Between mountains and frontiers: the Roman settlement system in the provinces of Germania Superior, Raetia and Noricum

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3. Different kinds of centres: the deeper layers of the settlement system

"Characteristic of the urbanism in the northwestern Roman provinces, where relatively little official Roman promotion of town centres happened and where the administrative territories of the few cities were extensive, was the importance of villages and subordinate centres, who provided some of the functions that were elsewhere reserved for chartered towns. Excluded from the rank of city and denied the full rights of municipal autonomy, numerous settlements existed which nonetheless acted as important local centres.", as A. Poulter phrased it.[345] It will be such centres that are the focus of this chapter. These places hosted institutions and practices that were not per se of an administrative or juridical kind, but which rather included economic, logistical, religious or other social matters. M.E. Smith described urban settlements therefore not as municipal autonomous communities, but as '*places that serve as the setting for institutions and practices that affect a larger, regional hinterland*'.[346]

As concluded in chapter two, investigating only the stratum of self-governing towns does not allow an in-depth understanding of the Roman settlement system in the northern Alpine region. J. Bintliff has even criticised the work of N. Pounds and T. Bekker-Nielsen for ignoring the urban processes occurring in the shadow of 'official' towns and pleaded for the inclusion of centres not meriting official town status when studying urbanism.[347] A perspective in which self-governing towns acted as the only focal points across the landscape has lost popularity and has given place to approaches in which travelling traders, smaller centres as well as villages and even rural inhabitation, played a more profound role in the organisation of daily life in antiquity and thus of the overall settlement system.[348]

The main aim of this third chapter will be to illustrate the diversity of the centres, other than the chartered towns, that belonged to the Roman settlement system in the northern Alpine region and that fulfilled certain central functions for a wider region. Following a brief overview of the debate concerning the denomination of these centres, their diverse nature, provisions and specialisations will be discussed over four sections. A first section will focus on garrison settlements. Production centres of ceramic wares will be explained in a second section and examples of centres specialising in other crafts, such as metal or stone processing, will be given. The third section focuses on the centres which provided a specific service for a wider region in terms of cultural, religious or logistical needs. A final section is dedicated to describing the nature and the general characteristics of this mix of possible urban centres that existed beside and between the self-governing towns.

3.1 Subordinate centres, *Kleinstädte* or *vici*?

The institution of administrative self-governing centres created an inequality between the municipal centres on the one hand and the many non-self-governing communities living in dispersed

[345] Poulter 2009, 829; 853-854.
[346] Smith 2010, 138.
[347] Bintliff 2002, 240.
[348] Condron 1995, 103; De Ligt 1993, 199-240.

agglomerations on the other.[349] Despite the fact that they might have possessed a range of administrative and economic functions, these non-self-governing centres apparently never gained municipal rights. Since these communities were dependent and owed allegiance to a higher authority, often a neighboring chartered town, modern scholars often call them 'secondary' or 'subordinate' centres.[350] Elsewhere these centres are referred to as 'small towns'/'townships' in English - or *Kleinstädte* in German scholarship. Modern scholars also regularly use the Latin term *vicus,* but that is not always justified. The term *vicus* appears frequently in inscriptions, but its exact meaning in Roman administrative language is not fully understood. The term was used to refer to many types of habitation, such as a town quarter, a built-up street, a complex building or a village-like agglomeration (far) outside the town centre.[351] Nevertheless, the usage of the term has in the archaeological literature developed to become an equivalent for village or small town, and is often applied to any Roman village-like site, regardless of the term's juridical connotations, epigraphic or literary proof.[352] However, when looking at places where inscriptions are found that confirm the existence of a *vicus*, a more cautious use of the term is appropriate.

Vicus, a pseudo-status

It has been suggested that the term *vici* related to communities that were given certain privileges or freedoms concerning legal affairs and market rights.[353] Inscriptions testify to the presence of certain magistrates who were active in these communities: *magistri vici.*[354] Although their position and role are not fully understood, it is generally accepted that these offices administered local and religious affairs and should not be considered equal to municipal magistrates.[355]

The map below (Fig. 3.1) shows the places in the northern Alpine region for which a *vicus* status could be confirmed epigraphically, while Table 3.1 gives an overview of the actual sources. A closer look at the inscriptions reveals that the evidence for a *vicus*-status is most often embedded indirectly in the way the inhabitants referred to themselves as *vicani*. It is furthermore apparent that the majority of these inscriptions belonged to communities within the province of Germania Superior, while only one *vicus* is known in Raetia. Not a single *vicus* could be attested in the epigraphic record of Roman Noricum.[356] This pattern corresponds strongly with the differences between the three provinces regarding their municipal organisation (discussed in chapter 2). More specifically, in the regions where chartered towns were more scarce and where *civitates* appeared to be the dominant

[349] Poulter 2009, 829.
[350] Corbier 1991, 212; Fischer 2002, 95; Poulter 2009, 853.
[351] Tarpin 1999, 4-6; Poulter 2009, 853; Czysz 2013, 265.
[352] Fischer 2002, 95; Tarpin 2002. The following definition by W. Czysz nicely illustrates the general application of the term *vicus* to all kinds of countryside agglomerations: *Vicus meint hier „eine kleine, eigenständige Siedlung auf dem offenen Land, jedoch ohne den landwirtschaftlichen Produktionshintergrund, und gebunden an eine Überlandstraße, die als verkehrstopographisches Element das Rückgrat der Ortschaft darstellt",* published in Heising 2012, 5.
[353] W. Czysz refers to a 2nd century text from S. Pompeius Festus and a Late Antique one by Isidorus from Hispala in which they emphased the independent government of *vici* concerning jurisdiction, and the right to keep markets (Czysz 2013, 265.). For the market function on centres referred to as *vicus*, see also: De Ligt 1993, 157-158; 173; 178.
[354] Inscriptions belonging to *Salodurum*/Solothurn in Germania Superior mention *magistri vici*, implying the existence of annually elected magistrates active in a non-self-governing centre (Niffeler 1988, 183.). Solothurn inscriptions: EDCS 13900607; 10900284.
[355] Tarpin 2003, 258-262; 264-265; Czysz 2013, 265.
[356] I see no reason to assume that different epigraphic traditions might have caused this discrepancy.

administrative unit, more *vici* are also attested.[357] Many *vici* seem to have been related to the settlements that developed in the vicinity of Roman forts. The *vici* of Benningen, *Grinario*/Köngen and the *vicus Scuttarensium/*Nassenfels are only a few examples.[358] A. Poulter has suggested that the offices for the management of civil agglomerations on military territory were based in *vici*, which might explain the strong relationship between *vici* and garrison settlements.[359] Some of these *vici* in the area of the Rhine and Neckar have been designated as the administrative centre of *civitates,* such as *Lopodunum*/Ladenburg, *Aquae Mattiacorum*/Wiesbaden or *Nida*/Frankfurt-Heddernheim.[360]

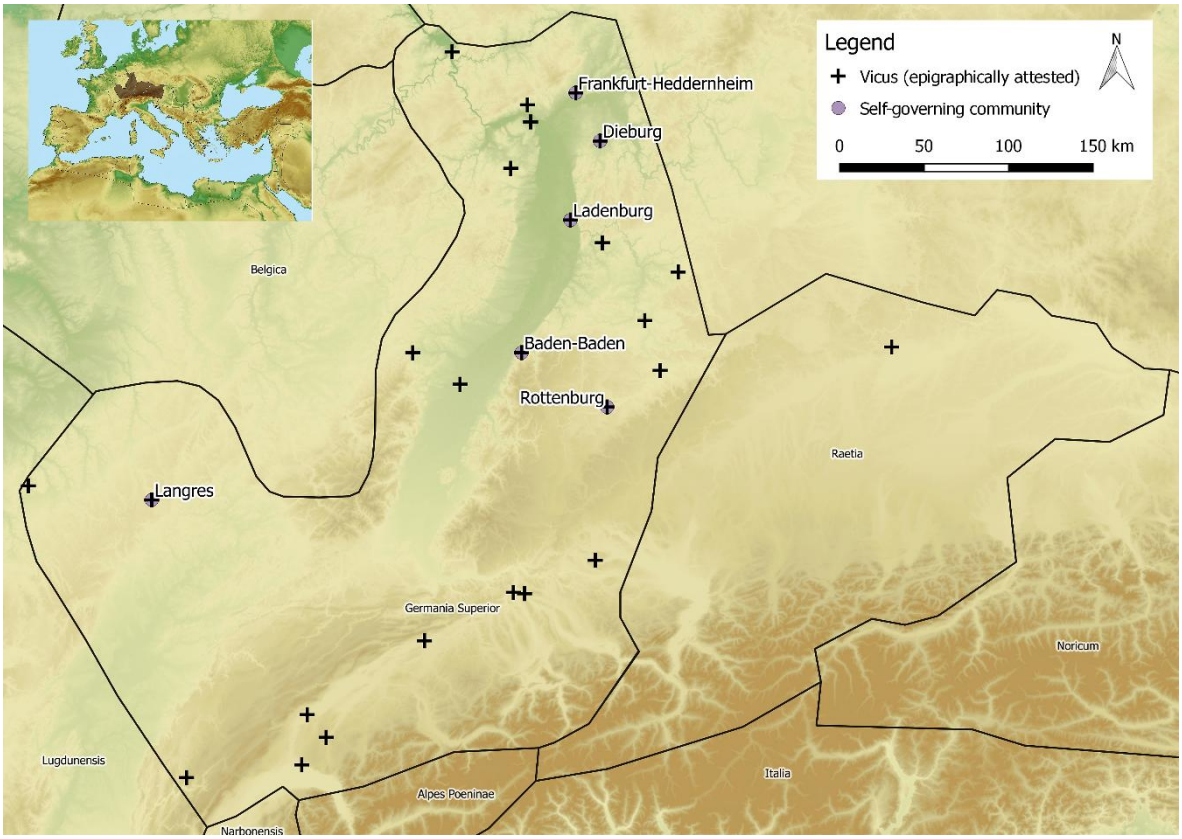


Fig. 3.1: The distribution of *vicus*-inscriptions in Germania Superior and Raetia

Overall, the distribution pattern of these *vici*-inscriptions and the privileges towards market rights and local affairs assigned to these communities, suggest to me that the term *vicus* should not be applied to all Roman centres lacking a municipal charter or subordinate to another town. Only a minority of the centres have yielded inscriptions proving their *vicus*-status. That certain communities could obtain a certain status emphasizes the diversity that characterised these unchartered Roman centres. What differentiated them even more was the range of the services that these places offered, as will appear from what will follow.

[357] For the municipal organisation of the three provinces, see chapter two.

[358] Benningen and Köngen: Filtzinger, Plack and Cremer 1976, 234-238; 333. Nassenfels: Czysz 1995, 485. The date of the inscriptions CIL 13, 11726 (Köngen) and CIL 13, 6454 (Benningen) is estimated between AD 151 and 200. I did not find a date for the inscriptions of Nassenfels.

[359] Poulter 2009, 846-847.

[360] See chapter two.

Table 3.1: Overview of the epigraphic evidence for *vici* in the provinces of Germania Superior and Raetia				
Place Name	Province	Inscription	Primary source	Reference
Alzey	Germania Superior	Vicani Altaienses	CIL 13, 6265	(Tarpin 2002, 372.)`
Baden	Germania Superior	Vikanis Aquensibus	CIL 13, 5233	(Schucany 2013, 224.; Tarpin 2002, 370.)
Benningen	Germania Superior	Vicani Murrenses	CIL 13, 6454	(Tarpin 2002, 376.)
Carden (Koblenz)	Germania Superior	Vicanorum	CIL 13, 7655	(Tarpin 2002, 372.)
Dieburg	Germania Superior	Vici	CIL 13, 6433	(Tarpin 2002, 377.)
Eschenz	Germania Superior	Vikani Tasgaetienses	CIL 13, 5254 CIL 13, 5257	(Schucany 2013, 224.; Tarpin 2002, 370.)
Frankfurt-Heddernheim	Germania Superior	Vicanis … Nide…	BRGK 58, 1977	(Tarpin 2002, 377.)
Horburg	Germania Superior	Vicanorum	CIL 13, 5317	(Tarpin 2002, 371.)
Köngen	Germania Superior	Vicanis Grinar… Vici Grinarionis	CIL 13, 11726 CIL 13, 11727	(Tarpin 2002, 376.)
Ladenburg	Germania Superior	Vicanis Lopodunensibus	CIL 13, 6421	(Tarpin 2002, 377.)
Langres	Germania Superior	Vici?	CIL 13, 5877	(Tarpin 2002, 371.)
Lousanne	Germania supwerior	Vikanorum Lousonnensium	CIL 13, 5026	(Schucany 2013, 224.; Tarpin 2002, 355.)
Mainz	Germania Superior	Vicanis Mogontiacensibus Vicani Mogontiacenses vici Novi Vicani	CIL 13, 6705 CIL 13, 6722 CIL 13, 6723 CIL 30, 6764	(Tarpin 2002, 372-373.)
Moudon	Germania Superior	Vicanis Minnodunensibus	CIL 13, 5042	(Schucany 2013, 224.; Tarpin 2002, 355.)
Nassenfels	Raetia	Vikani Scuttarenses	CIL 3, 5898	(Tarpin 2002, 355.)
Öhringen	Germania Supeior	Vicanis Aurelianensibus	CIL 13, 6541	(Tarpin 2002, 376.)
Rottenburg	Germania Superior	Vici? Magistri	CIL 13, 6365	(Tarpin 2002, 375.)
Sandweier (Baden-Baden)	Germania Superior	Vicani Bibienses?	CIL 13, 6315	(Tarpin 2002, 375.)
Solothurn	Germania Superior	Vico Saloduro	CIL 13, 5170	(Schucany 2013, 224.; Tarpin 2002, 370.)
Spechbach	Germania Superior	Vicani vici Nediensis	CIL 13, 6388 CIL 13, 6389	(Tarpin 2002, 376.)
Strasbourg	Germania Superior	Vici Canabarum et vicanorum Canabensium	CIL 13, 5967	(Tarpin 2002, 371.)
Vertault	Germania superior	Vikani Vertillensibus	CIL 13, 5661	(Tarpin 2002, 371.)
Villards-d'Heria	Germania Superior	Vicanorum?	CIL 13, 5352	(Tarpin 2002, 371.)
Wiesbaden	Germania Superior	Vicani Aquenses	CIL 13, 7566a	(Tarpin 2002, 374.)
Windisch	Germania	Vicanis	CIL 13, 5194	(Schucany 2013,

