

[The name Meuse has been changed into Maas.]

3.3 Area 3. The Maas line

5 Geologically, the Lower Maas has much in common with the Lower Rhine, as both are part of the same river delta. Further up-stream in Limburg, however, it cuts into harder Quaternary sediments composed of coarse gravel and sand.

10 Local subsidence means that the Maas does not erode or deposit large quantities of sediment and avulsions or lateral migration are thus far less common in the Maas delta than in the Rhine delta. Furthermore, the Rhine depends on both rain water and meltwater, whereas the Maas is only fed by rain water.

This means that the discharge of water can fluctuate strongly between seasons, which surely will have affected the Maas's usability for transport.

15 Fortifications along the Maas are a new phenomenon in the Late Roman period, and are generally taken as an indication of defence-in-depth. However, the majority of the identified sites here is located along its east-west axis, such as Cuijk, Kessel-Lith and Wijchen-Tienakker. What makes the Maas even more interesting is that at least two bridges over it are known at Cuijk and Maastricht (a third has been suggested at Kessel-Lith), a unique feature in the Netherlands. Unfortunately, however, the Maas is, like the Rhine, a volatile meandering river, and many sites are completely or 20 partially eroded away and can only be identified by dredge finds.

Again, like the Rhine, the military sites along the Maas have traditionally been identified based on written sources. Notably this concerns the comment by Ammianus Marcellinus that Emperor Julian rebuilt three forts situated on a line along the Maas in AD 358, that were destroyed by invading Franks.

25 Several sites have been proposed in the past, including Cuijk, Blerick-Venlo, Grubbenvorst-Lottum, Heel and Kessel-Lith, several of which also appear on the Tabula Peutingeriana.

30 3.3.1 Sites

Far fewer sites are known from the Maas relative to the Rhine, but generally speaking the evidence they have yielded seems to have been better preserved. The amount of excavations carried out on some has also helped to establish better chronologies and material culture studies.

35 There are still some sites that are a little doubtful, however. These are the sites for which the interpretation as a military site was predominantly based on written evidence imposed upon scant archaeological evidence, such as Blerick, Grubbenvorst and Heel.

Blerick has yielded some Late Roman finds in the form of a relatively high amount of 40 stray coins from the first half of the 4th century, but no other evidence seems to exist. Its interpretation as a road fort is rooted in its location but in the absence of more concrete archaeological evidence this seems circumstantial. No Late Roman remains seem to have been found at all in Grubbenvorst-Lottum. From Heel, we only have a large Middle Roman cemetery with several stray finds of later coins and 45 pottery from the top soil.

Even though Ammianus Marcellinus is very specific in his description of the location of the supposed repaired forts, it seems that the archaeological evidence for such a string of connected forts along the Maas area is lacking, and his comments should not be taken too literally.

50 For all the other sites, plenty of archaeological evidence is available, although in varying degrees. Kessel-Lith is the only site on the Maas based on dredge finds, although remains of walls and building materials were recovered more or less in situ. Its foundation date remains obscure, but the coin series and ceramics suggest 55 somewhere around the middle of the 4th century and continuous activity into the early 5th century. It is generally assumed in the literature that the building remains found at Kessel represent a small fort or castellum with perhaps a bridge nearby, but the site's exact function is unclear.

The three remaining sites, Cuijk, Maastricht and Wijchen-Tienakker, have all been 60 excavated to some extent. The burgus or watchtower of Wijchen was built on the grounds of a villa complex and the ceramics from its surrounding ditch suggest a foundation date somewhere in the late 3rd or early 4th century.

An unusually large amount of coin planchets from around AD 400 make it difficult to 65 establish the end of Roman occupation here, but given the other material culture the end date would be at the end of the 4th century at the earliest. Wijchen is one of the rare sites in this thesis which was recently excavated and published in full. The castellum at Cuijk was partially excavated in the 1960's, and was never published,

and Maastricht has seen numerous excavations pretty much throughout the 20th and early 21st centuries, many of which were also never published.

