus disaster of AD 9 was of enormous significance for the Roman Empire. Nearly all troops were pulled back across the Rhine and settled into bases. Gradually the large army groups were broken up and units spread along the river. This was a long-drawn-out process. During this process, the spacing between forts along the rivers Rhine and Danube was reduced from an earlier erratic framework to about 30–40 km. On other frontiers, deserts or mountains, the distance between forts was often greater, though long gaps were usually broken by fortlets and towers. In some places, gaps remained, but over the following decades, they were filled, as in Noricum. There were other areas where there was a greater concentration of troops. These were generally because of an actual or perceived threat from beyond the frontier, the necessity to control a route or people living close to the frontier or a particularly fertile region.\(^\text{75}\)

A most significant change was the greater use of towers and fortlets on the frontier. Towers appear in Upper Germany under Augustus, and along the lower Rhine under Claudius. Tiberian fortlets are known on the upper Danube. The mere existence of these structures suggests that there are more to be found. The first evidence for their

\(^\text{73}\) Breeze 2011a, 167.
\(^\text{74}\) Klce 2006, 151.
\(^\text{75}\) Breeze 2011a, 167-170.
use in a more concentrated form on frontiers is in Britain in the late 1st century and shortly afterwards in Germany.

The creation of linear barriers was the next invitation. This is normally attributed to Hadrian, but a short length of barrier constructed in Germany appears to date to the reign of his predecessor, Trajan. Nevertheless, it would appear that it was Hadrian who developed this frontier element. Such barriers were constructed in Germany and Britain and, when both were abandoned for a new forward line, they were replaced with similar structures. The barrier in Germany was repaired and rebuilt, but continued in use until that part of the empire was abandoned about AD 260. The linear barrier in Britain continued in use to the end of the empire.\(^76\)

The Antonine Wall was perhaps the most developed frontier, with its linear barrier, close spacing of forts, fortlets and small enclosures. Later in the 2nd century, however, it is noteworthy that there are other developments. Under Commodus towers were erected on the Danube and fortlets in North Africa, both concerned with the protection of the frontier areas from raiders.

Septimius Severus stepped beyond the frontiers he had inherited. He sought, and obtained, new conquests in the East, though not all he wished. He advanced the line of forts in *Mauretania Caesariensis*, constructing a new frontier zone, and built new forts along the northern edge of the Sahara Desert in both *Numidia* and *Tripolitania*.\(^77\)

On the eastern frontier a string of forts and fortlets for 800 km from the Gulf of Aqaba to the Euphrates has been erected under the reign of Diocletian. Some of Diocletian's successors such as Constantius II, Julian and Valentinian were energetic emperors and undertook extensive building programmes. The tools were as before, forts, fortlets and towers. Noteworthy was Valentinian who ordered an extensive programme of tower building from Britain to the eastern frontier in the 370s.\(^78\)

In Europe the Limes established under Augustus was moved ahead under Domitian, Trajan, Hadrian and Antoninus Pius between the rivers Rhine and Danube, in the territory of the United Kingdom and in Romania. It was moved back under Gallienus and Aurelian in the 3rd century, and given up in the course of the 5th century. However, its eastern sector remained under Roman rule (Eastern Roman Empire) until later, up to the beginning of the 7th century. The boundary of this late Roman sector is in the Balkan, and involves the provinces *Pannonia secunda*, *Moesia prima*, *Dacia ripensis*, *Moesia secunda* and *Scythia minor*. In AD 375 and after the Roman defeat at Adrianople in 378, Goths were settled down in these provinces as federates. The division between the Western and the Eastern Roman Empire had weakened the defense on the frontier and many towns and forts along the Lower Danube were soon occupied by the Huns. After the collapse of the Hunnic rule *Sirmium*/*Sremiska Mitrovica* was taken by the Goth and Gepids, and *Singidunum*/*Belgrade* was occupied by Theodoric, king of the Ostrogoths, in AD 471. They ceased to be Roman *foederati* (subsidised tribes). Justinian reoccupied the eastern part of the Danube frontier together with *Pannonia secunda* (with the city of *Bassianae*, and later also *Sirmium*) in the forties of the 6th century and conducted a significant restoration of forts. The Lower Danube Limes was taken by the Avars and the Slavs in waves in the last decades of the 6th and in the first decades of the 7th century.

In North Africa the frontiers were held until the Vandal invasion in AD 429 which led to the creation of a kingdom there, though with significant depletion of effective frontier control. The power vacuum in the old frontier sectors was filled by a number of ‘berber’ kingdoms, in part based on the populations of the old garrison settlements. In 533, the Emperor Justinian recovered Africa for the Eastern Roman Empire.

\(^{76}\) Breeze 2011a, 170.  
\(^{77}\) Breeze 2011a, 171.  
\(^{78}\) Breeze 2011a, 171.
Thereafter, the Limes survived as an effective protection until Byzantine times. In the very last years of the 7th century, the frontiers fell with the Muslim conquest of North Africa.

In the Near East the frontiers belonged from Late Antiquity on to the Roman Eastern Empire. Troops were progressively withdrawn from the *Limes Arabicus* in the first half of the 6th century and replaced with native Arab *foederati*, chiefly the Ghassanids. To secure the eastern frontier, Emperor Justinian signed a peace treaty with the Sasanian Empire. After the Arab conquest in the 7th century, the frontiers in the Near East and in Egypt were largely left to disappear. Nevertheless, some fortifications were used and reinforced in the following centuries.

In summary, the frontiers in the Western Roman Empire were abandoned from the 5th century onwards. An exception was the frontier in North Africa, which was conquered after the collapse of the Western Roman Empire by the Eastern Roman Empire in the 6th century. The frontiers of the Eastern Roman Empire remained in one form or another until the late 7th century.

### 5.3 CULTURAL AND SOCIAL ASPECTS

Spanning three continents, the Roman Empire developed and transmitted a universal culture based on Greek and Roman civilisation over large parts of Europe. Its influence reached far beyond its actual boundaries in Europe and around the Mediterranean. Its culture framed and guided the cultures of Europe and beyond up to and including the present day.\(^79\)

The Frontiers of the Roman Empire form the single largest monument to this civilisation. They helped define the very extent and nature of the Roman Empire. As a whole, they represent the definition of the Roman Empire as a world state. They also play a crucial role defining the development of the successor states to the Roman Empire. The frontiers and their garrisons were also a crucial tool of Romanisation on both sides of the borderline.\(^80\)

The frontiers also have high significance as illustrating the complexity and organisational abilities of the Roman Empire. With only the technology and communications of a pre-industrial society, the Empire was able to plan, create and protect a frontier of

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\(^79\) Breeze/Young 2008, 29.
\(^80\) Breeze/Young 2008, 29-30.
some 7,500 km and garrisons of tens of thousands of men. It was then able to manage and use this system, on the whole successfully, for periods of many centuries, both as a physical barrier, and also as the basis for diplomatic and military intervention far beyond the actual frontier line itself.\footnote{Breeze/Young 2008, 30.}

Physically, the frontiers demonstrate the variety and sophistication of the responses of the Roman Empire to the common need to demarcate, control and defend its boundaries. This had to be done in widely differing circumstances, reflecting the interaction of political, military and topographical features. Mostly, the empire faced a variety of tribal groups, but on their eastern front they were confronted by the Parthian Empire, a state of equal sophistication and complexity.\footnote{Breeze/Young 2008, 30.}

In some places the boundary ran along rivers. Elsewhere, it skirted the desert and it also ran through areas with no natural barriers. In each case, the Romans developed a local solution, making use of topographical features and political circumstances to provide a barrier that was an effective control of movement across the frontier as well as a strong military defence. The variety of physical remains have outstanding value in demonstrating the complexity and success of this society in using boundary works to define and protect itself in ways appropriate in each case to the local circumstances.\footnote{Breeze/Young 2008, 30.}

The installations on the frontiers, their size, location, type, spacing, distribution and the units based there, have much to tell us about how frontiers operated. All these factors are better interpreted when related to the landscape affected where people could live, where they could produce food, and the Roman military need to maintain observation of people and places. Particularly in the early empire we can see that there were no forts where there were no people.\footnote{Breeze 2011a, 172.}

Logistical factors played an important role in establishing the frontiers and the movement of large groups of troops. The troops were dependent on replenishment, and if supplies such as foodstuffs and heating materials could not be provided locally, they had to be supplied from elsewhere. The regular arrangement of the legionary fortresses and forts along the Rhine and the Danube is justified by the possibilities of defence as well as by the ideal transport conditions for bulk goods along river boundaries.

The pursuit of an offensive or defensive border policy depended essentially on the military strength of the enemy. A defensive border policy required deeper staggered fortress lines and practically excluded the establishment of client states as a buffer. Toward the strong Parthian and Sasanian Empire, Rome relied on a deeply staggered system of fortified cities, a concept which was not applied in the western parts of the Roman Empire until Late Antiquity.\footnote{Pfaffenbichler 2006, 8.}

The Roman Empire was offensive as well as defensive. Almost all Emperors tried to extend its territory, and they did it with greater or lesser success. However, the territory of the empire remained fairly constant from the time of Augustus, who prescribed his successor not to start new offensives (with permanent new provinces only created in Britannia, Dacia and Arabia). The reason for this is that the Roman Empire was substantially a sea-shore empire round the Mediterranean Sea where water routes could provide the long distance traffic and communication lines. The action radius into the continents could not be more than 200-300 km unless big rivers provided opportunities for deeper penetration.

People also travelled and the control of routes was important. Legions were placed so as to be in good positions to repel invasions or guard significant routes. Mountains particularly focused attention on routes, in this case through passes. In Dacia and

\footnote{Breeze/Young 2008, 30.}
\footnote{Breeze/Young 2008, 30.}
\footnote{Breeze/Young 2008, 30.}
\footnote{Breeze 2011a, 172.}
\footnote{Pfaffenbichler 2006, 8.}
the land frontiers of Germany, soldiers were located to ensure Roman control of the passes. This concern extended to mountain ranges beyond the empire, for Rome always showed a keen interest in the control of the routes through the Caucasus Mountains in order to protect the eastern provinces from the depredations of the Alans and other peoples to the north. In Mauretania Caesariensis, the strong east-west lines of the Atlas Mountains together with the narrowness of the province forced a parallel east-west distribution of the single line of forts. Military deployment in the Atlas Mountains is also a useful reminder that forts had to be placed within the most sensible locations in such terrain. This was not on the top of the mountains, but rather in the valleys. The line of forts therefore did not in itself constitute the frontier.\textsuperscript{86}

In the desert regions, wadis served as communications routes and these required controlling. Sometimes, a single fort or outpost might be sufficient, but in Tripolitania and Numidia barriers were erected across lines of movement, presumably with the same purpose as barriers elsewhere.\textsuperscript{87}

On the river frontiers, the nature of the river valleys as well as the location of tributaries affected the positioning of forts. Tributaries formed routes which needed guarding, while their mouths offered safer anchorages than the main river or the open sea.\textsuperscript{88}

Water always affected the location of forts, especially in the more arid parts of the empire. Forts in deserts tended to be placed at oases, both for the water available there as well as to deny their use to anyone else and maintain surveillance over the people living there. Water was still the basic requirement and along the eastern frontier and in North Africa the outermost forts tend to lie on the furthermost points of settlement allowed by rainfall. Food to feed the army was probably also a factor in the location of units. In many parts of the empire, it has been noted that forts were generally located close to good farmland.\textsuperscript{89}

5.4 CHARACTERISTICS OF THE FRE AS A WHOLE

The FRE form the single largest monument of the Roman Empire, one of the world’s greatest pre-industrial empires. These frontiers are well identified, understood and documented. Their components convey the extraordinary complexity and coherence of the FRE in Europe, the Near East and North Africa. The FRE help define the very extent and nature of the Roman Empire. Although some parts have been affected by land use change and natural processes, the integrity of the FRE is demonstrated through its visible remains and buried archaeological features. Their state of survival has been researched in many areas. Many remains are in an exceptionally good state of preservation, surviving as part of a landscape which still contains significant visible traces of the Roman military presence. Some areas of the frontiers have been built over, but there are many significant archaeological remains still existing buried under the ground. There are several kinds of frontiers – artificial barriers, river frontiers, mountain frontiers, desert frontiers and sea frontiers – and they all have a high level of genuineness. They all have also been verified through extensive study and research. The materials and substance of underground archaeological remains are well-preserved, as are upstanding and visible remains. The form and design of each representative part of the frontier, in particular its linear character, and its architectural and military elements as well as its associated structures are clear and comprehensible. They are still easy to understand and their location and setting in the landscape can be clearly

\textsuperscript{86} Breeze 2011a, 173.
\textsuperscript{87} Breeze 2011a, 173.
\textsuperscript{88} Breeze 2011a, 173-174.
\textsuperscript{89} Breeze 2011a, 174.
appreciated. Many upstanding parts of the frontiers have been conserved in accordance with the highest standards and are in a good state of repair. Some visible sections have significant heights and depths. Nevertheless, there are still many invisible, undisturbed and uncovered elements in nearly all sections of the frontiers.