	Superior	Vondonissensibus		224.; Tarpin 2002, 370.)
Yverdon	Germania Superior	Vicani Eburodunenses	CIL 13, 5063-5064	(Schucany 2013, 224.;Tarpin 2002, 355.)
Zabern	Germania Superior	Vicani ….		(Tarpin 2002, 371.)`

3.2 From garrison settlement to civilian centre

A considerable number of chartered towns in the northern Alpine region appear to have originated as a Roman military base. The same also applies to many of the subordinate centres. The development of civilian centres in the vicinity of legionary forts was already noted in chapter two. Today, however, it is assumed that around every military fort, including the auxiliary ones, a civil settlement arose of small or large size.[361] These accompanying agglomerations at auxiliary forts were generally smaller than the *canabae* associated with legionary forts, but they underwent a similar development. These agglomerations are often labelled 'military *vicus*' or '*Kastellvicus*' in the academic literature.[362] However, to avoid the issue around the term *vicus* explained above, and to encourage an approach that includes both the military and the civilian aspects of these kind of sites, D. Mattingly has proposed the use of the term 'garrison settlement'. This term emphasises the symbiosis between the civil occupation and the fort, concerning their proximity, their shared culture and their administrative and economic unity.[363] Whether or not these garrison settlements eventually developed into civilian centres, they must have been stimulating places for the local economy. It is true that the existence of these garrison settlements is often explained by the economic stimulus created by the presence of a military unit.[364]

3.2.1 The inhabitants of garrison settlements

Roman forts generally occupied favourable locations, strategically positioned along important road junctions, and that of course attracted small groups of civilians. These people are often called 'camp followers'. When the soldiers were sent elsewhere, it is assumed that most of these people followed

[361] Until the 20th century the main interest on frontier studies focused on defensive works and pure military structures, such as forts. It was only gradually that the wider environment of these forts entered the research field and that the civilian structures on these sites became valued. The thesis of Professor C. S. Sommer "Kastellvicus und Kastell" from 1988 was the first work that analysed the settlement structures in these military environments and is still one of the leading works on the topic. Due to newer research instruments, such as the use of aerial photography and the application of geophysical survey, in combination with the UNESCO project *Frontiers of the Roman Empire*, the amount of data as well as knowledge about these military settlements has increased drastically over the last few decades. This increase in knowledge has led to the conclusion that at every Roman military site a civilian settlement can be assumed. See also: Sommer 2006, 96; 2008c, 253-254; Sulk 2011, 35-36; Czysz 2013, 271-274; Sommer 2015, 122.

[362] Sommer 1999a, 82; Sommer 2015, 125-126? The dimensions and the scale of the community around an auxiliary fort should have been smaller than a community that lived near to a legionary base. Nevertheless, similar developments and activities are assumed at both kinds of sites. For a thorough comparison of the nature of garrison settlements of legions and auxiliary bases, Sommer points out the lack of comparable studies on legionary sites.

[363] Mattingly 2007, 170-171. One cannot yet talk of a successful implementation of the term 'garrison settlement', since it is used almost exclusively in the English literature, while the extensive German literature continues to use the term Kastellvicus (military vicus). The influence of D. Mattingly's comments on the research agendas and the unification of both sides of these archaeological sites in recent investigations should nevertheless not be underestimated.

[364] Czysz 2013, 289; Sommer 2015, 122.

them, as is reported in some ancient writings.[365] It was mainly the relatives of soldiers and merchants whose relations (personal or professional) relied on the consumption of goods by the army unit that formed the population of these settlements.[366] Despite the fact that until the Severan period soldiers were not allowed to marry during their service, there is enough evidence that their (unofficial) wives and children lived close to them. Gravestones are regularly found from the cemeteries of these garrison settlements, erected by the wife or children of a soldier, or *vice versa*.[367] Although more and more evidence is being revealed of women who were living within the walls of the forts, it is most likely that the families of the majority of the soldiers lived in the houses built close to the forts.[368]

The entire garrison settlement must have been under the direct supervision of the military commander. The land was military territory and the closest *civitates* were probably too distant to have had any administrative influence.[369] From a few garrison sites, such as Saalburg and Bad Wimpfen, inscriptions survived proving the presence of some Roman citizens. It must have been rather common for retired soldiers to remain in the vicinity of the fort and their followers.[370] The civil communities inhabiting these garrison settlements probably invoked some community bodies, as is evidenced by archaeological remains of what were most likely *scholae* or meeting halls. Examples of these have been found in Munningen and Ruffenhofen.[371]

3.3.2 Local market spots

Just as in civilian centres, the backyards of the houses in garrison settlements were often used as a workshop for certain kinds of production, such as wood carving, metal processing or glass melting. Since women in antiquity were regularly involved in many kinds of economic activities, such as spinning, weaving, cloth-making and repairing, as well as trading, they would probably be responsible for a certain percentage of the crafts and commerce in these garrison settlements.[372] C. S. Sommer summarised that despite the weakness of the archaeological evidence, it is generally accepted that a certain proportion of the supplies of food, equipment and personal needs were produced within the settlement.[373] Of course, independent tradespeople and artisans also settled here, attracted by the market which the presence of an army unit created.[374] Epigraphic evidence dated to the occupation period of the forts of Bregenz, Kastel, Lorch, Passau, Rottenburg, and Wiesbaden confirms the

[365] Breeze 2015, 227-228. Caesar, BG 6, 36. Caesar, Bell. Afr. 75. Cassius Dio, 56.20.2.
[366] Sommer 2015, 122?
[367] Hanson 2005, 303; Breeze 2015, 225-226; Sommer 2015, 123?
[368] Some of the letters found in *Vindolanda* contained correspondence between two officer's wives (Bowman 2003, 50-51 and letters 31 -32.). Both in and around the *praetoriae* of *Vindolanda*/Hexham and Saalburg finds were excavated that are interpreted as children's toys as well as child sized shoe soles and thus suggesting the presence of an entire family (Hanson 2005, 304; Sommer 2015, 125?).
[369] 1997, 50; 2006, 128; Mattingly 2007, 127; Czysz 2013, 345.
[370] D. Breeze has shown that certain civilians in these garrison settlements gained privileges or certain rights which they could retain even when they moved to a new centre (Breeze 2015, 227-228.). Roman citizens have been attested in inscriptions from the garrison settlements of Saalburg (CIL 13, 7460, AD 101-150) and Bad Wimpfen (CIL 13, 11752, AD 90-150), all dated to the occupation period of the fort.
[371] Munningen: Baatz 1975. Ruffenhofen: Sommer 2015, 132.
[372] Breeze 2015, 226-227.
[373] Sommer 2015, 122. Indications for crop cultivation undertaken by the soldiers or camp-residents themselves include sickles, as for example found in Newstead. It is nevertheless believed that the amount of self-supply at garrison settlements remained insufficient (Wierschowski 2002, 113; Kehne 2007, 323.).
[374] Czysz 2013, 289.

presence of traders and merchants.[375] For every 500 soldiers it is assumed one or two potters were needed to provide the daily cooking and tableware. Traders found business in importing goods from farther away, such as olive oil, wine or terra sigiliata wares. The remains of a mill have been found in Dambach and Günz, indicating that some people were involved in food processing, but one can also assume the presence of bakers, fishermen, innkeepers and many others. [376]

These garrison settlements acted mainly as local markets. The road between the fort and the settlement was often widened, creating a triangular or square open space which was most likely used as a market square.[377] Examples are known from Eining, Kumpfmühl, Ladenburg, Ludwigshafen, Saalburg and Zugmantel.[378]

3.3.3 The development of garrison settlements during and after the military occupation

Garrison settlements often developed over a long time, changing from street-aligned settlements along the *via principalis* into agglomerations that encircled the fort. It is assumed that their earliest phases generally date back to the construction time of the forts.[379] This assumption is based on elements that suggest planning and measurements carried out by the army during the first occupation phases. Graveyards, for example, lie outside the borders of the settlement, indicating that these agglomerations were planned from the start. Moreover, the regularity of the house plots suggests professional land surveying techniques. The best and most-cited example comes from the garrison settlement in *Lopodunum*/Ladenburg where exactly the same lay-out of land plots was kept during rebuilding, even after the whole settlement had burned down, implying an official delimitation of the land.[380]

The majority of buildings in these civilian settlements were residential houses with a few for public use, such as inns, temples and bathhouses.[381] It is assumed that from the Flavian period every permanent military base had a bathhouse, generally at a distance varying between 20 to 120m from the fort.[382] Whether or not these military bathhouses were also used by civilians is still a topic of debate. The remains of private baths have been found at Gauting and *Tasgetium*/Eschenz, which might indicate a strict separation between military baths and civilian baths.[383] In a very few cases, the remains of an amphitheatre or theatre have been found on the outskirts of a garrison settlement,

[375] Sommer 1988, 589. CIL 13, 7588 (Wiesbaden), CIL 13, 7300 (Kastel), CIL 13, 6366 (Rottenburg), CIL 13, 6524 (Lorch), CIL 3, 13542 (Bregenz), Wolff 1984, 87 (Passau).
[376] Czysz 2013, 333-338.
[377] Sommer 2006, 117.
[378] Cüppers 1990, 455; Sommer 1999a, 87; Sommer 2015, 127.
[379] Depending on where the settlement developed with respect to the fort, C.S. Sommer created a three-part typology: 1) the street/ribbon type: settlement developed along the arterial road(s) from the fort 2) the tangential type, in which case the settlement developed mainly laterally along the highway leading past the fort and 3) the ring type when the settlement appeared as a ring formation along the roads surrounding the fort. More extensive explanations of these typologies can be found in Sommer 1999a, 82-83; Sommer 2006, 97-103; 2008c, 255-257; 2015, 123-127?
[380] 1997, 47; Hanson 2005, 304-305; Sommer 2006, 123; 2008c, 258.
[381] 1997, 45-46; Czysz 2013, 306-310.
[382] 2013, 306.
[383] Ibid., 310. The evidence for a separate civilian bath in Gauting relies on the interpretation of a structure as a private bath complex. In the case of Eschenz CIL 13, 5257 mentions the construction of a *balneum balneum* by the *vicani*.

such as in Arnsburg, Dambach and *Quintana*/Künzing.[384] These will be discussed in more detail in chapter four.

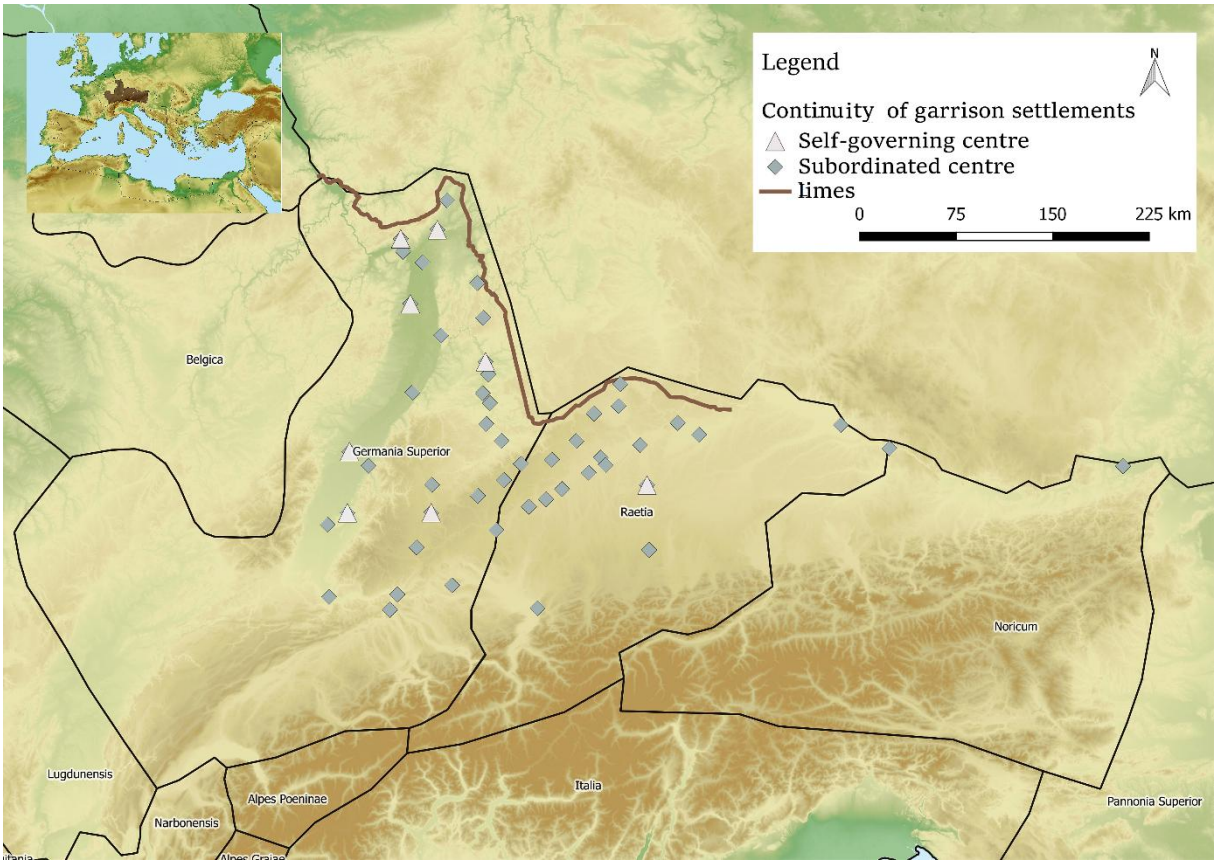


Fig. 3.2: Garrison settlements that continued in occupation after the retreat of the army unit

As has already been mentioned, forts were regularly constructed and abandoned because of shifts in the location of the frontier. It is assumed that most of the camp followers moved together with the soldiers to their new posting. However, in some cases the population - or a part of it - remained, living where they were. As a result, some garrison settlements developed into centres of local or regional importance (Fig. 3.2). The reasons for their success is a matter of debate. Their favourable location is frequently mentioned and it is assumed that their economic integration extended beyond the army to include the wider rural population.[385] As has been discussed earlier, over the course of time, some of these communities even gained municipal rights, such as Roman Augsburg, Bad Wimpfen, Frankfurt-Heddernheim, Riegel, Rottweil, Strasbourg, Wiesbaden and Worms. The majority, however, remained subordinate settlements within the territory of another higher municipal authority.

