The defensive system of the late Roman *limes* between Germania Secunda and Britannia

Relatore
Dr. Daniela Cottica

Laureanda
Sofia Turk
Matricola 825383

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1. Preface

The present study is an attempt to reassess the processes of formation and development of the defensive system along the *limes* area of the north-western Roman provinces of Germania Secunda, northern Belgica Secunda and south-eastern Britannia in the later Roman period. This area comprises the lower Rhine frontier from *Bonna*-Bonn and *Colonia Agrippina*-Köln downstream to the Rhine delta in modern Netherland, the continental coast of the English Channel with the territory between the river and the sea, and the coast of southern Britain.

These northernmost frontiers where most exposed to incursions of Germanic tribes; the Frankish confederation started to exercise pressure on the Rhine border as well as the Channel coast, while groups of Saxon tribes began to push due west resulting in piracy raids on both sides of the Channel coasts, especially that of south-eastern Britannia. The three regions have always been tied by strong relations of trade (Hassall 1978, 43), even for the later Roman period substantial evidence of trade from Britain to the lower Rhine and Belgica and *vice versa* is recorded despite the unsafer trade routes (Fulford 1978, 59); now they had to face a common enemy against which strategic measures had to be taken.

From the epigraphic evidence we know that Britain and Germany had been, since the time of conquest, closely related from the military viewpoint. Epigraphic documents relate that entire legions or detachments of them were moved from one province to the other when needed during the whole period of the Roman occupation. For example the VI legion was moved from Germania Inferior and Belgica to Britannia during Hadrian's campaigns in the North of the island (RIB. I. 1319, 1320 – *leg(io) VI Vi(ctrix) P(ia) F(idelis)*), while the IX legion was relocated from Britain to

Nijmegen on the lower Rhine (RIB. I. 665)[1]. Auxiliary troops and vexillations, later *numeri* of Germanic ethnicity were probably also moved between the provinces. At least from the *Notitia Dignitatum* we know some Germanic ethnic groups serving in Britain, such as the *numerus Turnacensium* from Tournai (Belgium).

What associates Britain, northern Gaul and Germania Secunda further, in the later Roman period, are two historical episodes of imperial separatism; these areas saw themselves divided from central Roman authority by the usurpations first of Postumus and his "Gallic Empire", and later of Carausius. The fact that in both cases the island remained tied to the neighbouring continental provinces proves their association and the feeling of unity of the armies stationed in these territories. In the Carausian power-seizing the new domains did not reach Germania Secunda itself, but it must have been affected by it as it lay on the opposite border.

The present work consists of four main parts; at first an introduction on the subject of the late Roman army is provided. This is doubtlessly an incredibly vast subject and cannot be fully examined here, but it is necessary to point out some aspects for a better comprehension of defence strategy on the frontiers, in this case, of the Roman North-West. Reformation in the set-up of the *exercitus* would certainly have affected the fortification structures as well as the frontier policy; both of which will be analysed in the following work.

The subsequent two parts are an exposition of the areas object of study from a historical and archaeological point of view. Firstly, the provinces of Germania Secunda and northern Gaul will be considered, and

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[1] (Hassall 1978, 41)

in second instance south-eastern Britain. The data will be organised chronologically for a more holistic approach in which to isolate strategic interventions and their relation to each other. The archaeological evidence will be displayed synthetically but punctually; extensive works on late Roman fortifications and single structures, or those regarding larger areas, exist elsewhere and will accordingly be referenced. Only specific archaeological records will be considered to avoid redundant speculations.

This brings us to the problem of the late Roman navy in the area we are concerned with, and on that matter some considerations are necessary. The *classes Britannica* and *Germanica* are well attested for the 1st and 2nd century A.D., as well as the first half of the 3rd, but their name disappears from the historical sources after that. This does not at all mean that during the later Roman period the naval power was completely absent on the lower Rhine or the English Channel, on the contrary, smaller flotillas are often mentioned[2]. We can deduce from this that the *classes* did not exist as such in the same formations, nor in the nomenclature, but that the forces were split into smaller units and spread along the frontiers (Konen 2000, 460ff).

The Constantinian re-organisation of the army touched the navy just as much, but no clearer information is given for it, only that the smaller ship units were now put under the command of a *dux* (Pitassi 2009, 291). These forces spread along the Rhine and the northern coasts were probably meant to intercept the returning barbaric raiders, rather than directly opposing resistance (Lewis 1978, 21). It has been counted however that the navy *milites* at the western emperor's disposal in the 4th century were about 10,000 strong (Le Bohec 2008, 51). Even for the earlier periods

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[2] *Amm. Marc.* XVII, 2.; *Vegetius, De Rei Militaris, Praecepta Belli Navalis.*

the archaeological evidence for the fleet on the Rhine is slight; the same *classis Germanica* base in Köln-Alteburg has not as yet yielded a concrete harbour installation[3] and few other sites downstream present pier structures, e.g. *Asciburgium* – Moers-Asberg, and *Gelduba* - Krefeld (Horn 1987, 564f).

Because of the lack of information regarding the fleet of the Channel and the Rhine in the late Roman period, but above all, the lack in the archaeological record, the naval power will not be considered in this work unless there is specific need of it. There are no traces of ports or piers related to military installations for the later Roman period along the lower Rhine, or the southern coast of Britain (Cleere 1978, 38). This is partly due to the change of the river course in the first case and the extreme erosion of the coastline in the second. Specific archaeological investigation could perhaps give us the means for a better understanding of the problem, but with the available material only unfounded speculative solutions could be hazarded. This study will therefore concentrate on the available archaeological evidence.

The closing section is devoted to the analysis and the interpretation of the previously displayed data. A chronological approach is followed here as well because the interrelation of military organisation and strategy in the two main areas is best expressed in chronological spans. The archaeological evidence will be read in a historical political key, drawing from epigraphic, numismatic and historical sources when available. The

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[3] On the eastern side of the base the foundation of a basalt wall running perpendicularly from the fort towards the river has been excavated. This find has been interpreted as the remnant of the riverbank fortification inside which the harbour and boathouses should have been. No evidence of the latter two has, however, been found. For more detail see Höckmann O. 1998, "Das Lager Alteburg, die germanische Flotte und die römische Rheinschiffahrt" in *KJ* 31, pp. 317-350. And for new evidence of the Roman use of the riverbank next to the Alteburg fort see Brunotte, E. und Schulz, W. 2003, "Zur Lokalisierung einer Schiffsanlagenstelle beim römischen Flottenlager Köln-Alteburg aufgrund geomorphlogischer Untersuchungen" in *KJ* 36, pp.737-743.

main focus has been put on the evidence for the Gallic Empire, when the provinces were separated from the central Empire and the first consistent Germanic incursions had to be faced. We recognise a period of strong frontier fortification, and contemporarily the hinterland of the *limes* is provided with its first defensive structures both of military and civil nature. In southern Britain new fortifications are built on a rather north-eastern trajectory, e.g. the coast of Norfolk is the first to be strengthened for the defence.

The following focal point is set on the episode of the so-called British Empire, when a series of fortifications was added to the defensive system in south-eastern Britain. On the Rhine, with the beginning of the tetrarchy the occupied military structures remain mostly unaltered, but after the great invasion of 275 a drastic demographic decrease is attested in the northern part of Germania and Belgica Secunda, the intensity of populated rural settlements reaches its minimal numbers while the first Germanic settlement of *laeti* and *foederati* is recorded.

The next main period to be analysed comprises the reign of Constantine the Great to Valentinian I when a series of problems is addressed; the prevalence of reconstruction work as compared to new foundations within the defensive system, and its correspondence with the change in foreign policy of Roman-barbaric relations. The evidence is supported by archaeological finds in the *Barbaricum* and historical sources, as well as the evidence on the frontiers.

In relation to the problem of the garrisoning of the *limes* area some issues are addressed in an attempt to provide a larger frame of our understanding. In this context, the *Notitia Dignitatum* and the problem of

the *limitanei* are considered and the final stages of the Roman occupation of the north-western frontiers assessed.

2. Introduction to the late Roman army

The army of the late Roman Empire has always attracted scholars' attention because of its difficult interpretation in a time of struggles in central administration and military pressure on the Roman borders with little contemporary historical sources available. The most exhaustive studies on the army in Late Antiquity remain the now outdated "*Römische Militärgeschichte von Gallienus bis zum Beginn der byzantinishcen Themenverfassung*" by Grosse (1920), "*The late Roman Empire 284-602*" by Jones (1964), and Luttwak's "*The grand Strategy of the Roman Empire*" first published in 1976.

Since then, studies on the subject have been manifold, touching themes ranging from economy to military equipment; this heterogeneous scholarly production is due to the fact that the Roman army offers numerous fields of research as it is linked to just as numerous aspects concerning the Empire. We find studies investigating the army and its implications in economy (Erdkamp 2002), the problems of the frontier better known as "frontier studies" (Whittaker 1994), equipment and warfare studies (Bishop and Coulston 1993, Le Bohec 2008; the *Journal of Roman Military Equipment Studies*) or historical studies (Campbell 1994). Some works try to combine different elements like historical sources and archaeology regarding the physical presence of the army on the territory (Southern and Ramsey Dixon 1996), epigraphic studies on provenance of contingents and soldiers in the Roman army.

A most interesting contribution is offered by Ferrill (1986), where he identifies the causes of the end of the western Empire almost exclusively in the military failures of the army. Moreover, he stresses in his preface the importance of differing between fall and decline; he states that the decline is a process of extended duration even a couple of centuries long, while the fall is basically brought down to the notorious date A.D. 476. Even if this approach is quite restrictive, it gives interesting

inputs regarding the definition of terms used in the study of the later Empire, which are sometimes applied too lightly and vaguely by scholars (this theory is emphasised again by Faulkner, 2002). The definition of terms and concepts is still very important when dealing with phenomena spread over various provinces and with scholars of different methodological traditions.

There is no doubt that in frontier and army studies the most used term is the word "*limes*", and the different applications of it caused a slight confusion in the acceptation of it. An important contribution on this issue is the one offered by Isaac (1988), who tried to clear the confusion by analysing the use of the term in Antiquity and comparing it with modern studies. From this work it is clear that the term was not used in Antiquity to define an official border or fortified line.

In the 1st and 2nd century A.D. it mostly describes the "strategy of making difficult terrain accessible for the Roman army by constructing roads" in one way, or it refers to a land boundary in general, a provincial boundary without specific military meaning. In the 3rd century it meant district boundary. Only in the 4th century the term *limes* is used to describe a military administrative district mostly in correspondence with the mention of a *dux*; therefore "in no case is a *limes* described as something made or constructed, although the term is now used very frequently. […] There can be no justification for calling any chain of forts in a frontier area a *limes*" (Isaac 1988, 127f and 146).

2.1. The Army of the 3rd century and the Diocletianic reform

The history of the army we are concerned with begins with the Diocletian reformation, but it is necessary to briefly mention the interventions of previous emperors in the organisation of the *exercitus romanus*. The most significant alterations occurred in the so-called crisis of the 3rd century, where most scholars recognise the appearance of the fist signs of strain in the military resources and the radical changes in the

asset of army and navy. Within this context the importance of the Severan reform is meaningful and will have to be mentioned here[4]. The asset of the army was that of the early Empire, and the main units were subdivided as follows[5]:

Unit	Strength	Composition	Number	citizen
Legion	5,000 (total ~ 150,000)	Infantry 10 cohorts; the first composed of 5 *centuriae*, the remnant of 3 maniples each of 2 *centuriae*. Cavalry: 120 horsemen	*33*	Roman citizens
Auxiliary	500 (*quingenaria*) 1,000 (miliaria) (total ~ 150,000)	o *Alae*: cavalry o *Cohortes peditatae*: infantry o *Cohortes equitatae*: mixed o *Numeri*: mixed (of barbarian ethicity)	variable	Non-citizens
Vexillations	No standard size (probably ~ 500)	Troops collected from legions and/or auxilaries stationed in different regions than the ones they were moved to	variable	Roman citizens and non-citizens
Rome's garrison	1,000 (total 24,000)	Infantry Except the *equites signulares Augustae* (cavalry)	o *Cohorts praetoriae*: 10 o *Cohortes urbanae*: 4 o *Cohortes vigilum*: 7 o *Equites singulars Augustae*: 1	Roman citizens

Table 1 The composition of the army in the Severan period (after Le Bohec 2002, elaborated by Turk 2012).

Unit	Strength	Compostion	Number	Citizen
Classis	total 40,000	Infantry	o *Classis Britannica* o *Classis Germanica* o *Classis Pannonica* o *Classis Moesica* o *Classis Mauretanica* o *Classis Pontica* o *Classis Syriaca* o *Classis Alexandrina* o *Classis Misenensis* o *Classis Ravennas*	Roman citizens?

Table. 2 Organisation of the navy (after Reddé 1986; elaborated by Turk 2012)

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[4] For a detailed study of the Severan army reforms see Smith, R.E. 1972, "The Army Reforms of Septimius Severus" in *Historia* 21, pp. 481-500
[5] After Le Bohec 2002. For a study of the Roman legions from the Marian reforms to the end of the Marcomannic wars see Parker, H.M.D. 1971, *The Roman Legions*, Heffer and Sons, Cambridge.

The main changes effected by Septimius Severus (193-211) are the pay rise of the soldier's salary to twice its amount; this brought more strain on the economy of the Roman state already under financial pressure. The second main alteration was the increase of the *annona militaris* intended for the army, and thirdly he allowed soldiers to live with their wives and families while in service outside the camps. He also recruited three new legions (*I, II* and *III Parthica*) and several auxiliary units. Furthermore, the emperor allowed and legalised military *collegia* of different professions for soldiers still in service, while this had only been allowed to veterans so far (Le Bohec 2002, 208-210). The most incisive change of these reformations resulted to be an easier access to promotion; a simple soldier could now rise to higher statuses of military official positions, at times reaching even the highest title; this made enlisting in the army much more attractive.

These measures, however, did not prevent the forthcoming crisis which had its causes and effects in different fields; firstly the massively increasing tension on the frontiers, especially in the North with the German incursions and in the East with a new invasion from the Persian Empire. The strong pressure on two fronts increased the military needs of the emperor and the weakening of central government with a series of short reigns of emperors and usurpers raised to power by the armies. The instability it created led to a degradation of the economy because of unsafe trade routes and raise of taxes to satisfy the military needs of the empire; now the main recipient of fiscal privileges were soldier and their officials. The situation worsened until Gallienus (253-268) inherited the reign and carried out a series of new interventions in the organisation of the army.

He legally forbade senators to take military official positions, a situation which had already started with the Severan reforms, but the title of legate and *tribunus laticlavius* were removed entirely and replaced by camp prefects of the equestrian order. Furthermore he reinforced the cavalry by raising their number in the legions from 120 to 726, increasing the number of their detachments and putting an equestrian *praepositus* at their head (Le Bohec 2002, 216). In addition he bestowed the title of *protectores divini lateris* to high officers, mostly experienced men of arms close to the imperial house and loyal to Gallienus. Later on, they formed a *collegium* of *protectores* who functioned as imperial guards (Southern and Dixon 1996, 14).

The pressure from enemies on East and North did not lessen until the end of the 3rd century, and the necessity to strengthen the defence on those frontiers is evidenced by the distribution of the legions and the rise of their number under the reign of Aurelian in 270 (Le Bohec 2008, 30):

- Germany: 16
- East: 12
- Britain: 3
- Africa: 1
- Egypt: 1
- Spain: 1
- Italy: 1

Civil wars among the generals, eager to become emperor, and the enormous efforts to protect the borders weakened the imperial power, and the period of crisis and instability continued until Diocletian (284-305) rose to power. He re-established order with the instauration of the tetrarchy and the radical administrative reformations.

The reign of Diocletian represents a turning point in the history of the Roman Empire with the institution of the Dominate to replace the Principate and the ending of the military anarchy which had started with the end of the Severan dynasty (235). Diocletian tried to avoid usurpation and insurrections by joining three new positions to his reign and beginning the age of the tetrarchy. He instituted two emperors with title of *Augusti*, who in turn co-opted two *Caesares* as their seconds-in-command and future successors. He thereby divided the administrational duties. By doing so he decentralized political power and reduced the temptation of high-ranking generals to usurp the throne, diminished the influence exercised by the troops in the decision of imperial succession, and at the same time, legitimated the system of ascension to the reign. It would be out of place to treat the Diocletian reformations extensively in this work, as they brought deep changes in the administrative and juridical system of the Roman state, but some of these are inevitably related to the military sphere[6].

The main administrative changes were carried out by dividing the provinces within vaster territories which were called *dioecesis*; he also divided military from civil power, so that provincial governors had no access to the troops, while the command of the army was given to the *duces* directly dependant from the emperors (De Salvo and Neri 2010, 35). As to the army, Diocletian accomplished the deepest change, after increasing the number of the legions, he divided the *exercitus* into two contingents; the *comitatenses* were to follow the emperor, while the stationary defence of the frontiers was entrusted to the *limitanei*.

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[6] For a detailed study of the changes brought by Diocletian's policies see Williams, S. 1997, *Diocletian and the Roman Recovery*, Routledge, Batsford.

This brought to a process of permanent settling of the troops along the frontiers and, together with the right to live with their families[7] and the increasing numbers of soldiers of barbaric ethnicity within the *limitanei*, the structure and function of the army changed deeply (Alföldi 1965, 208). It has often been argued that these troops could partly be local farmers serving in the frontier militia (Williams 2006, 129), but some scholars have a different interpretation on the term; it would only refer to soldiers under the command of a *dux limitis* and is particularly used in relation to the field army to distinguish the two from each other (Isaac 1988, 140, 146).

The *comitatus* was probably formed by units taken from different legions to form a separate contingent now functioning as field army. It was composed by cavalry units or *equites promoti*, and special infantry units called *lanciarii* [8] (these were probably derived from the Praetorian Guard[9]). It seems that these troops did not nominally form new units; they remained administratively one with the legion of origin but were physically detached (Southern and Dixon 1996, 16). The changes of the *exercitus romanus* during the later Empire did not end with Diocletian, who is seen as the emperor who re-established central power through an ordered succession policy and who gave the army a new asset; it was under the reign of Constantine (307-337) that the measures taken by his

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[7] It is known that Septimius Severus had prohibited marriage between Roman officers and provincial women (see Cherry, D. 1997, "The Marriage of Equestrian Officers in the Post-Severan Army" in *Historia* 49, pp. 113-116). Diocletian brought a significant change to the life of frontier soldiers. There is evidence that troops permanently stationed would devote themselves to agriculture, even though this was legally forbidden, (MacMullen 1967, 2-3) and together with the right of marriage, this is a clear sign that the frontier forces were becoming more and more sedentary.
[8] On the problem of the field army scholars are divided between those claiming that it was institutionally created by Diocletian, and those affirming that it was introduced later by Constantine and that Diocletian's *comitatenses* were a temporary expedient (Jones 1964, 54; Southern and Dixon 1996, 16).
[9] See Speidel 1992, chapter 10.

predecessors were confirmed and made permanent, newly adjusting the army's structure with further reforms. It is with the separation between mobile field army and the stationary frontier troops that Luttwak (1981, 178-180) finds the great Roman strategy changed. He speaks now of a "defence-in-depth" strategy, as the main military activity was devoted to the defence of the frontiers with stations and fortifications disposed behind the borders to contrast barbarian incursions, which were no longer avoidable along the frontiers.

2.2. The army after Constantine the Great

After Diocletian's abdication in favour of his Caesar Galerius (and Maximian's for Constantius Chlorus), the political stability regained by his 20-year-long reign came to a halt when *Caesares* and *Augusti* all claimed their rightful place in the imperial palace. New civil wars shook the Empire until Constantine took over the others in 307 and installed himself as emperor for 30 years with the support of his troops (with Licinius as co-Augustus in the East for the first 16 years). This was the longest domination after the *princeps* Octavian Augustus himself, and East and West were re-united for over 10 years. It is in this scenario that the 4th century begins, bringing a new stability but also fundamental changes in the Roman state and society, not the least among these was the declaration of Christianity as official state religion.

From the military point of view the most striking change is the formal instauration of a mobile field army, the *comitatenses*; this army consisted of cavalry vexillations and infantry units called *auxilia*. In 312 Constantine dismissed the Praetorian Guard and the *equites signulares Augusti,* because these corps had supported his rival Maxentius during the

civil war. In their stead he instituted the *scholae palatinae* [10] (Le Bohec, 1989, 54). For the first time barbaric troops were allowed to be part of the court army, for until then only praetorians and legionary detachments could enter the imperial guard. It seems that every *auxilium* fought with another *auxilium* to form a "Doppeltruppe", e.g. the Alamannic *Regii* fought with the Frankish *Batavi* (Speidel 1996, 166). With five *scholae* of 500 men each, the guard was 2.500 strong, added to the *urbaniciani*, the *protectores* and *domestici* who formed the emperor's personal staff (Frank, 1969, 81). On the frontiers, next to the *limitanei* now we find the corps of *riparienses.*

Another important change carried out by Constantine was the subdivision of the armies in 3 main regions, the praetorian prefectures *Gallia* (Gaul, Germanies, Britannia, Spain and Tingitania), *Illirici* (Illyricum, Africa, and Italy) and *Orientis*. These regions were placed above the dioceses and lay under the command of the praetorian prefects, who now had only juridical authority over the armed forces, while the effective military power was divided between six *magistri militum* for each prefecture. Among them we find a *magister equitum* and a *magister peditum.* By doing so the emperor diminished the power of the prefects and subdivided it in turn among the *magistri militum* (Le Bohec 1989, 54-55).

Each dioceses was under the command of a *vicarus*, each frontier province of that of the *dux* and some parts of the army were directed by a *comes*; all of whom where under the direct command of the *magister equitum*. Scholars are never of one opinion in regards to the size and number of units of the various contingents; a summary is offered by Luttwak in the figure below.

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[10] On the *scholae palatinae* see the extensive work by Frank, R.I 1969.

	Numero dei soldati				
	(1)	(2)	(3)	(4)	(5)
Comitatus occidentale	—	111.000	113.000	123.000	94.000
Comitatus orientale	—	94.500	104.000	96.300	79.000
Totale *comitatenses*	194.500	205.500	217.000	220.100	173.000
Limitanei occidentali	—	200.000	135.000	138.000	122.000/130.000
Limitanei orientali	—	332.000	248.000	165.700	201.500
Totale dei *limitanei*	360.000	532.000	383.000	303.700	323.500/331.500
Contingente totale in Occidente	—	311.000	248.000	261.800	226.000/224.000
Contingente totale in Oriente	—	426.500	352.000	262.000	280.500
Percentuale di *limitanei* in Occidente	—	64%	54%	47%	56-58%
Percentuale di *limitanei* in Oriente	—	78%	70%	63%	72%
Totale delle truppe, in Oriente e in Occidente	554.500	737.500	600.000	523.800	496.500/504.500
Percentuale di *limitanei* rispetto al contingente totale	65%	72%	64%	58%	65%

Fonti: (1) T. Mommsen, *Das römische Militärwesen seit Diocletian in*, ''Hermes'' 24 (1889), p. 263, citato da Clemente, *La Notitia Dignitatum*, p. 156, n. 71; (2) Nischer, *Army Reforms of Diocletian and Constantine*, p. 54; (3) Jones, *Later Roman Empire*, vol. 3, tavola 15, pp. 379-80; (4) Várady, *New Evidences on Some Problems of Late Roman Military Organisation*, p. 360; (5) J. Szilágyi, *Les variations des centres de prépondérance militaire dans les provinces frontières de l'empire romain*, in ''Acta Antiqua Academiae Scientiarum Hungaricae'' 2 (1953), p. 217.

Fig. 1 Different estimations of the strength of the army East and West after the distribution of the troops in the *Notitia Dignitatum* (after Luttwak 1981, 252).

The most reliable estimation counts some 500,000 men for Constantine's army[11]. However, the most striking element is the drastic drop in the number of soldiers within the legions, while the number of those rises to almost double. The distribution and function of all the armed forces is now entirely transformed as compared to that of the Principate but also of the Dominate (Richardot 2005, 60-70). The creation of a field army taking excellent troops from their frontier legions has often brought historiographers to accuse Constantine of weakening the borders' protection and allowing barbarians to finally break through the defences (*Zos.* II, 34). Modern scholars reject this statement as it would have been very difficult to effectively defend the whole length of the frontier with a permanent frontier army at this stage. Another accusation, the one of barbarising the army by enrolling German units as high-ranking troops,

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[11] After Jones 1964; and Williams and Friell 1998.

seems to be an overstatement as this practice was quite common well before Constantine's reign (Waas 1971, 2f).