Therefore, the following characteristics of the FRE can be distinguished:

- The FRE were designed and constructed to protect the Roman Empire. They are a symbol of a common heritage.
- In their engineering and construction they illustrate the technological and organisational ability of the Roman Empire, and are a reflection of the way that resources were deployed by the Roman army.
- They reflect the enormous complexity and outstanding variety of a frontier system, the inter-relationships among the single elements and the relative completeness of the system as a whole.
- They reflect the successful adaption of central planning both in a strategic and technical manner, and at the same time the ability to adjust them to the local features (climatic, geographic, strategic and ethnographic circumstances).
- The frontier was occupied by the Romans for more than four centuries; its remains therefore display considerable evidence of repair, rebuilding, re-use, re-planning, and decay.
- The retrievable archaeological information that survives – in the form of buried structures, artefacts, ecofacts, and data about the palaeo-environment – is still extensive and is a significant attribute of the Outstanding Universal Value.
- The setting of the FRE offers the opportunity to understand and appreciate Roman military planning and operations.
- The settlements associated with the frontier illustrate the impact and attraction of the Roman economy.
- The course and extent of the frontier zone, its massive size, and its infrastructure, all influenced the subsequent development of the landscape, both in open country and in urban areas. In view of the extent of the remains of the Roman frontier it is impossible to present more than a very broad overview in this chapter. In accordance with the Koblenz declaration (chapter 2) the focus will be on the frontier line of the 2nd century AD.

90 For this overview extensive use was made of the following publications: Bechert 1999; Bishop 2012; Bowersock 1976; Breeze 2011a; Daniels 1987; Dyczek 2008; Graf 1997; Ilić/Golubović/Mrdić 2010; Jilek 2009; Karavas 2005; Kennedy 1987; Klose/Nünnerich-Asmus 2006; Korać et al. 2014; Lotter 2003; Mattingly et al. 2013; Maxfield 2000; Maxfield 2005; Rankov 2005; Sommer 2009; Spring 2015.
In accordance with the Koblenz declaration (chapter 2), which suggested that the focus of World Heritage nominations should be on the frontiers in the 2nd century AD, when they reached their greatest extent, this chapter will focus on the frontier line in that century. In view of the extent of the Roman frontier it is impossible to present more than a very broad overview.

The overview is divided in three sections: Africa, the Near East and Europe. For each section the extent, site locations and site distribution will be discussed. For Europe there is an additional discussion of the distribution of the sites over Roman provinces.

6.1 THE ROMAN FRONTIER IN AFRICA

In this study ‘Africa’ is used as a general indication of the northern edge of the African continent, from modern Morocco to Libya. Egypt, though largely situated on this continent, is generally considered as a separate entity. In this chapter, the term ‘Africa’ comprises the countries of Morocco, Algeria, Tunisia and Libya; Egypt is discussed along with the Near East (section 6.2).

The African frontier is not very well known. Most of the field work was carried out during the colonial period, as a hobby of military officers. On account of the tight association with that past, research of the Roman frontier today is seen as a product of its time. Most recent publications are the work of Anglo-Saxon, French and German scholars.

6.1.1 EXTENT

In the 2nd century AD the Roman military infrastructure extended over all the Roman provinces: Mauretania Tingitana, Mauretania Caesariensis, Numidia, Africa Proconsularis and Cyrenaec. These provinces cover all of the semi-arid and some of the

91 For this overview extensive use was made of the following publications: Bechert 1999; Bishop 2012; Bowersock 1976; Breeze 2011a; Daniels 1987; Dyczek 2008; Graf 1997; Ilić/Golubović/Mrdić 2010; Jilek 2009; Karavas 2005; Kennedy 1987; Klose/Nünnerich-Asmus 2006; Korać et al. 2014; Lotter 2003; Mattingly et al. 2013; Maxfield 2000; Maxfield 2005; Rankov 2005; Sommer 2009; Spring 2015.
92 Numidia was separated from Africa Proconsularis at the very end of the 2nd century AD.
93 Cyrenaec was part of the joint province of Creta et Cyrenaec. It is often called Cyrenaica, the Latin transcription of the Greek name for the area around the city of Κυρήνη, Curenae in Latin.
arid zones of northern *Africa*, from east to west over a distance c. 3,000 km as the crow flies.

Digital map layers with the locations of 228 forts and of several long and short linear barriers in these provinces have been kindly provided by Dr Martin Sterry (Leicester University, UK). The identification and location of these sites are more accurate than those of 366 records of forts and earthworks in the Pleiades database (cf. section 3.2), which include amongst others many fortified farms which cannot be considered as frontier installations.

### 6.1.2 SITE LOCATIONS

Essentially, the military installations in *Africa* were situated in three different landscapes: in coastal plains, mountainous areas and along north-south routes in and out of the desert (fig. 6.1). Although the linear arrangement of several series of forts and the occurrence of some linear barriers may readily suggest the existence of a closed frontier line, this is certainly not applicable to most of the military infrastructure in *Africa*. A

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94 The dataset did not include towers, but only forts, fortlets and the legionary fortress of *Lambæsis*. 
major factor in its layout is the separation between the northern coastal zone and the Sahara desert.

In Mauretania Tingitana the military installations were closely associated with the cities in the coastal area and the outskirts of the Rif and Middle Atlas mountain ranges. Most were located along two more or less parallel roads connecting the provincial capital of Tingis/Tangier on the northern coast to the cities of Sala/Rabat and Volubilis in the south. Somewhat to the south of Sala a ditch was dug over 11 km between the ocean and the Bouregreg river, supplemented with some stretches of wall, demarcating the southern boundary of the province. The forts of Tingitana are separated from those in the adjacent province by the Rif mountains, which were evidently never under permanent military control.

Mauretania Caesariensis and Numidia are dominated by the mountain ranges of the Tell Atlas, Saharan Atlas and Aurès. In the former province two successive series of military installations ran parallel to the coast. The earlier series, established in the late 1st and early 2nd century, largely followed the narrow plains halfway the Tell Atlas. The later one, pushed out around AD 200 and known as Nova Praetentura, mainly ran along the southern fringes of the mountain range, turning off into the mountains in the west. Both series were connected by an east–west road and served to control movement along these routes rather than across.

Fig. 6.1 Roman military installations in Africa. Long and short artificial barriers are indicated by red lines and dots, respectively.
Two lines of forts in the more southerly Saharan Atlas are a mainly 3rd century southwest extension of a large fort cluster enveloping the Aurès mountains of Numidia, initially the western part of Africa Proconsularis. In three areas the military infrastructure, pushed out in the early 2nd century from a new legionary fortress at Lambaesis/Lambèse, was supplemented with linear barriers, extending over distances varying from 40 to 150 kilometers. These obstacles, provided with towers and gates, are collectively known as the Fossatum Africae, suggesting a coherence which may not reflect the past reality. The large numbers of gates indicate that the primary aim of these barriers was control of movement rather than defence.

To the east of Numidia the mountains make way for the desert, with only small semi-arid areas on the coast around Leptis Magna and Cyrena/Shahhat. In Africa Proconsularis the military infrastructure was tightly connected to the incoming desert routes. Especially in the western part the forts were regularly supplemented with so-called clausurae, short earthworks and walls evidently set up to regulate passage through natural corridors leading in and out of the areas of sedentary agriculture. In the early 3rd century some new forts were built further to the south, along trade routes.

The military control of the Cyrenaica was confined to the roads connecting the coastal cities and to the water points along the main routes coming in from the desert. As such the situation is similar to that in Mauretania Tingitana.
6.1.3 SITE DISTRIBUTION

The state of research of the African frontier does not allow a proper analysis of site types and their distribution. For many sites the evidence is incomplete or unreliable. However, it is generally agreed upon that the African garrison of the 2nd and 3rd centuries was small by any standard. The overall size probably amounted to no more than 30,000 troops, including only a single legion. This modest army force had to secure an area extending over more than 3,000 km between the cities of Sala in the west and Cyrene in the east – equivalent to the distance from the North Sea to the Black Sea and twice the distance from the Black Sea to the Gulf of Aqaba.

Estimates made by Sterry of the garrison sizes of 228 military installations clearly indicate that the Mauretanian provinces and Numidia received many more troops than Africa Proconsularis and Cyrenaica (fig. 6.2). This opposition corresponds with the division between the mountain ranges and the desert areas.

Although the legionary fortress at Lamhesis could accommodate all ten cohorts of Legio III Augusta, epigraphic evidence demonstrates that many legionaries were detached to forts and watchtowers. Even so the ratio between the available troops and the number of installations reveals that most of the forts were small – fortlets rather than forts. It may be objected that not all 228 listed forts existed simultaneously, but
on the other hand, watchtowers are not included and had to be manned as well. The presence of towers has been attested in many areas.

### 6.2 THE ROMAN FRONTIER IN THE NEAR EAST

In this chapter the term ‘Near East’ is used as short for the ‘Ancient Near East’, which is more or less equivalent to what is called the ‘Middle East’ today. The term comprises the countries of Egypt, the Arabian Peninsula, Israel, the Palestinian territories, Lebanon, Jordan, Iraq, Iran, Syria and Turkey.

The situation regarding this part of the frontier is clearly expressed by Kennedy: “The archaeological evidence for the location, character and development of the eastern frontier is patchy, and often confusing. The basic evidence for much of the region remains even now the maps of Poidebard and Stein from before the Second World War. It has long been recognized that these present a palimpsest of several centuries of occupation and, indeed, include a number of non-Roman sites”. Although his words date back to 1987, much is still valid.

#### 6.2.1 EXTENT

What may be called the eastern frontier in the 2nd century AD extended over the Roman provinces of Cappadocia, Syria and Arabia, from the Black Sea to the Gulf of Aqaba, covering a distance of c. 1,300 km as the crow flies. The military posts along the Nile in Egypt are stretched out over another 1,000 km.

For an overview of military sites in this area we have used data from the Pleiades project (cf. section 3.2). A selection of Pleiades sites occupied at some point during the Roman period resulted in 326 sites, of which 75 were only occupied in the Late Roman period. Some of these sites – mainly, but not exclusively of Late Roman date – are located behind or beyond the 2nd century frontier. A comparison with published maps of parts of the frontier demonstrate that the Pleiades dataset is far from complete, but it may be useful for a general overview.

#### 6.2.2 SITE LOCATIONS

The military installations of the Near Eastern frontier were situated in the mountainous areas of Cappadocia and northern Syria, along the upper course of the river Euphrates and on the fringes of the (semi-)deserts of Arabia and Egypt (fig. 6.3).

Egypt was, in many aspects, a case of its own. The settled area was nearly confined to the valley of the Nile, which was, for a large part, protected by deserts to its east and west. The military infrastructure was divided over three areas: a limited number of forts existed in the delta and along the coast, a range of sites was stretched out along the Nile (mainly from Syene/Aswan to the south, between the First and Second Cataracts) and a large scatter of sites occurred in the Eastern Desert.

The garrison of Upper Egypt is archaeologically not very well visible, probably because troops were regularly based in towns and villages, including a legionary force at Alexandria. The latter city was also the base of the classis Alexandrina, the fleet operating in the eastern Mediterranean, but also on the Nile. Syene, just downstream from the First Cataract of the Nile, served as a basis for the protection against nomadic

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96 For one thing, the dataset does not include watchtowers.
raiding from the southeast and southwest, complemented with a series of outposts extending over 100 km upstream, mostly on the west bank. The military posts in the Eastern Desert were divided over five roads connecting the Nile to the Red Sea coast – four to the east and one to the southeast, the latter over more than 400 km. The main
destinations of the northerly two roads were mines and quarries for the exploitation of valuable minerals and stone. The military supervision of the Red Desert therefore served various purposes: protection against raiding by nomadic tribes and pirates and supervision of mining and quarrying.

The remainder of the Near Eastern frontier is likely to be the most volatile of all sections of the Roman frontier. The dynamics are mainly due to the strained relations between the Romans on one side and the Parthians and later the Sasanians on the other. Changing ambitions and strategies repeatedly led to shifting territorial boundaries, ranges of influence and military resources.

From the reign of Augustus to the middle of the 2nd century, client kingdoms made way for provinces, but the process was whimsical. By the mid-1st century, garrisons were stationed on the Euphrates, with legions at Melitene/Malataya, Samosata/Samsat and Zeugma/Belkis. The garrisons on the Euphrates were connected to the fleet base of Trapezus/Trabzon on the Black Sea by the Zigana Pass with its nearby legionary base at Satala/Sadak. A series of military posts was maintained on the southeast coast of the Black Sea. In the early 2nd century, the Emperor Trajan created the province of Arabia and initiated the construction of the Via Nova Traiana from the legionary base of Bostra/Busra al-Sham near the Syrian border to Aila/Aqaba on the Red Sea. The line from Trapezus to Aila is usually taken to represent the eastern frontier of the 2nd century.