It is not always clear what happened to the area occupied by the previous military fort.[386] Rescue excavations in the past decade on the Roman site of *Brigantium*/Bregenz have shed interesting new light on this issue. The Augustan fort seems to have been made unusable by the army during the reign of Claudius when the garrison had to leave. Ditches were refilled, the ground leveled and the

[384] Sommer 2006, 103-105; Czysz 2013, 306-310.For more on public buildings in garrison settlements see: chapter 4 and Pazmany forthcoming.
[385] Sommer 2015, 137; Oberhofer 2016, 101.
[386] Czysz 2013, 293.

buildings were demolished.[387] Similar destruction works have also been attested at the fort of Munningen.[388] Table 3.2 contains some data on the after use of abandoned Roman camp sites. Sometimes, indications for the reuse of the building materials of the fort have been found, such as in Sulz, Bad Nauheim, Lützelbach and Munningen.[389] In Bregenz, large wooden construction beams from the previous fort were reused as the foundation for a *Lehmfach* building (mud house).[390] Inside other forts, evidence has been found for small-scale production workshops, such as in Bad Cannstatt.[391] In Ristissen and Walheim ceramics were produced in the period after the military occupation, while in Wiesbaden and Hesselbach remains of metal processing have been discovered.[392] In some cases, a bigger infrastructure with a more public purpose was erected on the place where the fort used to be. In addition to the ceramic workshops of Ristissen and Walheim structures were also recorded and identified as storage rooms. It is unclear to me whether these were warehouses for food storage or whether these buildings were related to the pottery production.[393] However, a similar storage building was also excavated within the area of the former fort at Neckarburken.[394] Another type of building that was regularly constructed in the area of an earlier fort was a guesthouse. Such structures have been identified in Köngen, Munningen and Rottweil.[395] The area of the original fort was frequently built over by the expanding settlement. Living quarters developed on top of the previous forts in Wallheim, Heidenheim, Gross-Gerau, Faimingen, Frankfurt-Heddernheim and Bad Cannstatt. In Bregenz a bath complex was erected on top of the previous fort,[396] and in Faimingen a temple for Apollo-Grannus was erected.[397] In Köngen, Nassenfels and Ladenburg, the civilian centre overbuilt the former fort completely.[398] In the case of Okarben and Seckmauern the prior military land became the scene for a Roman *villa rustica*.[399]

It seems therefore that in the transition from fort to civilian settlement no strict regulations existed regarding the further use of the land. It appears to have been common practice for the fort itself and the additional infrastructure to be cleared out and rendered unusable, but we cannot be sure of this in every case.

[387] Oberhofer 2015, 96.
[388] Schaflitzl 2016, 84.
[389] Lützelbach: Baatz and Herrmann 1982, 424. Münningen: Czysz 2013, 297. Bad Nauheim, Münningen and Sulz: Luik 2002, 79.
[390] Oberhofer 2015, 97; 2016, 101.
[391] Luik 2002, 79.
[392] Ristissen, Walheim, Wiesbaden: ibid., 79. Hesselbach: Baatz 1973, 81; Luik 2002, 79.
[393] 2002, 79.
[394] Schallmayer 1984, 121-124/127.
[395] Köngen, Rottweil: Luik 2002, 79. Münningen: ibid., 79; Czysz 2013, 297.
[396] Oberhofer 2015, 100.
[397] Luik 2002, 79.
[398][398] Bad Cannstatt, Faimingen, Frankfurt-Heddernheim, Gross-Gerau, Heidenheim, Köngen, Ladenburg: ibid., 79. Nassenfels: Czysz 1995, 485.
[399] Okarben: Baatz 1973, 81. Seckmauern: Schallmayer 1984, 63-65; Luik 2002, 72.

Table 3.2: Overview of the continued use of Roman fort sites							
Place name	**Retreat of the army**	**Reuse of building material**	**Houses**	**Workshops**	**Public infrastructure**	**Fully overbuilt**	**Reference**
Bad Cannstatt	AD 150	X	-	X	-	-	Luik 2002, 77. Oberhofer 2016, 101.
Bad Nauheim	-	X	-	-	-	-	Luik 2002, 77.
Bregenz	AD 50	x	x		Bathhouse		Oberhofer 2015, 95-100; 2016, 101-108.
Faimingen	AD 120	-	X	-	Temple for Apollo Grannus	-	Luik 2002, 79.
Frankfurt-Heddernheim	Around AD 100	-	-	-	-	But not densely, it was the periphery of the centre	Luik 2002, 79.
Gross-Gerau	AD 120-130		Only from AD 170 onwards				Luik 2002, 79.
Heidenheim	-	-	X	-	-	-	Luik 2002, 79.
Hesselbach	-	-	-	Iron/metal workshop	-	-	Luik 2002, 79. Baatz1982, 348. Baatz 1973, 81.
Köngen	AD 150-160	-	X	-	Street/station of *beneficiarii*?	X	Luik 2002, 75-77.
Ladenburg	-	-	X			X	Luik 2002, 79.
Lützelbach	AD 150-160	Houses in the vicinity built with material from the fort					Baatz 1982, 424.
Munningen	AD 98-117	Reuse of the palissade construction material	-	-	Street station and schola?	-	Luik 2002, 79. Czysz 2013, 297. Schaflitzl 2016, 84.
Nassenfels	AD 100-150	-	-	-	X	*Vicus* develops over area of earlier fort	Luik 2002, 79. Czysz 1995, 485.
Neckarburken (West)	-				Big structures, possible storage rooms		Schallmayer 1984, 121-124/127.
Okarben/ Neckarburken (Ost)	AD 150-160					*Villa*	Baatz 1973, 81.
Ristissen	AD 160?	-	-	2 ceramic killns	Big storage room for 20-30 years	-	Luik 2002, 77.
Rottweil	-	-	-	-	Mansion	-	Luik 2002, 79.
Seckmauern	AD 138					*villa*	Luik 2002, 79. Schallmayer 1984, 63-65.
Sulz	-	X	-	-	-	-	Luik 2002, 77.
Wiesbaden	AD 120		-	Bronze	-	-	Luik 2002, 77.
Walheim	-	-	X	Ceramic late 2nd century	Just east of the fort big storage halls were constructed	-	Luik 2002, 79.

3.3 Specialised production centres

Not all subordinate centres developed from a Roman military base. Others went back to the Late Iron Age or arose because of very specific economic and logistical motivations. At most centres a multitude of crafts were performed, such as in *Alesia*/Alise-St.-Reine. Since the overall activities at these agglomerations were so diverse, they are seldom categorised as specialised production centres.[400]

Specialised production and production quarters occurred both in self-governing towns as well as in subordinate agglomerations. A specific quarter of a town could function as a manufacturing district. In *Nida*/Frankfurt-Heddernheim, for example, the potters quarter located south of the settlement had no fewer than 150 kilns, used between AD 150 and AD 250.[401] This section, however, will focus further only on the nature of and the specialised production that took place in subordinate centres. The aim of this approach is to gain a better understanding of the nature of this kind of subordinate centre and its place within the wider settlement system.

3.3.1 Terra Sigillata production centres

A few places in the northern Alpine region intensively manufactured terra sigillata wares. The name of this ware refers to the fact that the pottery was stamped, '*sigile*'. Its red colour and shiny appearance makes these vessels and plates easily distinguishable from other types of tableware. Its earliest production occurred around 40 BC in northern Italy (region of Arezzo) as a rather luxurious product and was initially very popular with the army. Gradually, the production of terra sigillata expanded, first to southern and later to central and northern Gaul. Here big production centres, such as La Graufesenque, Banasac and Lezoux, contributed to the wide distribution of this type of ceramic ware as well as of skilled people in the northern and western areas of the Roman Empire.[402] The analysis of potter's stamps allows us to reconstruct the gradual spread of the terra sigillata skills. It can be derived from these potter's stamps that the terra sigillata production in the northern Alpine region had come originally from the workshops in Gaul (Fig. 3.3).

The terra sigillata centres of the northern Alpine region

The biggest terra sigillata production centre in the northern Alpine region was located in modern Rheinzabern. Based on the ancient place name *Tabernae, Tabernis*, it is assumed that the place initially served as a road station, situated on the river Rhine and between the important military centres of *Mogontiacum*/Mainz and *Argentorate*/Strasbourg.[403] A ceramic production centre had developed here from the reign of Claudius, mainly manufacturing building ceramics of which the production was probably intended for the construction of the forts and other military installations in the surrounding areas. Tiles produced in Rheinzabern have been found, for example, in the legionary

[400] Mangin 1994, 58.
[401] Baatz and Herrmann 1982. It is even assumed that the potters in *Nida* had an associated workshop outside the borders of the Empire. Ceramic production is attested in Haarhausen (Thüringen) that deviates clearly from the 'Germanic' style. The technology used in Haarhausen is based on provincial Roman manufacturing, shown by the construction of the kiln. Strong similarities with the production from *Nida* means a connection between both workshops is likely. Dusek 1992, 12-131.
[402] Roller 1965, 7-8; King 1990, 125-130; Van Oyen 2015, 281.
[403] Schulz 1999, 65; Fülle 2000, 152.

base of Mainz, but also in the forts of Worms, Speyer, Altrip and Andernach.[404] However, when the army moved further northwards during the Flavian period, the production in Rheinzabern decreased strongly, to the advantage of the new production site for building ceramics in Nied.[405] Around AD 130 a new heyday of production started in Rheinzabern, but this time with the making of terra sigillata fineware. The centre remained successful until AD 260. During this 130 years no fewer than 400 to 600 potters may have produced 50 up to 80 million vessels.[406] The influence of Reinzabern is reflected in the fact that the potters from most of the other terra sigillata workshops in the Rhine and Danube region had a relationship with Rheinzabern, not least because of their training.

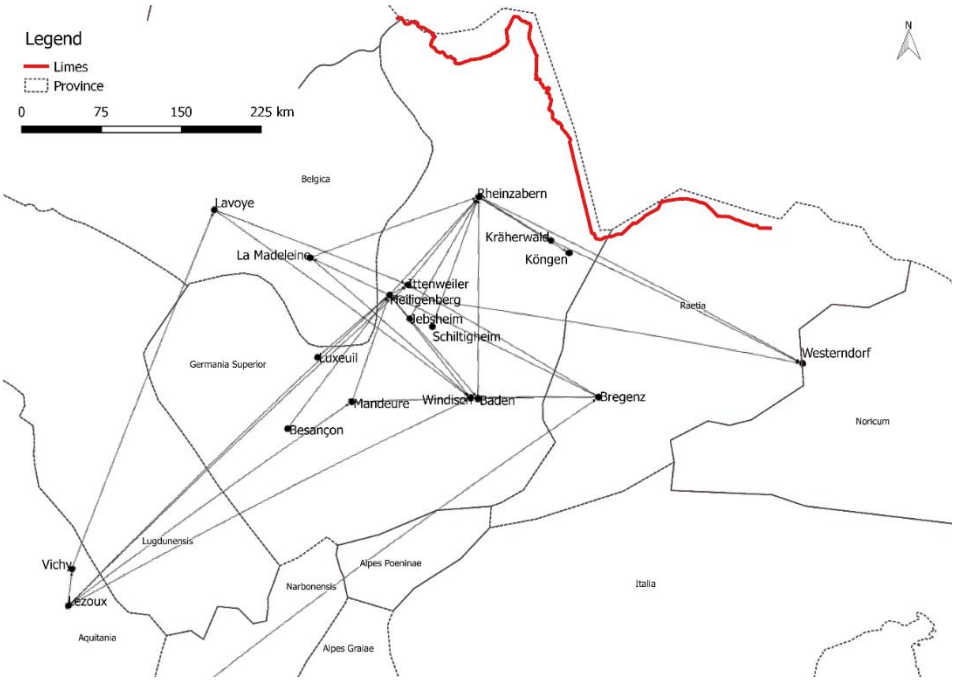


Fig. 3.3: Map showing the movements of terra sigillata potters, based on the analysis of stamps[407]

The first other production centre of terra sigillata appears to have been Westerndorf, which functioned as a subsidiary workshop of Rheinzabern (Fig. 3.4). It was located near the river Inn on the border between Raetia and Noricum.[408] The workshop in Westerndorf was probably set up around the end of the second century (AD 180-193). The kiln installations and the site's infrastructure are unfortunately very poorly known, with most information coming from reports from the 19th century after which the site was overbuilt.[409] Another ceramic production centre was discovered two kilometers away from Westerndorf, in Pfaffenhofen. Based on its production date and on morphological arguments, it is assumed that the workshop in Pfaffenhofen was an offshoot of Westerndorf. However, unlike the dependent relationship between the workshop at Westerndorf and Rheinzabern, the workshop in Pfaffenhofen has been interpreted as a new independent initiative.[410]

[404] Sprater 1948, 79-86.
[405] von Bülow 1975, 234; Biegert 1999, 15-50.
[406] Roller 1965, 8-10; Fülle 2000, 153.
[407] Forrer 1911. The network analysis was realised with the help of Pieter Houten.
[408] von Bülow 1975, 235-236.
[409] Radbauer 2013, 151-162.
[410] Kellner 1964, 80; 91.

