

The Wayback Machine - https://web.archive.org/web/20080503084057/http://www2.rgzm.de:80/Navis...

The early Roman defended harbours of Velsen 1



Introduction



Velsen has been since 1945 a key element in the Roman historiography of the Netherlands. Both its early date (at least for the Netherlands) and its location far north of the (later) Limes, gives it a status far beyond that of 'just another Roman military base'. In the Netherlands, only Nijmegen (*Noviomagus*; [fig.1: E](#)) is somewhat older, while Vechten (*Fectio*; [fig.1: B](#)) seems contemporary.

To date, two Roman military installations have been discovered in the neighbourhood of the medieval village of Velsen (see [fig.1: A](#)). The occupation of *Velsen 1* ([fig.1: 12](#)) dates mainly to AD 16-28 and of *Velsen 2* ([fig.1: 13](#)) to approximately AD 40-50. The main subject of this homepage is *Velsen 1*. Of *Velsen 2* only scarce information is available.

In 1978 it became apparent that Velsen 1 was a two-period military base. In *Period 1* the fort is roughly triangular in shape and provided with a harbour and three massive moles. In *Period 2*, the fort becomes trapezoidal in shape, with timber jetties of a mainly open construction.

General dating of Velsen 1

In 1943, even before the discovery of any Roman material in the region, a Dutch historian came to the conclusion that *castellum Flevum* must have lain in the vicinity of Velsen, on the basis of the description of the landscape by Tacitus (*Annals 4:72*). The events described by Tacitus - the revolt of the Friesian local population, resulting in a battle, an attack on *Castellum Flevum* and a (temporary) retreat of the Romans from the region - took place in AD 28, the presumed end of the main occupation of Velsen 1. This is in accord with the dating by the finds to approximately AD 15-30. The beginning of Velsen 1 should be related to Germanicus' activities in the region in AD 16.

Topography

Position

The early Roman site of *Velsen 1* is situated about 2 km to the west of the Medieval centre of the village of Velsen, in the province of *Noord-Holland* (the Netherlands) ([fig.1: A](#)).

At *Vechten*, in the province of *Utrecht* - where the Roman *castellum Fectio* once was situated ([fig.1: B](#)) - the Rhine splits into the *Oude Rijn* and the *Vecht*. In the Roman period, the Vecht represented the northwesternmost branch of the Rhine, streaming northwards and having its outlet to the *North Sea* ([fig.1:9](#)) via the so-called *Oer-IJ* ([fig.1: 10](#)). Velsen 1 was situated at the southern shore of this Oer-IJ,

surrounded by an area inhabited by the local population, the *Friesians* (fig.1: 11).

The situation of Velsen 1 and 2 within the region

Many native sherds have been found at both Velsen 1 and Velsen 2. Comparative research on the *native* pottery from Velsen (1 and 2) and the surrounding region, indicate a similarity. *Roman* imports from the period of Velsen 1 however (approximately AD 15-30), seem to be entirely absent in the surrounding Friesian sites, but are present from the period of Velsen 2 (AD 40-50). It can be concluded that Velsen 1 and Velsen 2 were founded in differing military contexts. Velsen 1 must be seen as an extremely isolated base, in fact the most northwesternly base on the whole continent of Europe. But the substantial amount of native pottery at Velsen 1 indicates that at least some sort of contact with the local population existed. It is possible that these contacts were restricted to the inhabitants of the 'Roman' side of the Oer-IJ, hence the dunes along the coast of the North Sea.

That the feelings between Romans and natives were not always of the friendliest, is indicated by the above-mentioned Friesian revolt of AD 28 and the temporary abandonment of the Velsen area by the Romans, probably connected with it.

It was otherwise with Velsen 2. It seems to have been founded at the same time as *Valkenburg 1* in circa AD 40. Together with Valkenburg and Vechten, Velsen 2 formed part of a strategically strong 'triangle'. The Roman finds from the surrounding region, point towards a somewhat closer contact with the local population, although the Roman finds are limited.