However, in 115-117, Trajan defeated the Parthians and founded the provinces of Armenia, Mesopotamia and Assyria. His successor Hadrian immediately withdrew from these areas, and with good reason: they stretched the military resources and tripled the distance from the Mediterranean to the eastern frontier.

In the 160s, after a new Parthian War, the Roman occupation of the Euphrates was extended downstream to a large military base at Dura Europos/Salhiyah, and a further troops were stationed c. 200 km to the northeast at Nisibis/Nusaybin, on the southern
fringe of the mountains. At the end of the 2nd century Septimius Severus followed the example of Trajan by restoring Mesopotamia to a province, though only as far east as the Khabur river (c. 50 km west of the modern border between Syria and Iraq). In the decades to follow, the area would remain a source of dispute.

Both here and in Arabia garrisons were pushed out into oases in the desert, in the latter case possibly as far as Al Jawf near Sakakah, 400 km east of the Via Nova Traiana. There is some evidence for equally remote outposts along caravan routes to the southeast of Aila as early as in the 2nd century.

The base of the classis Pontica (Pontian fleet) at Trapezum and the short-lived posts on the east coast served to discourage piracy on Pontus Euxinus, the Black Sea. The military posts between Trapezum and the Euphrates guarded the passes and accesses in the Pontian mountains. From Analibla/Iliç southwards the military installations lined along a stretch of the Euphrates winding through the Central and Southeastern Taurus mountain ranges. The military occupation of this area primarily served to exert control over the much contended kingdom of Armenia.

Below Samosata the Euphrates left the mountains. As far as the city of Sura near Ar-Raqqah, military posts were situated on the right bank of the river. They constituted what was probably the most direct ‘contact zone’ with the Parthian Empire. The importance of the Euphrates appears from the presence of as many as three legions, at Melitene, Samosata and Zeugma, complemented with a fourth at Satala further north. This was obviously both the last line of defence against Parthian attacks and a springboard for Rome’s own actions.

From Sura a route departs in south-eastern direction, over Palmyra/Tadmur to the Damascus area, along the separation between the semi-arid steppe zone and the barren Al-Hamad desert. Around 300 the section from Palmyra to Damascus was lined with fortlets and known as the strata Diocletiana. From Damascus over Bostra to the city of Philadelphia the southward continuation of this route passed through a fertile area; later, a line of fortlets was established further east. Between Philadelphia and Aila at the Gulf of Aqaba, the Via Nova Traiana was situated on the fringe of the steppe and the desert, continuing an ancient caravan route. As yet, evidence is lacking for garrisons along these routes in the 2nd and 3rd centuries, and it is clear that, if the line of these routes is considered as a frontier, it is of an entirely different character than the line between Trapezus and Samosata.

### 6.2.3 SITE DISTRIBUTION

The available evidence does not permit a quantified analysis of site types and their distribution, but some points can nevertheless be made.

The size of the army of Egypt seems never to have exceeded 24,000 men, and may have counted less than 15,000 troops by the middle of the 2nd century, when the initial three legions had been reduced to a single one. It goes without saying, therefore, that most military installations were small – only three of approximately 70 posts in the Eastern Desert exceed 0.5 ha in size, the largest being Coptos on the Nile with no more than 0.9 ha.

The standing army of the remainder of the Near East amounted to c. 60,000 troops by the middle of the 2nd century, leaving the large garrison of the province of Iudaea/Syria Palaestina aside. While in Egypt the legionary capacity was reduced to a single unit in the 2nd century, five legions were stationed in the eastern parts

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97 The province was initially named Iudaea, but was merged with the province of Syria under the new heading of Syria Palaestina around AD 135. By 195 two new province were split off: Syria Coele and Syria Phoenice.
of Cappadocia (2), Syria (2) and Arabia (1), and a sixth closer to the Syrian coast at Raphanea/Rafniye. From Cappadocia and Syria about fifteen and thirty auxiliary units – the equivalent of some four legions – are known from the mid-2nd century, against a dozen in all from Arabia, underlining the overriding military importance of the frontier towards Parthia.

At the present state of knowledge it is impossible to provide an overview of site types and their distribution. Many sites known mainly or exclusively from aerial photographs cannot be properly dated.

6.3 THE ROMAN FRONTIER IN EUROPE

In the 2nd century AD the Roman frontier in Europe extended from Scotland to the Black Sea, passing through the territory of ten modern states.

Three stretches of the frontier have already been inscribed on the World Heritage List, as component parts of the property ‘Frontiers of the Roman Empire’. All three are artificial barriers: Hadrian’s Wall, the Antonine Wall and the Upper German-Raetian Limes. These already listed sections will not be considered here.

6.3.1 EXTENT

The remains of the Roman frontier in Europe not belonging to these three artificial barriers are divided over three separate areas:

1. a stretch of c. 400 km on the left bank of the (Lower) Rhine;\(^98\)
2. a stretch of c. 2,400 km on the right bank of the river Danube, starting somewhat upstream from Regensburg and extending to the Black Sea;\(^99\)
3. an extended area to the north of the Danube, in the Roman province of Dacia, including several defensive lines amounting to c. 1,300 km.\(^100\)

Information on the remains of the Roman frontier in these three areas has been kindly provided by the States Parties involved in the preparation of their nomination for the World Heritage List. The supplied information has been merged into a single database, covering nearly 1,000 sites (fig. 6.4).\(^101\) These include sites which have been selected for possible nomination as well as sites not currently considered for nomination.

These almost 1,000 sites are not all the Roman military installations in Europe, but only those which are located on the line of the frontier in the 2nd century AD. There are many more military sites located some distance from this line, most of them dating to earlier and later periods of the Roman Empire. Sites which are not on or near the line of the 2nd century frontier are outside the scope of this Thematic Study.

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\(^98\) The length of this stretch was calculated along the modern Rhine, using the ‘Rheinkilometer’ system (revised 1939), from Remagen (D) (Rkm 633) to the bifurcation at Wijk bij Duurstede (NL) (Rkm 928), supplemented with the lengths of the downstream continuations called Kromme Rijn (28 km), Leidse Rijn (13 km) and Oude Rijn (52 km). According to this calculation, the distance between Remagen and the Rhine outlet at Katwijk amounts to 388 km.

\(^99\) The length of this stretch was calculated along the modern Danube, using the ‘Donau-Kilometer’ system, from Hienheim (D) on the left bank of the Danube, about 20 km upstream from Kelheim (D) (2414 Donau-Kilometer). Hienheim is considered as the southeastern end of the Upper-German/Raetian Limes.

\(^100\) This is a rough estimate of the overall length of the lines along which most of the sites are located.

\(^101\) A ‘site’ in this database may consist of several component parts, e.g. a fort, the surrounding military vicus, and harbour installations.
6.3.2 SITE LOCATIONS

Of the almost 1,000 sites considered here, approximately 650 sites are located on the bank of a river: 100 sites along the Rhine and 550 along the Danube. The remaining 330 sites are located to the north of the Danube.

Germania Inferior

In the context of this study the Rhine is the section known as the Lower Rhine, which starts where the river leaves the Rhenish Massif near Rigomagus/Remagen, close to the Vinxtbach, where the border between Germania Inferior and Superior was situated. From Bonna/Bonn until about Burginatium/Altkalkar the forts and fortresses were built on the edge of the older river terraces, with harbour installations on the river bank underneath. The legionary fortress of Vetera I near Xanten was an exception, being built on an ice-pushed ridge overlooking the Rhine.

Downstream from Burginatium the Rhine built up natural levees, and from Carvium/Bijlandse Waard onwards the river had a strongly meandering and bifurcating character. In this very dynamic delta the forts were built on the edge of the active river, prone to erosion. For the preservation of the sites this vulnerable position is both a blessing and a curse. Some forts were partly or entirely washed out by shifting river channels, but at other sites constructions along, and rubbish deposits in, the channels were covered by sediment, resulting in an outstanding preservation of timber and other organic remains. The legionary fortress of Noviomagus/Nijmegen and the adjacent fort on the Kops Plateau are exceptions, as they were situated on the outskirts of an eroded ice-pushed ridge, with an excellent view over the river plain.

The stretch downstream from Fectio/Nechten has a high density of small forts – nine divided over barely 60 km, with some additional timber watchtowers along a strongly winding stretch between Utrecht-Hoge Woerd and Laurium/Woerden. Since it has been established that most of these posts were built around AD 40 the system is considered as a protection against German pirates threatening the logistics of the
Fig. 6.4  Distribution of nearly 1,000 sites representing the Roman frontier in Europe, as far as they are located on the line of the frontier in the 2nd century AD. Hadrian’s Wall, the Antonine Wall and the Upper German-Raetian Limes are merely indicated by blue dotted lines. Green: end in 1st century. Violet: start in 3rd century and later. Orange: date uncertain.
annexation of Britain, which commenced in 43. Apart from this series of timber watchtowers this type of installation is rare on the Rhine.

The observation of the Rhine was complemented by the *clasis Germanica* or German fleet, based at Köln-Alteburg. The operation area of this fleet was restricted to the Lower Rhine, presumably because the access to the Middle Rhine was severely hindered by transversal reefs between Koblenz and Mainz.

**Raetia and Noricum**

The river frontier of the Danube started at *Abusina*/*Eining*. Most of this stretch of the frontier faced a densely wooded area without much habitation. This probably explains why the number of military posts was initially limited.

Due to the alternation of gorges and wide floodplains the location of the military installations varies, but most were built in high positions, which often – but not always – safeguarded them against river erosion. Several forts were established at river confluences and other crossings of trade routes, like Künzing and *Batavis*/*Passau*.

Both provinces have a high proportion of fortlets and – in *Noricum* largely Late Roman – watchtowers. Two legionary fortresses, at *Castra Reginal*/*Regensburg* and *Lauriacum*/*Enns* (with short-lived predecessors at Eining—Unterfeld and Albing, respectively), owe their origins to the Marcomannic Wars of AD 166–180. Harbours have been attested at sites including *Sorviodurum*/*Straubing*, which may have served as a secondary base of the Pannonian fleet, and Regensburg.

**Pannonia**

From Klosterneuburg at the boundary between *Noricum* and *Pannonia* the Danube runs through the wide Vienna Basin until it reaches the Little Carpathians at Devín near Bratislava. This fertile area was mainly secured by the legionary fortresses of *Vindobona*/*Wien* and *Caruntum*/*Petronell* at its ends. The latter was located close to the crossing of the ancient Amber Route over the river. It is often assumed that it was preceded by a military post below Devín castle at Bratislava, but as yet this has not been attested.

From *Gerulata*/*Rusovce* to *Arrabona*/*Györ*, the military posts were laid out along the Little Danube, the southerly of several parallel channels. The mentioned forts protected the ends of this inaccessible and strongly winding river section. Somewhat further downstream the legionary fortress of *Brigetio*/*Komárom* marks another important river crossing, which played an important role in the Marcomannic Wars. Across the river a bridgehead fort is located at *Kelemantia*/*Iža*, and both military installations are surrounded by many temporary camps.

From *Brigetio* to the next legionary fortress at *Aquincum*/*Budapest* the Danube cuts through the outskirts of the North Hungarian Mountains. Here, and especially in the Danube bend, the number of military posts was initially limited. It was only in the Late Roman period that this section was secured with large numbers of watchtowers and some fortlets, bridgeheads and outposts.

Beyond *Aquincum* the Danube enters the Great Hungarian Plain. In view of the relatively close spacing of the legionary fortresses from Vindobona to Aquincum – approximately 60–200 km – it is astonishing that the distance to the next legionary base, at *Singidunum*/*Belgrade*, is over 400 km. Until the confluence of the Drava river near Osijek the Danube has a twisting course. In the case of parallel channels the military posts were invariably built along the most westerly one; occasionally additional posts or bridgeheads were built further east at a later stage.

Throughout the Little and Great Hungarian Plains the riverbank is strewn with some 200 watchtowers. As far as their date has been established most belong to the Late
Roman period, but some are definitely earlier. The towers varied in size, construction and position, with only few distinctive groups. Some were clearly linked to the frontier road while others occupied high positions or river bends. Between the mouths of the Drava and the Sava towers are virtually absent. It is not impossible that this partly or mainly reflects a different state of research in Hungary on the one hand and Croatia and Serbia on the other.

The last military post in Pannonia, Taurunum/Zemun, appears to have been the main base of the classis Pannonica or Pannonian fleet. A position downstream from its operational area can hardly be called favourable.

**Moesia**

At the confluence of the Sava at Singidunum/Belgrade the outskirts of the southerly mountain ranges start closing in on the Danube. Some 100 km downstream the river flows into the narrow gorges of the Iron Gate. The mouth of the Sava and a westerly entrance to Dacia were occupied by legionary fortresses at Singidunum and Viminacium/Kostolac by 85/86, at the occasion of Domitian's Dacian War. The Iron Gate itself was supervised by mainly small posts distributed along the more accessible parts, some already installed under Tiberius and Claudius.