Across the northern Alpine region existed more terra sigillata or pottery production centres existed of which the potters probably were trained in Rheinzabern but had started a new business of their own, such as in Blickweiler and Stuttgart. It is assumed that the craftsmen from the ceramic production in Waiblingen also learned their skills in Rheinzabern.[411] At least 30 kilns are known from this 5 to 8 ha large site.[412] Also in Schwabegg a specialised workshop in terra sigillata existed. So far, a minimum of 5 kilns have been discovered here, probably enough for at least ten potters. It is assumed that they too originally came from Rheinzabern.[413]

Rheinzabern, the most important terra sigillata workshop in the region

Based on the startup dates of the different terra sigillata workshops in the region (Table 3.3), it seems that Rheinzabern was the earliest production centre of this kind. Its sister centre in Westerndorf was founded almost half a century later and soon afterwards, around the turn of the second century, more terra sigillata workshops opened. The extensive export area of the Rheinzabern ware also emphasises the importance of the workshops (Table 3.4). Its most successful market was located along the frontier in Germania Superior and the Danubian provinces, up to Moesia and Dacia. Although some of the Rheinzabern ware was traded along the lower Rhine, the quantity was substantially lower. By contrast, the production of Blickweiler (Gallia Belgica) seems to have been more successful in this area.[414] Also Roman Britain did not belong to Rheinzabern's main distribution zone. The import of terra sigillata here originated primarily from Gaul and especially from the production centre in Lezoux. Despite the excellent connections provided by the river Rhine, the old trade contacts between Gaul and Britain continued and Rheinzabern never became a real competitor.[415] Like the extended workshop of Rheinzabern, the production centre in Westerndorf fulfilled an import role in satisfying the markets in the Balkan region, since Westerndorf terra sigillata has been found everywhere along the Danube. The wares were traded even beyond the river, into *Barbaricum*. The workshop in Schwabegg on the contrary, probably provided for only a very specific market. Pottery made in Schwabegg is rarely found on sites in Raetia and Noricum, but it is commonly encountered in Pannonia[416] In general, the terra sigillata ware produced in Rheinzabern is the only make that was traded all over the northern Alpine region and beyond. The market of the other centres was much more limited.

Table 3.3: Approximate start-up dates of the terra sigillata workshops

Potters centre	Start of terra sigillata production (AD)	Reference
Rheinzabern	130	(Roller 1965, 8-10.; Sprater 1948, 41.)
Westerndorf	180-193	(Radbauer 2013, 162.)
Schwabegg	200	(Czysz 2000, 77-78.)
Waiblingen	200	(Filtzinger, Plack, and Cremer 1976, 546-549.)
Pfaffenhofen	210	(Kellner 1964, 91.)

[411] Roller 1965, 10-14.
[412] Sommer 1994, 144.
[413] Czysz 2000, 77-78.
[414] Sprater 1948, 87-101; Roller 1965, 8; 14.
[415] 1965, 14-17.
[416] Czysz 2000, 78.

Table 3.4: Export areas of the different terra sigillata workshops							
	Germania Inf.	Germania Sup.	Raetia	Noricum	Pannonia Balkan	Britain	Reference
Rheinzabern	x	x	x	x	x	x?	(Fülle 2000, 154.; Roller 1965, 14.)
Westerndorf				x	X		(Radbauer 2013, 151-153.)
Schwabegg					X		(Czysz 2000, 78.; Radbauer 2013, 151-153.)
Waiblingen				x?	x?		(Radbauer 2013, 151-153.)
Pfaffenhofen				x?	x?		(Radbauer 2013, 151-153.)

The army as a consumer not as a producer

The development of terra sigillata workshops, emerging in Italy, dispersing to Gaul and later to the Rhine and Danube region correlates clearly with the gradual expansion of the Empire. Being part of this trend, the distribution of the terra sigillata centres in the northern Alpine region equally reflects the military developments, from the arrival of the troops to the establishment of a permanent frontier. New production centres were constructed close to the army camps and at convenient locations with easy access to the necessary raw materials, such as water, fuel (mainly wood) and red clay.[417] The site of Schwabegg, for example, was located on the edge of a clay-rich soil, the ground in Westerndorf consisted of glacial lake deposits and the surroundings of the Rheinzabern workshop contain an alluvial sandy soil.

Although the terra sigillata production had a loyal customer in the army, it is believed that these workshops were most likely private initiatives. Overall, these sites show little evidence for a military presence. Also the nature of the stamps on the ceramic wares produced in these terra sigillata workshops differs significantly from that of those on army produced ceramics. The early ceramic building materials made in Rheinzabern, for example, did carry stamps with the abbreviation of the legions that were responsible for the production. The later terra sigillata wares however were stamped with the name of the workshop owners, endorsing independent production.[418] The army's production in general is known to have been restricted to the manufacturing of construction materials.[419]

[417] Van Oyen 2015, 282.
[418] von Bülow 1975, 238-239.
[419] In Friedberg 2 of the 11 kilns could be assigned to the production of ceramic building materials, probably for military consumption, since stamps of *Cohors I Flavia Damascenorum, Legio XI* and *Legio XIV* have been identified (Biegert 1999, 52-56.).The tiles produced in Westheim even indicated some state intervention, based on stamps mentioning *Figlinae Caesaris Nostri* (Czysz 1985, 141-181.).

3.3.2 Production centres of different ceramic wares

In addition to the terra sigillata workshops there were also subordinate centres that intensively produced fineware in more local or mixed styles, such as Heidelberg in the *civitas Ulpia Sueborum Nicrensium* or Mathay in the *civitas Sequanorum* (Fig. 3.4).[420]

A ceramic production centre also existed on the outskirts of the centre of *Luxovium*/Luxeuil-les-Bains. The manufacturing of pottery here had started in the first half of the 1st century AD and consisted of a very wide range of shapes, including *terra nigra* wares, engobe decorated products, plates, dishes and cups. A very small percentage of the production consisted of terra sigillata, probably made exclusively for the nearby centre of *Epamonduodurum*/Mandeure. The production in *Luxovium* stopped rather early, in the course of the 2nd century, after which the centre developed into a spa centre. Adjacent extensions of the bath complex emerged in the former potter's quarter.[421]

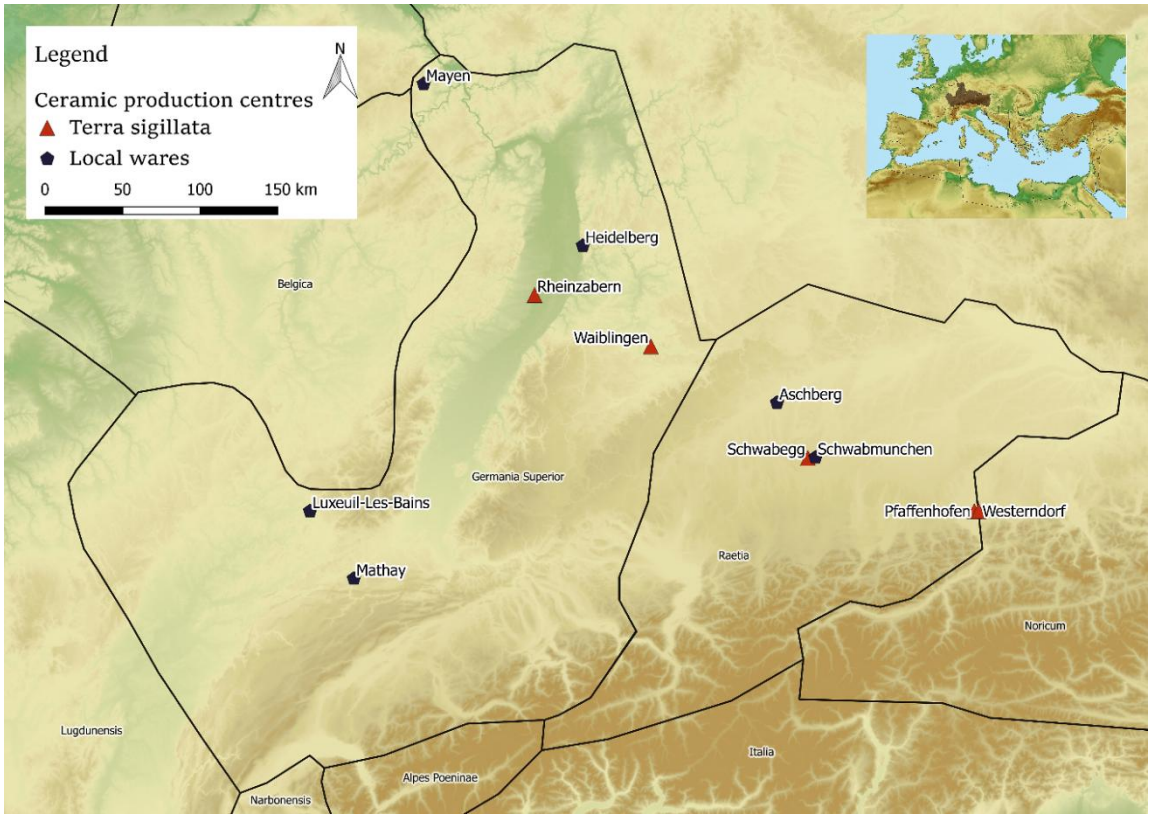


Fig. 3.4: Map with production centres of terra sigillata and other ceramic wares mentioned in the text

Manufacturing in the ceramic centre in *Rapis*/Schwabmünchen started during the Flavian period and also had a wide variation in shapes, from vessels, plates and cups to *mortaria*.[422] Its location, along the main road to Augsburg, guaranteed a successful outreach of the production to the town and the rural settlements in the foothills of the Alps. *Rapis* became one of the biggest ceramic centres in

[420] In around 1976, 60 kilns were already known at the Roman site of Heidelberg. Over a period of 150 years pottery in Terra Nigra and Terra Rubra style was produced here: Filtzinger, Plack and Cremer 1976, 278-291. Alongside other crafts, the production of ceramic wares was the main activity carried out in the Roman centre of Mathay, probably stimulated by the market of the nearby religious centre in *Epamanduodurum*/Mandeure: Carroll 2001, 84-91.

[421] Card 2008, 206; Vurpillot 2014, 208-209.

[422] Czysz 2000, 63; Czysz and Sorge 2000, 142.

Raetia. A minimum of 70-80 kilns have been excavated. Different from in Rheinzabern where there was a separate production quarter, the production here took place mostly in the backyard of the dwellings of the local population. It is assumed that during the 2nd century more than three quarters of the households were making a living from ceramic production. The size of the centre is estimated from 2 ha to a maximum of 5 ha, accommodating about fifteen residential units. The total population of *Rapis* is estimated at 100 people.[423] Since the later specialised terra sigillata workshop of Schwabegg was visible from this centre, it is assumed that a connection existed between the potter's centre in *Rapis* and the terra sigillata workshop found in Schwabegg. Most likely craftsmen from *Rapis* were sent over to Schwabegg because of the presence of better clay.[424]

Along the southern Danube street, close to Faimingen, another centre was discovered in which the inhabitants were widely involved in the manufacturing of ceramic wares, including products such as plates, dishes, jugs, vessels and pots in Raetian style, as well as ceramic building material. The site of Aschberg was rather small, about 1 ha, and its export area, which is not very well investigated, most likely extended downstream towards Noricum. It may also have provided a resting place for travelers, although the archaeological structures can be interpreted either as an inn or as a bathhouse.[425]

An example of a late ceramic production centre is Mayen, located in northern Germania Superior. Local wares were produced here in rather high quantities only from the 3rd century onwards. Previously, Mayen's business centre was related to stone mining, as will be discussed in a later section. The main distribution area for the Mayen ceramics included the Rhine as well as the Mosel region. Although the soldiers stationed along the frontier must have been important customers, the retreat of the army during the fifth century at the latest did not affect the production in Mayen. It remained one of the most important ceramic centres in the region until the 9th century.[426]

3.3.3 Centres with other kinds of specialised production

Overall southern Germania Superior and south-central Noricum were within the northern Alpine region the areas where most raw materials were mined during the Roman period. There is plenty of evidence for Roman iron quarrying in the Central Jura and the region of St Gallen. In addition, the Norican iron mines remained in use, of which the Hüttenberg and the Erzberg are only two examples. The Norican soil also contained gold and salt. Despite the fact that Polybius and Strabo report on gold in Noricum, its exploitation during Roman times was rather limited. It is assumed that the pre-Roman salt mining also continued, as the sites of Hallein and Hallstatt indicate. Also, the mountains right of the river Rhine were rich in minerals, such as silver, copper, lead and iron.[427]

The digging for raw materials encouraged the development of mining villages that were most often located on extra-municipal territory. Moreover, it is generally stated that from Tiberius onwards most of the important mines belonged to state-owned imperial domains. The administration of these mines and their associated settlements is not very well understood and may have varied from region to region. In Noricum, however, evidence has been found for *conductors,* who were under the

[423] Czysz 2000, 62-63.
[424] Ibid., 77-78; Czysz and Sorge 2000, 143.
[425] Czysz 2004, 176-178; 180; 197; 199-201.
[426] von Bülow 1975, 237.
[427] Davies 1935, 2-4; 165-181; Hirt 2010, 53-56.

supervision of the provincial governor and were responsible for the prosperity of the mining business.[428] It is most likely that the mines in the Rhine area were under the control of a military commander.