A point on which the emperor seems to insist is the separation of civil and military authorities, and keeping them well divided by prohibiting the *cursus honorum* to cross over from one to the other. It also would seem reasonable to presume that the praetorian prefect was gaining too much power, and that he intended to reduce their jurisdiction to mere civilian spheres, although it might be that uniting military, financial and administrative competences in one person was beginning to be a challenging task (Jones 1964, 101).
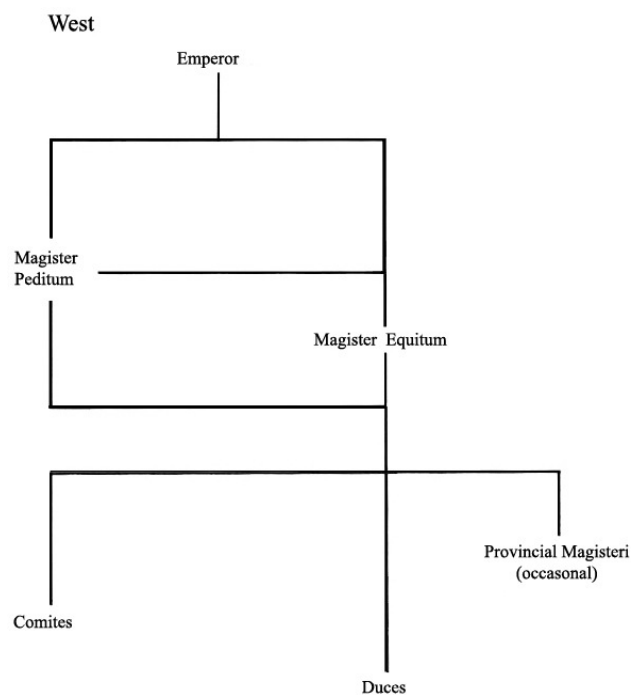
Fig. 2 The military hierarchy in the late western Empire (after Friell 1994, 188)

After the death of Constantine the Great, he was succeeded by his three sons; the army did not accept other regents and the brothers divided the reign between them. This brought to an ulterior change in the structure of the army, as now the command had to be split in three; the

comitatenses were divided into three regional forces and soon afterwards, with the death of Constantine II, reorganised in two parts. This division into smaller regional groups which had been started by the sons of Constantine continued for the whole 4th century, until, under the reign of Theodosius (379-385), the officers at the command of such smaller garrisons received a separate honorific title of *comes rei militaris.*

The subdivision in smaller groups and the stationary status of the frontier troops, as well as the constant threat on all the frontiers made it difficult to move garrisons from one area to the other; this left the emperors only small troops to be deployed when needed for defence (Williams and Friell 1998, 80). In the same way, legions had seen their manpower diminished to about 1,000 each, the ones stationed in Africa even to 200-400 (Richardot 2005, 69). With the disastrous defeat at Adrianople in 378 against the Goths, the army had been weakened, and although with the ascension of Theodosius an effort for a short recovery had been made, the *exercitus romanus* was no longer capable of withstanding war on all fronts, not least because of the lack of forceful emperors at the head of the state (Le Bohec 2008, 307).

The army of the later 4th century appears smaller in size and strength, until the central authority could not further maintain all forces in the West. The eastern army managed to reorganise and regain strength becoming the later Byzantine army. At the beginning of the 5th century the western army ceased to exist as a whole while the barbarians penetrated to the very heart of the western Empire by conquering Rome itself in A.D. 410.

The citizens of outer provinces were advised to self-defend their territories so that we now find autonomous armies in the north-western

provinces becoming independent within their regions, as was the case of Britain or northern Gaul (Richardot 2005, 72). The figure below shows the distribution of units of the western army between field army and frontier guards after the *Notitia Dignitatum* in a chart made by Richardot (see fig. below).

Frontier guards (*limitanei*) and navy				Field army			
Unit	West	East	Total	Units	West	East	Total
Cavalry				Cavalry			
Cavalry (*alae, equites*)	74	179	179	*Vexillationes palatinae* (cavalry 200-500 men)	10	14	24
Sarmates	23			Vexillationes comitatenses	35	29	64
Total cavalry	97	179	276	Total of cavalry	45	43	88
Infantry				Infantry			
Legions (200-1000 men)	14	33	47	*Legiones palatinae* (600-1000 men)	12	13	25
Units of infantry (*cohorts, numeri, milites*)	152	92	244	*Auxilia palatina* (élite infantry 300 men)	68	43	111
Laeti (barbarian soldiers)	11	-	11	*Legiones comitatenses*	33	27	70
Total of infantry	177	125	302	*Legiones pseudomomitatenese* (leg. from frontier guards)	-	1	1
Fleets	16	6	22	Total of infantry	140	114	254

Table 3 The Roman army around the year 400 (After Richardot 2005, 81)

2.3. Transformations in late Roman fortification measures

The army reformation which took place from the mid-3rd century onward was not the only transformation that occurred within the military organisation. Changes in strategy and arrangement of soldiers brought the necessity of rethinking the defensive structures and their distribution. We assist a distinct transformation in the types of fortifications as well as in

the structures themselves. Similarly, their distribution mirrors a change in military strategy.

When it became clear that the frontier army could no longer resist the continuous and persistent incursions and raids on the frontiers, new defensive structures had to be built in the hinterland of the borders as to provide the means of counter-attack from the rear, and an easier deploy of the mobile armed forces within the province. Late Roman forts were no longer displays of Roman power and military dominion, but had to be functional, and above all, had to effectively resist an assault (Heather 2001, 16).

In Germania Inferior, where the frontier ran along the river, new fortified structures had to be built; Britain on the other hand, because of its insular reality, was already provided with rear fortifications (von Petrikovits 1971, 179ff). The late Roman military activity is therefore very strong in Germania, as will be displayed in the next chapter. In the picture below (Fig. 3) we can see how the fortifications are distributed further inland. In particular along the main roads new forts are built but also, as will be shown below, towns and civil settlements begin to enclose themselves with fortified walls. This reflects the sense of insecurity which the barbarian raids must have cased in the civil population living in those areas.
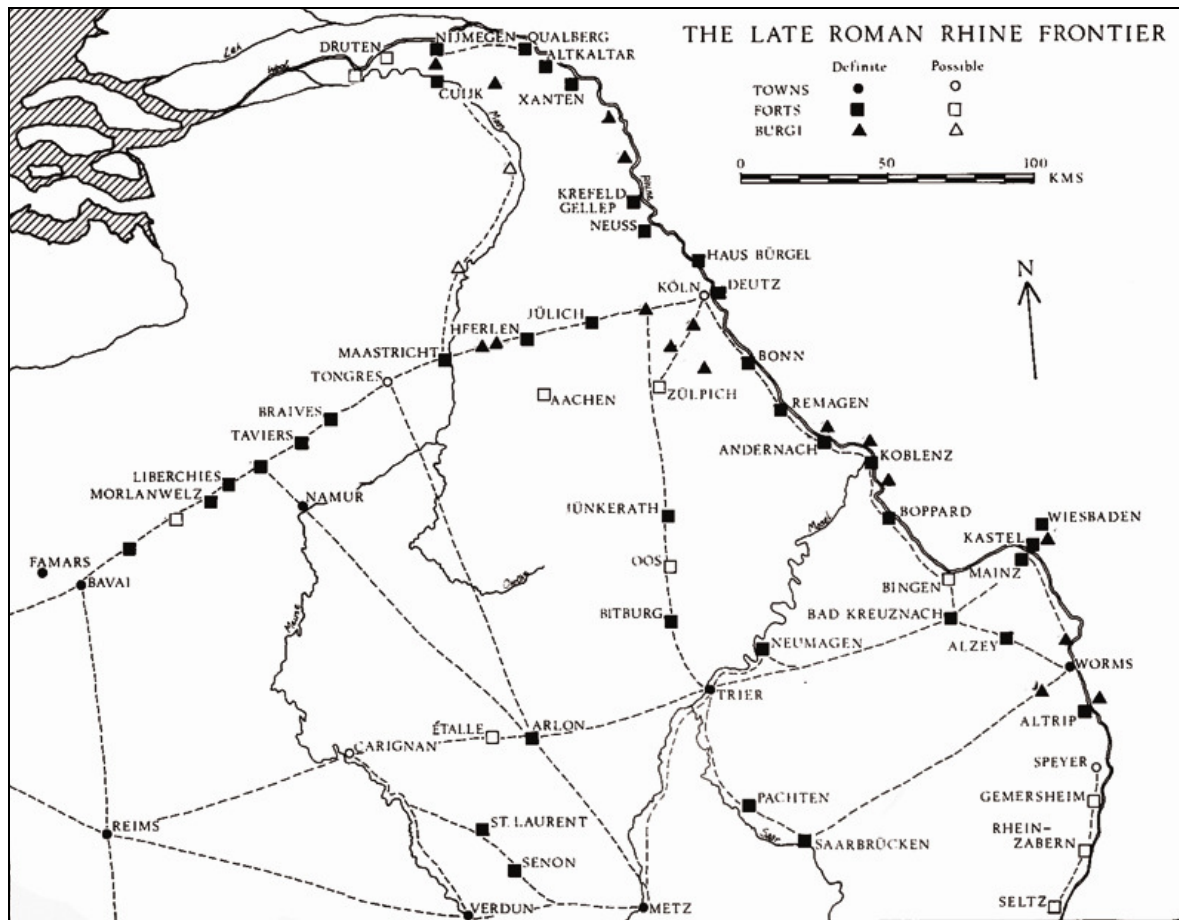
Fig. 3. The frontier along the Rhine in the later Roman period (Johnson 1979, 83).

The next main change in the characteristics of late Roman defences is most evident in their planimetry; the most common layout is now the square compared to the rectangle of the Principate, but other shapes are also present such as the circle, semicircle, oval or the polygon. Especially the circular type seems to appear with the reign of Constantine (von Petrikovits 1971, 196). The typical rectangular shape was abandoned to give way to irregular plans; the structures had to adapt to the surrounding area at times, and the maintenance of the traditional format was now of secondary importance. Instead of building on open plains, building sites were now chosen on higher ground as on hill tops (Southern and Dixon 1996, 129).

Good examples for forts on high ground are the fort at Qualburg and the fort of Nijmegen on the very north of the Rhine frontier (see fig. *3* above).
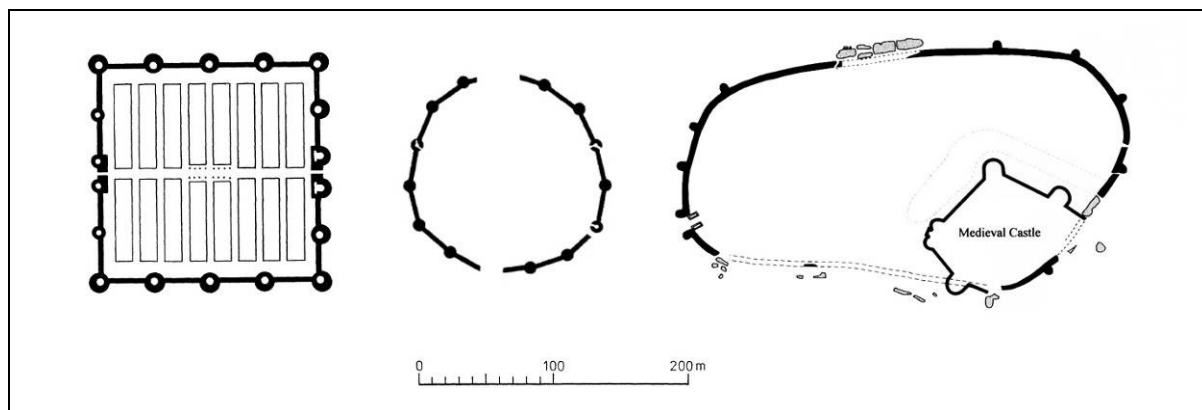
Fig. 4 Examples of different plans; from left to right: square *Divita*-Deutz; circular *Icorigium* – Jnkerath; irregular Pevensey (from von Petrikovits 1971 194, 202; Pearson 2002, 70; modified by Turk 2012).

It is to note that generally, however, forts are smaller in size, feature which is in line with the reduction of the units present in each contingent. Exceptions are those forts which have been reused in the 4th century but had been built in previous periods, in which case the dimensions remain of a larger average; an example could be the fort of *Bonna,* where the reuse in the second half of the 4th century after a decennial abandonment overlies the former walls, but leaves empty unused spaces within. The walls were thicker and higher than those of the 2nd and 3rd century and the outer space was provided with deeper and wider ditches, generally two at least. From the literary sources we know that the walls were provided with battlements to protect the patrol walk behind the parapet (Le Bohec 2006, 131).

The appearance of a conspicuous number of towers and bastions, all of them projecting partly or totally, is also a characteristic feature of late Roman forts. Both square and rectangular projecting towers began being used from the mid-3rd century and reach well into the 5th; while these shapes probably derived from earlier town wall towers, new shapes appear next to them such as circular, semicircular and polygonal ones. Sometimes the gates were recessing in respects to the main wall as is the case of Portchester below (von Petrikovits 1971, 198).
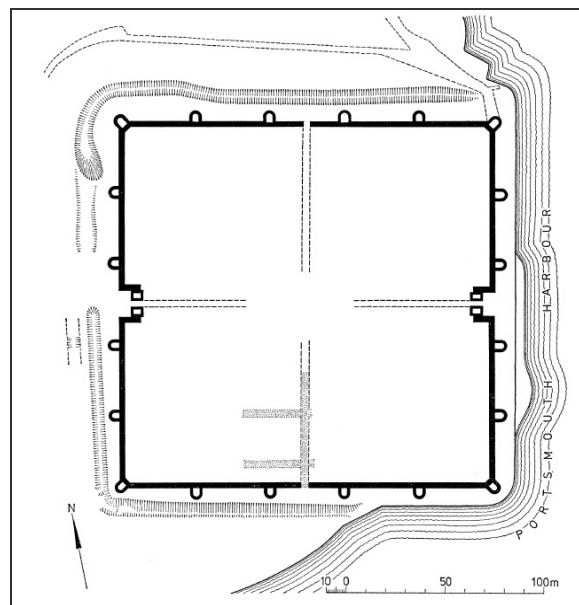
Fig. 5 Plan of Portchester fort. It presents a very similar plan to Divita fort from the picture above; square plan, 2 main gates, projecting bastions and towers (After von Petrikovits 1971, 186).

Most recent scholarships tried to identify the types of fortification by their layout on the inner space and resulted in the following scheme provided by Le Bohec (2006, 136). The most striking features are the possible absence of the *principia* which was always present in fortifications of the Principate, the reduction of the number of gates and the peripherical disposition of the barracks inside, especially alongside the enceinte walls.

This new distribution was made to avoid the spreading of fires if the enemy attacked with burning elements thrown over the wall, and to facilitate their defence in case of breach.
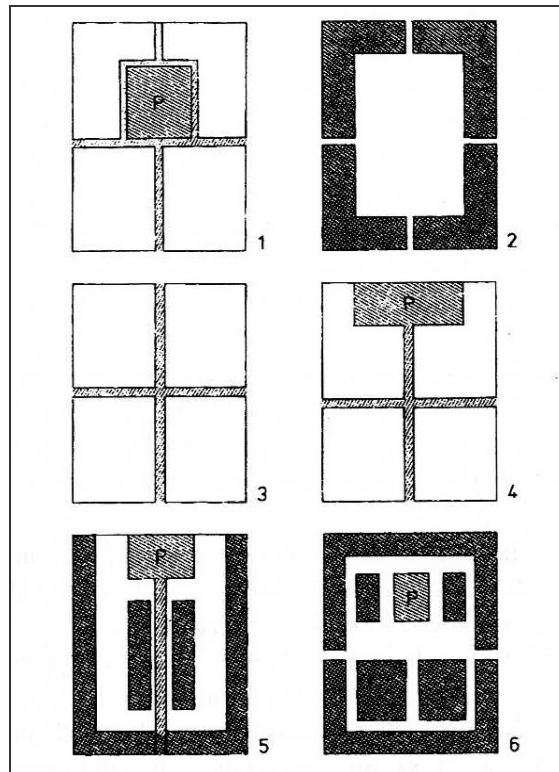
Fig. 6 Late Roman fortification types:

1. Principia in the central area, barracks around it (same as during the Principate).
2. No principia, no perpendicular road grid, peripherical barracks,
3. No principia, but with perpendicular road grid.
4. Principia against the wall, generally opposite the main gate, perpendicular road grid.
5. Principia against the wall opposite the main gate, one central road, periphercal barracks.
6. Principia in central position, one East-West road, periphercal barracks
(after Le Bohec 2006, 136).

With the new mobility of the army and barbarian penetrations further inland, new defences along the supply and communication roads had to be built, and the network itself had to be improved and expanded; we have good examples of such new structures, the so-called *burgi*, along the North-South Trier-Köln road or the West-East Bavay-Köln road (von Petrikovits 1971, 188 and 193). Their function was to protect the main

roads which led from the frontier to the inner land as these would have been used by the invaders as well. Further, they also played an important role in the protection of granary stores and forgeries which were meant to supply the frontier army and the field army when necessary (von Petrikovits 1971, 188). These structures have generally a rectangular or circular ground plan and could host only small units of soldiers. After von Petrikovits the *burgi* derived from the towers where the *benificiarii* stationed in earlier periods, but they were now provided with defensive structures such as ditches and walls or palisades.

Not all of them were built of stone, this is probably why these structures are not always well preserved, but a feature which is visible in the archaeological record even in timber constructions: post holes allow us to reconstruct their plan at least. The first storey was supported by pillars which differed in number, sometimes *burgi* were provided with only one central pillar, in other examples there are four, and rarely six with two central pillars (von Petrikovits 1971, 197). The function of these structures was the one of watchtower and signalling post, but their role seems to be more important now than in the past. If before they were meant to be a signalling post and a device to give warning to the enemy rather than the Roman contingents, in the late Roman period these towers had to provide fast and efficient warnings to the Roman inland.

Again we evince the change of method of strategy from the fortification measures undertaken in the 3rd and 4th century. There are two main types of *burgi*; one of a square tower with wooden pillars to support the upper floors, outer wall or wooden palisade of square of rectangular plan, sometimes with circular towers. External ditches can be also present. (see **fig 7**).
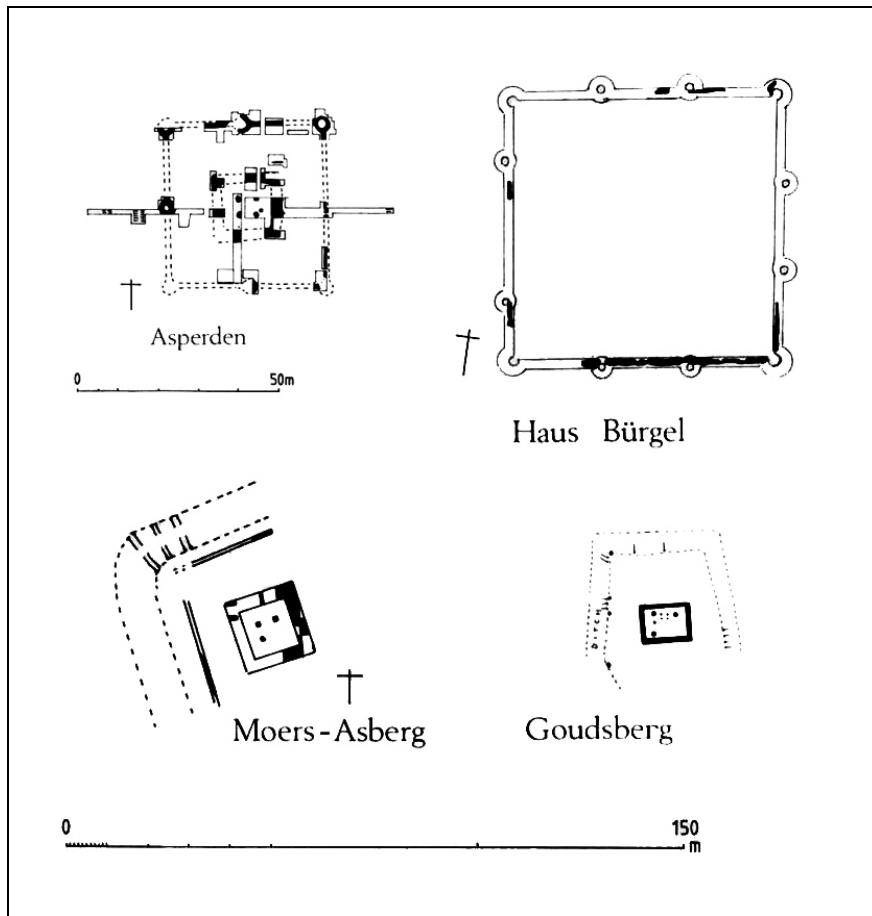
Fig. 7 Examples of *burgi* with central square towers and square or rectangular wall or palisade (from Johnson 1983, 140; modified by Turk 2012).

The second type of *burgus* presents a circular or square with rounded corners wide ditch, that encloses a palisade of similar plan.
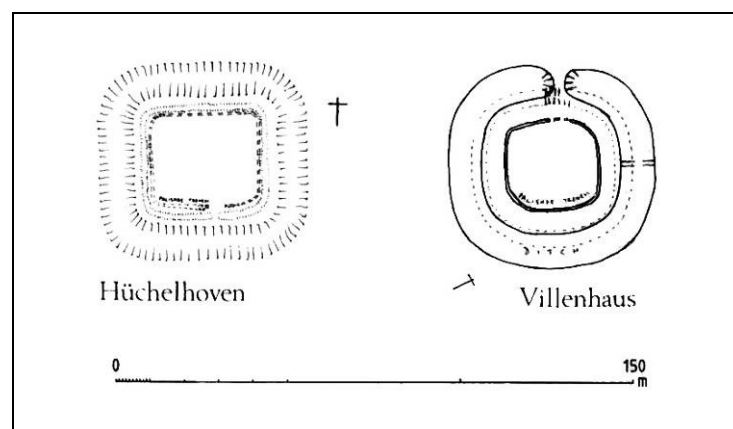

Fig. 8 *Burgi* with large outer ditch and inner enceinte (from Johnson 1983, 140; modified by Turk 2012)

After this attempt of briefly explaining a quite complicated and dynamic military situation as that of the later Roman Empire, the attention will focus on the areas selected for study for a more detailed analysis. In first instance the selected areas are the lower Rhine frontier zone and northern Gaul, which comprises the riverine frontier from Bonn-Köln to the North Sea, the Channel coast from the Rhine-Maas-delta to the area of Boulogne-sur-Mer and from there the inner land back to Bonn; today it includes partly Germany (especially the land of Nordrhein-Westfalen), southern Netherlands, Belgium and a very small part of northernmost France. The other area to be analysed is South-eastern Britain, the coastal area from Portchester to Norfolk and the corresponding inner land.

3. The Lower Rhine frontier and northern Gaul

3.1. General overview

The frontier running along the river Rhine in Germany has for centuries been the northernmost border of the Roman Empire. The territory had first been occupied by Cesar with his campaigns to subdue the Gaulish tribes, but only under Augustus the first permanent fortifications had been established on the left bank of the Rhine. Forts such as *Bonna*, *Asciburgium*, *Vetera* and *Novaesium* (of whom there are 6 of the first phases of occupation) are dated to the Augustan and Tiberian period. It seems that this line was not seen as the official *limes* until the 4th century, but counted as a fortified natural line that should have been in the rear of the main frontier further north-east towards the Elbe (von Petrikovits 1960, 36; Drinkwater 1983, 54).