The scarce finds from Velsen 2 which continue through AD 50/55, would seem to indicate that Velsen was considered of strategic importance for even some time after the establishment of the Rhine Limes by Claudius in AD 48.

History of research

The first Roman finds were discovered in 1945, in the spoil of a World War II German anti-tank trench. They belonged to what was later called Velsen 2 (since the discovery in 1972 of Velsen 1 by members of the Velsen section of the Netherlands Association of Amateur Archaeologists [AWN]). A date of AD 40-50 was indicated by these finds and also by finds from later activities. The sparse features of Velsen 2 - rows of rammed posts and deposits of the former Oer-IJ - appear to indicate, in conjunction with the nature of the finds and a comparison with Velsen 1, the presence of *quays* and/or *jetties*, probably connected with a *fortified base*.

From 1973 to 1991, extensive excavations have taken place every year, with the exception of 1983-1984. As a result of the close teamwork between the AWN-amateurs and the Instituut voor Prae- en Protohistorie (IPP) of the University of Amsterdam (UvA), an area of over 6 ha in size has been totally laid bare.

The major difficulty encountered during the excavations, was the severe erosion, which has removed over 2 m from the original Roman surface, leaving only the deepest features. A slight consolation was the fact that the site remained undeveloped following the Roman occupation.

The fort

Period 1



In *Period 1a*, the first or initial fort - in fact a kind of temporary 'construction camp' - was built on the sluggish southern shore of the Oer-IJ river. In this period, the shape was more or less triangular (see [fig. 2](#)). The defences mainly consisted of an earthen wall, with a simple external ditch in front of them ([fig. 2](#): *wal* and *spitsgracht*). A simple timber palisade defended the eastern part of the enclosed river shore, with a centrally placed, simple wooden gate ([fig. 2](#): *poort*). This 'fort' did not initially have any harbour works, although ships could have been beached on the undefended western, gently sloping riverbank. Shortly afterwards though, in a *transitional period* between Periods 1a and 1b (*Period 1a/1b*), the simple wooden fence was provided with an extra, more substantial gate. This harbour gate ([fig. 2](#): in red) gave access to a short open jetty ([fig. 2](#): *kleine steiger*), at which bigger ships could unload, for instance, building material for the next period. Thus ships no longer needed to be beached.

Period 1a is dated to AD 16.



In *Period 1b*, a more permanent fort, similar in shape, replaced the 'construction camp' (see [fig. 3](#)). The new defences followed almost exactly the course of the previous one (: *verloop verdediging per. 1a*, in red). The earthen defensive walls now were replaced by a box-rampart, a so-called *Holz-Erdemauer*, which consisted of two parallel wooden revetment walls, set into a foundation trench, with vertical posts at approximately 1.3 m intervals set slightly deeper ([fig. 3](#): *houtaarde muur*). The 3 m wide space between the timber revetments, was filled with spoil from the single ditch in front of it. The *Holz-Erdemauer* was provided with simple wooden towers ([fig. 3](#): *toren*) and probably one (or more) simple gates, of which the ground plan was not distinguishable from that of the towers. The eastern riverside section was also provided with a, somewhat narrower, *Holz-Erdemauer*. In this period, extensive harbour works were constructed, consisting of three moles ([fig. 3](#): *westpier*, *noordpier* and *oostpier*) and a single shipshed ([fig. 3](#): *scheepshuis*).

Period 1b is dated to AD 16-22



After only a couple of years, erosion caused by the river running alongside the fort (see [fig. 12](#) below), necessitated modifications to the harbour works in *Period 1c* (see [fig. 4](#)). The partially washed away shipshed also had to be replaced by a similar construction of almost exactly the same dimensions. It seems that the fort itself remained unchanged, possibly with the exception of some repairs or minor modifications, for instance, at the north-western end of the defences. There a part of the former ditch from period 1b was 'widened' by the above-mentioned erosion and provided with a protective revetment, thus forming a substantial harbour basin ([fig. 4](#): *insteekhaven*).

To the west of the fort, the slight remains of a single ditch, running parallel to the rivershore seems to indicate a defended working area outside the fort itself.