Before the booming pottery production of the 3rd century in Mayen the activities in the centre were mainly related to the stone quarrying that took place in the region. It has been suggested that Mayen operated as the administrative centre of an imperial mining district, although there is no evidence that confirms this assumption. The possible involvement of the army in the production activities, will be discussed in more detail in chapter 5.[429]

The Roman centre that developed in Eisenberg has also been suggested as a possible administrative quarter relating to the mining activities in the surrounding area, which was naturally rich in iron, copper and silver. As its name implies, the site of Eisenberg developed into a significant iron- and metal processing centre. The amount of waste and iron slag found on the site is very high. Factors such as the presence of extensive woods and the Eisenbach stream as well as the road connecting Metz and *Mogontiacum*/Mainz contributed to the favourable location of this centre and its metal processing. Since the kilns on the site were demolished after use, it is hard to estimate the level of production. However, based on the amount of production waste Eisenberg is considered an extensive production centre. The discovery of a *forum-basilica* complex and large storage halls in the centre has contributed to the discussion about whether or not the centre hosted an extra-municipal office for the *civitas Vangiones* or an imperial post.[430]

3.4 Secondary centres with a specific cultural or religious function

Some other centres did not develop because of industrial or commercial reasons, but were important for the wider settlement system and initially to their surrounding population and to visitors from other areas because of the cultural or religious functions they fulfilled. Examples of such sites are spas and sanctuaries.[431]

3.4.1 Hot springs and spas

The *raison d'être* and main source of income for a few centres in the region was the presence of thermal springs. At sites where hot water springs were available, the Romans often built bathing complexes, such as those at *Aquae*/Baden-Baden, *Aquae Helveticae*/Baden, *Aquae Mattiacorum*/Wiesbaden, Badenweiler, Bad-Gögging, *Eburodunum*/Yverdons-les-Bains and *Luxovium*/Luxeuil-Les-Bains (Fig. 3.5).[432] Both their ancient and modern names refer to their function as a spa or *Kurort*. These *Heilbäder* distinguished themselves from the regular bathhouses in any Roman town or village by their dimensions and the presence of big swimming pools or *piscinae*.[433] The bath complex of *Aquae Helveticae* measured 2,035 m^2 (55 m x 37 m), while the *Doppelanlage* of

[428] Alföldy 1970, 172.
[429] Glauben 2013, 63-67.
[430] Bernhard *et al.* 2007, 54-55.See chapter four for more information on the *forum-basilica* of Eisenberg. The inscriptions CIL 12, 11696 and 11698 mention a *decurion* from the *civitas St*. There is no *civitas St.* known. It has therefore also been suggested that Eisenberg was not a subordinate centre of the *civitas Vangiones,* but administrative centre of a separate *civitas* (see also chapter two).
[431] Goodman 2007, 172.
[432] The Roman baths in Luxeuil were probably the most imposing buildings and most significant infrastructures of the Roman centre, but are also the poorest researched, according to Vurpillot 2014, 210.
[433] Meyr 2012, 52.

Badenweiler was no less than 3,069 m^2 (93 m x 33m).[434] The dimensions of the Roman bath complex in Luxeuil is estimated as 5,000 m^2.[435] Since the remains of the Roman bathhouse at Bad Gögging lie beneath the modern centre, its currently known dimensions of 56m x 30m are only an indication for its minimum size.[436] Other centres had more than one bath complex. In *Aquae*, for example, there were at least three such *thermae:* the so called *Kaiserbäder* (imperial baths), the Roman baths found under the modern Friedrichsbad and the so-called *Soldatenthermen (Soldiers baths)*.[437] At modern Baden-Baden a minimum of twelve mineral rich hot springs come to the surface, of which some reach a temperature of 70 ˚C.[438] Such hot water was not available everywhere, the baths in Bad-Göging were fed by sulphurous springs with water of only around 14 ˚C and so needed a heating system.[439] Also at several locations in modern Wiesbaden parts of Roman baths have been found, such as in the *Schützenhofstrasse* and at the *Kranzplatz.* A possible third bath is assumed at the *Adlerquellen*, where circular structures have been found.[440] Even Pliny considered it worthwhile mentioning the hot springs of Wiesbaden where the water apparently kept its boiling warmth for three days.[441]

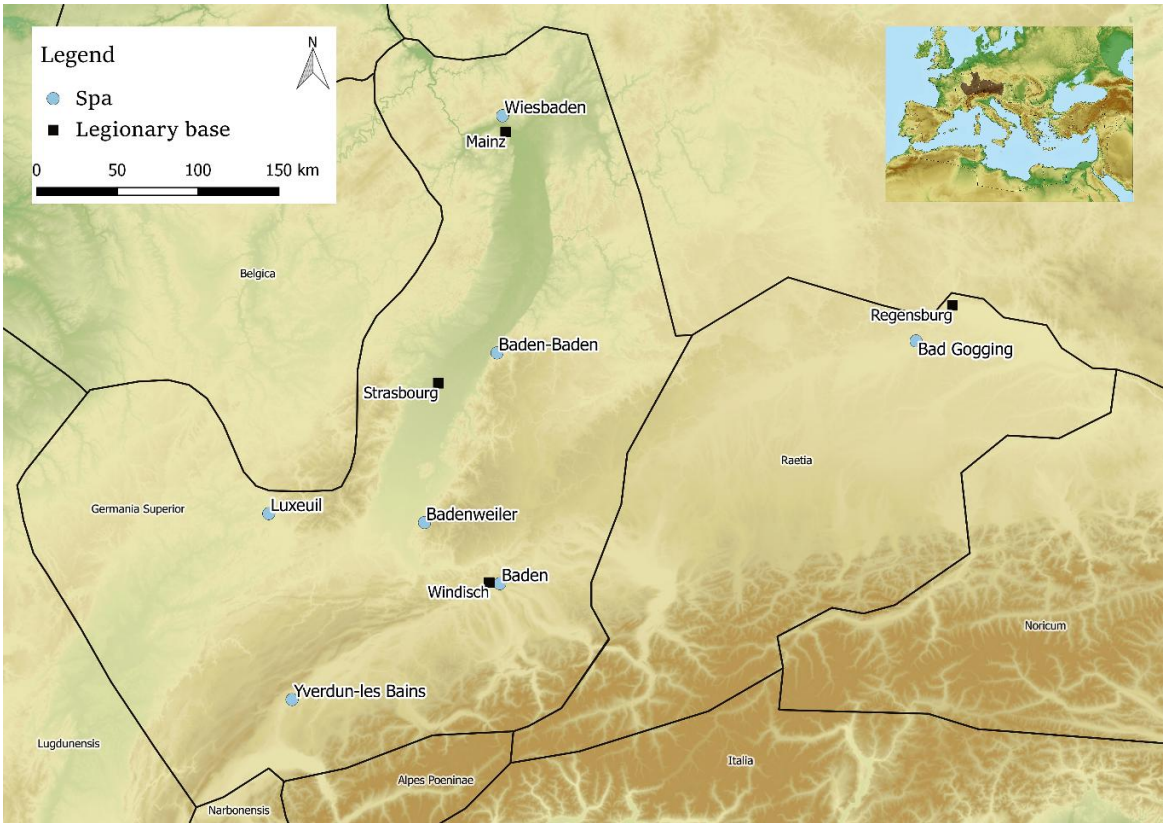


Fig. 3.5: Spas in the northern Alpine region

[434] Baden: Drack and Fellmann 1988, 348. Badenweiler: Sommer 1994, 136 (in the atlas).
[435] Bedon 2001, 200; Rorison 2001, 186.
[436] Nuber 1980, 7-11.
[437] Meyr 2012, 52.
[438] Kronenwett 2015, 43.
[439] Nuber 1980, 7-11; 2012, 66.
[440] Schoppa 1972, 229-230.
[441] Pliny, NH 31.17.

Spas for the soldiers?

The construction materials, including tiles and pipelines, used for the construction of these baths, often contain stamps of legionary workshops, for example, in *Aquae Helveticae* and *Aquae Mattiacorum*.[442] It is furthermore striking that these thermal baths frequently appeared in the vicinity of army camps, especially in the proximity of legionary bases (Fig.3.5). The centre of *Aquae* started to develop after the construction of a fort in the 1st century and the first bath installation also dates from that time. It was nevertheless the legionaries stationed in *Argentorate*/Strasbourg, some 50 km to the south, that were the most important visitors to this spa, according to H. Kronenwett.[443] In *Aquae Helveticae,* the oldest remains date back to around AD 15/16, the time of the foundation of the legionary fort of *Vindonissa*/Windisch, only 10 km west of Baden. Both the finds of tiles stamped with the initials of the legions posted in *Vindonissa* and the short distance imply a strong connection between the two places.[444] Pipes used for the construction of the bath complexes in *Aquae Mattiacorum* were stamped by the *Legio XIV Gemina M. V* and prove that the soldiers stationed in *Aquae Mattiacorum* were involved. The stamps of the *Legiones XIV, XXI, XXII* found on the tiles of the baths found at the *Kranzplatz* prove that the legions stationed in *Mogontiacum*/Mainz also helped out. Likewise, the thermal baths were visited not only by the soldiers stationed in Wiesbaden but by people from a wide area. This is suggested by the inscriptions on the many tombs that have been found in the surrounding graveyards.[445] The construction date of the bath complex in Bad-Göging corresponds with the foundation of the legionary fort in Regensburg during the second half of the second century. The stamps found on the tiles here are even more special. They refer not only to the *legio III Italica* and the *cohors III Brittonum Equitata,* which were indeed stationed along the Danube after AD 165, but some were even stamped with the letters CAESAR, implying that the construction of the baths of Bad-Gögging was carried out with imperial funds.[446]

All this together gives the impression that the soldiers were some of the most frequent visitors to such bathing centres, and also that the construction of the bath complexes regularly depended on army and state initiative. It therefore seems likely that these thermal sites initially fell under the supervision of the military governors. Some of these spa places, however, later grew into civilian agglomerations and sometimes even into self-governing centres, such as *Aquae* and *Aquae Mattiacorum*, which during the second century became the centres of the *civitates Aquensis* and *Mattiacorum*.[447]

3.4.2 Sanctuary sites

Sanctuary sites are another category of settlements generally recognised as a specific type of (subordinate) centre.[448] The map above gives an overview of sites where, mostly archaeological, evidence is found for one or more temples (Fig. 3.6).[449] Temples or small sanctuaries were, just like bathhouses, very well distributed and a kind of investment even most small centres and some rural

[442] Baden: Aargau 2011. Wiesbaden: Schoppa 1972, 229.
[443] Kronenwett 2015, 44.
[444] Wiedemer 1969, 45-46; Flutsch, Niffeler and Rossi 2002, 368-369; Aargau 2011.
[445] Schoppa 1972, 229.
[446] Nuber 1980, 17-18; 2012, 68.
[447] Baden-Baden: Dondin-Payre and Raepsaet-Charlier 1999, 319-321; Kronenwett 2015, 44.Wiesbaden: Schoppa 1972, 228.
[448] Mangin 1994, 58; King 1995, 186.
[449] According to S. Izri and P. Nouvel are the majority of Roman temples still undiscovered, so the map above naturally misses many of the already known and still unidentified temple sites: Izri and Nouvel 2011, 514-516.

estates could make, as is illustrated by the temples found at the garrison settlement of Pfünz, or the *villa* site of Avenches-en-Chaplix.[450] Since natural elements, such as mountains, rivers, springs or woods, were often given a sacred character, temples and sanctuaries appeared everywhere in the landscape.[451]

However, there is a considerable distinction to be made between Roman centres with one temple or several and centres where the sacred area was so extensive that most of its existence depended on, or was dominated by, it. The latter can be identified as sanctuary sites.

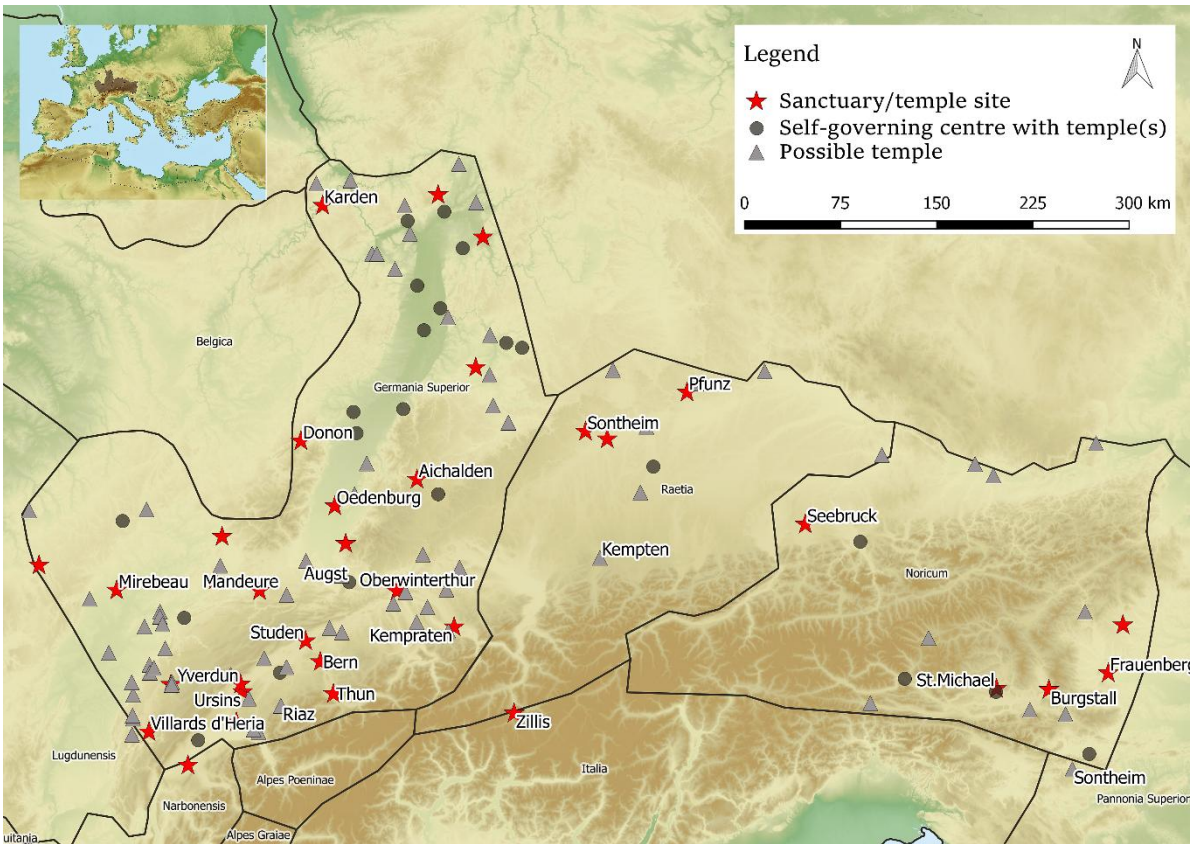


Fig. 3.6: Map with sanctuaries and temple sites

The location of sanctuary sites

Temple sites could develop within built-up quarters, but were most often located either on the periphery of a centre, along an access road or on an a isolated but meaningful location in the landscape.[452] A clear example of a Roman sanctuary at the periphery of an urbanised centre can be found in Kempten, but also in the smaller centres of Kempraten and Yverdun.[453] The temple site in Thun meanwhile was located a few kilometres away from the actual Roman centre of *Dunum*.[454] Also the Roman sanctuary in St. Michael was less than 3 kilometers from the *municipium Virunum*/Zollfeld.[455] The entrance to the sanctuary on the Martberg in Germania Superior was