From the exit of the Iron Gate the Danube took a winding course until Ratiaria/Archar. The dense series of military posts overlooking this stretch were mainly built in the 3rd and 4th centuries.

Downstream from Ratiaria the Danube follows a relatively straight course until as far as Durostorum/Silistra, between the Wallachian/Romanian Plain to the north and the more elevated Danubian Plain to the south. For much of this c. 400 km long stretch the river has a wide and often twisting channel. The legionary fortresses of Oescus/Gigen, Novae/Svishtov and Durostorum were built at rare spots where the river has a single, narrow bed. The intermediate military posts were often built in high positions with a clear view over the river and the plain beyond.
Downstream from Durostorum the Danube takes a northerly course, developing many twisting channels in a wide zone, before bending to the east at Barboși and creating a delta near Argyus/Tulca. In this region the military installations were invariably built on the higher grounds along the most easterly river channel.

**Dacia**

The military infrastructure of Dacia can be divided into several groups. The core area of the Transylvanian Plateau was occupied by the legionary fortresses of Apulum/Alba Iulia and Potaissa/Turda and a few forts. The accesses through the mountain ranges from northwest to southeast were blocked by a series of forts supplemented by towers high up in the mountains; in the north and northwest over a hundred towers constituted a very tight observation screen. Four lines of military posts connected Transylvania to the Danube: two in the southwest, departing from Lederata/Ram and Transdierna/Tekija, and two in the southeast, known as the Limes Alutanus and the Limes Transalutanus.

During the existence of the province of Dacia, c. 106–270, the Danube frontier between Viminacium and Dimum/Belene (west of the legionary fortress at Neva) lost much of its military significance. The legionary fortresses of Ratiaria and Oescus were replaced by coloniae and many smaller posts were dismantled, but the legionary fortress of Viminacium and some of the larger forts were nevertheless maintained.

### 6.3.3 SITE DISTRIBUTION

The three areas distinguished above have nearly 25 sites per 100 km, but their distribution is less even than this average suggests. If the Upper, Middle and Lower Danube are separated, following a common geographical division, the number of sites per 100 km ranges from 14 to 41 to 11, respectively. The strongly deviating number for the Middle Danube is caused by the frequency of watchtowers in modern Hungary. These towers, many of which are of Late Roman or uncertain date, account for half of the sites along the Middle Danube.

These figures demonstrate firstly that the distribution of military installations is far from even, and secondly that it cannot be understood without consideration of site typology and chronology.

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102 We have followed the division by the Danube Commission, presented at http://www.danubecommission.org [accessed October 10, 2016], with Gönyü (HU) and Turnu-Severin (RO) separating the upper, middle and lower courses of the river, resulting in stretches of approx. 670, 860 and 930 km length, respectively. The numbers of sites amount to 93, 356 and 101, respectively.
In the data provided by the States Parties over 170 different individual and combined site types occur. Since such a large variety is impossible to oversee we have distinguished no more than fourteen main site types. In cases where a site includes the remains of several site types – for example of a fort, an extramural civil settlement and a cemetery – the military installation was used to assign it to a main site type. A list of the main site types with brief explanations may be found in section 3.3.

Table 6.1 gives an overview of the frequencies of the main site types, with their division over the Rhine, the Danube (divided in three) and Roman Dacia. It is obvious that the site types are very unevenly distributed over the European frontier, with for example most of the fortlets in Dacia, most of the watchtowers along the Middle Danube and in Dacia, and the Lower Danube dominated by forts (fig. 6.5).

As indicated above, chronology may have an impact on the site distribution. Yet, if only the c. 700 sites occupied during the 2nd century AD are considered, the image is very similar (table 6.2), with still most of the fortlets in Dacia, most of the watchtowers along the Middle Danube and in Dacia, and the Lower Danube dominated by forts. However, earthworks have now nearly disappeared from the record, since most of the sites concerned are of uncertain date. On the Upper Danube the numbers of fortlets and watchtowers have decreased, and on the Middle Danube those of watchtowers, since not a few of these installations are of either Late Roman or uncertain date.

The important constant factor is that the main site types are very unevenly distributed over the five distinguished areas. For the 2nd century, the major differences are:
- Watchtowers are overrepresented in Dacia and underrepresented on the Rhine and the Lower Danube.
- Forts are heavily overrepresented on the Lower Danube.
- Temporary camps are overrepresented on the Middle Danube.
- Fortlets are overrepresented in Dacia and absent on the Middle Danube.

And from a regional point of view:
- On the Rhine watchtowers are rare, while road sections, civil settlements and other sites are overrepresented. The high frequency of road sections and civil settlements must reflect selection preferences, since in reality these site types are not rare in other areas. The category ‘other’ includes amongst others the seat of the provincial governor, sanctuaries, an aqueduct and a dug canal.
- The distribution of site types on the Upper Danube has the strongest resemblance to that of the European frontier as a whole.

Table 6.2 Distribution of the 707 European frontier sites occupied in the 2nd century AD (excluding the existing FRE WHS).

<table>
<thead>
<tr>
<th>main site type</th>
<th>Europe</th>
<th>Rhine</th>
<th>U Danube</th>
<th>M Danube</th>
<th>L Danube</th>
<th>Dacia</th>
</tr>
</thead>
<tbody>
<tr>
<td>legionary fortress</td>
<td>21</td>
<td>3</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>fort</td>
<td>199</td>
<td>24</td>
<td>20</td>
<td>51</td>
<td>44</td>
<td>60</td>
</tr>
<tr>
<td>fortlet</td>
<td>42</td>
<td>1</td>
<td>5</td>
<td>6</td>
<td>2</td>
<td>28</td>
</tr>
<tr>
<td>watchtower</td>
<td>286</td>
<td>4</td>
<td>22</td>
<td>115</td>
<td>145</td>
<td></td>
</tr>
<tr>
<td>bridgehead</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>fleet base</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>hill fort</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>earthwork</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>temporary camp</td>
<td>44</td>
<td>4</td>
<td>3</td>
<td>37</td>
<td></td>
<td></td>
</tr>
<tr>
<td>industrial site</td>
<td>7</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>road</td>
<td>51</td>
<td>25</td>
<td>5</td>
<td>17</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>road station</td>
<td>4</td>
<td></td>
<td>1</td>
<td>1</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>civil settlement</td>
<td>16</td>
<td>8</td>
<td></td>
<td>5</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>other</td>
<td>20</td>
<td>12</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>total</td>
<td>707</td>
<td>85</td>
<td>65</td>
<td>247</td>
<td>59</td>
<td>251</td>
</tr>
</tbody>
</table>

103 The record for Dacia includes 10 sites which are located on the northern bank of the Danube, and for that reason might have been assigned to the Middle (1) and Lower (9) Danube.
Fig. 6.5 Distribution of the main types of military installations. Hadrian’s Wall, the Antonine Wall and the Upper German-Raetian Limes are merely indicated by dotted lines.
THE FRONTIERS OF THE ROMAN EMPIRE - A THEMATIC STUDY

- Noricum
- Pannonia
- Dacia
- Moesia
- Legionary fortress
- Fort
- Fortlet
- Watchtower
- The Middle Danube stands out by a large number of temporary camps. Most of these are situated around the legionary fortress of Brigetio and have been built during the Marcomannic Wars c. 166-180. It is also the only area for which bridgeheads from the 2nd century have been recorded, all located in or opposite Pannonia Inferior.

- The main characteristic of the Lower Danube is the predominance of forts and the absence of watchtowers.

- Dacia displays an overrepresentation of fortlets and watchtowers, while temporary camps are currently rare. Knowledge on the latter is increasing, however, and differences are probably due to the history of research and methodologies employed.

Of course, the reduction of over 170 different individual and combined site types to a mere fourteen categories implies a loss of information. However, it turns out that most of the variation has to do with terminology, for example by the use of the alternative terms of ‘fort’, ‘auxiliary fort’ and ‘auxiliary castellum’ for installations of similar size and purpose.

The most frequent site types which were lost by the reduction to fourteen main site types are the civil settlements and cemeteries outside forts and other military installations. The low frequencies and their peculiar distribution clearly indicate that the presence of remains of these associated features has not been consistently recorded (table 6.3). Hence, it is impossible to draw any conclusions from their distribution.

<table>
<thead>
<tr>
<th>main site type</th>
<th>Europe</th>
<th>Rhine</th>
<th>U Danube</th>
<th>M Danube</th>
<th>L Danube</th>
<th>Dacia</th>
</tr>
</thead>
<tbody>
<tr>
<td>extramural settlement</td>
<td>64</td>
<td>27</td>
<td>15</td>
<td>16</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>cemetery</td>
<td>17</td>
<td>9</td>
<td>4</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>all sites</td>
<td>707</td>
<td>85</td>
<td>65</td>
<td>247</td>
<td>59</td>
<td>251</td>
</tr>
</tbody>
</table>

### Table 6.3 Distribution of the civil settlements and cemeteries associated with military installations occupied during the 2nd century AD (excluding the existing FRE WHS).

#### 6.3.4 SITES AND ROMAN PROVINCES

Of the five areas distinguished above, the Rhine and Dacia are equivalent to Roman provinces. The (Lower) Rhine constitutes the external border of Germania Inferior, generally assumed to have been created as a Roman province c. AD 85. Dacia existed as a Roman province from its establishment by the Emperor Trajan in 106 until its abandonment in or soon after 271. Its internal and external boundaries underwent various changes, which are not taken into consideration in this study.

The upper, middle and lower courses of the Danube correspond to some degree to Roman provinces as well. From the south-eastern end of the Upper German-Raetian Limes onward the Danube constitutes the external border of the provinces of Raetia, Noricum, Pannonia (Superior and Inferior) and Moesia (Superior and Inferior) – for a section of Moesia only before and after the occupation of Dacia.

The mentioned provinces have a complicated history, which is not very relevant here. All four provinces appear to have been created in the 40s by the emperor Claudius, either transforming earlier military districts (Raetia, Noricum) or splitting up existing provinces (Pannonia from Illyricum, Moesia from Macedonia). Pannonia and Moesia were later each divided into a Superior and Inferior province, c. 106 and 85 respectively. Developments after the 2nd century are not included.

The Upper Danube roughly corresponds to the external boundaries of Raetia, Noricum and Pannonia Superior, the Middle Danube to those of Pannonia Inferior and Moesia Superior, and the Lower Danube to the northern border of Moesia Inferior. On account of this correspondence it may be expected that the previously described characteristics
of the three sections of the Danube will apply to the adjacent Roman provinces (table 6.4).

From the point of view of the Roman provinces the characteristics can be summarized as follows:

- For *Raetia* and *Noricum* the numbers of sites are too low to permit any conclusions, but the different ratios of forts and fortlets are remarkable.
- *Pannonia Superior* and *Inferior* have by far the most watchtowers. *Superior* has nearly all temporary camps (mainly around Brigetio), while *Inferior* has more forts.
- *Moesia Superior* and especially *Inferior* have high numbers of forts. The absence of watchtowers and temporary camps is statistically significant.

These peculiarities indeed largely reflect those observed earlier for the three stretches of the Danube. Evidently, the main site types are very unevenly distributed over the Roman provinces along the Danube.

As a reminder the main conclusions regarding *Germania Inferior* and *Dacia* are repeated:

- On the Rhine watchtowers are rare.
- *Dacia* displays an overrepresentation of fortlets and watchtowers, while temporary camps are currently rare.

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104 For *Pannonia Superior* and *Inferior* the boundary prior to c. AD 214 has been used.
7

INTERNAL COMPARISON OF
THE ROMAN FRONTIERS

In this chapter the various frontiers of the Roman Empire will be compared. The purpose of this comparison is to assess to what degree they are similar. The comparison is divided in two parts. First the frontiers of the three continents will be compared, with a clear focus on the 2nd century AD. The second part is devoted to the comparison of the European river frontiers.

Each part comprises a summary of the main characteristics of the frontiers involved, an assessment of similarities and dissimilarities and a conclusion. The part on the European river frontiers has an extra discussion of the relationship between natural barriers and Roman provinces.

7.1 THE FRONTIERS OF THE THREE CONTINENTS
IN THE 2ND CENTURY AD

7.1.1 BRIEF CHARACTERISTICS

Africa
In Africa the military infrastructure served three purposes: protection of the towns and settled agricultural areas, control of nomadic movement, and supervision of long distance trade routes. An army of probably no more than 30,000, with only a single legion, apparently sufficed to perform these tasks. Consequently, the majority of the military installations were fortlets and towers.

In Mauretania Tingitana they were mainly located around and between the cities. In Caesariensis they were stretched out in a line parallel to the coast, which was pushed southward by AD 200. In Numidia most military posts were located in and around the Aurès mountains and its outskirts; some additional linear barriers imply that their main purpose was control of nomads.