With emperor Tiberius the conquering of the land between Rhine and Elbe had been given up, and the Rhine became a more permanent border; the four legions operating in the province were stationed at *Vetera*, *Novaesium* and *Bonna*, and, with the insurrection of the *Batavi* in A.D. 70, a fourth legionary fort was built at *Noviomagus* (von Petrikovits 1960, 36). Until the 3rd century the river would sign the limits of the province Germania Inferior with the *Barbaricum*, while in the last decade of the 3rd century the provincial organisation carried out by Diocletian renamed the territory Germania Secunda. The inner land between the river and the English Channel was part of the Belgica Secunda; both provinces were now included in the dioceses of Gaul, a whole new administrative unit of the Roman territories under the direction of the *vicarius*. As mentioned above, the provincial garrisons were now under the command of the *dux*,

who answered to the *comes rei militaris* commanding the army of the dioceses. The uppermost military authority was entrusted to the *magister equitum* who answered directly to the emperor.

It is in the middle of the 3rd century that the first persistent raids from Franks and Saxons along the continental coast of the Channel and across the lower Rhine occur, and against these incursions the Roman state tried to re-establish security on the borders by strengthening the defensive system. Instability on the borders of lower Germany and Belgica forced emperor Gallienus (259-268) to hire one of the Frankish chieftains and his warriors in defence of the Rhine line; he must have considered the problem on the Rhine of major importance, for he moved the imperial mint from *Viminacium* in Moesia to *Colonia Claudia Ara Agrippinensium* – Köln (Alföldi 1965, 158). The hiring of Germanic tribes in defence of the river frontier allowed Gallienus to return to the eastern *limes* while the situation seemed more stable in the West. The precarious balance on the frontiers did not last long, as soon new internal insurrections against him in east (Macrianus and Quietus in Egypt, Ingenuus in Pannonia) and west (Postumus in Gaul) took place, barbarian warriors undertook new raids and incursions on the frontiers.

With the capture of Emperor Valerian by the hand of the Persian king in 260, the Gallic armies rebelled and chose their general (and probably governor of Lower Germany) Postumus as new emperor (Drinkwater 1987, 25). Within this scenario, the so-called "Gallic Empire" (260-274) makes its appearance in the history of the later Empire, and will comprise the Three Gauls, Germany, Britain and Spain. The core of it, however, was to be placed in Germania and north-eastern Gaul (Drinkwater 1983, 89). Postumus established his headquarters at Köln and

began with the strengthening of the Rhine fortifications as attested by von Petrikovits (1960, 77), bringing the change in fortification methods typical of the late Roman period which considerably differ form structures dating to the Principate.

Next to the new military defence pattern of frontier fort structures or along communication routes, in this period the first civil fortifications appear both in towns and countryside installations such as villas and farms. We find urban agglomerations reduced in their area as they had now to be surrounded by walls and be defendable. The similar features of the walls around the main urban centres make scholars hypothesise a common intervention carried out by the central military administration, while walls of smaller secondary settlements result to be more heterogeneous in type and construction phases (Brulet 1990, 283, 288). As we have seen above, the strategy of defence changed not only the physical defensive structures and site choice, but also the set up of the army and its strategies. Where before only a fortified line existed, as in lower Germany, now the different requirements of a transformed army and a change in enemy forces brought the necessity of supplying the inland with forts, *burgi*, watchtowers and other military facilities along the roads (von Petrikovits 1971, 188).

Even after the reuniting of the Gauls with the empire by Aurelian, there is no interruption in the fortification phase. From the archaeological record we discern a very dynamic phase of military activity on this northernmost frontier between the second half of the 3rd and the middle of the 4th century. Forts were built *ex novo*, reinforced and supplied with new towers, but also abandoned and sometimes reoccupied. The complexity of dating Late Antique establishments, and the chronologically close

interventions can at times result in a difficult distinction between the various phases, especially the ascribing of an intervention to the reign of Diocletian rather than Constantine and vice versa. This is due to the fact that the two emperors followed a very similar line of strategy in regards to the organisation of defence.

The dating of these interventions from the second half of the 3rd century to the end of the 4th is not as straightforward as the dating of fortifications of the Principate; because of their typological variety and widespread distribution in the whole Roman West, clear chronology has always been a main problem for these phases and cannot be based on typological grounds (von Petrikovits 1971, 203). To make matters more uncertain, late Roman phases are often victims of disturbances of modern agricultural activity or settlement building (Schönberger 1969, 171).

As efficiently surmised by Brulet (2006, 156f), scholars have used different criteria in approaching Late Antique fortification studies: some classify them by chronology, some by typology, some by function and the most recent one by area[12]. In the following chapter the military structures will be organised by chronology; the aim is to reconstruct the defensive strategy and only through the highlighting of contemporary fortification measures is this efficiently done. Mostly the area of Germania Secunda and northern Gallia is subdivided in river frontier, littoral defences and inner fortifications especially along the communication roads. This subdivision is sometimes necessary when treating such a diversified area such as the one from lower Rhine to the Channel coast. The differentiation is dictated by the desire of providing an easier consultation and overview, as well as a

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[12] For a detailed summary on the different classifications see Reddé and Brulet 2006, 158ff.

better comprehension of the defensive strategy and does not want to reflect a differentiation applied in Antiquity.
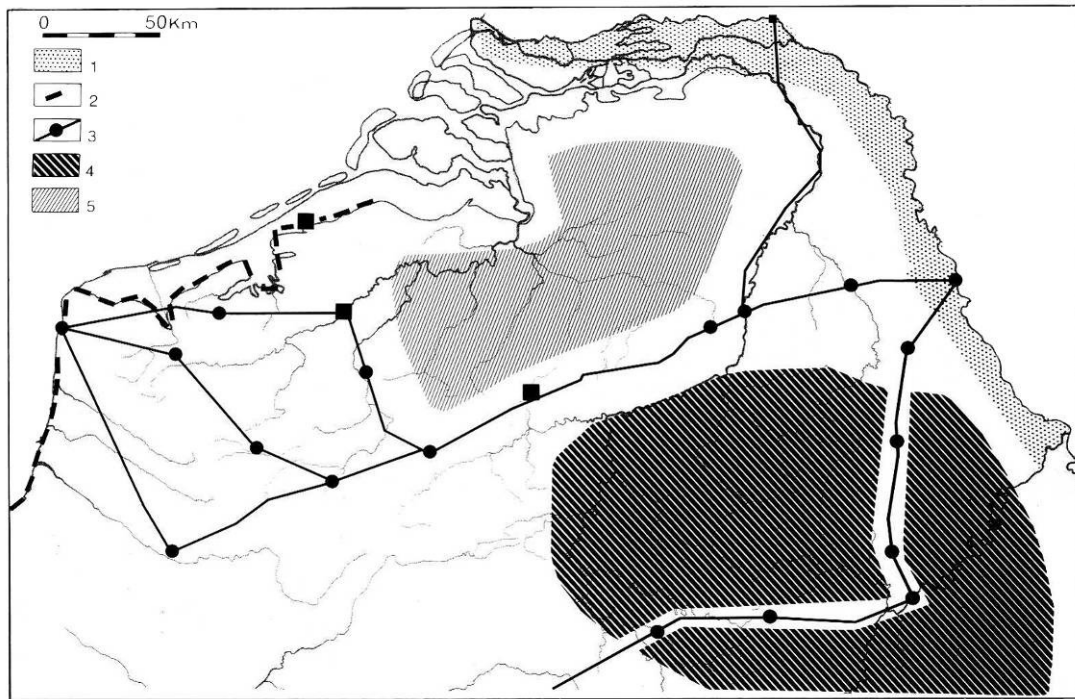
Fig. 9 The area of Germania Secunda and north-eastern Belgica and the subdivision of the fortified sectors. 1: The lower Rhine frontier; 2: Coastal defences and continental area of the *Litus Saxonicum*; 3: fortified sites on the roads of the hinterland; 4: area of fortified rural sites; 5: Abandoned hinterland, later occupied by the *foederati* (After Brulet 1990, 339).

Following the river downstream, we find some forts which pre-existed the new mid 3rd century fortifications. Such are the fortress of **_Bonna_ - Bonn,** whose first stone phase dates to the period after the Batavian revolt in 71 A.D. and a second rebuilding is dated to the 230's after the Alamannic invasions occurred (Lander 1984, 158). The legionary fortress presented an almost perfectly square plan with an area of 27 ha; its interior was organised in six *scamna*, but major changes in the internal organisation have taken place from the mid 2nd century and after Constantine's reign (von Petrikovits 1960, 81). In the later phases the military occupation was reduced to the north-eastern sector, while on the

opposite corner, civil activity is attested and even a church had been built out of a double barrack. In the mid 4th century the fortress was destroyed by the Franks but there are traces of a Roman re-occupation about 10 years later (see *Bonna* below).

The next legionary fortress upstream is **Köln – Alteburg**, built in the occupation years just a few km south of the *colonia*. It presents two phases: a pre-Flavian timber phase and one of stone following the Flavian period. It is notoriously known as the base of the *Classis Germanica* which was operating on the Rhine, until a new fortress was built on the right river bank under Constantine (see *"Divita"* below). Its plan was uncharacteristically of irregular shape and had only two gates: one north and one west where a *vicus* is attested; the southern part and the eastern side along the river were gateless (Fischer 2006b, 253). From the archaeological record it is clear that the fortress was definitively abandoned by the end of the 3rd century, the last numismatic evidence is dated to Gallienus 253-268, at the latest an uncertain coin of Tetricus 270-273 (Fischer 2003, 638).

The interpretation of the site of **Novaesium – Neuss** is more complicated as six different camps have been identified and it is difficult to attribute one or the other to the stationing of a legion or an auxiliary unit. All the phases have been dated to the Julio-Claudian period and some at least must have been temporary summer camps. Only one is of clear identification, and that is the so-called "Koenenlager" named after its discoverer and excavator C. Koenen at the end of the 19th century; this camp is probably one of the best excavated and best know fortresses of the whole Roman Empire (Hanel 2006a, 340). The fortress of *Novaesium* suffered under the revolt of the Batavians, just like most military sites

present in 69-70 A.D., and shortly after it was rebuilt in stone by the *VI Legio Victirix* presenting the usual layout of the Principate with a central *principia* and the *via principalis* and *via praetorian* meeting at a right angle. The fort has been abandoned at the end of the 1st century, and some undefined time during the following century a small auxiliary fort was built in the middle area of the former legionary fortress, probably to host a not otherwise specified *ala* (cavalry) and was probably in use until the 4th century (Rübekeil and Hanel 2002, 123, 125)[13].
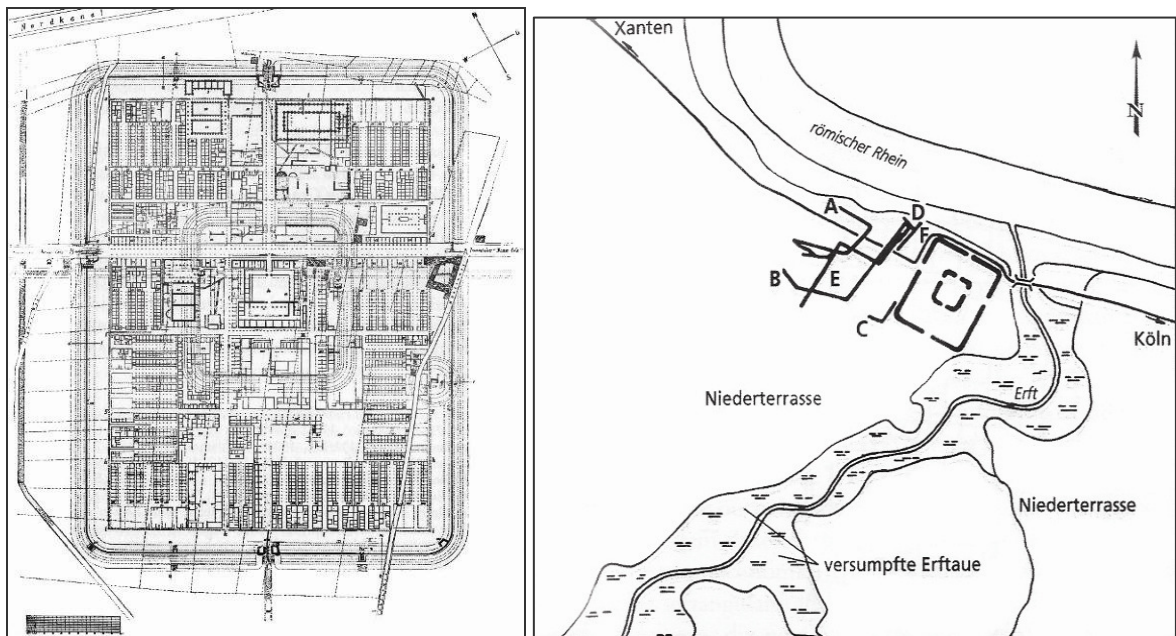
Fig. 10 Plan of the Kroenenlager with the Auxiliary fort (after von Petrikovita 1960, 41). 2. Overview of the six camps of *Novaesium* (in chronological order A-F) (After Hanel, 2006, 341).

Further upstream we encounter the legionary fortress of **Vetera – Xanten** (Vetera I), first founded to host 2 legions, the V *Alaudae* and the XXI *Rapax*, in the first quarter of the 1st century, the latter to be replaced in the 40's by the XV *Primigenia* (von Petrikovits 1960, 38). Around 60 A.D. the fortress was rebuilt in stone, on a slightly different orientation,

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[13] For a complete bibliography on the site updated to 2002 see Rübekeil and Hanel 2002, p.126.

but basically on the same site. *Vetera* as well fell victim to the Batavian revolt, and the site of *Vetera* I was abandoned and *Vetera* II built approximately 1,5 km to the north-east and again two legions are attested here; the XXII *Primigenia* and the VI *Victrix* until 120 A.D., when they both were replaced by the XXX *Ulpia Victrix.* The fortress was abandoned around 275 (Hanel 2006b, 430-32).

The last legionary fortress pre-existing in the mid-3rd century is the one of **Noviomagus – Nijmegen**. The occupational phases are manifold, after a brief Augustan occupation, the Flavian fortress was built, as most of the legionary fortresses on the lower Rhine after the Batavian revolt, inside the area of the previous camp according to the usual fort disposition. The main occupation of this site does not seem to go further than the Hadrianic period (Haalebos 2006, 358). Important to notice in these phases is the development of the *canabae legionis* of the *Noviomagus* fortress, which was vast, well organised and very productive, probably a real market centre (Franzen 2009, 1281).

The fort of **Remagen** was built in the 1st century and remained in use until the late 3rd when it was provided with a second outer wall leaning on the earlier one. No occupation is recorded after the end of the 3rd century.

On the coast the fortress of **Oudenburg** was also already present but is more recent than the ones mentioned above. The fort was built in the first half of the 3rd century probably in response to the appearance of the Saxons which began to sporadically raid the Channel coasts. The same function had the fort of **Aardenburg** further north, which was build at the end of the 2nd century or beginning of the 3rd but was inexplicably

abandoned before 275. Perhaps the abandonment was due the recessing of the coast which seems to take place in this period.

The lower Rhine frontier was therefore provided with strategic fortifications still in use and well distributed before the new defensive measures were carried out in the second half of the 3rd century. It is important to understand the distribution of forts and array of the defensive system to be able to analyse the military measures taken in Late Antiquity. A chronological display of the defences on the Rhine, Channel coast and hinterland from mid-3rd to end 4th century is displayed below.

3.2 Fortified urban centres or military road posts?

As already mentioned above, in the course of the 3rd century the first town walls and civic fortifications make their appearance almost everywhere in the Empire. Northern Gaul and Germania as well see themselves included in the new bias born out of necessity. At first it was thought that the action of fortifying civil settlements, or the fortification of a small area inside urban centres reflected the need of accommodating the mobile army when deployed in new areas, as to spear the troops the continuous construction of new camps. However, this theory was later rejected, as von Petrikovits explained there are too many such structures in Gaul to serve for this purpose only (von Petrikovits 1971, 188). In most cases it is not clear if the occupation was military or civilian or both contemporarily, what is certain is that these late Roman enclosed structures installed themselves on urban centres and were not originally meant as military sites.

Mostly these structures are counted both as civil walled towns, as well as defensive military structures. In this study they will be considered separately as our understanding of them is not univocal. From the

archaeological record we evince that all these structures are to date within the second half of the 3rd century, and will chronologically be considered within the measure taken between Postumus the first emperor of the Gallic Empire, and Probus, the restorer of the united Empire. Some significant examples are the site of **Tongern** which presents a late Roman enceinte inside the earlier town walls. The area enclosed by the wall is considerably smaller, and supports the theory that more insecurity pushed urban societies to provide their towns with more efficient and better defendable fortifications. The wall was about 3,80 m think and was provided with towers of circular plan 25 m from one another while the ditch on the northern side was more than 9 m wide and 2, 15 m deep (Brulet 1990, 81).

Bagacum - **Bavay** is another good exemplar of late Roman fortified town; it comprised the monumental complex of the *forum* and was enclosed by 2 phases of walls. Its rectangular plan, composed by two segments, formed the eastern and western *castellum*. The towers were round in plan as were the semi-towers and the outer ditch, very similarly to the one of Tongern, was 9 m wide and 3 m deep (Brulet 190, 88). It is not yet clear if these structures were meant to protect a civil agglomeration, or if it served as a military post only. In the western part of the fortification no military presence has, as yet, been found, differently though is the case of the eastern fortification (Hanoune 2006, 220); this equivocal situation does not enlighten us in regards to the real function of the road *burgi*, for now both a civilian and military presence is to be considered. It has also been suggested that the fortification around the *forum* could reflect the desire of a specific elite to separate itself from the rest with the fortification of the centre of public power of the roman world (Thollard 1996, 81). As no

evidence to support such a theory has been found, on the contrary it seems that the *forum* was already in a state of abandonment when the walls have been built, it is here considered more likely that it was either a refuge for the surrounding population in case of imminent need, or that it had a more military function in such a militarised context. It is unlikely that an elite group would choose a site already abandoned to display their status, even if such a site had been the *forum* itself.

Further west we find the town of **Fanum Martis - Famars** which was provided with a fortification or irregular rectangular plan. The walls have a thickness of 2 m in average and present semi-circular towers along the sides and circular ones on the corners, as was the case of *Bagacum* (Brulet 2006, 276). On the eastern side 3 different ditches have been put to light; the latter two have a width of 12 m and are over almost 4 m deep (Brulet 1990, 91-92).

3.3 Fortifications from Postumus to the end of the century

Postumus appears to be a key character in relation to the defence of the frontier in Germania and, behind it, Gaul. He was at that time probably the governor of Germania Inferior and charged with the command of the provincial troops[14]. Two legions were still present on the frontier zone: XXX *Ulpia Victrix* stationed in *Vetera*, and I *Minervia* with headquarters in *Bonna*. The legions were distributed strategically one in the North and one on the southern border of Germania Inferior, while auxiliary units were spread between them, such as the *ala* present in *Novaesium*. The problem of the Germanic pressure on the northern frontiers brought Gallienus to commission his son Saloninus and the

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[14] As we can see, military and civil functions could still be exerted simultaneously by one individual. This will not be the case after Diocletian's reforms as the power held by governors proved to be dangerous for central power.

governor Postumus to take measure in Germania and Belgica to contrast the incursions. Construction work was probably already started in this period, though it is feasible that the main effort was made during the Gallic Empire from 260 to 273.

It is interesting to note that the usurpation of Postumus weakened the central authority on one hand, but on the other side he reinforced security on the empire's borders. No doubt his intentions were to protect his new-born empire from the same enemy of Rome, but he also provided effective fortified structures and distribution of the army which was later re-inherited, so to say, by the united Roman Empire. These new defensive structures are the fort of *Quadriburgium* (Qualburg) in modern Germany, the first fortifications along the communication roads such as the Köln-Bavay route with the *burgi* of *Iuliacum* (Jülich - DE), Goudsberg (near Valkenburg – (NL), *Fanum* (Famars - FR) *Bagacum* (Bavay - FR). Similarly there appear *burgi* on the Trier-Bavais route as Villenhaus (DE), Liberchies, Taviers, Braives (BE).

The town of Bavais was one of the first urban centres in Gaul to provide itself with a fortified wall and this action as well is to ascribe to Postumus *imperium*. The fort of Remagen was probably modernised in this period, though the chronology is not yet certain; it could be a measure undertaken slightly later by Probus (276 -282). In 275 a new grave Frankish invasion took place, which destabilised security on the *limes* area. Many forts in Germania Inferior have been abandoned in this period probably due to the invasion wave. Probus, however, began a strong campaign of re-establishment of Roman supremacy along the Rhine line (Horn 1987, 87). By the end of the 3rd century, beside the pressure on the Rhine by the Frankish tribes, the Saxons begin to become insistent in their

expansions and the coast of on either side of the English Channel were. Against this enemy the Roman authority created a new defensive system of forts to protect the coasts, and the hinterland from them. This measure is known as *litus Saxonicum* and seems to have had very important role in the defence of Gallia and Britannia in the 4th century. In typology and structure the forts built in the second half of the 3rd century fall within the late Roman fortification types as stated above and will be described below.

***Quadriburgium* - Qualburg:** this auxiliary fort is placed on the left Rhine bank in northern Germany, Nordrhein-Westfalen. A series of ditches has been recovered but no wall and the material culture which emerged suggests a long occupation (Johnson 1983, 146). There is a strong concentration of 4th century pottery compared to 2nd and 3rd (Bridger 1990, 402).

Gouldsberg: The *burgus* is situated on the road Köln − Bavay and its planimetry is typically that of the late 3rd century roadside fortification measure. A square tower with 4 pillars to support the first floor is enclosed by a trapezoidal ditch 7 m large. Not much is possible to say, except that archaeological finds place its occupation in the last quarter of the 3rd century A.D.
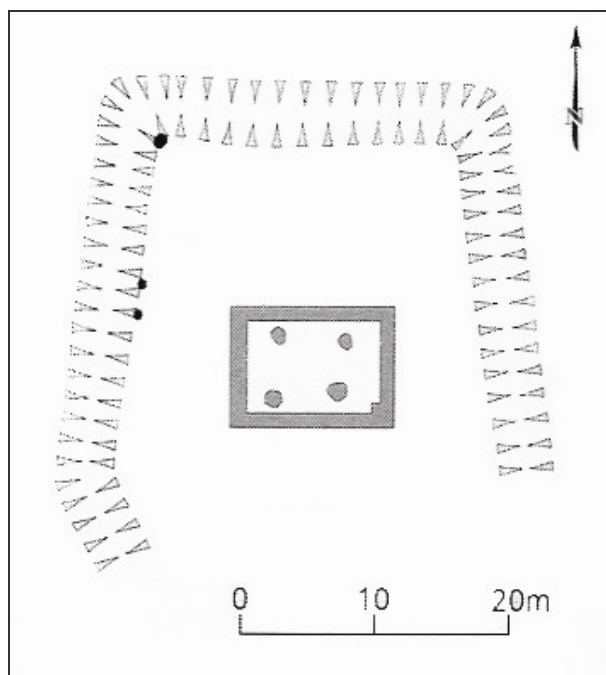
Fig. 11 *Burgus* of Goudsberg on the Köln – Bavay road (Haalebos 2006, 300).

Liberchies: The fortification presents a rectangular plan with rounded corners of a large ditch which measures almost 14 m in width. The Köln – Bavay road runs through it, which shows that the road was kept under strict military control from the second half of the 3rd century. Along the inner side of the ditch post hole have been recovered, and the remnant of an earthen rampart. The wooden palisade was meant to contain the earth of the rampart. Two gates were placed on either side of the entrance and exit of the road from the *burgus*. From numismatic evidence, the fort is dated to the second half of the 3rd century and was in use until the beginning of the 4th. A short abandonment followed and the site was re-occupied from the middle of the 4th to the beginning of the following century (Brulet 2006, 364).