[450] Budei 2016,71; 116.
[451] Ibid., 26.
[452] C. Cramatte in the overview of Roman sanctuaries in Switzerland makes a distinction between temple sites 'urbain', 'peri-urbain', 'dominaux' and 'extra-urbain'(Cramatte 2008, 265.).
[453] Weber 2000, 72.
[454] Martin-Kilcher and Schatzmann 2010, 23.
[455] Dolenz 2004, 241-242.

connected via a road with the settlement of *Cardena*/Karden. The link between the two places becomes clear from the distribution of the ceramic vessels that were locally produced in *Cardena* for votive gifts. These vessels are found at a temple that was erected along the road as well as in the sanctuary on the Martberg. Based on this evidence it is assumed that a pilgrimage route existed that began in the little village and led to the sanctuary, with a first stop at the temple along the road before the start of the climb up the Martberg.[456] Other temple sites, amongst which Petinesca/Studen and Riaz, were also located along important roads or visible from such roads.[457]

The location of some other sanctuaries was connected to particular landscape features.[458] Some sites provided a wide view over the Alps or towards the Black Forest, such as the one in Donon and Schauenburgflue close to Augst.[459] The isolated sanctuary of Villards-d'Heria must have been given a sacred aura by the *Lac d' Antre*, the river Heria and the many gushing springs.[460] During high tide, the sanctuary in Thun changed into a peninsula, enclosed by the rivers Kander and Aare.[461] The temple site on the plateau in Burgstall was connected with the river Lavant which flowed for longer by a kind of staircase that was cut into the rocks.[462]

Sanctuary sites and continuation (II)

The cave sanctuary of Zillis (Switzerland) that was discovered in the early '90s could count as another landscape featured sanctuary. In front of the cave was an enclosed area with various pits and hearths. The high number of animal bones, of which the majority belonged to sheep/goats, as well as the numerous fine ware vessels (cups, dishes, plates, etc.) points to ritual sacrifices or banquets. The sanctuary must have been well used between the late 2nd century and the 4th century AD, based on coin finds. Of even greater interest were the five, maybe even seven, early Medieval burials that came to light, suggesting that the cult practices here might have continued as late as the 8th century.[463]

The continuity of Roman cult places is however more commonly found in early churches; which were often built on top of an earlier sanctuary or erected with building materials of a Roman predecessor, such as in Bern, Oberwinterthur, Pfünz and Ursins.[464]

It has already been explained that sanctuaries tend to be places where continuity can be seen.[465] Just as the use of some Roman temple sites continued into the early Medieval period, some of them were successors of Late Iron Age cult places, such as the temple sites in *Brenodurum*/Bern and *Petinesca*/Studen.[466] Recent excavations in one of the three sacred areas (Champs des Fougères) of

[456] Budei 2016, 36-37.
[457] Ibid., 84-86.
[458] Some studies, such as the one by J. Budei, apply a typology for temple sites depending on the location, such as street-, mountain peak-, water- or spring sanctuary. This is not always applicable since one sanctuary can belong to multiple categories. One example is the sanctuary complex of Villards- d'Heria, where all factors - water, springs and height - played a role. For further discussion see: ibid., 66-67.
[459] Ibid., 32-33.
[460] Ibid., 65; 68.
[461] Martin-Kilcher and Schatzmann 2010, 19.
[462] Sedlmayer 2015, 313; 316-317.
[463] Liver and Rageth 2001, 123-124; 126.
[464] Budei 2016, 114-118.
[465] See chapter one.
[466] Bern: Martin-Kilcher 2008, 8 (check page). Petinesca: Flutsch, Niffeler and Rossi 2002, 397.

the Roman centre of *Epomanduodurum*/Mandeure revealed late La Tène finds, indicating a continuous use of the place.[467] The archaeological evidence is even more convincing at two other sites. At the sanctuary of Mirebeau-sur-Bèze (France), Iron Age and Roman structures were found. The ditch surrounding the space could be dated to the La Tène D2 phase and contained many animal bones associated with cultic ceremonies. Although the earliest Roman finds date to the late 1st century BC, a Roman monumental temple site only emerged during the 1st century AD.[468] A very similar situation could be reconstructed at the Frauenberg in Austria (near Wagna). Here two sanctuaries existed, one on top of the hill, the other 40 m down on the slope. The lower site consisted of an Iron Age temple that was overbuilt by Roman houses. Excavations revealed pre-Roman sacrificial pits, ditches and possibly four timber buildings. The archaeozoological finds contained the remains of at least 1,300 animals which were most likely involved in the cult practices. Since the discovery of a Hallstatt burial grave it is even questioned whether the cult practices on the Frauenberg date back as early as this. The other sanctuary was probably in use since 150 BC and was built on a terraced space on top of the hill. From the Flavian period onwards a Roman temple dominated the top of the Frauenberg.[469]

Table 3.5: General appearance of a sanctuary site

Place name	Total size (m^2)	Temples	Chapels	Altars	Enclosed	Reference
Aichalden		7				Von der Osten-Woldenburg 2013, 210-212.
Alise-Sainte-Reine	7,000	2			location	Budei 2016, 51; 56.
Bern		3				(Martin-Kilcher 2008, 8???.)
Burgstall	15,000	1				(Sedlmayer 2015, 316-317.)
Donon		3 (+ Jupiter columns)			location	Budei 2016, 22
Frauenberg	+/- 556	2				(Schrettle 2015, 292-295.) Budei 2016, 103-104.
Kempraten		2	2	X	X	(Ackermann 2013, 252.)
Kempten	40,000	1	6-7	X	U-shaped hall	(Weber 2000, 72.)
Lousanne		3				(Drack and Fellmann 1988, 423.)
Mandeure		Multiple sites (5+)			X	(Bossuet, Thivet, Marmet *et al.* 2012, 270-274.)
Mirebeau	50,000	2			Enclosed by colonnade	(Barral and Joly 2011, 551-552.) Budei 2016, 94-95.
Neuenstadt am Kocher	6,750	1		x	x	(Kortüm 2013, 159-160.)
Oedenburg	11,300	4	3-4		Oval structure and 2 rectangular annexes	(Schucany and Schwarz 2011)
Podkraj		1		x		(Sedlmayer 2015, 327-330.)
Riaz		1		x	X	(Martin-Kilcher 2008,

[467] Bossuet *et al.* 2012, 268-274; Thivet and Nouvel 2013, 423-426. Budei 2016, 94-95.
[468] Barral and Joly 2011, 552-553.
[469] Schrettle 2015, 292-298; Budei 2016, 103-104.

						8??.)
Rotteburg		2	2+ (2 cult buildings plus 1 half round structure)		x	(Gairhos 2008, 154.)
Sontheim	34,000	4	5 (+2 fenced sacred spaces)		X	Pöll 2013, 250-251.
St. Michael		1				(Dolenz 2004, 241-242.)
Studen	1,400	6-8	3	x	X	(Flutsch, Niffeler, and Rossi 2002, 397.; Martin-Kilcher 2008, 9-11.)
Thun	600	5	2	x	X	(Martin-Kilcher and Schatzmann 2010-20.)
Yverdon			3		X	(Meylan 2015, 132.)

The general appearance of sanctuary sites

Table 3.5 gives an overview of the number and kinds of buildings within the sacred area of a sanctuary, of which the majority were enclosed by walls or ditches. At Kempten and Mirebeau the wall also provided a sort of colonnade that surrounded the domain. The temple domain on the Mont Donon was not walled, but the steep mountainside served as the boundary of the sacred space.[470]

Most often the sacred area enclosed multiple temples as well as chapels, such as at the sites of Aichalden, *Cambodunum/*Kempten, Oedenburg, Sontheim, *Petinesca*/Studen and Thun where a total of seven or eight such monuments were constructed. Often at these sites a high number of altars is found spread between the temples or Jupiter columns, as for example in Donon. An exception in its monumentality is the sanctuary of Yverdun, where no temples have so far been found. The excavations only revealed some enclosed chapels together with some 20 ditches.[471] In some cases, certain structures have been interpreted as houses of priests, such as at *Petinesca*/Studen.[472]

Often amenities such as lodging and taverns were available on the non-sacred side of these temple sites or in the vicinity.[473] The remains of guests houses and *tabernae* have been found at the sites of Burgstall, Podkraj, St. Michael, Studen and Thun for example.[474]

Urban benefactors

A final question arises concerning these temple domains, namely, who maintained and financed these sanctuaries? In contrast to the bathing places, no military involvement could be derived from the archaeological evidence. According to S. Martin-Kilcher, the answer lies in their bond with the elite who lived in the towns.

Evidence for financial support in the development of local sanctuaries in the surroundings of the *colonia Aventicum* by the urban elite, for example, is derived from a statue in toga found on the site

[470] 2016, 22; 87.
[471] Meylan 2015, 1632.
[472] Flutsch, Niffeler and Rossi 2002, 397.
[473] King 1995, 186; Martin-Kilcher 2008, 16.
[474] Burgstall, Podkraj: Sedlmayer 2015, 316-317; 327-330., St. Michael: Dolenz 2005, 145., Studen: Flutsch, Niffeler and Rossi 2002, 397. and Thun: Martin-Kilcher and Schatzmann 2010, 20.

in Thun. Inscriptions record the aristocratic family of the *Camilli* on votive altars found in Riaz and a building inscription belonging to one of the temples in *Brenodurum*/Bern that involved a *duoviri* of the *colonia*.[475]

Even more curious is the relationship between the *municipium Iuvavum*/Salzburg and the temple domain for the local god Bedaium in Seebruck, 45 km west of the town. The majority of the votive inscriptions in *Bedaium* could be ascribed to *duumviri* who had their office in *Iuvavum*. While previously it was assumed that this was related to some pre-Roman cult practices, H. Grassl recently came up with a different and more convincing explanation. The lake must have been of great importance for the town's economy, in the form of income from fishing for example. In order to keep the god satisfied, and to safeguard the well-being of the town, the *duumviri* most likely organised periodic religious festivities for Bedaium, which are now only testified in these votive inscriptions. According to Grassl, the interval time between the erection of these inscriptions was 5 years, corresponding with the duration of a *lustrum* or one lease term.[476]

3.4.3 Road stations

All the centres discussed so far could only exist, flourish and participate within the settlement system because they were in contact with each other and people, information and goods could travel between them. The importance of the centres providing accommodation along these routes, waterways and roads can hardly be overestimated.

One of the earliest Roman investments in the newly conquered territories in the Alpine region and beyond was the construction of roads. Very often already existing tracks and paths were turned into paved roads, which were passable the entire year round.[477] The improvement of existing roads and the construction of new ones was deemed important by the emperors.[478] It was a state matter and the majority of the work was carried out by soldiers, although this mostly relates to the *viae publicae* and the *viae militares*, or in other words the main highways and the roads.[479] These roads initially had to serve efficient relocations and movements of army units, but contributed overall to an improved communication system that connected Rome with previously remote areas and supported the functioning of the Roman administration in the provinces.[480] They allowed people and goods in general to travel throughout the Empire.

From the time of Augustus onwards official couriers were employed for state-related communication exchanges, postal and other administrative services along these roads, the so-called *cursus publicus*. This created a need for stations where horses or men could be changed.[481] The literary sources use different terms, such as *mutatio*, *mansio* and *statio,* to refer to these kind of centres. However, their exact meanings are uncertain. It is assumed that these terms referred to stations with different sorts of infrastructure and function only from the 3rd to the 4th century onwards. I therefore will use the

[475] Martin-Kilcher 2008, 8-11.
[476] Grassl 2016, 121-123.
[477] Winkler 1985, 33.
[478] The concern of the emperors about decent roads is reflected in inscriptions such as: CIL 3, 7203 and 8267 (Meijer and van Nijf 1992, 145.).
[479] Bender 1975, 10-11; Kolb 2000, 206-207. H. Bender and A. Kolb both distinguish further a *viae privatae*, roads situated on private land and a *viae vicinales,* secondary roads that passed along smaller centres and connected parts of the *viae publicae*.
[480] Bender 1975, 6; Adams 2012, 229; Glaser 2014, 158-159.
[481] Kolb 2000, 49-51; 54.

more general term 'road station'.[482] Road stations were supposed to lie a distance of one day's journey apart from each other, implying an inter-distance of around 25 Roman miles (about 35 km).[483] However, estimations vary between 25 km to 40 km, depending on the landscape and its relief.[484] Often the first signs of activity at such road stations correspond with the earliest works on the roads, as archaeologically attested in Biberwier, Friesheim, Kippenheim and *Immurium*/Moosham.[485] Generally, these road stations either developed into smaller centres or were located nearby a town centre or military fort (Fig. 3.7).