An interesting feature, is a small, defended 'camp' opposite the main fort, provided with a small basin. Here ships could moor relatively safe in 'hostile' Friesian territory. Such small '*Bruckenköpfe*', but from a later period, are known from Roman forts along The Rhine and Donau, permitting the romans to unload military personel in the german territories. The possibility remains, that this *Bruckenkopf* dates from, or was still in use in period 2

Period 1c is dated to approximately AD 22-25.


Period 2



The fort from period 1b/c was possibly abandoned for a (short) period of time. In Period 2, a 'construction camp' was again the first to be built (here named *Period 2a*,

 see [fig.5](#)). The defences, this time oval in shape, consisted again of an earthen wall with a single ditch in front of it, only encircling the harbour works from the previous period, with the exception of the shipshed. This defence probably still incorporated the *Holz-Erdemauer* along the (eastern) riverside section ([fig.5: oevermuur per. 1b](#)).

Period 2a is dated to approximately AD 25.


 In *Period 2b*, the fort got its final trapezoidal shape (see [fig.6](#)). To the east, the defences followed directly those from Period 2a, but westward they were extended up to the line of the period 1b/c western *Holz-Erdemauer*. The new defences consisted of an earthen wall with wooden towers and (at least) one double wooden gate in the west ([fig.6: poort](#)). The defences were now encircled by three ditches, which stopped shortly before the so-called *insteekhaven* from period 1c.

The total river shore within the defences now remained undefended. In the harbour, open jetties replaced most of the massive moles from period 1, with an extra jetty outside the eastern defences ([fig.6: vierde steiger](#)). This new jetty, outside the defences, was controlled by a sturdy platform, added to the eastern end of the defensive wall ([fig.6: verdedigings-platform](#)).

To the west (and possibly also to the south and east) of the fort, a new defensive single ditch was dug, thus providing a bigger defended working area, for instance, for ship repair, 'dirty' activities and so on. It also incorporated the so-called *vierde steiger* and a new, this time double, shipshed, since the shipshed from period 1c, if still usable, obstructed the new double gate.

A most interesting feature, was a huge well, 3 x 3 m in plan. From this well, a wooden aqueduct transported fresh, clean water to ships in the western *insteekhaven*. This might seem illogical, but the activities of the Romans must have polluted the harbour area. Water from the river itself (possibly also somewhat brackish) could not be used any more as drinking water.


Period 2b is dated to approximately AD 25-28.

 At the end of period 2b, in AD 28, the fort was attacked by the Friesians, as mentioned by Tacitus (see above *General dating of Velsen 1*). It is probable that the attackers did not take the fort itself, but that the defended working area outside the fort was overwhelmed, as is shown by the distribution of lead shots. Even if the fort itself remained undamaged, the 'loss' of the working area represented a problem. It was there that the double shipshed and the most important well were situated.

It is clear, that the Romans did not immediately abandon Velsen 1, but they had to find a solution to encounter the problems with the weak defences of the working area. This was done by replacing them by a defence, comparable to those of the main fort (see [fig.7](#)) and connected with it. This consisted of an earthen wall, but now only encircled by two, quite deep, ditches. The wall was provided with the 'normal' towers (set wider apart than those of the defences from period 2b) and two narrow gates, one to the east - close to the fort defences - and one to the west. Dendrochronological dating of posts from one of the 'new' towers suggests a building date slightly later than AD 28.

How long the occupation of Velsen 1 lasted is unclear. Velsen seems to have been abandoned for at least some time. **Velsen 2 (mentioned above), situated 1 km to the west, was build around AD 40, It is possible that the Romans first (re)occupied Velsen 1 as a temporary base, from which Velsen 2 was build.**

Port installations

 In *Period 1b*, the extensive port installations consisted of a platform, projecting into the river and placed centrally in the encircled river shore (see also [fig.3](#)). From this platform, two moles extended further into the river, which more or less defined an 'outer' harbour. A third mole, accessible through the harbour gate in the *Holz-*

Erdemauer along the riverside, was constructed at a certain distance to the east of the platform. Together with the eastern platform mole, it enclosed a small 'inner' harbour.