In the eastern half of northern Africa the Roman interests were restricted to the small habitable areas around Leptis Magna and Cyrena. The military infrastructure was very thin there, aimed at the control of the cities and of routes coming in from the desert.
**Near East**

In Egypt only the delta and valley of the Nile were habitable. Part of the military infrastructure was located within these areas – not on their periphery, as was usual elsewhere. Furthermore, a large cluster of small posts occurred in the Eastern Desert, controlling accesses from the Nile to the Red Sea and securing the exploitation of valuable minerals and stone. Finally, a series of (out)posts extending southward from Syene protected against nomadic raiding from the southwest and southeast. With possibly around 15,000 troops in the mid-2nd century, including a single legion, the army of Egypt was small, though in comparison to the settled area larger than that of the remainder of Africa.

South of the river Euphrates the Roman occupation of the East extended to the fringes of the steppe and desert, along which ancient caravan routes ran. Although one of these routes was upgraded as the *Via Nova Traiana* in the early 2nd century it is unclear to what degree it was provided with military posts; the later *Strata Domitiana* further north certainly was.

The main part of the c. 60,000 troops of the eastern army (not counting those stationed in *Iudaea*) were garrisoned along the Euphrates and a northward line to the Black Sea. This was the boundary with the Parthian Empire and with *Armenia*, the bone of contention between the two empires. Four legions were deployed on the river and in the mountains to the north, and possibly as many auxiliaries.

**Europe**

In Europe the rivers Rhine and Danube constituted the frontier on most of the continent, separating the Roman Empire from what it considered as barbarian peoples over some 3,000 km. In Britain, where no convenient river was available as a frontier, artificial barriers were built between river estuaries – Hadrian’s Wall and the Antonine Wall. A further linear barrier – the Upper German-Raetian Limes – was established to provide a shortcut between Rhine and Danube, screening off a vulnerable inward bend into the Empire and embracing the fertile *Agri Decumates*.

*Dacia* is a special case, projecting up to 500 km beyond the Danube. Most of its military posts were part of two lines facing east and one facing north – the *Limes*
Alutanus, Transalutanus and Porolissensis. Two legionary fortresses and some additional forts served both as a backup and to control the interior.

Leaving the linear barriers and Dacia aside, the military infrastructure of Europe was stretched out on the ‘Roman’ bank of the Rhine and Danube, accommodating the main part of 170,000 troops of the mid-2nd century,\textsuperscript{105} including a dozen legions. In the 2nd century the focus of the military strategy shifted from Britain and the Rhine to the Danube. The densities and types of military installations varied along with the landscape and the relations with the peoples across the rivers.

7.1.2 SIMILARITIES AND DISSIMILARITIES

The North African provinces, Egypt, Arabia and southern Syria have much in common. A large part of the military infrastructure in these areas was primarily aimed at controlling nomadic movement and caravan routes. The areas were all relatively peaceful, and the provincial armies accordingly small, comprising no more than three legions by the middle of the 2nd century, at Lambaesis, Alexandria and Bostra. The majority of the military posts consisted of fortlets and towers.

Within this group there are nevertheless some differences as well. In Mauretania Tingitana the military posts were located around and between the cities in the coastal plain and the table-land around Volubilis. In Mauretania Caesarenis and Numidia most fortlets and towers were not built on the fringe of the arid zone, but somewhat further north; yet the linear barriers of the Fosatum Africae demonstrate that control of nomadic movement was an important task of the garrisons. In Proconsularis and the Cyrenaica, a series of fortlets and towers, complemented with short artificial barriers in the west, protected the cities and agricultural areas from nomadic incursions; caravan routes were also under military control, involving a few remote outposts.

The military disposition in Egypt is similar to that of the latter two provinces, but here a sizeable number of military posts were pushed out into the barren Eastern Desert to protect accesses to Red Sea ports, quarries and mines. The desert frontier of Arabia and southern Syria built on ancient caravan routes following the separation between the desert and the sown; however, most military posts along these routes may postdate the 2nd century. Here too some remote outposts in the desert betray a concern for the security of long distance trade.

The military deployment in Cappadocia and the northern part of Syria is of an entirely different nature. The installations from the 2nd century are distributed over the west bank of the upper Euphrates and northward through the mountains to the fleet base at Trapezus. This area borders on the heavily contended areas of Armenia and Mesopotamia, and was protected by approximately two thirds of the eastern army. The forts on the south-east shores of the Black Sea belonged to the Cappadocian army and were vital to the securing of its corn supply.

The disposition of troops along the Euphrates and in the mountains to the north at first sight resembles that along the Rhine and Danube and in Dacia, but there is a fundamental difference. In the East army units were often garrisoned in towns and villages – as in Africa. Samosata and Zeugma, ancient cities at crossings of the Euphrates, are clear examples in the region. To Rome this was a familiar strategy, which it applied in all areas where urban centres were at hand, or other central places like the hillforts in Gaul and southern Britain. On the Rhine and Danube, however, the military infrastructure had to be built from scratch, in the absence of such centres.

The river frontiers of Europe are a phenomenon of their own. The Rhine and Danube made a convenient demarcation between those parts of the continent which could

\textsuperscript{105} In this figure the garrisons of the Upper German–Raetian Limes and Dacia are included.
be controlled from Rome and those which outreached its powers or interests. The vulnerable inward bend shaped by the headwaters of these rivers was cut off in various stages, ending with the artificial barrier of the Upper German-Raetian Limes.

The military installations along the rivers were built almost exclusively on the ‘Roman’ bank. However, bridgeheads were built across the rivers for expeditions or as more permanent alternatives for bridges. The spacing of the military installations was on the whole closer than along the deserts, where it was dictated by the availability of water. Here, the density depended on accessibility, visibility and possible threats. Except in periods of severe frost and drought rivers were effective barriers, in the absence of permanent bridges and with forts, towers and fleets to control them. Additional protection was provided by the three fleets, on the Lower Rhine and the Pannonian and Moesian sectors of the Danube.

*Dacia* provides a mixture of military solutions. Evidently, the main area of interest was Transylvania, largely surrounded by the Carpathian Mountains and more or less separated from the Danube by the Wallachian/Romanian plain. To the east and north Transylvania was protected by a range of forts, with a screen of more than hundred towers controlling the accesses, complemented with short banks and barriers in some areas. There is no similar shield to the west of Transylvania.

The Romanian Plain is cut by two lines of fortifications, which constitute a mixture of military concepts. The earliest line is along the river Olt, which provided an easy connection between Transylvania and the Danube. This route was secured by a series of fortifications on its right bank – forts in the plain and fortlets and towers upstream in the mountains – and an earthen wall to its left. Although it may have been primarily a protected north-south route it also served as a frontier to the east (*Limes Alutanus*). Later on the latter function was overtaken by a line of military posts some 50 km further east (*Limes Transalutanus*). This line partly follows the Cotmeana/Vedere river; the remaining stretches through the plain were provided with an earthen bank.
7.1.3 CONCLUSION

The differences emerging from the above overview vary in character. Some relate primarily to climatic and geographical conditions, others to the threats to be countered. The main characteristics of the five groups of frontiers which can be distinguished within the whole of the frontier of the Roman Empire in the 2nd century, vary accordingly (fig. 7.1):

- the desert frontier: Africa, Egypt, Arabia and southern Syria;
- the Parthian frontier: northern Syria and Cappadocia;
- the river frontier: Rhine and Danube;
- the artificial barriers: Hadrian’s Wall, the Antonine Wall, the Upper German-Raetian Limes;
- the mixed frontier of Dacia.

7.2 THE EUROPEAN RIVER FRONTIERS

In the context of the comparison of the Roman frontier of the three continents it was convenient to present the Rhine and Danube frontiers as a whole. However, this suggests a uniformity which does no justice to the differences which emerge on closer inspection.

7.2.1 NATURAL BARRIERS AND ROMAN PROVINCES

Throughout the basins of the Rhine and Danube narrow gorges and wide plains alternate. The narrow sections constituted natural barriers which are likely to have had an impact on the internal structure of the frontier zone.

Fig. 7.1 Diagram of the Roman frontiers on three continents, with their main characteristics (frontier type, threats, garrisons). The attribution of frontier sections to five overarching groups is indicated in red.
In the Rhenish Massif between Mainz and Remagen there were no fortifications on the Rhine before the Late Roman period, with the possible exception of the small Neuwied Basin at the confluence of the Moselle river with the Rhine. The northern fringe of the massif coincides with the boundary between Germania Superior and Inferior. The operational area of the German fleet was confined to the Lower Rhine, downstream from Remagen.

In the Danube basin there were three major natural barriers. Somewhat upstream from Vienna a spur of the Alps closes on the river. Here the boundary between Noricum and Pannonia was located.

Upstream from Budapest the outskirts of the North Hungarian Mountains form a second obstacle, between the Little and Great Hungarian Plains. Initially, this narrow section in the Danube bend was chosen as the boundary between Pannonia Superior and Inferior. In AD 214 this separation was moved to the west to include the legionary fortress of Brigetio in the Inferior province.

The Iron Gate provides a formidable third obstacle in the Danube. Here the Carpathians and Balkan Mountains meet at the river, separating the Great Hungarian/Pannonian Plain in the west from the Wallachian/Romanian and Danubian Plains in the east. The Iron Gate did not coincide with a separation between two provinces, but they divided the operational areas of the Pannonian and Moesian fleets. The location of the Pannonian-Moesian border was determined by the confluence of the Sava river.

7.2.2 BRIEF CHARACTERISTICS OF FRONTIER SECTIONS

Lower Rhine – Germania Inferior

This frontier section comprises the earliest bases established on the lines of the two rivers. They were founded as springboards for the annexation of Germanic territories across the Rhine, but when it became evident that Roman authority could not be extended far beyond the river at acceptable costs, the bases on the left bank were transformed into the backbone of a frontier system, gradually supplemented with forts.

The river delta starting near the Dutch-German border is without comparison. The challenges posed by the highly dynamic landscape have led to some unique military engineering works: a groyne designed to regulate the water flow into the northern branch and artificial canals connecting that branch to the sea coast in the north and to the estuary of the river Meuse in the south. The marshy areas near the coast apparently invited Germanic raiding, which was countered by the establishment of a tight screen of small forts supplemented with watchtowers along winding sections of the river. The wetland conditions of the delta have led to an outstanding preservation of the timber building phases of several military installations and of ships and road infrastructure.

The surroundings of the legionary fortresses of Bonna and Vetera are the only areas outside Pannonia where larger numbers of temporary camps have been attested.

After the Germanic invasions of the mid-3rd century only some of the military posts were reoccupied in the 4th century, but new installations were added on the river line and in the hinterland. The frontier collapsed in the early 5th century, but some fortifications survived as nuclei of medieval power centres.

Upper Danube – Raetia and Noricum

The northern boundaries of the provinces of Raetia and Noricum did not result from military ambitions beyond these lines, but from a gradual northward shift of Rome’s control of the Alps. Military posts along the Danube first appeared in western Raetia during the reigns of Tiberius and Claudius, and further downstream in the Flavian
period. At the beginning of the 2nd century Roman control was extended beyond the Danube in western Raetia, eventually to be fenced off by the Upper German-Raetian Limes. The Raetian-Norician river frontier was not threatened before the Marcomannic Wars (166-180). Only then was it considered necessary to deploy legions here, one in each province. This section has the widest spacing of military installations, probably because of the partly inaccessible landscape and the initial absence of military threats. The military posts display a large variety in size and positioning, due to the alternation of gorges and floodplains.

After the Germanic raids of the mid-3rd century the frontier was restored. Especially the eastern part was further consolidated by the addition of fortlets and towers, several of which (partly) survived as parts of medieval buildings.

**Middle Danube - Pannonia**

The creation of the province of Pannonia was a sequel to the Roman occupation of the Dalmatian coast, as military control of the area was gradually extended to the northeast. Once the Danube had been reached under Augustus, the Dalmatian and Pannonian tribes revolted, aborting a planned operation against the Marcomanni across the river. The revolt explains both the large military presence and their initial concentration in the interior of the province. It was only in the Claudian period that some permanent bases were founded on the Danube, supervising river crossings.

Most of the remaining fortresses and forts on the river are Flavian or later foundations, linked with the growing pressure from across the Danube, resulting in the Dacian Wars of Domitian and Trajan. In the aftermath of the second war Pannonia was divided in two provinces, Superior and Inferior.

The Superior province was a springboard for the Marcomannic Wars of AD 166-180, resulting in an unparalleled clustering of temporary camps around Brigetio and the bridgehead of Kelemantia.

A distinguishing characteristic of the Pannonian provinces is the high frequency of watchtowers. Many cannot be adequately dated, but it is certain that some already existed in the 1st century and some more in the 2nd century; the great majority, however, are Late Roman. Building inscriptions from the 180s indicate that the
Frontier section below *Aquincum* suffered from raiding, countered by the construction of watchtowers and forts.