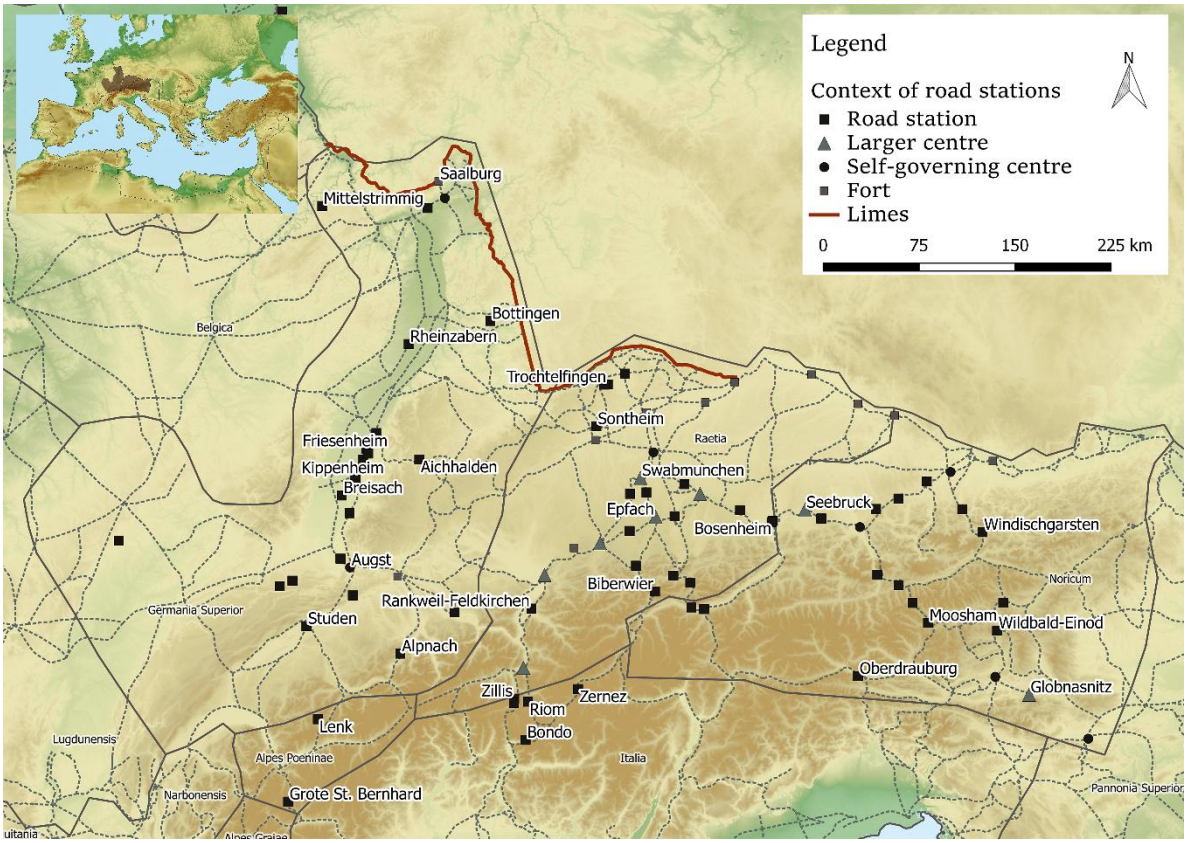


Fig. 3.7: Overview of road stations in the northern Alpine region

Reconstructing the road network and its stations

Both the *Tabula Peutingeriana* and the *Itinerarium Antonini*, provide overviews of towns, centres, stopping places and road stations along Roman roads, including the distances between them.[486] These documents are often used to reconstruct the ancient road network as well as to identify sites as possible road stations, despite the difficulties that this entails.[487] Not every place mentioned should be considered a road station, the temple in Kuchl for example was added as a landmark.[488]An unfortunate slip of the pen resulted in at least four different sites being suggested as the possible

[482] Bender 1975, 19; 2000, 262; Kolb 2000, 211-212; Kastler 2010b, 40.
[483] Bender 2000, 262.
[484] Pöll 2001, 244.
[485] Fingerlin 1976, 27-29; 30-31; Fleischer and Mouchka-Weitzel 1998, 47; Kolb 2000, 63; Grabher 2010.
[486] For a more extensive description of the nature and contents of these documents, see: Bender 1975, 13-16; 2000, 255-256; Winkler 1985, 21-23.
[487] Glaser 2014, 180; Bender 1975, 11-12; Walser 1997, 53-54; Glaser 2014, 158-159; Lang *et al.* 2016, 11-12.
[488] 2016, 15; Knauseder, Schachinger and Lang 2016, 138 ff.

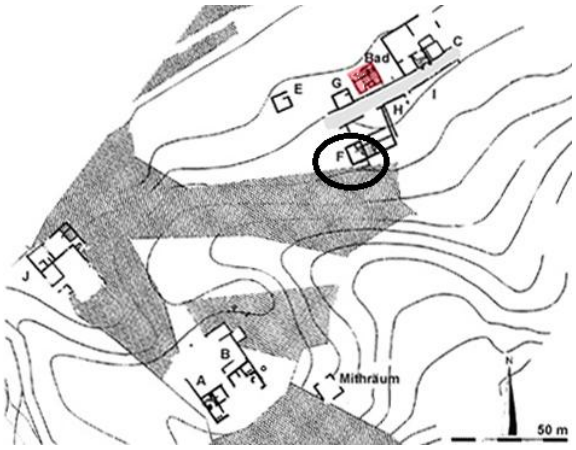
location of the road station *Ovilatus.* These days, however, it is generally accepted that the place must be the *municipium Ovilavis/*Wels.[489]

In addition to written sources, aerial photography and geophysical prospection tools have over recent decades contributed to new discoveries concerning the Roman road network. The geophysical survey of 2007 at the road station of *Immurium*/Moosham, is just one example. After a long period of speculation about the course of the road between *Virunum*/Zollfeld and *Iuvavum*/Salzburg at this particular spot, more clarity on its trajectory has finally been achieved.[490] Also the discoveries of milestones and other archaeological finds have contributed to the reconstruction of the road network.[491] In addition to this, our understanding of road stations, their appearance and infrastructure has improved due to recent archaeological excavations and surveys.

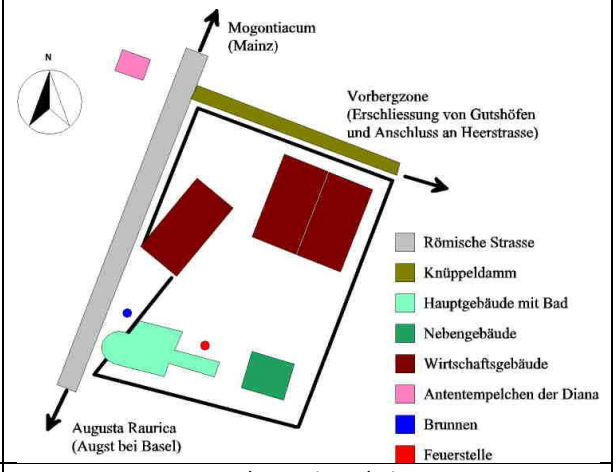
The general appearance of road stations and activities

It is assumed that road stations provided a shelter for animals and men, where one also could change horses or and have a broken chariot fixed. Although the idea of the existence of a standardized type of guesthouse (in the literary sources called *praetorium, taberna, deversorium, stabulum* or from the third century onwards *mansio*[492]) is no longer believed, there are nevertheless some recurrent elements in the archaeological remains that help to shape an idea of their layout (Fig. 3.8 a and b).[493] The main building often consisted of a central inner courtyard surrounded by single rooms or apartments, with a shared or individual cooking area for the guests, as well as a living area for the inn keepers. Very often some rooms were provided with a heating system, possibly the common rooms.[494] At some of these buildings a cellar where food and drinks could be stored and kept cool has been excavated, such as at Sontheim and Niederschopfheim.[495] Table 3.6 shows the variety of the dimensions of such guesthouses, ranging from a few hundred square meters up to a few thousand. These differences can partially be explained by the different activities hosted, whether or not inside the main building. In the guesthouse of Niederschopfheim, *Immurium*/Moosham and *Noreia*/Wildbald-Einoïd, for example, some rooms were used as stables, while in most places the stables and carriage houses were placed elsewhere within the domain, such as in Sontheim and Trochtelfingen.[496]

[489] Winkler 1991, 49-52.
[490] Groh and Lindinger 2008, 75-83; Fleischer 2010, 8-13.
[491] Although milestones have been rarely found *in situ*: Winkler 1985, 42-43.
[492] Bender 1975, on pages 19-20 refers to the following primary sources: CIL 3, 6123; AE 1995, 179 and Suetnonius, The Life of Vitellius (Chapter 7).
[493] For more on the discussion concerning the standardization of the Roman guesthouses in road stations see: ibid., 16-18; Pöll 2001, 248-249.
[494] Bender 2000, 262; Kastler 2010b, 41.
[495] Sontheim:(Pöll 2001, 250-251.) and Niederschopfheim: Website: Road station Niederschopfheim.
[496] Niederschopfheim: ibid, Moosham: Fleischer and Mouchka-Weitzel 1998, 12-41., Wildbald-Einoïd:Glaser 2014, 173-174., Sontheim: Pöll 2001, 250-251., Trochtelfingen: Krause 1990, 167-169.



a. Moosham (website: Transformation)



b. Friesenheim

Fig.3.8: Examples of a road station

Table 3.6: Overview of the dimensions of guest houses

Guesthouse	Dimensions (in m)	Area (in m^2)	Reference
Trochtelfingen	20 x 7 (incomplete)	140	(Krause 1990, 165.)
Wildbald-Einoïd	21 x 16	336	(Glaser 2014, 173-174.)
Riom	30 x 20	600	(Rageth 1982, 137.)
Moosham	32 x 23	736	(Fleischer and Mouchka-Weitzel 1998, 12-41.)
Kuchl	40 x 25	1,000	(Kastler 2010b, 38.)
Niederschopfheim	40 x 45	1,800	(www.hohberg.de)
Rankweil	75 x 50	3,750	(Pöll 2001, 239-242.)

Bathhouses also part of the standard amenities of a road station. These bathhouses were rather small, under 80 m^2, for example at *Murus*/Bondo and Riom, *Immurium*/Moosham and at Trochtelfingen.[497] In a few cases, such as *Grabomagus*/Windischgarsten and Niederschopfheim, the bath complex was inside the main building or annexed to it.[498]

As has been noted earlier, Roman society was permeated with religion and it is therefore not surprising that these road stations also present evidence for or the remains of cult places and temples. Travellers might have been willing to thank the gods for a safe journey and for a secure continuation of their journey.[499] Some places functioned as both a road sanctuary and a road station, such as Aichalden, Sontheim and *Petinesca*/Studen.[500]

Despite it being disputed whether or not it was common practice, some road stations hosted certain state officials, such as *beneficiarii* or toll collectors, as has been attested in *Ad Enum*/Bosenheim and *Pons Aeni*/Pfaffenhofen on the border between the Gallic and Illyrian toll districts at the river Inn.[501] Because of frequent appearances of *horrea* in road stations, for example in Pfaffenhofen and Sontheim, the existence of a relationship between the so-called *mansio*, *horreum* and the *beneficiarii*

[497] Bondo and Riom: Pöll 2001, 255., Moosham: Fleischer and Mouchka-Weitzel 1998, 12-14., Trochtelfingen: Krause 1990, 166-170.
[498] Windischgarsten: Pöll 2001, 251-252. and Niederschopfsheim: Website Road station Niederschopfsheim.
[499] von der Osten-Woldenburg *et al.* 2013, 212.
[500] Aichalden: ibid., 210-212. , Sontheim: Pöll 2001, 250-251., Studen: Flutsch, Niffeler and Rossi 2002, 397.
[501] Steidl 2010, 85-88; 96.

and the introduction of the *Annona militaris* in the Severan period has been assumed.[502] However, there is no evidence proving that the *cursus publicus* served the transport of the *Annona.*[503]

An edict found in the Roman town of *Sagalassos*/Aglasun in Pisidia (Asia Minor) gives an idea of the services and facilities available at (official) road stations. The edict stated that the residents must have ten wagons and the same number of animals at hand.[504] It also teaches us that the maintenance of the infrastructure and the provision of transport equipment for state affairs was part of the duties of local municipalities.[505] F. Glaser suggested that at one road station between 10 and 20 people were employed and estimated the number of animals that were kept in reserve at about 40.[506] Archaeological investigations have indeed revealed indications for animals being kept at several road stations. North of the road station in Sontheim (Raetia), for example fenced plots of land (some of 21m by 12m) were discovered and interpreted as meadows for draft animals.[507] The archaeozoological material derived from road station sites generally contains a large amount of bone from horse and cattle, typical travel and traction animals. The fact that these bones do not show any cutting marks, confirms that these animals were kept for their power and not for their meat.[508] Nevertheless, Glaser's estimations may be on the high side given the limited size of most of these road station sites. From the data in Table 3.7 it appears that the average size of a domain associated with a road station did not exceed 5 ha, although a larger agglomeration sometimes developed around or in close proximity to these nuclei, such as in Epfach and Breisach. Of course, the bigger the agglomeration, the fewer the buildings that were actually part of the road station's framework.[509]

Table 3.7: Overview of the total size of the domains of road stations

Road station	Size (in ha)	Reference
Aichhalden	2	(von der Osten-Woldenburg *et al.* 2013, 208-212.)
Moosham	3	(Groh and Lindinger 2008, 89.)
Bosenheim	4	(Steidl 2010, 93..)
Kuchl	2-3	(Kastler 2010, 21-43.)
Pfaffenhofen	2-3	(Steidl 2010, 86.)
Sontheim	3-4	(Pöll 2001, 251-252.)
Seebruck	5	(Keller 1981, 130.)
Epfach	9	Information displayed on the archaeological site
Breisach	9 (max)	(Gassmann 1992, 130-132.)