Brühl – Villenhaus: This fortification is not well excavated, but the evidence available places the structure within the defensive measures taken

by Postumus while a second phase has been dated to the end of the 3rd century in the Diocletianic period. It consists of two ditches, one 10 m wide and over 3 m deep, the other one find itself on the inner side of the first one which was probably provided with a wooden palisade. Inside this area a wall of wood and earth was placed, but what lay inside this wall is not known (Brulet 1990, 160).
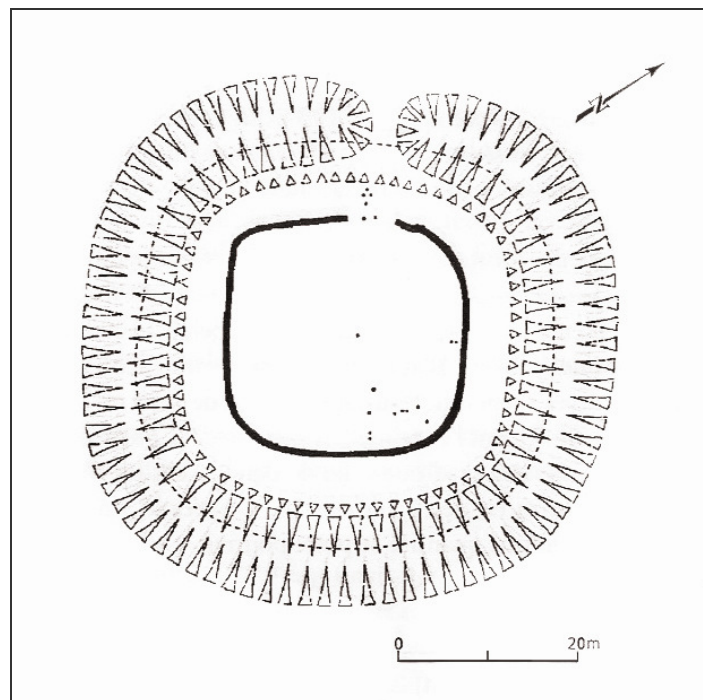
Fig. 12 Plan of the defensive structure of Brühl (after Brulet 2006, 244).

Heidenburg – Hüchelhoven: The fortification of Hüchelhoven has a square plan with rounded corners and falls within the typical roadside forts of the later 3rd century which lies along the roads leading form Köln to Bavay (Hagen 1928, 239). The outer ditch measures 10 m of width and inside this area, traces of a wooden palisade are to be found with only one opening on the southern side (Brulet 2006, 292).
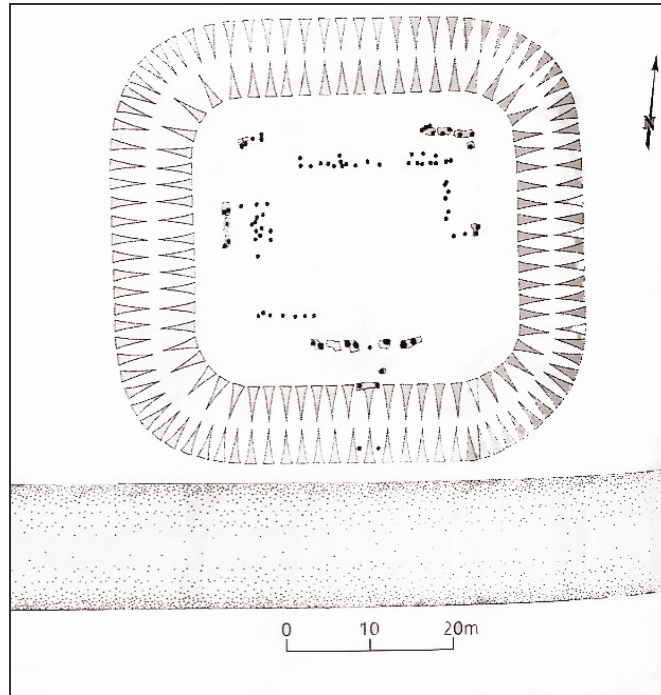
Fig. 13 *Burgus* of Hüchelhoven on the Köln – Bavay road (Brulet 2006, 292).

Braives: The fortification of Braives is placed to the north of Bavay and consists of a square tower with traces of five pillars in one line in the middle to support the first floor; around it two chronologically distinct defensive ditches have been found. The structure ahs been dated to the end of the 3rd century and was probably abandoned after it had been destroyed by fire in 347-348 (Brulet 2006, 241).
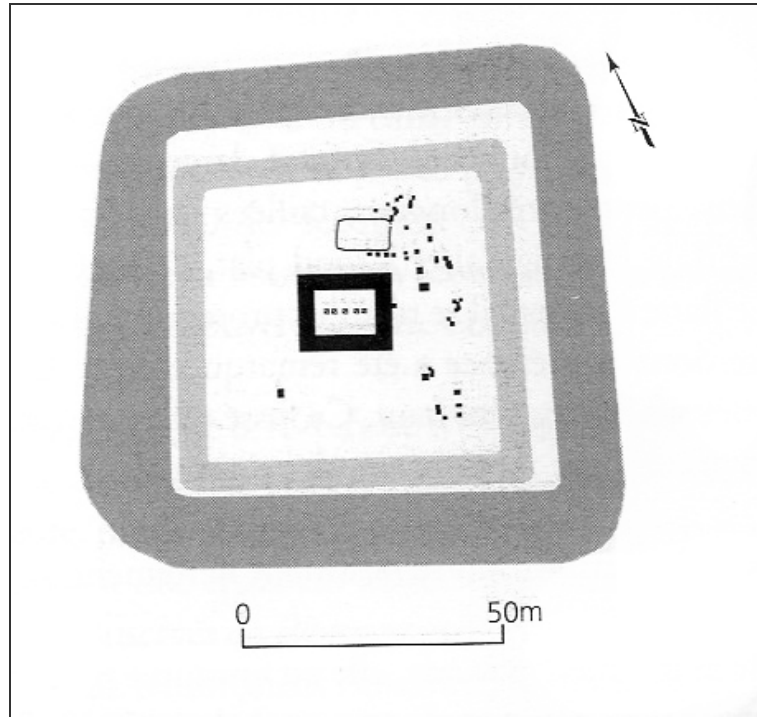
Fig. 14 Plan of the fortified tower of Braives (after Brulet 2006, 241).

As shown by the distribution of the fortifications in the Rhineland and northern Gaul, importance was now given to the protection of the communication roads. Continuous incursions and invasion attempts by Germanic tribes made roads very dangerous to travel on. This sense of insecurity is also reflected in the appearance of civil fortifications, both in town and in country; fortified villas and farmsteads are the rule and their concentration reduced to the area around bigger civil settlements or in proximity of fortresses in the frontier zone. The northern parts of Belgica and Germania Secunda were less populated than in previous centuries. The military aspect prevails, however, and the protection of the communication routes was of essential importance for the distribution of goods to the frontier armies and obviously for the control over the land. It was essential to provide fast and effective communications between the fortifications to ensure immediate intervention by the troops.

3.4 Defensive measures taken by Constantine and his sons

The main strategy against the Franks has been that of defence and securing of the territory for the whole second half of the 3rd century but this changed with the proclamation of Constantine to emperor. His new strategy was that of forceful response against the Germanic invasions and this is best to be seen in the construction of the bridge at *Colonia Agrippina* and its bridgehead the fort of *Divita*. As Kunow (1987, 89) rightly claimed, this bridge was mean to be the point of transfer of the troops on the right bank of the Rhine to fight the enemy beyond the border, and it might as well reflect the desire to expand again the *limes* area beyond the river as it has been in former times. But other bridges have been built or reinforced during Constantine's reign, and each was provided with a fortification to control the passing of the streams; these are the cases of Maastrickt on the Meuse and *Ceuclum* on the Maas (see below).

Divita – **Deutz**[15]: One of the most important fortresses build within the Constantinian fortification programme is the legionary base of *Divita*. The new structure was placed on the right bank of the Rhine and was connected to the bridge which crossed the stream on the east of the *colonia Agrippina*. It served as bridge head of the 420 m long wooden bridge, positioned on 19 piers and its width wa of 10 m (Galliazzo 1994 272). The fort construction is linked to the one of the bride as is attested by dendrochronological analyses of the wooden pillar fragments found in the river, and the stamps of the *legio* XXII *Constantiniana adiutrix*[16] on the

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[15] A very useful contribution is the one offered by Hanel (2007) in which he gives a summary of the bibliographic reference about the fort *Divita* and the Rhine bridge at Deutz.

[16] The legion received this epithet only after it helped Constantine subdue the usurper Maxentius in 312, this is therefore the *terminus post quem* for the brick stamps. Stamps of the legion without the specification of the title could still be precedent, so the beginning of the building phase is set

bricks used for the construction of the fort (Carroll-Spillecke 1993, 385). Each side measures over 140 m which produced a perfect square of 500 x 500 feet and has an orientation east-west and follows the direction of the road crossing the bridge becoming the *via principalis*. The fortress has therefore two gates, one east and one west and the gate towers are impressive semi-circular structures on the outside and rectilinear on the inner section.

The walls, almost 4 m deep, were provided with circular towers, one in each corner, further three on the northern and southern sides, and two each on east and west between gates and corners. The inside is structured with long and regular barracks 8 in number on each side of the main inner road with a north-south orientation. The two outer ditches are 13 m on average of width and run along 3 sides; the western flank is sited on the river bank and is therefore without ditches (Hellenkemper 2006, 256). The fort was build by a detachment of the XXII *legio*, the so-called *numerus Divitensium*, and could station between 900 and 1000 men (Schmitz 1995, 758).

In its later days the fort shows traces of civilian life within the fort, just as is the case of *Bonna* and *Vetera* in the second half of the 4th century A.D. This is attested by the literary sources as well as by the archaeological record[17]. What is also interesting is that the fort was not abandoned in haste or destroyed neither by the leaving soldiers nor by invading Franks; the unit was probably withdrawn in 420 and joined the mobile field army, while the occupation of the fort as a settlement continued into the Karolingian period (Carroll-Spillecke 1993, 390).

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between 310 (as mentioned in the *Panegyricum* of Eumenius – *Paneg. Lat.* 7, 13, 1-5) and 312 AD. For a detailed bibliography see Carroll-Spillecke 1993, footnote 2.

[17] Objects belonging to the female toilette were found in the later phases. *The Cod. Theod.* 7, 1, 3 (349); 7, 4, 17 (3779) speaks of the matter of marriage of soldiers (Carroll-Spillecke 1993, 390)
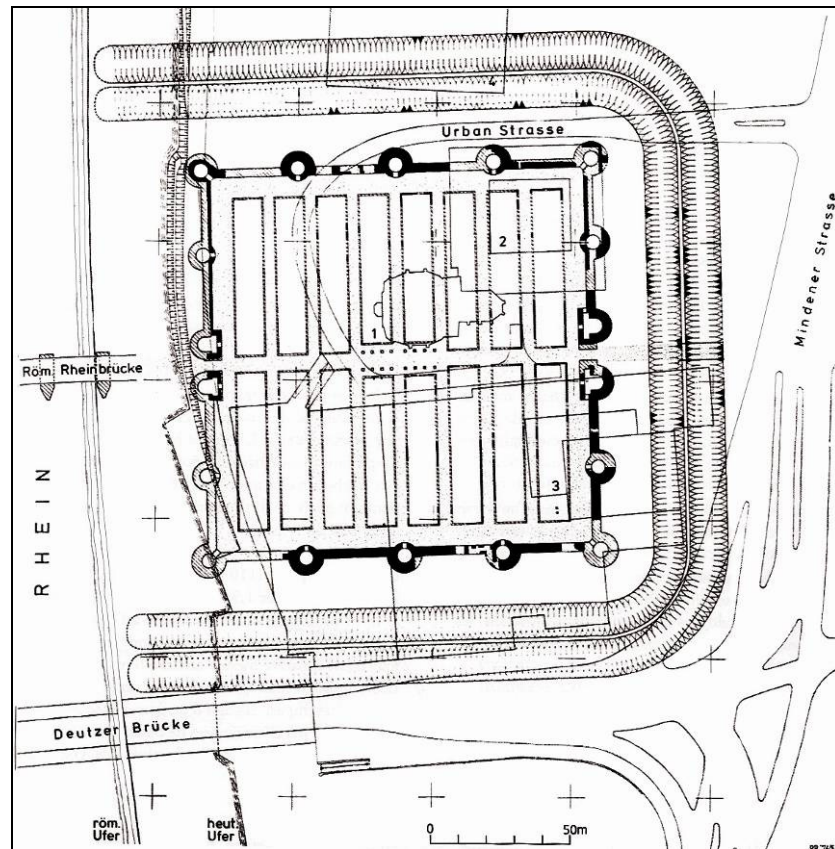
Fig. 15 Plan of the fortress and bridgehead of *Divita* and the position of the Roman bridge (After Hellenkemper 2006, 255).

***Ceuclum* – Cuijk**: This fortlet has been dated to the first half of the 4th century but it presents a later stone phase of the second half of the same century, probably reconstructed under in the years 357-358. It was placed on the river crossing of the Meuse to give protection to the bridge. The structure must have had a trapezoidal plan though unfortunately the eastern part is lost to the river, the archaeological evidence confirmed a phase of earth and timber wall while the stone phase presents a rampart and semi-circular towers (Haalebos 2006, 256).
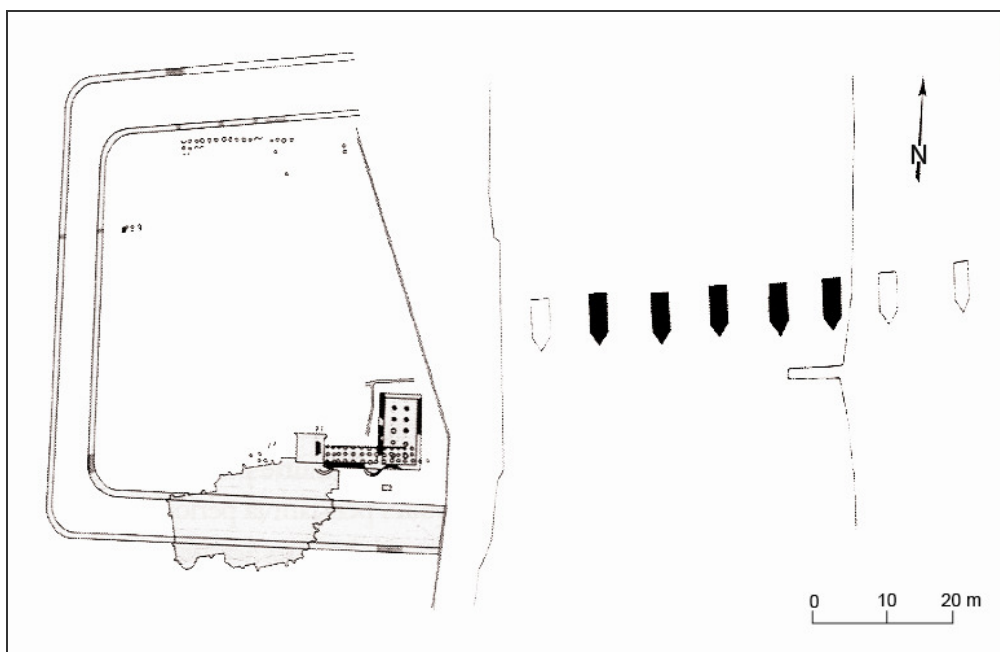
Fig. 16 Plan of *Ceclum* and the bridge pillars (after Haalebos 2006, 256).

***Tricesima* – Xanten:** This fort has been built from Constantine in the middle of the *Colonia Ulpia Traiana* – Xanten. The fortification comprised 9 *insulae* of the town, and presented a 4 m thick wall with projecting bastions, 44 in number along the whole perimeter. The fort was later destroyed by the Franks, but rebuilt by Julian soon afterwards (Horn 1987, 636).

Haus Bürgel – Monheim: The fortification installed itself on an earlier structure, but took the aspect of a typical late Roman fortification. The *burgus,* of square planimetry (64 x 64 m), presents massive square towers in the corners, but no intermediate towers has yet been identified. The fort had only one opening which was provided by the eastern gate, although another gate on the opposite side is a reasonable supposition, because of the corresponding gap in the ditches. These are two in number and quite

wide, they run around the *burgus* at a distance of 30 m from the walls (Fischer 2006, 336).
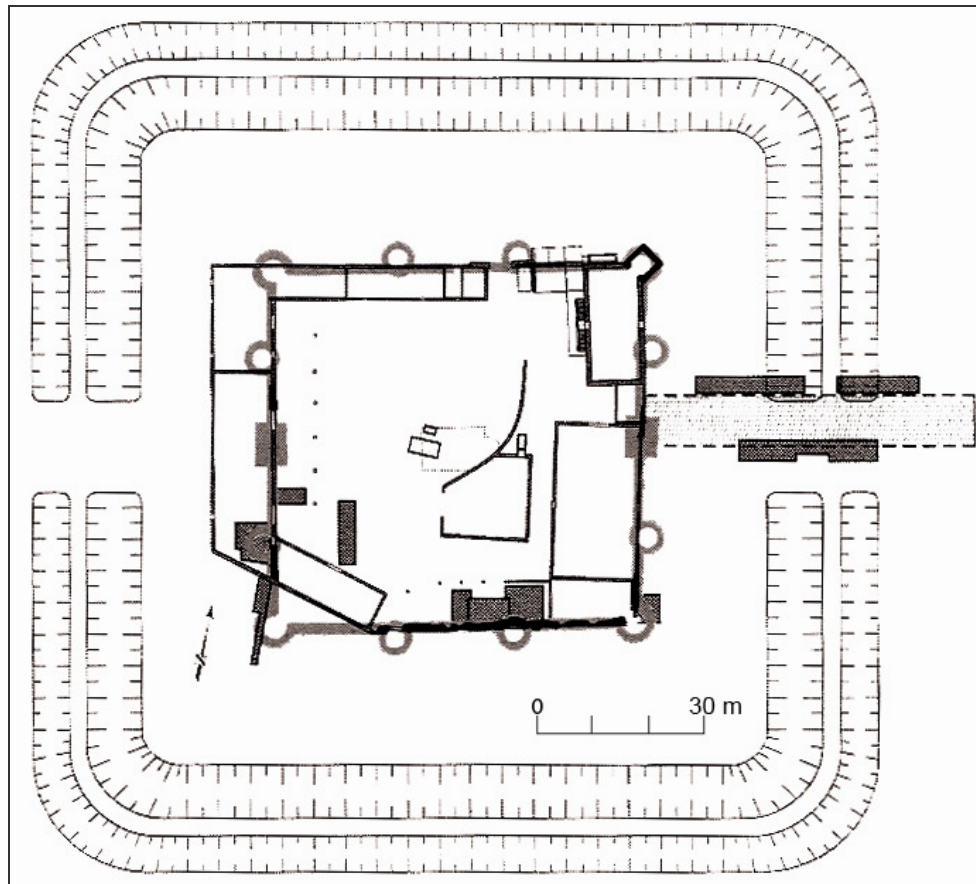
Fig. 17 Plan of Haus Bürgel (After Fischer 2006, 336).

***Iuliacum* - Jülich**: This site seems to be a real *burgus* of military occupation, a roadside fortification probably derived from a civil settlement. As of yet it is not possible to ascribe it an exclusively military occupation. The walls, dated to the beginning of the 4th century, are of circular plan and are provided with circular towers – the shape is typically Constantinian (Perse 1998, 58).
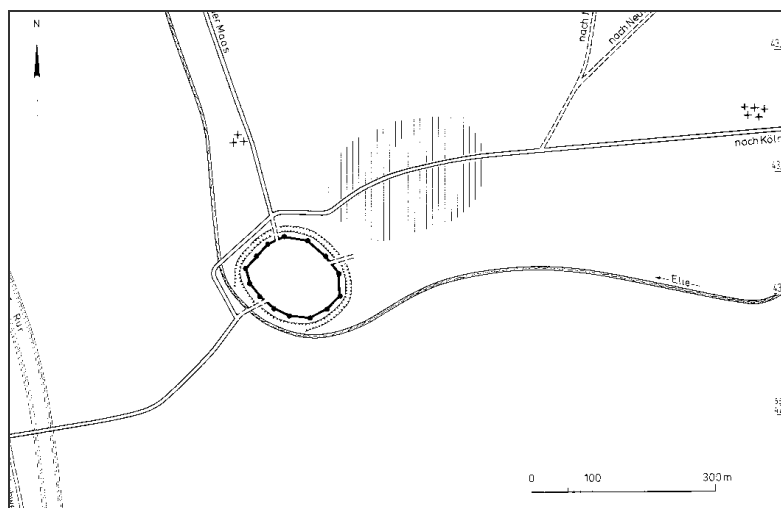
Fig. 18 *Iuliacum* within the road system between Köln and Aachen and two roads coming from the north (After Horn 1987, 449).

Maastricht: The fortification of Maastricht is placed on the left bank of the river Meuse. Its vicinity to the Roman bridge over the river must have been planned to provide protection and surveillance of the crossing point. The important communication road from Köln to Bavay, for which the bridge served, passed through the fortification; this aspect makes scholars think of a purely military function of this road or probably strongly controlled, especially in the 4th century. From dendrochronological analyses a definite dating of the fort is possible, and it is to be placed in the reign of Constantine (Panhuysen 2006, 316). This is a confirmation of the intensive strengthening of the defensive system actuated by this emperor. The plan of the fort is approximately rectangular and covers an area of one and a half hectares. Ten round towers enclose the fort with the walls of more than one meter thickness and the two gates, composed of two rectangular towers each, are placed on the eastern and western sides in correspondence with the passing through of the military road. One large ditch ran around the fort and was 9 m large and almost 4 m deep, typically late Roman ditch features (Panhuysen 2006, 318).
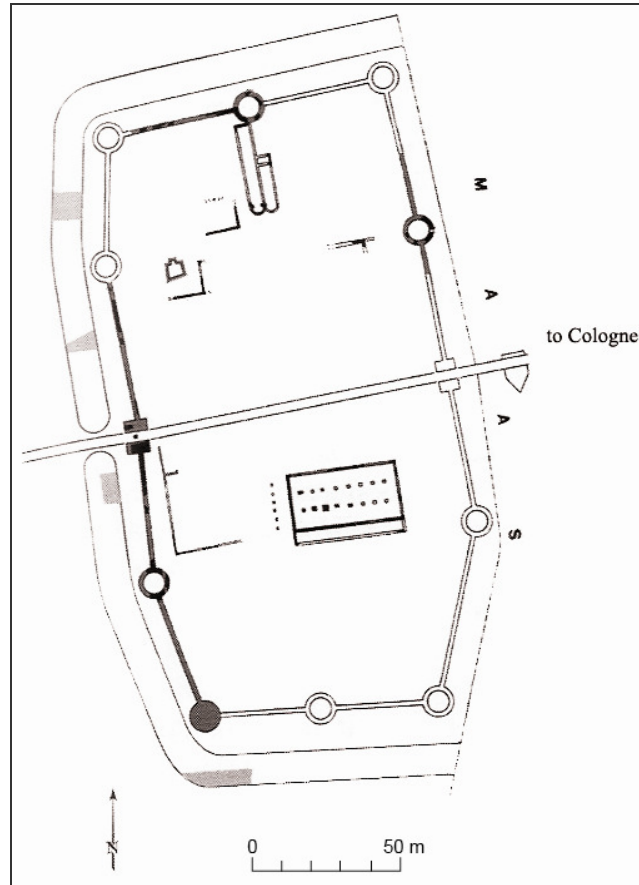
Fig. 19 Plan of the Constantinian fortification at Maastricht (after Panhuysen 2006, 317).