At Cuijk, the complex stratigraphy prevents a concrete interpretation of the site's 70 chronology. Based on the finds, it has been suggested that the castellum may already have been founded in the late 3rd century.

Traditionally, the two building phases that have so far been recognised have been attributed to Constantine I and Valentinian I.

The bridge at Cuijk was seemingly built and rebuilt in three successive phases: AD 75 347/349, AD 368/9 and AD 388-398.

The dock which was part of the castellum complex has been dated to around AD 320, with subsequent continuous repairs from AD 342 to at least AD 373.

As none of the excavations at Maastricht were comprehensively published, it is 80 difficult to establish a concise chronology for the whole site. Most authors seem to agree that the castellum was founded around AD 325, on a previously empty terrain.

Its end date is a little harder to place, as the location was continuously inhabited from the 4th to the 6th century.

The inner buildings of the castellum are still poorly understood, although it does include a stone horreum.

85 For the bridge at Maastricht, three construction periods have been recognised: AD 334-357, AD 368-369 and AD 387-398.

3.3.2 Discussion

All in all, it seems there are four confirmed military sites in the Maas area:

90 Kessel-Lith, Cuijk and Wijchen on its east-west axis and Maastricht way down south. Purely looking at location and the spread of these sites, no single line of defence along the Maas can be identified. Rather, it seems that its sites interlock with those along the Rhine. Wijchen and Cuijk are located within the influence sphere of Nijmegen, and Kessel-Lith forms a chain with Waal sites such as Rossum and Ewijk.

95 The question of course is whether these sites are all contemporary, and some overlap could be argued for. A foundation date as early as the late 3rd century has been suggested for both Wijchen and Cuijk (Kessel seems to begin much later, around the middle of the 4th century), so some correlation between the sites of the Rhine and Maas could be suggested.

100 The first research question of this thesis was whether traditional end dates for Middle Roman sites could be extended into the later 3rd and 4th century. This does not apply to the Maas, as all sites are newly built in this period. As said before, construction could have begun on sites such as Cuijk or Wijchen as early as the late 3rd century, but Maastricht and especially Kessel-Lith appear to have been founded in the first half of the 4th century.

105 Compared to the evidence from the Rhine area, the quality of archaeological evidence is rather good on the Maas. The partially eroded site of Cuijk can still be studied relatively well, and even Kessel-Lith has offered some context. Besides this geological aspect, the Maas fortifications have practically all been excavated 110 extensively, giving us good ground plans of fortifications and defences (although not so much of the inner buildings). The only downside is that apart from Wijchen, none of these have been published in full detail, but this is a common problem elsewhere too. Stratigraphy is still often problematic (Maastricht, Cuijk) and extensive material culture studies are seriously lacking.

115 The small selection of material culture discussed in the appendix is already informative. From every established site in the Maas area, we have significant numbers of crossbow brooches, whereas the more doubtful sites have yielded none. Naturally, a certain amount of bias is in play here, but it also suggests that a clear relationship exists in this sub-area between fortified sites and the presence 120 of crossbow brooches.

125 The coin graph of all the Maas sites combined (see below fig 7.), shows that the large influx of coins to this area starts much later than in the Rhine delta, and results in much lower numbers per site. It is interesting that the large peak around AD 270 observed from the Rhine area is largely absent here (in absolute numbers at least), and relatively few coins struck by Gallic Emperors have been found (except of course for the coin hoard in Maastricht). The relative lower numbers of circulating coins may reflect the general population decline in the MDS-area. Heeren has shown that the area became almost entirely depopulated in the later 3rd century, and that there is very little evidence to suggest inhabitation in the early 130 or mid-4th century.

New settlements only began to appear in the area around the late 4th or early 5th century, which would correspond well with the sharp increase in coins we see at

Maastricht and to a lesser extent Wijchen.