Protection against such incursions is likely to have been the main purpose of the Late Roman towers as well, in view of the appearance of bridgeheads on both river banks in the same period, another peculiarity of the Pannonian frontier.

The dense distribution of towers stops at the Hungarian-Croatian border. Considering the fact that in Hungary the numbers have doubled during the last twenty years it is not impossible that their absence in Croatia and their rarity in the Serbian part of *Pannonia* is influenced by the research history and methodology, as the landscape across the river was not significantly different.

**Lower Danube - Moesia**

The province of *Moesia* started off as a northward extension to that of *Macedonia*. It received its own governor when Claudius added the Danubian Plain to its territory at the creation of the province of *Thracia*. By that time, Rome had already for over a century been interfering with regional affairs on both sides of the Lower Danube, but it seems that the Claudian rearrangement first led to the foundation of permanent military bases on the river. Nevertheless military interventions across the Danube continued, at least as far as the Dniestr river, over 100 km to the north of the Danube delta. It was only after Dacian incursions in 68/69 and 85/86 from across the Danube that the military infrastructure along the river was considerably extended. Following the latter invasion the province was divided in a *Superior* and *Inferior* part.

At the creation of the province of *Dacia* in 106, the military occupation of the bordering section of the Danube was reduced, whereas the lower course along the Dobrudja was strengthened following the inclusion of the eastern part of the Romanian Plain into the territory of *Moesia*, but this was soon given up. In the mid-3rd century, the Moesian frontier suffered from invasions of Goths and other peoples, and in 271 the Dacian province was evacuated. Following these events both the provincial structure and the frontier were reorganised. Although barbarian raids

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106 There are some early records of watchtowers near Šarengrad and Ilok, close to the Croatian-Serbian border, but these have not been confirmed by recent research (pers.comm. I. Vukmanić).
persisted, the area more or less survived the collapse of the Western Roman Empire in the 5th century. As part of the Eastern Roman Empire the Moesian frontier was restored in the first half of the 6th century, but following invasions of Avars and Slavs heralded the end of the Danube frontier in the early 7th century.

The long survival is a distinctive characteristic of the Moesian frontier. A further remarkable feature is the near absence of fortlets and towers, with the exception of the Iron Gate. Although it cannot be excluded that this is influenced by the state of research, an explanation might be that on this frontier more than elsewhere the opposite river bank was under military control.

### 7.2.3 SIMILARITIES AND DISSIMILARITIES

The Rhine and Danube basins were subdivided by natural barriers. In most cases the borders between Roman provinces coincide with these barriers. This may be a reflection of the congruence of the territories of conquered peoples with these naturally determined spaces, or of practical strategic or administrative considerations as accessibility by land or water.

As far as their origins are concerned the provincial frontiers belong to two different groups. Those of *Raetia*, *Noricum* and *Pannonia* gradually shifted from the hinterland, whereas those of *Germania Inferior* and *Moesia* were established after largescale military interventions across the Rhine and Danube.

These two groups also differ in the frequency of fortlets and towers, high in the first and low in the second group. This may well reflect a different approach of control of the rivers and of access across, but it is unlikely that it is linked to whether the frontier lines were shifted forward or backward. As the majority of fortlets and towers in the first group are of Late Roman date, chronology can play a major role here.

On the whole, chronology is a distinguishing aspect, but along different lines. The Rhine frontier started off earlier than the Danube sections, and it was also the first to collapse. The frontiers of *Raetia*, *Noricum* and *Pannonia* shared the fate of the Western Roman Empire somewhat later. The Moesian frontier survived them by more than a century as part of the Eastern Roman Empire.

Preservation is another area of distinction. The wetland conditions of the Rhine delta have led to an outstanding preservation of timber building phases of military installations and of ships, canals and roads. In *Raetia* and *Noricum* several Late Roman stone remains have survived as parts of medieval buildings, of the legionary fortress at Regensburg and various fortlets and towers. The same applies to *Moesia*, but here some of the standing remains are of even later date.

### 7.2.4 CONCLUSION

The European river frontiers of the Rhine and Danube can be divided into four groups:

- *Germania Inferior*;
- *Raetia* and *Noricum*;
- *Pannonia* (Superior and Inferior);
- *Moesia* (Superior and Inferior).

From these groups *Raetia/Noricum* and *Pannonia* are the most similar, but on account of the differences in landscape they have been separated here.
This chapter presents a World Heritage Nomination Strategy for the frontiers of the Roman Empire, first in a general way for the frontiers as a whole – extending over the continents of Africa, Asia and Europe – and secondly in more detail for the frontiers of Europe. This strategy builds on the results of the Thematic Study and intensive discussions with the representative of ICOMOS-International. It aims at providing the World Heritage Committee with insight into the intended nominations, the justification of the properties, the selection of sites, and the approach to management and future development.

The focus of the Nomination Strategy on the European frontiers of the Roman Empire reflects the progress which has been made by the States Parties concerned in the preparation of their frontier sections for nomination, as well as the complicated political situation in some of the countries encompassing sections of the frontiers of Africa and the Near East. Yet, the ambition to include the frontiers of the African and Asian continents is still standing, and the States Parties involved are expressly invited to join the initiative developed here.

After an outline of the background and aims of this strategy (8.1) an overall strategy for the Frontiers of the Roman Empire is presented (8.2). This is followed by a more detailed Nomination Strategy for Europe and a proposal for the nomination of three additional properties for the European frontier (8.3) with a brief justification for their proposed OUV (8.4) and an explanation of the current selection of component sites (8.5). The chapter is concluded by an outline of a proposed viable way forward (8.6) and a timetable (8.7).

### 8.1 BACKGROUND AND AIMS

In 1987 Hadrian’s Wall (UK) was inscribed on the World Heritage List. When, in the early 2000s, the nomination of the Upper German-Raetian Limes (DE) was being prepared, the idea was advanced to create a single World Heritage property encompassing all the frontiers of the Roman Empire in Europe, the Near East and North Africa (cf. chapter 2). The World Heritage Committee expressed its support of this idea in 2005 with the inscription of the Upper German-Raetian Limes, renaming the joint property to ‘Frontiers of the Roman Empire’ (FRE). The Antonine Wall (UK) was accepted as an extension of this property in 2008.
Meanwhile preparations had started for the nomination of further sections of the Roman frontiers in Europe, as demonstrated by the submission of relevant entries on the Tentative Lists of Slovakia in 2002 and Croatia in 2005. The remaining European States Parties with sections of the frontiers followed in due course, and in 2012 Tunisia was the first – and as yet only – State Party outside Europe to submit a Tentative List entry for its Roman frontier section.

The submission of individual Tentative List entries by the States Parties involved reflected the envisaged gradual extension of the FRE on a national basis. A UNESCO expert meeting held in 2010 to debate the challenges of the increasing number and complexity of serial transnational nominations resulted in several recommendations for the creation (or extension) and management of such properties. These recommendations concerned amongst other things the definition of the properties, the explanation of their Outstanding Universal Value and the necessity of developing prior to their nomination a chosen Nomination Strategy, a comparative analysis, and a justification of the number and size of component parts in relation to how they contributed to OUV.

In line with these recommendations, ICOMOS requested a Thematic Study of the Roman frontiers, clarifying the scope and nature of what remains of the frontiers, and whether the frontiers of the Roman Empire can be divided into sections that reflect geographical and cultural aspects and which might have the capacity to demonstrate OUV. Such a study would serve as a base for the development of a Nomination Strategy that could guide future nominations.

The preceding chapters comprise the Thematic Study of the frontiers of the Roman Empire, elucidating the character and distribution of their remains and providing substantial arguments for a division into discrete sections. This study was based on published evidence, supplemented with data provided by the European States Parties. The aggregated information demonstrated that although frontier installations shared many characteristics throughout the Roman Empire, regional landscapes and threats provoked different responses, discernible in the distribution, positioning and design of the military posts, amongst other things.

The Nomination Strategy unfolded in this chapter aims to convert the findings of the Thematic Study into a viable approach for the nomination of sections of the overall frontier linked by the overall concept of the Frontiers of the Roman Empire as coherent entity. Each nominated section would be a single property and would demonstrate OUV for its particular distinctive characteristics.

8.2 WH NOMINATION STRATEGY FOR THE OVERALL FRONTIERS OF THE ROMAN EMPIRE

The frontiers of the Roman Empire have gradually developed almost 2000 years ago out of a desire to protect the Roman Empire’s interests against external threats. The linear arrangement of thousands of military installations along natural and artificial barriers on its periphery leaves no doubt about this fundamentally defensive purpose. Yet, the Roman frontiers had many other functions and characteristics, and they often developed into inclusive contact zones between populations on both sides of the frontier lines. Viewed in the context of the protection of World Heritage, the
conservation and protection of the military infrastructure of the frontier are essential to the ongoing generation of the understanding of its complexity.

When the idea was advanced in the early 2000s to create a World Heritage property for the whole of the frontiers of the Roman Empire, across three continents, it was envisaged that this property should reflect the coherence as well as the diversity of the frontiers. Both aspects are addressed in the Summary Nomination Statement that was provided with the nomination of the Upper German-Raetian Limes in 2004:

“Spanning three continents, the Empire developed and transmitted a universal culture based on Greek and Roman civilisation. Its influence reached far beyond its actual boundaries in Europe and around the Mediterranean. The frontiers of the Roman Empire form the single largest monument to this civilisation. They helped define the very extent and nature of the Roman Empire. As a whole, they represent the definition of the Roman Empire as a world state. Physically, the frontiers demonstrate the variety and sophistication of the responses of the Roman Empire to the common need to demarcate, control and defend its boundaries. This had to be done in widely differing circumstances, reflecting the interaction of political, military and topographical features. In each case, the Romans developed a local solution, making use of topographical features and political circumstances to provide a barrier that was an effective control of movement across the frontier as well as a strong military defence. The variety of physical remains has outstanding value in demonstrating the complexity and success of this society in using boundary works to define and protect itself in ways appropriate in each case to the local circumstances.”

The envisaged spatial extent of the Frontiers of the Roman Empire World Heritage property was defined in 2004 as: “the line(s) of the frontier of the height of the Empire from Trajan to Septimius Severus (about 100-200 AD), and military installations of different periods which are on that line. The installations include fortresses, forts, towers, the limes road, artificial barriers and immediately associated civil structures.”

This definition is still maintained as an effective and practical delineation in time and space of the Frontiers of the Roman Empire as World Heritage.

The Thematic Study provides a clear image of the frontiers of the Roman Empire on the lines of the 2nd century AD, demonstrating both their overall coherence and their

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108 Quoted, with some omissions, from the Summary Nomination Statement, part 2 a (Statement of Significance), included in Nomination file 430ter, pp. 399-400.
109 Quoted from the Koblenz declaration (cf. chapter 2) included in Nomination file 430ter, p. 427.
diversity. An internal comparative analysis has provided arguments for the distinction of five discrete groups of frontiers (fig. 7.1):

The desert frontier of Africa, Egypt, Arabia and southern Syria served to protect long distance trade routes crossing the desert and to control the nomadic tribes of the region. Within this group there is some regional variety, with for instance some artificial barriers and mountainous sections in Africa and a deviating positioning of military installations in Egypt.

The Parthian frontier of northern Syria and Cappadocia (Turkey) combines a river and a mountain frontier and served as the military backbone for the Roman claims on Armenia and Mesopotamia, which were disputed by the Partian Empire.

The river frontier of the Rhine and Danube separated the Roman Empire from areas which it considered as ‘barbaric’ and outreached its powers or interests. Varying natural conditions and threats are reflected in regional differences in size, design and spacing of military installations.

The artificial barriers of Hadrian’s Wall, the Antonine Wall, the Upper German-Raetian Limes – constituting the already inscribed World Heritage property – were built where no convenient rivers were available to constitute a frontier line.

The mixed frontier of the Roman province of Dacia (Romania) provides an unparalleled mixture of military responses to natural and political conditions. It combines sections of mountain and river frontiers with long and short linear barriers.

This division provides a basis for a nomination of discrete frontier sections as single properties. Of the four groups mentioned above besides the inscribed property, the Parthian frontier and the mixed frontier of Dacia may constitute two separate properties. The desert and river frontiers are too large and complex – extending over thousands of kilometres and the territories of seven and eight States Parties, respectively – to be manageable as single properties. The variety within these two groups, however, allows a further partitioning. In the case of the river frontier a division between Rhine and Danube is proposed (section 8.3). For the desert frontier it is impossible to set out a detailed strategy now, due to the current political situation and to the lacking of precise information on the character and integrity component sites in many areas. However, the Thematic Study provides various arguments to consider a further subdivision.

Each frontier section to be nominated as a single property will have to demonstrate OUV for its particular characteristics. It is argued that the three new properties proposed for the European frontiers have the capacity to do so (section 8.4), and the
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Thematic Study justifies the expectation that this also applies to coherent sections of the frontiers in the Near East and North Africa.