Dormagen: The fortification of Dormagen, along the Rhine between *Divita* and *Novaesium* was built on the site of the auxiliary camp of the ala Noricum, which has occupied it from 80 to 161 A.D. The rebuilding of this camp in the north-eastern corner of the former abandoned fort is dated to the beginning of the 3rd century (Gechter 2006b, 256). The walls were 3 m thick and set with rectangular towers in the corners and one on each side, while running along the outer area a shallow ditch was dug. It has been suggested that the large empty space created by the 2nd century fortification could have been used to accommodate troops of the *comitatenses*, but no archaeological evidence can ascertain this hypothesis. It seems that its occupation does not reach into the 5th century but ends with the reign of Theodosius I (Horn 1987, 397).
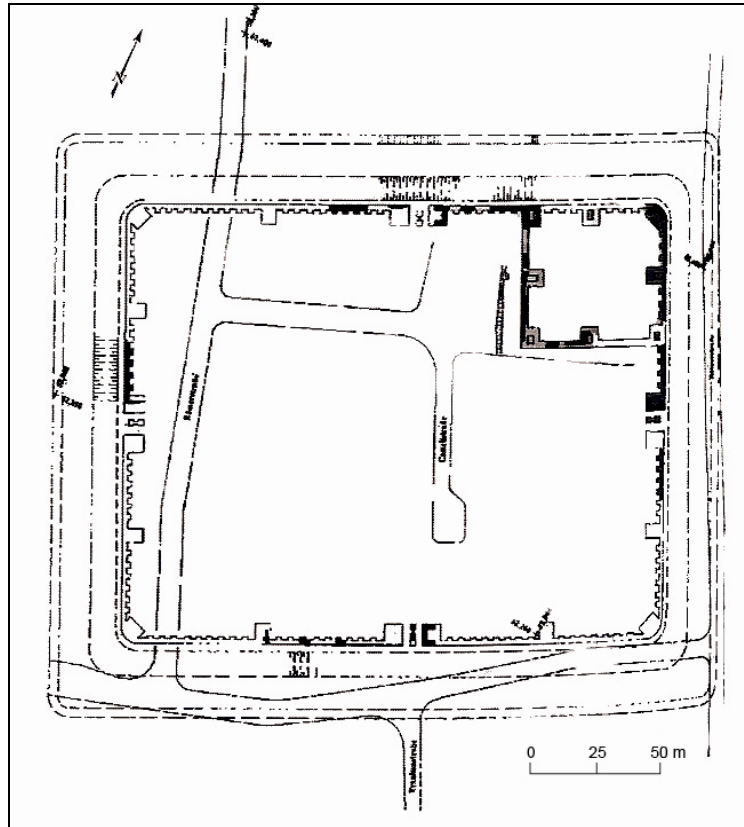
Fig. 20 The late Roman *burgus* installed in the north-eastern corner of the earlier auxiliary fort of Dormagen (Gechter 2006, 266).

Oudenburg: The late Roman fort at Oudenburg is also of Constantinian date an installed itself on the wooden structures of a previous fortification. The fort consists of a solid stone wall of almost square plan, comprising a vast area of more than 2 hectares. In various areas around the structure, a 20 m wide ditch has been found. Very little is left of the inner structures, but from the evidence found they seemed to have been of rectangular shape and aligned with the central *via principalis.* This complex had at first been interpreted as a possible *principia* or rather a administration building (Johnson 1983, 52), but its decentred position along the main inner road made scholars leave this suggestion and interpret it rather as two barracks. The towers are of round plan in the corners, while those on the sides, two each as gate towers, are octagonal. Its occupation reaches to the

beginning of the 5th century; it was probably abandoned around 410 A.D. when the troops were withdrawn. Some scholars want to identify it with the *Portus Aepatiacus* mentioned in the *Notitia Dignitatum*, but it cannot be stated with certainty (Mertens 2006, 364).
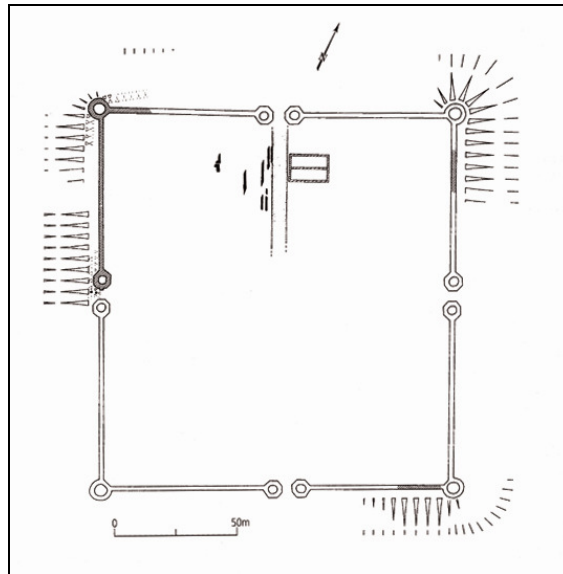
Fig. 21 The plan of Oudenburg (after Mertens 2006, 363).

***Gelduba* – Krefeld**: The fortification of *Gelduba* was built on the site of an earlier fort, that area had actually always been set with a fortification and the late Roman fort was built within the area of the former one. Its walls measured between 2 and 2.5 m. In contrast to many later forts, this one has a rectangular plan of 90 m x 120 m, but the barracks were built along the perimeter of the walls. The gates were positioned in the same axis as the earlier road grid, and the latter might have been simply restored and reused. The outer ditch was some 30 m form the wall which created a large berm for the defence (Reichmann 2008, 28).
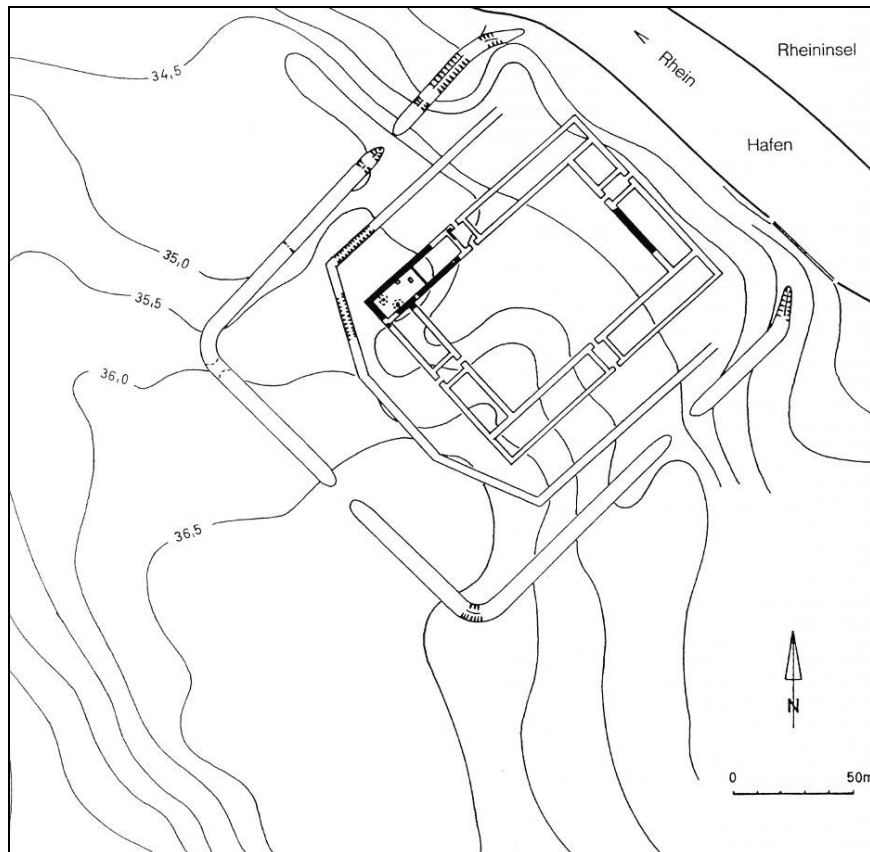
Fig. 22 The fort at Krefeld (Richmann 1998, 28).

3.5. Reconstruction of the frontier in the second half of the 4th century

After a rather long period of stability under Constantine, by the mid-4th century the internal political situation lost its balance again and another period of crisis followed the emperor's death. Frankish tribes took advantage of the new weakness of Roman central power to actuate a series of incursions and invasion attempts. Especially the invasion of the first 50's of the 4th century saw the frontier zone changed as Franks conquered Köln and established there their headquarters. Constantius II sent *Caesar* Julian in Gallia to set the situation with the Germans and to secure the frontier.

Characteristic of the later 4th century is, however, the application of diplomacy rather than battle to settle matters provisionally. Diplomacy was not always enough to stem the raiding campaigns, especially by Franks living just beyond the borders and incursions did still happen. This period is therefore characterised by a series of interventions on the lower Rhine frontier zone but the new constructions are rare; fortifications were rebuilt and reinforced.

Most measures were taken in the northernmost part of the frontier line, especially to re-establish security on the supply routes of grain for the troops coming from southern Britain, such as the fortlet of *Castra Herculis* at Meinerswijk (Groenman-van Waateringe 1977, 232). The same technique or reconstructing pre-existing fortifications was also followed by Valentinian, we find therefore phases of this period in structures which have already been mentioned as *Ceulcum* and Asperden. The Dutch part of the frontier particularly underwent new fortification measures probably as a result of the campaigns against the Saxons which had newly raided the northern frontier (Mann 1989 = Mann 1996, 208).

As the 4th century comes to its end, the archaeological record remains silent in regards to the fortifications in Germania Secunda and Belgica, nor does the *Notitia Dignitatum* give much information about it. There is a *dux Belgia Secundae* which had the command of the continental part of the *litus Saxonicum* and the north of Gaul, but Germania Secunda was probably under the jurisdiction of the *dux Mogontiacensis* of Mainz. The territory of the lower Rhine and northern Gaul was completely lost after the huge wave of Germanic migration in 406 when the *magister militum* Stilicho withdrew the troops to protect Italy. The garrisons would not return to the northern frontiers and the provinces where lost forever.

***Ceuclum* – Cuijk**: The fortlet, as mentioned above is dated to the first half of the 3rd century, but presents evidence of a occupation until the second half of the 4th century, during Julianic period, and again during the reign of Valentinan, the fort underwent strong reconstructions. The bridge for which the fort served as a bridgehead underwent the last reconstruction in 393.

***Castra Herculis* - Meinerswijk**: This auxiliary fort is situated to the north of Utrecht in the Netherlands and represents an outpost of the frontier of the final part of the lower Rhine frontier. Its foundation reaches back to the first decades of the 1st century A.D. and shows a continuous occupation until 275 A.D. year in which, like so many other forts of the German *limes* zone, it has been abandoned. 70 years later a new fort was built over the ruins of the former structure and falls within the fortification measures of Constantine and his sons. Only the parts of the wall and the *principia* have been excavated, as well as the southern gate with its two rectangular towers. From the archaeological record and finds the last occupation has been dated 350-425 which extends the life of the fort to the end of the existence of a Roman frontier along the lower Rhine (Hulst 2006, 198).

Qualburg: This fort presents a phase which corresponds to the new Julianic and Valentinian re-organisation of the lower Rhine. The two emperors actuated a conquering campaign of the lands now lost to Roman authority after the new Frankish incursions in the 350's (Thijssen 2009, 97). In contrast with the former measure taken by the emperors, it was now more common to re-occupy pre-existing sites and rebuild them,

rather than found camps and forts *ex novo*. This course of action is probably to lead back to a faster and more efficient occupation of the territory. It might also reflect a desire to impose the Roman presence on these lands by using former probably well known Roman sites, as if to legitimate the forceful claim. *Foederati* and *laeti* were stationed in the northern areas of Gallia, especially between the final section of the Rhine and the notorious military road leading from Köln to Bavay, which was the former area of the Batavian tribes (Thijssen 2009, 97).

Bonna - **Bonn**: As mentioned above, in 360 the site of the earlier abandoned fort was occupied again. The outer walls were rebuilt and overlie the former walls of the fortress. They were provided with towers and a system of double ditches was dug around the whole external perimeter. The *castellum* was furnished with barracks and other functional structures on its entire area, but a small civil settlement seems to have formed again inside the walls and the general occupation of the fort seems to reach the 20's or even 30's of the 5th century (Gechter 2006a, 236).
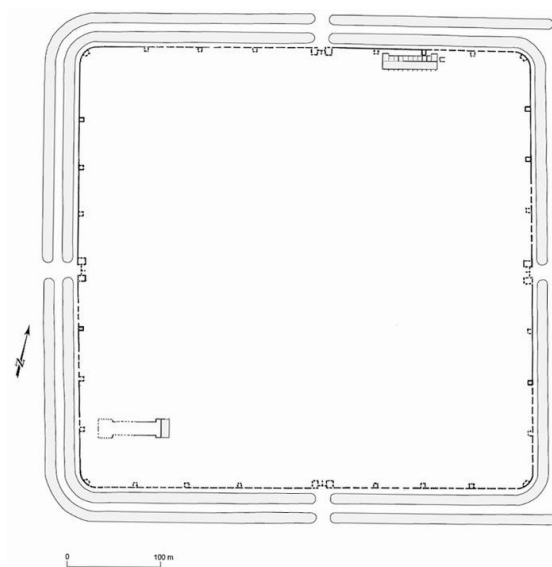
Fig. 23 *Bonna* in the second half of the 4th century (After Gechter 2006, 235).

Asperden: This fortification is situated to the south-east of Nijmegen and is a smaller defensive structure on the *limes* area. There is an earlier wooden phase for which there is no clear dating yet, it might belong to the end of the 3ʳᵈ century, perhaps Diocletianic. The stone phase on the other hand is dated with certainty to the Valentinian period and is therefore placed within the reconstruction measures of this emperor (Horn 1987, 431). The fortification is composed of a square enceinte with 4 circular towers in the corners, and a central one on the sides except for the eastern wall. In the middle of this walled area a square tower has been excavated, of which the first floor was placed on 4 pillars. Along the outer wall two shallow ditches seem to have run although only the eastern and western sections have been brought to light (Fischer 2006a, 205).
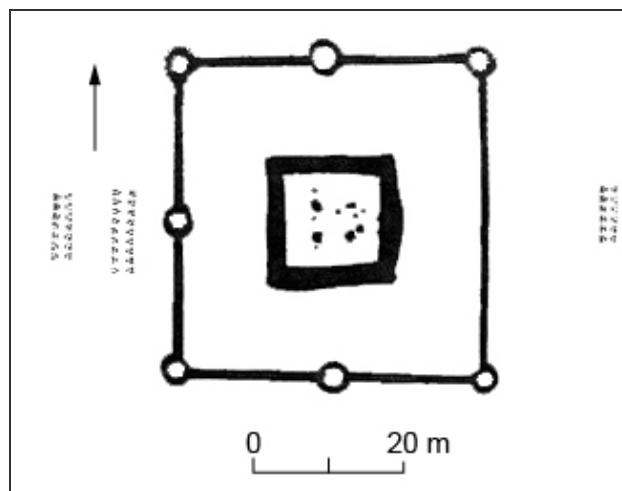
Fig. 24, Asperden: plan of the tower and the walls (after Fischer 2006a, 202)

Duisburg: The fortification of Duisburg consists of a massive square tower of 18 m x 18 m, which was enclosed by a wall and a wide ditch. The archaeological evidence shows that four post holes held the upper floors (Horn 1987, 567).
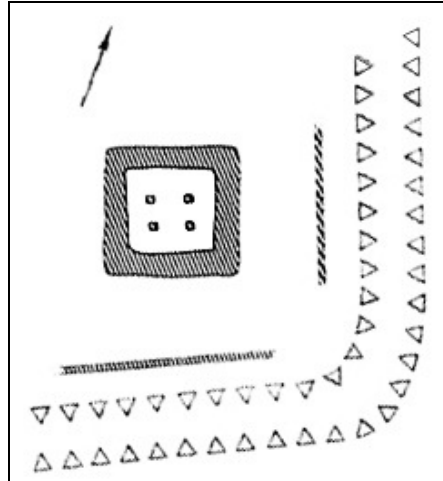
Fig. 25 Plan of Duisburg (Moers-Asberg)(after Reddé; Brulet 2006, 164).

4. The coastal defences in south-eastern Britannia

4.1 Introduction

From the mid-3rd century the northern Roman territories were put under strong pressure by continuous waves of incursion by Germanic tribes of the north. As we have seen, the lower Rhine *limes* zone was subjected to the raids of a series of tribes which would later be grouped under the Franks, as well as Saxons on the coasts of northern Belgica. In Britain the situation was perhaps even worse, as its insularity exposed it on all fronts; in the north Picts and Scots, coming from the Irish island and modern Scotland, began to insistently push against the northern border.

A series of reconstructions of military structures are recognisable on the Hadrianic *vallum* and the eastern and western coasts in the north of the island. A similar fate awaited the southern coasts, especially on the eastern part with the Saxon incursions, which caused insecurity on this part of the island. It is this area which will be considered here, because of its strong connection to the continental part of the English Channel and the northern part of the lower Rhine. The Saxons had settled themselves to the north of the Rhine-Maas-delta and from there began to push towards the southern coast of Britannia (Le Bohec 2006, 32).

Incursions are obviously attested on the mainland as well, in northern Gallia, but the presence of the Frankish tribes on the German frontier drove them perhaps to concentrate on Britain on the opposite side, but these populations had specialised in the art of seafaring and preferred perhaps piracy on the sea (Demougeot 1969, 470).

Two fortifications on the south-eastern coast seem to date to the earlier stages of the invasion period; the auxiliary forts of Reculver and

Brancaster, and only recently added to them, Caister-on-Sea (Pearson 2002, 15). It is suggested, that by the difference in plan and structure compared to the other late Roman littoral defences, and their affinity to the fortifications on Hadrian's Wall of the first half of the 3rd century, they belong to the same period (Mann 1989 = Mann 1996, 206).

One of the main features of late Roman fortifications is absent in all three structures which is the presence of projecting towers and bastions (see fig.28 below). The military activity did however last into the 4th century and the two fortifications must have been part of the fortification system which was slowly being created (Pearson 2002, 25).

The main military activity and defensive strengthening undertaken by Roman officers is to be put somewhat later, right after the middle of the 3rd century. In the case of shore forts in south-eastern Britain it is to remember that the archaeological record is incomplete, as the erosion of the British coasts left the structures only partially preserved. Dating is therefore difficult with such a lack in the archaeological evidence, but suggestions are always forwarded by the excavators and scholars.
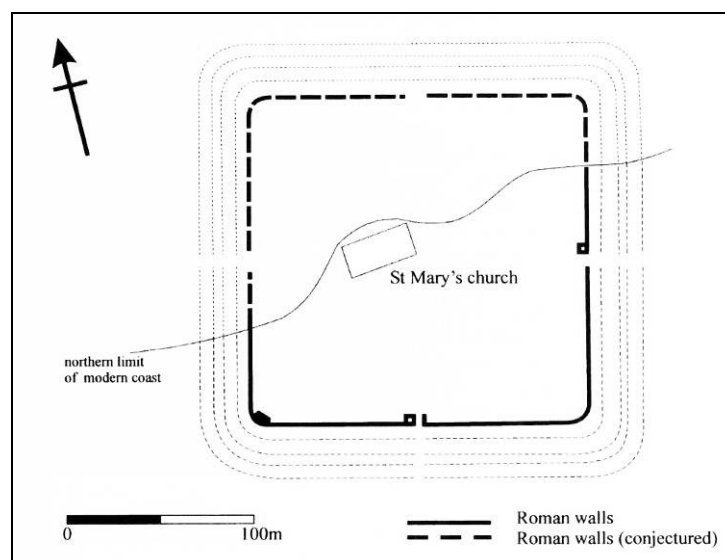
Fig. 26 Reculver fort (Pearson 2002, 14).
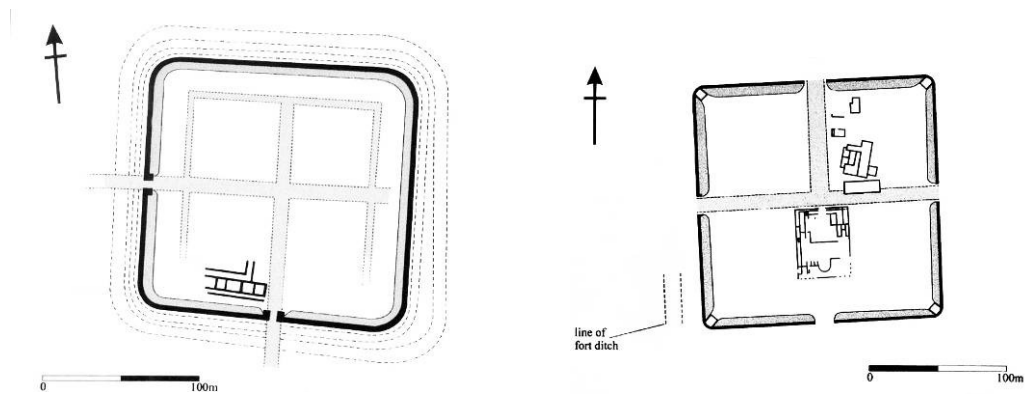
Fig. 27 The 2nd – early 3rd century forts, from left to right Caister and Brancaster (after Pearson 2002, 14, 16, 25)

4.2. New fortifications under the Gallic Empire

The idea that the south-eastern coastal defensive structures in Britain were to be placed in Carausius' building programme (286-293) is long abandoned in favour of a rather earlier dating of at least some of the fortifications (Scullard 1979, 67). The commander of the fleet had of course an important role and of that will be related later (see 4.3). The first timber construction phases of Richborough and Brugh Castle, but also Bradwell and Lympne are actually dated to the period of the Gallic Empire and should therefore be considered as a measure taken by its emperor Postumus or perhaps Tetrici, the last Gallic emperor. There is no doubt that he must have actuated an intensive building programme on the British Channel coast, just as he had strengthened the defensive system on the shore of Belgica Secunda and on the waterfront of Germania Secunda.

It is interesting to note that in Britannia we do not find as many town walls dating to this period, in contrast to the spreading of the phenomenon in northern Gaul and lower Rhine. Many towns of Britannia had built their walls already in the 2nd century. One exception for the studied area can be named in the city of Canterbury, the walls of which are of the end of the 3rd century (Esmonde Cleary 1989, 63). The reason for

the wall building in this period could be seen in its proximity to the coast and greater exposure to possible raids from the sea; the town was placed on the communication road between Richborough and Reculver. The site might have been of strategic importance for the defence of the area when invaded, and would definitely be very exposed to raids. The construction of the town walls in this period is not at all surprising.
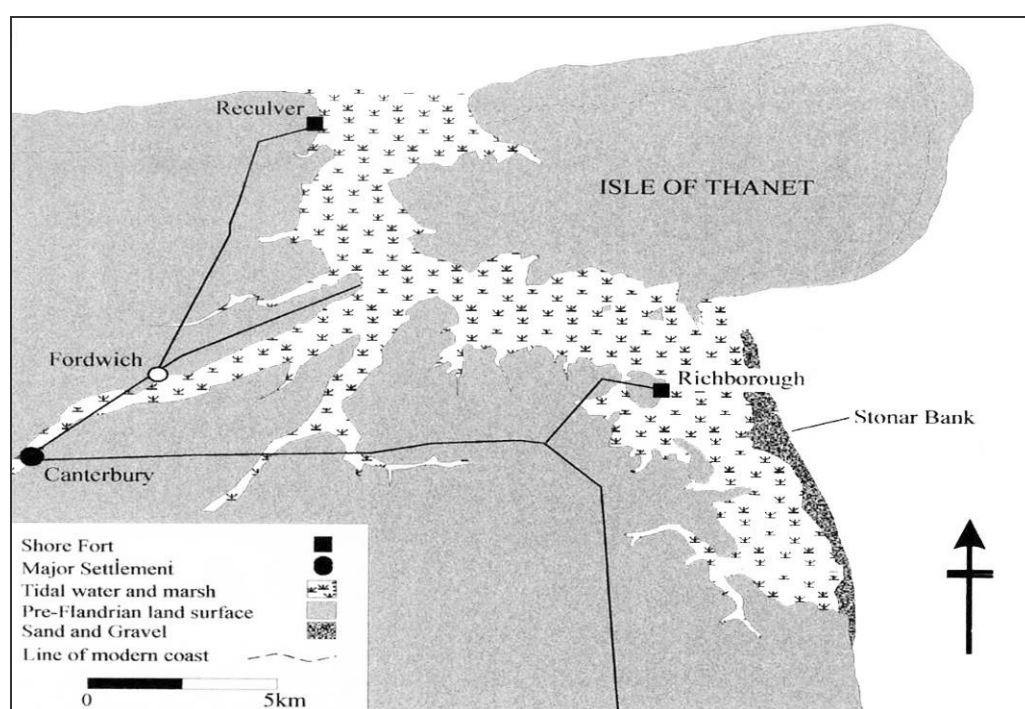
Fig. 28 Communication roads between Richborough fort, Canterbury and Reculver (after Pearson 2002, 112).

It could also be argued that the funds for such civil fortifications were not available in a time when the main economic effort was to militarily protect the borders and the now independent western provinces could not afford such a financial strain, for they were now to support themselves (Salway 1984, 273). On one hand, the Gallic emperor would

have to use all his resources in the strengthening of the frontiers, while civil administrations were put under fiscal pressure to secure tax collecting, and could not afford to provide themselves with walls around them. In contrast to this economic strain, numismatic evidence seems to suggest some prosperity in the western provinces and that trade from Britain to the continent was still rather florid (Drinkwater 1987, 214).