That some of these road stations developed into bigger agglomerations is related to the economic stimulus these places generally provided for their predominantly rural environment, creating work for innkeepers and craftsmen. They attracted merchants who travelled along these busy trade routes. At some of the bigger pottery centres, such as *Pons Aeni/*Pfaffenhofen, *Rapis*/Schwabmünchen and Rheinzabern, a road station was present that dated to the earliest stages

[502] Bender 1975, 22.
[503] Kolb 2000, 228-229.
[504] Ibid., 55-56. SEG XXVI 1392, 8-10.
[505] Ibid.-56.
[506] Glaser 2014, 158-159.
[507] Nuber 1992, 196.
[508] Steidl 2010, 86-87.
[509] Grabher 2010, 248-250.

of the site.[510] The number of crafts generally practised in road stations was nevertheless rather limited and small-scale, such as the ceramic production attested in *Abodiacum/*Epfach and *Petinesca/*Studen.[511] Since many sites, such as for example *Abodiacum*/Epfach, *Iuenna*/Goblasnitz, Moosham, Niederschopfheim, *Noreia*/Wildbald-Einoïd and possibly Riom, have yielded traces of metal and iron workshops, the presence of a smith is considered standard practice. There must have been a considerable need for the repair of chariots, horse equipment, or similar objects.[512]

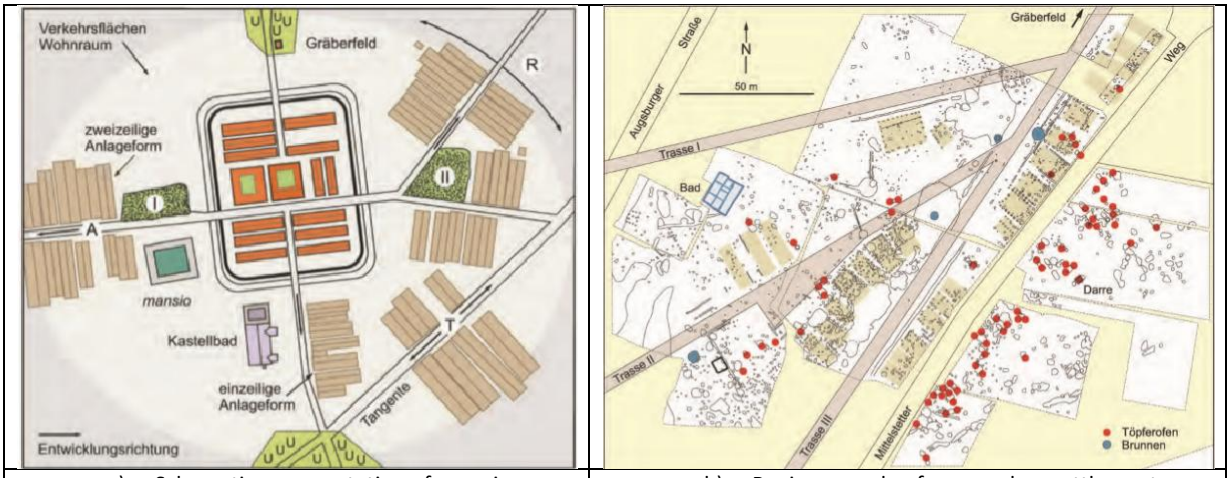
The road station of *Immurium*/Moosham (Fig. 3.8a), is probably one of the better investigated sites of its kind. It illustrates the sorts of businesses that could have been located at a road station. The road station excavated in Moosham was located along the route leading from *Virunum*/Zollfeld to *Iuvavum*/Salzburg, not far from entering the Alps. Building F has been interpreted as a specialised tailor workshop for the manufacture of cloaks. It is easy to imagine that couriers and traders coming from the south were interested in warm clothing before moving further north.[513] That such a road stations benefited from its location on a main road and along important trade routes is also apparent from the kinds and number of import goods. At *Immurium*/Moosham rather exceptional ceramic ware has been excavated, such as pottery originating from the East (Ephesos) and from North Africa (Djilma).[514] Such African wares are reasonably common finds in town centres in southern Noricum. The amount of African ware at *Immurium*, however, is considerably higher than the amount found in northern Norican towns, such as *Iuvavum*/Salzburg. This proves that this road station benefited from the ongoing south-north trade.[515] Finds such as lead labels and scales imply that the place functioned as an important intermediate trade or transit post.[516] This example shows that road stations played an active role not only in transport but equally in the trading network.

3.5 The nature and size of subordinate centres and garrison settlements

The majority of subordinate centres tended to develop on or close to the transport network.[517] For many settlements the street provided the main artery of their existence. The general appearance and development of garrison settlements and civilian subordinate centres is comparable, except the fort structures (Fig. 3.9a and b). Houses were usually positioned along the streets and provided space both for living and for most economic activities performed by the inhabitants. The majority of these houses can be categorised as strip houses or *Streifenhäuser*,[518] characterised by their long

[510] Pfaffenhofen: Steidl 2010, 85-86., Schwabmünchen: Czysz and Sorge 2000, 142-145., Rheinzabern: Schulz 1999, 65.
[511] Epfach: Information on site; Studen: Zwahlen 1993, 71; Flutsch, Niffeler and Rossi 2002, 397.
[512] Epfach: Information at the site, Goblasnitz: Glaser 1982, 16-18., Moosham: Lang *et al.* 2016, 16-17., Niederschopfheim: Website Road station Niederschopfheim, Riom: Although it is not clear whether after the construction of the main building the metal processing continued: Rageth 1982, 137., Wildbald-Einoïd: Glaser 2014, 173-180.
[513] Fleischer and Mouchka-Weitzel 1998, 49.
[514] Ibid., 55-62; Fleischer 2010, 2.
[515] Kastler and Gschwind 2015, 84.
[516] Kastler 2008, 136-137.
[517] Czysz 2013, 276.
[518] The assumption that the strip house was the standard house in the northwestern provinces during the Roman period has been questioned by B. Steidl, who found evidence for Roman agglomerations in the region of *Lechtal* (Raetia) which distinguished themselves from the stereotyped image of a Roman agglomeration by a completely different, indigenous architectural tradition, mostly in perishable material. Because of a research

rectangular shape of which the dimensions could vary from 6 m to 12 m in width and 12 m to almost 40m in length. It is assumed that most of them had a pointed roof and that the houses themselves were mainly constructed in post-and-beam or half-timbered style. In general, a transition from pure wooden constructions to stone (foundations) can be observed during the 1st- and 2nd centuries. In some regions cellars are more frequently attested than in others, and the possibility of one to two floors is accepted.[519] The houses were placed with their short side towards the street, where sometimes evidence for a *porticus* is found, for example in Alise-St.-Reine, Ehl, Güglingen and Vertault.[520] They either shared a wall with the neighbouring house or were detached, separated by a very narrow alley. Since these houses hosted both the living area for the entire family, as well as the workspace, a spatial division can often be seen. The front part of the house generally seems to have served as a workshop, while the rear area of the house served as living and kitchen area.[521] Behind the house there was often some land where the remains of wells and latrines have been found. Furthermore, these backyards were also used to grow herbs and vegetables (in very limited amounts). It is also in this backyard that most evidence for the performance of certain crafts, such as kilns appears.[522]



a) Schematic representation of a garrison settlement

b) Rapis, example of a secondary settlement

Fig. 3.9: Strip houses allocated with the small side towards the streets gave a similar lay-out to garrison settlements and civilian centres (Czysz 2013, 303; 336)

narrowly focused on the strip house settlements, Steidl suspects the excistence of a possible large gap in our overview of the Roman inhabitation (Steidl 2016, 78.)

[519] In southern Germania Superior as well as at the left bank of the Rhine the houses were more often provided with a cellar than in the region of North Germania Superior according to Klee 2013, 142.

[520] Alise-St.-Reine: Bedon 2001, 63., Ehl: Gilles 1994, 170-171., Güglingen: Neth 2013, 167-180. and Vertault: Bedon 2001, 300.

[521] The division of living and workspace could also be the other way round or could be changed over time. At the settlement of *Vitudurum*/Winterthur, for example, the front part of the houses were regularly used as workshops, but after AD 50, they were moved to the rear of the houses: Jauch 2008, 92.

[522] Jütting 2000, 109-110; Ertel 2008, 27; Klee 2013, 141-142. For more explicit details of the construction of these strip houses see, Czysz 2013; 316-331. In this publication W. Czysz discusses the possible look and design of these strip houses which are regarded as typical for the western provinces during the Roman period: Czysz 2016, 58 ff.

A high variety of crafts were carried out in these subordinated centres.[523] At the site of *Vitudurum*/Winterthur evidence for ceramic production, leather tannery, textile industry and shoemaking has been found, as well as workshops for metal and bone processing. It is assumed that this wide variety of production was mainly sold at the local market to local residents and the rural population, who probably lived mainly from agriculture, except in the case of the production centres as discussed above.[524]

The population of subordinate centres varied from a few hundred to a few thousand and consequently they grew to different sizes. The chart below (Fig. 3.10) displays the size categories of subordinate civil centres and garrison settlements in the northern Alpine region for which respectively 73 and 70 sites were included. The size estimation corresponds to the built-up area of these settlements. In the case of garrison settlements this relates to both the military and the civilian structures.

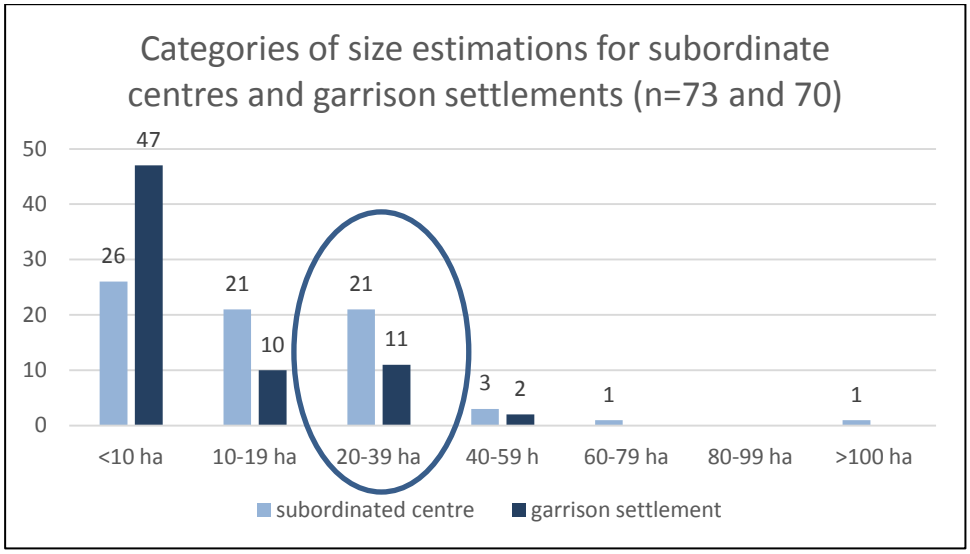


Fig. 3.10: Size categories of the subordinate centres and the garrison settlements

The chart shows that the majority of subordinate centres and garrison settlements did not exceed 20 ha. In fact, for both types of settlements the category below 10 ha contains the highest number of sites. This means that the overall size of subordinate centres was smaller than that of the self-governing towns. The most dominant size category of self-governing centres of between 20 ha and 39 ha (indicated with a circle in Fig. 3.10), corresponds to the size of some of the larger subordinate centres and garrison settlements. Whilst legionary bases turned out to be among the largest centres in the northern Alpine region, the majority of garrison settlements were within the smaller categories of the settlement system. It appears to have been exceptional for subordinate centres in general to become larger than 40 ha. The site of *Epamanduodurum*/Mandeure with its size estimation of 250 ha does not fit the general pattern at all. The Roman centre of Mandeure is considered to have been the second most important centre of the *civitas Sequanorum*. Earlier estimations for its built-up area varied between 60 ha and 120 ha. Recent geophysical research however has put even more living quarters on the map. Estimations reach now up to 500 ha, of

[523] Ertel 2008, 27.
[524] Jauch 2008, 89-95.

which at least half are considered to have been densely populated.[525] *Epamanduoudurum* stands out from the average subordinate centre. Apart from its expansion, this centre had a high level of monumental buildings, with no fewere than three religious areas and a theatre. The centre seems to correspond very well with the Gallo-Roman phenomenon of large urbanised centres without a town administration.

Although subordinate centres were dominanted by residential houses, *Epamanduodurum* was not the only centre with some monumental architecture. In Offenburg, for example, a Corinthian-style column was found. The Roman place is now heavily overbuilt, preventing any suggestion of the type of (public) building the column might have belonged to.[526] The fact that the presence of urban-like infrastructures and public buildings, such as monumental squares and theatres, was rather low but not uncommon in subordinate centres will become clear in the next chapter.

3.6 Conclusion

The aim of this chapter was to demonstrate the variety of subordinate centres, comprising the agglomerations spread out over the territories of the chartered towns as well as the settlements that developed around the auxiliary army bases administered by the military officials. Despite their submission to a higher authority, these centres were essential stepping stones in the settlement system, allowing people to organise their lives and their goods to be moved from one place to another.[527] There were many more subordinate centres than self-governing towns. They were therefore most likely the main contact points with urban services for a vast majority of people living in the countryside.[528]

Certain subordinate centres distinguished themselves from one another in their size or in the privileges they were afforded, but what differentiated them even more was the services and activities that drove them. Despite the fact that agriculture was the main occupation of many communities, not all subordinate centres lived exclusively from the growing of crops. Some centres hosted regional markets, while other centres flourished because of the manufacture of certain products, including ceramics, stone or metal. Cultural and logistical facilities, such as spas, sanctuaries or lodging accommodation equally formed the base for the existence of a centre.

This leads us to the important question why some of these subordinate centres developed to a higher urban level or grew larger than others. As we have seen, the majority of subordinate centres were of a modest size (i.e. smaller than 40 ha), notwithstanding that some were larger than the average chartered Roman town in the region. Why did flourishing production centres, such as Rheinzabern or Mayen, not develop into wealthy urban centres but remained small agglomerations? The proceeds of the production clearly belonged elsewhere, such as surrounding elites or imperial administrators. In contrast, the religious centre of *Epamanduodurum*/Mandeure did become a monumentalised urban centre.

[525] Rorison 2001, 187; Bossuet *et al.* 2012, 16.
[526] Schrempp 2013, 201.
[527] Baret 2013, 31-32.
[528] Gräf 1995, 190.

An analysis of the archaeological remains of why the subordinate sites highlitghts the interaction between the urban developments, the civil world and the stimulus given by the presence of the Roman army in the region. The support of the army was most apparent in the development of the bath complexes and from the expansion of the road network, but also helps to explain the flourishing of the terra sigillata centres in the northern Alpine region.

Clear urban investments were made towards the maintenance and development of sanctuaries, involving the *munera* of the town officials. The investment in public buildings and monuments by citizens was thus not restricted to the town centres, as will be further discussed in the following chapter.