The moles consisted of 'boxes' or 'caissons', with revetments of closely spaced rows of posts, separated by transverse partitioning. The 'caissons' once contained a fill (see [fig.8](#)) of layers of willow twigs ([fig.10](#)), separated by thick layers of clay, enclosed between layers of straw ([fig.9](#)), to prevent the clay from being washed away. Only some of the fill was preserved at the end of the western mole (see [fig.11](#)).



It is possible that along the easternmost mole, defended by the eastern riverside defences, *non-Roman* (Friesian?) ships could unload. The central platform with its moles and the undefended western riverside section that gave access to the shipshed, were undoubtedly only accessible for use by Roman ships.



In *Period 1c*, the harbour was modified. This was necessary, due to scouring at the west side of the platform (see [fig.12](#): rendered in blue) and silting in between the platform-moles and at the east side of the platform ([fig.12](#): rendered in yellow). It is obvious, that the moles will have contributed to a partial stagnation of the Oer-IJ current. The

scouring also weakened the revetments of the moles.

A wooden revetment was constructed along the western river shore, to counter further scouring. The quays of the platform were extended outwards, because of accretion of silt deposits, and additional reinforcements were built along the westernmost mole. A short, open jetty replaced the curving head of the central mole ([fig.12](#): rendered in red). This open construction was considered to improve the water flow to some extent, in an attempt to prevent further silting.



In *Period 2b*, the appearance of the harbour was changed, since the alterations of the harbour constructions in period 1c must have appeared unsatisfactory (see [fig.6](#)). Open jetties, consisting of three rows of heavy posts (see [fig.13](#) and [fig.14](#)), replaced most of the

moles. A jetty was added to the western mole, at an angle to it and running parallel to the river shore, thus enclosing the 'inner harbour'-basin. The central mole, together with the added short jetty, was entirely replaced by a long open jetty, while the eastern jetty was extended into the river. Since the river shore within the defences now was totally open, the fort became dangerously exposed to an eventual attack from the riverside. To counter this weakness somewhat, a new jetty was build outside of, and to the east of, the defences of the fort for use by non-Roman ships, as was the case with the eastern (defended) mole from period 1.

Roman shipsheds



Remains from shipsheds were till recently only known from the Mediterranean and restricted to the Greek and Hellenistic

periods. These shipsheds were carefully build constructions, consisting of sloping slipways, separated by stone pillars or columns and covered by stone vaults or a wooden roof with tiles. Although no Roman shipsheds are known in the Mediterranean, they must have existed there, as is shown by Roman-period depictions on coins ([fig.15](#)), frescoes ([fig.16](#)) and mosaics (([fig.17](#))). Click [here](#) for more information about shipsheds in the mediterranean.



Since the middle of the 1980s, shipsheds have been known from Haltern-Hofestatt and from Velsen 1, they constitute the only remains of roman shipsheds so far known. The most extensive is that of Haltern, with dimensions of 56 x 32 m, and consisting of eight slipways ([fig.18](#), below). These slipways, approximately 6 m wide, could contain galleys over 30 m long.

In *Period 1b*, the first shipshed was built in the western part of the fort, at a short distance from the shore (see [fig.18](#), above). The dimensions, 6.1 x 22.1 m, point towards a small galley. It lay so close to the river, that the above-mentioned scouring overwhelmed, or washed away, part of it.

In *Period 1c*, the shipshed was moved some 30 m southwards. Shape and dimensions, 6.4 x 20.5 m, were very similar to the first shipshed ([fig.18](#), second from above).

In *Period 2b*, a completely new shipshed was built ([fig.18](#), third from above), this time double and with dimensions of 29.7 x 12.2 m.

This text is partially based on *J.-M.A.W.Morel, De vroeg-Romeinse versterking te Velsen 1. Fort en haven (diss.), Amsterdam 1988.* and *J.-M.A.W.Morel, The early roman harbours. Velsen, in: R.W.Brandt, W.Groenman-van Waateringe & S.E.van der Leeuw (eds.), Assendelver Polder Papers 1, Amsterdam 1987, pags. 169-175.*