Richborough: In the 3rd century a series of ditches and an earth rampart had been built around a triumphal arch erected at the end of the first century near the coast at Richborough; it seems to have been used as a signalling post to communicate with the *classis Britannica* fort at Dover (Hassall 2004, 181). At the end of the 3rd century, however, the area has been levelled, probably to prepare the site for the construction of the shore fort (see below). The earth and timber structure was therefore begun during the Gallic Empire, and lasted even beyond it.

In 276, in a time when the province of Britannia had returned to be part of the *Imperium Romanum*, the *legio* II *Augusta* is moved from its base at Caerleon to Richborough. A large detachment had been withdrawn form the island and deployed to the continent, and the strength of it was reduced to about 1000 soldiers. This figure would later correspond to the average number of soldiers composing the legions stationed in frontier zones. In the case of the II *Augusta*, the detachment would never return to the main body. What is striking of this episode is that the fort at Richborough was not reconstructed in stone until the Carausian usurpation occurred, which means that the main legion of southern Britannia had to be satisfied with a timber and earth fort for al least 10

years. The area outside the fort yielded conspicuous archaeological evidence regarding the presence of a well developed *vicus.*
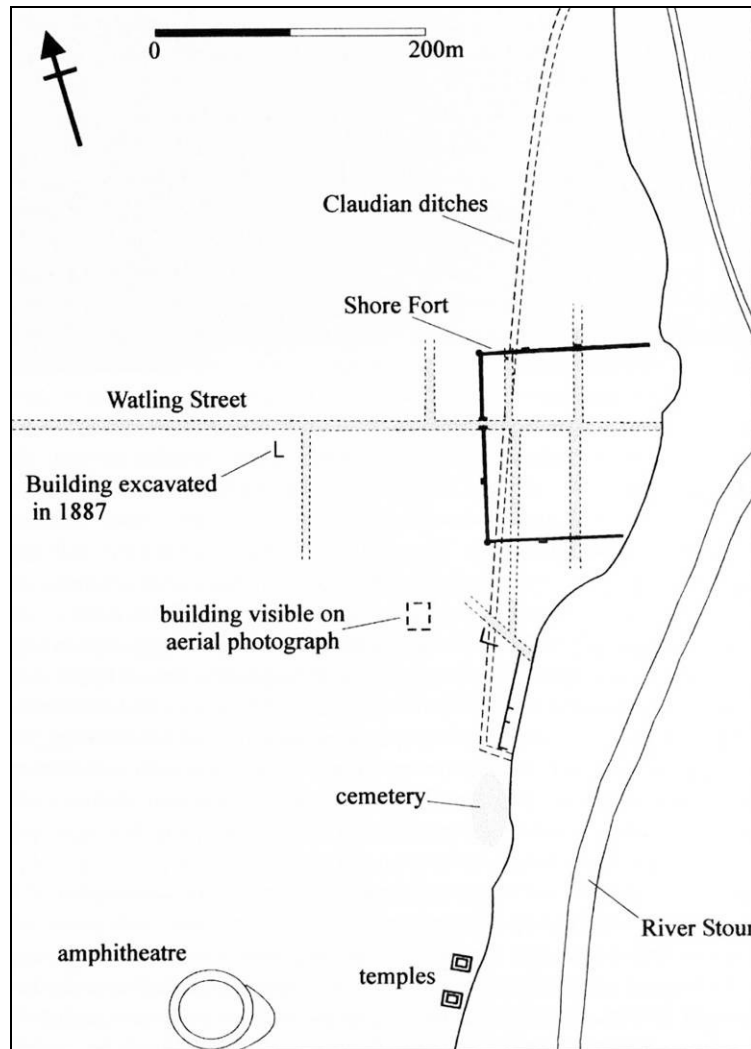
Fig. 29 The Richborough area (Pearson 2002, 27).

Burgh Castle: The plan of Burgh Castle fort is off irregular shape; it is trapezoidal, extended in one direction and presents a series of circular planed bastions which are completely projecting. The first phases are not more precisely dated after 260 A.D, and the fact that the typically late Roman fortification features are present, gives it a later date in regards to

Caister or Brancaster. As Pearson (2002, 18) has pointed out, the bastions are not joined to the wall in the lower levels, and the reason for this could be that it was decided in a later phase to add these construction elements. Only two gates have been detected, one on the east wall, the other on the north wall, but western side has suffered severe erosion and nothing of the conformation of it is known. An interesting feature is recognisable in the walls of Burgh Castle, and it is the construction of the inner side of the wall. It presents a reduction of width towards the top, which would have spared the builders the preparation of an earth rampart.

The position of Burgh Castle is significant in the estuary area outside the settlement of *Venta Icenorum* – Caister-by-Norwich. The fort lies in front of the Caister fortification, and the two together must have offered a very efficient protection to both the urban centre and the navigable passage leading inland offered by the river Yare.
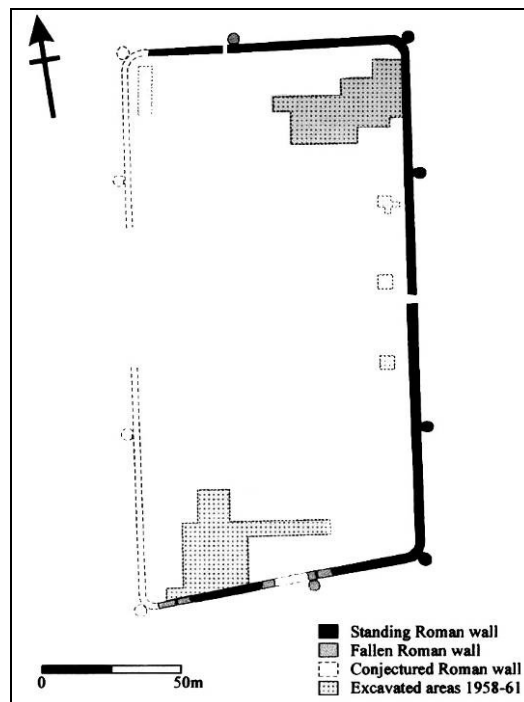
Fig. 30 The shore fort of Burgh Castle (after Pearson 2002, 18).
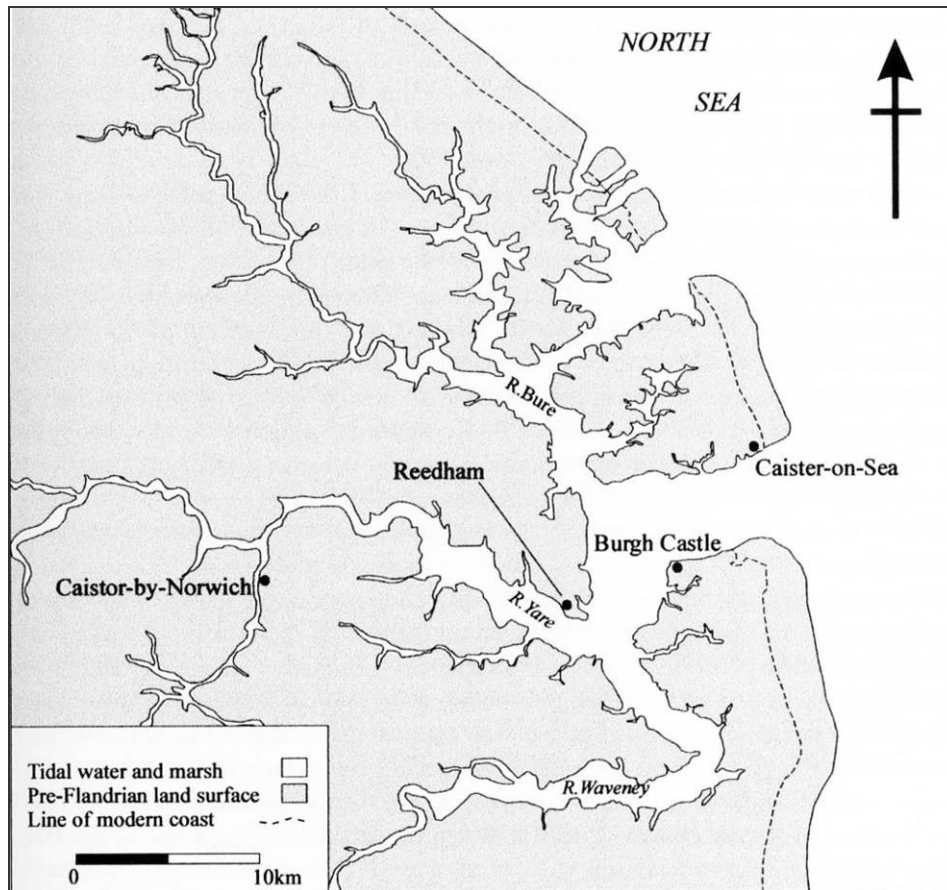
Fig. 31 The eastuary by Caistor-by-Norwich and the positions of Burgh Castle and Caister-on-Sea (after Pearson 2002, 107).

Bradwell: This fort has been dated to a later phase of the 3rd century, and could be included in the series of shore installations build under the Gallic Empire. The fort is situated on the northern coast outside the mouth of the Thames and, together with Reculver, it must have offered an effective monitoring of the sea and the opening of the river towards *Londinium*. The fort seems to have been of trapezoidal plan, but the exact extend of is unknown because of the severe erosion on the eastern side. In addition to some sections of the walls, two circular planed bastions have been recovered; one on the north-western angle and an intermediate one on the same walls towards the possible gate (Pearson 2002, 23).
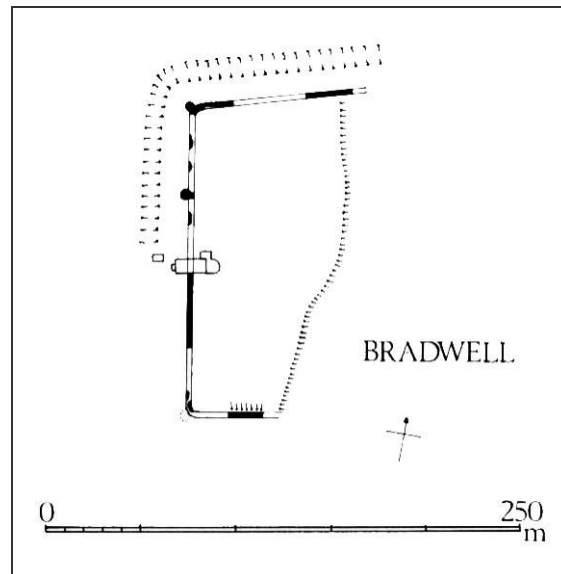
Fig. 32 Plan of Bradwell shore fort (after Johnson 1983, 204).

Walton Castle: the presence of this fort is documented by 18th century drawings only, as the sea erosion of the coast destroyed the structure completely. No precise measurement is known, only the general plan and outline: a lengthened rectangle with circular towers at the angles. From archaeological evidence around the site area it is possible to give a general date for the fort to after 260, probably to be put under the Gallic Empire constructions.

4.3 The Carausian usurpation and his defensive measures

After the experience of the Gallic Empire, Britain and the Gauls had been reunited to the whole empire by Emperor Aurelian in 274. Not long did the unity last, as in 286 new Frankish and Saxon acts of piracy in the Channel and Britain's south-eastern coast were the trigger for a new usurpation (Demandt 1989, 50). In the wake of these incursions, Maximian nominated in Boulogne Carausius as new commander of the British fleet[18]

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[18] The name *Classis Britannica* is known until 250 AD, after that the name is no longer mentioned. The fleet did still exist in a lesser form, but no name for it has been passed on to modern times (Mann 1989 = Mann 1996, 205).

and after his successful campaigns he took advantage of the troop's support to usurp power and proclaim himself emperor in Britannia and northern Gaul. He had been accused of keeping the booty to enrich himself and, after being sentenced to death by Maximian, he seize power of Britain and northern Gaul. His strongholds were the naval base of Boulogne and Richborough on the British island of which he began the construction of the stone fort (Pearson 2002, 45).

It is clear that Carausis's main activity is bound to the maritime aspects of his territories; he seems to have continued the strengthening of the coastal defences. These measures were not only meant for defence against the Saxons and Franks, but would now have had an interest in defence against the imperial fleet and its attempts to subdue the usurpation (Johnson 1970, 241). The forts of Burgh Castle and Lympne seem to gain their stone walls in this period. Finally, Portchester was built on the southern coast of Britain, probably to match the port of Calais, also under Carausian authority (Pearson 2002, 45). The continental part he lost however in 293, when Caesar Constantius attacked Boulogne and conquered it. Carausius was himself killed by his finance minister Allectus, who took his place, but his reign did not last long, as in 296 Constantius left Boulogne to subdue Britain and returned victorious. After this further episode of separatism which befell Britain, the island remained integral part of the empire for more than a century.

Richborough: The archaeological evidence shows, that over the levelled ground of the later 3rd century, a late Roman shore fort was built. It covers a vaster area than the earlier structure but the walls were not built as one unit. First the south and west walls were built, only afterward the others,

and not in a continuous manner. Johnson suggests that the bastion between south and west wall was built in second time, and on a different alignment, and that the northern wall was even built simultaneously by different building units, and probably with some rush (1970, 244). An irregularity in the western section of the outer ditches could also be symptom of a rather hasty construction time. The presence of numerous Carausian coins in the first occupation phases of the later fort, and the complete absence of them in the earlier earth fortlet confirms the date of construction to the Carausian building programme (Pearson 2002, 58). The *Notitia* mentions as garrison the *legio* II *Augusta,* which means that it must have been stationed there from 275 until its withdrawal in 406.
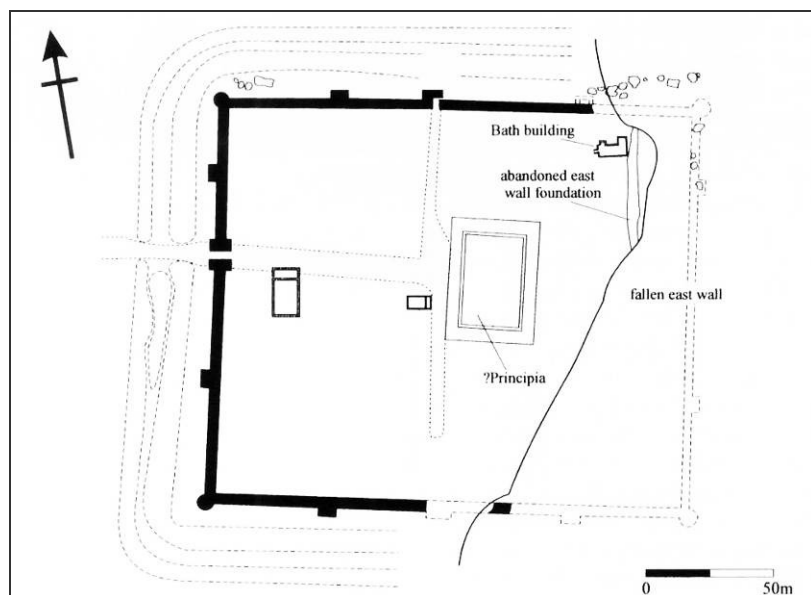
Fig. 33 Plan of Richborough fort (after Pearson 2002, 60).

Lympne: Of the original outlay of this fort little remains for the ruins of the walls are scattered on the area of the site. At first a square plan had been suggested by Cunliffe (1980, 256) but from recent examinations a possible plan has been reconstructed, and its shape is that of an irregular

pentagon (Hutchinson *et al* 1980). Three sides are in perpendicular position, as if to form a normal square, but the northern side presents a further angle in the middle of it, forming a pointed wall on its northern side. Very scant remains of possible bastions have been found, and the reconstruction proposed a series of circular bastions along the entire perimeter.
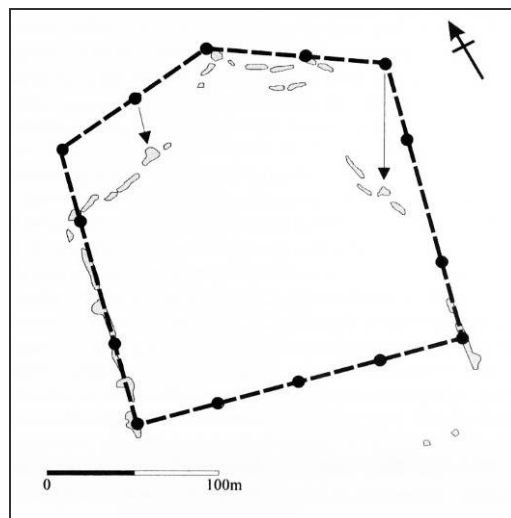
Fig. 34 The proposition of the reconstructed plan of Lympne fort (after Pearson 2002, 33).

Dover: Overlying a part of a second century fortification, the late Roman fort has been excavated for its south-western part only. The structure presents a massive wall of 2.5 m thickness and seems to be of irregular shape. Of the bastions six have been found, and they are of two different types; contemporary to the wall building, or posterior (Pearson 2002, 30). One of the bastions had been installed on the northern gate tower of the second century fort eastern gate.
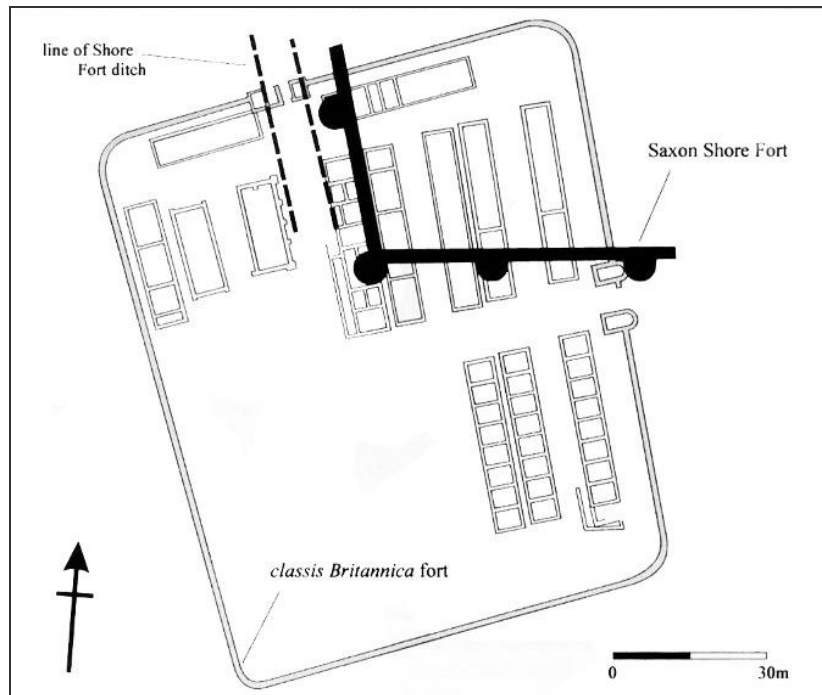
Fig. 35 The late Roman fort of Dover (in black) overlying the second century fortification (after Pearson 2002, 30).

Portchester: This fort is one of the best preserved of the shore forts of southern Britain. Its plan is a square of almost 200 m per side and the walls were provided with 20 circular planed towers. On each side a gate opened in the middle, and the two main gates (east and west) were set behind the main wall line. Military activity is attested until the later 4th century, but it does not seem to have been well organised after 365 (Pearson 2002, 38).
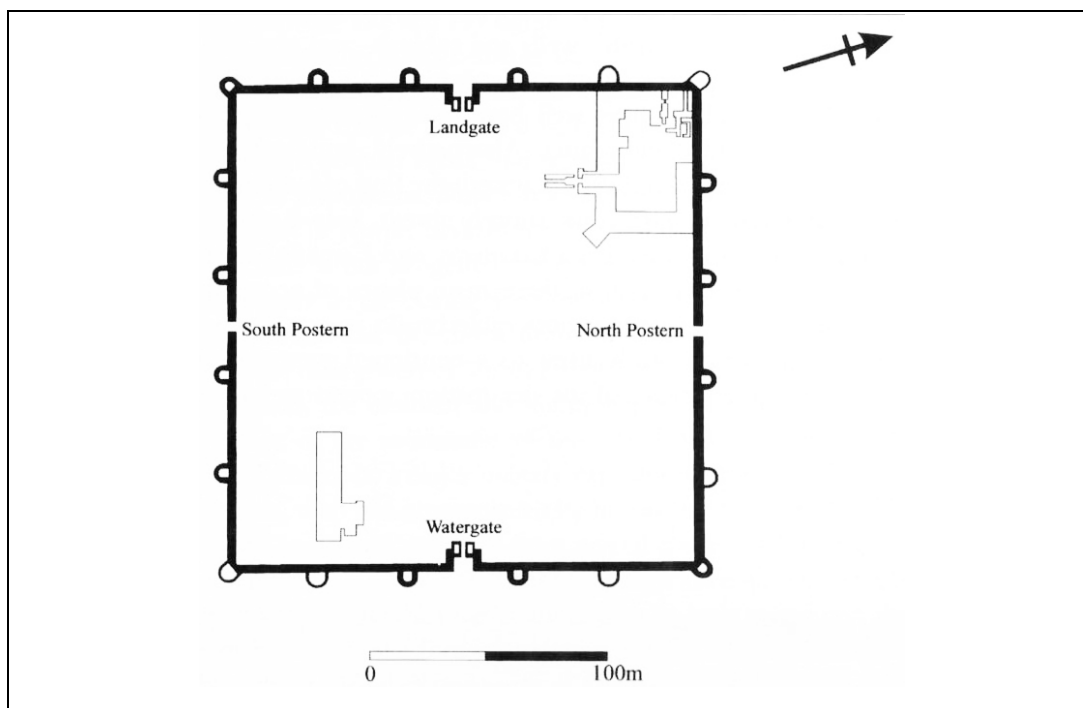
Fig. 36 the shore fort of Portchester (Pearson 2002, 37).

4.4. The 4th century

With the Diocletianic reformations of the Empire, Britain was organised in 4 administrative provinces: Britannia Prima, Britannia Secunda, Maxima Caesariensis, Flavia Caesariensis. The *vicarius* leading the dioceses responded to the praetorian prefect of Gaul (as did Spain). The military subdivision of the area resulted in three offices; the *Dux Britanniarum* commanding the garrisons of the north, The *comes Litoris Saxonici* [19] responsible for the functioning of the south-eastern shore forts and the Channel fleet, and the *comes Britanniarum* who commanded the field army (Scullard 1979, 171). A long and lively debate is still in course regarding the *Litus Saxonicum* and its interpretation. The *Notitia Dignitatum* mentions it for the first time; the redaction of this document, for the *pars Occidentis,* is dated to the last quarter of the 4th century but

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[19] This title is first attested in 367, but is most likely a Constantinian office.

might refer to Constantinian organisation at the earliest. A second redaction is dated to 400 A.D. In the period following Constantine's proclamation to emperor, Britannia seems to live a phase of discrete peace and prosperity, the forts of the southern coast remain occupied. In the northern frontier of the island new constructions are attested, but seemingly the south was rather secure.

It is in the reign of Constantine's son Constans that a new fortification is built on the southern coast; the fort of **Pevensey**.

This fort has a very irregular plan, almost elliptical with the towers distributed asymmetrically around its perimeter. The gate which are still visible today are three, the western gate and a smaller east gate, on the northern wall a narrow postern. The strange irregular shape is probably due to the conformation of the sort of peninsula on which it was built. (Pearson 2002, 34).
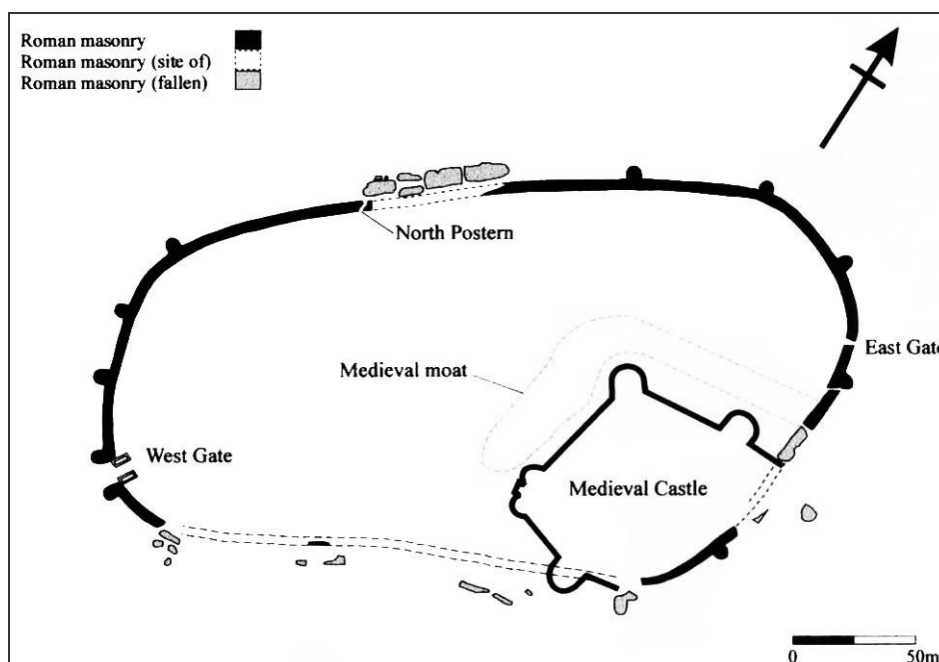
Fig. 37 The fort of Pevensey Castle (Pearson 2002, 35).