The graph is slightly problematic, however, as it contains very few sites, with widely varying numbers of coins. Maastricht dominates the spectrum, and its extreme peak around AD 400 is not representative for other sites. Likewise, the late 4th century peak at Wijchen is a deviation. The general pattern seems that most sites show a slight peak in coins struck between AD 360-370, and show a steady influx of coins into the 390's. I have already stated above that the often-observed spike in coin issues under the House of Constantine should perhaps be interpreted rather as a general development rather than an indication for a Constantinian construction phase. The AD 360-370 peak has similarly been interpreted for various sites as a sign of a Valentinian building programme. As I have already argued in appendix 3, this could very well reflect a general increase in coin emissions, rather than signal heightened activity at individual sites.

The problem of stratigraphy and the chronology of individual sites has been highlighted already, and it appears that this is equally the case for both excavated and non-excavated sites. There is definite proof in Cuijk for at least two building phases, although it cannot be stated how much of the castellum was overhauled for the second phase. The common assumption that its first phase was constructed of wood can also not be proven, as no actual remains of wooden buildings could be found in the excavation's documentation. For Maastricht, two successive phases have also been proposed, based on peaks under certain emperors (Constantine I and Valentinian I) in the coin evidence. As long as no comprehensive study of the excavated defences and stratigraphy have been published, I am sceptical as to the validity of this argument. Coins of the House of Constantine are numerous across the Dutch river area, and may thus reflect a general increase in official emissions in the study area rather than an increased influx in one particular site. For Kessel-Lith, the evidence is insufficient to establish any detailed chronology. The relatively short and steady influx of coins during the second half of the 4th century suggests that there was only one major construction phase. The ground plan of Wijchen similarly shows a single construction phase.

None of the Maas sites are built on previous military terrains, but they do show a relation with already established activity: the burgus of Wijchen was built on a villa complex, Cuijk and Maastricht on or near thriving central settlements and Kessel-Lith was constructed of spolia from a nearby Gallo-Roman temple.

When we look at the coin series of the four identified sites in the Maas area (fig. 7), it is immediately clear that they start much later: coins pre-AD 260 are almost completely absent, and the AD 260/270 peak is fairly small. Evidence for the 4th century is consistent, however, and the drop in coin emissions from AD 378 onwards seems less pronounced. The extreme peaks in the late 4th -early 5th century at Wijchen and Maastricht are probably related to an increase in coins circulating in the Maas area generally.

At Wijchen, a large hoard of blank planchettes was found that was dated to the late 4th early 5th century. As already said above, the coin series at Maastricht seems to show continued occupation in the 5th century.

The Maas fortifications seem to pick up around the beginning of the 4th century, so slightly later than their Rhine and Waal counterparts. It is interesting to speculate as to the underlying cause for this. Did the Rhine gradually go out of use, due to 180 climatological changes? We have far fewer sites on the Maas, which may suggest that it was not meant as a complete replacement, but rather as an extension.

Of course, it could be that Maas sites have not been preserved as well, so we should be careful in this. It is noteworthy, however, that two bridges and a port were found in this area, suggesting that the Maas was very important in this period for 185 transport purposes. It should also be noted that two previous studies into the distribution of Late Roman belt buckles and gold coin hoards both showed an increased archaeological activity in the Maas delta as opposed to the Rhine delta, especially in the 5th century.

As such, these studies fall outside of this thesis's parameters, but it is interesting to see that that development, in which the Maas seemingly becomes more important to the Roman authorities, can perhaps already be traced back to the 4th century.

All four sites have yielded crossbow brooches, be it in varying numbers. Cuijk, Wijchen and Maastricht have all yielded four (those from Kessel-Lith could not be quantified). The fibulae from Cuijk date from the late 3rd to the second half of the 4th century, those from Wijchen to the entire 4th century, while those from Maastricht date much later, from the second half of the 4th to the second half of the 5th century.

See (67) The Late Roman limes revisited. The changing function of the Roman army in the Dutch river/coastal area (AD 260-406/7)