The envisaged new discrete properties would be linked by the overall concept of Frontiers of the Roman Empire, together with the already inscribed property. The conceptual coherence is already indicated above and will be further developed (cf. Annex A). Collaboration and joint development would be furthered by an overall cooperative framework for the heritage of the Roman frontiers (section 8.6.2).

8.3 WH NOMINATION STRATEGY FOR THE EUROPEAN FRONTIERS OF THE ROMAN EMPIRE

As the complicated political situation does not permit to develop a coherent view for the frontier sections in North Africa and the Near East, only a detailed Nomination Strategy for the frontiers in Europe is presented here. It is anticipated that discrete sections of the European frontiers of the Roman Empire will be nominated as separate, manageable properties, in a reasonably short timeframe. The proposed Nomination Strategy is supported by all European States Parties involved, as a means to arrive at successful nominations of sections of the European frontiers in an environment stimulating collaboration, exchange of experiences, coordination and joint development.

The internal comparison of the Roman frontiers (chapter 7) has clarified that the European frontiers differ from those in the Near East and North Africa. The frontiers of Europe fall into artificial barriers (included in the inscribed WH property), river frontiers (along Rhine and Danube) and the mixed frontier of the Roman province of Dacia (now part of Romania). For the river frontiers a further division was suggested, along the lines of Roman provinces: Germania Inferior (Rhine), Raetia-Noricum, Pannonia and Moesia (all Danube).

In this Nomination Strategy, a route is being proposed for the nomination of the European frontiers: three additional properties besides the existing WH property. The names used for these sections in this Nomination Strategy are provisional. There is much to say for names which combine a common element ‘Frontiers of the Roman Empire’ with an additional element identifying the individual property, e.g. ‘Frontiers of the Roman Empire: the Danube frontier’. This issue will be dealt with before the first nomination dossier will be submitted.

8.3.1 THE INSCRIBED PROPERTY ‘FRONTIERS OF THE ROMAN EMPIRE’

The inscribed property ‘Frontiers of the Roman Empire’ (ref. 430ter) includes Hadrian’s Wall in northern England, the Antonine Wall in Scotland and the Upper German-Raetian Limes in southern Germany. As it happens, all three are long artificial barriers: Hadrian’s Wall was built in stone over 117 km, the Antonine Wall in turf over 60 km, and the Upper German-Raetian Limes in stone, earth and timber over 550 km. Although long artificial barriers have also been attested in North Africa (Fossatum Africae) and Romania (Limes Transalutanus) the three inscribed barriers have distinct characteristics. The retrospective Statement of Outstanding Universal Value for this property includes the following summary of qualities:

“Together, the remains of the frontiers, consisting of vestiges of walls, ditches, earthworks, fortlets, forts, fortresses, watchtowers, roads and civilian settlements, form a social and historical unit that illustrates an ambitious and coherent system of
defensive constructions perfected by engineers over the course of several generations. Each section of the property constitutes an exceptional example of a linear frontier, encompassing an extensive relict landscape which reflects the way resources were deployed in the northwestern part of the Empire and which displays the unifying character of the Roman Empire, through its common culture, but also its distinctive responses to local geography and climate, as well as political, social and economic conditions.\textsuperscript{110}

The already inscribed artificial barriers constitute a discrete group within the European frontiers, which does not call for further extension. The artificial barrier of the \textit{Limes Transalutanus} in Romania is part of the unparalleled mixture of the frontier solutions of the Roman province of \textit{Dacia}, and corroborates the OUV of that section.

\section*{8.3.2 THREE PROPOSED FRONTIER SECTIONS AS ADDITIONAL SINGLE PROPERTIES}

The comparative analysis (chapter 7) suggested that five groups can be distinguished within the overall European frontiers, besides the already inscribed artificial barriers. These groups correspond to five (groups of) former Roman provinces: \textit{Germania Inferior} (Rhine), \textit{Raetia-Noricum}, \textit{Pannonia} and \textit{Moesia} (all Danube), and \textit{Dacia}. It was noted that the provincial borders coincide with major geographical obstacles, often separating natural and cultural habitats, with the exception of that between \textit{Pannonia} and \textit{Moesia}. Further, it was acknowledged that the differences between \textit{Raetia-Noricum} and \textit{Pannonia} are less distinct than those between others.

In line with these observations an assessment of the potential for sections to demonstrate OUV revealed that a strong case could possibly be made for the frontiers of the Roman provinces of Lower Germany (\textit{Germania Inferior}) and \textit{Dacia} as two distinct sections. It also demonstrated that the distinctiveness of the frontiers of the Danubian provinces stand out most prominently when viewed as a whole. Consequently, it is proposed that the European frontiers, not yet inscribed, could be

\textsuperscript{110} WHC/16/40.COM/8E.Rev, pp. 23-24.
nominated as three separate sections: the Lower German (i.e. Lower Rhine) frontier, the Danube frontier and the Dacian frontier (fig. 8.1). The main characteristics of these envisaged sections can be summarised as follows:

The Lower German frontier runs for 400 km along the river Rhine. The Lower Rhine was a very dynamic river, particularly in its extensive delta. The challenging natural conditions invoked innovative responses of the Roman military engineers, which are outstandingly exemplified by the peculiar positioning and design of many military installations and by water management works as a dug canal. By the early date of the first military bases on the Rhine the Lower German frontier represents the very beginning of the linear perimeter defence of the Roman Empire.

The Danube frontier runs for 2,400 km along the river Danube. The river is bordered by wide floodplains interrupted by narrow gorges where it cuts through the mountain ranges of Central and Eastern Europe. As a whole, the Danube frontier outstandingly demonstrates the evolution of the Roman military responses to external pressure resulting from unremitting migration. The distribution and characteristics of the military installations eminently illustrate the subsequent strategies of diplomacy, forward defence, annexation and perimeter defence. The remains include impressive testimonies of a large-scale external war and the longest surviving river frontier section.

The Dacian frontier consists of several lines of military posts surrounding the Transylvanian Plateau (Romania) and connecting it to the river Danube to its south. The lines add up to more than 1,000 km and are largely situated in mountainous areas. The frontier is an unparalleled mixture of military responses to landscapes and threats, combining a perimeter defence, backed-up by large bases in the rear, with fortified accesses to and from the Danube. Because the Roman province of Dacia existed for less than two centuries the purpose and design of its frontier stand out very clearly.

8.4 JUSTIFICATION FOR INSCRIPTION OF THE ENVISAGED EUROPEAN PROPERTIES

The Thematic Study provides various arguments which may serve as a basis for the definition of Statements of Outstanding Universal Value for the three proposed sections. The earlier mentioned preliminary assessment of the potential OUV of frontier sections has added further insight into their characteristics. The most distinctive aspects will be addressed below in separate paragraphs for each envisaged section, without pretention of being complete or definite. It is considered that all three sections have the potential to meet criteria (ii), (iii) and (iv). Eventually, however, it is the task and privilege of the States Parties involved to define and justify the detailed potential OUV for each section and how the appropriate criteria might be met in the respective nomination dossiers.

8.4.1 THE LOWER GERMAN FRONTIER

The envisaged section is located within the territories of the States Parties of the Netherlands and Germany. It constitutes the north-eastern boundary of the Roman province of Germania Inferior (Lower Germany), running for 400 km along the river Rhine, from the spurs of the Rhenish Massif south of Bonn in Germany to the North Sea coast in the Netherlands. The military infrastructure was established in the last decades BC and existed, after a temporary breakdown in the late 3rd century, until the disintegration of the Western Roman Empire in the early 5th century AD.
The highly dynamic character of the Lower Rhine, particularly in its extensive delta in the Netherlands, made a strong appeal to the ingenuity of the Roman military engineers. A groyne and canals were designed to enhance its navigability, and quays...
and landing platforms to facilitate its use for logistical purposes. Designs of forts and roads were adapted to cope with the whimsical behaviour of the river. These peculiarities are demonstrated by outstanding remains of timber and other organic
materials, which are excellently preserved by the wetland conditions of the Lower Rhineland.

The Roman military infrastructure on the Rhine was established as a springboard for the conquest of Germanic territories across the river. Once this ambition had failed the left river bank was converted into a fortified frontier, the first European river frontier to develop. The Lower German frontier also provides a fine example of the creation of an urban infrastructure in a region without central places, illustrating the spread of Roman administrative and architectural traditions.

8.4.2 THE DANUBE FRONTIER

The envisaged section is located within the territories of the States Parties of Germany, Austria, Slovakia, Hungary, Croatia, Serbia, Bulgaria and Romania. It constitutes the northern and eastern boundaries of the Roman provinces of Raetia (eastern half), Noricum, Pannonia and Moesia, running for 2,400 km along the river Danube, from Hienheim in Germany to the Black Sea coast in Romania. The frontier was gradually established in the 1st century AD and was strongly fortified after a temporary collapse in the late 3rd century. The western part, reaching approximately to the Croatian-Serbian border, was abandoned at the fall of the Western Roman Empire by the mid-5th century, while the eastern part continued to serve as the frontier of the Eastern Roman Empire until it was given up in the early 7th century.

For most of its length the Danube frontier is bordered by wide floodplains, which are separated by the outskirts of high mountain ranges forcing the mostly winding and twisting river into deep and narrow gorges. These alternating natural conditions are clearly reflected by the size and positioning of the military installations, with the gorges being secured by small posts in elevated positions, and the plains by larger forts at river crossings and at points overlooking the plains. The severe problems posed to river transports by the Đerdap gorges or the Iron Gate in Serbia were met by the early construction of a towpath cut into the rocks.

The distribution and chronology of the military installations on the Danube eminently reflect the evolution of Roman strategies to counter the threats emanating from sustained large-scale migration. A long period of diplomacy, supplemented with concentrated military actions, was followed by decades of forward defence based on a gradually expanding military infrastructure on the Danube. A series of large wars with
the Dacian was concluded with the creation of the Roman province of Dacia across the river. Subsequent conflicts with Germanic and Sarmatian peoples led to further wars. Although the establishment of another new province across the Danube seems to have been contemplated, the conclusion of these so-called Marcomannic Wars was followed by a considerable tightening of the military line on the river bank, by rebuilding timber forts in stone and adding intermediate fortlets and watchtowers. This strategy of perimeter defence was intensified after a temporary collapse of the frontier in the late 3rd century, when the Empire suffered from civil wars and was unable to ward off its powerful external enemies. Strongly fortified military bases reflect several imperial programs of modernisation and rebuilding. The western part of the Danube frontier broke down under attacks by the Huns and was abandoned at the fall of the Western Roman Empire in the mid-5th century, but the Lower Danube frontier survived as a border of the Eastern Roman Empire into the early 7th century, when it fell victim to invasions of Avars and Slavic tribes.

The Danube frontier thus outstandingly demonstrates the succession of Roman military responses to external threats. A large cluster of temporary camps exemplifying the scale of an external war is one of its conspicuous assets. Dense series of fortlets and watchtowers reveal the similarity between river frontiers and artificial linear frontiers where the watchtowers are connected by walls of turf, timber or stone. The transition to a strong perimeter defence is clearly exemplified by heavy tower-like fortifications and very characteristic bridgehead fortifications. The remains, which in many cases survived astonishingly well to the present day, are the most distinctive and still visible witnesses of the longest surviving river frontier section in Europe.

8.4.3 THE DACIAN FRONTIER

The envisaged section is located within the territory of the State Party of Romania. It constitutes the frontier of the Roman province of Dacia, surrounding Transylvania and connecting it to the river Danube. The province of Dacia was created in AD 106 to end sustained raiding into the Empire and to exploit its valuable reserves of salt, silver and gold. It was evacuated in around AD 270, when the military capacity of the Roman Empire was overstretched by extensive barbaric raids across the Rhine and Danube.

The Dacian frontier is an unparalleled mixture of military solutions developed to cope with varying landscapes and threats. It consists of a tight screen of military posts in the Carpathian mountains along the edges of the Transylvanian Plateau, and of several fortified accesses to and from the Danube. A dense series of more than a hundred watchtowers served as an early warning system for the securing of Transylvania, communicating with larger posts in the rear. The main routes to and from the Danube were protected by lines of forts and small posts, incorporating stretches of river and, in one case, supplemented with a long earthen barrier.

This varied assemblage of strategic concepts is a concise and outstanding illustration of the Empire’s military genius, accumulated over centuries of territorial expansion. Because of the relatively brief existence of the Dacian province the purpose and design of its frontier stand out very clearly, not being obscured by earlier or later developments. The creation of the province reflects the response of the Roman Empire to the failure of diplomacy, while its evacuation demonstrates the constraints of its military power.
8.5 SITE SELECTION

All States Parties involved in the proposed nomination process for the European frontiers have made a selection of the component sites representing the frontier section within their territories. In this paragraph the applied selection criteria and the current selections of component sites are summarised. This paragraph reflects the state of August 2016; the site lists may be subject to changes as a result of field research or an assessment of management issues.