After the Valentinian period, a brief attempt to hold the provinces of Britain was made, especially under Theodosius I, from whom we know he began a refortification action in Britannia. Many cities were provided with strong walls and forts were strengthened, but this measure did not touch the south-east as the evidence for it is recorded in the north only, along Hadrian's Wall and the towns south of it (von Petrikovits 1971, 186).

From the southern shore forts, no occupational evidence seems to reach far into the 5th century and it would seem that the forts were abandoned some time after the withdrawal of the army. Some sites have yielded evidence for a later Germanic occupation, as has Portchester, but the archaeological record suggests that there is no relation between the late Roman and the Saxon phase (Esmonde Cleary 1989, 143).

5. Closing considerations

After the exposure of the resource and its historical contextualisation, the data will be combined and analysed. A chronological approach will be followed to explain the development of the defensive system on the northern *limes* area and some problems will be raised regarding the army and the frontiers.

5.1 The Gallic Empire

First we will consider the measures taken by the Gallic Empire; the first systematic fortification of the *limes* area is recognisable. The frontier line along the lower Rhine was provided with new forts and the techniques used are typically Roman. This implies that Postumus did not want to cause a caesura with central government; the land was still Roman, inhabited by Romans and the troops would build fortifications of Roman planning. We find, therefore, fortifications of a reduced area compared to earlier structures, the ditches are wide and further from the structure itself leaving a lager berm.

Much attention is given to the communication roads which are now fortified with *burgi* along them. The first town fortifications appear in Germany and Gaul, enclosing a very small area of the settlement; it is possible to attribute those structures to a military or civilian occupation and are therefore of difficult interpretation. The evidence of wall rebuilding in a later context would lead to interpreting these *burgi* as military structures.

On the Channel coast new forts are built, but their interpretation is also dubious. They could be seen as the first measure taken to prevent pirate raids form the Germanic populations which appear in this period in

the North Sea, but their function could be of different origin (see **fig. 38**). Even if these structures were partly meant to provide protection for grain stores for the troops, their military function cannot be denied, and as such a defensive function must have been thought of. The coasts of Britain and Gaul were undoubtedly exposed to Germanic raiding and these fortifications must have provided control of the seashore.
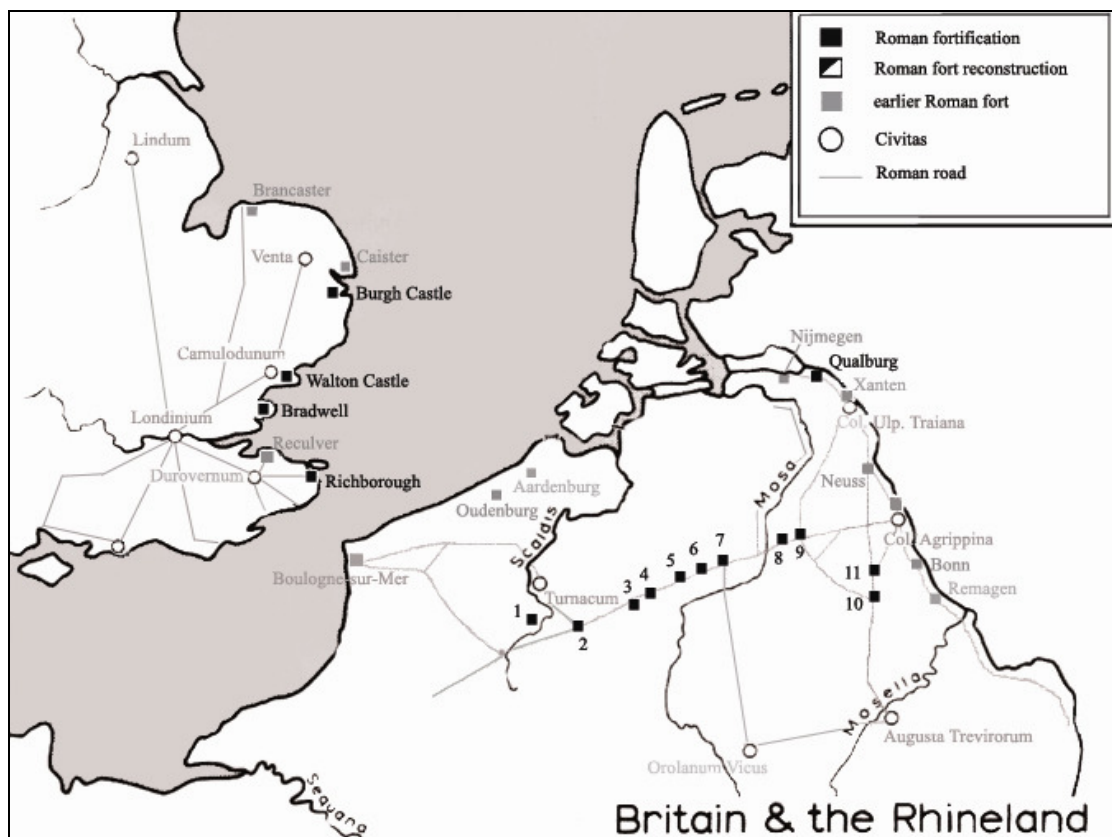
Fig. 38 The forts built under the Gallic Empire. 1. Famars; 2. Bavay; 3. Morlanweltz; 4. Liberchies; 5. Taviers; 6. Braives; 7. Tongern; 8. Valeknburg; 9. Goudsberg; 10. Froitzheim; 11. Villenhaus. (from du Pat Taylor and Cleere 1978, viii; modified by Turk 2012).

Fundamental for the movement of the troops was the road system which the Romans had built in the provinces. This system had been created in the very early stages of the occupation and later Romanisation, and must have been maintained by the *limitanei* troops in the later Roman

period, in the case of the *limes* road. As stated above the roads were provided with small fortifications to defend the hinterland from incursions and allow fast communication. When the field army arrived in times of open war, the roads had to be ready for massive troop movement. Furthermore, the roads were needed for army supply transport, but also trade would be exercised through them.

Fig. 39 Overview of the road system in Britain and the Rhineland (from du Pat Taylor and Cleere 1978, viii; modified by Turk 2012).

A most interesting study by Fulford and Bird (1975) on late Roman pottery imported from Germania and Belgica in south-eastern Britain gives us the means to suggesting that from the late 3rd century, but as far as at least the mid-4th, the areas were tied by strong commercial bonds. This type of Germanic pottery has a limited distribution in the south-eastern shore area, well corresponding to the fortification line along the

coast. The distribution of the finds revealed, however, that the trade was not meant for a strictly military target; some fortifications did yield very little evidence for it, while others, together with some fortified towns produced a consistent amount of material.

From here the scholars deduce that the trade was of civilian type but was specially demanded by those garrisons in the south eastern littoral fortifications, but not systematically acquired for them (Fulford and Bird 1975, 181). It could be ventured to say that some garrisons might have acquired there vessels because of their German origin. The main trade routes to and from Britain were from Nijmegen to the south-eastern coast of Britain, and from Boulogne-sur-Mer to Dover or Richborough (Lewis 1978, 8), either route could have been used here for commercial transport from the Rhineland.
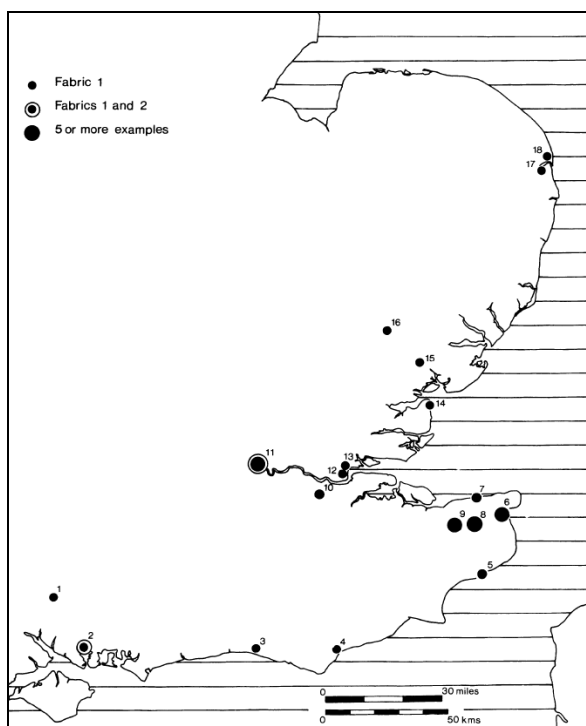
Fig. 40 The distribution of Germanic pottery in south-eastern Britain in the late 3rd and the 4th centuries (after Fulford; Bird 1975, 180).

5.2 The British Empire

The usurpation of Carausius did not much affect the lower Rhine frontier, but the coast of Gaul and Britannia. Historical sources report of his low descent and his rise to a commanding position of the Channel fleet. Carausius was a Menapian, a population which lived between the Rhine delta and the Scheldt, known to have been experienced seafaring people (Williams 2004, 7). As already mentioned above, the commander was appointed the task of getting rid of the Germanic raiders devastating the Channel coasts. Eutropius mentions both Franks and Saxons[20], but he wrote more than half a century after the historical events and Carausian contemporary sources do not mention the latter (Williams 2004, 13). In fact, archaeological evidence does not support the statement of a Saxon presence, at least not on the British isle (see below "The problem of the Saxon Shore").

The commander of the Channel fleet seems to have been rather successful and this might be the reason why he attracted the attention of the emperor, who sent out the accusation that Carausius intentionally left the Germans raid the shores in order to get the booty back from them on their way home and keep it to himself (Williams 2004, 8). We do not know the veracity of these accusations, we only know that Carausius seized power with the support of the British troops and the fleet and proclaimed himself emperor of Britain and the Channel coasts of Gaul (Mattingly 1965, 331). He has at least two legions at his disposal, the II *Augusta* and VI *Valeria Victrix* in Britain, and probably the XXX *Ulpia Victrix* in Boulogne (Williams 1985, 59). Archaeology gives us numerous evidence of the Carausian period, most important for the dating of sites is the coin

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[20] *Eutropius Liber IX*, 22.

evidence. The forts which have yielded Carausian coins are Rhichborough, Portchester, Lympne and Burgh Castle.

As already stated, these forts, with the exception or Portchester, all underwent reconstruction in this period and their first construction is dated to the Gallic Empire. If Saxon raiding on the island seems to be scarce, Carausius must have started reconstruction to protect his domain from the Imperial army. It is still plausible to think that such raids did take place, even if in a smaller scale, and that these forts were meant to provide protection from both Germans and Romans. Important to mention is that during his reign, Carausius fortified the western coast, especially in Wales. It seems that, next to the Imperial fleet, the commander and British Emperor must have had problems with raids from Ireland. Some forts however seem to have been abandoned around this time, such as the fort of Caerleon (Williams 2004, 14).

On the continent very little work seems to be done, either on the Channel coast within Carausius reign, as well as on the German frontier. It could be suggested that the main effort needed to efficiently fortify the Rhine frontier had been made during the experience of the Gallic Empire, and such forts were still in perfect condition as well as in a proper disposition along the *limes* area. Only the last phase of Oudenbourg seems to be dated to this period, but its interpretation is not clear. It was probably not part of the British Empire; it could have been reinforced in view of the campaigns against Carausius. In the end the British provinces were re-conquered, Allectus, who had killed Carausius and taken over his reign, was killed but no further damage seems to have affected the island or the continent.
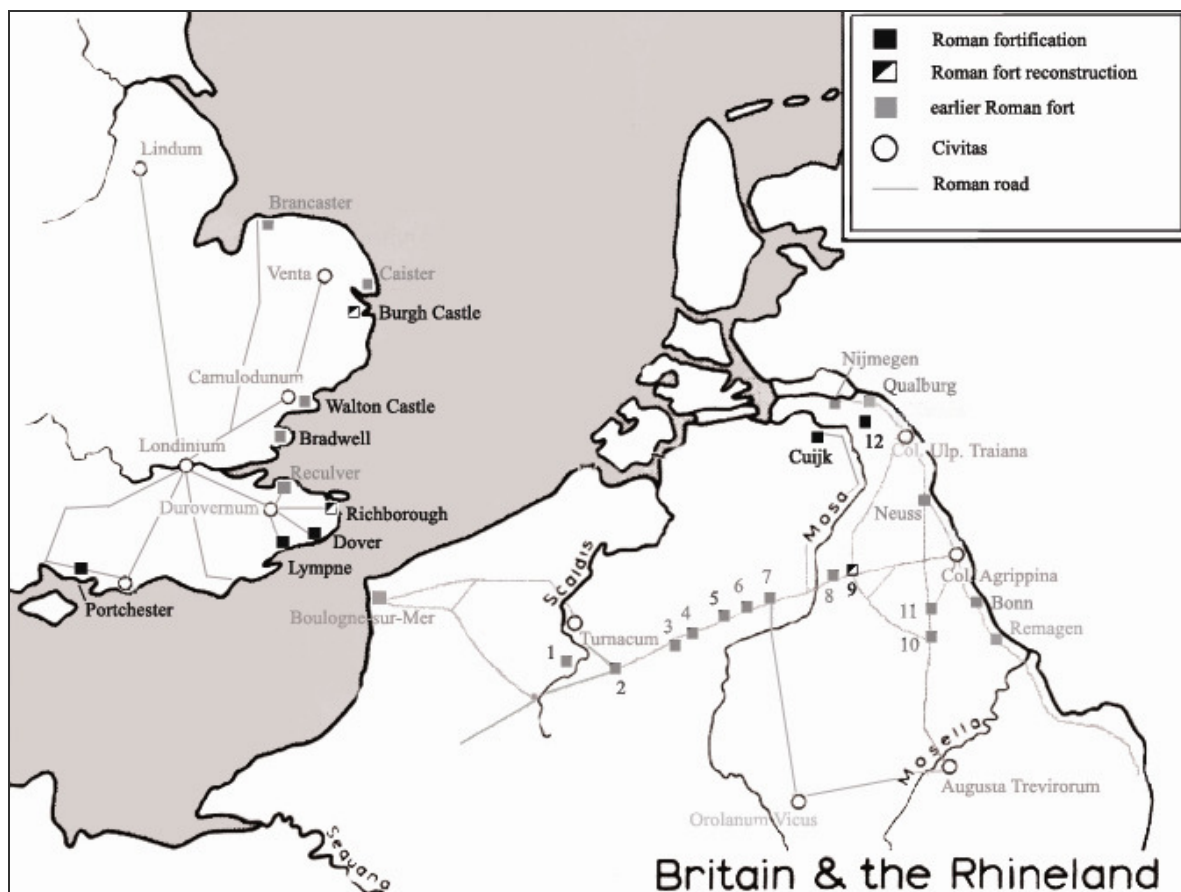
Fig. 41 The forts built under the British Empire. 1. Famars; 2. Bavay; 3. Morlanweltz; 4. Liberchies; 5. Taviers; 6. Braives; 7. Tongern; 8. Valeknburg; 9. Goudsberg; 10. Froitzheim; 11. Villenhaus; 12. Asperden; (from du Pat Taylor and Cleere 1978, viii; modified by Turk 2012).

On the model of the Gallic emperor Postumus, Carausius issued his own coin series; the assimilation of the two separatist episodes is evident (Williams 2006, 60). An interesting detail regarding the Carausian coinage is the mention on some issues of legions with certainty stationed in other parts of the Empire. Next to the British legions, some are mentioned from the Lower Rhine (I *Flavia Minervia* and XXX *Vlpia Victirx*), the Upper Rhine (XXII *Primigenia* and VIII *Augusta*) but even one as far as Dacia, the VII Claudia. It is not clear why Carausius would have minted coins with the mention of legions stationed in such far away regions, the first theory was that he wanted to win those troops over, but this is not possible for Danubian and Dacian garrisons, perhaps on the lower Rhine. Another

theory is that he wanted to reassure the people of Britain of the support of other troops for his reign and the spread of it on the continent.

The most supported theory is the one suggested by Williams (2004, 69) that detachments of these legions were stationed on the Channel when Carausius was appointed the command of the fleet, and that they too had been supportive of his act (Williams 2004, 69).

5.3 From Constantine to Valentinian I

In the previous chapters we have seen that from the end of the 3rd century, to the Constantinian recovery, not much reconstruction work has been done on the lower Rhine frontier or south-eastern Britannia. Most construction work is devoted to recovery of pre-existing fortifications, but there is also a clear change in frontier policy to be noted. Constantine ordered the building of a number of bridges on important river crossings in the German *limes* area. In first instance the bridge next to Köln, or the bridge at Cuijk in the northern frontier zone. These bridges were of great importance for the communication but also the transport.

It has been suggested that, especially the bridge at Köln with the massive fortification of *Divita* as its bridgehead, was meant to symbolise a more aggressive frontier policy. But we know from historical sources that Constantine and the following Emperors applied much more the device of diplomacy in the relations with the barbaric tribes that had been before. A strong concentration of Roman gold *solidi* and *multipla* is attested for the reign of Constantine and his house, later Valentinian, which proves the intensive appliance of diplomacy in Roman-barbarian relations during the 4th century (Bursche 2001, 89).
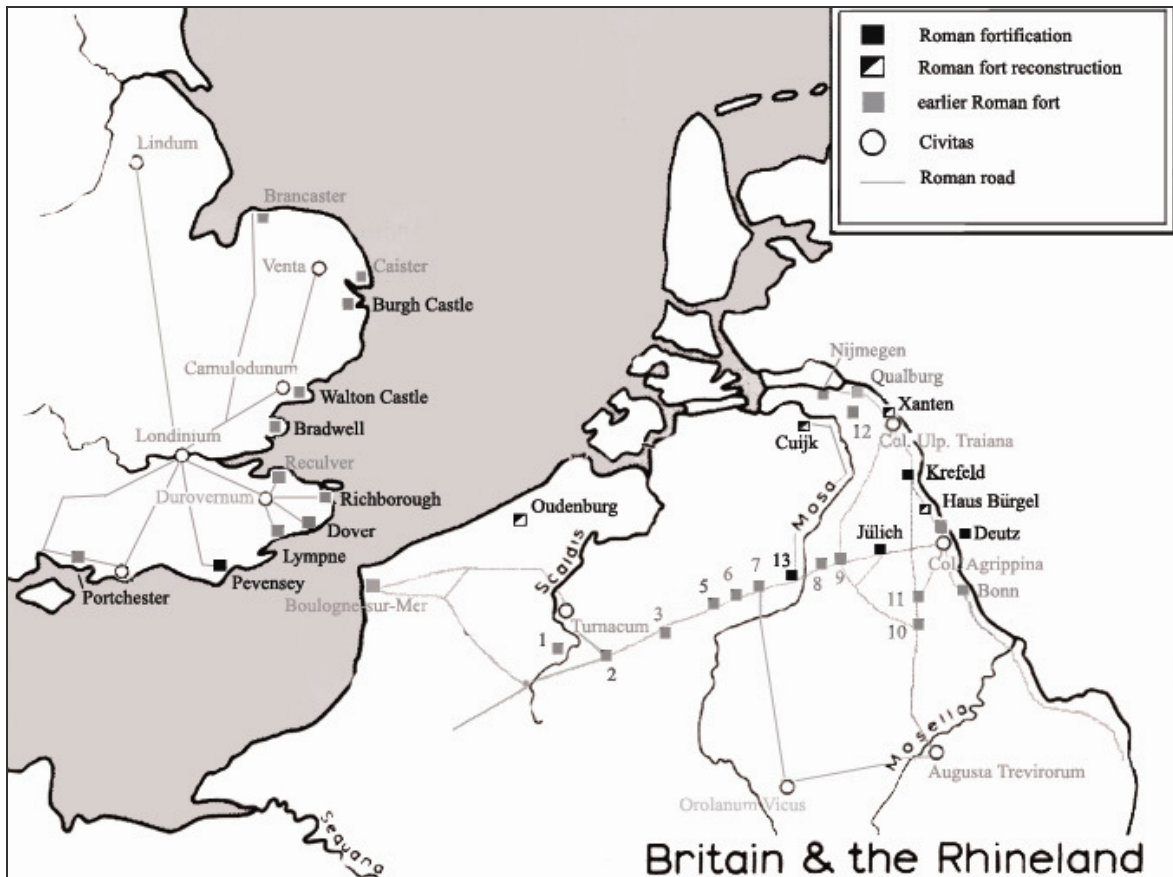
Fig. 42 The forts built under the Constantinian dynasty. 1. Famars; 2. Bavay; 3. Morlanweltz; 5. Taviers; 6. Braives; 7. Tongern; 8. Valeknburg; 9. Goudsberg; 10. Froitzheim; 11. Villenhaus; 13. Maastricht; (from du Pat Taylor and Cleere 1978, viii; modified by Turk 2012).

It is interesting to note this coincidence between the afflux of the Roman gold coins in the *Barbaricum*, and the mere reconstruction of pre-existing fortifications instead of *ex novo* foundations. The area of distribution of the Roman coins is not immediately behind the frontier line but rather in the barbaric hinterland (see fig. below). Very few are the coins found among Frankish lands; this could mean that with the Franks, in part already settled on Roman soil, the emperors had diverse diplomatic contacts, while with the populations further to the north-east different political relations were necessary.

To support this theory other types of archaeological finds of Roman manufacture emerge more clearly in this period. Luxury goods and weapons could also have been payments to German soldiers who had fought for Rome, and there might also have been a cultural or aesthetic interest for them. It is interesting to note, that the types of vessels found are prevalently Samian ware, glass vessels and bronze buckets, and the latter two categories originated from the Rhineland (Bursche 1996, 34f). In this context we can imagine a different meaning behind Constantine's attempt to connect barbarian and Roman soil, other than simple military motives. There is no doubt that the fort at *Divita* and the bridge connecting it to Colonia Agrippina were put under strong control from the army, and that at need it would serve as the gate for enemy repulsion, but it also opened the way for diplomatic and commercial intercourse.

Fig. 43 The distribution of Roman *solidi* and gold medallions beyond the northern frontier (after Bursche 2001, 84).

These political contacts and the lack of new fortifications along the frontier line does not mean that no Frankish or even Saxon incursions occurred in the first half of the 4th century, Ammianus Marcellinus reports such raids during the reign of Valentinian (*Amm. Marc.* XXVII, 8.5). It could be that, obliged by financial strain and more imminent threat in the East, some sort of provisional solution had been sought. Stallkencht (1969, 30) argued that the Constantinian "foreign policy" and, following his steps, his successors' did not change the legal status of the *foederati* and *laeti* for the Empire[21]. This fact is important in the view of lacking *ex novo* fortifications on the Rhine and in Britain as it implies that the same ties still bound the two. In this case, the Franks did not need to be appeased with special gifts such as gold medallions.

Still there is evidence of a strong policy regarding the image that the Romans wanted to deliver to the Germanic tribes, and such was accomplished by the construction of an imposing fort at the only easy crossing of the Rhine, the bridge of Köln. As mentioned above, not only military control could be carried out, but also supervision over commercial exchange with barbaric merchants.

The installation of bridgeheads reflects, however, a clear intent of impressing the barbarians with a symbol of control over the frontier river. On the British coast only one fortification was added to the shore forts, Pevensey, as the incursions begin to become more insistent. This fort has been dated to the reign of Constans and fits in well with his campaigns to re-appease the frontiers driving back Franks from the lower Rhine and Saxons from Britain (Stallknecht 1969, 43).