8.5.1 SELECTION CRITERIA

The compilation of the sites belonging to the Roman frontiers within the territories of every State Party demonstrated an altogether very homogenous approach regarding the selection criteria. The individual component sites that are considered for each of the three sections are characterised by their high level of authenticity and integrity and their long-term protection and management perspectives.

8.5.2 CURRENT SITE SELECTION

The numbers of component sites currently selected by the States Parties amount to one per 7 km of frontier for the Lower Rhine and Dacia sections, and one per 10 km for the Danube section. Considerable densities are indispensable to demonstrate the linearity and coherence of the frontiers, and to exemplify the character of the separate sections and the links and contrasts between them. A clearly discernible network of military installations and associated features will contribute to a sense of connectedness and to support for long-term protection.

Nomination dossiers for the individual sections will provide a justification for the applied selection, explaining their contribution to the OUV, integrity and authenticity of the section, and to the whole of the Frontiers of the Roman Empire.

The nine States Parties involved in the preparation of the nomination of the three proposed sections have provided lists of component sites with remains of the Roman frontiers within their territories, adding up to a ‘long list’ of nearly 1,000 sites (Annex C). By applying the criteria listed in the introduction to Annex C, this long list has currently been halved, to 497 sites in all (table 8.1).
For the three proposed sections, the average percentage of selected sites varies from 60 for the Lower Rhine to 45 for the Danube and 56 for Dacia. Some deviating individual percentages may require an explanation. The modest percentages for roads and civil settlements on the Rhine are due to the unconvincing evidence for many instances. On the Danube the percentage of selected watchtowers is well below average; this is caused by the insufficient or unknown integrity and/or authenticity of the majority of the towers. In Dacia it is uncertain for most earthworks whether they date to the Roman period.

8.6 A VIABLE WAY FORWARD: ADDRESSING THE COMPLEXITY

If the three proposed sections are inscribed on the World Heritage list, the European frontiers of the Roman Empire would be distributed over four separate World Heritage properties. The States Parties involved attach great value to international collaboration as a means to promote the presentation, management and development of the heritage of the European frontiers, by joint initiatives and exchange of experiences. An outline for such a collaborative framework is presented below.

For the Danube frontier, extending over 2,400 km and involving eight States Parties, a nomination in two steps is proposed as a viable approach to a successful inscription of the most complex of the three envisaged sections.

8.6.1 MANAGEMENT SYSTEM

Following the inscription of the Upper German-Raetian Limes a system of exchange and cooperation concerning all World Heritage matters and management has been established. It works successfully for the inscribed property ‘Frontiers of the Roman Empire’ (ref. 430ter), including the later extension with the Antonine Wall. The two main elements are the Intergovernmental Committee (IGC) and the Management Group (also known as the Hexham Group). Their function and procedures were laid down in a Joint Declaration (Annex B).

It is suggested that this system of Intergovernmental Committee “to coordinate overall management of the FRE WHS at an international level” and Management Group providing “the primary mechanism for sharing best practice in relation to WHS FRE”, made up “of those directly responsible for the site management of the currently inscribed sections of the WHS FRE” will be transferred to the proposed three new properties Frontiers of the Roman Empire.

8.6.2 COLLABORATIVE FRAMEWORK

When the nomination of the Upper German-Raetian Limes was handed in as a first extension of Hadrian’s Wall under the joint heading of ‘Frontiers of the Roman Empire’, the nomination dossier included a paragraph defining a common management system. Since it was envisaged that the property would be further extended in the near future – as it actually was by the subsequent nomination of the Antonine Wall – the management system was designed to be able to incorporate further States Parties.

111 Included as paragraph 4 of the Summary Nomination Statement (Nomination file 430ter, p. 409-413).
The aims of the joint management system included “to achieve common standards of identification, recording, research, protection, conservation, management, presentation and understanding of the Roman frontier, above and below ground, in an interdisciplinary manner and within a sustainable framework”. These aims are fully shared by the States Parties involved in the preparation of the nomination of the three sections proposed in this Nomination Strategy.

Since it is no longer envisaged to extend the inscribed property ref. 430ter, a new overarching framework is needed to support international collaboration in those fields relevant to the overall management and development of the European frontiers of the Roman Empire as World Heritage. It is the ambition of the States Parties involved to realise such a framework, which is provisionally labelled ‘Frontiers of the Roman Empire World Heritage Cluster’ (hereafter: Cluster), before the end of 2017. In putting this cluster in place lessons will be learned from existing structures and collaborations.

The Cluster will include both the inscribed and envisaged properties in Europe, and will be open to future extension with frontier sections in North Africa and the Near East (fig. 8.2). The Cluster will include provision to ensure appropriate levels of governance and scientific advice applicable to the Cluster itself and to the individual component World Heritage properties.

The primary aims of the Cluster 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. The existing Bratislava Group could form the basis. This “is an international scientific advisory body with expert members from States Parties containing inscribed or potential parts
of the WHS FRE. The Bratislava Group aims to share knowledge and experience of Roman frontiers and their identification, protection, conservation, management and presentation, leading to the distillation of a common viewpoint. Through technical and professional advice the Bratislava Group provides a scientific framework for the whole of the Roman frontiers.” Its responsibility could cover the four domains of policy, management, scientific advice and public outreach and form the bracket over the inscribed sites Frontiers of the Roman Empire.

The above framework needs to be fully developed by the States Parties, but it may be clear that this Cluster will enable us to expand from individual sites and properties to an overarching European monument, which may grow to include parts from other continents in the future.

8.6.3 APPROACH FOR THE DANUBE

The section envisaged to represent the Danube frontier extends over 2,400 km and is located within the territories of eight States Parties. The current site selection comprises about 250 component sites. Previous cooperation projects such as the Culture 2000 project ‘Frontiers of the Roman Empire’ (2005-2008),113 the EU Central Europe project ‘Danube Limes – UNESCO World Heritage’ (2008-2011)114 and the EU South East Europe project ‘Danube Limes Brand’ (2012-2014)115 are demonstrations of successful cooperation by the States Parties involved in the envisaged section, resulting amongst others in the submission of entries on the Tentative Lists of Hungary (2009), Austria, Germany, Serbia (all 2015), Bulgaria (2016) and Romania (due for 2017).

These cooperative projects have added to the confidence that the Danube frontier will be a feasible and manageable property. Yet, despite the considerable progress made in recent years, the preparations for nomination have advanced at different speed. The feasibility of inscription of this extensive property would considerably increase if it were nominated in two steps: the western part first and the eastern part later. A successful nomination of the western part would be a major stimulus to the eastern part, and the States Parties involved in the preparation of the nomination of the latter would greatly benefit from the experiences and support of those involved in the former.

The western segment would comprise the component sites within the territories of Germany, Austria, Slovakia and Hungary, the eastern segment those in Croatia, Serbia, Bulgaria and Romania; the current selections of component sites amount to about 130 for the western and 120 for the eastern segment. The Thematic Study provides a clear view of the characteristics of both parts, as the western segment covers the frontiers of the Roman provinces of Raetia (eastern part), Noricum and most of Pannonia, while the eastern segment covers the frontiers of a small part of Pannonia and all of Moesia.

The main distinctive characteristics of the Danube frontier have been listed in section 8.4.2, clarifying that the property as a whole will be able to demonstrate OUV. In a two-step approach the western segment needs to be able to justify OUV on its own in a first step, while the eastern segment needs to demonstrate attributes not present in the western segment in a second step.

The most distinctive characteristics of the western segment are the temporary camps illustrating the military impact of external wars, the dense series of fortlets and watchtowers revealing the similarity between river frontiers and artificial barriers, and heavy fortifications and bridgeheads exemplifying the transition to perimeter defence.

112 Joint Declaration; Annex B.
113 Breeze/Jilek 2008.
These attributes should support justification for the OUV of the western segment as an outstanding example of the varied Roman military responses to external threats. Extension of this property with the eastern segment would supplement it with the early strategy of diplomacy and with its longer survival, as part of the Eastern Roman Empire. These additional attributes of the eastern segment are contributory rather than sufficient for nomination as a separate property.

8.7 TIMETABLE

With the foreseen submission in 2017 of an entry for the Tentative List of Romania all European frontier sections will be part of national Tentative Lists, and little harmonisation will be necessary. For the remainder of the nomination process the following timetable is foreseen:

- **end of 2017** creation of an overarching collaborative framework
- **January 2018** submission of the nomination dossier for the Danube frontier, western segment
- **January 2020** submission of the nomination dossier for the Lower German frontier
- **January 2021** submission of the nomination dossier for a major extension to add the eastern segment to the Danube frontier property
- **January 2021** submission of the nomination dossier for the Dacian frontier
Standing remains of the fort of Cannabiaca at Zeiselmauer (Austria).
LIST OF ILLUSTRATIONS

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VI  Udhruh Archaeological Project, Leiden University
X  Institute for the Protection of Cultural Monuments of Serbia (Siniša Temerinski)
6  https://commons.wikimedia.org/wiki/File:Hadrian%27s_Wall_west_of_Housesteads_3.jpg (Steven Fruitsmaak)
9  Michel Reddé
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MAPS AND FIGURES

The maps of figs. 4.1–4.9 were derived from Klee 2006, with kind permission by the author. The map of fig. 4.9 was adapted by Marinus Polak using information provided by Felix Marcu.

The maps of figs. 6.1–6.5 and 8.1 were made by Marinus Polak, using various sources (cf. section 3.2).

Figs. 7.1 and 8.2 were made by Marinus Polak.
ABBREVIATIONS

ABE  Advisory Body Evaluation
FRE  Frontiers of the Roman Empire
OUV  Outstanding Universal Value
SOUV  Statement of Outstanding Universal Value
WHS  World Heritage Site

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SPRING 2015 – P. Spring, Great walls and linear barriers (Barnsley 2015).


The Roman Empire, in its territorial extent, was one of the greatest empires the world has known. Enclosing the Mediterranean world and surrounding areas, it was protected by a network of frontiers stretching from the Atlantic Coast in the west to the Black Sea in the east, from central Scotland in the north to the northern fringes of the Sahara Desert in the south. Much of this frontier survives on and in the ground. It was largely constructed in the 2nd century AD when the Empire reached its greatest extent. This frontier was at times a linear barrier, at other times protected spaces, or in some cases a whole military zone.

Substantial remains survive (clockwise from the west) in the United Kingdom, the Netherlands, Germany, Austria, Slovakia, Hungary, Croatia, Serbia, Bulgaria, Romania, Turkey, Syria, Jordan, Egypt, Libya, Tunisia, Algeria, and Morocco. Starting on the western coast of northern Britain, the frontier in Europe then ran along the rivers Rhine and Danube, looping round the Carpathian Mountains to the Black Sea. The eastern frontier, stretching from the Black Sea to the Red Sea and running through mountains, great river valleys and the desert. To the south, Rome’s protective cordon embraced Egypt and then ran along the northern edge of the Sahara Desert to the Atlantic shore in Morocco.

The remains include the lines of the linear frontier, natural elements such as the sea, rivers and deserts, and networks of military installations and ancillary features such as roads on, behind and beyond the frontier. These encompass both visible and buried archaeology. Together, the remains form an extensive relict cultural landscape which displays the unifying character of the Roman Empire, through its common culture, but also its distinctive responses to local geography and political and economic conditions. Each section is a substantial reflection of the way resources were deployed in a particular part of the Empire.

The Frontiers of the Roman Empire (FRE) as a whole was the border of one of the most extensive civilizations in human history, which has continued to affect the western world and its peoples till today. It had an important effect on urbanization and on the spread of cultures among remote regions. The scope and extent of the frontier reflects the unifying impact of the Roman Empire on the wider Mediterranean world, an impact that persisted long after the empire had collapsed while the frontiers are the largest single monument to the Roman civilization.

The FRE illustrate and reflect the complex technological and organizational abilities of the Roman Empire which allowed it to plan, create and protect a frontier of some 5000 km in length, with a garrison of tens of thousands of men, and to manage the social, economic and military implications of this frontier. The frontier demonstrates
the variety and sophistication of the response to topography and political, military and social circumstances which include walls, banks, rivers, and sea.

The frontiers as a whole reflect the development of Roman military architecture and the impact of the frontier on the growth of transport routes, and urbanization.

The Roman frontier is the largest monument of the Roman Empire, one of the world’s greatest preindustrial empires. The physical remains of Limes, forts, watchtowers, settlements and the hinterland dependent upon the frontier reflect the complexities of Roman culture, but also its unifying factors across Europe and the Mediterranean world. The FRE’s constructions are evidence from the edges of the Empires and reflect the adoption of Roman culture by its subject peoples. The frontier was not an impregnable barrier: rather it controlled and allowed the movement of peoples within the military units, amongst civilians and merchants, thus allowing Roman culture to be transmitted around the region and for it to absorb influences from outside its borders.

The frontier reflects the power and might of the Roman Empire and the spread of classical culture and Romanization which shaped much of the subsequent development of Europe.
View on the Euphrates near the ancient river crossing at Zeugma/ Belkis (Turkey).