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[21] For a detailed analysis of the relations between the Roman Empire and *foederati* from Constantine onwards see Heather, P. 1997. "*Foedera* and *foederati* of the fourth century" in Pohl, W. (ed.), *Kingdoms of the Empire*, Brill, Leiden – New York – Köln.

New invasions are attested under the reign of Julian, and even Ammianus Marcellinus (18, 2, 4) records the massive reconstruction works along this part of the frontier, and the archaeological evidence supports his statement. Reconstruction work is actually attested at Cuijk, Qualburg, Xanten and Bonn. The historian relates those sites to be cities, but some are definitely meant to be fortresses such as Xanten and Bonn, although some work must have been carried out in the *canabae* and towns as well. It is interesting to note that Ammianus mentions the auxiliary troops to have helped in the restoring of the structures hinting that this was an uncommon practice (18, 2, 6). This supports the idea that most of the cities cited are in fact forts, because generally only legionary soldiers built such fortifications. He apparently restored the supply route of grain shipped over from Britain and rebuilt the granaries along the Rhine mouth (18, 2, 3).

Even barbaric kings are mentioned to have helped with the supply of building material, and this tells us that diplomatic relations still existed in the area (18, 2, 6). Finally, the historical account tells us something more about foreign policy by relating that Julian denied the authorisation for the construction of a bridge crossing the Rhine at *Mogonaticum* – Mainz, "declaring that they ought not to set foot in the lands of those who had submitted, for fear that (as often happens) through the rudeness of the soldiers, destroying everything in their way, the treaties might be abruptly broken"[22]. If this policy could be extracted to Constanitine's policy, we might deduce that the relation between Romans and Franks was different than that between Romans and Alamanni. Even though there was a treaty

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[22] *Amm. Marc.* XVIII 2, 7: (…) asserens pacatorum terras non debere calcari, ne (ut saepe contigit) per incivilitatem militis occurrentia vastitantis, abrupte foedera frangerentur. Translated by Rolfe (1982, 409).

with the Franks, and diplomatic relations with other Germanic tribes behind them, the construction of a bridge must have meant to be a forceful demonstration of power (Stallknecht 1969, 33).

After this date, only few traces are visible in the archaeological evidence regarding the fortification structures; Asperden and Qualburg have yielded evidence of rebuilding of this period. Bursche (2001, 98) records similar golden medallions in the barbaric hinterland as the ones portraying Constantine, and a similar policy line could be presumed.
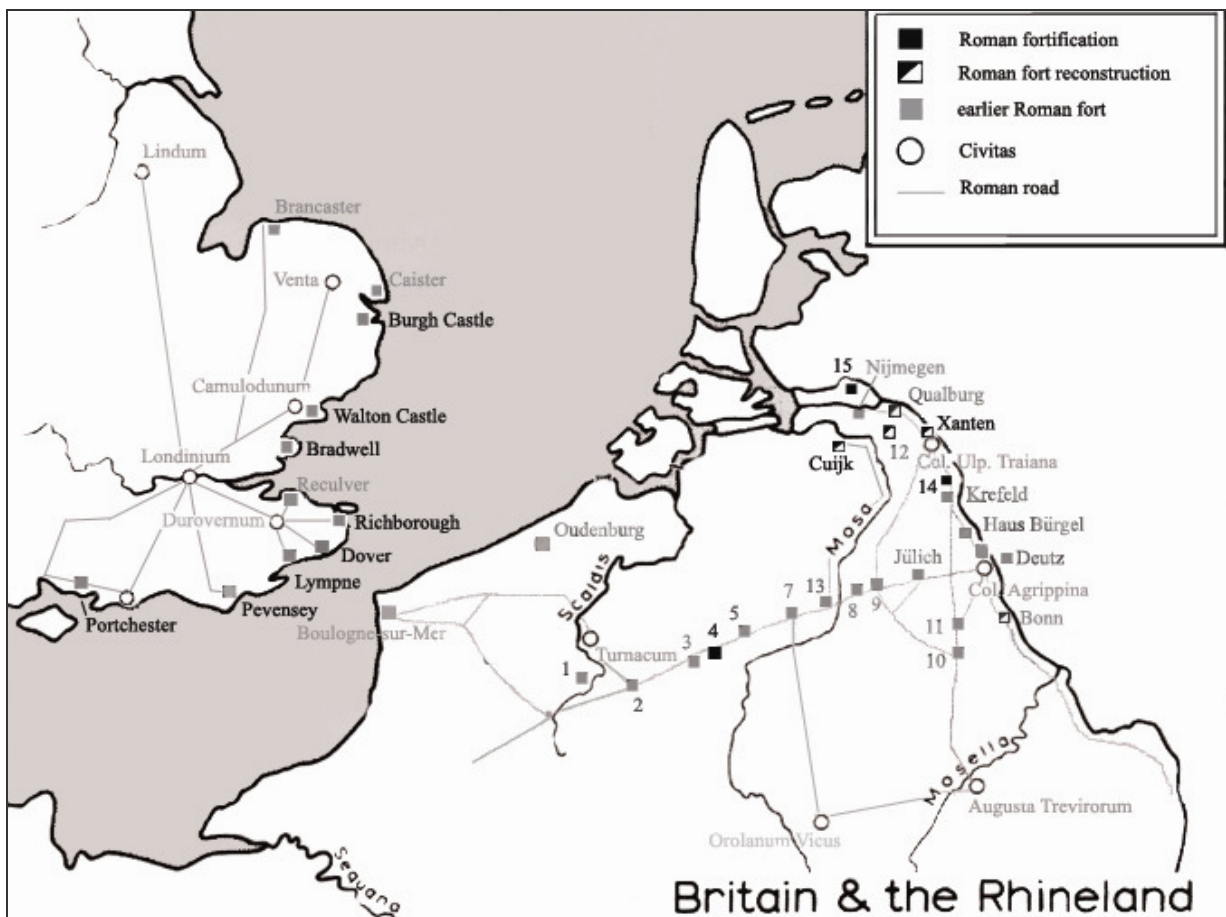
Fig. 44 The forts built Valentinian. 1. Famars; 2. Bavay; 3. Morlanweltz; 4. Liberchies; 5. Taviers; 7. Tongern; 8. Valeknburg; 9. Goudsberg; 10. Froitzheim; 11. Villenhaus. 12. Asperden; 13. Maastricht; 14. Duisburg; 15. Meinerswijk; (from du Pat Taylor and Cleere 1978, viii; modified by Turk 2012).

The raids did not stop either on the continent and Rhine, or on the Channel coasts, and with the great invasion of 395 a great part of the frontiers had been lost; it would not be long now before Honorius will withdraw the troops from the northern provinces of the Western Empire. He did not nominally give the territories up, and some sort of military presence is attested by the sources. The emperor, however, advised the population of these provinces to take the reins and think of their own defence against the Germans[23], and this might be significant in regards to the diminishing importance of those lands for the imperial power.

Finally with the massive invasion of 406 and the garrisons of the lower Rhine and Britain had been withdrawn, the populations of those territories were advised to defend themselves against the barbarian invasions. These provinces were now lost forever to the Roman Empire and would from now develop independently. One was settled by Franks with Köln as their capital, and Britain was left to the definitive migration of Saxons and Angles.

There is occupational evidence for the 5th century on some military sites of the frontiers we are concerned about, but is seems that these were of a more civil nature; the best representative site is again Bonn, which shows traces of a civil settlement and even the presence of a church. In some cases continuing occupation is attested primarily by the prolonged use of cemetery areas close to the fortifications, e.g. at Oudenburg, but it mostly ceases to be of military type (Mertens 2006, 364). German settlers installed new settlements in Roman abandoned villas and at times in fortifications as is the case of Krefeld (Thoen and Vermeulen 1998, 6) or Portchester (Cunliffe 1975, 190). The situation after the Roman official

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[23] *Zos.* VI, 10, 2.

withdrawal must have been quite heterogeneous, with partly former Roman soldiers and their families still living in those areas, Germanic peoples who had settled in Roman land before the end of the provinces of the West, and new Germanic migrants.

5.4 Garrisons

Concerning the garrisons stationed in the different fortifications, only scattered records have come down to modern times and they necessitate of careful handling. Epigraphic evidence attests the presence of the legions on the territories for the end of the 3rd century. We find two legions stationed in Britain, the *legio* II *Augusta* at *Rutupiae* (Richborough) and the VI *Victrix* at *Eburacum* (York). In Germania Inferior (Secunda) only the *legio* I *Minervia* at *Bonna* (Absil 2004, 120) remained.

For the 4th century not much more information is given on the distribution of the troops and generally the epigraphic evidence contributes the most. In regards to the late 4th century, on the other hand, there exists one historical source which is of primary importance: the *Notitia Dignitatum*[24]. This document consists of a list of civil authorities and military commands with their garrisons for the whole Roman Empire and seems to have been compiled approximately in 400 A.D.[25] The work subdivides the enumeration between western and eastern Empire and the part mentioning Rhine and Britain is found in the *pars Occidentis.*

In regards to the British part much information is given about the garrisons of the island for both *comitatenses* and *limitanei*; *comes*

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[24] On the *Notitia Dignitatum* see Bury 1920, Jones 1964, but it is generally mentioned in most works on the late Roman Empire and late Roman army, such as Richardot 2005 and Le Bohec 2008.

[25] On date of the document much is still debated. It seems to be generally accepted, that the author wrote around 400 A.D. or slightly later, but that he used outdated documentation and would therefore partly correspond to the situation of 395 A.D. (Jones 1964, 347; Esmonde Cleary 1989, 20).

Britanniarum in the first case, *Dux Britanniarum* and *comes litoris Saxonici* in the second. The latter two were respectively on the northern frontier along Hadrian's Wall, and on the south-eastern coastline of Britannia. The area which concerns this study corresponds to the command of the *comes litoris Saxonici per Britanniam.* The stations mentioned to have composed the littoral defences have almost all been identified and correspond to the fortifications named in the previous chapter; from north to south Brancaster, Bourgh Castle and Bradwell in East Anglia, Reculver, Richborough, Dover, Lympne in Kent, Portchester and Pevensey on the southern coast (Sussex and Hampshire).
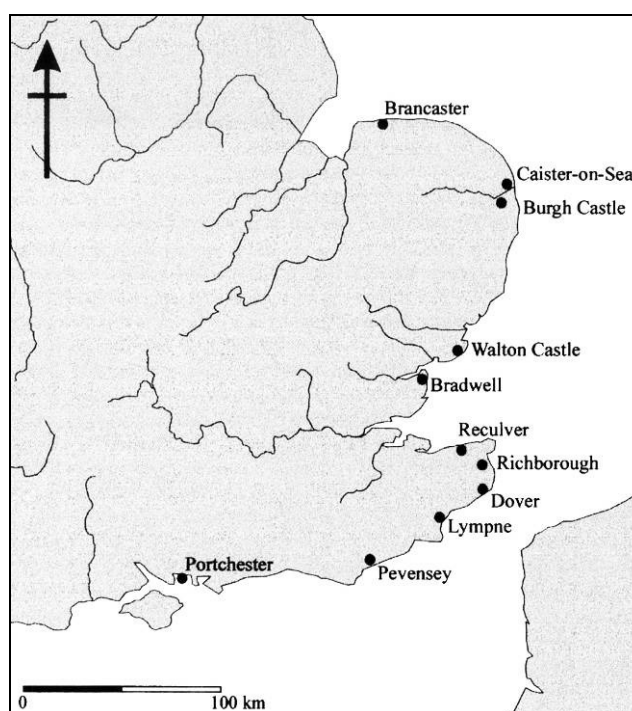
Fig. 45 The fortifications of the *litus Saxonicum* in the *Notitia Dignitatum* (after Pearson 2002, 12).

The *Notitia* mentions not only the fortifications of the *litus Saxonicum*, but also which garrisons were stationed in each of them:

"Sub dispositione viri spectabilis comitis litoris saxonici per Britanniam:

1. Praepositus Numeri Fortensium Othonae, (Bradwell)

2. Praepositus Militum Tungrecanorum Dubris, (Dover)

3. Praepositus Numeri Turnacensium Lemannis, (Lympne)

4. Praepositus Equitum Dalmatarum Brandodunensium Brandoduno,

5. Praepositus Equitum Stablesianorum Gariannonensium Gariannonorum, (Burgh Castle)

6. Tribunus Cohortis Primae Vetasiorum Regulbio, (Reculver)

7. Praefectus Legionis Secundae Augustae Rutupis, (Richborough)

8. Praepositus Numeri Abuleorum Anderidos, (Pevensey)

9. Praepositus Numeri Exploratorum Portum Adurni, (Portchester)"[26]

The find of a helmet in Burgh Castle, dated to the middle of the 4th century, is associated by typology and construction technique to a helmet found in Deurne (southern Netherlands), in the *limes* area south of Nijmegen (Johnson 1980, 312)[27]. The latter bears the inscription STABLESIANA VI[28] and we know from the *Notitia Dignitatum* that the same cavalry unit was stationed in Burgh Castle in the 4th century. These facts reflect again the connection between the lower Rhine with northern Gaul and Britain, as the same garrisons were moved from one to the other, at least in one case.

Unfortunately the *Notitia* does not tell us much about the garrisons in Germania Secunda or Belgica Secunda. We find mention of a *dux Tractus Armoricani* which mentions the garrisons stationed along the western continental part of the English Channel, also within the defence of the *litus Saxonicum.* Further north we find the *dux Belgiae Secundae* which concerns us more:

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[26] *Not. Dig. pars Occ. cap. XXV* (after Böcking, E. 1839-53).

[27] See Johnson 1980 for a detailed study of the construction technique of the two helmets.

[28] This inscription could refer to a troop of the Stablesiani, the sixth part of it, or to a victory of the unit as in *vi(cit)*. See Johnson 1980, 312.

"Sub dispositione ducis Belgiae Secundae:

1. Equites Dalmatae Marcis in Litore Saxonico

2. Praefectus Classis Sambricae in Loco Quartensi sive Hornensi

3. Tribunus Militum Nerviorum Portu Aepatiaci"[29]

The association of these names with archaeological sites is less certain compared to the British section. It is possible that the *Portus Aepaticum* is to be associated to the site at Étaples in northern France. Boulogne-sur-Mer is not mentioned.

There are no other garrisons comprised in the *Notitia* regarding the areas we are concerned with. No mention is made to Germania Secunda, only the part of the dioceses of Gaul. The reference to a *dux Magontiacensis* is made, but it only regards the garrisons in Germania Prima. It might be worth noting that in both Britannia and Belgica the *equites Dalamatae* are present; it could be that the unit was once a single garrison, and that part of it had been removed and sent to the island, or that the mention of them under the command of the *dux Belgiae Secundae* was out of date.

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[29] *Not. Dig. Pars Occ. cap. XXXVII* (after Böcking, E. 1839-53).
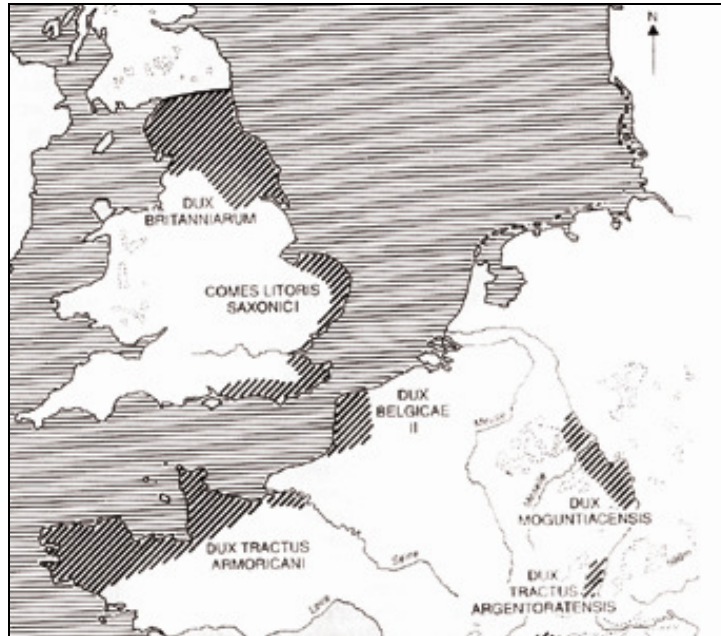
Fig. 46 The commands of Britain and Gaul mentioned in the *Notitia Dignitatum* (after Esmonde Cleary 1989, 21).

5.5 The problem of the *litus Saxonicum*

The problem of interpretation of the meaning of *litus Saxonicum* still remains open, as scholars are not of the same opinion; it has been argued that the term derives from the Saxon settlement on the southern coast of Britannia and on the continent. This interpretation would presume that there were Saxon *foederati* which had been conceded lands in Britain and Gaul, and though it cannot be entirely implausible, it would certainly seem improbable that Roman authorities would name a coastline after them (Wood 1990, 93). The second hypothesis concerning the naming of the shoreline is that it was named thus because of raiding from the Saxon populations from the north of the lower Rhineland, but this theory is not without some doubtful elements (Pearson 2002, 131).

The English term "Saxon Shore" equally poses some difficulties to modern scholarship, as recently it has been abandoned in favour of a simpler and less pretentious "shore forts". The reason for this uneasiness in applying the former to the series of coastal fortifications in south-

eastern Britain is explained with the date of the *Notitia Dignitatum*, and the dating of the structures through archaeological evidence. The term *litus Saxonicum* does not appear in other contemporary historical sources, the *Notitia* is the first to apply the term and it has been suggested that using the term for the whole line of forts in those stages is anachronistic, for it had not been designed as a single building programme. The *Litus Saxonicum* was called thus later when the forts, which are not contemporary to each other, were recorded in the official document around 400 A.D.

For this reason many scholars prefer to avoid the use of "Saxon Shore", while until the 70's and 80's (Johnson 1979) the name was almost arbitrarily used. There are still enormous difficulties in placing the forts of the *litus Saxonicum* on the continent, partly because of the scarce archaeological record in regards to fortifications for the late Roman period. The *Notitia Dignitatum* as well is unreadable in this viewpoint, as it mentions only two forts to be part of the "*litus Saxonicum*" – *Marcis* under the command of the *dux Belgiae Secundae*, and *Grannona* under the *comes Tractus Armoricani*; there seems to be no systematic chain of forts to form a shore defence against the Saxons there.

The fact that these forts do not have harbour installations brought some scholars to think of a different function of them. In addition, the garrisons mentioned in the *Notitia* are mostly infantry. If the shore forts were placed there to provide protection from possible sea raids, cavalry units would certainly have been necessary for a fast deploy of the forces. From calculations of the time that the Saxons would have needed for crossing the Channel, and the return journey after raiding and the necessary rest for the man, it resulted to be almost impossible that such

raids would have taken place in the late Roman period (Cotterill 1993, 228). These elements brought some scholars (Wood 1990, Cotterill 1993) to develop the theory that these forts were actually fortified ports (called trans-shipment ports) and served as a chain of depots to supply the army both in Britain and on the Rhine land.

To sustain his theory, Cotterill (1993, 236) argues that the traces of change in their construction to the typical late Roman fortification and, on the other hand, the complete lack of such updates on earlier forts as Brancaster and Reculver, would not necessarily lead the needs of a defensive system; if the defence had been of primary importance, even the earlier forts would have been reconstructed to conform the late Roman fortification building characteristics. The importance of protecting harbours for supply shipments would seem reasonable, and we know that the *limitaei* played an important role in army supply and logistics. However plausible these theories are, it is not possible to state with certainty what the function of the forts of the *litus Saxonicum* was.

This takes us to the problem of the role of the *limitanei* in the later Roman Empire. As already mentioned, our understanding of the functions and the composition of these troops is limited and the theories about them vary. Isaac (1988) tried to investigate the meaning of the term in Antiquity and his conclusions are that whatever meaning we want to give it, from the sources it only stands when opposed to the *comitatenses*. It had been believed that these troops of the later Roman period were peasants who were paid from limited frontier defence, and that principally they were farmers (Isaac 1988, 139). This assumption has not entirely been abandoned, as there is evidence that the frontier soldiers cultivated

agriculturally the land close to the frontier where they were stationed (MacMullen 1967).

The fact that legions were also part of the frontier troops gives us an idea of the importance of the *limitanei*. Soldiers of a legion would certainly not be recruited among the local farmers and the auxiliary units were seldom stationed where they were recruited. The idea of a peasant-militia is rather controvertible; it might be the case that soldiers started cultivating lands for their own provisioning, even though this was not allowed by the law (MacMullen 1967, 18). There is no reference in the historical sources for soldier farmers, the term *limitaei* means simply 'stationed on the *limes* area' and even though some might have cultivated some land, not all of them were farmers.

The laws concerning farming in proximity of frontier forts only imply that the land was given to a certain category of people, which Isaac thinks could have perhaps been veterans (1988, 145). Only in the 5th century we have evidence that land was officially allotted to frontier soldiers, but the evidence regards the Eastern Empire only and the soldiers remained professionally organised Roman soldiers. In addition, the codes tell us about the supplies for the frontier soldiers, and if they all had their land to cultivate, this would not have been economically convenient. Furthermore, veterans were promised allotments after their service, and this would have been superfluous if they already had such land (Jones 1964, 650).

The problem of the *limitanei* concerns this study as the garrisons operating on the frontiers here examined fall under this category. Even the *burgi* in the hinterland were probably meant for the stationing of

smaller units of frontier soldiers, not for the troops of the *comitatus* when called to war as was formerly suggested (von Petrikovits 1971, 180).

In the context of the ending of the military occupation in the frontiers of the North-West, the *limitanei* play an important but ambiguous role. From the historical sources it would seem that these contingents still stationed the frontier in the 5th century, or at least some groups of the troops. The famous case of such surviving units is the one told by Eugippius in the Life of Saint Severinus, who went into Noricum and found some soldiers there still trying to hold the frontier.

From this account it is possible to read the situation which must have been in most abandoned provinces; most soldiers left after the payment ceased to arrive, and some remained to fight for the land, because, as we have seen, they would have started being stationary in the area, perhaps living with their families and cultivating land.

These are, however, only assumptions and theories, for no record is left of contemporary writers, and archaeology does not give enough evidence for interpretation. Eugippius[30] also states that the soldiers still stationed in cities received payment form the state, and this would be in line with the letter which Honorius sent along to Britain with public money fort he cities and their armies to provide for their own defence. But if the imperial money started failing to arrive in Noricum, we can only presume that it faced much more difficulties it reaching further lands such as Germania and Britain. The defence now depended on the civil administrations rather than a central authority (Ward-Perkins 2005, 26). It is no wonder that in such a scenario many legends were created, the

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[30] *Eugippius, Vita Sancti Severini*, XX, 1.

most notorious one is the legend of King Arthur taking over rule in Britain on the confused Britons the Romans had left behind.

The evidence displayed above demonstrates that in the later Roman Empire a distinct change in fortification structures occurred; these alterations were dictated by the needs of the army which had undergone considerable reformations. After the reductions of the garrisons, smaller units needed smaller forts and better defendable structures, thus thicker walls and wider ditches around them. The distribution of the fortifications suggests the necessity of spreading the fortified points along the frontier line, such as the river Rhine and the coast lines of the Channel, as well as in the continental hinterland.

While we assist an impetus of new constructions during the second half of the 3rd century where even legionary forts were abandoned and rebuilt elsewhere, like Richborough stationing the II *Augusta* coming from Caerleon, in the 4th century not many new installations were constructed. The main characteristic of the later 4th century is the rebuilding and re-fortifying of previously built structures. An interesting example is the base of *Bonna* which had been abandoned by its legion at the end of the 3rd century to be later reoccupied by *legio* I *Minervia* under the reign of Julian. The same fortification has been reused, but the archaeological record for its occupation suggests the presence of a smaller contingent.

List of figures

Abbreviations

AJ	Archaeological Journal
BAR Brit.Ser.	British Archaeological Reports British Series
BAR Int.Ser.	British Archaeological Reports International Series
BJ	Bonner Jahrbücher
Brit.	Britannia
CBA	Council for British Archaeology
CAH	The Cambridge Ancient History
DumOaks	Dumbarton Oaks Papers
JRA	Journal of Roman Archaeology
JRA Sup.Ser.	Journal of Roman Archaeology Supplementary Series
KJ	Kölner Jahrbuch
Limes XX	XXth International Congress of Roman Frontier Studies

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